

3 Policy and regulatory framework developments, 2011-2012

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Highlights

- A new set of forest carbon accounting rules for developed countries was agreed at the 2011 United Nations Climate Change Conference held in Durban. In this framework, the EC legislative proposal on accounting rules for harvested wood products clearly recognizes that forest harvesting is not a source of carbon emissions.
 - Russian export and import duties will be much influenced by that country's accession to the WTO and are expected to decrease significantly.
 - The North American Free Trade Agreement, which aims to eliminate barriers to trade and investment between the US, Canada and Mexico, has been extended until 2015 and continues to influence Canada-US wood products trade.
 - Canadian Annual Allowable Cut (AAC) reductions in the provinces of British Columbia, Ontario and Quebec will affect the North American timber supply in the future.
 - Efforts to exclude illegal timber from markets are being strengthened in Europe with the EU Timber Regulation and Forest Law Enforcement, Governance and Trade (FLEGT) and, in the US, with the Lacey Act.
 - The EU's targets for 2020 to reach 20% share of energy from renewable resources, 20% cut in greenhouse gas emissions and 20% improvement in energy efficiency are already putting wood energy at the centre of attention as it now provides 47% of renewable energy in Europe.
 - Increasing government support for alternative wood-based energy by governments is creating market opportunities for the forest sector but is not without controversy, given the potential implications on wood supply for other wood-using industry.
 - Green-building policies continue to affect markets, by highlighting the green credentials of building with sustainably produced wood.
 - Life cycle assessments (LCA) measuring the environmental impact of products should favour forest products, but are not yet widely adopted in green-building guidelines.
 - The Russian Federation has developed a programme for forestry development up to 2020 and a new forest policy to strengthen sustainable management, enhance yield and curb illegal logging.
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3.1 Introduction

The 2011 International Year of Forests helped promote awareness of the issues confronting the world's forests and the people who depend on them.

Many governments believe that the forest industry has great potential for promoting a "greener economy" including the use of bioenergy, wood promotion activities, and new wood-based products and biomaterials. And many developed countries have increased their support for the development of forest industries over the last few years. (FAO, State of the World's Forests, 2011)

Climate- and energy-related policies continue to gain momentum, in particular those that address and promote sustainable forest management, the use of renewable energy, and "green building".

Europe and North America are increasingly developing and enforcing legislation that ensures that wood and wood products are traceable, that they are legally sourced and come from sustainably managed forests.

In 2011, the Russian Federation introduced significant changes to its forest legislation in order to fight illegal logging. In particular, it toughened administrative and criminal liability for violations of the country's forest law.

In their efforts to mitigate climate change, governments are setting targets for increasing use of renewable energy. Europe has a target to meet 20% of its total primary energy supply from renewable energy by 2020, a considerable increase over the current 6.5%. Wood energy accounted for 3% of total primary energy supply and 47% of the renewable energy supply in the UNECE region in 2009; and the use of wood energy is on the increase (UNECE/FAO, 2012). This presents both opportunities and challenges for the forest sector.

Market trends are naturally influenced by the policies of the main economic powers. The accession of the Russian Federation this year to the World Trade Organization (WTO) is expected to have considerable impact on import and export duties for wood products.

China continues to be a major actor on global wood and wood-product markets despite a slowdown observed in 2012. The slowdown might actually be offset by a new Chinese government stimulus package, although it is much more limited than the package in 2008.

3.2 Trade-related policies

3.2.1 Major changes expected for Russian log export and import tax

The Russian Federation is the world's largest exporter of logs. In 2008, it increased its duties on log exports to 25%, with a minimum of €15/m³. At that time, it exported \$3.5 billion worth of logs, with 51% going to China, 25% to

Finland and 5% to Japan. To some extent, the duties had the planned effect of increasing the country's own capabilities and domestic production. Finland alone invested over €1 billion in Russian forest-product industries.

China built sawmills inside the Russian Federation, but close to its own border to process logs into basic export products. Indeed, in 2011, sawnwood exports to China increased by 39% compared with 2010, accounting for 38% of all Russian sawnwood exports. Between 2007 and 2011, log exports from the Russian Federation declined appreciably, as Chinese importers looked to other sources, especially in North America and New Zealand, for softwoods, and in Viet Nam, Australia and Southeast Asia for hardwoods.



Source: UNECE, 2012.

China's Prime Minister and the National People's Congress set a growth target of 7.5% for the economy in 2012. This is a reduction of 0.5% from the target for the last years when growth was more guided towards capital-intensive manufacturing. Now, it is assumed that investments may be more directed towards State-owned service enterprises, diminishing imports of commodities for manufacturing (Campbell Group LLC, 2010).

In the near future, Russian log exports may rise if export duties are reduced, with the country having cleared the final hurdle to becoming a WTO member, in December 2011. WTO Ministers adopted the Russian Federation's WTO terms of entry at the 8th Ministerial Conference in Geneva, a significant step that will require a change in the country's export duty for logs. Russian lawmakers voted on 10 July 2012 to ratify the accession to the WTO, bringing the world's largest country into the club that sets global trade rules after 18 years of negotiation. The upper chamber of Parliament, the Federation Council, approved the bill on 18 July, with the Russian President signing it into law on 21 July (WTO, 2012). With its \$1.9 trillion economy, the world's ninth largest, the Russian Federation will officially become the WTO's 156th member 30 days after ratification.

The Director of the Russian Department for Trade Negotiations of the Ministry of Economic Development revealed the quotas on exports of roundwood from the Russian Federation that were agreed at the negotiations with WTO. According to the new agreement, the Russian Federation, after the final accession to the WTO, will set export quotas on spruce logs at 6.2 million m³, including 5.9 million m³ for the EU with an in-quota export tax of 13% and out-quota tax at the discretion of the country and without limitation.

The pine quota will be set at 16 million m³, including 3.6 million m³ for the EU, with an in-quota tax of 15% and an out-quota tax with no limitation. For birch and aspen logs, export duties will amount to 5% for aspen and 7% for birch without quotas (Protocol on the accession of the Russian Federation to the WTO, 2011).

However, it is not known whether the government will impose restrictions, such as specific quotas, to protect domestic producers. At a press conference on the theme "The accession of the Russian Federation to the WTO" in Kazan on 17 January 2012, the Director of the Department of Economic Development commented that "our tariff commitments do not prevent the Russian Federation from establishing measures to protect industries if we see that imports prejudice them".

Import duties to the Russian Federation will change as well. For example, from the date of entry into the WTO, duties on logs of spruce and pine will decrease from 15% to 8% within three years. Duties on softwood chips will fall from 15% to 5% within four years and hardwood chips from 15% to 8% within three years. Import duties on some timber from tropical timber will be cut from 15% to 5% within four years. Further, import duties will be reduced on almost all manufactured wood products (Lesprom, 2012).

After full implementation of its WTO accession commitments, the Russian Federation's average tariff on forest products imported from the US will be reduced to, and bound at, 7.9%, with tariffs ranging from zero to 14%. The Russian Federation's membership in the WTO should therefore provide significant commercial opportunities for US exporters. US manufacturers and exporters will have more certain and predictable market access, as a result of the Russian Federation's commitment under the WTO (International Trade Administration, 2011).

3.2.2 *Government support to the Russian timber industry*

The government of the Russian Federation continues to apply measures to support the timber industry through:

1. Subsidizing interest rates on loans received for:
 - Stockpiling for seasonal downtime.
 - Export of timber products with a high degree of processing.

- Technical improvements for equipment and production processes.
2. Cancelling export customs duties on all kinds of processed products (sawn timber, plywood, pulp and paper).
 3. Exempting from import duties technological equipment that the Russian Federation does not produce, including woodworking equipment.

3.2.3 *Extension of the Softwood Lumber Agreement*

The Softwood Lumber Agreement between Canada and the US, which regulates sawnwood exports from Canada to the US, was renewed in January 2012. The agreement was signed in 2006 and revoked US countervailing measures. The deal returned to Canadian exporters more than \$4.5 billion in tariffs collected by the US. It also set export charges for Canadian companies when the sawnwood price dropped below a certain amount.

Although there are ongoing issues, with one dispute about pricing of softwood timber from the British Columbia (BC) Interior currently under arbitration, both countries, in consultation with their forest sectors, saw value in extending the agreement for an additional two years, to expire in 2015. The principal motivation for the extension was to promote predictability in the ongoing trade partnership, which has taken on renewed importance given the dramatic changes in the traditional market for Canadian sawn softwood in the US, following the collapse of the US housing market. One sign of emerging cooperation is the efforts of the Binational Softwood Lumber Council, formed under the Softwood Lumber Agreement, in which forest-sector participants and organizations from the two countries work together to promote growth in new markets and new products.

3.2.4 *Canadian Annual Allowable Cut reductions*

The North American timber supply could be considerably lower as a result of reductions in the annual allowable cut foreseen in British Columbia (BC) and eastern Canada.

3.2.4.1 *Impact of the British Columbian mountain pine beetle infestation on the Annual Allowable Cut*

The BC Interior mountain pine beetle infestation is the largest ever recorded in North America. Originally expected to cause a cumulated loss of over 1 billion cubic metres of lodgepole pine in BC, officials now estimate total loss to date to be 710 million m³. An estimated 18.1 million hectares have been affected. The province projects that by 2021, 58% of the lodgepole pine volume

will have been killed, which is significantly less than the 80% originally projected.

On 16 May 2012, a Special Committee on Timber Supply was formed by the BC Ministry of Forests, Lands and Natural Resources to make recommendations about mid-term timber supply (annual allowable cut reductions) as a result of the infestation.

Current figures show that the Annual Allowable Cut for BC has risen, as a direct result of the infestation and as killed pines are more aggressively harvested before they completely dry out. The “shelf-life” of dead pine varies by moisture conditions etc., but can be as little as two years. Eventually, of course, the Annual Allowable Cut will drop significantly until the affected areas are re-grown. This will take many decades.

3.2.4.2 Annual Allowable Cut in Ontario and Quebec

The allowable cuts for Ontario and Quebec have fallen markedly at times during the period from 2002 to 2011. Reductions in Quebec began in 2008 as a result of the Coulombe Commission report on the sustainability of public-forest management in that province. The Commission concluded that the forests were over-harvested and recommended a 20% cut in production and a more ecologically sound and decentralized approach. The Quebec government subsequently introduced sector cuts slightly larger than those recommended by Coulombe (IATP, 2004). Harvest levels more recently have been even short of the Annual Allowable Cut thanks to mill shutdowns.

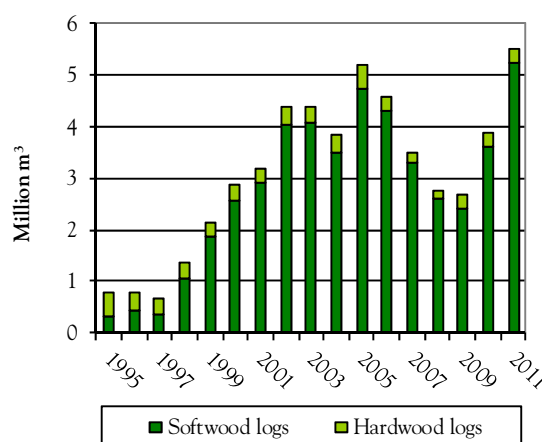
3.2.4.3 Log export restrictions

Log export restrictions (at the national, and provincial BC levels, where most of Canada’s log exports originate) exist to ensure that logs are traded only after domestic demand has been satisfied. Thanks to strong demand from China in particular, exports are soaring and these legal restrictions are being increasingly questioned by the public (graphs 3.2.1 and 3.2.2). Private forest owners argue that log export restrictions transfer wealth from timber owners, both the Crown and the private sector, to private forest-product manufacturing companies that enjoy lower raw material costs than they would have in the absence of such restrictions (Haley, 2002).

The dilemma is apparently that export demand has driven prices up to levels that BC domestic manufacturers are unable to pay, with jobs being lost as a result. The BC Province’s Timber Export Advisory Committee has the ongoing objective of finding an appropriate balance between these economic and social objectives.

GRAPH 3.2.1

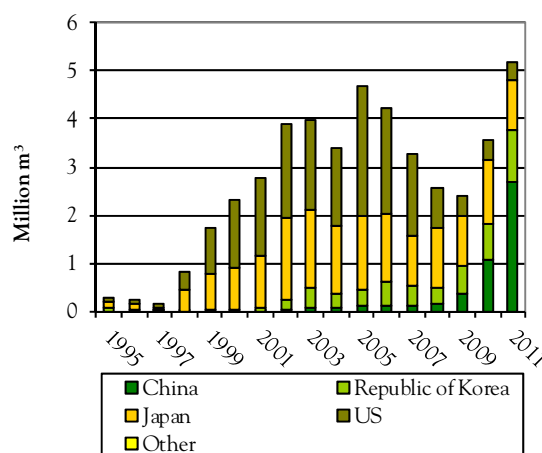
Canada exports of softwood and hardwood logs, 1995-2011



Source: Statistics Canada, 2012.

GRAPH 3.2.2

British Columbia exports of softwood logs, 1995-2011



Source: Statistics Canada, 2012.

3.2.5 EU Timber Regulation and FLEGT

The EU Commission, under the Action Plan on Forest Law Enforcement, Governance and Trade of 2003 (FLEGT), took up again the question of illegal logging of timber and related trade. The EU FLEGT Action Plan provides a number of measures to exclude illegal timber from markets, to improve the supply of legal timber and to increase the demand for responsible wood products.

A central element of the EU’s strategy for combating illegal logging are trade accords with timber-exporting countries, known as Voluntary Partnership Agreements (VPA). These ensure legal timber trade and support good forest governance in the partner countries. As a second element, the EU enacted legislation in the form of the EU Timber Regulation to prevent illegally produced wood products from entering the EU market.

Six countries are developing the systems agreed under a VPA and another six are negotiating with the EU. Around 15 countries from Africa, Asia and Central and South America have expressed interest in VPAs. (European Union FLEGT, 2012).

Exporting countries that enter into VPAs receive financing from the EU to implement modern systems to regulate forest practices, track forest products and license their exports to the European Union. After a VPA takes effect, countries have an agreed time period to put the necessary systems in place. After these systems are established, only licensed timber from said country will be permitted to cross the EU border (Powers and Wong, 2011).

The second key piece of legislation of the EU FLEGT Action Plan is the EU Timber Regulation, which takes effect from 3 March 2013. It aims to eliminate illegal wood products from the European market by requiring “due diligence” by operators and “traceability” through a “chain of custody”. Records must clearly identify suppliers and customers. The core of the due diligence notion is that operators undertake a risk-management exercise to minimize the risk of placing illegally harvested timber, or timber products containing illegally harvested timber, on the EU market.

The Regulation covers a broad range of timber products, including solid wood products, flooring, plywood, pulp and paper. Not included are recycled products, as well as printed papers such as books, magazines and newspapers. The Regulation applies to both imported and domestically produced timber and timber products.

It is legally binding on all 27 EU Member States, which are responsible for laying down effective, proportionate and dissuasive penalties and for enforcing the Regulation (European Commission, 2012a).

The Regulation is causing anxiety among stakeholders about how the law will be applied and about the administrative and bureaucratic burdens (Schally and Atanasova, 2012).



Source: Manfred Mielke, USDA Forest Service, 2012.

3.2.6 The US Lacey Act

The Lacey Act was first introduced by Iowa Congressman John Lacey in the House of Representatives in the first quarter of 1900 and signed into law by President William McKinley on 25 May that year. Today, the Lacey Act combats trafficking in illegal wildlife, fish and plants. The 2008 Farm Bill (the Food, Conservation, and Energy Act of 2008), effective 22 May 2008, amended the Lacey Act by expanding its protection to a broader range of plants and plant products. Among other things, The Lacey Act, made it unlawful as of 15 December 2008 to import certain plants and plant products without an import declaration (USDA, 2012).

The 2008 amendments expand the scope of products covered under the Act to include trees from natural or planted forest stands and any products made from wild plants or trees. They also expand the range of applicable protections to include any tree or wild plant that is taken, possessed, transported or sold in violation of any US or foreign law that protects plants. The amendment provisions require increased due diligence by businesses that source and sell wood and wood products (Beveridge & Diamond, 2009).

The Act essentially targets the prevention of illegal logging. Proponents say that it prevents US companies from importing inexpensive illegal wood. The amendments have resulted in ramifications for US wood importers, spotlighted by a pending case involving Gibson Guitar Company of Nashville, Tennessee. Federal agents have raided Gibson facilities twice since 2009 for allegedly importing wood that violates the Lacey Act, giving rise to claims of government overreach from Gibson executives and others.

More recently, on 14 October 2011, the US Congress introduced House Bill 3210 to again amend the Lacey Act. This Act is called the “Retailers and Entertainers Lacey Implementation and Enforcement Fairness Act” or the “RELIEF Act”. The proposed amendment would limit application to certain plants and plant products, reduce penalties for certain first offences, introduce changes to reviewing and reporting, provide funding for the implementation of plant declaration requirements, and establish standard certification processes for plants and plant products.

Further, under the “RELIEF Act”, the 2008 amendments would not apply with respect to (a) any plant that was imported into the United States before 22 May 2008; or (b) any finished plant or plant product the assembly and processing of which was completed before 22 May 2008 (Library of Congress, 2012).

3.2.7 *China continues to influence trade*

China's growth has slowed down in 2012 to its lowest rate – 7.6% in the second quarter – since the depths of the global financial crisis in 2009. The slowdown partly reflects the country's shift to a more sustainable development pattern after years of double-digit growth (The Guardian, 2012).

Despite the slowdown, UN Comtrade statistics show that China is the third top importer, only 1.8% behind the top importer, the US. It is also the top exporter of wood and wood products. As such, China is one of the major drivers for overall growth in global timber consumption. Timber exports from China are estimated to be growing at an annual rate of 30%, and Global Witness (2012) reports that China accounts for about a quarter of the global trade in illegal timber.

While the Chinese government has made forestry protection one of its goals, there is still no evidence that it has made substantial progress in stemming the global trade of illegal timber. Domestically, there are no public procurement policies encouraging the use of legal timber. China's effectiveness in controlling legal timber imports is equally weak (Powers and Wong, 2011).

3.3 *Climate- and energy-related policies*

3.3.1 *Influences of climate change legislation on market dynamics*

3.3.1.1 *Reducing emissions from deforestation and forest degradation (REDD+)*

Reducing Emissions from Deforestation and Forest Degradation (REDD) is an effort to assign a financial value to the carbon stored in forests, offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development. REDD+ goes beyond deforestation and forest degradation, and includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.

To “seal the deal” on climate change, REDD+ activities in developing countries must complement, not be a substitute for, deep cuts in developed countries' emissions. (UN-REDD Programme).

A number of key mechanisms, such as funding, reference levels and distribution of benefits, for the implementation of REDD+ are still under discussion. More about REDD+ can be read in chapter 11, Carbon markets.

3.3.1.2 *Agreements at the Durban climate conference*

A new set of forest carbon accounting rules for developed countries was proposed at the United Nations Climate Change Conference held in Durban (UNFCCC-COP17), 28 November-11 December 2011. If approved by EU Member States, these accounting rules will have to be applied for a time period from 2013 to the end of 2017 or even 2020. Afforestation, reforestation, and deforestation will be accounted for, as in the past, without caps on credit or debit. As far as the pool of harvested wood products is concerned, it is now to be accounted for when emissions occur, reflecting its contribution to climate change mitigation.

The Intergovernmental Panel on Climate Change (IPCC) had concluded that the mitigation benefits of the land use, land-use change and forestry (LULUCF) sector is a combination of sequestration, material substitution and fossil-fuel replacement. The policy provides an incentive to balance harvest and sequestration, as emissions from the harvested wood products pool need to be offset by new products entering the pool, otherwise debits would ensue.

The new rule provides a better balance between the use of wood for the generation of energy and solid wood products such as lumber and panels. However, wood products obtained from deforestation will still be considered as instant emissions. This consideration remained because of fears that delaying emissions from the harvest could provide an incentive for deforestation.

Related to these developments, the European Commission (EC) is beginning inter-service consultations on its proposed Communication on LULUCF and discussions with Member States. It presented its Communication and Proposal for a “Decision on accounting rules and action plans on greenhouse gas emissions and removals resulting from activities related to LULUCF” on 12 March 2012. The EC legislative proposal on accounting rules for harvested forest products clearly recognizes that forest harvesting is not a source of carbon emissions (United Nations, 2012).

The above agreements have been endorsed by the European wood industry association CEI-Bois, as follows:

“The European woodworking industries welcome the recent legislative proposal from the European Commission towards accounting rules and action plans on greenhouse gas emissions and removals resulting from activities related to LULUCF. The sector welcomes the move from the EC to start implementing the accounting system for harvested wood products on which a final agreement had been reached at the Durban climate conference. This will give full credit to the contribution of harvested wood products to climate change mitigation” (CEI-Bois, 2012).

3.3.1.3 Updating the EU Forestry Strategy and Forest Action Plan

In early 2011, the European Parliament, stressed that the EU Forestry Strategy and Forest Action Plan should be updated to include the climate change dimension. It issued a report on the EC's Green Paper on forest protection and information in the EU: "Preparing forests for climate change".

It pointed out that the Emissions Trading Scheme (ETS) in its current form was incompatible with LULUCF accounting. A difference existed between annual ETS-compliance requirements for industrial installations and the longer periods required for carbon stock changes in landholdings, and therefore no linkage should be made. Indeed, separate targets should be established for the LULUCF sector because of the differences in accounting precision and a large degree of natural variation.

Further concern was expressed with the short timeframes used in the current greenhouse gas (GHG) calculation methodology and the resulting carbon neutrality assumption for woody biomass. The EC should consult with the IPCC to establish a new GHG calculation methodology, accounting for the longer time horizons and for biomass emissions from land use, land-use change and forest management. Carbon flow should be assessed on a national level integrating the different phases in forestry.

The report also states that current biofuel criteria developed by the EC are not suitable for woody biomass. New legally binding sustainability criteria are to be developed for the use of biomass for energy considering indirect emissions and possible risks of distortion in the renewable energy market, i.e. one should not necessarily assume carbon neutrality. The detailed implementation of the criteria should be left to the local level accounting for specific site conditions (European Parliament, 2011).

3.3.1.4 New regulations under the Clean Air Act in the US

In the US, policies regarding the emissions from industrial boilers have become a major controversy. The proposed rules will also apply to the combustion of biomass and could discourage the development of renewable fuels that may have environmental benefits (Benway, 2011).

In 2010, the US Environmental Protection Agency (EPA) issued new regulations under the Clean Air Act and the Resource Conservation and Recovery Act, which cover emissions of hazardous air pollutants from incinerators and boilers. Boilers burn a variety of fuels to produce heat or steam for generating electricity and heating. The update to the Maximum Achievable Control Technology standards has been criticized for its latest restrictions on industrial companies (Benway,

2011). This is especially true for paper mills, which are very energy-intensive and utilize boilers for making pulp, producing power and for recovering inorganic chemicals from black liquor. But also biomass-based energy plants such as cogeneration units will be immediately affected.

The Maximum Achievable Control Technology standards were formulated based on the average emissions by the top-performing 12% of all existing sources and would apply to those sources that produce over 10 tons (9.1 tonnes) of emissions per year of any one hazardous air pollutant or over 25 tons (22.7 tonnes) per year of all hazardous air pollutants combined. Many in industry consider several features of the proposed legislation problematic, and questioned the EPA's methodology and analysis.

The American Forest & Paper Association commissioned a study, which found that these new regulations would have severe consequences for the paper industry if enacted in their current form. The EPA issued an administrative stay on the regulation, which would allow more time for reconsideration. However, in January 2012, a US District Court vacated the EPA's March 2011 stay, thus making the effective dates of the boiler Maximum Achievable Control Technology rules retroactive to May 2011, effectively putting many boilers out of compliance and adding a great deal of uncertainty to the pulp and paper industry.

3.3.2 International and government policies supporting alternative wood-based energy and fuel sectors

3.3.2.1 International perspective

In 2011, the International Energy Agency (IEA) started developing a roadmap for some of the most important technologies to achieve a global energy-related CO₂ target in 2050 of 50% below current levels. Each participating country is to identify technology, financing, policy and public engagement milestones that need to be achieved to realize the technology's full potential. This roadmap is to name technology goals and define key actions that stakeholders must undertake to expand biofuel production and sustainable use.

It will provide additional focus and urgency to international discussions about the importance of biofuels for a low CO₂ future. The successful development of technologies will determine to what extent agricultural or forest feedstock is to be utilized. Thus, in the long run, it could strongly influence the availability and pricing of wood.

3.3.2.2 European perspective

The Directive 2009/28/EC on renewable energy, which had to be implemented by all Member States by December 2010, sets ambitious targets, such that the EU

will reach a 20% share of energy from renewable sources by 2020 including a 10% share of renewable energy specifically in the transport sector, a 20% cut in greenhouse gas emissions, and a 20% improvement in energy efficiency.

The EU recognized that changing to sustainable economics requires, for instance, financing mechanisms that focus on renewable energy, transport and manufacturing. The EU provides grants and contracts under the Renewable Energy Source Directive for topics including integration of renewable energy in Europe, blending of biofuels with fossil fuels and other ways to market biofuels, operation of the system for the biofuels and bio-liquids sustainability scheme (European Commission, 2011).

Successful development of the technology for converting wood into biodiesel would boost the role of forestry, but would also increase competition for raw materials for energy production and manufacture of products such as pulp and composite boards.

Further and to promote clean technologies, a number of grants became available to stimulate businesses of all sizes for start-ups, expansion and research and development. Currently, the European Investment Bank and the European Bank for Reconstruction and Development provide EU loans for developing “cleantech” projects.



Source: UNECE, 2011.

3.3.2.3 Policy shifts on the production of biofuels

Analyses by the International Energy Agency show that biofuels, liquid and gaseous fuels produced from biomass need to obtain a larger share of world markets to reduce the reliance on crude oil. Although production of biofuels increased appreciably from 16 billion litres in 2000 to over 100 billion litres in 2011, biofuels provide globally only around 3% of all road transport fuels (International Energy Agency, 2012).

In Europe, an early EU Directive set the target that by 2020 biofuels, hydrogen and electricity would constitute 10% of transport fuels. However, some studies indicated biofuels to be less environmentally sound than expected. For instance, biodiesel production, in some cases, was linked to tropical deforestation and diversion of agricultural lands from food and fodder production. Among firms that have invested in biofuels, there are therefore growing concerns of a possible shift in policies (The Economist, 2012).

3.3.2.4 North American perspective

In the US, the Department of Agriculture has allocated \$6.1 billion in renewable and clean energy and environmental improvements to spur the creation of high-value jobs, make America more energy independent, and drive global competitiveness in the sector (Office of Management and Budget, 2010). In addition, the Department of Energy provided \$27.2 billion in discretionary funds, 3.2% above the 2012 enacted level. This includes increased funding for priority areas such as clean energy, research and development to spur innovation, and advanced manufacturing. Savings and efficiencies are achieved through cuts to inefficient and outdated fossil fuel subsidies, low-priority and low-performing programmes, and by concentrating resources on full utilization of existing facilities and infrastructure.

The Department of Energy has also increased funding for applied research, development, and demonstration in the Office of Energy Efficiency and Renewable Energy. The budget also maintains and expands funding for the Advanced Research Projects Agency-Energy (Office of Management and Budget, 2010).

In an attempt to reduce the federal budget, the US Senate voted 73 to 27 to eliminate billions of dollars in support for the US ethanol industry. This move to end taxpayer support for biofuels was mainly symbolic because the White House did not repeal ethanol subsidies entirely. Government support for the production of ethanol has increased every year since 2004. In 2011, refiners received a tax credit worth \$0.45 per gallon of ethanol mixed with regular gasoline and producers are also protected against cheaper imports made of sugar cane by a \$0.54 per gallon tariff.

However, a large part of the benefits accrues to farmers growing corn (Doggett, 2011). Wood has the potential to replace corn as the raw material for the production of ethanol; however, if government support were diminished or eliminated, investments in production facilities might become rather risky.

3.4 Environment-related policies

3.4.1 *Green building and research and development*

3.4.1.1 *International Green Construction Code*

The International Green Construction Code (IgCC) was issued in early 2012 following a period of public comment and feedback, and revision to the text. It addresses commercial construction and requirements for various building materials. However, it does not apply to residential structures of four storeys or less.

Its scope is “the design, construction, addition, alteration, change of occupancy, movement, enlargement, replacement, repair, equipment, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures and to the site on which the building is located.”

Most green building programmes increasingly focus on environmental aspects of construction materials. Buildings with sufficient credits earn the desired “green” rating. The designation of environmentally better materials can be based on a systematic science-based environmental life cycle assessment (LCA), which compares different materials on the basis of consistent, measurable characteristics of their environmental impact. This favours forest products.

LCA studies have consistently found that wood products require substantially less energy to manufacture, transport, construct and maintain than other materials. Increasing the use of wood means less fossil fuel consumption and represents a simple way to meet national targets on reducing greenhouse gas emissions (Silvia Melegari, CEI-Bois, July 2012). Not all programmes have, as yet, incorporated LCA in their guidelines, however.

Although the use of wood and other agricultural fibres is favoured by the IgCC bio-based materials selection requirements, wood is the only material that is singled out as needing to be certified and third-party audited to obtain recognition. Requirements are more stringent for materials with recycled, recyclable, and bio-based content. Otherwise, the IgCC indigenous-materials specifications are similar to and possibly more flexible than those of the Leadership in Energy and Environmental Design (LEED) and other green building programmes.

While the IgCC does not apply to residential structures of four storeys or less, jurisdictions may adopt the code and decide whether the National Green Building Standard applies to various types of residential buildings and occupancies (International Code Council, 2012).

An alternative to the IgCC is the ANSI/ASHRAE/USGBC/IES 189.1 Standard for the

Design of High-Performance Green Buildings Except Low-Rise Residential Buildings. It has also been revised in 2011. Standard 189.1 serves as a compliance option in the 2012 IgCC (International Code Council, 2012).

LEED provides building owners and operators with a framework for identifying and implementing practical and measurable green building design, construction, operation and maintenance solutions. Developed by the US Green Building Council (USGBC) in 2000, the LEED rating systems are developed through an open, consensus-based process led by LEED committees. The next update of the rating system, coined LEED 2012, is the next step in the continuous improvement process and ongoing development cycle of LEED.

LEED certification provides independent, third-party verification that a building, home or community was designed and built using strategies aimed at achieving high performance in key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality. LEED projects are in progress in 120 countries (US Green Building Council, 2012).

However, to attain “Responsible Extraction of Raw materials” credit towards LEED certification, forest products are facing obstacles in the US. In May 2012, eight Members of Congress sent a letter to the USGBC pressing for the immediate recognition and acceptance of all credible forest-management certification systems for qualification under the LEED rating system. The letter stated that “the only way for wood to earn this credit is to be “certified” to the Forest Stewardship Council (FSC) standard or an USBGC-approved equivalent. This is most unfortunate because 90% of FSCs land certifications are outside the United States, yet three quarters of the domestically certified forests are held to standards not recognized by LEED, including the Sustainable Forestry Initiative (FSI) and the American Tree Farm System (AFTS)”.

3.4.1.2 *Strategic networking of R&D programmes in the construction of buildings*

The European Commission set out to overcome the fragmentation in European Research Areas (ERA). Eracobuild was one of the first components of a European system for research and innovation in the construction and operation of buildings. In the past, a strong platform in ERA was established among the Member States for funding research, development, and implementation in the construction sector, with the Members successfully involved in planning and preparing a transnational R&D programme.

Representing the national governments’ funds for research, Eracobuild found a financial match for their research needs and built an efficient network of funding organizations and stakeholders (European Commission 2012b).

Also in this framework, the Energy Efficient Buildings Association (E2BA) collaborated with the European Commission in the Energy-efficient Buildings research program (E2B Association, 2012). They developed a multi-annual roadmap, with research priorities identified until 2013. In 2011, the Energy Efficient Buildings Association initiated the identification of RDI priorities for the period 2014-2020, taking into account advancements in the state of the art and the results emerging from past research (European Commission, 2010).

3.4.1.3 European Commissioner for Climate Action: develop a low-carbon economy

The European Commission sees climate change as a pressing challenge, with science and technology playing a central role in combatting it. The European Commissioner for Climate Action pointed to the EC Roadmap, which describes the cost-effective pathway to reaching the EU's objective of cutting greenhouse gas emissions by 80% – 95% of 1990 levels by 2050 – by stating that "while Europe is well on track to meet our 20% emissions targets (in 2020), and renewable goals, we are only on track for a 9% improvement in energy efficiency. Research and development is one of the few areas of the budget we have proposed to spend more money on. With a rise from €54bn to €80bn, it is a significant increase" (Public Service.Co.UK, 2011).

3.4.1.4 Legally Binding Agreement on Forests in Europe

The FOREST EUROPE Ministerial Conference on the Protection of Forests in Europe was held in Oslo from 14 to 16 June 2011. Ministers agreed on a common vision, strategic goals and measurable targets for European forests by 2020 and on negotiating a Legally Binding Agreement on Forests in Europe. The Agreement is to reinforce and strengthen the implementation of sustainable forest management with the objective of guaranteeing a balanced and stable continuity of all economic, environmental, cultural and social forest functions in Europe.⁹ Negotiations are continuing.

3.4.1.5 Action Plan for the Forest Sector in a Green Economy

This Action Plan describes how the forest sector in the UNECE region should lead the way towards the emerging green economy. It defines an overall vision and strategies and a number of areas of activity. For each area of activity, it proposes specific actions, and identifies potential actors who might contribute to achieving the objectives.

It is a work in progress and will be the outcome of a two-year inclusive process of consultation, under the leadership of the UNECE Timber Committee and the FAO European Forestry Commission. It will be presented

for approval to the Committee and the Commission at their joint session in December 2013. It reflects the ideas of participants in the process but does not constitute a binding commitment by any participant.

3.4.1.6 Environmental Product Declaration

In recent years, the International Organization for Standardization (ISO) and a number of European countries have been focusing on environmental issues, specifically on the sustainability of construction works relating to the Construction Product Regulation (EN 15804), the Environmental Product Declaration (EPD) of building products (ISO 21930), environmental labels and declarations (ISO 14025) as well as on environmental management and life cycle assessment (LCA) (ISO 14040 and 14044).

The Environmental Product Declaration is a "standardized report of environmental impacts linked to a product or service" and is based on an LCA. It allows the comparison of environmental performance and substantiating marketing claims. Now ISO is developing a new standard ISO/Draft International Standards (DIS) 14067 on the "Carbon footprint of products: Requirements and guidelines for quantification and communication" (Know the Flow, 2011).

Considering this expansion of international standards, the possibility of trade barriers arising between conforming and nonconforming countries remains unclear.

3.4.2 Russian Federation

3.4.2.1 Draft State programme on forestry development, 2012-2020

In April 2011, the Russian Federal Forestry Agency published the first version of the State "Forestry Development Programme 2012-2020". This programme is in coherence with the "Concept of long-term socio-economic development of the Russian Federation until 2020" (approved in 2008) and with the "Strategy for the development of the Russian forest sector up to 2020" (approved in 2008 by order of the Ministry of Industry and Trade and the Ministry of Agriculture).

The programme is expected to have the following implications for forest products markets. It will:

- Implement sustainable forest management practices.
- Decrease the volume of illegal logging.
- Increase the density of forest roads and the availability of forest resources.
- Enhance forest yield per unit of forest area, expand of the volumes of various types of forest use, and create conditions for a comprehensive and rational processing of forest resources.

⁹ For more information: www.forestnegotiations.org/

- Introduce advanced domestic and foreign technologies of logging, providing the maximum conservation of the forest environment and biological diversity of forests.
- Increasing work productivity in the forest sector and the competitiveness of Russian goods in world markets.

3.4.2.2 Draft Federal “State Regulation on the Production of Roundwood”

In 2011, the Russian Federal Forestry Agency drafted a legal text, the “State Regulation on the Production of Roundwood”, aiming at taking measures against illegal logging, improving the transparency and legality of timber trade and at promoting reforestation. This is seen as a necessary step in developing forest-law enforcement and to ensure compliance with the EU Timber Regulation 995/2010 and the US Lacey Act.

The Regulation provides for the introduction of:

- A unified State information system on roundwood production.
- A mandatory declaration of roundwood production prior to processing.
- A liability for violation of legislation on roundwood production and possible confiscation of timber in the event of such breach.
- A mandatory labelling of valuable wood assortments.
- Accompanying documents for the transportation of roundwood.
- A ban on the sale/transfer of roundwood harvested by citizens for their own needs.

In February 2012, at a meeting on the preparation of this Federal law, the first deputy Prime Minister indicated that: “the enactment of the Regulation and its subsequent implementation will significantly reduce the amount of illegal logging and will increase budget revenues of all forestry activities. To support the implementation of the bill, the government plans to spend 500 million roubles in 2012-2014”.

According to official government estimates, the annual volume of illegal logging in the Russian Federation in 2011 was about 1.3 million m³. Economic damage is estimated at 12-14 billion roubles a year.

3.4.2.3 Draft text of the “National Forest Policy”

For the first time in modern Russian history, a draft national forest policy was formulated this year. In March 2012, the Federal Forestry Agency presented the draft text. According to this text, the main objectives of forest policy are to:

- Achieve sustainable forest management, conservation and enhancement of forest resources and of their ecological potential.

- Increase the contribution of forests to socio-economic development and to environmental protection, while maintaining existing and creating new decent employment positions.
- Meet the social needs of present and future generations of Russian citizens for forest resources and services.
- Support Russian forest products to reach a leading position in world markets.

The National Forest Policy would enable a shift towards the up-scaling of sustainable forest management, the strengthening of the timber-processing sector and the active participation of citizens in managing forest resources. However, State ownership of forests should remain the main principle of the national forest policy (Maslyakov, 2012).

3.4.3 China

The Chinese government is aiming at expanding its total forest area by 40 million hectares, to reach a forest cover of 23% of its land area, and its total forest inventory by 1.3 billion m³ from 2005 to 2020.

To that end, the government will continue to subsidize tree planting to boost the development of the country’s forest industry.

3.5 Conclusions

Overall, measures are being enacted to promote certainty and predictability in timber markets in the UNECE region, although gaps exist as the full implications of the Russian Federation’s accession to the WTO are still unfolding. On the other hand, clarity has emerged on the treatment of LULUCF and harvested wood products within the climate change regime. International and national policies are increasingly supportive of wood-based energy and efforts to guarantee the sustainability of solid biofuels and measures against illegal logging and trade of timber are intensifying.

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