The international promotion of wood construction as a part of climate policy

Working Group Report
FOREWORD

In domestic discussion and international cooperation, a great deal of attention has been paid to biofuels, such as the use of wood for energy generation, in preventing climate change. At the same time, the climate-political significance and potential of wood construction has received much less attention. Nevertheless, wood is a renewable natural resource that captures and stores carbon dioxide. Where wood is used to replace other construction materials, the environmental and climatic benefits are considerable from the whole life cycle perspective. Wood can be used in a multitude of ways. The utilisation of trees for timber enables forests to be regenerated. The manufacture of wood products consumes minimal natural resources and energy. Wood is a source of a wide range of raw materials, and wood products are highly recyclable. By raising the degree of processing and value addition of wood, the economic significance of wood increases, thus creating employment and wealth.

As awareness of climate and environment issues increases and consumption habits change, new opportunities are opening up for the forest industry and wood construction to develop functional green solutions to meet consumers’ needs. This development holds great potential for increasing exports and value addition. This requires strengthening product development and other business know-how in wood construction in Finland.

In April 2010, Minister of Foreign Trade and Development Paavo Väyrynen appointed a working group to discuss how wood construction could be promoted internationally as a part of climate policy (the decision to appoint the working group can be found in Appendix 2).

In the decision to appoint the working group, its tasks were described as follows:

“Formulate proposals for actions to promote wood construction as a part of climate policy in a best possible way through the EU and other international cooperation and thus also create opportunities for Finnish exports.

With this aim in mind, the working group shall identify the key targets and methods for lobbying. In particular, these include the European Commission, the EU Member States, the UN’s climate change negotiation process and WTO negotiations. In this respect, the working group shall also formulate proposals for the lobbying responsibilities of various parties.

Furthermore, the working group shall formulate proposals for objectives of the said lobbying and define arguments to be used in lobbying.

The working group shall formulate proposals for actions with which Finland can influence forest industry development policy and development cooperation programmes internationally in order to promote sustainable forestry, enabling the increase of wood construction in developing countries. The working group shall also formulate proposals for Finnish development cooperation.”

Minister Väyrynen invited Jorma Julin, Director General at the Department of Development Policy, to chair the working group and the following persons from the Ministry of Foreign Affairs to act as members of the group: Deputy Director General Pekka Säilä, Deputy Director General Liisa Talonpoika, Counsellor Markku Aho, Forestry Adviser Vesa Kaarakka and Senior Advisor Kalevi Kyyrönen. In addition, Director Mikko Viljakainen from the Finnish Forest Industries Federation was invited to the group. The working group also decided to invite Ministerial Advisor Reima Sutinen from the Ministry of Employment and the Economy to join the group. The secretaries of the group were Counsellor Jukka Pesola from the Ministry of Foreign Affairs and EU Coordinator Riku Eksymä from the Finnish Forest Industries Federation. Project Assistant Jussi Viding from the Ministry of Foreign Affairs was nominated as deputy secretary.

The working group had 16 meetings and consulted several specialists (a list of the specialists is given in Appendix 1). In May 2010, a conference on climate change and wood construction was organised.

The actual recommendations of the working group will be presented in Chapter 11.

The working group respectfully presents its report to Minister of Foreign Trade and Development Paavo Väyrynen.

On behalf of the working group, in Helsinki on 8 December 2010.

Jorma Julin
Director General
CONTENTS

1. INTRODUCTION ........................................................................................................................................... 4
  1.1. ON THE ECONOMIC SIGNIFICANCE OF WOOD CONSTRUCTION .................................................. 4
  1.2. WORK AND THE STARTING POINT OF THE WORKING GROUP ...................................................... 5

2. ARGUMENTS FOR PROMOTING WOOD CONSTRUCTION AS A PART OF CLIMATE POLICY ............ 7
  2.1. THE ECOLOGICAL FOOTPRINT OF CONSTRUCTION IS LARGE AND KEEPS ON GROWING ............. 7
  2.2. WOOD CONSTRUCTION OFFERS MEANS FOR REDUCING CLIMATE AND ENVIRONMENTAL EFFECTS
       OF CONSTRUCTION ................................................................................................................................. 7
  2.3. WOOD CONSTRUCTION OFFERS MEANS FOR RESPONDING TO MOST ENERGY, CLIMATE AND ENVIRONMENT
       CHALLENGES .......................................................................................................................................... 8
  2.4. WOOD IS A RENEWABLE NATURAL RESOURCE THAT IS PRODUCED SUSTAINABLY ..................... 8
  2.5. WOOD STORES CARBON AND CAN BE USED TO REPLACE MATERIALS THAT GENERATE MORE EMISSIONS 9
  2.6. WOOD AND ITS CHARACTERISTICS ARE PARTICULARLY SUITABLE FOR CONSTRUCTION .................. 9

3. WOOD CONSTRUCTION AND THE EUROPEAN UNION ............................................................................. 11
  3.1. THE SUSTAINABLE DEVELOPMENT AND EU 2020 STRATEGIES – THE STARTING POINT AND
       TARGETS FOR SUSTAINABLE DEVELOPMENT ..................................................................................... 11
  3.2. THE EU INTERNAL MARKET FROM THE PERSPECTIVE OF WOOD CONSTRUCTION ....................... 13
  3.3. PUBLIC PROCUREMENT IN THE EU ....................................................................................................... 13
  3.4. CLIMATE CHANGE AND WOOD CONSTRUCTION IN THE EU ......................................................... 14
  3.5. EUROPEAN CLIMATE CHANGE PROGRAMME – ECCP ..................................................................... 15
  3.6. OTHER EU-RELATED ASPECTS ............................................................................................................... 16
     3.6.1. The EU Forest Action Plan ............................................................................................................. 16
     3.6.2. The study on perceptions of the wood-based industries ............................................................... 16
     3.6.3. The opinion of the European Economic and Social Committee (EESC) ....................................... 16
     3.6.4. The role of the European Parliament ............................................................................................ 17

4. THE CLIMATE CONVENTION NEGOTIATIONS AND WOOD CONSTRUCTION .................................... 19
  4.1. LULUCF .................................................................................................................................................. 19
  4.2. WOOD PRODUCTS ................................................................................................................................. 19
  4.3. THE EU AND WOOD PRODUCTS IN THE CLIMATE CONVENTION NEGOTIATIONS ..................... 20
  4.4. THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE – IPCC ............................................... 20

5. WOOD CONSTRUCTION IN THE UN ORGANISATIONS ............................................................................ 23
  5.1. FOCUS ON THE LIVING – UN-HABITAT .............................................................................................. 23
  5.2. WOOD CONSTRUCTION AS A PART OF ECONOMIC COOPERATION – UNECE ......................... 24
  5.3. ENVIRONMENTAL PERSPECTIVE – UNEP ....................................................................................... 25

6. OECD – REPORTS AND POLICY GUIDANCE ......................................................................................... 27

7. WTO – LIBERALISATION OF TRADE IN WOOD PRODUCTS .................................................................... 29

8. WOOD CONSTRUCTION IN RUSSIA .......................................................................................................... 31
  8.1. LOBBYING TO PROMOTE WOOD CONSTRUCTION IN RUSSIA ..................................................... 32

9. WOOD CONSTRUCTION IN DEVELOPMENT COOPERATION .......................................................... 35
  9.1. BARRIERS TO WOOD CONSTRUCTION CAN BE REMOVED IN DEVELOPING COUNTRIES ............ 35
  9.2. ACTIONS TO PROMOTE WOOD CONSTRUCTION AND SUSTAINABLE FORESTRY ..................... 35
     9.2.1. National forest programmes, good governance and non-industrial private forestry .................... 35
     9.2.2. Climate change and sustainable forestry ...................................................................................... 36
     9.2.3. Wood trade agreements and FLEGT ............................................................................................ 36
     9.2.4. Education and communications in promoting wood construction ............................................. 36
9.2.5. Wood energy underutilised.................................................................................................................. 37
9.2.6. The value chain for wood needs to be extended............................................................................. 37

10. WOOD CONSTRUCTION IN DISASTER RELIEF AND RECONSTRUCTION ................................. 39
1. INTRODUCTION

Wood construction and the use of wood products have two key positive environmental and climatic effects. Firstly, items made from wood, such as wooden buildings, wood-based structural components, wooden furniture, or any other wood or wood-based products, serve as carbon stores. Secondly, when energy-efficient and renewable wood is used to replace energy-intensive materials which contain non-renewable raw materials and which generate carbon emissions during their production, the overall substitution effect in terms of CO2 reduction is considerable in wood’s favour.

Utilising wood in an ecologically sustainable manner can make the capture of carbon emissions more effective. A cubic metre of wood contains approximately 200 kg of carbon, which equals approximately 750 kg of carbon dioxide. This corresponds to emissions caused by 5,000 kilometres of driving.

In the EU, there is a need and demand for promoting wood construction. As early as in 2004, the benefits and advantages of wood construction were examined by a group of experts. The resulting report states climate-political benefits of wood construction, among other advantages. Of the EU Member States, France has begun to take measures to promote wood construction and related legislation has been drawn up requiring the use of wood in new buildings. Other countries have displayed increasing interest in wood construction, too. Great Britain and Sweden have demonstrated their openness to construction by constructing wooden multi-storey residential buildings. At the EU level, several related initiatives have been made in recent years and strategies, action programmes and surveys prominently featuring sustainable development and green construction have been implemented. Nevertheless, in practice the EU-level measures for promoting wood construction have been exceedingly modest, even though surveys have shown the benefits of wood for climate policy and, at a more general level, for environmental policy. No incentive systems, wood-related tax concessions or subsidies have been implemented at the EU level, and the situation is fairly similar in other parts of the world.

Russia is one of most important markets for Finland, and wood construction exports to Russia are growing. In the future, climate and environmental policy will play a greater role also in the Russian market. However, for the present the Russian market remains particularly challenging due to local standards and regulations and inexperience in using wood extensively in construction. Increased wood construction in Russia would create considerable growth opportunities for the Finnish wood products and wood construction sectors, and increased utilisation of forest resources would offer opportunities for cooperation in mechanical forest industry investments, for instance. Such investment decisions would be less cumbersome than involvement in large wood processing factory projects requiring lengthy consideration and planning.

Forests have a crucial role in strengthening ecologically sustainable development and reducing poverty in developing countries. Forests can function as carbon sinks and pools of biodiversity, while providing employment and livelihood. Sustainable forestry requires extensive understanding of the social, economic, ecological and cultural significance of forests as well as of the roles of states, communities and the private sector. In order for wood construction to prevent climate change, wood usage should be based on sustainable forestry in developing countries, too, which would make large-scale commercial use of forests possible. The forest sector is one of the focus areas of Finnish development cooperation.

1.1. ON THE ECONOMIC SIGNIFICANCE OF WOOD CONSTRUCTION

Forests cover 70% of Finland’s surface area, and wood is an important renewable natural resource for the country. Finland has living traditions in wood construction, and its wood usage can be considerably further increased. Domestic construction is the single biggest market for the Finnish wood products industry.

The forest industry needs a steady and competitive roundwood supply. Approximately 70% of forest owners’ stumpage earnings come from saw timber. The basic principle in Finnish forestry is to grow trees to sawlog size. Accordingly, forest owners aim at producing large-size timber to maximise profitability. Approximately 70–80% of products made from sawlogs are used in construction. Final fellings also provide pulpwod, wood from forest thinning, and other wood materials used as raw material in other branches of the forest industry. Wood construction thus plays a key role in securing the raw material supply for the entire forest products industry. Without a
smoothly functioning forest industry it will be impossible for Finland to reach its target of increasing its use of bioenergy, as the availability of raw material for bioenergy is linked to the need for industrial roundwood.

The wood products industry provides employment for approximately 31,000 people in Finland, in addition to which wood procurement, the timber trade and wood construction give work to many more. By enhancing value addition and by increasing wood construction, the employment effect can be multiplied. Wood processing is mainstay in Finland. These jobs cannot be relocated, as the most rational place to process wood is where it grows. The development of wood construction contributes to Finland’s national employment policy and market-oriented regional policy because sawmills and wood processing plants are located close to the forests.

Finland’s forest industry accounts for approximately one fifth of the country’s net export income. Of this, about two thirds come from the pulp and paper industry and one third from the wood products industry. However, the forest industry is an interconnected entity in which it is difficult for one part to function without the other.

According to calculations by Statistics Finland and industry figures, in Finland the value of forest industry exports per capita and in relation to exports in general is the highest in the world. Second in this ranking is Sweden, with Germany sixth. Other EU Member States in the top 8 are Austria and France. There is the potential for successful cooperation among these and other countries in promoting wood construction within the EU and internationally.

1.2. THE WORK AND STARTING POINT OF THE WORKING GROUP

Aware of on-going work by several other working groups and other similar bodies in Finland, the working group appointed by the Ministry of Foreign Affairs regarded it important to focus on promoting wood construction

- at an international level, and
- as a part of climate policy.

The working group considered it best to start its work by examining how wood construction and climate policy has been perceived thus far and what sort of role it has had in international forums and in key negotiation and review processes. The working hypothesis of the group was to ensure that wood construction is treated equally to other construction materials, since it has been observed that existing regulations impose much tighter requirements on the use of wood in construction compared to other materials. Climate policy needs new ways of ensuring progress in the move towards low-carbon economies. The possibility of favouring wood over other construction materials was also raised. The EU has already taken the road towards unequal treatment by favouring biofuels on climate-political grounds. A logical continuation of this would be to favour wood construction on account of its positive environmental effects. In any case, the target should be better consideration of the climate and other environmental advantages of wood in public decision-making and regulation. Nevertheless, it was acknowledged that it is not realistic to consider that other construction materials could be replaced with wood in all areas of construction. Each construction material has its specific applications, different construction solutions are needed, and materials should also be utilised in combination.

Relatively early on the working group estimated that, as a support for lobbying, internationally high quality independent research on the climate and other environmental advantages of wood construction is needed. This type of authoritative survey would also be needed to support political decision-making. In particular, the survey should compare different construction materials in a reliable manner for the entire life cycle from production to disposal. Furthermore, it should take into account the raw materials – both renewable and non-renewable – needed for manufacturing different construction materials.

At an early stage, the working group also concluded that one of its most important recommendations will be that there should be an extensive lobbying programme to spread and strengthen the message of the climate and other environmental advantages of wood construction at an international level.

The work of the working group was primarily guided by the idea that the advantages of wood construction have been largely underused as a climate policy tool and that the potential benefits of increased wood construction would be a considerable, even in the medium term. According to an estimate, if Europe increased wood construction by 10%, this would account for 25% of the Kyoto Protocol emission reduction targets set for the EU. Despite surveys carried out in the EU highlighting the benefits of wood construction, no noteworthy actions have been taken at the EU level to encourage or promote wood construction.
2. ARGUMENTS FOR PROMOTING WOOD CONSTRUCTION AS A PART OF CLIMATE POLICY

Several surveys and studies on wood products and wood construction have been carried out worldwide. Perspectives have varied from the role of the forest and the wood industry in industrial policy, to the suitability of wood for construction, and the climate and environmental policy benefits of wood. In Finland, the significance and role of the forest industry has been discussed in numerous studies and surveys. As a foundation for its work, the working group formulated a set of arguments for promoting wood construction as a part of climate policy.

2.1. THE LARGE AND GROWING ECOLOGICAL FOOTPRINT OF CONSTRUCTION

In Europe, construction consumes more raw materials than any other industry. Measured by weight, construction’s share of raw material consumption varies in different sources from 33% to 50%. In addition, construction and deconstruction produces approximately 40–50% of waste.\(^1\)

The use of buildings accounts for approximately 40% of energy consumption and 30% of carbon dioxide emissions, while the manufacture of construction products is responsible for approximately 5% of energy consumption and climate-related emissions.\(^2\) Construction’s share of traffic emissions is as high as 25%.\(^3\) The majority of emissions from the manufacture of construction products derive from cement production, which generates approximately 5–8% of global carbon dioxide emissions (this figure varies in different sources).\(^4\)

Construction activity is increasing due to population growth, migration and rising living standards. According to estimates, the world population will reach 9 billion by 2050. Within this same timespan, approximately 1 billion people will migrate to towns and cities. It has also been estimated that by 2050 every tenth world inhabitant will be a refugee.

As prosperity increases, people want to live in more spacious and better-equipped homes. New homes are also needed to replace redundant housing. In Finland alone, 16,000 homes need to be built each year just to maintain the current stock.\(^5\)

A high proportion of construction is based on non-renewable natural resources. Increasing competition for raw materials can result in sharp fluctuations in the prices of non-renewable raw materials due to international trade cycles, as already evidenced by steel price trends, for instance.\(^6\) The rise in material prices leads to the need to find alternative materials. In construction, the answer may be renewable, sustainably produced wood.

2.2. WOOD USE AS A MEANS OF REDUCING THE CLIMATE AND ENVIRONMENTAL EFFECTS OF CONSTRUCTION

The environmental effects of construction are caused by a range of factors. These include the manufacture of construction materials, construction itself, the use, heating and cooling of buildings, traffic and transport, and demolition. For the present, there is no established method for assessing the relative impact of the different factors and, as a result, the question is open to different interpretations.

The majority of attention is paid to improving energy efficiency in the use of buildings. However, only approximately 1% of the building stock is replaced annually, making this a slow method of reaching emission reduction targets. To accelerate the change, emphasis is placed on the improvement of energy efficiency in the existing building stock, which is, in the long run, a good but slow method of reducing emissions.

To reduce climate-related emissions, the EU has set high targets for improving energy efficiency in buildings. According to the new Directive on the Energy Performance of Buildings, by as early as 2021 all new buildings in

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\(^{1}\) The EU research project: RELIEF 2003, the background material.

\(^{2}\) Ministry of Environment (The figures relate to Finland but the figures are similar internationally.)

\(^{3}\) UFEMAT, (the European Association of National Builders’ Merchants Associations and Manufacturers)


\(^{5}\) Statistics Finland. Construction statistics.

\(^{6}\) Statistics Finland. Building Cost Index.
the EU should be virtually zero-energy buildings. According to national targets, by 2050 Finland’s carbon dioxide emissions should be 80% below the 1990 level.7

The last time that the energy efficiency requirements for buildings were tightened in Finland was at the beginning of 2010 and the next change is due in early 2012. At the same time, so-called integrated energy calculation is being adopted and energy efficiency requirements are now set for the overall energy consumption of buildings. Reaching these targets requires significant development within the construction sector; they cannot be achieved with conventional solutions and existing technologies alone. The Fourth Assessment Report (2007) of Working Group III of the Intergovernmental Panel on Climate Change (IPCC) lists several short-term mitigation measures for buildings: more efficient use of energy and energy savings in heating and air conditioning, for instance, as well as use of solar energy. Long-term mitigation measures include standards and ecolabelling for appliances, building regulations and certificates and public sector programmes, including public procurement.8

Consumption of non-renewable natural resources caused by construction and environmental harm resulting from materials manufacture can also be reduced by favouring renewable raw and other materials. There are hardly any differences in energy consumption caused by the use of buildings built according to the same energy efficiency requirements. The major differences in energy consumption caused by buildings arise, therefore, from the manufacture of construction products. Furthermore, as energy consumption caused by the use of buildings decreases due to future regulations, the role of the environmental effects of manufacturing construction products will be emphasised in both new buildings and renovation.

2.3. WOOD CONSTRUCTION AS A MEANS OF RESPONDING TO THE MAJORITY OF ENERGY, CLIMATE AND ENVIRONMENT CHALLENGES

If Europe were to increase its share of wood construction by 10%, this would account for 25% of the Kyoto target.9 An increase in wood usage could considerably reduce consumption of non-renewable natural resources, carbon dioxide emissions caused by construction and the manufacture of construction products as well as energy consumption. The level of emissions caused by the manufacture of different construction materials varies greatly. Usage should, therefore, focus on those products that generate the least emissions, such as wood.

In Europe, an annual increase in wood use of 4% would generate an annual reduction of approximately 150 million tonnes in carbon dioxide emissions, worth approximately EUR 1.8 billion in emissions trading.10

Environmental comparisons carried out in Finnish and international construction projects support estimates that by increasing wood usage the environmental effects of construction can be reduced.

In these calculations, a comparison is typically made between a wooden building and a corresponding concrete building. Despite some statistical dispersion due to the varied nature of individual construction projects, a common trend can be observed: wood use significantly reduces the environmental effects of construction.

2.4. WOOD IS A SUSTAINABLY PRODUCED, RENEWABLE NATURAL RESOURCE

Wood is the only construction material with a continually increasing raw material source. By using wood, the use of non-renewable materials can be reduced or eliminated completely. This has important implications for construction, where materials are used in high quantities and where replacing less ecological materials with wood is relatively easy to achieve.

In Finland and in Europe, the wood used is mainly harvested from certified forests and is always sustainably produced. The annual growth of these forests considerably exceeds the drain. Where wood is used, forests are better managed and have better growth. The total carbon stock of Finland’s forests increases daily by an amount equivalent to the total amount of wood raw material used by the country’s structural wood products sector each year.

It is also important to distinguish tropical and subtropical forests from temperate forests. The world’s tropical and subtropical forests are shrinking due to population growth, poverty and economic structure related problems.

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However, the state of temperate forests and European forests in particular is good. Increasing wood usage does not reduce the forest area but gives forests economic value, which in turn encourages their management.

If Russia’s forest resources are excluded, the annual growth of European forests is 760 million cubic metres. If Russia’s forest resources are excluded, the annual growth of European forests is 760 million cubic metres.11 Each year, the forest area increases by 661,000 hectares, and only 64% of the annual growth is harvested.12 European forests are also increasing constantly through the expansion of the forest area. There is little need to import wood to Europe: over 97% of softwood used on our continent comes from the region’s own forests. European wood accounts for over 90% of all wood used in Europe – hardwoods included.

2.5. WOOD IS A CARBON STORE AND CAN BE USED TO REPLACE HIGH-EMISSIONS MATERIALS

In order to grow, a tree needs carbon dioxide from the air. The carbon contained in the carbon dioxide is captured and used as the “building material” for the tree. In return, the tree releases oxygen back into the atmosphere. Around 1.55 kilograms of carbon dioxide are taken from the air to make one kilogram of wood. Roughly half of wood is carbon. As a rule of thumb, one cubic metre of wood stores roughly one tonne of carbon dioxide. In addition, the emissions caused by manufacturing wood products are also lower than those of other construction materials.13

When building components are made from wood, the captured carbon contained in the wood is stored in-situ in the wooden structures, resulting in long-term carbon storage. An average Finnish wooden house stores in its wooden structures approximately 30 tonnes of carbon dioxide captured from the air. This is equivalent to the total carbon dioxide emissions generated by an average household car in over 10 years. The carbon can remain stored in this way for the entire lifetime of the building – sometimes centuries.

The manufacture of wood products generates comparatively little carbon dioxide emissions.14 The amount of carbon stored in wood products outweighs the emissions caused by their manufacture by many times over. When wood products are converted to energy after use, the amount of carbon dioxide released into the atmosphere is no greater than the amount of carbon dioxide stored in the wood during the growth of the tree. Wood energy is renewable and can replace fossil fuels.

Wood products can be used as substitutes for products whose manufacture would generate carbon dioxide emissions.15 This is referred to as the substitution effect.16,17 When substituting other products with wood, the carbon dioxide emission reduction effect is often even greater than the carbon storage effect of the wood. This is due to the lightness of wood and the fact that it is often used as a substitute for considerably heavier and more emission-intensive materials.

2.6. WOOD AND ITS CHARACTERISTICS ARE IDEAL FOR CONSTRUCTION

The manufacture of wood products and structures consumes little energy in comparison to similar products and structures made of other materials. Unlike other materials, most of the energy needed to manufacture wood products is derived from renewable energy sources. For the most part, energy comes from by-products of production such as bark. The manufacture of basic wood products used in construction, such as sawn and planed timber, even generates more energy than it consumes.

Wood is an ideal building material. Working with wood is relatively effortless and can be done with simple hand tools. Large structures can be easily made from wood using a wide variety of jointing techniques and methods. In addition to their lightness, wooden structures are also flexible, making them ideal for use in earthquake resistant

12 Nabuurs et al. (2003). Future wood supply from European forests – implications for the pulp and paper industry, Alterra Report 927 commissioned by CEPI, Alterra/ EFI/SBH, Wageningen, the Netherlands.
structures, for instance. Wooden structures are also highly fire resistant. The charring rate of wood is approximately 1 millimetre per minute, so its behaviour in fire is highly predictable. This is important when considering the safety of fire fighters, for instance. A margin for charring is included in the dimensional specifications for wooden structural members; the margin allows for a given depth of charring without risk of structural failure.

Wood also has moisture-balancing qualities. Indoors, naturally breathing wood surfaces even out moisture variations and improve the indoor air. This reduces the need for air conditioning and thus saves energy. The resulting decrease in moisture variation also reduces indoor air contaminants, such as dust. Wood also has very low thermal conductivity, making it a good heat insulator and ideal for use in ultra energy-efficient buildings.
3. WOOD CONSTRUCTION AND THE EUROPEAN UNION

The greatest future challenges for the European Union relate to the changeover to green economy and to sustainable production and consumption, and to the creation of new jobs. Actions to pursue these targets are focused mainly on mitigation and adaptation to climate change, sustainable energy production and conservation of natural resources.

In order to succeed globally, the EU must strive for as efficient as possible use of resources and develop new green competitiveness and technologies. To prevent climate change, the EU has already committed to cutting its greenhouse gas emissions and is constructively negotiating a new climate convention. Emission cuts in themselves are not sufficient; in addition, in the long run all operations should be carbon neutral.

Europe can meet 25% of the Kyoto target by increasing the market share of wood construction by 10%. Increasing the usage of wood in Europe by 4% annually would generate an annual reduction of approximately 150 million tonnes in carbon dioxide emissions, worth approximately EUR 1.8 billion in emissions trading.

At the EU level, an increase in wood usage could considerably reduce consumption of non-renewable natural resources, carbon dioxide emissions caused by construction and the manufacture of construction products as well as energy consumption. By developing wood-based construction solutions at this stage, the EU could prepare for any likely future requirements set for construction globally.

Through investment in wood construction, the EU Member States could already reduce carbon dioxide emissions and get closer to their climate targets. With wood usage, the efficiency of the EU’s natural resource usage as well as self-sufficiency can be significantly improved.

Nevertheless, for the present there have been barely any investments in increasing wood construction in the EU climate policy, even though green construction is receiving increasing attention. The reason behind this is, first and foremost, that the whole life cycle environment- and climate-political effects of different construction materials are ignored, thus not highlighting the advantages of wood. At the same time, the steel and concrete industries, for instance, benefit from free emission allowances within the EU emissions trading system.

The following discusses the EU’s key initiatives, strategies, action programmes and processes of relevance to green construction and wood.

3.1. THE SUSTAINABLE DEVELOPMENT AND EU 2020 STRATEGIES – THE STARTING POINT AND TARGETS FOR SUSTAINABLE DEVELOPMENT

In 2006 the European Council adopted a comprehensive renewed Sustainable Development Strategy that aims at changing unsustainable consumption and production patterns as well as making policies and governance methods coherent. The main objective is to identify and develop operating models that enable long-term development of the standard of living by creating ecologically, socially and economically sustainable communities.

Of the seven priorities of the Strategy, two can be deemed related to wood construction. These are:

- sustainable consumption and production (by implementing Integrated Product Policy, making public procurement greener, renewing EMAS- and ecolabelling schemes and directing research to developing products and production methods that consume less natural resources, among other measures)

- conservation and management of natural resources.

The Strategy also emphasises the opportunities of education, research and development in the promotion of sustainable development. The Member States could strengthen sustainable development education and develop training programmes targeted for different professions, such as construction experts.

An integral part of the Strategy implementation is the Climate and Energy Package, adopted in 2008, that includes many elements from the Action Plan on Sustainable Consumption and Production and Sustainable Industrial Policy (see below) influencing wood construction. These relate to renewable energy sources, energy performance and eco-design, for instance.

One of the objectives of the Climate and Energy Package is a 10% emission reduction by 2020 in sectors outside the EU’s emissions trading system. These sectors include, for instance, construction, living, traffic (excluding
aviation), waste management and agriculture. For its part, wood construction contributes to reaching this objective by reducing emissions in the construction sector. The rules of the European Regional Development Fund (ERDF) have been changed with regard to supporting the eligibility of building stock investments in energy performance and in the use of renewable energy sources.

The voluntary development of the Member States’ public procurement in an environmentally friendly direction (see below) also has an important role in implementing the Sustainable Development Strategy. The Commission has developed guidelines for environmentally friendly public procurement (Green Public Procurement, GPP) for ten product and service groups, one of which is construction. In July 2010, GPP criteria were approved for eight new product and service groups, of which windows, thermal insulation and wall panels are clearly linked to wood construction. The criteria for Green Public Procurement are based on generally available scientific information, life cycle approach and recognition of stakeholders’ know-how. The criteria favour the use of sustainably produced wood and recycled material whenever possible.

**In the second review of the EU Sustainable Development Strategy, completed in 2009,** it is stated that the EU has mainstreamed sustainable development principles horizontally in order to combat climate change and to promote low-carbon economy. However, practical actions need to be more efficient. The Lisbon Strategy already referred to the significance of green growth in reviving the economy and creating new jobs. In the longer run, green growth will have a positive influence on climate change, natural resources and ecosystems. In addition, the Member States have paid attention to energy efficiency, for instance, which has contributed to decreasing energy consumption in the construction industry.

**The EU 2020 Strategy** aims at a sustainable, greener market economy based on innovation and more efficient use of resources. Know-how, education and research have a central role in the implementation of the Strategy. Achieving a competitive, linked and greener economy requires improving the productivity of production inputs and investing in projects that support growth. With the Strategy, the EU aims at pulling through the economic crisis and accelerating the changeover to a smart, green economy.

The objective of the **Action Plan on Sustainable Consumption and Production and Sustainable Industrial Policy** is to support a model promoting sustainable consumption and production in the EU and internationally and to promote the development of sustainable industrial policy in the EU. The Action Plan complements the Climate and Energy Package.

The core aim of the Action Plan is to create a dynamic framework for improving the energy and environmental characteristics of products and for increasing consumer interest in such products.

Measures include strengthening internal market norms in order to improve product quality through incentive systems and public procurement procedures, as well as providing information to consumers in order to increase the demand for environmentally friendly products. Special attention will be paid to products with the potential for significant reductions in environmental effects. The challenge is to create a framework that supports sustainable development and where the environmental characteristics of products improve throughout their life cycle.

Other measures of the Action Plan include improving natural resource efficiency, supporting eco-innovations, industrial policy initiatives for environmental industries, promoting good practices internationally and accelerating international trade in environmentally friendly goods and services.

In 2007 the **Commission’s Lead Market Initiative** was launched. The challenge is to identify promising development and growth prospects and to remove barriers to development. The EU’s objective is to support product development and growth in demand for such products, for instance by improving legislation and through standardisation. Other possible measures relate to green public procurement and financial support for innovative bio-initiatives and consumer communications. According to estimates, the effects of the Initiative could be seen within the next 5–10 years.

The Initiative’s sectors include sustainable construction, bio-based products and renewable energy. With regard to construction, sustainable renovation, wood construction and wood products, for instance, have been identified as sectors of interest for Finland. The report “Edelläkävijämäärä ja innovaation tavoitteet” (Lead Market Initiative and Innovation) by the Ministry of Employment and the Economy and Tekes (the Finnish Funding Agency for Technology and Innovation) recognises the climate benefits of wood construction, among other things, but at the same time notes the challenges in the sector.
Furthermore, in waste policy EU level targets have been defined for more efficient resource management, waste prevention and life cycle thinking. These targets are likely to have a positive influence on wood construction. The different strategies and programmes form an optimal foundation for promoting wood construction as a part of climate policy. However, in practice (on the internal market, for instance) the approach has not reflected these guidelines.

3.2. THE EU INTERNAL MARKET FROM THE PERSPECTIVE OF WOOD CONSTRUCTION

Despite the strategies, programmes and initiatives mentioned above, in practice the promotion of wood construction as a part of climate policy within the EU is a challenging task. Within the Commission, construction, the wood industry, and climate and environment belong to several Directorate-Generals, each of which handles the issues from their own perspective. The work of different Directorate-Generals is based on advance working programmes. Extensive political objectives are divided into various task areas, managed by different parts of Directorate-Generals, often according to strict territory thinking.

In the EU internal market, the starting point for the construction sector is the subsidiarity principle, according to which Member States are allowed to impose national norms, provided that these achieve the desired objectives more efficiently than with EU-level measures. The key principle is the functioning of the EU internal market. According to the Commission, certain construction materials or methods cannot be favoured in the internal market. In order to improve the functioning of the market, the EU pursues freedom of movement for construction products. Then again, the position of the Directorate-General for Enterprise & Industry is that environmental issues should have more impact on decision making, and products should also compete based on their environmental characteristics.

The most significant of the EU projects related to wood construction and wood construction products is the Construction Product Regulation, where the basic requirement BWR3 (Basic Works Requirement 3) relates to greenhouse gas emissions of construction products. The new basic requirement BWR7, Sustainable Use of Natural Resources, has also been added to the basic requirements, requiring the use of environmentally compatible materials.

To fulfil this requirement without risk of a technical barrier to trade, EU-level carbon footprint calculation rules for construction products are required for all materials for the entire life cycle of a building. Currently, these rules are being defined at a global level in the ISO 14067-1 standard, establishing carbon footprint calculation rules for all products.

The “Sustainability in Building Construction” project launched in the EU includes the harmonisation of methods for assessing environmental effects (CEN/TC 350), which aims at creating standardised European rules for compiling environmental product declarations for construction products and for assessing the environmental effects of buildings that use these declarations as source information.

In CEN/TC 350, horizontal standards (prEN 15643-2, prEN 15978 and prEN 15804) for assessing environmental performance of a building and of construction products are established. These standards are based on assessing said environmental performance for each individual building. In harmonisation, the first framework standard for assessing sustainability of construction (EN 15643-1) has been defined.

In the EU, the Directive on the Energy Performance of Buildings does not apply specifically to wood construction, since the Directive relates purely to the regulation of energy consumption in the use of buildings and the same energy performance can be achieved with any construction material.

The product Eco-design Directive is not directly related to wood construction or construction in general either, as it concentrates on environmentally friendly design of products by setting criteria by product group. This does not make it possible to compare the good environmental performance of wood construction products with the environmental performance of other construction products (wood construction vs. construction using other materials).

3.3. PUBLIC PROCUREMENT IN THE EU

The EU directives related to public procurement aim at freedom of movement for goods and services. In the EU region, all public procurement exceeding a certain threshold value has been opened for competition.
Of the procurement directives applied in the EU, Directive 2004/18/EC of the European Parliament and of the Council on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts, the so-called Public Procurement Directive, is essential to wood construction.

Since the EU has no actual public procurement policy for wood products, national guidance measures are applied in the execution of wood product procurement in Belgium, Denmark, France, Germany, Great Britain, the Netherlands and Sweden. The EU Forest Action Plan states the need for discussion between the Commission and the Member States in order to formulate recommendations on applying the Public Procurement Directive to wood products.

A working group has been set up under the EU’s Standing Forestry Committee to exchange information and experiences on guidance measures for public procurement of wood products, on the compatibility of different approaches, and on public procurement criteria. The working group will complete its work at the end of 2010. The EU’s recommended guidelines (GPP Training Toolkit) for the inclusion of environmental perspectives in public procurement within ten product groups are already a step in this direction.

By directing public procurement, environmentally friendly alternatives can be promoted. Finland's National Forest Programme 2015, approved by the Council of State in March 2008, emphasises that the entire life cycle of products as well as the significance of wood should be taken into account in pursuing sustainable development.

In Finland’s Strategic Programme for the Forest Sector wood usage is promoted and the significance of wood in public construction is highlighted. The Programme also lobbies for conducting an independent international survey on the benefits of wood use.

For its part, the Strategic Programme for the Forest Sector contributes to reaching the objectives of the EU Sustainable Development Strategy and other guidelines. The Programme’s recommendations are compatible with the EU’s Public Procurement Directive.

In 2009, the Council of State made a decision in principle to promote sustainable choices in public procurement. The environmental effects of products and services constitute a key criterion in sustainable public procurement decision making. According to the decision in principle, actions are required of public procurement personnel to promote sustainable choices in certain key industries, one of which is construction and housing.

Within the Strategic Programme for the Forest Sector, a steering group appointed by the Ministry of Employment and the Economy prepared a proposal for a national policy for the public procurement of wood products, published in June 2010.

3.4. CLIMATE CHANGE AND WOOD CONSTRUCTION IN THE EU

The role of wood products in climate change mitigation was examined in the EU in 2002 by a working group appointed by the Advisory Committee on Forestry and Forest-based Industries. The task of the working group was to investigate different approaches, methods and models of carbon calculation for wood products and to increase awareness of them, as well as to examine the role of wood products in climate change mitigation. In addition, the working group was tasked with reviewing the actions and initiatives of the EU Member States.

Additional momentum for the appointment of the working group was given by the EU-level ratification of the Kyoto Protocol, the Marrakesh Accord adopted by the 8th Conference of Parties to the Climate Convention and the preparations for the Conference of Parties of December 2003. The Conference discussed the role and significance of wood products and different options for taking them into account in carbon balances. Before the Conference, the Subsidiary Body for Scientific and Technological Advice (SBSTA) asked the Parties for their views on taking the carbon stocks of wood products into account in national reporting.

The conclusions of the working group’s report, published in January 2004, confirmed the significance of wood products in capturing and storing carbon. Furthermore, the report stated the whole life cycle ecological sustainability of wood products.

The report briefly examined different models for calculating carbon stocks of wood products and introduced projects that the Member States and some central organisations have executed to promote the use of wood products. The working group identified decision-makers, specialists and consumers as the target groups for lobbying. Thematically, lobbying was to be focused on two areas: construction and professional and consumer use of wood. The group divided the lobbying measures for promoting wood usage into four groups: lobbying at a political level, PR activities, education and technical counselling for different target groups.
The working group’s report presents actions and regulations made by certain Member States for the promotion of wood construction. The group emphasised the significance of construction Eurocodes in creating an internal market for wood construction. The report also noted the significance of public procurement in the promotion of wood use.

According to the report, recognition of the significance of wood and wood products as carbon stocks would be a positive step towards increasing wood consumption and atmospheric carbon capture. The working group’s report listed actions for increasing wood usage and for replacing other, non-carbon capturing and energy-intensive materials with wood:

- replacing fossil fuels and energy-intensive materials with sustainably produced wood products;
- incentives and subsidies to increase the use of wood products;
- incentives to increase wood, paper and board collecting, sorting and recycling;
- fiscal incentives such as reduced VAT on wood products. Wood products should originate from sustainably managed forests (FSC and PEFC certified wood, for instance);
- market incentives such as public procurement clauses to encourage the use of wood products, such as minimum wood content in public buildings (France, Germany);
- raising awareness of the positive role of wood products in fighting climate change.

At present, the above recommendations have not produced any major actions at the EU level.

3.5. EUROPEAN CLIMATE CHANGE PROGRAMME – ECCP

The European Climate Change Programme (ECCP) launched by the Commission in 2000 aims at identifying and developing all necessary basic elements to implement the Kyoto Protocol in the EU. One of the results of its work is the report “Working Group on Forest Sinks, Final Report” of 2002.

According to the report, there is plenty of room for increasing the use of forest products within the framework of sustainable forestry as annual wood harvesting in the EU is only 70% of annual growth, and the forest area is increasing. Furthermore, the report proposes different actions for increasing the use of wood products.

Carbon storage in wood products can be enhanced in the following ways:

- increasing the market share of existing wood products;
- replacing more energy-intensive materials with forest products;
- improving the quality of wood products;
- improving the processing efficiency of the forest industry;
- expanding recycling and re-use of wood and wood products.

Biomass should not be used as a substitute energy source

- if the biomass consists of wood that fulfils industrial quality requirements and originates from existing forest resources;
- if the biomass consists of recyclable forest-based products;
- if its production results in replacing forest with plantations;

which means that only forest-based products at the end of their life cycle should be used as an energy source.

The working group discussed at a general level the relation of carbon storage to use of forest resources in material and energy substitution. Although the subject requires deeper analysis, the following conclusions, among others, were reached:

- The increase in carbon storage and capture capacity achieved by sustainable forestry is a prerequisite for increased material and energy substitution.
- Wood products function as carbon stores and can be used as substitutes for more energy-intensive materials.
ECCP II was launched in 2005, but has thus far not addressed any topics of relevance to the promotion of wood construction. In addition, none of the Programme’s earlier conclusions have led to any major EU-level actions for promoting wood construction.

3.6. OTHER EU-RELATED ASPECTS

3.6.1. The EU Forest Action Plan

The overall objective of the Plan is to support and enhance sustainable forest management and the multifunctional role of forests. The Plan aims to contribute to achieving the objectives of the EU 2020 Strategy for growth and jobs and the objectives for sustainable development.

The Plan has four main objectives, the most central of which with regard to wood construction is improving long-term competitiveness, for instance by investigating the effects that globalisation has for economic viability and competitiveness of the EU’s forestry and by promoting research and technology development to improve the competitiveness of the forest industry.

In 2008, the Plan was complemented by the Communication on Innovative and Sustainable Forest-based Industries in the EU. It described future challenges and aims and listed 19 action points to improve the competitiveness of the industry; for instance, access to raw materials is to be improved by increasing the supply of wood, by developing solutions for possible gaps between supply and demand and by re-use of wood.

According to the Communication, there is a need to assess the role of wood products in climate policy and environmental legislation beyond 2012. In innovation and research, investments should be made both in education and in development of new methods in order to promote re-use, construction products and methods. Communications should also be increased to provide correct and up-to-date information about wood products. Communications and discussion about harmonised procedures with non-EU states is needed as well. The aim is to ensure access to the international raw material market by removing duty or other barriers from international wood trade.

3.6.2. EU study on perceptions of the wood-based industries

In 2002, the Commission commissioned a qualitative study across the then 15 EU Member States to investigate how the wood industry and economy is perceived. The aim of the Commission was to help the wood industry to coordinate activities to improve the industry’s productivity and operations.

According to the study, Europe, excluding Finland, Sweden and, to some extent, Austria, has a rather distorted perception of the operating methods, structure, productivity and ecological effects of the wood industry. In many countries, felling is not considered a sustainable practice but exploitation of natural resources. Wood-based industry is not perceived as an economically significant activity either. The only product group that is considered an important and economically significant group using wood as raw material is furniture. The surprisingly low credibility of sustainable and responsible forestry in Europe is one of the challenges that successful forestry faces. Consequently it was considered important that different actors in the sector contribute to providing true and up-to-date information about the current state of the forest industry.

3.6.3. The opinion of the European Economic and Social Committee (EESC)

In 2009, the European Economic and Social Committee (EESC) adopted an opinion that emphasises the significance of forests in preventing climate change. The Opinion stresses the significance of forests and use of wood products in the cost-efficient prevention of climate change and suggests that the EU increase the usage of sustainably produced wood. The Committee also urges the EU to adopt a leading position in practicing sustainable forestry. According to the Committee, the expansion of wood construction and wood usage in construction is restricted by the lack of harmonised standards, guidelines and certification criteria. Research-based life cycle and greenhouse gas emission analyses should be created for the sector so that unbiased comparison of different materials would be possible.

The Opinion encourages taking actions to increase wood usage, establishing a European council of experts in forest and environmental industries and striving to fulfil the greenhouse gas reporting requirements by all possible means. EESC considers it important for the EU to be involved in international cooperation, to take a more active role in international forest policy and also to adopt a leading position in the promotion of sustainable forestry globally.
3.6.4. The role of the European Parliament

With the Treaty of Lisbon, the position of the European Parliament has strengthened and thus it can play a greater role in the promotion of wood usage. The Parliament can present initiatives and questions to the Commission, for instance, and in this manner influence initiatives to be included in working programmes.

In the European Parliament, the Finnish MEPs (Takkula, Manner) have presented questions regarding the promotion of wood construction and the EU’s support for use of renewable materials. There has not been any extensive political discussion about the sustainable production and use of raw materials in the construction industry. The questions emphasise the environmental advantages of wood and its potential with respect to green growth and green economy.

In its responses, the Commission has comprehensively discussed the promotion of sustainable construction in the EU region through, for instance, the Construction Product Regulation, research and lead markets. The role of wood is seen as a significant element in moving towards a sustainable European economy; however, there is no programme particularly aimed at promoting wood usage. The responses state the Commission’s neutral attitude with regard to different construction materials as a part of the functioning of the internal market. There are no plans for binding orders to use a certain material. The responses given can be considered characteristic of the Commission’s perception of the role of wood construction in the EU region.

There is an unofficial group in the Parliament working across party boundaries and promoting wood usage. In the future, important factors in lobbying for the promotion of wood construction will be maintaining awareness of the key questions in the Parliament’s working programmes and taking the initiative in ensuring that wood construction and its environmental advantages are properly taken into account.
4. THE CLIMATE CONVENTION NEGOTIATIONS AND WOOD CONSTRUCTION

In the Climate Convention negotiations, wood products do not feature prominently as an individual topic but rather as a part of the larger LULUCF entity (Land Use, Land-Use Changes and Forestry). How wood products will be treated depends to a great extent on the results of the negotiations as a whole. It is relatively safe to assume that the results of the negotiations will have no significant influence on the promotion of wood construction in the medium term. Comprehensive long-term estimates are difficult to make due to uncertainties related to climate change and to the possible negotiation results, for instance. In any case, the significance of forests and wood products (and wood construction) in preventing global warming has been recognised in the negotiation process.

4.1. LULUCF

At the 2007 UN Climate Change Conference in Bali, a negotiation process was initiated to revise the climate convention system for the time after the first Kyoto Protocol Commitment Period, i.e. for the post-2012 period. Wood construction has not been discussed as a separate topic during the Climate Convention negotiations, but rather as a part of the negotiation agenda related to wood products (Harvested Wood Products, HWP). The agenda in turn is a part of the LULUCF entity (Land Use, Land-Use Changes and Forestry). On the basis of the United Nations Framework Convention on Climate Change (UNFCCC), all countries mentioned in Annex I of the Framework Convention report emissions related to the LULUCF sector.

Forests act as sinks, capturing greenhouse gases from the atmosphere. According to the Kyoto Protocol, industrialised countries can count carbon stored in vegetation and soil as credit. The effect of reforestation, forest management as well as cropland and grazing land management on sinks can be taken into account, with certain restrictions, whereas emissions generated by deforestation are added to other emissions.

The ongoing Climate Convention negotiations aim at finding a consensus on calculation methods related to the LULUCF sectors, among other things. In this connection, a programme aiming at reducing emissions generated by deforestation and forest degradation in developing countries through conservation, sustainable management of forests and enhancement of forest carbon stocks (REDD+) is discussed.

In the Climate Convention negotiations, the parties review opportunities to develop rules for taking forests and land use into account, for instance by expanding commitments and changing calculation rules for future Commitment Periods.

Emissions of the LULUCF sectors can be best discussed within a wider context where emissions and deductions generated by all manners of land use (for instance, food and fodder production) are calculated. Carbon stock increases would thus create credit, which is important for ensuring sufficient biomass resources in the long run. A reliable and functioning LULUCF calculation at the global level may significantly promote sustainable production of biomass. However, at the moment the development of information production related to the LULUCF sector is still in progress and there are a great deal of uncertainties related to sink and emission values, which makes it difficult to include the sector in binding emission reduction commitments.

4.2. WOOD PRODUCTS

Wood products are not so much carbon sinks but carbon stocks, and they are discussed in connection with LULUCF. The amount of carbon released from wood products depends on their average service life and their level of consumption. Service lives and uses vary greatly. In current calculation models suggested for wood products, major differences exist regarding where and when carbon stocks are considered to become carbon emissions.

The negotiations regarding a post-2012 Climate Convention continue. Even though carbon stocks of wood products have not held centre stage in the negotiations, related methodological and technical questions have been discussed since 1996 in the Subsidiary Body for Scientific and Technological Advice (SBSTA) for the Climate Convention and the Kyoto Protocol. The SBSTA is tasked with contributing to the negotiation process by providing information and advice on scientific and technical questions related to the Climate Convention and with contributing to the implementation of the Kyoto Protocol.
The SBSTA has comprehensively analysed and discussed, for instance, the definition and classification of wood products, methods and calculations for greenhouse gas inventories and their socio-economic and environmental effects on the parties’ forest carbon stocks and emissions, sustainable forestry and trade. In addition, the SBSTA has studied questions related to information gathering.

During the process, the parties (including the EU and the Member States) have provided the SBSTA with suggestions and views on different approaches and methodologies as well as national inventories and statistics on wood products.

The inclusion of wood products in the Climate Convention or in the Kyoto Protocol raises several complex questions. The aim of technical work is to create a foundation for defining wood products (the sector in its entirety or specific individual product groups), for assessing the effects of monitoring methods of carbon stocks and their emissions in order to avoid negative socio-economic and environmental effects, for clarifying monitoring method concepts and for collecting and processing data.

International negotiations feature in particular the so-called SCAD model (Stock Change of Domestically Produced and Consumed Harvested Wood Products) which would cover domestic production and use, as the name suggests. In addition, if there was reliable information of cross-border export, this could be included as well. In this case changes in carbon stocks could be counted as credit in either the selling country or the buying country.

In any case, the inclusion of wood products in the Climate Convention, and thus highlighting wood’s function as a carbon stock and the benefits created by the substitution effect, can already be used as a positive marketing factor for the promotion of wood construction and wood products.

As the climate change negotiations are still ongoing with no defined end point, it is difficult to assess their final result. It is also conceivable that the negotiations may not yield any desired results.

4.3. THE EU AND WOOD PRODUCTS IN THE CLIMATE CONVENTION NEGOTIATIONS

The EU prepared for taking the carbon stocks of wood products into account as early as in 2003 when the SBSTA asked the parties to give their views on the carbon stocks of wood products in their national reporting. The response provided by the EU noted that

- the inclusion of carbon stocks of wood products should be considered for the second Kyoto Protocol Commitment Period and beyond. According to the EU, there is still need for further analysis and development of approaches, methodologies and available, accurate and relevant data.
- any decisions with regard to wood products have to be consistent with other LULUCF decisions;
- the inclusion of wood products should not undermine the integrity of the Kyoto Protocol;
- the EU recognised the significance of substituting fossil fuels and energy-intensive materials with sustainably produced wood, as well as carbon storage and wood product recycling and incentives promoting these uses;
- the parties should seek a method for handling carbon stocks that would be methodologically feasible, transparent, accurate and verifiable and not overly sensitive to annual quantity fluctuations due, e.g., to import and export levels.

Wood products were included in the EU’s position formulation when the conclusions of the EU’s Environment Council preceding the Climate Change Conference in Copenhagen in 2009 emphasised sustainably produced wood as an environmentally friendly material and suggested the inclusion of wood products in the carbon stock calculations. At the same time the Council emphasised the need for solid, transparent and consistent data and methodology. In this manner, the EU has recognised the significance of wood construction and wood products in climate policy.

4.4. THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE – IPCC

The Intergovernmental Panel on Climate Change, IPCC, is a leading international body in scientific monitoring of climate change and its expertise is being widely utilised in the Climate Convention negotiations. The IPCC’s opinions attract wide international attention. The task of the Panel is to examine and assess the latest relevant scientific, technical and socio-economic information to understand climate change. IPCC carries out no research of its own. Several Finnish specialists participate in the Panel’s work.
There are working groups under the IPCC, of which the IPCC Working Group III, WG III, assesses possibilities and methods related to mitigation. The working group monitors central economic sectors, such as energy, transportation, construction and agriculture, both in the short term (up to 2030) and the long term (beyond 2030). It assesses the costs and benefits of different mitigation measures, taking available methods and instruments into account.

The Fourth Assessment Report (2007) of the working group lists several short-term mitigation measures for buildings: more efficient use of energy and energy savings in heating and air conditioning, for instance, as well as use of solar energy. Long-term mitigation measures include standards and ecolabelling for appliances, building regulations and certificates and public sector programmes, including public procurement. The working group has approached the subject mainly from the energy efficiency perspective. The Fifth Assessment Report of the working group will be published in 2014.
5. WOOD CONSTRUCTION IN THE UN ORGANISATIONS

5.1. FOCUS ON LIVING CONDITIONS – UN-HABITAT

The United Nations Human Settlements Programme (UN-HABITAT) promotes socially, economically and environmentally sustainable urbanisation and the improvement of the living conditions of low-income people. The target is to improve the living conditions of at least 100 million slum dwellers significantly by 2020. This work is guided by the Istanbul Declaration (1996) and the Habitat Agenda (1996).

The Habitat Agenda increases knowledge about the links between urbanisation and poverty and influences the formulation of political policies for sustainable human settlement development, adequate shelter and good governance. A major part of its work consists of practical cooperation projects with developing countries and transition economies. The operations of the Agenda are financed mainly by voluntary support. Finland supports the execution of the Agenda with approximately EUR 0.5 million annually.

One of the programmes supported by UN-HABITAT is SUD-Net (Sustainable Urban Development Network), an innovative network of global partners working to promote a multilateral and inter-disciplinary approach to sustainable urban development. SUD-Net’s vision is to contribute to productive and inclusive cities which embrace social harmony, economic vitality and environmental sustainability.

SUD-Net is designed to support poverty reduction strategies and wider national development strategies through interaction with global, regional, national and city actors. The overall aim is to work at the local level to build the capacities of national governments and to promote the inclusion of the community in the decision-making process.

SICCMA (Shelter Initiative for Climate Change Mitigation and Adaptation) is one of the SUD-Net’s components, based on and complementing the Initiative on Cities in Climate Change. SICCMA cooperates with UNEP-SBCI (Sustainable Buildings and Climate Initiative) – as well as with several universities and research centres. The overall objective of SICCMA is to encourage the use of energy-efficient and low greenhouse gas emitting building materials, construction technologies and building and neighbourhood design in order to adapt to and mitigate climate change. The role of research is also emphasised.

According to SICCMA, buildings are responsible for a huge proportion of energy consumption and carbon emissions in cities. Globally, buildings account for approximately one third of all energy consumption and greenhouse gas emissions. Buildings can consequently play a major role in climate change mitigation if the use of greener construction engineering is increased.

SICCMA provides decision-makers and the construction industry with guidelines for formulating policies and practices that take the entire life cycle of construction materials and techniques used into account. In addition, local authorities are encouraged to make use of energy-efficient construction materials and techniques more efficient. This is pursued by supporting changes/specifications to building codes and town planning that aim at amending the energy standards of new buildings and renovation with relevant minimum targets.

A Green Building Rating System conference was held in Nairobi in May 2010. The conference produced the Nairobi Declaration on Green Building for Africa, from which clear links to wood construction can be drawn. The Declaration underlines the vast extent of energy consumption in the African construction sector, a factor that can no longer be underrated. Urgent improvement is need in the energy efficiency and environmental friendliness of buildings in order to mitigate greenhouse gas emissions. The Nairobi Declaration emphasises that Africa is committed to promoting green operating models in the planning, design, construction and operation of the built environment. Another aim is to improve the selection of appropriate construction materials, technologies, services and processes in order to minimise carbon dioxide emissions. In these actions, the importance of professionals, education and general communications is emphasised in relation to green construction.

Within UN-HABITAT wood construction appears as a part of a wider entity formed by greener construction but wood is not discussed in more detail. The focus is on improving the living conditions in developing countries and transition economies, for instance by promoting regulation systems and energy efficiency.
5.2. WOOD CONSTRUCTION AS A PART OF ECONOMIC COOPERATION – UNECE

The main objective of the United Nations Economic Commission for Europe (ECE) is to promote economic cooperation between its member countries. In addition, the organisation develops conventions, regulations and norms between its members and aims at providing economic and technical help for transition economies in particular, where necessary. Currently there are 56 members: the European countries, United States, Canada, Israel and Central Asia. In its international activities, the ECE emphasises the principles of sustainable development in the economic, social and environmental sectors.

Three ECE member countries alone – Russia, Canada and United States – account for 35% of the world’s forest coverage. Together with the other ECE members, the figure rises to 41%. These forest resources produce 72% of the world’s roundwood supply.

The UNECE/FAO Forestry and Timber Section has served as a source of information, data and analysis on the forest sector in the UNECE region for more than 60 years. The Section is unique in that it is a joint UNECE/FAO secretariat, serving the UNECE Timber Committee and FAO European Forestry Commission and working closely with other members of the United Nations family and with relevant country stakeholders. The Section regularly collects, verifies and analyses information related to forest products markets, forest resources, outlook studies for the industry, social and cultural issues as well as policies and institutions in the forest sector.

The Section is preparing a comprehensive Action Plan on the Forest Sector for a Green Economy that aims at strengthening the economic situation of the forest sector while identifying ways to maintain the important ecological functions of forests in the region. Intended for decision-makers in the ECE region, the Plan pursues the promotion of the forest sector’s role in green economy. It deals with issues ranging from wood products, wood energy and forest management to forestry policy and the administrative framework, including sustainable building, production and consumption and valuation of forest ecosystem services. To ensure the comprehensive nature of the Plan, the secretariat consults member countries, international organisations, non-governmental organisations and academic institutions. The Plan is to be presented to the Rio +20 Earth Summit after being reviewed at the Section’s joint meeting next October.

In addition, there are several committees and sections under the ECE handling issues that are relevant to the promotion of wood construction. These committees and their working groups mainly pursue the harmonisation of norms and standards in the member states and information exchange on policies practised in different countries. The organisation does not make decisions that would be binding for the member states; it only gives recommendations. However, many of these recommendations become international conventions and thus binding.

In addition to several authorities, business life is also represented in the Timber Committee. The Committee acts as an information exchange and cooperation forum on forestry and wood market issues for the ECE member countries. The aim of the Committee is to provide the ECE members with information needed in forest sector decision making and to give recommendations to the member countries and any organisations interested in the field when necessary. It analyses forest sector development in each member country, produces related statistics and promotes cooperation, for example by organising seminars.

Despite its name, the Timber Committee has carried out relatively few studies of relevance to wood construction. However, due partly to Finland’s initiative, the Committee is now adopting a more active role in wood construction. Different UNECE sections have been asked to work actively to promote green construction. The Timber Committee has also recommended the establishment of a green construction task force, the objective of which would be to assess the environmental performance of different construction materials with respect to climatic effects.

The Committee on Housing and Land Management is a forum responsible for the compilation, dissemination and exchange of information and experiences on housing, urban development and land administration policies. Through workshops, research on urban and land administration and analyses of the housing and real estate sector, the Committee advises the member states on human settlement policies and strategies and encourages their practical implementation.

The HUMAN (Housing and Urban Management Advisory Network) programme was established in 1997. It consists of experts from the private sector, non-governmental organisations, trade unions, research centres and local
authorities. The Committee works closely with the EU, OECD, CEB (Council of Europe Development Bank), UN-HABITAT and other UN Regional Commission and specialised agencies.

The Committee on Human Settlements (CHS) pursues the promotion of the flow of information between its members on issues related, for example, to housing, urban development, land registers and national and local operating methods. It also compiles statistics, mainly on human settlements, and gives recommendations on housing strategies and their implementation.

5.3. ENVIRONMENTAL PERSPECTIVE – UNEP

Resource efficiency and sustainable consumption patterns and production methods are increasingly important themes with respect to climate change. For this reason, resource efficiency, including sustainable consumption and production, is one of the medium-term strategic sub-programmes of the United Nations Environment Programme (UNEP). In 2011, the intention is to reach an agreement on an international 10-year framework programme for the promotion of sustainable consumption patterns and production methods.

In the so-called Marrakesh Process, the aim is to implement the Johannesburg targets in practice by initiating national and regional programmes for sustainable production and consumption as well as by spreading best practices. One of the working groups of the Process is the theme group for sustainable construction and buildings. Its tasks include gathering and disseminating information on expert views and best practices. UNEP-SBCI (Sustainable Buildings and Climate Initiative) is expected to carry the working group’s work forward.

In connection with the 2009 United Nations Climate Change Conference COP 15, UNEP published two reports. The report “Common Carbon Metric for Measuring Energy Use & Reporting Greenhouse Gas Emissions from Building Operations” suggests two basic indicators: energy intensity and carbon intensity (kWh/m²/year and kWh/o/year, kgCO₂/m²/year and kgCO₂/o/year). The study aims at establishing a verifiable method for measuring the climate footprints of buildings. It concentrates on assessing emissions from the use of buildings (including lighting, heating and air conditioning) but ignores the manufacture and disposal of materials, thus rendering a comprehensive life cycle approach impossible.

The other UNEP report, “Buildings and Climate Change, Summary for Decision Makers”, describes the operating environment of the construction and real estate sectors. The report recognises the role of the construction sector as a source of emissions as well as its possibilities for considerable emission cuts. In the same context, the report presents a number of solutions, such as developing regulation, utilising the Clean Development Mechanism (CDM) in developing countries and improving energy efficiency. The report also highlights the potential of renovation in the mitigation of environmental effects. Nevertheless, the report does not examine the influence of construction material choices on the consumption of natural resources and energy, for instance.

The Finnish-funded SPoD project (Sustainable Building Policies in Developing Countries) promotes sustainable building policy in developing countries. The two-year project was initiated in 2009. Its objective is to develop policy tools for governments, in particular for improving energy efficiency while keeping national and regional characteristics in mind. The project includes a pilot project for testing the tool kit at a country level.

On the whole, UNEP has failed to show the significance of wood construction in a comprehensive manner. Attention has been paid to the environmental friendliness of materials but the perspective is limited to separate comparisons of individual materials. The substitution effects and the environmentally friendly choices resulting from them have consequently been ignored.
6. **OECD – REPORTS AND POLICY GUIDANCE**

Wood products and wood construction have not been discussed by the OECD (Organisation for Economic Co-operation and Development) or the IEA (International Energy Agency) in recent years, neither are they included as such in the working programme for 2011–12.

Although the OECD has carried out research related to sustainable development, sustainable consumption, product value chains and green growth and economy, wood construction has been given no specific mention. Of the OECD studies published in the last few years, the OECD report “Environmentally Sustainable Buildings, Challenges and Policies”, which was published in 2003 as a result of a four-year project initiated in 1998, is the closest to the working group’s focus area. The study sought means with which governments could guide the construction sector in taking environmental effects into better account. The report concentrates on the reduction of CO₂ emissions and construction waste and the prevention of indoor air pollutants. Wood construction / wood products are not dealt with specifically and, as the report was written nearly a decade ago, it probably does not provide the most current information.

In October 2010, the OECD and Belgium organised a global forum focusing on the environment and sustainable materials management (OECD Global Forum on Environment focusing on Sustainable Materials Management). One of the Forum’s study cases discusses wood, more specifically wood fibre. However, the focus is on waste and material life cycles, but not construction materials.

Although the OECD is not currently addressing wood construction directly as a part of climate policy, its work, such as the Green Growth Strategy currently under preparation, will bear more relevance to this issue in the future. As an inter-disciplinary organisation, the OECD has extensive experience in handling questions related to the state of the environment, climate change and material flows. However, it would also be important to include assessments of natural resource depletion and the environmental effects of construction in the Green Growth Strategy.

One of the objectives of the Green Growth Strategy is to develop green industry. However, economic growth and development cannot be sought by increasing environmental harm and decreasing biodiversity. The strategy must include different political instruments and market-based actions with which harmful activities, such as excessive use of natural resources, can be priced high or prevented completely through regulation. At the same time, barriers to the transition to green growth, such as subsidies causing environmental harm and other conflicting or wrong incentives, must be eliminated.

According to the working group, the OECD, as an internationally renowned, experienced, trustworthy and independent producer of analyses and studies, is the strongest candidate for conducting an authoritative international study comparing the whole life cycle environmental effects of different construction materials.
7. WTO – LIBERALISATION OF TRADE IN WOOD PRODUCTS

The environment and climate change have not, traditionally speaking, belonged to the GATT/WTO agenda. The objective of the WTO (World Trade Organisation) has been to guarantee undisturbed working conditions for the Doha Development Agenda (DDA) and the Climate Convention negotiations. Developing countries and, above all, emerging economies have been sensitive about discussing climate matters in the WTO as they fear that this might lead to the consideration of border protection measures on the basis of climate and environmental factors.

The environment appeared officially on the DDA negotiations agenda in Doha in 2001. The DDA discusses the development of institutional cooperation and coherence between the environment and trade by, for instance, defining a hierarchy for international Multilateral Environmental Agreements (MEA) and WTO rules, as well as by developing coordination between the WTO and MEA secretariats. The third issue pertains to the liberalisation of trade in environmental products and services. The negotiations aim at reducing or eliminating customs duties and non-duty barriers to environmental products while keeping trade, environment and development dimensions in mind.

In the negotiations, no agreement has been reached regarding the approach – how trade in environmental products as a separate issue should be liberalised. There has been no consensus either on the definition of an environmental product. “Environmental friendliness” can be understood in several ways. Many developing countries are of the opinion that, for industrial countries, the ultimate motives are not development or environmental aspects but merely trade policy objectives aimed at achieving increased exports of products that cannot be explicitly classified as environmental products.

A group of industrialised countries is currently supporting the reduction of customs duties for environmental products on the basis of a common list covering 153 items, which would produce benefits for all group members. A few developing countries have also listed their environmental products to be used as a basis in the negotiations. Some developing countries are pushing forward a request/tender method with a more restricted coverage of countries and products, aiming at eliminating duties on a few key products on the basis of tenders from interested members. In this method, only those countries that are willing and interested participate in the agreement.

A third alternative is the so-called project approach suggested by a few developing countries, where duties for certain products would be reduced temporarily to a zero level in connection with individual projects that are agreed to be environmentally friendly. This suggestion has several potential problems – uncertainties related to the duty classification, the temporary nature of the liberalisation and possibilities for malpractice in customs clearance, for instance.

Developing countries emphasised that a solution must be found to the technology transfer issue as a prerequisite for concluding the negotiations. However, they have not precisely defined what would ultimately be pursued with technology transfer in the DDA environmental product negotiations. Nonetheless, the reduction of customs duties and non-duty barriers to environmental and climate friendly products would be a concrete step forward in the promotion of technology transfer.

One of the main objectives of the Doha Development Agenda is the liberalisation of trade in industrial products by eliminating or reducing their duties (Non-Agricultural Market Access, NAMA). Industrial products would also include wood products.

The EU’s objective has been to achieve an ambitious outcome that enables new types of market access in the NAMA negotiations. The environmental friendliness of wood products and wood construction can become an additional, weighty argument for eliminating duties. However, this argument is not yet widely supported by the member countries – the developing countries in particular – in the negotiations. Wood construction and its advantages should, therefore, be appropriately addressed by the WTO’s Environmental Committee to prepare the ground for future negotiation rounds.

It is unlikely for wood products and wood construction to feature in the DDA’s environment negotiations as part of the sector solution. Instead, effort should be devoted to reaching as ambitious a NAMA solution as possible, including wood products and wood construction.
8. WOOD CONSTRUCTION IN RUSSIA

Russia’s vast wood assets are of interest to Finland. The opportunity to invest in the utilisation, import and export of these assets, as well as in wood construction in Russia, presents Finland with a range of cooperation opportunities, also in the future. These opportunities for Finno-Russian cooperation will be increasingly affected by how Russia perceives the connection between wood construction and environmental and climate policies.

The Russian economy has grown approximately 6% annually throughout the 2000s, and this growth is predicted to continue strongly. Construction has been one of the most rapidly developing areas of the Russian economy during this period. If Russia’s national construction programme is realised even in part, demand for wood products will enter exponential growth.

The target groups for re-housing are soldiers, disabled persons, people living the northern regions and people affected by structural changes in society and relocated to new industrial sites. Young families are provided with special housing support in the form of credit and mortgage loans. The Ministry of Regional Development of the Russian Federation also provides funds for the establishment of house factories. The Russian government has also addressed the needs of the middle class with its aim of providing middle class homeowners with reasonably priced apartments.

Local know-how in wood construction is nevertheless lacking. Since the 1990s, the construction materials sector in Russia has been undergoing radical change. Russia might have enough sawn timber, but the supply of building joinery products and other construction materials is barely sufficient. Product and system solutions are still open and several Russian and foreign entrepreneurs and companies have been active in this area. Regardless of this, one of the most significant barriers to more widespread use of wood construction is the inadequate sales, storage and distribution network for wood products which, in the manner of any new, developing market, is still highly unorganised. The development of the subcontracting chain also requires more efficient operations in the construction, housing and joinery industries.

The national construction programme is expected to grow 14% per year from 2008–2015. The Presidential Administration includes a national council for residential construction, the operations of which cover the Russian Federation in its entirety. The residential construction programme is one of Russia’s key priority programmes. Each federal subject is responsible for the targets of its region in the national programme.

In addition, there are several other authorities and actors promoting wood construction directly or indirectly at the federal and regional level.

The objective of the national priority project of residential construction is to create a well-functioning housing market in Russia. The project spans the years 2006–2011. The goal of the first phase (2006–2007) is to increase the number of mortgages available, improve the availability of apartments on the market, increase residential construction, modernise municipal engineering, and ensure the availability of apartments for special population groups. The project is executed at the federal, regional and local levels.

The project develops the construction of single-family houses and the construction material market. No climate-political emphasis, as such, is evident from the project documents. However, during the last couple of years increasing attention has been paid to climate issues and green values, ecology and energy efficiency have gained more weight in residential construction.

The tasks of the Residential Construction Development Fund include promotion of trade in residential plots, promotion of regional and urban development planning, coordination of different organisations in executing residential construction programmes, production of construction materials, establishment of business parks, promotion of the development of energy-saving and ecologically clean technologies and materials and the creation of prerequisites for their use in residential construction. The fund operates under the direct control of the government.

The key task of the fund is to create conditions for cost-efficient residential construction and first and foremost for the construction of single-family houses, which constitute the majority of wood construction. The target is for residential construction to reach 100 million square metres per year by 2016 and as much as 142 million square metres per year – one square metre for every Russian – by 2020. By 2015, 75% of residential construction should fall into the cost-efficient category (ekomon-klass). The Development Fund, along with the Association of Archi-
pects of Russia and the National Agency of Low-rise and Cottage Construction, organised a competition for the design of the “21st century house”, for which a key criterion was a total project price of approximately EUR 700 per sq.m. (including plot and infrastructure). This price category could be considered the benchmark for cost-efficient residential construction in Russia.

The National Agency of Low-rise and Cottage Construction (Natsionalnoe agentstvo maloetažnogo i kotledžnogo stroitelstva, NAMIKS) is a non-profit alliance of actors in the field of construction of single-family houses. The agency is active both at the federal and regional levels. Members include development and construction companies, manufacturers of materials and equipment as well as financial institutions. The agency provides companies with information and counselling and participates in different projects in the construction of single-family houses.

The task of the agency is to manoeuvre residential construction policy towards favouring single-family house construction, to redirect single-family house construction so that industrial, economical and energy-saving technologies are utilised, to establish and implement efficient practices for financing single-family house construction as well as to define anti-crisis actions in order to develop the construction industry.

NAMIKS serves as an important discussion forum that gathers and distributes information for proposals on changing and complementing the existing legislation. The Agency cooperates with the government and all state bodies that develop residential construction. For instance, it is drawing up a target programme for developing construction of single-family houses in cooperation with the Ministry of Regional Development of Russia.

In Finland, Puuinfo Oy and Building Information Ltd. are working actively in the field of wood construction in Russia. They organise meetings for various actors in both countries where different issues related to wood usage are discussed. A common Development Programme for Low-Energy Wood Construction has been established with the Russian wood information services. The programme will be carried out in 2010–2012. It uses Finnish guidelines translated into Russian as educational material. As a part of the project, renovation guidelines adapted for the Russian market will be released in spring 2011. The aim of the programme is to reduce the use of traditional energy forms, to increase the use of renewable energy sources and to increase wood construction by 20%.

The Russian Forest Sector Development Strategy for 2020, by the Ministry of Industry and Trade and the Ministry of Agriculture of Russia, is a programmatic/political document guiding the operations of the said ministries at a general level. However, the strategy is not included in the federal budget and so does not have the status of a federal target programme, which undermines its weight and implementation.

The strategy contains several references to wood construction. One of the priorities is strong development of wood-based single-family house construction and related construction materials, mainly by establishing new companies for the industrial production of wooden houses. These utilise new technologies and progressive wood-based construction and thermal insulation materials. According to the strategy, innovative changes in wood construction should include energy-saving and ecologically clean wood harvesting and processing. By 2020, the share of wooden houses in residential construction should grow to 20–25%. To achieve this target, the state is to define normative-judicial regulations and guidelines for wood construction.

8.1. LOBBYING TO PROMOTE WOOD CONSTRUCTION IN RUSSIA

The wood construction and wood products market situation in Russia is promising, but still requires a great deal of lobbying. Potential lobbying channels within the Russian Federation include the Presidential Administration, the State Duma Committee of Natural Resources, the Ministry of Natural Resources, the Ministry of Industry and Trade, the Forest Agency as well as the actors mentioned above.

Energy efficiency is considered a key selling point in the Russian construction market. Nevertheless, awareness of climate change, environmental issues and environmental friendliness is expected to become one of the key factors guiding consumer decision-making in Russia. Although the role of wood construction and wood products as carbon stocks is not yet considered central, estimates indicate that the competitiveness of wood construction is set to improve as the prices of energy and competing construction materials rise.

In Finland, several studies on wood construction have been carried out with regard to construction in Russia. In addition, model houses have been constructed by Finns in the Leningrad region.
The aim of standardisation cooperation is to harmonise Russian construction norms with the EU norms. The objective is to secure Russia’s approval of the EU standard Euro 5. Finnish specialists act as intermediaries and coordinators of information and standards expertise. Here, the Finnish-Russian Intergovernmental Commission for Economic Cooperation and its working groups have a central role. Of the working groups, the working group for standardisation and certification seeks solutions to issues related to norms and regulations.

The construction and construction products industries have also investigated the Russian construction norms and translated them into Finnish. Quality standardisation nevertheless remains a considerable future challenge in wood construction.

The Finnish-Russian Intergovernmental Commission for Economic Cooperation has appointed a Finnish-Komi regional working group, which has carried out a three-year wood construction project in Syktyvkar, Russia. The project participants on the Finnish side are the Ministry of Employment and the Economy and Rovaniemi University of Applied Sciences. The practical experiences from the Finnish “Modern Wooden Town” project are also being drawn on in cooperation between Finnish and Russian architectural universities, including the Finnish universities of Oulu, Tampere and Otaniemi.

A comparison of points of contact between the national forest strategies of Finland and Russia is also currently being carried out by Finland’s Ministry of Employment and the Economy and Russia’s Ministry of Industry and Trade. Topics include promotion of the wood products industry and wood construction, increasing the use of wood in construction, the review and revision of standards and norms, and development of logistics and distribution solutions. The comparative investigation will be completed in spring 2011. Following this, cooperation with Russia will be continued in the working groups for the forest industry and sustainable forestry under the Finnish-Russian Intergovernmental Commission for Economic Cooperation. The Forest Forum for Russian decision-makers, designed to resemble the Finnish Forest Academy for Decision-Makers, will also be a lobbying channel in the long term.

At the international level, Russia has become more active in participating in the meetings of the UNECE Timber Committee. This can be seen as a positive signal of the authorities’ fresh interest in wood construction.
9. WOOD CONSTRUCTION IN DEVELOPMENT COOPERATION

The objective of the Government’s Development Policy Programme is to eradicate poverty by promoting socially, economically and ecologically sustainable development. Forests have a crucial role in strengthening ecologically sustainable development and reducing poverty. They function as carbon sinks and biodiversity pools, while also providing employment and livelihood.

Finnish development cooperation serves to promote the sustainable use of natural resources and to prevent environmental degradation. Mitigation and adaptation to climate change are important aspects of each of the key areas of Finnish development cooperation. The role of developing countries should be reinforced, particularly in the water, energy, forest and agriculture sectors. The improvement of production efficiency and the promotion of carbon capture in forests and soil are significant in these respects.

Finland’s Development Policy Guidelines for Forest Sector (September 2009) emphasise that the global objectives set out by the UNFF serve as the starting point for cooperation in the Finnish forest sector. Of these objectives, the following in particular is applicable to wood products and construction: “Increase significantly the area of sustainably managed forests, including protected forests, and increase the proportion of forest products derived from sustainably managed forests.”

Sustainable forestry refers to the management and use of forests and forest lands in a manner that preserves their diversity, productivity, regenerative power, vitality and the possibility to carry out, now and in the future, relevant ecological, economic and social activities at the local, national and global levels in a manner that causes no damage to other ecosystems.

9.1. BARRIERS TO WOOD CONSTRUCTION CAN BE REMOVED IN DEVELOPING COUNTRIES

In many developing countries woodworking and wood processing skills and training are inadequate. Misconceptions regarding the fire safety and durability of wood are also commonplace. Other materials have replaced wood, which is widely considered “the construction material of the poor”. Misplaced opinions and attitudes of decision makers and authorities can also hinder wood construction, even though wood is an ideal, viable and climate friendly construction material. Such misunderstandings and suspicions can be dispelled by providing hands-on working examples of wood constructions or wood products that demonstrate the excellent characteristics of wood, with an emphasis on sustainable practices.

In developing countries, often only traditionally used wood species are harvested. Many species that might be well suited to construction or naturally pest-resistant are left unutilised. Research and, in particular, communication and education on the potential uses of different wood species is needed. For instance, the service life of wood can be considerably extended by choosing the most suitable wood species, using appropriate cultivation methods (e.g. avoiding extensive monoculture plantations) and by protecting trees from insect damage.

9.2. ACTIONS TO PROMOTE WOOD CONSTRUCTION AND SUSTAINABLE FORESTRY

9.2.1. National forest programmes, good governance and non-industrial private forestry

According to its Development Policy Guidelines for Forest Sector, Finland supports developing countries in combating climate change and adapting to it and in including the forest sector in national energy strategies.

National forest programmes are part of national poverty reduction programmes. The participatory preparation and coordinated implementation of a forest programme improve the capacity of forest-dependent communities and the private sector, and promote the fair distribution of benefits obtained from forests (gender and generational equity, minorities). Currently Finland supports or has supported the planning and implementation of national forest programmes or strategies in Tanzania, Mozambique, Vietnam and Laos.

Forest programmes and the policies and legislation supporting them are futile unless they are implemented. Here good governance is a key feature, and for it, well-functioning monitoring and control systems as well as up-to-date legislation and policies are essential tools. From the viewpoint of a person/body investing in developing countries, it is important that there are clear and jointly approved rules on good governance promoting sustain-
able forestry. The significance of social responsibility is highlighted to a greater extent as forest industry companies and forest product trade become more international.

The promotion of non-industrial private forestry creates incentives for rural communities to conserve forests. Community forestry, contract cultivation systems and forest owner associations, among other factors, stabilise the private sector ownership and create value for the forest as a source of livelihood. Finland’s projects in Kenya and Tanzania already include actors from the private sector.

In developing countries, women and girls obtain firewood for households. In addition, they contribute to the family’s housekeeping by going into forests to gather animal fodder, medicinal plants and foodstuffs, which often provide income and a significant additional source of nutrition to poor families. The right of women to own land and participate in decision-making concerning the use of forests is essential. The types of forest use that are important to women must be taken into account in forest policy and in planning the use of forests. In Kenya, Finland develops the production of wood charcoal and other business activities in a manner that also benefits rural women.

9.2.2. Climate change and sustainable forestry

Deforestation causes 15–20% of all carbon dioxide emissions. Therefore, sustainable management and use of forests and the prevention of forest fires also mitigate climate change. The implementation of the REDD+ mechanism, based on the Copenhagen Accord and aiming at decreasing deforestation in developing countries, promotes the objectives of sustainable forestry. In Central America, Finland and the Inter-American Development Bank support the preparation of regional and national REDD+ capabilities and plans.

In multilateral operations Finland has supported the World Bank’s Forest Carbon Partnership Facility that promotes the creation of new financing mechanisms for sustainable forestry. Mapping and assessment methods for forest resources and carbon balances as well as more sustainable use and management of forests, reducing carbon emissions, are developed in cooperation with the FAO. This project focuses on Peru, Ecuador, Vietnam, Zambia and Tanzania.

9.2.3. Wood trade agreements and FLEGT

Deriving timber and wood products from sustainably managed forests and certified sources reduces illegal logging and timber trade. Furthermore, it improves the status of producers and suppliers of sustainably and legally harvested wood and wood products. The EU’s FLEG programme promotes these good governance objectives. Through voluntary timber trade agreements (Voluntary Partnership Agreement, VPA) between a developing country and the EU, wood and wood products can be bought and sold in compliance with the FLEGT (Forest Law Enforcement, Governance and Trade) principles.

The FLEGT processes increase interest in and awareness of sustainable use of forests. Furthermore, they are a good way of including different stakeholders – communities living in or dependent on forests, for instance – in the decision-making about forest management and use. Finland has supported the EU’s FLEGT programme since 2007 and also aids Vietnam and Laos in VPA preparations by providing funds for an assistant specialist for Finland’s diplomatic mission in Hanoi for 2011–2012. Finland may also consider supporting the implementation of VPA negotiations and agreements in other main target countries.

The International Tropical Timber Agreement (ITTA) is one of the commodity agreements negotiated at the United Nations Conference on Trade and Development (UNCTAD). In 1986, the ITTO (International Tropical Timber Organization) was established for its implementation. The ITTO is nominated in Finland’s Development Policy Guidelines for Forest Sector as a forest sector partner, and cooperation negotiations have already been carried out. The organisation’s new thematic programmes are a suitable tool in this partnership. The thematic programmes contribute to focusing the organisation’s activities on areas where it has a comparative advantage and that are considered significant by the countries involved in its operations (both suppliers and users of tropical timber). Themes for cooperation between Finland and ITTO could be community forestry and related business operations and small-scale wood processing.

9.2.4. Education and communication to promote wood construction

Needed education in wood construction, wood processing and sawmill technology should be increased in developing countries. To promote wood construction, the entire production chain needs to be reviewed. Education that supports construction activities, from harvesting through to skilled sawing, must be provided. Currently there is
lack of both skilled construction workers (carpenters) and higher educated professionals and designers (construction engineers and architects).

Finland has previously supported production development in mechanical wood processing through the Forestry Training Programme (FTP) of the National Board of Vocational Education (now the Finnish National Board of Education). The development of and education in small-scale sawmilling and other local wood processing would still be necessary as a part of Finland’s bilateral, regional or multilateral support in Central America and Africa, for instance. In Mozambique, the wood processing laboratory of the Aalto University School of Science and Technology and local institutions are planning cooperation in studying the characteristics and uses of different wood species. In China and India, the Forest Centre Tapio, the University of Eastern Finland and North Karelia University of Applied Sciences are training local specialists in construction and wood technology.

The FAO systematically compiles and publishes information on forest and wood processing products and their international trade. As a part of the UN’s International Year of Forests 2011, the FAO is planning an extensive international conference in Malaysia or India. Finland could consider supporting the event.

9.2.5. Wood energy underutilised

In developing countries, only 10–15% of industrial wood harvested from natural forests is turned into processed final products. Even in this case, felling and sawing waste is left unutilised and the stored carbon is released into the atmosphere. Many developing countries could benefit from turning wood waste into energy as is done in Finland, where wood waste is burned for energy production at the sawmill or is sold. Sawing residues could cover a significant proportion of the energy needs of many countries and in this way also replace fossil fuels. In addition to reducing carbon dioxide emissions, this energy could be used to maintain small-scale power distribution networks in order to promote local small industries.

9.2.6. The value chain for wood needs to be extended

The “value chain” concept describes the gradual processing of a commodity from raw material to end product. Each new stage in the chain increases the product’s value. When the value chain is extended, new means of livelihood open up and a larger proportion of the benefits is reaped by local people. Improving self-sufficiency decreases imports from abroad or from other parts of the country, increases local and/or national benefits and reduces the share of roundwood going for export. This, in turn, increases the value of forests, which can serve to promote their conservation.

In Tanzania, Finland already supports the cooperation of small and medium-sized industries, forest owner associations and financial institutions. At the same time, local forestry educational institutions offer training that supports these measures. In addition, Finnfund is funding the export-oriented sawn timber, panel and parquet production of a local Tanzanian company. In Kenya, Finland supports the production and marketing chain of wood charcoal and other rural business activities, for example by facilitating their entry to the market and by increasing the income level in rural communities through wood-based products. This type of activity would also be well suited to other bilateral, regional and multilateral projects and programmes of the Finnish forest sector, and to those receiving support from development banks or from Finnfund or Finnpartnership.

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Although the promotion of sustainable forestry is one of the key focus areas of Finnish development cooperation, support activities at the end of the wood value chain have remained modest. The working group considers it worthwhile to strengthen comprehensive Finnish development cooperation in the forest sector, in particular in new development cooperation programmes. This should be registered in the Government’s new Development Policy Programme 2011–2015, if possible.
10. WOOD CONSTRUCTION IN DISASTER RELIEF AND RECONSTRUCTION

The rate of natural disasters has increased exponentially in recent years. Following the recent major disasters – the tsunami in the Southeast Asia, the earthquake in Haiti and the floods in Pakistan – Finnish manufacturers of wooden houses have shown considerable interest in shipping houses to these regions. In this context it has become evident that in many respects these manufacturers have inadequate knowledge of the required operating methods. Consequently, the working group decided to investigate the most appropriate ways for companies to develop their preparedness for future disasters and for the reconstruction phase after immediate emergency relief.

In Finland, the normal practice is for the Ministry of Foreign Affairs to receive requests for disaster relief through the UN’s operations centre for humanitarian relief, in the same way as other countries providing relief. This improves the coordination of relief efforts. Each year, Finland receives several requests for relief from the UN and its special organisations, for food, shelter, medication, etc. In the past years, the share of Finland’s development cooperation funds directed to humanitarian relief annually has been approximately EUR 80 million.

The Ministry of Foreign Affairs is not directly involved in the provision of humanitarian relief in the field and therefore does not carry out procurement. Instead, the Ministry channels funds through the UN organisations and Finnish non-governmental organisations, such as the Finnish Red Cross (FRC) and Finn Church Aid (FCA), on the basis of their appeals and requests. However, these funds can only be used for disasters taking place in developing countries. At the moment, FCA is the only organisation in Finland that specialises in the construction and commissioning of emergency accommodation. FCA’s special expertise is in the provision of school buildings and shelters. FCA is a member of the Lutheran World Federation, which has provided emergency accommodation in Haiti.

In the event of a disaster it is vital that help arrives quickly and flexibly. Responding to this immediate need for help requires existing preparedness that is difficult to establish quickly when a disaster has already taken place and requests for help have been made. For this reason, companies need to establish preparedness in advance.

Experiences from past disasters have demonstrated the importance of the following key factors:

House manufacturers should form a cooperation network based on a sufficiently detailed advance agreement regarding the methods and operations to be employed in the event of a disaster and/or reconstruction phase. In order to establish a strong level of preparedness, the establishment of joint enterprises may be an appropriate solution.

In individual projects, a local partner is needed.

Houses and other buildings provided, as well as broader concepts, should be tailored to the needs and demand, taking into account the price, size and model of the solution. Case-specific considerations such as earthquake resistance, vermin proofing and modular structure (i.e. expandability) are also important and beneficial characteristics. For cost reasons, the aim is often to procure the required raw material on site, if it is available. Other important factors include the need for efficient marketing of the benefits of wood products and the ability to transfer Finnish know-how and technology. Wood may not always be seen by buyers as a desirable alternative and its benefits are often not known.

Finnish companies could also specialise in a certain field, as certain other countries have done. Norway, for example, is known as a water expert and a supplier of tent equipment.

The solutions provided must fulfil the needs of both the recipients and the organisations providing help. A functional system is based on clear overall solutions without unnecessary middlemen. This approach helps ensure efficient use of funds and diminishes the risk of corruption.

The participating companies are responsible for product development and all other business operations. The Ministry of Employment and the Economy has the means for providing some limited export financing for the development of early-stage concepts, and the Finnish Funding Agency for Technology and Innovation (Tekes) for product development.

Where possible, products should be presented to the UN’s procurement office in Copenhagen and contacts with procurement personnel established in advance of a disaster occurring.
In the post-crisis reconstruction phase, one of the key issues is creating relationships, for instance with international financial institutions and development banks. In addition, it is crucial that the circumstances in the target country are taken into account. The suitability of the material depends on, among other factors, the target country’s environment and ecology (vermin, climate), legislation and other regulations as well as on the characteristics of (availability, durability, price) and demand for the material. The target country may strictly regulate the materials and the appearance of buildings; in extreme cases the regulation may be based on the opinion of a single authority or civil servant. However, the UN standards are usually defined early on for first-phase relief.

Reconstruction projects can be extremely extensive, such as the current reconstruction in Haiti. The chances of Finnish companies winning bidding competitions depend to a great extent on the same factors involved in winning bidding competitions for disaster relief. The companies must also be able to offer competitively priced solutions. Specialisation is one of the ways to further improve competitiveness, establish contacts and acquire references.

In disaster relief and reconstruction, the climate benefits of wood construction and sustainable construction may not, alone, be decisive factors in decision-making. However, combining the climate benefits with the other key strengths and benefits of wood construction can work in favour of Finnish actors and companies.

Finland’s ability to participate in the provision of humanitarian relief is limited by the availability of relief funding. In each case, the volume and quality of the relief provided is also dependent on several other factors, such as the volume of relief received from other sources, the distances involved, and issues related to the division of work among relief providers (relief from EU funds provided by the European Commission, for instance). The same applies to the participation in reconstruction. Excessive scattering of development cooperation generates high administrative costs, an issue that Finland strives to avoid in its operations.

The working group’s view is that Finnish companies with a strong level of preparedness for construction in disaster relief and reconstruction projects have chances of being included both in the procurement activities of organisations operating in Finland and of other similar bodies, and in projects funded by the UN, the European Commission, international development banks and international non-governmental organisations. Nevertheless, this requires sufficient investment, specialisation and a professional approach to special construction, which is a highly competitive field both in Finland and internationally.

The working group also recommends the utilisation of the websites of relevant international organisations, such as the UN and its organisations (such as UNOCHA, United Nations Office for the Coordination of Humanitarian Affairs, and UNHCR, Office of the United Nations High Commissioner for Refugees), the International Federation of Red Cross and Red Crescent Societies (IFRC) and CARE International, when companies are developing their preparedness for participation in disaster relief. OCHA, IFRC and CARE International have, for instance, compiled a practical guide on the use of wood and bamboo in construction in crisis areas. Sustainable technical solutions for wood procurement, processing and usage should be demonstrated with concrete examples. Practices that have been tested in field conditions can then also be applied to other uses than humanitarian relief.18

18 United Nations, the Office for the Coordination of Humanitarian Affairs (OCHA), the International Federation of Red Cross and Red Crescent Societies (IFRC) and CARE International. Timber as a construction material in humanitarian operations. Available at http://www.humanitariantimber.org.
11. RECOMMENDATIONS

The objectives of the working group’s recommendations are
1. to promote wood construction as a part of climate policy;
2. to improve awareness of the environmental and climate benefits of wood construction and promote them as a climate policy tool in political decision-making and regulation;
3. to map international lobbying targets and means that are central to the promotion of wood construction and to set related objectives;
4. to promote independent research and studies on the environmental and climate benefits of wood construction;
5. to strengthen the focus on the end of the wood value chain in Finnish development cooperation in order to promote the development of wood construction and wood products industry in developing countries;
6. to guide Finnish companies in becoming involved in wood construction in disaster relief and reconstruction;
7. to map possibilities for the promotion of wood construction and related business opportunities for Finnish companies in Russia.

For the international promotion of wood use as a part of climate policy, the working group proposes the actions listed below, the implementation schedules of which vary. At the first stage, steps would be taken to implement Recommendations I–III. This stage would also include the implementation of Recommendations X, XVII, XXVI and XXVII. The working group’s suggestion for the responsible bodies in each case is shown in parentheses.


The key suggestion of the working group is that coordination should be further strengthened. To this end, an existing working group can be utilised by adding the promotion of wood construction to its standard agenda or alternatively a specific coordination group can be established. If necessary, the coordination group can be expanded to ensure expertise and cooperation. The coordination group would be composed of representatives of authorities, industry, research institutes and non-governmental organisations. MOL, MOAF, MOE and MOFA can agree on the required arrangements.

The aims of coordination include
- promoting and coordinating the implementation of the lobbying programme;
- monitoring relevant international projects and processes related to wood usage and its promotion as a part of climate and environmental policy;
- creating new initiatives to support lobbying.

International lobbying will be decentralised and will be carried out by several actors. Nevertheless, the role of the chairperson of the coordination group is crucial in leading the lobbying activities, and thus the chairperson should have adequate time and resources available.

II. Commissioning an international comparative study on the life cycle effects of construction materials (the coordination group, MOL, MOAF, MOE, MOFA)

The study will be commissioned to an authoritative international body. The view of the working group is that OECD is the strongest candidate for carrying out this type of study. The working group has prepared a preliminary research assignment on the basis of which discussions with the OECD Secretariat can be initiated as soon as possible. To add momentum to the research project, support from like-minded countries is needed.

The study focuses on a comparative analysis of the climate and environmental effects of different construction materials during their entire life cycle – from raw material to deconstruction. Finland, along with other interested countries, should be ready to partially fund the study unless it can be included in a normal working programme, which may be difficult in the short term. In the future, the study would be utilised as a lobbying tool on different forums.

III. Initiation of an international lobbying programme (the coordination group, MOL, MOAF, MOE, MOFA, interest groups, diplomatic missions)
The working group suggests a lobbying programme to get a consistent and convincing message through. This would be carried out as cooperation between different authorities and interest groups so that the authority responsible for an international actor or organisation would implement the programme for its part.

To increase the influence of the lobbying programme, Finland needs cooperation partners both from the EU Member States and from other countries. Such countries could include the USA, Canada, Russia, Austria, France, Germany, Sweden, Norway, Latvia, Estonia and Poland, for instance. At the first stage, these countries would be lobbying targets and thereafter active partners.

To get partner countries involved, the working group suggests
- that Finland’s diplomatic missions include these topics in discussions in the target countries;
- that industrial and forestry organisations make similar enquiries through their own channels;
- that interested parties be invited to a common meeting in a suitable context (in connection with a meeting of an international organisation or such, for instance).

In the future, lobbyists should be those Finnish bodies and actors that have been responsible for advancing Finnish views, for example in international organisations and working groups. A clear division of responsibilities between different actors ensures consistent and convincing communications in the future.

Lobbying should be extensive and carried out in parallel in different contexts. It should be based on convincing arguments with firm foundations. The aim is to ensure the commitment of lobbying targets to the assessment and promotion of the advantages of wood construction.

The working group has identified the following crucial lobbying targets.

THE EUROPEAN UNION AS A LOBBYING TARGET

Lobbying in the EU must be carried out on several fronts. Progress requires ensuring the commitment of the Member States and mutual cooperation in relation to the European Commission and the European Parliament. Lobbying oriented towards the Commission must be carried out at as wide a strategy and programme level as when lobbying the drafting of individual acts and regulations. As the role of the European Parliament is strengthening, more attention should be paid to its position formulation.

IV. Lobbying to influence EU policies and strategies (the coordination group, responsible ministries, interest groups)

The aim regarding EU policy is to improve the EU’s preparedness and operations for utilising renewable natural resources in a better manner. This requires, for instance,
- influencing the EU climate policy;
- utilising the EU 2020 strategy, which includes green construction;
- utilising the EU’s Strategy on Natural Resources to support sustainable use of renewable natural resources;
- establishing an EU programme/strategy for the promotion of wood usage and wood construction and setting up a coordination group to guide its implementation;
- directing the EU’s innovation policy and research programmes efficiently to develop new know-how and solutions based on renewable natural resources (this work is currently under way in the Lead Market Initiative, for instance);
- bringing up wood construction regularly in political and official meetings;
- transferring information to the Commission and lobbying there.

In the short term, the main focus of lobbying should be on ongoing processes. Wood usage can be significantly promoted through the Directorate-General for Enterprise and Industry which is responsible for regulating construction, even though its line is not to favour any individual material. However, the guidance of construction through regulations is already being developed in a direction that supports taking the environmental characteristics of wood into account in decision-making.

V. Strengthening EU-level regulation to promote wood construction (the coordination group, responsible ministries, interest groups)

EU-wide regulation and decision-making regarding construction should be strengthened and expanded into new fields. For instance, the definition of national energy performance requirements is guided by the EU’s Directive on the Energy Performance of Buildings. Similarly, the reduction of environmental effects caused by construction should be guided at the EU level with a directive on the eco-efficiency of buildings.
The EU construction regulation should be revised so that it favours wood construction as a part of climate policy by, for example:

- creating rules that require wood usage in construction on the basis of the section of the Construction Product Regulation that discusses the use of environmentally compatible materials, including the promotion of energy from renewable sources (Directive 2009/28/EC). This is the approach taken by France, for instance, where the aim of the Regulation is to increase wood usage in new buildings.

- requiring the calculation and comparison of the environmental effects of construction projects (CEN/TC350) and the favouring of the most environmentally advantageous options by weighting indicators related to climate change and the use of renewable materials and renewable energy;

- directing operations towards sustainable and green construction with environment-based incentives;

- contributing at the EU level, by exchanging information and experiences, to that national construction-related decisions (in connection with public procurement, for instance) emphasise taking environmental issues into account;

- developing public procurement regulation further so that it favours wood construction;

- promoting and harmonising voluntary environmental procedures (certification, quality labels) and expanding their use to all materials;

- moving to a true life cycle approach in energy and environmental comparisons, in which case the Directive on the Energy Performance of Buildings and the energy-related products directive will be revised in order to take the manufacture of products into account;

- preparing a directive on the eco-efficiency of buildings, similar to the Directive on the Energy Performance of Buildings, which would direct the Member States towards the reduction of environmental effects of construction.

VI. The EU countries (the coordination group, responsible ministries, diplomatic missions, interest groups)
The relevant ministries and authorities of the EU Member States are central lobbying targets. This means that Finland’s diplomatic missions are provided with appropriate background material on wood construction, with which they
- bring up the topic in political and official meetings and try to acquire support from the countries in question for EU-level lobbying;
- pursue topic- and project-specific alliances and functional bilateral contacts in order to promote projects related to wood construction.

VII. The Commission (the coordination group, responsible ministries, interest groups)
At present, most construction-related regulations originate from the EU. The initiatives come from the Commission and they are targeted at both Commissioners’ cabinets and their Directorate-Generals/units. In the Commission, several processes are ongoing in different Directorate-Generals which may influence the promotion of wood usage. Relevant Directorate-Generals include, at least, DG Enterprise & Industry, DG Climate Action and DG Environment but also DG Agriculture and Rural Development and DG Trade. Lobbying for influencing the formulation of the Commission’s annual working and legislation programme and the Commission’s internal act preparation should be initiated as early as possible.

VIII. The European Parliament (the coordination group, responsible ministries, interest groups)
In order to influence the European Parliament
- wood construction should be actively lobbied to the Members of the Parliament; industry and industrial organisations as well as interested non-governmental organisations can participate in this;
- the topic should be brought up in different groups of the Parliament, in which the Finnish MEPs could be utilised;
- information exchange and availability in the Parliament should be ensured;
- communication with the unofficial group promoting wood usage across party boundaries should be ensured. The awareness of key questions in working programmes should be maintained and the initiative should be taken in relation to future working programmes and policy fields.

IX. Continuing the work of the temporary working group on the role of wood products (the coordination group, responsible ministries, interest groups)
Lobbying will be carried out for the re-establishment of the temporary expert working group on the role of wood products in climate change, working in the EU in 2003–2004, or for the establishment of a similar body.
X. Establishing the position of a forest attaché at the Permanent Representation to the EU (the coordination group, responsible ministries, interest groups)
The possibilities of establishing the position of a forest attaché at Finland’s Permanent Representation to the European Union will be examined. The position would be established in cooperation with the Ministry of Employment and the Economy, the Ministry of Agriculture and Forestry and the Ministry of Foreign Affairs. The job description of the attaché would include an extensive variety of forest sector topics and the national coordination and lobbying of the forest sector-related actions of the Commission’s Directorate-Generals.

XI. Utilising a national specialist (the coordination group, responsible ministries)
The possibility to get a Finnish forest and wood specialist into DG Climate will be examined.

XII. Industrial organisations (interest groups, responsible ministries)
Active lobbying will be carried out in relation to national organisations in Europe and their umbrella organisations (CEI-Bois, EOS, EPF, FEIC, WEI, FEP).

OTHER INTERNATIONAL ACTORS AS LOBBYING TARGETS

XIII. Multilateral organisations (the coordination group, responsible ministries, interest groups)
At the multilateral level, targets include the following international organisations and processes in particular:

- UNEP, UNECE, UN-HABITAT, FAO, the World Bank, regional development banks, OECD, IEA, WTO
- Preparations will be made for arguing for sustainable use of wood in different contexts.
- Climate-political benefits of wood construction will be brought up at the official and political level.
- The possibilities of utilising existing programmes and projects or initiating new ones for highlighting the advantages for wood construction will be examined.
- The possibilities for seconding Finnish specialists for organisational positions that are central to wood construction will be examined.
- Groups of countries interested in the promotion of wood construction will be established within the organisations.

XIV: Climate convention negotiations and secretariat and the Intergovernmental Panel on Climate Change (UNFCCC, IPCC) (responsible ministries, interest groups)
- Active lobbying on LULUCF and REDD+ issues (including HWP) will be carried out in climate convention negotiations.
- It will be ensured that wood products are included in the climate convention in order to promote wood construction.
- The expertise of the IPCC Secretariat will be utilised in different phases of the OECD study.
- Finns participating in the work of the IPCC will be supported in actively bringing up surveys and studies related to wood construction in the Panel.

XV. International non-governmental organisations (the coordination group, responsible ministries, interest groups)
Certain international non-governmental organisations (IUCN, WWF and WDCSD, for instance) can be important allies in increasing awareness of the advantages of wood construction. Independent studies and analyses can offer them the opportunity to formulate their position on the matter.
- An objective will be to involve the organisations in cooperation in the promotion of wood construction and, whenever possible, in carrying out studies and related communications.
- Active dialogue on wood construction questions will be carried out with the organisations.

XVI. Non-EU countries (the coordination group, responsible ministries, interest groups)
At the international level, targets include also those non-EU countries and the interest groups therein that are believed to have a vested interest in promoting wood construction. Such countries include Canada, USA, Norway and Russia. The objective is to include the advantages of wood construction in the discussion agendas of international processes extending beyond the EU; in negotiations, working groups and committees, for instance. At the same time, the aim is to include them in target-oriented cooperation and lobbying.
OTHER MEANS OF LOBBYING FOR THE PROMOTION OF WOOD CONSTRUCTION

In addition to the lobbying programme and international research, the following means of lobbying should be utilised, for instance.

**XVII. Compiling a summary of existing studies and reports** (the coordination group, responsible ministries)
As carrying out an international research project in the desired manner could take a couple of years, and as lobbying should be initiated as soon as possible, the meanwhile existing studies and reports should be compiled in a summary or an argumentation paper that can be utilised by different actors. The paper should be translated into key languages (Swedish, English, German, French, Spanish and Russian).

**XVIII. Organising researcher and thematic seminars** (the coordination group, responsible ministries, interest groups)
International researcher and thematic seminars and meetings on the climate and environmental advantages of wood construction form an essential lobbying channel. Speakers for such events should come from international organisations, research institutes and countries interested in wood construction. Through these events, lobbying and image creation opportunities could open up in the media, too, and opportunities for shared opinion-forming and initiatives could be created. When organising these events, private sector forums (Metsäverkosto, Club du Bois, etc.) should be utilised.

**XIX. Wood construction at export promotion and internationalisation (EPI) events and in other export promotion** (MOFA, Finpro, the private sector)
Climate-political arguments and market demand development create new opportunities for promoting wood construction which can be utilised in EPI-related excursions and events. Companies should develop their argumentation related to the climate and energy advantages of wood construction further in their marketing activities.

**RECOMMENDATIONS WITH REGARD TO RUSSIA**

**XX. Standardisation cooperation** (MOL, MOE, MOFA, the private sector)
With regard to the Russian Federation, the main lobbying targets include the Ministry of Regional Development, the Ministry of Natural Resources, the Ministry of Industry and Trade, the Presidential Administration, the State Duma Committee of Natural Resources, the Forest Agency and other key actors. The Finnish-Russian Intergovernmental Commission for Economic Cooperation and its sub-working group for standardisation and certification are also good channels. Standardisation cooperation is continued in order to harmonise Russian construction norms with the EU norms. Finnish specialists will have an important role as intermediaries of know-how also in the future. Seminars and authority meetings with key Russian actors will be continued. In the future, the environment- and climate-political benefits and advantages of wood construction should be given more emphasis in ongoing cooperation and contacts.

**XXI. The private sector as a lobbying target** (the coordination group, MOL, actors from the private sector)
Companies will be encouraged to promote wood construction in the future as well through education and promotion activities and to bring actors in both countries together. Climate and environmental advantages should be discussed more extensively in meetings and seminars focusing on this theme.

**XXII. Benefiting from the dialogue between the EU and Russia** (the coordination group, responsible ministries)
The ongoing Commission-led dialogue between the EU and Russia will be utilised in lobbying to bring up the advantages of wood construction.

**SUGGESTIONS FOR DEVELOPMENT COOPERATION**

**XXIII. Inclusion of a guideline regarding wood construction in the Development Policy Programme** (MOFA)
The next Development Policy programme should include a guideline defining that Finland will broaden the development cooperation programme in the forest sector to include more activities at the end of the value chain for wood, which makes the development of wood construction and wood products industry in developing countries possible.

**XXIV. Participation in multilateral development cooperation programmes (MOFA)**

According to the bilateral model of development cooperation in the forest sector, opportunities to participate in suitable multilateral development cooperation programmes or projects will be mapped when these programmes or projects already contain a segment promoting wood construction. The current contribution will be increased accordingly.

**RECOMMENDATIONS WITH REGARD TO DISASTER RELIEF AND RECONSTRUCTION**

**XXV. Establishing a corporate cooperation network and/or companies and the development of preparedness** (actors from the private sector)

Wood construction industry representatives that are interested in disaster relief and reconstruction will be encouraged to establish a cooperation network and/or companies, and to agree on operating methods with which they will create the preparedness to participate in these operations efficiently.

**XXVI. Emphasising climate and environmental aspects** (actors from the private sector)

Environment- and climate-political benefits of wood construction, sustainable development and green construction will be brought up in government and corporate contacts with the authorities, aid organisations and bodies responsible for reconstruction in the target countries.