

ANNEX 2 - COUNTRY REPORTS

ARGENTINA

Dr. José Urtubey
Asociación Forestal Argentina
Grupo Tapebicúa
Jurtubey@tapebicua.com.ar

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

The forest-based industry in Argentina is supplied 90% from cultivated forest. With 1.2 million hectares planted—mainly pine, eucalyptus and salicaceae- annual production is estimated at 20 million cubic meters of wood, approximately, half of which is used – around 10 million m³. On the other hand, it is estimated that around 2.5 million m³ of the waste, resulting from thinning forests and sawmills, are unused. This shows the dimension of the possibility of industrial investment which is not currently exploited in Argentina.

Good news in the forest sector was the extension of the Law for the Promotion of Investments in Cultivated Forest. [*Ley de Promoción de Inversiones en Bosques Cultivados*] for an additional 10-year term – up to 2019- which has been a sign of continuous public support to the expansion of foresting in the country. Accordingly, Argentina has at least 2 million hectares of high-productivity forest lands, which do not compete with agriculture or native forests, available for foresting.

On the other hand, the so-called Forest Law [*Ley de Bosques*] was passed, whereby provinces are required to undertake land use planning in order to classify native forests for a better management and exploitation thereof. This Law recognizes the payment of Environmental Services provided thereby. The Law has been recently regulated (February 13, 2009) and the provinces are making progress in land use planning. This tool is essential for the expansion of cultivated forest and the sustainable exploitation of native forests.

Argentina has high-productivity forest lands available and around 10 million m³ of wood for the industry. We believe that the greatest challenge for the forest sector and related industries in Argentina is to create a business environment attractive for the investments required to exploit the country's forest potential.

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

Undoubtedly, the financial crisis and the decrease in demand in the main wood markets –especially in the United States- are having a strong impact on companies. Exports have decreased at the same time the domestic market shows signs of retraction.

Most of the companies are redesigning their strategies to overcome this situation, which is estimated to show the worst scenario in 2009. The sector has sought to reduce costs and improve productivity.

The forest area has shown an expansion of mechanization in forest harvesting. Development of forest services and professionalization of rural workers have continued, making progress in the measures taken for social and environmental sustainability. It is estimated that around 30% of the forested land is certified by some environmental, labor or sustainable standard (ISO 14000; OSHA 18000, FSC), and that such area will grow. Accordingly, in 2008 progress was made on a federal rule on forest certification which may be approved by PEFC as well as on establishing a FSC National Initiative. It is expected that the two programs will be operating in 2009.

The investments in the industry have not significantly increased the production of pulp and paper. During 2008 no progress was made in any greenfield investment, although there is at least one significant project waiting. The main investments were focused on improving the environmental management of the industry and expanding and optimizing the productive processes in the existing plants.

Wood production is particularly affected by the crisis, and thus, production is estimated to have decreased in comparison with 2007. It has been reported that many small sawmills have closed down and that the payroll of bigger wood-producing companies has been reduced. To date (February 2009), the companies report a two-month-production stock.

On the other hand, during 2008 progress was made on the investments related to bio energy. A pellet-production factory started operating (in addition to another factory which was already operating) and cogeneration systems have been installed for the production of energy from sawmill waste.

3. What new information do you have on the socio-economic contributions of the forest industry in your country (formal and informal employment generated by the forest industry, contribution to rural and urban development, health, education, poverty alleviation, etc).

According to estimates made on the basis of the input-output matrix, the forest industry generates in Argentina direct and indirect employment for over 500,000 people. According to AFoA estimates, foresting generates 1 job every two planted hectares and one job in the industry per every harvested hectare.

On the other hand, the forest sector is leading the implementation of a Labor Competency Certification and Continuous Training Program for forest as well as industrial workers. The sector is working jointly with the Ministry of Labor, trade unions and the academic sector in order to accomplish such purpose. The goal is to reduce labor risks, improve workers employability and the quality of job training.

The first 700 assessments of rural workers showed that only a minority of such workers -2%- had completed middle school. Most of them – 50%- only completed elementary school, while 35% of the workers have not completed elementary school and 12% has not finished high school.

This education profile of workers describes them as a “vulnerable group”, - those that show high levels of unemployment, low income and high rates of industrial accidents-. With this Program, recently implemented in Argentina, the forest and forest-industrial sector aims at improving the employability of workers and the continuous training system, permitting to reduce labor risks and improve labor productivity of the forest sector and related industries.

Some data:

According to data from the Secretariat of Agriculture, livestock, fisheries, and Food (SAGPyA) an estimated 1, 2 million hectares were planted as of 2008. Additionally, there are 33.2 million hectares of native forest. It is estimated that about 80% is in Mesopotamia.

Forest products exports were estimated in 1 billion US dollars and imports in 1.4 US billions in 2007.

BRAZIL

THE ECONOMY AND THE PULP AND PAPER SECTOR

The Brazilian economy was growing strongly in 2008 with a rate of 6.4% in the third quarter/2008 compared with same quarter of 2007. Once the global crisis was intensified in late September, the Brazilian economy fell sharply due to lack of credits and consequently decreased in consumption. With the sharp drop of activities in the last quarter/2008, the Brazilian had an annual GDP growth of 5.1%.

Brazil, well inserted in the global economy started to suffer the impact of the slowdown in commodities demand in prime markets and the consequent fall of international prices.

With high inventories of its products and sudden drop in domestic and global demand, companies of the Brazilian pulp industry had to manage their levels of production through planned downtime, reducing production by 150 thousand tons of pulp during November/December/2008.

The continuous investments in modernization of its facilities and in the expansion of the installed capacity, and considering the good performance of industry during the first half of 2008, led, however, Brazil to jump from the 6th to the 4th position in the world leading pulp producers, with a total of 12.8 million tons produced.

The Brazilian production of paper reached 9.2 million tons in 2008, maintaining the 12th position among world producers.

In light of the planned investments in the past which will come into activity in 2009, we should expect to increase the installed pulp capacity by 10%. Brazilian investors did not cancel announced investments. However, the expansion projects of the pulp installed capacity were postponed and are awaiting the definition of a new postcrisis economic scenario.

At this time the forecasts are not prominent in the business world. With the current global economic situation, prudence is the rule. The uncertainties generated by the global crisis, will certainly impact further on global supply and demand of pulp and paper, presenting a new and totally different scenario. Thus, there is no precise identification of the trend of this market for 2009. The present objective of Brazilian industry is maintaining the 4th position in the world pulp production, in 2009.

However, it is quite clear that the crisis is conjuncture, and that the sector in Brazil is the world most wellstructured. The global crisis may result in opportunities for markets with the sustainable and technology level found in Brazil.

BEST PRACTICES OF THE PULP AND PAPER INDUSTRY IN BRAZIL

The industry has 1.7 million hectares of planted pine and eucalyptus forests and 2.8 million hectares of preserved forests, totaling 4.5 million hectares of forests. Of this total, 2.25 million hectares of forests are certified, representing 42% of certified forest area in Brazil (5.4 million hectares).

Moreover, the initiative's program of forest fostering encouraged the association of more than 10 thousand forest farmers, and occupies an area of 380 thousand hectares. This program aims to reach 30% of the wood demand for the industry, besides being an important mechanism for the expansion of the planted area, generating income and maintaining the economic activity in rural areas.

The Brazilian pulp and paper industry is also committed to the challenge of climate change and contribution to reduce emissions of greenhouse gases GHGs. The forests planted by the sector are major carbon sinks and contribute significantly to absorption of CO₂ from the atmosphere. The genetics study and development of various types of pine and eucalyptus for decades, has allowed a better use of land space and a large increase in the productivity of Brazilian wood. It is estimated that one hectare of pine absorbs 27 tons of CO₂ per year,

and one hectare of eucalyptus can absorb between 18 to 39 tons of CO₂ per year. The sector also contributes to the recovery and protection of degraded areas.

The production processes have been greatly improved and modified, contributing to reduce GHG emissions, such as the use of renewable fuels, solid waste management, methane capture and treatment of liquid effluents, biomass energy generation and production of ethanol from cellulose.

In Brazil, the social responsibility takes different dimensions: economic, environmental, spatial, political, cultural and social.

Improving the life quality in rural areas where the companies are located, is closely related to the restoration, preservation and conservation of the environment as well as the affirmation and strengthening of environmental management practices in projects related to employment generation and family income, the extension of services as access to safe water, sanitation, waste removal, safe energy, education, culture, and health services.

Thus, the social and environmental responsibility of companies is assuming a strategic and sustainable profile, not only because it brings image and reputation benefits to the companies or ensures a license to operate, instead they will understand that plants are not isolated production units, but a business community formed from an ecosystem.

CHILE

WHAT ARE THE EMERGING ISSUES FACING THE INDUSTRY IN YOUR COUNTRY?

Chile's forest industry, as well as the rest of the world, is facing the international crisis. Thus, by this year, we expect a fall between 15% and 18% in our export earnings. This is explained by two main reasons. First, sawnwood and moulding exports fell more than 10% in 2008, due to wear. As a result, several sawmills went bankrupt, mostly small and middle-sized businesses, and many others are running at operating rates of 70% or less.

Sawmills have slashed about 4,000 employments since 4Q08 and in the beginning of this year, more than 1,500 employees have taken collective holidays, due to temporary reductions in level production.

A second reason is the continuous drop of pulp prices, which has lost more than 35% of its value from mid 2008 through 1Q 2009.

On the other hand, in mid 2008, the native forest law was promulgated, which is expected to promote the native forest sustainable management. Thereby, a new productive source is available to utilize. Chilean studies estimate that extracting only 60% of the forests growth, about 9 million of cubic meter could be available for energy generation. All this could benefit approximately 50,000 small and mid-sized native forest owners.

Finally, at the end of 2008, CORMA worked with the Government in preparing a brief submission in regard to planted forests and their contribution to the fight against climate change via CO₂ sequestration. This document was sent as a Chile's viewpoint, to the AWG-KP of the UNFCCC.

WHAT ARE THE MOST IMPORTANT BUSINESS DEVELOPMENTS WITHIN YOUR INDUSTRY OVER THE LAST YEAR?

During 2008, continuing with its trade agreements policy, Chile signed a Free Trade Agreement with Australia, which starts in March 2009. With this agreement, 97% of the products will be free of taxes, and it will rise to 100% by 2015. In addition, three negotiations for free trade agreements continue in course; Malaysia, Vietnam and Turkey.

In mid 2008, the Government of Chile presented the New Environmental Institutionality Law Project, which intends to replace the current structure.

Much of the industrial sector believes that change will make more difficult and slow approval of projects, in their environmental aspects, weakening national economy with no actual improvement of the environmental management.

The new law will create new Departments and Services (Ministry of Environment, Environmental Evaluation Service, Environmental Superintendence, among others) affecting negatively the development of industrial projects, entrapping environmental approval processes.

What new information do you have on the socio-economic contributions of the forest industry in your country?

Exports of forest-based industry in 2008 amounted to US\$ 5,445 million, 9.8% more than 2007. It means that forest industry contributed with a 7.8% to the whole exports of Chile.

Forest-based Chilean industry employed more than 125,000 people in 2008, and it is estimated a similar number of indirect jobs. If we consider the workers and their families, more than a million of people live from forests in Chile. In addition, most of the forests are located in south-central and south of Chile, mainly in rural areas. It promotes decentralization and stimulates economy and well being in poorer provinces of the country.

Promoting a continuous improvement of safety and timely preventive actions, the accident rate of CORMA's member companies has been increasingly reduced, reaching an average of less than 2% by mid 2008. In addition, CORMA has been developing a voluntary system of Competence Certification, which allows evaluating a worker's capabilities, knowledge and aptitudes to perform certain tasks, as a result a certificate is

issued stating his/hers working competence by the entrepreneurial association and recognized in the labour market. Last year it reached a new record, bestowing 4,770 certifications. Since 1994 more than 25 thousand certificates have been issued to nearly 20 thousand workers.

Regarding social contribution of the forest industry, main companies of the country have carried out manifold activities, focusing on generating jobs, productive development and raising education levels in communities in the vicinity of plants and forest lands. By way of illustration, in 2006 about 70 companies invested more than US\$ 4.3 million in this kind of activities.

Recently, in answer to a foreseen increase in unemployment, because of the international crisis, CORMA proposed specific actions to the Government of Chile, for creating new employments through afforestation. To achieve this goal, it was proposed, among others things, to extend the reach of Decree Law 701 for forestry development, incorporating more potential beneficiaries and improving the amount of rewards. As a result, Government incorporated these proposals in its action plan, recognizing the role of forest industry in the employment generation. These measures will provide work precisely in months with high rate of rural unemployment and major beneficiaries will be small and mid-size forest owners.

FINLAND

In 2008, the Finnish forest industry has been forced to adjust its operations level to the raising energy and raw material costs, weakened market situation, and reduced use of Russian wood due to the unprofitability of the import and the export tariffs Russia has announced.

Emerging issues facing the industry in Finland (e.g. national political situation, climate change, water, illegal logging, SFM certification, energy market reform etc.)

EU's renewable energy and climate targets increase competition of wood

The EU set a target for Finland in which 38% of all energy must be derived from renewable sources by 2020. The present level of renewable energy in Finland is 28.5%.

The Finnish forest industry can contribute to reaching the target by tripling the use of forest residues (branches, tree tops and stumps). This would form a significant share of the needed increase in renewable energy. The increase is a challenging, yet still attainable objective.

Direct subsidies to the energy use of wood would distort the raw material markets. Safeguarding the raw material use of wood supports the goal of increasing the share of renewable energy as the forest industry is by far the largest producer and consumer of renewable energy in Finland. Nearly 70% of Finland's renewable energy is generated by the forest industry. Harvesting residue, wood bark and other wood unsuitable for processing is used to produce more than 20% of all the energy produced in Finland; this figure is more than five times the EU average.

To attain the overall EU energy and climate targets, however, all renewable and low-emission energy sources need to be developed further.

More domestic wood needed on the market in the long run

Annual growth in Finland's forests is almost 100 million cubic metres. Finnish Forest Research Institute calculations show that 72 million cubic metres of wood per year could be harvested without jeopardizing sustainability. The actual amount harvested in 2008 was about 53.5 million cubic metres.

In Finland, forest industry production is based on the domestic supply of a raw material coming from sustainably managed forests. Over 80% of the wood raw material that the industry uses is procured from privately-owned forests, most of which are the property of ordinary families.

Close to 90% of Finland's forests are certified, which means that practically all forests outside conservation areas are certified. Finland mainly uses the PEFC but FSC system is also used. The Finnish PEFC-standards are being updated in 2008-2009. The Finnish FSC-standard is presently being updated.

Finnish forest industry companies have reduced the share of imported timber in their raw material supply in preparation for increased Russian roundwood export duties. It is not possible to replace all imported timber with domestically sourced raw materials, however, because sufficient quantities of birch, for example, are not available in Finland. Companies have been forced to look for substitute raw materials and, in some cases, to switch the raw material used in their production lines from birch to softwood species.

For many years, Finland's forest industry has been an important partner for Russia in the development of the Russian forest sector.

The most important business developments within the Finnish forest industry over the last year (e.g. economic situation, legal developments, investments etc.)

Overall deterioration in industry business cycle in Finland

The Confederation of Finnish Industries EK's Business Tendency Survey conducted in January 2009 revealed a dramatic weakening in the business situation of Finnish companies at the end of 2008. The current situation is characterised in almost all sectors as significantly weaker than normal.

Expectations for the first half of the coming year are also dismal. The most pessimistic outlook is in construction. Declines in production volumes are expected across the board in different sectors.

The rapid deterioration in the business situation has been negatively affecting profitability in all main sectors.

Global economic slump effects on forest industry - Production contracted towards end of 2008

The downturn in the global economy in the latter part of the year 2008 substantially weakened demand for all Finnish export industry products. Forest industry companies had to cut production in several countries. The weakening export demand has serious impact on Finland especially as some 90% of the domestic paper and paperboard production is exported. The sawmilling and wood products industries export 60% of their production.

The exceptionally uncertain economic situation calls for a rapid ability to adjust as well as for measures to improve productivity and competitiveness. As export demand wanes, the significance of cost competitiveness is further emphasised.

Because the greater part of the forest industry's production inputs are sourced in Finland, it is vital for the industry's competitiveness to keep domestic cost developments under control.

Gross value of Finnish forest industry production was €20 billion in 2008

In the fourth quarter of 2008, the volume of forest industry production in Finland was about 15% lower than in the corresponding period of 2007. Total forest industry production in 2008 fell by about 10% compared to the previous year.

The gross value of forest industry production fell by about 12% to slightly less than €20 billion. The industry's exports fell by more than 10% from the corresponding period of the previous year. The value of the Finnish forest industry exports was estimated to decline to €11 billion euro in 2008.

Reduction in operations, intensified efforts in R&D and innovations

Finnish forest industry is going through a structural change and is seeking new strengths through research and innovation with simultaneous efforts to improve the cost competitiveness of the current products. The development of new manufacturing technologies, new products and new ways to organize production are all necessary forms of innovation.

In spring 2007, the forest industry together with equipment and chemical manufacturers, two research institutions and four universities launched a strategic centre of expertise, Forest Cluster Ltd. The new innovation boosting company has launched its first research programs comprising of projects related to resource efficient production technologies and development of biorefinery concept.

The wood products industry published a common research strategy in late 2008. With the help of a common strategy and by establishing a joint R&D organization the companies aim to create a broader, competence-based foundation for the sector as well as to provide support for the generation of new, robust business activities for the industry in Finland.

High level working group to prepare measures to improve the long-term operating conditions of the forest industries in Finland

In the end of 2007, the Prime Minister appointed a working group to prepare proposals for measures to improve the long-term operating conditions of the Finnish forest industries and the forest sector, including proposals for immediate action to secure the supply of timber in Finland.

According to the working group's vision wood is a valuable, renewable and recyclable material that is suitable for a wide range of various uses. In the global economy, wood represents a significant national source of added value and its sustainable utilization will contribute toward solving the climate, environmental and energy challenges.

The working group proposed a comprehensive development program covering the entire forest sector. Three priorities were chosen: the development and utilization of forest resources; an increase in the added value available from wood; and the creation of operating conditions conducive to competitiveness. The point of departure in the development program was that the success of the Finnish forest sector will be based on a high level of competence, technology, innovations and the competitive edge provided by the forest cluster. Global demand for wood-based materials, now intensified by climate, environmental and energy concerns, will create favorable conditions for the implementation of such a strategy.

New information on socio-economic contributions of the forest industry in Finland (e.g. formal and informal employment, health, education, poverty alleviation etc.)

Active support to areas of structural changes

The production of Finland's forest industry rests on a domestic supply of renewable raw material. The industry uses a higher percentage of domestic production inputs than any other sector, which highlights its importance for the national economy. Forestry and the forest industry are especially important for sparsely populated rural areas by offering jobs and income.

Decisions to adjust operating capacity to the changes in demand have affected several locations in Finland where the forest industry has been one of the most important industrial employers. These areas which have faced significant regional economic effects have been named "areas of structural changes" by the Finnish government. These areas are entitled to well-targeted support and actions aiming to recovery of the local economic activities and creation of new jobs.

New basic qualification for the process industry to be introduced in autumn 2010

The new educational basic qualifications for the process industry that has been introduced in Finland will unite the earlier vocational basic diplomas of the paper, panel, sawmilling and chemical industries. The new qualifications will be taken into use in August 2010 in all secondary level institutions that provide education in the above mentioned fields.

The new qualifications have the aim of promoting the development of versatile skills and this will make graduates more prepared for work in the different tasks and competence requirements of the forest industry than earlier training programmes did. The first graduates will be leaving school in 2013.

FRANCE

EMERGING ISSUES FACING THE PULP AND PAPER INDUSTRY IN FRANCE

Issues specifically connected to the French political agenda influential on the pulp and paper industry are:

- **Environmental regulation:** the multi-stakeholders discussions on environment (Grenelle de l'environnement), has delivered two pieces of regulation during 2008, not yet formally adopted (one is on the verge of being approved by the MPs, the other will be discussed by the parliamentarians during the spring). Some provisions of these regulations will 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 trucks, mandatory decrease of the paper consumption in the State offices, environmental labelling of consumer products,....
- **Terms of payment.** A piece of regulation adopted in August sets up a maximum duration for the payment (60 days as of the release of the invoice). This modifies how payments are undertaken between suppliers and customers.
- **Regarding the electricity market,** energy-intensive sectors have welcomed the approval by the European Commission of the consortium set up by a pool of electricity purchasers (among them are p&p companies, but also, steel, aluminium, and chemical companies). This pool (Exeltium) has nevertheless not started yet to be operational. Regarding the organisation of the electricity market, all industry associations are waiting for the outcome of a Commission set up by the government with the objective to propose a market organisation taking into account the existing system of fixed prices and an open EU electricity market.
- **Changes of some aspects of the tax system.** French business associations criticise for many years a tax based on the material assets of a company. This tax ("Taxe Professionnelle"), all the more important that the tax paying company is capital intensive, deters investments and is acknowledged by many politicians as "silly". The long announced reform of this tax is now on a good track, but many uncertainties remain on the future mechanism that will be implemented (carbon tax? Tax based on value added?).

Some issues derived from EU policies are also of paramount importance, but will not be presented any further in this report:

- Adoption of the "energy-climate" package by the EU institutions in December 2008 (with two main directives, one on the trading of CO₂ allowances, and the other on the development of Renewable Energy Sources);
- On going discussions on the FLEGT regulation;
- Check-up of the Common Agricultural Policy (with consequences on the "starch restitution" regime).

Most important business development

Like the world economy, France has been struck by the economic crisis and the p&p industry as of course been severely affected by the deterioration of the situation during the second half of 2008. French GDP growth should be close to 0.7% in 2008, but following a severe contraction in GDP in Q4 2008, a major setback is still expected 2009, given the historically low levels hit by the majority of business climate indicators and the continued fall of industrial production. Economic forecasts institutes envisage that the contraction in GDP will continue at least until the middle of the year before a fledgling and fragile recovery. The upturn will be favoured by a combination of factors: consolidation of international trade, measures to boost the economy and stock effects. However, it will remain hostage to a number of unpredictable events – notably the time needed to shore up the balance sheets of banks in countries where the financial crisis is extremely harsh. Growth is expected to emerge at -1.4% in 2009, which represents by far the deepest recession since the end of the Second World War.

In this dull context, regarding the business profile of the pulp and paper industry in 2008, noticeable features are:

- Decreased consumption of paper and board (+ 4.0%) down to 10.68 million tons.

- Decreased production (- 4.2%) amounting to a bit less than 9.5 million tons, as a consequence of 7 mills having shut down and a reduced production particularly during the 4th quarter of the year. The closure of these mills represents a capacity of 6% of the production capacity.
- Decreased imports (- 2.2%) and exports (- 2.2%).
- A decrease of the price index of the different grades. This index (100 = average for 2000) has reached the value of 96.6 at the end of 2008. Between January and December 2008, the index has decreased of more than 5% (but the various paper grades have different price evolutions).

Regarding investments, opportunities will be given to four mills that have been selected in 2008 by the government as producers of biomass-based electricity producers.

Socio-economic contribution the pulp and paper industry

It is obvious that the pulp and paper industry, as any other industries, 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. Nonetheless, in the context of mills closure, the number of employees in the industry is on a decreasing trend.

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 2008

The German economy was affected by the international financial crisis in the second half of 2008. The real gross domestic product was up only 1.3% after growth of 2.5% in 2007. The decline was driven by a drop in both external and internal demand.

In the first half of 2008 the German economy was still benefiting from its competitiveness on the world markets and exports of industrial products. But demand declined rapidly in the second half of the year. Nevertheless over the year exports still grew by 3.9%. Consumer spending remained at the same level on average.

The increasing recession has not so far had a dramatic effect on the labor market, as many industrial companies try to keep their staff on a short time work basis. But in January 2009 alone about 380,000 jobs were lost. However the unemployment rate that month was still lower than in the same month of the previous year.

The Federal Government expects a decline in economic growth of 2.2% in 2009. Nevertheless it has introduced a large-scale economic stimulus package and the economy – thanks to structural reforms in the recent years – seems to be better prepared than in the last economic cycle.

Performance of the pulp and paper industries in 2008

Germany's paper-grade pulp production declined by 3% to 2.9 million tons in 2008, with 1 Mio tons being exported. Most of the pulp used in German paper mills came from other countries. Some 5.1 million tons of paper-grade pulp were imported.

The German pulp and paper industry developed similarly to the economy as a whole in 2008. So even in quantitative terms, it was not a successful year. For the manufacturers of paper and board in Germany, 2008 brought a 2% decrease in production to 22.8 million tons, after it had increased by as much as 2.3% in 2007.

Germany's total capacities did not increase in 2008 on average, the decline in production leading to lower utilization of paper machines. Capacity utilization was down on average from 97 to 95%.

The backlash caused by the current crisis has led to several company insolvencies and the closing of isolated operations. This could present possibilities for consolidation and reduction of overcapacities. Nevertheless with the 2008 record result, the German pulp and paper industry remains no. 4 worldwide, after the US, China and Japan, and no. 1 in Europe.

Apparent paper consumption declined by 1.7 % to 20.5 million tons. Since imports dropped down by 1% to 11,7 million tons, the import rate rose to 56,9%.

The earnings situation in the German pulp and paper industry has become even more unsatisfactory. Although the erosion of paper prices has come to a halt and, in the case of some paper grades, prices are up again, 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 5% and a pre-tax profit of 0% in 2008. In 2001, cash flow was 18%, and profit stood at 11%. For the capital-intensive pulp and paper industry, the 2008 earnings figures were again far from adequate.

SPECIAL ISSUES

Emission trade

The recent decision of the EU Commission to gradually impose full-scale emission trading by 2013 still does not make it clear whether the paper industry will be able to fulfill carbon leakage criteria. Installations in sectors or subsectors exposed to a significant risk of carbon leakage will be allocated 100% of allowances free of charge at the level of the benchmark of the best technology available. The final decision will be made in 2010 and will be based on the criteria of intensity of trade and the expected increase in production costs with full-scale emission trading. If introduced without carbon leakage exemptions, full-scale emission trading would cost the German pulp

and paper industry more than five times 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. The unlevel playing field that this would again produce in Europe will ultimately harm European competitiveness. 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% compared to 2005, not by 100%.

Bioenergy

The recent adoption by European governments of the climate package, including the proposal for the EU Renewable Energy Directive, sets the target of increasing the share of renewable energies in total energy consumption up to 20% in 2020. To this end, each member state has to prepare a national renewable action plan by 2010 showing all measurements for reaching the national targets.

In 2007 the share of renewable energies in total energy consumption in Germany was 8.6% (biomass: 5.6%). It is not certain whether increasing the amount of solid biomass in energy consumption will be possible in view of the alternative of using wood as a raw material.

Reliable surveys predict that the demand for wood in Germany will increase by up to 142 million solid cubic meters in 2010 (an increase of 15% compared with 2007). In Europe the wood supply and demand situation will be similar in the future.

The German and European pulp and paper industry is concerned about a possible shortfall in European wood supply of at least 260 million solid cubic meters per year in 2020, which would endanger forest-based industries. The pulp and paper industry therefore proposes to increase the mobilization of wood resources and the planting of wood for energy. Furthermore the use of wood as a raw material first and then for energy production is essential if competition between the two sectors is to be reduced.

With regard to the EU biomass action plan, which was presented in December 2005, the German government is currently developing national action plans for the use of biomass for sustainable energy supply and as a raw material. Both drafts are currently being considered by national stakeholders.

Code of conduct

After the European Pulp and Paper Industry Federation adopted its code of conduct against illegal logging, national paper industry associations started to monitor the origin of pulp and wood imports to their member companies. A recent VDP survey (wood and pulp supply of German pulp and paper mills in 2007) revealed that proofs of origin were available to document that 100% of wood and 84% of pulp came from legal sources.

GERMANY FIBRES FOR THE PRODUCTION OF PAPER AND BOARD (1.000 tons)

	2007	2008 (e)	2008 : 2007 in %
CHEMICAL Pulp for Paper Production	1.545	1.520	-1,6
- Exports	842	905	7,5
+ Imports	4.708	4.819	2,4
= App. Consumption	5.411	5.434	0,4
MECHANICAL Pulp for Paper Production	1.456	1.383	-5,0
- Exports	135	96	-28,9
+ Imports	263	285	8,4
= App. Consumption	1.584	1.572	-0,8
Recovered Paper Collection	15.907	14.884	-6,4
- Exports	3.546	4.255	20,0
+ Imports	3.631	3.717	2,4
= App. Consumption	15.822	15.422	-2,5
FIBRES in total App. Consumption	22.817	22.428	-1,7

(e) = estimated

GERMANY PAPER AND BOARD(1.000 tons)

	2007	2008 (e)	2008 : 2007 in %
Production	23.319	22.848	-2,0
Exports	14.241	14.014	-1,6
Imports	11.795	11.685	-0,9
App. Consumption	20.873	20.519	-1,7
Export Quota	61,1	61,3	
Import Quota	56,5	56,9	

(e) = estimated

HUNGARY

In 2008 the performance of the Hungarian economy was determined by the internal balance-improving efforts and measures on the one hand, and the spillover effect of the crisis on the real estate market reaching Hungary mainly in the second half of the year, followed by the impacts of the financial and economic crisis that has spread on a global scale on the other hand. For the whole of the year the growth rate of the Gross Domestic Product was down to 0,6% from 1,1% in the previous year. On the production side decreases or stagnation were observed in the areas sensitive to external market processes. Consumer prices increased by 6,1% and unfavourable changes were observed also on the labour market: the unemployment rate rose by 0.5 percentage point to 7.9%. The deficit of current account and the external financing demand significantly increased.

Pulp

The only pulp mill produced last year 20 thousand ton pulp from flax. All this quantity was exported.

Paper

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

thousand metric tons

	2004	2005	2006	2007	2008
Production	579	571	553	552	424
Export	307	389	366	356	354
Import	659	697	758	775	840
Consumption	931	879	945	971	910

In line with the weak performance of the Hungarian economy, the paper consumption decreased by approx. 6%.

Also paper production declined last year by 23%, due to the fact that in 2008 two paper mills closed down its production. With this measure a production capacity of approx. 160 thousand tons has ceased in the country.

The enlargement of the production capacity of the Dunapack Ltd. started in 2007 continued also in 2008. The new paper machine with a finished reelwidth of 7800 mm will produce 350.000 tons of brown testliner and corrugating medium from 100% recovered paper in the range of 70-150 g/m². It will start the production in July 2009.

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

	2007 000 tons	2008 000 tons	2008/2007 %
Total paper and board	552	424	76,8
Newsprint	0	0	0
P-W paper	117	18	15,4
Sanitary and household paper	39	28	71,8
Linerboard	98	91	92,9
Fluting medium	207	189	91,3
Kraft wrapping and packaging	14	9	64,3
Other paper and board	77	89	115,6

For this production the country used 387 thousand tons of recycled paper reaching a utilisation rate of 91%.

The major emerging issues that the industry has to face in Hungary are:

- high energy costs
- weakness of domestic and external paper demand
- unstable currency exchange rates

INDIA

General

Global meltdown of the financial sector has its impact on the Indian scene too, though not as severe as the advanced economies, primarily due to the country enjoying a better growth picture as compared to the world average, largely on account of about 85% of the GDP finding local utilization with a unique scenario of the economic reforms showing better support to the growth plans even with a growing human population. The downturn impacts are more in the form of shrinkage of demands with export volumes coming down and a need to exercise maximum conservationist approach in the prevailing business environment. The Government of India as well as the central bank of the country have been quite alert in arranging a slew of packages to stimulate demands and bringing down the interest rates etc respectively.

Forestry and Wood resource

Nevertheless, there is hardly any respite on the pressure on the forest produce with about 41 percent of the forest cover in the country already being 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.

Thus, apprehension of scarcity of wood will be there. The annual fuel wood requirement in India is estimated to be about 200 million tons. Considering the capacity expansions of the wood based industries in the country, requirement of woody raw material in years to come would continue to grow faster. 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.

Pulp & Paper Sector

The pulp & paper industry is particularly plagued by inadequate availability of quality raw material. 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 fiber needs to quite 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 absence 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 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, the mechanism of which does not permit participation of private industries in afforestation.
- Government's Tribal Rights Act – Produce in the forest lands produced by the inhabitants of the forests (the tribals) are now accepted under this Act. This creates further pressure on natural forests.

New Mechanism for Resource Mobilization – Multi Stakeholder Partnership (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

However, with the country currently in its general election mode, this initiative cannot be pursued as per the Code of Conduct during this period till a new Government takes office.

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 on for environmental improvement. 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.
- 90 000 ha. of plantation with a potential to sequester 12 million tons of carbon, reducing 43 million tons of CO₂ 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 CO₂ 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.
- Emami Paper Mills – Have developed a reliable system to burn the primary sludge from the ETP in the AFBC Boiler thereby not only solving the solid waste disposal problem, but also saving fossil fuel (coal) by harnessing the heat value of the sludge. About 150000 CERs over a period of 10 years shall be generated by this process which is the first of its kind in the country.

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

- (1) 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 criteria 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.
- (2) Research work taken up to control diseases and pests by Semio-chemical, biological control on out-break of the pests which are reducing survival and productivity of Eucalyptus plantations. Forest Research Institutions, Agricultural Universities and the Indian Council of Agricultural Research along with Indian Paper Manufacturers Association (IPMA) have drawn up a plan and strategy on control measures as well as introduction of new germ plasm (species) in order to fight this menace so as to ensure availability of wood based raw material on continuous and sustainable basis.

JAPAN

Emerging issues facing the Japanese pulp and paper industry

1. **Worldwide economic recession triggered by subprime crisis in the U.S. has been severely affecting the Japanese economy. The recession caused significant decline of domestic demand for paper and paperboard, which forced paper manufacturers to curtail production in order to balance supply and demand.**

Domestic shipments of paper and paperboard in 2008 decreased by 3.0% from 2007. Especially, shipments for the fourth quarter of 2008 dropped by 12.1% compared to the same period of the previous year. It is forecasted that sluggish demand will continue through 2009 due to the continued economic slowdown, and JPA forecasts that domestic demand for the year will drop by 8.0% from 2008 to 28,256 thousand tons, that was a similar to the level in the year of 1993.

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 achieving the following targets:

- On a five-year averaged basis from fiscal 2008 to fiscal 2012, reduce fossil energy consumption per unit and CO₂ emission per unit derived from fossil energy by 20% and 16% 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.

In 2008, Japanese government launched the scheme “experimental introduction of an integrated domestic market for emissions trading”. Total number of participants in the scheme is 501 companies and organizations, of which ten participants are pulp and paper companies. So far the trial of this emission trading has not started yet.

3. **Corporate Social Responsibility**

In the beginning of 2008 there was news in media about falsified recovered paper content between actual and specified number in paper product. In order to regain credibility from users we established verification system including auditing by customers and third party, and already started the operation.

Japanese pulp and paper industry's economic/business performance for 2008

- Japanese economy in 2008
 - Real GDP growth rate for 2008 is negative 0.7% (preliminary results).
- Performance of the Japanese pulp and paper industry in 2008 over the previous year.
 - Paper and paperboard production decreased by 2.0% to 30,625 thousand tons.
 - Domestic shipments of paper and paperboard fell by 3.0% to 29,322 thousand tons.
 - Imports of paper and paperboard dropped by 6.1% to 1,291 thousand tons.
 - Exports of paper and paperboard rose by 5.0% to 1,454 thousand tons.
 - Recovered paper consumption decreased by 1.6% to 19,006 thousand tons, while utilization rate rose by 0.4 points to 61.8%. Recovered paper recovery rate grew by 0.6 points to 75.1%. Both rates are the highest numbers in the record and main reasons are due to time lag between collection of recovered paper and shipment of paper and paperboard, and more reduction of paper that utilize less amounts of recovered paper comparing to paperboard.
 - Recovered paper exports dropped by 9.2% to 3,491 thousand tons, of which 2,925 thousand tons were shipped to China accounting for 83.8%.

NEW ZEALAND

EMERGING ISSUES

Climate Change policy

Climate Change will generate major changes for New Zealand forestry. These will not only relate to the impacts of climate change on growing conditions and forest management through enhanced risks from fire, wind and pests, but also to the various mechanisms being put in place globally to enhance forestry's contribution to climate change mitigation.

The domestic climate change policy for New Zealand announced last year has stalled as far as its potential to stimulate forestry. The new government elected at the end of 2008 has required the Emissions Trading Scheme (ETS) to be reviewed by a special select committee of Parliament. The new National (centre right) government is committed to retaining measures to address New Zealand's Kyoto obligations, but will be reviewing the extent and timing of emissions reductions. That said, the FOA considers that an Emissions Trading scheme will be retained. Indications are that a modified ETS will be implemented late 2009.

Although there is uncertainty surrounding future policies and mechanisms addressing climate change, opportunities should still arise from the:

- Generation of carbon credits from forests under an ETS, with likely effects flowing onto species choice, management practices and regime length;
- Greater demand for wood as a sustainable substitute to materials that produce intensive greenhouse gases;
- Enhanced viability for using woody biomass as an energy source arising from increasing demand for sustainable fuels and the implementation of an ETS.

An ETS will have significant implications for the forestry sector. The currently enacted, but being reviewed, ETS is the first internationally linked domestic emissions trading scheme where forest sinks can be used by emitters to meet obligations to surrender units. 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. As it is likely changes will be made to the ETS, and it is not known when or if other sectors will be included, this has understandably created investment uncertainty in the sector, particularly the market for carbon which has seen a number of pending deals fall over or be postponed. 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.

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, 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. However, both these schemes have had limited success in attracting investment in new planting.

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 in the same location the owner gains neither credits nor debits. If the same forest, absorbing the same amount of carbon, is relocated however the owner still receives no credits but is instantly 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 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

1 hectare of radiata sequesters approx 25 tonnes CO₂ per year. So NZ plantation forests sequester approx 45 m tonnes of carbon per yr. (Source: NZFOA Facts and Figures)

Water

New Zealand now faces real challenges, of varying degrees and causes across regions, in ensuring there is sufficient water in our lakes, rivers, and aquifers; protecting freshwater ecosystems, in limiting and remediating degradation of water quality; and in ensuring that society gains the greatest benefit from the allocation of available water.

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 forest cover 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. Restrictions on establishment of forests based on water yield considerations usually ignore the positive benefits that forests can have on water quality (less sedimentation, reduced peak flows, less chemicals compared with some alternative land uses) and on other factors such as reduced soil erosion and greater carbon sequestration and storage;

Water quality issues are also emerging, largely attributable to an intensification of agriculture. About 30 percent of the country's lakes are considered likely to have poor water quality due to excessive nutrient levels. One third of the monitored groundwater has elevated nitrogen levels and 20 percent shows signs of contamination with fecal matter. However, streams draining indigenous forests and maturing plantation forests generally have high water quality and low concentrations of nutrients and suspended solids.

A key issue for non-forested land 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 has proposed a National Policy Statement for Freshwater Management. However, the NZFOA considers that the NPS should be withdrawn unless the focus on “Land Use Development” is changed to “Land Use”. The challenge for the Proposed NPS is to address the quality and quantity of freshwater resources in New Zealand. Logically it would seem that the focus needs to be on takes, uses and discharges to water as opposed to focussing on land use or land-use development. Reference to, and the concept of, land-use development which is central to the NPS as currently drafted is flawed. The proposed definition of land-use development lacks clarity and creates uncertainty.

An NPS should treat water polluters equitably, regardless of whether they are existing water users or proposed. The underlying basis, as is the case with the Resource Management Act when it is correctly applied, should be for the polluter to pay.

Drug and Alcohol Code of Practice

The forest industry has agreed to work toward an accident-free workplace. In doing so, we recognized that because of the threat they pose to health, safety and performance there was no place in our workplaces for people affected by drugs and alcohol. Several years work has culminated in the production of a significantly enhanced NZFOA Drug and Alcohol Code of Practice.

The 2008 Code of Practice is a further step toward an accident free industry. It is intended for adoption by all forest owners and industry employers, as part of a campaign to ensure that drug and alcohol abusers are not permitted to compromise the health and safety of their co-workers and themselves.

The Code is a quality management program with three main elements: education, drug and alcohol testing of all workers in safety sensitive positions and rehabilitation. All these elements are essential if the program is to be effective, lasting and compliant with NZ law. As a Code of Practice, it has similar status in law to a NZ Standard. As such, all forest owners have been advised to adopt drug and alcohol policies based upon the Code.

Biosecurity Funding and Decision-Making

As part of the development of a new Biosecurity Surveillance Strategy the Ministry of Agriculture and Forestry (MAF) is reviewing who should decide whether an exotic organism is contained or eradicated, and who should pay. Industry representatives are working with MAF representatives on a proposal for joint decision making and resourcing. It is proposed that MAF and affected industries would make significant strategic, financial, and operational decisions jointly for specific readiness and response activities.

The forest industry has welcomed all proposals to more formally involve the primary sectors in preparing for and dealing with incursions. The following principles have been incorporated into the draft agreement:

- there can be circumstances where it would be appropriate for an industry to contribute to an incursion response
- exacerbators are expected to be identified where possible and made to contribute in any response
- the efforts of the industry to prevent or minimise the impact of an incursion through surveillance, research etc, are to 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 was recently subject to an independent review and achieved a glowing report.

Certification

Independent third-party certification has continued to grow – with 55 percent of the 1.8 million hectares of plantation forest area in New Zealand 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. In total this represents around 1 million hectares.

In addition, information supplied from NZFOA FSC certificate holders in New Zealand shows that around 50% of the volume produced by forest growing companies (9.8 million cubic metres) 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, buddlejia, 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

Wood has a great story to tell as a renewable resource with relatively low embodied energy. The NZ Wood program (jointly funded by industry and government) was launched towards the end of 2007. This marked the first promotional phase of presenting the environmental credentials of NZ 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 “Association of Associations” 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 over the last year 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. Additional NZ Wood resources are continually being added to the site or published, such as the recent release of television advertisements promoting timber use, to the publication of the “Living with Wood – For a Better World” pamphlet. To firmly secure wood’s place as a preferred environmental choice a sustained multi-year campaign is required.

INDUSTRY SITUATION

Production Forestry Sector

Today there are 1.8 million hectares of plantation forests, which cover 7 percent of New Zealand’s land area; 93% privately owned. Plantation forests are dominated by radiata pine (89 percent by area), with Douglas fir

accounting for 6 percent by area. With the maturing of the plantations established in the 1970's and 1980's, there is capacity to increase the sustainable annual harvest by up to 50 percent over the next 12 years.

The current New Zealand production forest sector operating environment is characterised by:

- An historically low level of new planting, although most harvested forests are replanted, as NZ Forest Owners struggle with low investment returns, high land costs, and lack of certainty in the legislative environment
- Harvest level significantly lower than available supply
- A negligible indigenous harvest, and all of it on a sustainable basis
- Domestic consumption of approximately 30% of the harvest, with this forecast to grow at a much slower rate than the volume available for harvest
- Processing in New Zealand of around 65% (roundwood equivalent) of the harvest
- Increasing importance of environmental management and social responsibility to consumers and the public. Non wood products supplied by forests are becoming more important, with the industry struggling to find a way to value these (water quality, recreation, landscape, etc) in a manner which provides a suitable return to the forest owner.

Unprecedented levels of deforestation that took place leading up to the start of 2008 have not reoccurred as owners have become liable for the carbon associated with these stands. In addition, the major driver for conversions, namely soaring dairy returns, is no longer as significant as dairy prices have significantly declined. Growing concerns about environmental sustainability mean that attention is increasingly focusing on the “environmental services” provided by New Zealand's forests. These are wide ranging and largely unvalued. They include the maintenance of biodiversity, the mitigation of soil erosion, the maintenance of water quality, the sequestration of carbon, landscape values and the provision of recreational opportunities.

New Zealand's geographic location and the cost of shipping ensures that the markets of the Asia-Pacific region will remain the focus for New Zealand's exported wood products for the foreseeable future. Development of high value products capable of competing on European markets presents a challenge in the current financial environment. Tight market conditions and investment uncertainty generated by the global financial crisis and the confusion around emerging climate change policies also means that forest planting remains subdued.

Economic situation

The US, UK, Europe and Japan have all entered severe recessions after the banking crisis of last year. Forecasts for world economic growth continue to be slashed. The global growth outlook for 2009 is worse than the recessions of the early 1970's, 1980's or 1990's. The New Zealand economy is set to slow markedly this year, as firms face a squeeze on profitability from the global financial crisis. In New Zealand, in the short term, it appears interest rates will continue to drop as the NZ Reserve Bank continues to set policy to stimulate the market.

Falling world demand has, and will continue to cause a decline in New Zealand's forest exports. A lower NZD will spread some of the pain for exporters, as will significantly lower shipping costs. Freight rates are expected to continue to be weak in the short to medium term but to come up off the uneconomic levels reached in the first 2 months of 2009. Slowing economies globally, in particular lower housing starts in New Zealand, Japan, Korea, Australia and the United States as the housing markets undergo a substantial correction, are already significantly affecting demand. Lower exports from countries such as China are also reducing the demand for packaging lumber. This has led to an oversupply situation in these markets, creating challenging market conditions, despite a weakening NZ\$ and shipping rates reaching historic lows.

On a positive note, in the medium term, trade benefits can be expected if New Zealand is successful in achieving a free-trade agreement with India. Initial benefits are likely to be an increase in processed wood exports, reducing the current domination of log exports to the Indian market. Also potentially very positive for New Zealand wood product exporters, the proposed Russian log tax, possibly moving from 25% to 80% in early 2010, will if it is implemented offer New Zealand log and lumber exporters, particularly to China, excellent opportunities to improve market share and prices.

Socio-economic contribution of the New Zealand Forest Industry

New Zealand's plantation resource is the foundation for NZ's wood processing industries, which include about 370 sawmills, seven pulp and paper mills, three medium density fibreboard (MDF) mills, three particleboard mills, six plywood and laminated veneer plants and about 80 remanufacturing plants.

In the year ended March 2008, 20.6 million cubic metres of roundwood were harvested in NZ, of which 99.9 percent came from plantation forests. About 70 percent of the harvested volume (roundwood equivalent) is exported, earning \$3.5 billion in the year ended March 2008, or approximately \$2,000 for every hectare of plantation forest existing in that year. In the same year, the forestry sector accounted for about 10 percent of the total value of New Zealand's export trade. The forestry sector directly contributed 3.8 percent to GDP for the year ended March 2008.

Forestry and sawmilling employed approximately 20,000 people in New Zealand as at February 2007. 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. Expansion of the harvest is dependent upon market demand which is likely to remain depressed until the current correction in the housing markets is completed, and global trade recovers – creating demand for packaging materials.

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 as 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. Forests are also important in maintaining water quality and management of erosion prone soils. 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

Luís Deslandes
Member of the Board, Portucel Soporcel Group

GENERAL ECONOMIC SITUATION

Throughout 2008 the effects of the turbulence in the world economy – namely the overall sharp increase in commodities prices - spread on to Portugal and by year-end it was officially recognised that Portugal had also joined the recession process that was hitting some of the major economies across the world.

The Portuguese GDP stagnated (0%) in 2008, and for 2009 the EU latest projections point to a drop of 1.6%, with exports retreating by 3.8% and imports contracting by 2.8%. Inflation stood between 2.6% and 2.7% in 2008 and is expected to come down to 1.0% in 2009.

Unemployment is thought to have reached close to 7.8% of the working population, and is set to further deteriorate in 2009 – to 8.8%, according to the latest EU forecast.

Emerging issues

The country has been governed since 2005 by an absolute majority of the Socialist Party, which showed a reformist drive towards certain sectors of the economy and society during the first half of its mandate. This impetus dwindled as from the end of 2007 and the first signs of the international crisis, in 2008, impacted a country that already showed indications of serious weaknesses on the domestic front. Three electoral acts will take place in Portugal in the second half of 2009: elections for the European Parliament, local elections, and parliamentary elections (which will shape a new Government).

In the areas directly related to the Forestry Industry, the Government has transposed into national law a series of directives and regulations, namely on water (creating a tax on water resources), the energy market (making a strong bet on renewable energies in general, with a certain emphasis on biomass) and social responsibility.

The Government has remained quite inactive on the issue of certification of sustained forest management – seen as a market instrument of exclusive interest to the economic agents – having proceeded to a third organisational reshuffling of the Forest Services Department in four years, significantly reducing its dedicated human and material resources. Hence the possible tertiarization of many of the activities currently under the State's responsibility, such as the management of public uncultivated woods ("baldios") held by the State or the local communities, being today a matter of public debate in the Portuguese society.

The economic agents have attentively followed the project (and the consequent amendments by the European Parliament) of a draft European Union Regulation on illegal logging, while the national official authorities failed to engage on any type of dialogue with them on this matter.

The position taken by the private sector is that illegal logging must be fought with effective instruments and policies, ensuring at all times that the new EU rules enforce a number of basic principles, namely viewing:

- a non bureaucratic process aimed at reducing the risk of illegal timber entering the economic circuits;
- the existence of a National Authority with the capacity to supervise this process in each Member State;
- acceptance of the principle that in the EU Member States it is always and primarily the responsibility of the respective national authorities to make sure that raw materials and forest products are legal;
- a process that does not erode the competitiveness of the European industries of forest products.

Business developments

Except for forest resources, Portugal lacks other autonomous or abundant natural economic resources and has therefore developed an open economy based on services and tourism, very dependent on the European economy. Consequently, its situation was not particularly healthy even before the current economic crisis, as there was in recent years a decline of industrial sectors whose competitiveness relied on low wages and poorly

qualified labour (such as the textile industry) as well as the closure of industries with an uncompetitive dimension or suffering from prior economic difficulties. The global crisis at the end of 2008 further aggravated this situation, and even in strong and traditional sectors such as cork there have been closures of plants and significant layoffs.

The pulp and paper industry has stood as an exception to this panorama in so far as the two largest groups operating in Portugal – both national – are pursuing important investment and industrial expansion plans. While the ALTRI group (the second largest) is increasing the capacity of its bleached eucalyptus kraft pulp (BEKP) mills from little over 350 thousand tonnes to more than 700 thousand tonnes, the Portucel Soporcel group (the largest in the country and in Iberia) will soon (August 2009) conclude the installation in its Setúbal complex of the world's largest Paper Machine with a capacity of 500 thousand tons of uncoated fine papers. All in all, these represent a total investment of around EUR 1.4 billion, whose only theoretical weakness lies in the low productivity and lack of dynamics of the Portuguese eucalyptus forest.

On the positive side, we would mention the low occurrence of forest fires in 2004 and from 2006 onwards: in fact, a fortunate combination of factors, namely, improvements in the national fire fighting and prevention system and excellent weather conditions, have spared the Portuguese forest from the devastating fires that ravaged it in 2003. As regards the Pine Nematode, which was detected in April 2008 in the centre and north of Portugal (spreading from the southwest, where it emerged in 1998), there is evidence that it is already present in Spain, along the border with Portugal.

Since April 2008 EU regulations require all pine products to be treated in Portugal, even domestic shipments. At European level it has been discussed whether all European pinewood should also be treated.

Socio-economic contributions of the forest industry

Despite some ongoing initiatives and surveys aimed at assessing the social and economic contribution of the forest industry to the national economy, the truth is that the last global estimates already date from some years back, pointing to 113 thousand direct jobs (2% of the working population), 10% of total exports and 3% of the gross added value (the forest industry's labour data were included in the 2008 meeting report).

With regard to the forest cluster, more recent surveys estimate a total employment figure of 228 000 people, i.e., 5.13% of the country's total employed population, broken down as follows

- Forestry, logging, hunting and related services –34 300 people
- Forest industries –69 300 people
- Other forest related industries –80 900 people
- Other forest related services –43 300 people

The economic relevance of the pulp and paper sector in the context of the Portuguese industry, is very high, as shown in the following chart from a recent survey.

NAV (National Added Value) ⁽¹⁾

Non metallic minerals	0.549
Wood and cork	0.548
Metallurgic	0.532
Pulp and paper	0.482
Textiles	0.465
Metal products	0.437
Clothing	0.429
Rubber and plastic	0.409
Food and beverages	0.404
Electric machinery and appliances	0.403
Chemical products	0.386
Leather and footwear	0.384
Machinery and equipment	0.329
Radio, TV and Communications equipment	0.285
Cars	0.266

(1) Increase in the value added to the country resulting from an increase of 1 unit in the production value

This survey also determined the following indicators regarding the environment friendly nature of main sectors of economic activity:

CO₂ emissions per GAV unit (Gross Added Value)

Cement	43.943
Glass and Ceramics	22.717
Base metallurgics	15.146
Pulp and paper	14.364 ⁽¹⁾
Chemicals, Rubber and Plastics	9.644

Note that the bulk of the energy consumed is produced by the sector from biomass, i.e., a non fossil carbon source.

This survey also concluded that the Pulp and Paper sector is not only of huge importance to the Portuguese foreign trade (accounting for nearly 4% of the national exports), but also one of the few industrial sectors with a positive contribution to the balance of trade, and one that, as described, shows a high national added value coefficient per unit produced.

RUSSIA

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.
Akim-ed@mail.ru

In 2007 and the first part of 2008, Russia continued to experience robust economic growth and in particular growth in Russian pulp and paper output. However in the second half of 2008 there has been a drastic change in the situation (Tables 1, 2, 3, fig.1). The growth in Russia's paper and paperboard output turned to the slump caused by the global economic crisis.

In this period of time Russia is characterized by political stability and economics transfer to decrease.

The export-oriented forest sector of Russia and prevailing raw material structure of exports have led to the fact that the global economic crisis has made great impact on the Russia's Forestry Complex as a whole. In late 2008 – early 2009, a drastic change took place both in the structure of exports of forest and paper products and in the internal market. The slump in industrial production in the countries – importers of the Russian round wood coupled with increased duties on exports has resulted in decrease in round wood exports mainly to Finland. Decreased consumption of convenience goods in U.S.A. and West Europe has led to decrease in their production in China and as a result to decreasing consumption of packaging paper and paperboard. The increase in market pulp stores caused by this fact has resulted in a drop of global market pulp prices and in simultaneous drastic shrinkage of market pulp exports from Russia to China. Reduction in kraft-liner exports to China has also taken place.

At the same time, because of significant changes in exchange rate of Ruble as related to Euro and USD (Table 4), competitiveness of a number of products has increased (office paper, newsprint, etc.) both in the internal and external markets.

In the last years, tissue paper was responsible for more than 20% of total paper and paperboard imports to Russia. The changed exchange rate of Ruble has contributed to increasing output of this paper grades in Russia. New capacities have been put into operation at the Syassky Pulp and Paper Mill in 2008 in Syktyvkar. It is planned to put into operation an enterprise of the SCA Company not far from Moscow.

The current economic crisis has actually produced a stoppage of a number of so called priority projects developed in the last years and oriented to in-depth processing of wood in a region of trees growth.

The important forest sector policy developments of 2004-2009 in Russia were as follows:

- Changing structure of forest and paper exports caused by the global economic crisis and changed exchange rate of Ruble as related to Euro and USD;
- Decision made by the RF Government in late 2008 about one-year delay in introducing a new level of export duties on round wood (new level of export duty on round wood in 2007-2009-2011, 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).
- Entry into force of a new Forest Legislation – Forest Code.
- 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.
- The use of space satellite monitoring for preventing illegal timber cuttings.
- 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.
- Shutdown of the Baikal's Pulp Mill.

Both demand and output of pulp and paper products increased in Russia through 2004-2007 and into the first half of 2008. However in the second half of 2008 there was a slump in production of both pulp and paper & paperboard. This setback in production has been continued also in January-February 2009 (Table 1, 2).

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%, the output of market pulp increased by 1.6%, and the output of paper and paperboard increased by 2.3%, including a 4.2% 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% of Russia's exports in 2006, while pulp and paper accounted for only 16.2% 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% of output for market pulp, and around 40% 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 USD). 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.

In present time the biggest Russian Enterprise produced 75% market pulp, 80% paper and 50% paperboard (Table 6). 25.10. 2006 was announced new alliance formation between "International Paper" and "Ilim Pulp Enterprise" – "Ilim Group". In October 2007 the Ilim Group started its activities and implementation of major investment program. The Ilim Group is planning to put into operation a neutral sulfite semichemical pulp plant of capacity 900 tons a day at the Kotlas Mill in 2009.

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 200 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 500 million USD have been put into reconstruction of the mill in recent years. Office paper produced by the mill supplies presently more than 60% of the Russian market demand. In addition, a new 200,000 tons per year aspen-based BCTMP pulp line beginning work in 2008, 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 International Paper Svetogorsk. 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.

Table 1
Output of pulp, paper and paperboard in the Russian Federation in 1988, 1996 – 2008 (thousand metric tons)

PRODUCTS	1988 (89)	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2008/ 2007,%
Chemical pulp total:	8331	3028	3170	3205	4225	4960	5272	5568	5764	5922	5933	6005	5973	5880	98.4
Market pulp	3076	1144	1169	1320	1722	2018	2136	2233	2311	2409	2419	2380	2421	2287	94.5
Paper and paperboard	8632	3236	3269	3426	4535	5300	5595	5921	6227	6619	6800	7145	7382	7466	101.2
Total Market pulp, Paper and Paperboard	11708	4380	4438	4746	6257	7318	7731	8154	8538	9028	9219	9525	9730	9753	100.2
Paper total including:	5465	2274	2179	2325	2966	3320	3415	3524	3682	3903	3969	4004	4084	3982	97.5
Newsprint	1693	1243	1201	1386	1622	1694	1732	1713	1814	1978	2007	1993	1982	1988	100.5
Offset paper	396	349	337	399	485	461	465	491	449	469	452	466	455	427	93.7
Paperboard total:	3167	962	1090	1102	1569	1980	2180	2397	2545	2716	2830	3141	3249	3483	105.6
Corrugated board	1639	610	775	760	1080	1356	1530	1711	1882	2090	2102	2332	2499	2699	108.0

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

Table 2
Output of Pulp, Market pulp, Paper and Newsprint in the Russian Federation in October 2008 – January 2009 (%)

Products	10.2008/10.2007	11.2008/11.2007	12.2008/12.2007	01.2009/01.2008
Chemical pulp total	92.0	78.3	76.0	68.6
Market pulp	94.5	54.3	70.7	67.5
Paper total	93.7	94.3	87.0	81.1
Newsprint	103.2	105.4	101.3	102.6

Table 3
Structure of Russian exports of forest-based products in 1990 – 2008

	1990	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
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	49,3	36,7
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	17,3	14,1
<i>In terms of round wood¹, million m³</i>	25,1	7,36	10,2	12,6	12,3	14,2	17,6	20,96	24,64	26,88	27,68	22,56
Market pulp, million metric tons	0,993	1,056	1,373	1,600	1,758	1,885	1,905	1,866	1,952	1,896	1,900	
Paper and paperboard, million metric tons	2,761	1,767	2,048	2,309	2,353	2,500	2,550	2,590	2,700	2,552	2,590	
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	4,448	4,490	
<i>In terms of round wood², million m³</i>	12,7	9,57	11,6	13,3	13,94	14,87	15,10	15,11	15,77	15,08	15,22	
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	92,20	
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	16.5	
Percentage of round wood exports	45%	54%	56%	55%	55%	56%	53%	53.5%	54.3%	54.8%	53.5%	

¹The factor 1,6 is used - source: UN FAO

²The factor 3,39 is used - source: UN FAO

Table 4.
Exchange rate of Ruble as related to Euro and USD.

Date	US \$ / Ruble	Euro / Ruble
01.08.2008	23.42	36.58
01.09.2008	24.58	35.23
01.10.2008	25.37	35.50
01.11.2008	27.10	34.40
01.12.2008	27.60	35.72
01.01.2009	29.39	41.43
01.02.2009	35.41	45.68
01.03.2009	35.72	45.35

Table 5
Exports of market pulp, paper and paperboard from the USSR (1980 – 1990) and from Russia (1993 – 2007), thousand metric tons

Year	<i>Market pulp</i>			<i>Paper and paperboard</i>		
	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
2007	2421	1900	78.5	7382	2590	35.1
2008	2287			7466		

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

Fig. 2. Exports of market pulp, paper & paperboard from the USSR and Russia, thousand metric tons

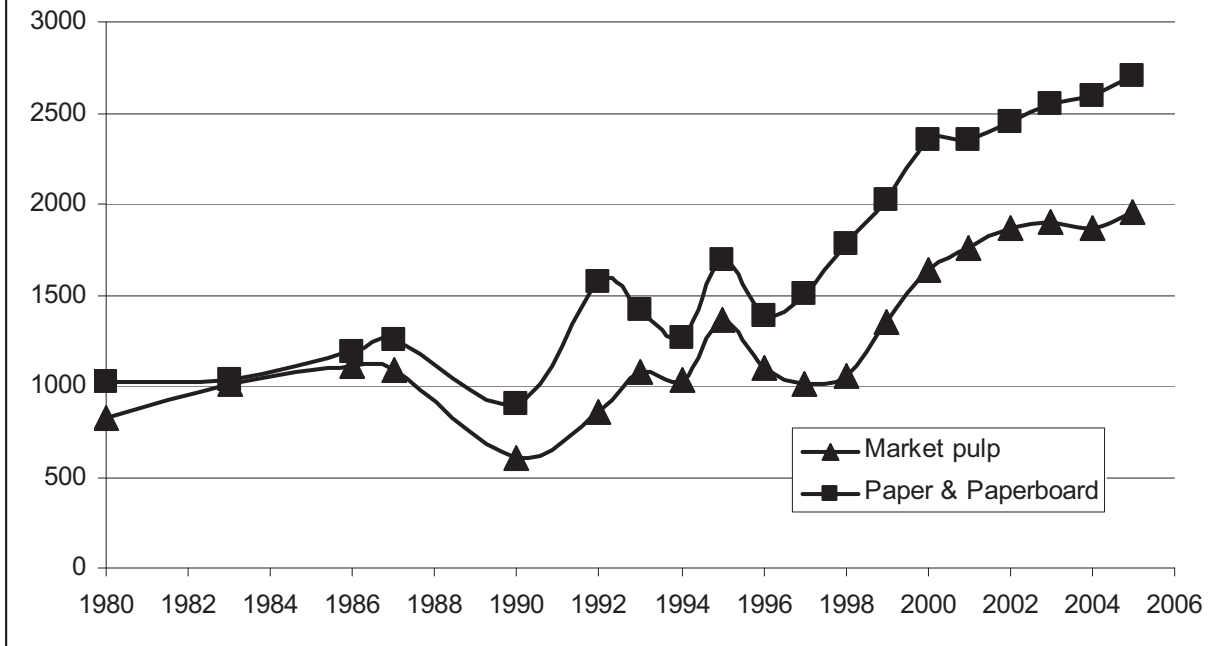


Fig. 3. Share exports of market pulp, paper & paperboard from the USSR and from Russia, %

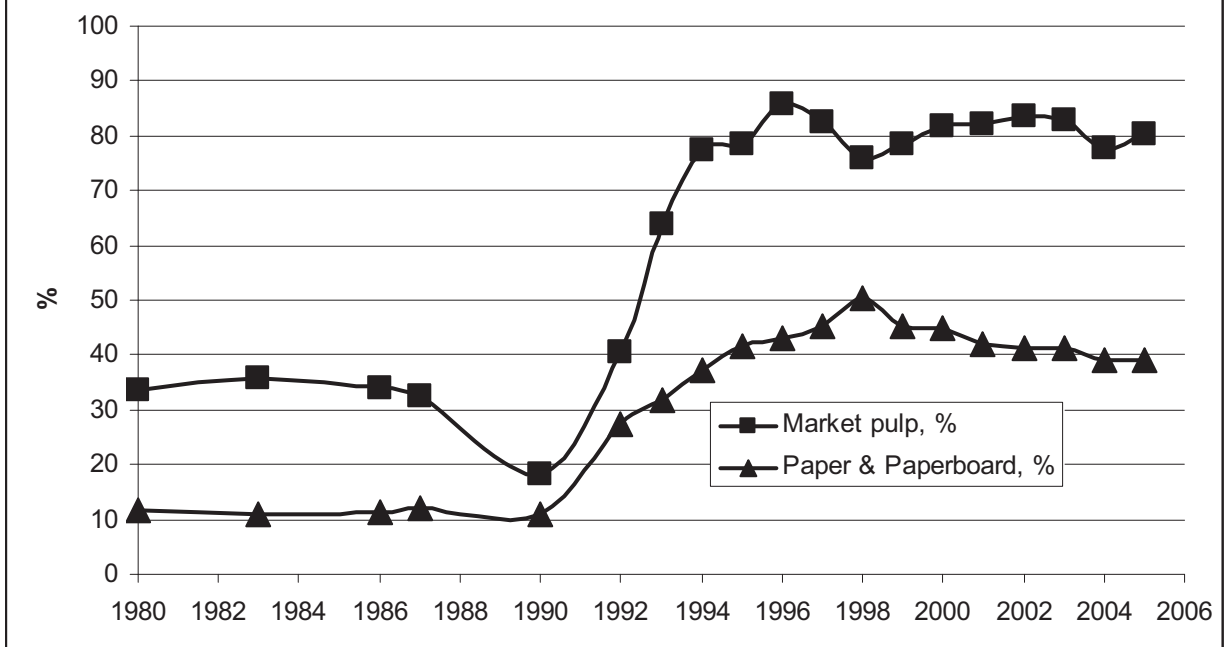


Table 6.
Russian exports and imports of paper and paperboard in 2000–2007 (million USD)

	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
2006	1428	2547	-1119
2007	1599	3246	-1647
2008 (I-III q.)		2787	

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

Table 7.
Russian exports and imports of pulp, paper and paperboard in 2006–2007 (million USD)

	Exports	Imports	Trade balance
2006	2279 (851+1428)	2589 (42+2547)	-310
2007	2658 (1059+1599)	3319 (73+3246)	-661

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

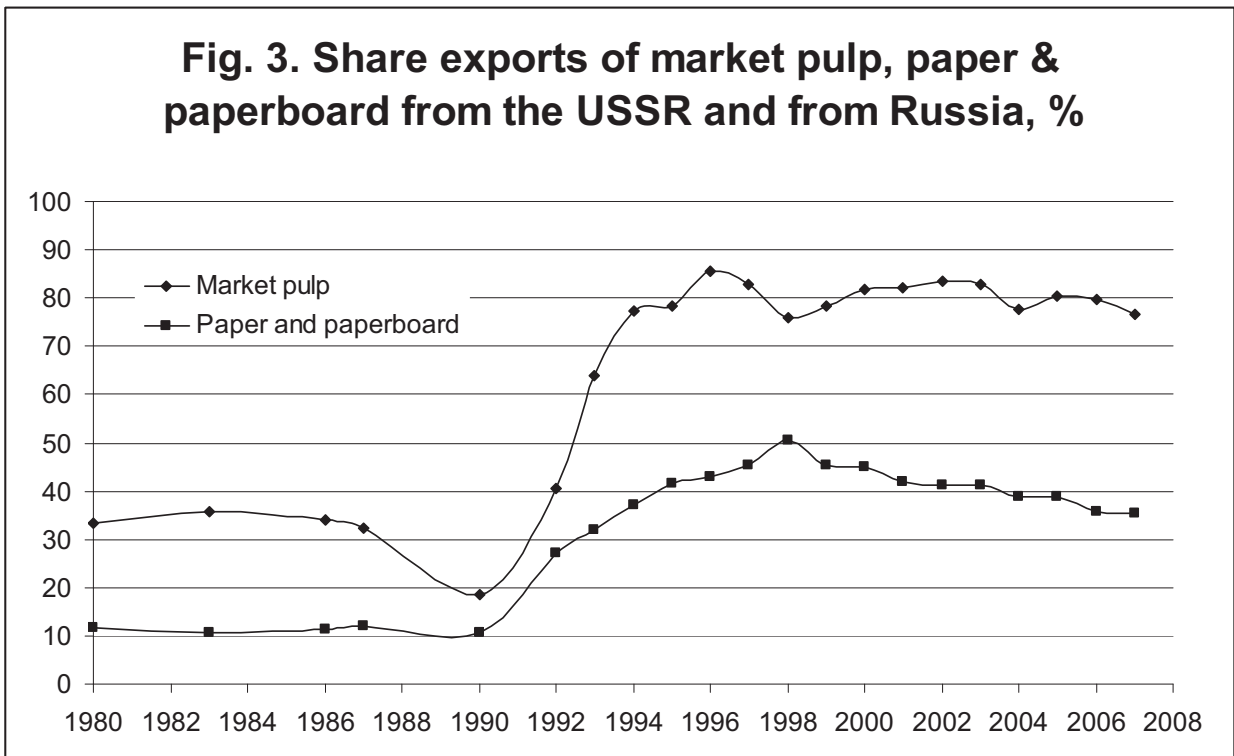
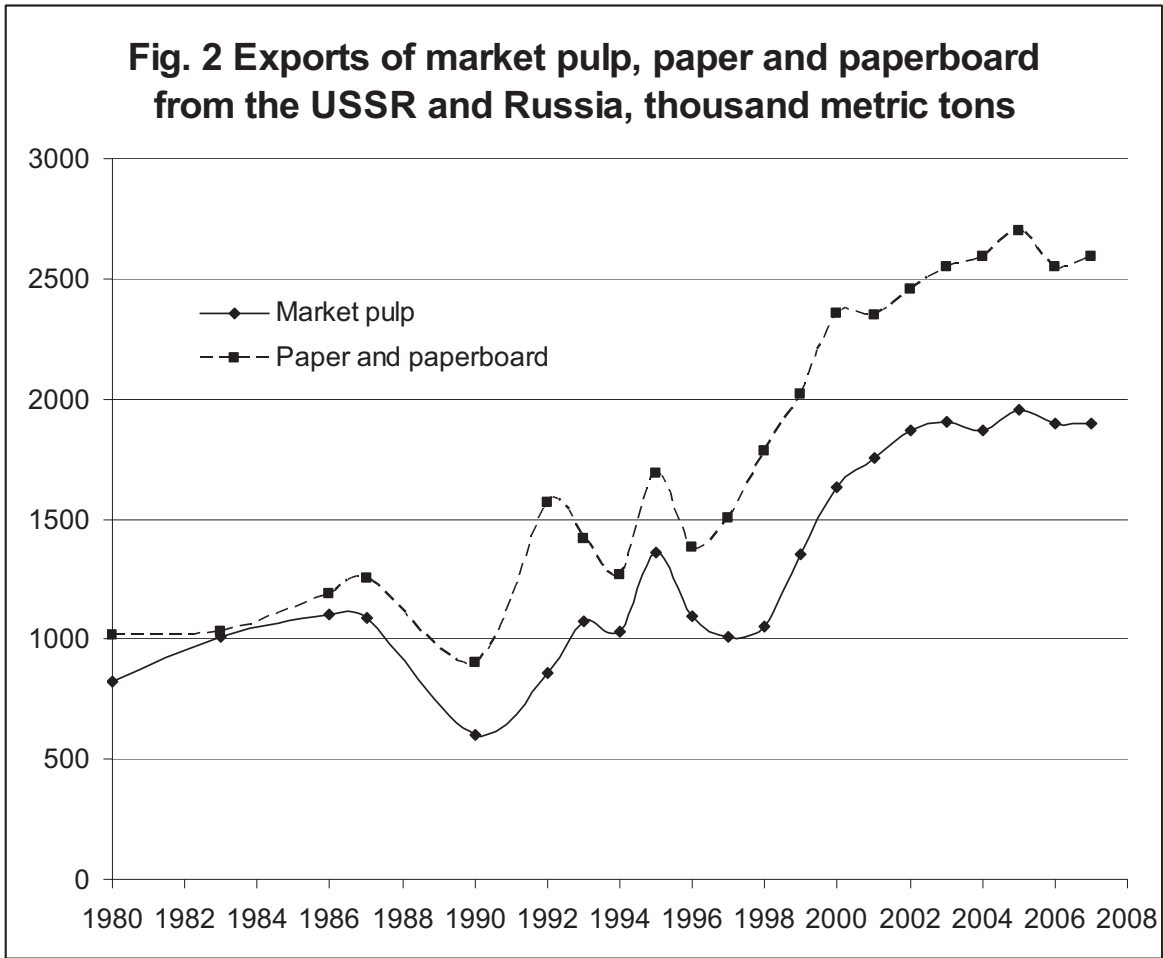


Table 8
Major Russian Pulp, Paper & Board Producers (2007)

	Total Output, x 000 t	Market Pulp, x 000 t	Paper, x 000 t	Board, x 000 t
Ilim Group	2647	1590	260	797
• Kotlas	945	354	260	331
• Bratsk	734	515		219
• Ust-Ilimsk	721	721		
• St.Petersburg	247			247
Arkhangelsk	771	211	82	478
Syktvykar	836		622	214
Kondopoga	733		733	
Volga	579		579	
Solikamskbumprom	418		418	
Svetogorsk	411		333	78
Segezha	283		232	53

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

SOUTH AFRICA

M V Peter (FSA) M J Molony (PAMSA)

The South African economy 2008/09

Significant political changes occurred in 2008 with the State President stepping down prior to the end of his term of office and a General Election coming up in April 2009.

GDP growth slowed and for the first time in over a decade there was contraction of 1,8% in the last quarter of 2008. Major fuel price increases impacted heavily on inflation in 2008 which reached over 13% in November but was back down to 8,1% y/y in January 2009. PPI for January 2009 was 9,2% up y/y. Lending rates have decreased by half a percent to 14% p.a. and the exchange rate (Rand to US\$) has fluctuated dramatically. It is currently (March 2009) at R10,53 to US\$1.00. In spite of the weaker Rand the export sector has not benefitted much, because of the slump in global demand.

Notwithstanding Government's expanded public works programme focussing on infrastructure development, the Accelerated and Shared Growth Initiative of SA (ASGISA) as well as capital expenditure programmes associated with the 2010 Soccer World Cup which is to be held in South Africa, official GDP growth estimates have been revised downwards from 6% to 1,2%. Following the contraction seen in the last quarter however, even this may be optimistic. Exports plunged more than 25% in January, widening the country's trade deficit to a record R17,4bn. Several of SA's main trade partners Britain, Europe, the US and Japan are in recession, and this has eroded demand for SA exports. This presents a bleak outlook for the rest of 2009 for manufacturing production, which dived a record 22% in the last quarter of 2008.

On a positive note most of the inflation experienced in South Africa was imported inflation driven by the spike last year in the oil price. Similarly the widening current account deficit and fluctuating currency have more to do with the global market crisis than South Africa's economic fundamentals. On this issue it should also be noted that none of South Africa's financial institutions have required State funding interventions.

The Forestry and Forest Products Sector in relation to the economy

A year ago domestic and international demand for SA forest products was outstripping supply by about 15%.

Given the current global financial turmoil, short-term demand has fallen off dramatically. Last year roundwood sales recorded by FSA amounted to 16.9 million tons whereas forecasts for this year are below 15 million tons. Having said this, the medium and longer-term forecasts still suggest that to meet demand over the next 25 to 30 years we should be increasing our planted area by a minimum of 25,000 hectares p.a. Unfortunately there are limited areas available for new afforestation and the restrictive regulatory burdens imposed on applications to plant timber, are further hampering the issuing of licences where areas are available to plant.

2008 was a record year for pulp and paper with paper production up by 27% on 2007 and paper imports down by 6% (this also being affected by a weaker domestic currency). This increased reliance on local products is good for the industry. With the current downturn however, the only grades of paper still showing robust demand are newsprint and tissue paper.

Pulp production for February 2009 is 30% down year on year which reflects the decreased global demand.

South Africa is probably one of very few countries in the world currently experiencing recovered fibre shortages, despite an increasing recovery rate of 54.5%. The weaker domestic currency further aggravates the supply problem as importing recovered fibre is not an attractive option.

Emerging issues facing the industry

Emerging issues of importance facing the industry are timber supplies, support to new entrants into forestry, fires, pest and diseases, competitiveness and climate change.

Timber supplies

As discussed above, the medium to longer-term shortages of roundwood supplies into all market segments are of major concern. Increased imports, improved yields, better utilisation of logs, lower plantation losses, 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.

Support to new entrants

Through statutory black economic empowerment initiatives and a strong land reform and redistribution programme, close to 60% of the current forestry estate is likely to be transferred to new ownership over the next 10 years. Industry and Government are working closely to ensure that new entrants into the sector are empowered to manage their newly acquired forestry assets, derive meaningful benefit from participation and ownership and that the sustainability of the sector is ensured. To this end the Minister of Land Affairs endorsed post-settlement support models to deal with land claims involving forestry land.

The support received by FSA from the FAO for the development of small grower toolkits was immensely valuable. The toolkits have been produced in all the relevant official languages and have assisted FSA greatly in leveraging major funding from the Forest Industries Education and Training Authority for the training of new entrants into forestry in the application of the toolkits. This training has been initiated and will continue throughout 2009.

Forest fires

Following the disastrous fire season in 2007 where close to 64,000 hectares of plantation was destroyed, in 2008 about 25 000ha were lost to fire again causing great financial loss and placing additional strain on the short, medium and long term supply situation.

Pests and diseases

Amongst Pine plantations serious problems continue to exist due to infestations by the Sirex Woodwasp. The incidence of new infestations has however decreased significantly due in large part to the excellent biological control strategies being implemented throughout the country. *Fusarium* or Pitch Canker is again becoming a big problem, with mortality arising therefrom 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 *Eucalyptus 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% of the entire Forestry state is being impacted upon by various pests and diseases resulting in unaffordable timber losses. The Government has provided funding for the combating of Sirex and has commissioned the development of an integrated protection strategy to deal with pests, diseases and fire to help counteract these problems.

Competitiveness

With profit margins being under such pressure for the first time in several years, there will undoubtedly be a move towards increased mechanisation and investment in newer and more efficient production, processing and manufacturing capabilities. This may result in a decreased dependence on human capital which may also be affected by the soon to be released increased minimum wages for forestry workers and the continuing impact of HIV/Aids in South Africa.

Reduced global demand has left South Africa with its liberal trade regulations vulnerable to dumping which needs to be vigilantly monitored.

Other emerging issues

(i) HIV/AIDS

The HIV/Aids prevalence rate amongst the population ranges between 11% and 20% depending on age category, with infections having increased by almost 50% since the year 2000. It was reported that 362,000 people were expected to die from HIV/Aids related illnesses during 2007, which amounts to almost 1,000 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% of its labour force in certain areas being infected. The cost in lives, in human misery, in productivity and on competitiveness are 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 are becoming massive and the sector is gradually being recognised by government as a social partner in combating this disease and other health challenges particularly in rural areas.

(ii) Climate Change

While the world a year ago was almost singularly focussed on global warming, the global financial crisis has eclipsed almost every other key issue.

This does not however diminish the threats posed by climate change which cannot quickly nor easily be stopped or reversed. Some of the impacts of climate variability are being felt already 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 was done in 2006 and continues to be done by both Industry and Government, with attention being focussed on greater site-species matching and variation in genus and species being planted, amongst others.

Opportunities for tree planting activities under the C.D.M. are also being investigated although it still does not yet recognise plantations as a legitimate mitigation strategy. This is in spite of the fact that forests as a land use are unparalleled in their ability to sequester carbon.

(iii) Sustainable Forest Management-Forest Certification

Even through 85% 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 Government and Industry in South Africa are currently developing a National Certification Standard which should be in place during 2009 and which will form the basis for certification by all certification bodies.

(iv) 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.

The FAO also funded, through its NFP facility, the production of a sector promotion and awareness raising strategy which has been immensely useful. The document accurately reflects all the key messages of global and local importance in forestry in South Africa and describes the key target audiences, media and role players which should be involved in addressing and delivering the messages.

BUSINESS DEVELOPMENTS DURING THE PREVIOUS YEAR

Forest sector transformation charter

A significant development during the last year has been the finalisation and Gazetting of the Broad Based Black Economic Empowerment Transformation Charter for the Forest Sector. This Charter, required in terms of the Broad Based Black Economic Empowerment Act, seeks to bring about socio-economic transformation in the forestry sector which will facilitate greater participation of previously disadvantaged people in South Africa and growth in the forestry sector. 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; and
- 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:

(i) Ownership

25 +1% of Industry to be owned by black people within a period of 10 years.

(ii) Management Control

50% of management (Board level, Executive and Senior) to be in control of black people within 10 years;

(iii) Employment Equity

75% to 80% of all employees, by grading, to be black people within 10 years;

(iv) Skills Development

4% of total annual payroll to be spent on skills development for black people within 10 years.

(v) Preferential Procurement

70% of total procurement spend to be spent on black owned or black empowered business within 10 years.

(vi) Enterprise Development

3% of entities net profit after tax to be spent on enterprise development for black people and communities within 10 years;

(vii) Socio-Economic Development

1% of entities net profit after tax to be spent on socio-economic development activities for black people and communities 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 its 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. A revised strategy was touted

for the privatisation of this asset but again more recently the Government has indicated that the asset will not be privatised for the foreseeable future.

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. This has also been embedded in the Broad Based Black Economic Empowerment Charter in an attempt to ensure that government and industry work together on ensuring growth in the sector, but to date the efforts of government on facilitating the expansion of forestry and the ensuring the availability and affordability of enabling infrastructure (road and rail in particular) have not been successful.

It is hoped that the major constraints and challenges being felt by the sector will serve as a catalyst for increased government focus on these and other binding constraints to forestry in South Africa.

SYNOPSIS OF INDUSTRY PROFILE – 2000 vs 2008 FORESTRY SECTOR

CRITERIA	Unit	2000	2008	Change
Planted area	Ha	1,330,944	1,266,194	(4.9%)
Roundwood Production	m ³ /p.a.	16.7 million	20.3 million	21.6%
Value of Roundwood Sales	Rand	2.6 billion	5.2 billion	100%
Percentage by value of Agricultural output (crops)	%	8.7%	21%	137%
Plantation losses (fires, pests & diseases)	ha	23,000	25,000	9%

FOREST PRODUCTS SECTORS (all sectors excluding Paper)

CRITERIA	Unit	2000	2008	Change
No. of Plants		167	178	6.5%
Roundwood Intake	m ³	17.1 million	19.8 million	15.8%
Value of Sales	Rand	12.9 billion	18.5 billion	43.4%
Contribution to Mnfg. G.D.P.	%	3.6%	4.3%	19.4%
Foreign trade balance	Rand	4.6 billion	2.4 billion	(47.8%)

PULP, PAPER AND BOARD SECTOR

CRITERIA	Unit	2000	2008	Change
No. of Plants		23	33	(43%)
Pulp Capacity	tons	2.6 million	29 million	11.5%
Paper and Board Capacity	tons	2.6 million	3.0 million	15.3%
Per Capita Consumption	kg	42.0	55.7	32.6%
Production				
- Pulp	tons	2.2 million	2.4 million	14.3%
- Paper and Board	tons	2.1 million	2.6 million	23.8%
Value of Exports	Rand	5.0 billion	9.3 billion	86.0%

SWEDEN

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. The amount of branches and tops for energy production could be almost doubled from 8 to 15 TWh. New selections for energy production: stumps, longer tops etc., 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.

After some years with a large demand for wood raw material leading to higher wood prices the financial crisis led to lower demand and the market changed into a situation with oversupply and lower prices.

The risk for even higher Russian export taxes has increased the wood price on the entire market which has sharpened the financial situation for the industry. This has led to decisions on mill closures.

The Swedish Forest Agency has launched Forest Impact Analysis, presenting the result of four different scenarios comparing forest policies for increased growth with policies for higher biodiversity considerations. The analysis shows that the annual harvest in the Swedish forests can continue on the same high level as the recent years for 3 decades and then increase.

The Swedish Forest Industries Federation has launched a climate campaign, focusing on the remedial effect of the growing forests to climate change and promoting the use of more wooden products

Sustainable transportation will become one of the main challenges for society and for sectors such as the pulp& paper industry. The priority to improve sustainability records is growing. The Board of the Swedish Forest Industry Federation has agreed on common sustainability goals and submitted them to the Swedish Minister of Environment. The goal was set that by 2020 the forest industry shall have reduced its emissions of fossil CO₂ from transportation by 20 per cent.

Most important business developments: economic situation, legal developments, investments

In the 4th quarter of 2008, the financial crises hit the real economy quite severely through decreased demand and decreased production. This resulted in a fall in exports of seven percent in the fourth quarter, while they increased by five percent year-on-year 2008/2007. Also, in the fourth quarter GDP fell by 4,9 percent, resulting in an annual drop of 0,2 percent 2008 over 2007. The number of people given notice increased sharply as the labour market weakened. The inflation rate declined towards the end of 2008, consumer price index in December was 0,9 percent annual rate, while for year-on-year 2008 over 2007 the CPI was 3,4 percent.

In 2008, Swedish paper production fell by 2 percent to 11,7 million tonnes. Some of the decline was due to mills being closed down. Exports fell by 2,4 percent and amounted to 10,1 million tonnes. Market pulp production declined marginally at 4,1 million tonnes, while exports fell by three percent to 3,4 million tonnes.

Pulp and paper production and exports have declined sharply in January- February 2009 compared with corresponding period 2008.

Companies continue efficiency and cost reduction programs. During 2008, several announcements of personnel reductions were made, affecting over 1600 jobs (of 25 000 in the pulp and paper industry). Stora Enso closed its Norrsundet pulp mill (300 000 tonnes bleached sulphate), and Rottneros its Utansjö mill (160 000 tonnes CTMP pulp) during the year. Holmen shut down one paper machine at the Hallsta mill (110 000 tonnes mechanical printing paper) and the Wargön mill (145 000 tonnes mechanical printing

paper). Arctic Paper has closed its Häfreström mill (160 000 tonnes fine paper) in 2009. Increased raw material and energy costs are major reasons.

Investments in the pulp and paper industry were 667 million euros in 2008, and are projected to 592 million euros in 2009 (same exchange rate both years). Investment plans mainly concern energy efficiency programs or energy generation.

In March this year, the Government presented a Bill on Energy and Climate. The Government proposes to change the policy on nuclear power. Hitherto the policy has been to phase out the 10 nuclear reactors when new electricity production based on renewable fuels is at hand. The proposal is that it shall be possible to replace the existing reactors by new ones at the same sites. Upgrading of the production capacity in the existing reactors as well as building of new reactors will be examined according to Swedish Environmental Law. No subsidies will be granted by the State.

Among other proposals are:

- The objective of the electricity certificate system is to increase the production of renewable electricity with 25 TWh in 2020. The existing target is 17 TWh by year 2016 compared to year 2002.
- Wind power should be planned to produce 30 TWh in 2020.
- Renewable energy shall be 50% of total supplied energy.
- Renewable energy shall be 10 % in the transport sector 2020.
- Emissions of greenhouse gases in the non trading sector shall be reduced by 40 % 2020.
- Supplied energy related to GDP shall be reduced by 20 % 2020 compared to 2008.
- Taxes on carbon dioxide and energy are proposed to increase as from 2011.
- The second step to reduce the carbon dioxide tax in the trading sector to reach EU minimum level planned for 2010 is proposed to be postponed till 2011.
- The Government also likes to promote sinks in the forests and in forest products. To cease deforestation is another important task according to the Bill.

Swedish commitments on reduction of emissions of nutrients to the Baltic Sea will be costly for the industry. Implementation of the Water Framework Directive is stricter in the Swedish legislation than in other European states.

Development of criteria for green public procurement of wood-based products: also social aspects might be included which is not the case for competitive materials.

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.

The close-down of mills affect severely the rural area where the mill was located.

New figures show that the indirect employment generated by the pulp and paper industry increased between 2000 and 2005 (based on input/output matrixes for those years, which are the latest available). This could be an indication that companies concentrate even more on core activities and procure more goods and services from suppliers.

THAILAND

THAI PULP AND PAPER INDUSTRY IN 2008

Executive Summary

For the year 2008, total short fiber pulp's production was 1.1 million tons with total utilization rate of 92%. Total pulp consumption was 1.3 million tons almost the same as the previous year. It was estimated that total pulp consumption will grow to 1.4 million tons in year 2013. Thailand total pulp import was 374,000 tons whereas total pulp export was 193,000 tons. (Annex 1)

Total capacity of Paper and Paperboard Industry in 2008 was 4.9 million tons. Kraft paper was the major portion of the industry with total capacity of 62% followed by Printing & Writing paper, Paperboard, Newsprint and Tissue paper.

Total Paper and Paperboard production declined by 3% with total production of 4.2 million tons. The industry utilization rate in 2008 was 87% the same rate as year 2007. In 2008 consumption of Paper and Paperboard was 3.5 million tons, down by 2% from the previous year. Main portion of the decreasing came from lower consumption of Newsprint paper and Printing & Writing paper. Paper consumption per capita in 2008 was 55 kg. The consumption rate is expected to reach 65 kg. in year 2013.

Total import of Paper and Paperboard in 2008 was 892,000 tons increased by 3% from previous year mainly came from Paperboard paper and Tissue paper import increased by 60% and 24% respectively. While Newsprint paper imports declined by 21% and 15% for Printing & Writing paper.

Export of Paper and Paperboard dropped by 5% from the previous year. Total export volume was 1,102,000 tons. Kraft paper was a major portion which consisted of 46% of the industry export followed by Printing & Writing paper, Tissue paper and Newsprint paper. The industry main export destinations were South Korea, Taiwan, Hong Kong and Southeast Asia countries.

In 2008 Thai economy growth was 2.6% and is expected to slow down to (-3.5)-(-2.5)% in year 2009. (source: National Economic and Social Development Board ; NESDB) Mainly driven by the sluggish of global economy and the economy of Thailand's major export countries. Thanks to global trend of environmental awareness that would improve consumption rate of the industry which has been almost 100% recyclable therefore it is estimated that demand of Paper and Paperboard will grow by 3% and estimated to reach 3.5 million tons in 2009 and will reach 4.1 million tons in year 2013.

For Recovered paper, the industry recovery rate in 2008 was 59% improved by 14% from year 2007. Total Recovered paper consumption was 3.3 million tons which provided by domestic collection of 2.1 million tons and importation. Recovered paper consumption is estimated to grow by 3% in parallel with Kraft paper industry's growth.

Pulp Industry

• Capacity

In 2008 total pulp capacity was 1.2 million tons improved a bit from year 2007. Totally 6 pulp manufacturers are as following;

• Production

In 2008 total pulp production was 1.1 millions ton declined by 5% from the previous year. Utilization rate was 92%, down 6% compared to year 2007.

• Consumption

Total pulp consumption was 1.3 millions ton almost the same as the previous year. As Thailand produced only short fiber grade, totally 880,000 tons of short fiber consumption were produced within the country, the rest was long fiber grade mostly imported from Northern Europe and Northern America regions. Slow growth of pulp demand was an impact of substitution effect from virgin pulp to recycled pulp of paper manufacturers in order to be cost efficient manufacturers and also environmentally friendly awareness.

1. Thailand Economy in 2008 :

Thailand Key Economic Indicators	2009 Forecast	2008 (2551)	2007	2006	2005	2004
GDP growth (1988 price, %)	(-3.5)-(-2.5)	2.6	4.9	5.2	4.5	6.3
GDP Current prices (Billion Baht)	8,832	9,105	8,493	7,841	7,088	6,490
Investment (1988 price,%)	-6.2	1.1	1.3	3.9	11.1	13.2
- Private	-9.7	3.2	0.6	4.1	10.9	16.2
- Public	5.0	-4.8	3.4	3.3	11.3	5
Consumption (1988 price,%)	2.0	2.2	2.7	2.9	5.5	6.1
- Private	0.4	2.5	1.6	3.0	4.3	6.2
- Public	11.3	0.5	9.2	2.4	13.7	5.6
Export value (Billion USD)	147.2	175.3	150.0	127.9	109.2	94.9
- Growth rate (%)	-15.0	16.8	17.3	17.0	15.0	21.6
Import value (Billion USD)	140.7	175.1	138.5	126.9	117.7	93.5
- Growth rate (%)	-19.6	26.4	9.1	7.9	25.9	25.7
Balance of Trade (Billion USD)	8.3	0.2	11.6	1.0	-8.5	1.5
Current Account (Billion USD)	9.3	-0.2	14	2.3	-7.9	2.8
Inflation (%)	(-0.5)-(-0.5)	5.5	2.3	4.7	4.5	2.7
Population (Million)	63.39	63.39	63.04	62.83	62.42	61.97
Source: BOT						

Source : National Economic and Social Development Board (NESDB) and Bank of Thailand (BOT)
(as of May 25, 2009)

Pulp Import – Export

Total pulp imported was 374,000 tons declined by 9% from year 2007, of which 315,000 tons were long fiber and 59,000 tons were short fiber. Imported of long fiber down by 15% from year 2007. Canada, Sweden and United States were Thailand major pulp exporters. Thailand exported short fiber pulp of 193,000 tons, down by 34% from year 2007. Thailand major pulp export destinations were China, South Korea, Taiwan, Indonesia and Vietnam.

• Trend of Pulp Demand and Capacity

Domestic pulp consumption is estimated to grow by 2% per year in line with the growth of Printing & Writing paper industry which was its major consumption. It's estimated that demand of pulp industry would reach 1.4 million tons in year 2013.

Recovered Paper

• Local recovered paper collection

In 2008, total volume of recovered paper collection was 2.1 million tons, a rise of 12% from the previous year. Thanks to an effective waste management schemes and environmental concerns, the industry recovery rate was 59% significantly improved by 14% from year 2007.

Pulp Manufacturers in Thailand

Manufacturer	Capacity (Thousand Ton)	Grade
1. Advance Agro	560	Eucalyptus
2. Phoenix Pulp and Paper	235	Eucalyptus, Bamboo, Leucaena, Acacia
3. Panjapol Pulp Industry	110	Eucalyptus
4. SCG Paper	105	Eucalyptus, CTMP
5. Siam Cellulose	86	Eucalyptus
6. Environment Pulp and Paper	100	Bagasse
Total	1,196	

• Consumption

Recovered paper consumption was 3.3 million tons increased by 22% from the previous year. According to the industry aware of friendly environment in accordance with a rising cost of energy and virgin pulp prices, which motivated the use of recycled pulp thus push to boosting trend of recovered paper consumption.

• Recovered Paper Import - Export

Import of recovered paper in 2008 was 1,217,000 tons, improved by 20% from the previous year. Old corrugated carton (OCC) accounted for 72% of total imports, while mixed waste and old newspaper accounted for 16% and 12% respectively. United States, Japan and Singapore were major exported countries to Thailand.

• Trend of Recovered Paper demand and collection

The recovered paper consumption is estimated to increase by 3% per year along with Kraft paper industry's growth. It is estimated that the country recovery rate would improve significantly due to Global trend of environmental awareness would lead the industry to utilize more in recycling material, thus would enhance the industry usage in recycling material. In addition, an establishment of Thailand Institute of Packaging Management for Sustainable Environment (TIPMSE), sponsored its initial fund by all related packaging material manufacturers in Thailand, is as well to reduce packaging wastes composition such as paper, plastic, glass and metal in the municipal wastes. TIPMSE's vision is to establish integrated management system for the packaging, packaging wastes and solid wastes, in harmony with the sustainable development. Several pilot projects at local universities and communities in order to turn waste to money, are implemented efficiently and disseminated broadly. With such intention and execution will boost up local collection rate for recycling materials especially paper hence will certainly improve the industry recovery rate.

Paper and Paperboard Industry

• Capacity

Total capacity of Paper and paperboard was 4.9 million tons dropped by 5% from year 2007. Due to the permanent shut down of Printing & Writing paper mills. Kraft paper continued to be the largest portion of the industry with total capacity of 62%, followed by 23% of Printing & Writing paper, 9% of Paperboard paper, 3% of Newsprint paper and Tissue paper respectively.

• Production

Paper production in 2008 down by 3% with the total production of 4.2 million tons compared to 4.3 million tons in year 2007. Major cause was from the slow growth of Thailand exportation. Kraft paper production volume was 2.5 million tons, down by 4% from the previous year. With the utilization rate of 83% the same rate as year 2007. Printing & Writing paper production was 1.1 million tons with the utilization rate of 95%. Utilization rate of Newsprint paper was 99%, 91% for Tissue Paper and Paperboard paper was 79%. In 2008 total utilization rate of Paper and Board Industry was 86% compared to 84% in year 2007.

Unit: Thousand Ton

Year	2005	2006	2007	2008	Estimated				
					2009	2010	2011	2012	2013
Consumption									
- Short Fiber	914	895	1,167	880	897	915	934	952	971
- Long Fiber	338	431	122	407	415	424	432	441	450
Total	1,252	1,326	1,289	1,287	1,313	1,339	1,366	1,393	1,421
Capacity									
- Short Fiber	1,143	1,146	1,189	1,196	1,396	1,736	1,736	1,736	1,736
- Long Fiber	-	-	-	-	-	-	-	-	-
Total	1,143	1,146	1,189	1,196	1,396	1,736	1,736	1,736	1,736
Production									
- Short Fiber	1,061	1,129	1,169	1,106	1,396	1,736	1,736	1,736	1,736
- Long Fiber	-	-	-	-	-	-	-	-	-
Total	1,061	1,129	1,169	1,106	1,396	1,736	1,736	1,736	1,736
Surplus (Shortage)									
- Short Fiber	148	234	3	226	499	821	802	784	765
- Long Fiber	(338)	(431)	(122)	(407)	(415)	(424)	(432)	(441)	(450)

• Consumption

In 2008, total Paper and Board consumption was 3.5 million tons, a decreased of 2% from 2007. Major impact was from the slump demand of Newsprint paper and Printing & Writing paper. Paper and Board consumption per capita was 55 kg. compared to 56 kg. in 2007. It is estimated that per capita consumption would reach 65 kg. in year 2013. Kraft paper consumption was 1.9 million tons down by 4% from prior year, primarily impact was from the economy slow down of Thailand export markets especially the key export market as USA. Printing & Writing paper consumption was 0.7 million tons, 8% down from the prior year. The same as Newsprint paper consumption was dropped by 10% to 0.2 million tons. On the other hand, demand growth of Tissue paper was up by 47% and Paperboard paper, mainly used for inner packaging for consumers and foods related products, grew by 17%.

• Import - Export of Paper & Paperboard

Import

Paper and paperboard imports in 2008 improved by 3% from the previous year mainly from an upward trend of Paperboard paper and Tissue paper import which increased by 60% and 24% respectively. While Newsprint paper, Printing & Writing paper and Kraft paper import dropped by 21%,15% and 3% respectively. Japan, Canada, Germany, and USA were Thailand's major exporters.

Export

Total paper and board exports declined by 5% to 1.1 million tons in year 2008. Major portion of export slow down came from Newsprint paper and Tissue paper export declined by 41% and 30% respectively. While Paperboard paper exports up 18% form the previous year. Main exportation countries are South Korea, Taiwan, Hong Kong and Southeast Asia countries.

• Trend of Paper & Paperboard Demand and Capacity

The GDP growth of Thai economy in 2009 is expected to decline to (-3.5)-(-2.5) % from 2.6% mainly driven by the sluggish of global economy and the economy of Thailand's major export countries. Total demand of Thailand Paper and Paperboard industry is expected to grow by 3% and total consumption will reach 3.6 million tons in year 2009 with estimated paper consumption per head of 57 Kg.

Grade		2004	2005	2006	2007	2008	Estimated				
							2009	2010	2011	2012	2013
Kraft Paper	Consumption	1,706	1,784	1,993	2,012	1,933	1,991	2,051	2,112	2,175	2,241
	Capacity	2,400	2,673	3,283	3,178	3,053	3,053	3,053	3,053	3,053	3,053
Surplus (Shortage)		694	889	1,290	1,166	1,121	1,063	1,003	941	878	813
Printing & Writing Paper	Consumption	657	744	893	787	721	746	772	799	827	856
	Capacity	1,083	1,264	1,271	1,246	1,132	1,132	1,132	1,132	1,132	1,132
Surplus (Shortage)		425	520	378	459	411	386	360	333	305	276
Paperboard	Consumption	220	261	315	417	487	515	544	575	608	643
	Capacity	300	300	348	460	449	449	449	449	449	449
Surplus (Shortage)		80	39	33	43	(38)	(66)	(95)	(126)	(159)	(194)
Newsprint Paper	Consumption	266	276	229	275	248	248	248	248	248	248
	Capacity	135	135	135	135	135	135	135	135	135	135
Surplus (Shortage)		(131)	(141)	(94)	(140)	(113)	(113)	(113)	(113)	(113)	(113)
Tissue Paper	Consumption	54	70	83	71	104	110	116	122	129	136
	Capacity	91	129	136	124	125	125	125	125	125	125
Surplus (Shortage)		37	59	53	53	21	15	9	3	(4)	(11)
Total Paper and Paperboard Consumption		2,904	3,134	3,513	3,561	3,493	3,610	3,731	3,856	3,987	4,124
Capacity		4,009	4,501	5,173	5,142	4,895	4,895	4,895	4,895	4,895	4,895
Surplus (Shortage)		1,105	1,367	1,660	1,581	1,402	1,285	1,164	1,038	907	771
Population	(Million Man)	61.9	62.4	62.8	63.0	63.4	63.4	63.4	63.4	63.4	63.4
Per capita Consumption (Kg/Head)		47	50	56	56	55	57	59	61	63	65

Unit : Thousand Ton

The Industry and Sustainability Development

Pulp and Paper Industry has been widely accepted to be one of environmentally friendly industry. Since throughout its life cycle, start from Eucalyptus plantation is considered to be renewable resources. Thai forestry company named “Siam Forestry Co., Ltd” has been certified FSC (Forest Stewardship Council) standard for Forest Plantation and received FSC’s CoC (Chain-of- Custody) management certification for pulp products in 2008.

For finished products, Thai paper products, such as Printing & Writing paper, Paperboard and Kraft paper have been awarded “Green Label”. The Green Label is an environmental certification awarded to specific products that are shown to have minimum impact on environment. The scheme was initiated by the Thailand Business Council for Sustainable Development (TBCSD) and formally launched by Thailand Environment Institute (TEI) in association with the Ministry of Industry.

In addition an increasing trend of recovered paper usage in substitute of using virgin pulp has been accepted widely for the industry new product development. Recently, an initiative project of “Life Cycle Inventory Database; LCI” for Thai Pulp and Paper Industry has been implemented. This project is to establish the industry product database and allow the industry to the further step of “Life Cycle Assessment; LCA” which is an analysis and assessment of a product’s environmental impacts throughout its life cycle by taking production process, raw materials, energy, wastes and disposal of the product into considerations. With the main purpose of the study is to identify potential areas of improvement to minimize the product’s overall impacts to environment.

UNITED STATES

Introduction

The U.S. forest products industry faced strong headwinds from a weak economy during 2008, which affected both the paper and wood products sectors. The wood products sector had been in decline since mid-2006, while the paper business held up relatively well until mid-to-late 2008, when it contracted sharply. While the outlook remains murky, most economists believe that the overall economy and the housing sector will stop declining by mid-2009 and, perhaps, start on a gradual recovery either later this year or in early 2010.

Paper and Paperboard Consumption and Production

Following a 3.4% decline in 2007, U.S. apparent consumption (production plus imports minus exports) of paper and paperboard contracted another 6.7% in 2008 to 81 million metric tons, marking one of the largest two-year declines ever recorded. Production of paper and paperboard registered somewhat smaller declines than consumption, dropping 0.6% in 2007 and 4.3% last year, to 79.6 million metric tons. Production held up better than consumption during the past two years because exports rose and imports declined.

The production declines for 2008 ranged from 7.5% for printing-writing papers and 6.1% for newsprint to 3.8% for containerboard and 3.1% for boxboard. Tissue production held stable in 2008. Total U.S. paper and paperboard production was especially weak towards the end of 2008, trailing year-ago levels by 12% in November and 19% in December.

Long-term production declines (from 2000 through 2008) have been particularly sharp for newsprint (-36%) and uncoated woodfree paper (-21%). Even after last year's drop-off, containerboard production was up 2% since 2000 and tissue paper production was up 6%.

Total U.S. exports of wood pulp and paper and paperboard exceeded 18.8 million metric tons in 2008, a 9.4% year-over-year increase. However, the positive trade picture began to deteriorate in the last months of the year as export demand began to decline due to the severe global economic downturn. Exports of recovered paper edged up to a record 17.7 million metric tons in 2008.

Leading these increases were exports of wood pulp, up 14% to 7.07 million metric tons, kraft linerboard, up 5.3% to 3.77 million metric tons, and bleached kraft paperboard, up 9% to 1.77 million metric tons. Exports of printing and writing paper were practically unchanged in 2008, up 0.5% to 2.2 million metric tons.

The paper industry is unlikely to recover until the economy improves, and the outlook for the economy is extremely cloudy. U.S. GDP began contracting during the second half of 2008, posting annualized declines of 0.5% in the third quarter and 3.8% in the final quarter of the year. Most economists expect that GDP will decline in the 4-5% range during the first quarter of 2009 and 1-2% in the second quarter, followed by a slow rebound in the second half of this year. GDP is projected to decline by about 1% for full-year 2009, following a 0.2% decline in 2008.

Those economists who expect GDP to begin to expand in the second half of this year point to the large economic stimulus package recently enacted by the U.S. Congress. However, a minority of economists believe that the economy will contract through 2010 because consumers need to work off a lot of personal debt and the banking system will remain fragile for several years to come.

Wood Product Shipments

In a typical year, more than three-quarters of U.S. lumber and panel consumption goes into new residential construction or residential repairs and remodeling. Hence, it is not surprising that the wood products sector has been hurt by the sharpest housing downturn in decades.

Total U.S. new housing starts contracted from 2.07 million units in 2005 to 903,000 units last year. Moreover, starts weakened throughout 2008, falling to a seasonally-adjusted annual rate of 560,000 units in December and just 466,000 units in January 2009, marking their lowest level since the series began in 1959.

Wood products production, as measured by the Federal Reserve Board, declined 22% between 2005 and 2008 and was off 38% relative to 2005 levels by the end of 2008.

A number of factors are working against the housing sector. Falling prices encourage prospective buyers to wait in anticipation that prices may decline further. Many families are concerned about job security and will, therefore, postpone buying a new home until labor markets improve. Finally, credit standards have been tightened making it more difficult to qualify for a mortgage.

On the other hand, the easing of mortgage rates and lower home prices make homes more affordable than they were two or three years ago. All in all, many economists anticipate a very gradual recovery in new home construction beginning in the second half of this year or in early 2010. The consensus view points to 2010 housing starts of about one million units.

U.S. wood product exports were off slightly on a value basis, down 0.9% in 2008 to \$6.78 billion, as the weakening international business environment constrained demand in many markets. U.S. imports of wood products declined 24% to \$14.1 billion, as imports from Canada and Brazil each dropped by about 30%.

UNITED STATES POLICY INITIATIVES

Illegal logging

The United States enacted a law in May 2008 that makes it a federal crime to import into the U.S. plants or plant products – including all wood and paper products – where the plant was illegally harvested in its country of origin. Known as the Lacey Act Amendments, the new law also requires a declaration from importers for certain plant and plant products they bring into the U.S. In a notice published on February 3, 2009, the U.S. government announced a phase-in schedule for the declaration requirement and provided a list of products that fall within the phase-in schedule. The following are the proposed dates, although some slippage may occur in the schedule as the U.S. government sets up a system for the electronic filing of the declaration form:

- Lumber and certain primary wood products will be subject to the declaration requirements effective April 1, 2009.
- Plywood and other more processed wood products will be subject to the declaration requirements effective October 1, 2009.
- Wood pulp and other pulps will be subject to the declaration requirements effective October 1, 2009.
- Primary paper and paperboard products will be subject to the declaration requirements effective April 1, 2010.
- Certain articles of wood and certain wooden furniture will be subject to the declaration requirements effective April 1, 2010.

The declaration must contain, among other information, the scientific name of the plant, value of the importation, quantity of the plant, and name of the country where the plant was harvested. For paper and paperboard products containing recycled fiber, the declaration also must include the average percent of recycled content without regard for species or country of harvest. Finally, packaging materials used for the transport of other goods (pallets, for example) and sundries that ordinarily accompany the product (tags, labels, manuals, for example) will not require a declaration.

The American Forest & Paper Association (AF&PA) has supported the implementation of the amended Lacey Act as a tool for fighting illegal logging. AF&PA worked with U.S. government agencies to ensure that the provisions of the amendment do not pose undue burden on companies engaged in legal trade. For more details on the Lacey Act, please visit www.aphis.usda.gov/plant_health/lacey_act/index.shtml.

Role of Forests in Carbon Policy

AF&PA serves as the Secretariat for the development of a new consensus U.S.-Canadian standard on measurement and accounting for carbon in forests and forest products, using procedures accredited by the American National Standards Institute (ANSI). Once developed, the standard will be available for adoption by governments, carbon traders, and markets, as well as by other private and public groups. The Forest Carbon Standards Committee (FCSC), which will be responsible for developing the bi-national standard (or standards), consists of approximately 45 individuals representing a balance of interests and expertise in existing protocols.

AF&PA also is participating in the development of and has endorsed the Forest Climate Working Group (FCWG) policy platform. FCWG is a broad coalition formed to develop consensus positions on the inclusion of forests in U.S. federal climate policy. FCWG includes participants from a variety of environmental organizations, forest industry/landowner interests, and others. The FCWG has held numerous discussions focused on elements of forest carbon offset projects, the role of other policy mechanisms in promoting forest carbon sequestration, and forest adaptation efforts. The outcome of each discussion was a set of “consensus principles” outlining areas of agreement, which formed the basis for the FCWG policy platform.