

Sustainable Procurement of **Wood** and **Paper-based Products**

An introduction

Version 3.2 Update November 2014



wbcd forest solutions



WORLD
RESOURCES
INSTITUTE

www.SustainableForestProducts.org

Contributing Authors

Ruth Nogueroń and Lars Laestadius, WRI;
Bruce McIntyre, PricewaterhouseCoopers, Canada;
Joe Lawson, MWV, Chair of the Value Chain Action Team
of the WBCSD Forest Solutions Group;
Members of the WBCSD Forest Solutions Group.

The update to edition 3.2 was led by Loretta Cheung,
Tina Schneider and Ruth Nogueroń, WRI.

Supported by

Financial support was provided by the WBCSD Forest Solutions Group
and Bank of America.

Disclaimer

This publication is released in the name of the World Business Council for
Sustainable Development (WBCSD) and the World Resource Institute (WRI).
It is the result of a collaborative effort between WRI and WBCSD. It does not
mean that WRI, WBCSD or every member endorse every concept or approach
described herein.

All information contained in this introduction, and more, is available at
www.SustainableForestProducts.org.



wbcd forest solutions



A message from the Presidents of the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD)

Forests play a critical role for the global environment, population, and economy. The forest-based sector employs 13.7 million workers, with a commercial output of about 1 percent of the global GDP. An estimated 500 million people depend on forests for their livelihoods, while hundreds of thousands of businesses rely on them for fiber and raw materials.

But with deforestation causing annual ecosystem losses valued at about US\$ 2-5 trillion, businesses and citizens must take action now in order to maintain forests for the future. One such action involves seeking out sustainably produced wood and paper-based goods.

Edition 3.2 of this guide incorporates the most up-to-date developments on the legality of forest products, the latest advances in technological and data management systems to trace and control forest product supply chains, an expanded overview of the social implications of forest products, as well as updates to the chapters on climate change and use of recycled fibers.

With this update, WRI and WBCSD continue our collaboration to scale up sustainable business decisions. Both large and small businesses need to be proactive in supporting sustainable forest management and reversing deforestation via their procurement practices. This guide will help do just that.

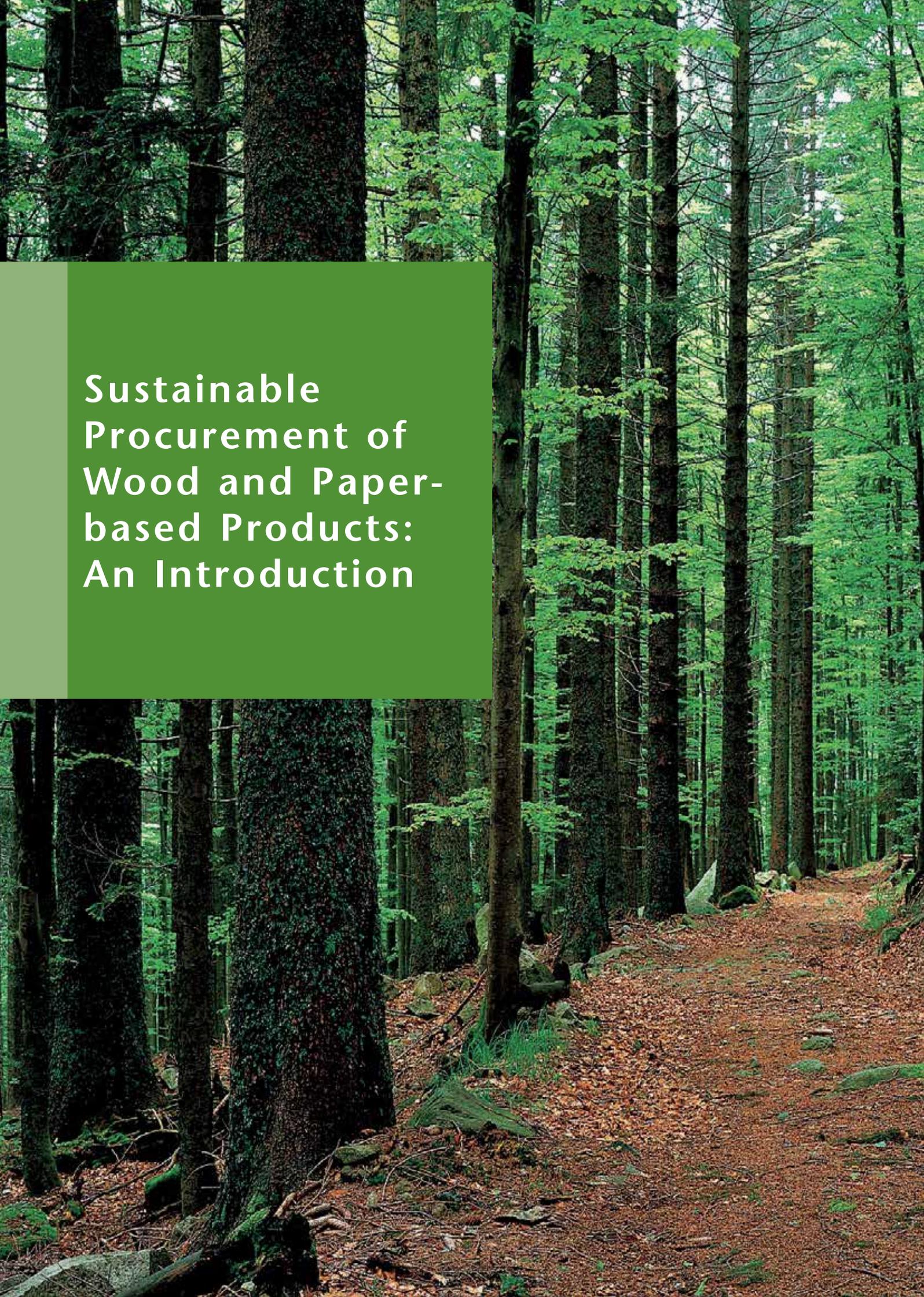
We welcome your comments, questions, and opinions.



Andrew D. Steer,
President
WRI



Peter Bakker,
President
WBCSD

A photograph of a forest with tall, thin trees and a path covered in fallen leaves. The trees are mostly deciduous with green foliage. The ground is covered in a thick layer of brown, fallen leaves. The lighting is soft, suggesting an overcast day or a shaded forest interior.

Sustainable Procurement of Wood and Paper- based Products: An Introduction

Sustainable procurement is the process by which organizations buy supplies and services taking into consideration the best value for money and the environmental and social aspects that the product/service has over its whole life cycle

(Environmentally and Socially Responsible Procurement Working Group, 2007)¹

Beyond the immediate and obvious consequences of their purchases, concerned consumers, retailers, investors, communities and other groups want to know how their buying decisions impact the environment and forest-based communities. They also want to know whether the products they buy are produced sustainably. Will buying them today adversely affect the availability of similar products or environmental values for future generations?

Questions surrounding sustainable procurement have led organizations that buy wood and paper-based products to consider factors beyond the traditional attributes of price, service, quality and availability when making purchasing decisions. The environmental and social aspects of wood and pulp and paper products are becoming part of the purchasing equation.

Numerous groups have developed tools, initiatives, projects and labels to promote and aid sustainable procurement of wood and paper-based products. However, organizations wanting to implement such a policy may not have the resources needed to fully sort through the myriad choices available.

The [World Business Council for Sustainable Development](#) and the [World Resources Institute](#) have partnered to publish *Sustainable Procurement of Wood and Paper-based Products: An Introduction* to assist purchasing managers by:

- Identifying the central issues around sustainable procurement of wood and paper-based products;
- Providing a general overview on these issues;

- Providing an overview of some of the tools, initiatives, programs and labels, and other resources that have emerged to assist sustainable procurement.

This guide is a companion to the report *Sustainable Procurement of Wood and Paper-based Products: Guide and Resource Kit*. Information about how to obtain a copy of the complete guide can be found at the end of this introductory document.

Compared to other materials, wood and paper-based goods produced in a sustainable manner can be a wise choice because:

- They come from a renewable resource – trees, the product of sunlight, soil, nutrients and water.
- They capture carbon – through photosynthesis, trees take carbon dioxide out of the atmosphere and replace it with oxygen, mitigating greenhouse gas emissions. In sustainably managed forests the carbon released through harvesting can be offset by that stored through regeneration and regrowth, making these forests carbon neutral.
- They store carbon over the long term – solid wood, panel and other wood and paper-based products can effectively store carbon for decades or even centuries.
- They are recyclable – they can be reused, or converted into other products, extending their useful life and adding to the available resource pool of wood fiber.

This guide is for business executives who are significant users and purchasers of pulp, paper, packaging, timber and wood-based products, and that do not have “in house” forests and forestry expertise.

Many tools, projects, initiatives and labels have emerged over the past few years to aid sustainable procurement; those new to the subject may find this proliferation of advice confusing. This guide highlights and characterizes, for the first time, a selected number of resources, and it provides a comprehensive overview of the issues central to sustainable procurement.

The growing demand for sustainably produced wood and paper-based goods can lead to improved forest management.

¹ - Environmentally and Socially Responsible Procurement Working Group. 2007. *What Is Sustainable Procurement?* Online at www.sustainableprocurement.net/home2.html (1/23/07).

The guide is designed as:

- **A decision support tool** – by providing simple and clear information on existing approaches to the procurement of wood and paper-based products from legal and sustainable sources, as well as providing additional references and resource materials;
- **An information tool** – to help customers frame and formulate their own sustainable procurement policies for wood and paper-based products; defining specific requirements aligned with core company values and building and maintaining stakeholder confidence.

The information is organized around ten key issues, posed as “essential questions” that underpin sustainable procurement:

10 key issues related to sustainable procurement of wood and paper-based products



1. Origin Where do the products come from?



Wood and paper-based products often come from developing regions and remote locations. Knowing the geographical origin of the products, and the type of manufacturing processes that produced them, will help the procurement manager make an initial assessment of several key issues:

- Credibility of product information;
- Legality of sourcing;
- Use of sustainable forestry practices;
- Protection of special places;
- Consideration of workers and local communities.

A supply chain (conversion of raw material to finished product) for wood and paper products can be short, long, simple or complex. The raw materials in a finished product may come from a variety of sources, including temperate, boreal and tropical tree species. The manufacturing process

for paper products may source logs, wood chips and recycled pulp from numerous suppliers and locations, making these supply chains even more complicated.

Several technological approaches are emerging to help trace and verify the origin of the raw materials in products. These approaches include the use of DNA, bar codes and fiber analysis. At a minimum, buyers should request that suppliers provide pertinent documentation such as harvesting permits, bills of lading and other documents. Contracts can be used to trace products from their origin in the forests and throughout the manufacturing process to ensure compliance with laws. It may be appropriate to ask suppliers to implement or contribute to special supply chain management systems and controls to track the product origin throughout the supply chain.

2. Information accuracy Is information about the products credible?



Some regions are at risk for poor forest management or weak governance so companies sourcing wood products from those areas may consider applying a greater degree of scrutiny and due diligence, such as with a certified chain-of-custody. Business, environmental groups, and labor and trade organizations generally agree that an independent, third-party verification of forest operations to an acceptable standard is desirable.

At the forest management level, voluntary programs enable producers to be certified against standards for sustainable forest

management. The two major global programs are the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC).

In the manufacturing and distribution process, self-reporting is a common source of information. Having environmental and social management systems in place typically generates acceptable levels of information. These systems are designed to achieve continual performance improvement by setting and monitoring goals and targets. They may even include some degree of third-party verification.

3. Legality Have the products been legally produced?



Illegal logging and associated trade is anything that occurs in violation of the legal framework. Illegal activities can include harvesting without proper permission or permits, logging in protected areas, logging protected species, failure to pay taxes and fees, violations of human rights, corruption including fraud, use of false documents used in harvesting, transport and trade. Illegal logging can result in loss of government revenues, unfair competition, increased poverty and destruction of important forest ecosystems.

Illegal logging has risen to the top of the international forestry agenda over the past five to ten years. Demand for legally-sourced wood and paper-based products in the global markets has increased due to changes in public and private

procurement policies, as well as in trade regulations such as the 2008 amendment to the U.S. Lacey Act, the European Union Illegal Timber Regulation, and more recently, the Australian Illegal Logging Prohibition.

Voluntary legality verification systems have emerged in response to the emergency of legality requirements in the global marketplace. The European Union is also working with a selected number of countries to build their capacity and strengthen governance in their forest sectors. To reduce the risk of purchasing illegally harvested and produced wood-based products, procurement managers should identify regions of higher risk and develop appropriate controls.

The incidence of illegally produced wood is usually estimated at 8-10% of global wood production.



In looking at forests, there are two major concerns: are forests being sustainably managed, and are they subject to deforestation or conversion?

Sustainable forest management

Sustainable forest management integrates economic, social and environmental aspects of management into an appropriate balance that meets the needs of today's society without jeopardizing future generations. The economic aspect is a suitable mix of wood products and non-wood products (plants, animals, etc.), that does not diminish the productive capacity of the forest. Social aspects include respect for labor and indigenous rights, the health and safety of forest workers, sharing of economic benefits, and protection of sites of spiritual or historic value. Environmental aspects can include soil protection, biodiversity, maintenance of air and water quality, and aesthetics. The appropriate balance of these aspects will vary among regions and contexts.

The voluntary certification systems mentioned before have developed standards that spell out the details of sustainable forest management at either national or sub-national levels. These standards have many similarities, but they also have differences that are considered important by their respective constituencies. Environmental organizations tend to prefer the FSC, while landowners and tenure holders tend to prefer PEFC. The choice of systems varies by geography, and many forest companies are certified to both systems depending on the location of their operations.

Forest land use change and forest conversion

Land-use change (deforestation) happens when forest land is converted to another use such as agriculture, mining, settlements, transportation infrastructure, etc. Deforestation is largely a historical phenomenon in developed countries (with the exception of urban sprawl). In some places forests are even being re-established on abandoned agricultural lands. Deforestation is an ongoing process in many developing regions. Logging concessions are often converted to plantations of other crops, such as oil palm in Asia or sugar beets in the Amazon. Industrial logging can sometimes cause deforestation inadvertently, when roads established for timber transportation open up the land for human encroachment, leading to deforestation or severe degradation.

Forest conversion occurs when a natural forest is transformed into a highly controlled, intensively managed forest, often with the goal of maximizing wood production. It can involve introduced tree species and changes in the hydrological and nutrient regime. Intensively managed forests often produce more fiber per unit of land, but can have reduced ecosystem values, including biodiversity impacts. These impacts can be mitigated through sustainable forest management.

Both deforestation and forest conversion can either be legal and planned, or illegal and spontaneous. In either case it can be controversial, and the procurement manager who accepts wood from either must be prepared to explain the basis for this policy.



5. Unique forest values Have unique forest values been protected?



There are areas in the forest landscape with unique qualities that deserve special attention or protection. The qualities that make a forest special differ widely, e.g., it can be the home of a rare or threatened species or type of forest. It can be critical in regulating water flow or preventing erosion. It may contain spiritual, recreational or other important values. Some qualities can be globally significant while others are locally important. Forest with unique values can exist without having been discovered, and far from all of them are legally protected. A realization that unique forest values are difficult or even impossible to re-create has led to increased interest in this issue.

While stakeholders generally agree on the above, there is no consensus on what constitutes a forest

with unique values, or the degree to which a landowner should be held responsible for protecting such sites. This is a complex, ongoing, and at times contentious discussion in which differences of opinion among public authorities, landowners, indigenous peoples, and environmental groups can be significant.

The status of wood from legally protected areas is relatively straightforward, but setting a policy for areas without legal protection status can be complex and contentious. There may be marketplace pressures to discourage sourcing from certain areas, as environmental groups seek to keep unprotected “candidate” forests with unique values from being logged until their special qualities have been investigated and official protection has been properly considered.

6. Climate change Have climate issues been addressed?



Forests remove carbon from the atmosphere (carbon sequestration) and store it as the trees grow. Global forest carbon stocks are estimated at 861 billion tons, more than half of which is stored in tropical forests (Pan et al. 2011). When trees are harvested for production, they stop absorbing carbon from the atmosphere, but the resulting wood products, including solid wood and paper-based products, continue to store carbon through their lifetime. The amount of carbon stored in wood products is estimated to be increasing by 189 million tons per year (Pan et al., 2011).

When forests are logged, destroyed or burned at a faster rate than the rate at which they grow

back, they can contribute to climate change. An estimated 13% of global carbon dioxide emissions are attributable to land-use changes and forestry activities (Pan et al. 2011).²

However, logging does not necessarily have to lead to deforestation. In a sustainably managed forest area, the growth of new trees can compensate for the carbon lost through annual logging within the area. Compared with other materials (e.g. concrete, steel, plastic), products made from sustainably managed forests are generally advantageous from a GHG perspective because wood is produced by taking carbon from the atmosphere while producing other materials require use of fossil fuels.

Forests mitigate climate change through uptake of carbon, and loss of forests through land-use conversion and forest degradation causes carbon dioxide emissions that contribute to climate change (IPCC 2014).



² – Pan, Y., R. A. Birdsey, J. Fang, R. Houghton, P. E. Kauppi, W. A. Kurz, O. L. Phillips, A. Shvidenko, S. L. Lewis, J. G. Candadell, P. Ciais, R. B. Jackson, S. W. Pacala, A. D. McGuire, S. Piao, A. Rautiainen, S. Sitch, and D. Hayes. 2011. “A large and persistent carbon sink in the world’s forests.” *Science* 333: 988-993. Accessed July 19, 2014, doi: 10.1126/science.1201609.

Source reduction goes beyond recycling by attempting to reduce negative environmental impacts throughout the entire life cycle of the product. Design, manufacturing, usage, sales and final disposal are all part of source reduction.

The paper industry uses both fresh and recovered fibers as raw materials. Fresh fibers, or wood, are sourced from natural forests and tree plantations. Fiber can also be recovered as by-products in industrial processes or after consumer use.

7. Environmental protection Have appropriate environmental controls been applied?



Different types of pollution can occur at various points along the wood products supply chain. These include air emissions, solid waste, water emissions and noise. Pulp bleaching is a potential source of pollution that has generated interest with several stakeholders. The majority of paper manufacturers have phased out the use of elemental chlorine as a bleaching agent, although it is still used in some areas.

The law is the formal reference for acceptable levels of emissions in a country. Some countries

are more stringent in their regulation and enforcement of emissions than others. A sustainable procurement policy may need to meet and exceed legal requirements in some cases. Ways to reduce pollution can include:

- Increased equipment and process efficiency;
- Increased recycling of waste material;
- Improved chemical recovery;
- Implementation of an environmental management system targeting continual process improvement.

8. Fresh and recycled fiber Have fresh and recycled fibers been used appropriately?



Recycling is an important aspect of the wood-based products supply chain. The paper-making industry uses both fresh and recovered fibers as raw materials. Fresh fibers, or wood, are sourced from natural forests and tree plantations. Fresh material is broken down into wood chips, and then converted to pulp in mechanical or chemical processes. Fiber can also be recovered as by-products in industrial processes or after consumer use. By-products, known commonly as post-industrial, pre-consumer materials, include sawmill residue, residue from the making of wood pulp, and trees that are too small or crooked to be cut into lumber. Post-consumer materials are collected from end consumers after paper-based products are discarded. Using recycled fiber, in the appropriate grades, can reduce the increasing demand for fiber from forests and reduce methane emissions from paper sent to landfills. The use of recycled fiber has become a significant complement to virgin fiber, but a constant input of virgin fiber into the process will always be necessary because recycled wood fibers are typically worn out after five to seven cycles, depending on the type of fiber and products generated.

Recycling also has other limits. The recovery and recycling process is resource and energy intensive.

The decision about whether to use recovered fibers and what percentage to use should be made after analyzing the kind of fibers needed for the end product, the availability of fresh and recycled fibers, and the environmental implications of both types of fiber for a specific product supply chain. Non-wood fibers, such as hemp, straw and bagasse, can also be used for papermaking. The challenges in large-scale utilization of alternative fibers can include:

- Inconsistent availability due to seasonality and transportation logistics;
- Potentially negative environmental side effects of large scale, intensively managed agricultural crops;
- Technical performance requirements for paper.

However, the use of non-wood fibers or other agricultural residues can provide benefits to some rural economies and reduce the demand for unsustainably produced wood fibers.

Sustainable procurement can incorporate recycling in a number of ways, including using recycled content in paper and supporting measures to help the collection of recycled fibers in sufficient amounts to meet demand.

9. Other resources Have other resources been used appropriately?



Wood and energy remain the most expensive inputs to pulp and paper manufacturing. Thus, reducing energy consumption and improving efficiency in the use of other raw materials are important industry goals. Source reduction of raw materials is a concept that goes beyond

recycling by attempting to reduce environmental impacts throughout a product's life cycle. Benefits include decreased use of natural resources, reduced pollution, and lower costs due to reduced use of materials, packaging and related disposal costs.

10.

Local communities and indigenous peoples

Have the needs of local communities or indigenous peoples been addressed?



Forests are home to an estimated 800 million people around the world. An estimated 13 million people were formally employed in the forestry sector worldwide in the year 2000. (FAO 2002)⁴

Protecting the rights of indigenous peoples and workers in the forest and in manufacturing facilities is an important part of sustainable procurement.

Social issues cannot be ignored in sustainable procurement. If poorly managed, social aspects can lead to conflict between forest companies, communities, and governments with negative effects for all.

Forest production typically takes place in remote, rural areas sometimes beyond the control of government authorities. As a result, the leadership role addressing social and governance issues can fall on forest companies. The way that these responsibilities are exercised is very important and are part of the social contract between companies and the communities in which they operate.

Logging and processing operations are potentially dangerous, and proper equipment and training

are essential. In areas where little industrial activity has taken place, the compatibility of operations with local property rights and the rights (rights to access resources, labor rights, human rights) of local peoples, including indigenous groups, can also be a concern.

Sustainable operations should consult local communities and indigenous groups before undertaking initiatives likely to impact their lands and resources, and community members should be allowed to participate meaningfully in forest management decisions affecting these rights. Capacity building, and recognition and support of cultural identity in local communities, are also important. Areas of special concern include those associated with armed conflict and areas known to have flagrant avoidance and violations of workers' and human rights.

A "Guide to the Guides"

Various organizations have developed initiatives to support the sustainable procurement of wood and paper-based products. They differ in geographic applicability, product scope, level of detail, and the constituency backing them.

Sixty-one tools have been analyzed and summarized in the following two tables grouped into 3 categories:

- Solid wood products;
- Paper products;
- Wood-based products in general.

Within each category the initiatives are further defined by their focus in the supply chain and by their geographic relevance. Each initiative's primary issues of concern are noted, as are the initiative's tools and contact information.

In reviewing these, a procurement manager should consider the origin, focus and extent to which each fits with the corporate procurement

strategy and supply chain – from forest production and manufacturing through retail and trade.

This introduction's associated publication, *Sustainable Procurement of Wood and Paper-based Products: Guide and Resource Kit*, further helps procurement managers identify potential resources by providing more detailed information on each of these initiatives, as well as an extensive glossary, list of acronyms, references and additional resources.

More information

Additional information about sustainable procurement of wood and paper-based products can be found at www.SustainableForestProducts.org. This is also where future revisions and updates of the *Guide and Resource Kit* will be located.

Interested parties can also download copies of both the *Introduction* and the *Guide and Resource Kit* from these websites.

Table 1. Summary of tools exclusively for either wood or paper-based products

Scope/Resource	Type	Focus in supply chain				Geographic areas of interest	Thematic coverage				
		Forest production	Processing/manufacturing	Retail/use	Trade		Traceability	Monitoring and verification	Legality	SFM	Forest conversion
Solid wood											
Belgian Government Procurement Policy	Government policy	✓			✓	Global	✓	✓	✓	✓	✓
Buying Sustainable Timber – A Guide for Public Purchasers in Europe				✓	✓	Global			✓	✓	✓
German Government Procurement Policy	Government policy	✓			✓	Global	✓	✓	✓	✓	✓
Green Globes	Certification standard	✓		✓		U.S.	✓			✓	✓
Greenpeace’s Responsible Procurement Policy	Publication	✓		✓	✓	China, with global implications	✓	✓	✓	✓	✓
Leadership in Energy and Environmental Design (LEED) Rating Systems	Certification standard	✓		✓		U.S.	✓			✓	✓
Madera Legal - Asociación Española del Comercio e Industria de la Madera (AEIM)					✓	Global			✓		

						Brief characterization	Contact details
Unique forest values	Climate change	Environmental protection	Recycled content	Use of other resources	Social issues		
					✓	The Policy is applicable to wood-derived products, except paper. The Policy is compulsory for all entities of the federal government, and it focuses on wood from sustainably harvested timbers. The definition includes provisions related to traceability, legality, and specific requirements for sustainable forest management certification systems.	Federal Public Service Health, Food Chain Safety and Environment Phone: +32 2 524 96 55 Website: http://www.guidedesachatsdurables.be
					✓	Guidelines for setting up public procurement systems for purchasing sustainable timber, compiled by the Sustainable Timber Action project. The initiative ended in November 2013, and the Sustainable Timber Action project was taken on by the European Sustainable Tropical Timber Coalition (http://www.europeansttc.com/). The guide offers a straightforward procurement model and suggested language for tendering documents.	Sustainable Timber Action Phone: +49 (761) 368 920 Email: procurement@iclei.org http://www.sustainable-timber-action.org/ http://www.europeansttc.com/
		✓	✓	✓		Procurement policy for wood and wood products only from verifiably legal and SMF.	German Federal Ministry of Consumer Protection, Food and Agriculture Phone: +49 (030) 200 60 www.bmelv.de
						Rating standard for commercial buildings.	The Green Building Initiative Phone: +1 877 424 4241 E-mail: info@thegbi.org www.thegbi.org
✓			✓		✓	Provides advice and assistance to solid-wood retailers devising and implementing a responsible procurement policy using Greenpeace's Timber Standard. The Timber Standard is a benchmark and it outlines a step-wise transition towards buying products that are sustainable. Sustainable products are defined as FSC-certified and/or are made of 100% recycled materials.	Greenpeace China Phone: +86 10 6554 6931 E-mail: greenpeace.china@cn.greenpeace.org www.greenpeace.org/china/en/
		✓	✓	✓		Rating standards for various types of buildings.	Green Building Council Phone: +1 800 795 1747 or +1 202 828 5110 E-mail: info@usgbc.org www.usgbc.org
						Website hosted by AEIM (the Spanish Timber Trade Federation) providing support tools for forest product companies to comply with the EUTR due diligence requirement.	AEIM Phone: +34 91 547 97 45 E-mail: aeim@aeim.org http://www.maderalegal.info

Table 1. Summary of resources exclusively for either wood or paper-based products

Scope/Resource	Type	Focus in supply chain				Geographic areas of interest	Thematic coverage				
		Forest production	Processing/manufacturing	Retail/use	Trade		Traceability	Monitoring and verification	Legality	SFM	Forest conversion
Timber Retail Coalition	Initiative/Project	✓		✓	✓	Europe, with global implications			✓	✓	✓
Timber Trade Action Plan	Initiative/Project	✓		✓	✓	Global	✓	✓	✓		
UK Timber Trade Federation Responsible Purchasing Policy	Trade association policy	✓	✓		✓	Global	✓	✓		✓	✓
Wood for Good Campaign	Organization	✓		✓	✓	Global				✓	✓
Paper-based products											
Consumer Goods Forum Guidelines for Pulp, Paper & Packaging		✓	✓	✓	✓	Global	✓		✓		✓

						Brief characterization	Contact details
Unique forest values	Climate change	Environmental protection	Recycled content	Use of other resources	Social issues		
	✓					The Coalition – founded by European retailers Kingfisher, Marks & Spencer, IKEA and Carrefour Group – seeks to raise awareness and support clear and pragmatic regulations and legislation to ensure that timber and timber products in the European markets are legal, responsibly sourced, and sustainable. The Coalition also seeks to raise awareness of other environmental issues such as deforestation and climate change. The European Retail Roundtable serves as the Coalition Secretariat.	European Retail Round Table Phone: +32 (2) 286 51 22 E-mail: smancini@errt.org www.errt.org/timber-retail-coalition
						A project aimed to reduce trade in illegal timber by helping members of European timber trade federations to work towards legality verification of their timber and wood products, and to implement robust chain of custody systems. TTAP is a private-sector initiative created by a number of European timber trade federations, and it is being implemented by the The Forest Trust. TTAP is funded by the European Commission and its European partner timber trade federations.	The Forest Trust Phone: +41 (0) 22 367 9442 http://www.tft-forests.org/
✓					✓	Management system compliant with UK central government requirements for legality and sustainability.	Timber Trade Federation Phone: +44 (0) 20 78 39 18 91 E-mail: ttf@ttf.co.uk www.ttf.co.uk
	✓	✓	✓			Practical guidance to develop and implement sustainable procurement.	wood. for good Phone: +44 (0) 800 279 0016 E-Mail: contact@woodforgood.com www.woodforgood.com
						The Pulp, Paper, & Packaging Guidelines are intended to assist companies in the development of their own policies for sourcing pulp, paper and packaging and offer an number of recommendations on how to get there. The guidelines are not mandatory, but instead provide voluntary guidance. The guidelines propose a three-pronged approach to eliminating controversial sources from supply chains: • Develop sourcing policies that avoid controversial sources of pulp, paper and packaging contributing to deforestation. • Verify supply from high priority countries has low risk of controversial sources contributing to deforestation. • Disclose company policies, goals and progress to avoid controversial sources of pulp, paper and packaging contributing to deforestation in their individual supply chains.	The Consumer Goods Forum Sustainability – Climate Change and Waste Streams Phone: +33 1 82 00 95 95 Email: sustainability@theconsumer goodsforum.com

Table 1. Summary of resources exclusively for either wood or paper-based products

Scope/Resource	Type	Focus in supply chain				Geographic areas of interest	Thematic coverage				
		Forest production	Processing/manufacturing	Retail/use	Trade		Traceability	Monitoring and verification	Legality	SFM	Forest conversion
Environmental Footprint Comparison Tool	Assessment methodology		✓			U.S. and Canada					
Environmental Paper Assessment Tool V.2.0.	Assessment methodology	✓	✓	✓		Global, but primarily U.S. and Canada	✓	✓	✓	✓	✓
Environmental Paper Network	Organization	✓	✓	✓	✓	Global	✓	✓	✓	✓	✓
New Zealand Government Paper Buyers Guidance	Publication	✓			✓	New Zealand with global implications	✓	✓	✓	✓	✓
Paper Profile	mechanism	✓	✓			Europe / Global	✓	✓		✓	✓
Publisher's database for Responsible Environmental Paper Sourcing (PREPS)	Initiative/Project	✓	✓			Global	✓	✓	✓	✓	✓

						Brief characterization	Contact details
Unique forest values	Climate change	Environmental protection	Recycled content	Use of other resources	Social issues		
	✓	✓	✓			An online information-support tool for companies and paper products buyers to weigh and analyze the trade-offs and co-benefits of managing the environmental footprint of papermaking. The tool focuses benefits and tradeoffs of using recycled fiber, water and energy use, and emissions to water and air.	National Council of Air and Stream Improvements (NCASI). Phone: (919) 941-6400 E-Mail:paperenvironment@ncasi.org www.paperenvironment.org
✓	✓	✓	✓	✓	✓	Comprehensive, online decision-support tool to facilitate direct dialogue and collaboration between producers and buyers on various issues; allows users to evaluate trade-offs in purchasing decisions.	GreenBlue Phone: +1 434 817 1424 E-mail: info@greenblue.org www.epat.org
✓	✓	✓	✓	✓	✓	A network of organizations providing information and guidance on various aspects of paper. Information and guidance is based on a common framework (common vision) for environmental and social sustainability in the production and consumption of pulp and paper products. The Network maintains and promotes various internet-based applications where its environmental and social goals are evaluated, and where guidance and practical tools for paper purchasers are provided.	Environmental Paper Network Phone: +1 828 251 8558 E-mail: info@environmentalpaper.org www.environmentalpaper.org
		✓	✓			Provides general overview of key issues and practical guidance for New Zealand paper buyers in selecting their products.	New Zealand Ministry for the Environment E-mail: govt3@mfe.govt.nz www.mfe.govt.nz
	✓	✓	✓	✓		Voluntary system to provide information to the consumer about various environmental parameters of specific paper products.	Finnish Paper Engineers' Association Phone: +358 (9) 132 6688 E-mail: info@papereng.fi www.papereng.fi
✓	✓		✓	✓		A joint initiative from twenty-three publishers to promote responsible paper supply chains. In 2012, PREPS membership was also opened to printers. PREPS has developed a database focusing on various aspects of the pulp and paper manufacturing processes, the forests from where the raw materials originate, as well as CO ₂ emissions and water use at the paper mill level. Members interested in adding new information to the database must ask the PREPS Secretariat, and PREPS will contact the mills directly and ask for technical specifications and forest source information. The information is organized by paper grades and mills. Paper grades are graded according to a PREPS Grading System based on the recycled content of the paper, whether or not is certified, whether or not the source or origin is known and if there are risks associated with that origin. The Grading System does not account for CO ₂ emissions or water consumption.	Publisher's database for Responsible Environmental Paper Sourcing (PREPS) E-mail: info@prepsgroup.com http://prepsgroup.com/home.php

Table 1. Summary of resources exclusively for either wood or paper-based products

Scope/Resource	Type	Focus in supply chain				Geographic areas of interest	Thematic coverage				
		Forest production	Processing/manufacturing	Retail/use	Trade		Traceability	Monitoring and verification	Legality	SFM	Forest conversion
Two Sides	Organization	✓	✓	✓		Europe, U.S. and Canada	✓	✓			
World Wildlife Fund Guide to Buying Paper	Publication	✓	✓	✓	✓	Global	✓	✓	✓	✓	✓
World Wildlife Fund Paper Scorecard	Assessment methodology	✓	✓		✓	Global	✓	✓	✓	✓	✓
World Wildlife Fund Tissue Scoring	Assessment methodology	✓	✓	✓		Europe	✓	✓	✓	✓	✓

						Brief characterization	Contact details
Unique forest values	Climate change	Environmental protection	Recycled conten	Use of other resources	Social issues		
	✓	✓	✓			Two Sides is an initiative of a number of companies from the graphic communications supply chain. The initiative includes actors involved in forest, pulp, paper, inks and chemicals, and printing and publishing industries. The objective of the initiative is (i) to promote the responsible production and use of print and paper products; and (ii) to make information about industry sustainability and performance available to all stakeholders.	Two Sides Phone: +44-115-8412 129 E-mail: info@twosides.info www.twosides.info
✓	✓	✓	✓	✓	✓	Companion to WWF Paper Scorecard. Provides guidance on various issues and showcases examples of companies taking action on issues covered.	WWF International Phone: +41 (0)22 364 91 11 www.panda.org/paper/toolbox
✓	✓	✓	✓		✓	Scoring system for paper.	WWF International Phone: +41 (0)22 364 91 11 www.panda.org/paper/toolbox
✓		✓	✓	✓	✓	Rating system to assess tissue paper sourcing.	WWF International Phone: +41 (0)22 36491 11

Table 2. Summary of resources for both wood and paper-based products

Scope/Resource	Type	Focus in supply chain				Geographic areas of interest	Thematic coverage				
		Forest production	Processing/manufacturing	Retail/use	Trade		Traceability	Monitoring and verification	Legality	SFM	Forest conversion
Solid wood and paper-based products											
A Buyer's Guide to Canada's Sustainable Forest Product	Publication	✓	✓	✓	✓	Canada, with global implications	✓	✓	✓	✓	✓
CEPI Legal Logging Code of Conduct	Trade association policy	✓			✓	Europe	✓	✓	✓		
Danish Government Procurement Policy for Tropical Forests	Government policy	✓	✓		✓	Global	✓	✓	✓	✓	✓
Dutch Government Procurement Criteria for Timber	Government policy	✓			✓	Global	✓	✓	✓	✓	✓
Enhancing the Trade of Legally Produced Timber, a Guide to Initiatives	Publication	✓	✓	✓	✓		✓	✓	✓		
European Community Green Purchasing Policy	Government policy	✓	✓		✓	Global	✓	✓	✓	✓	✓

						Brief characterization	Contact details
Unique forest values	Climate change	Environmental protection	Fresh and recycled fiber	Use of other resources	Social issues		
✓	✓	✓	✓	✓	✓	Uses the WRI/WBCSD 10 key questions framework, to provide buyers with information to reassure them about the social and environmental qualities of Canada's forest products. Includes sample forest products procurement/financing policy, environmental performance data of FPAC members, as well as additional resources including a glossary.	Forest Products Association of Canada Phone: +1 613 563 1441 E-mail: Ottawa@fpac.ca www.fpac.ca
						States CEPI member companies' commitments to address illegal logging. Commitments include: to operate in full compliance with laws; to purchase only wood that is legally harvested; to set up traceability systems to ensure compliance; to document the legality of the wood purchased and build internal staff capacity to implement the commitment.	Confederation of European Paper Industries (CEPI) Phone: +32 (2) 627 49 27 11 E-mail: mail@cepi.org www.cepi.org
✓					✓	Guidelines for purchasing of tropical timber	Danish Ministry of the Environment Phone: +45 (72) 54 20 00 E-mail: sns@sns.dk www.sns.dk
✓	✓	✓			✓	The Procurement Criteria for Timber prefers wood products that are sustainable and legal. If sustainably produced products are not available, they at least have to be from legal sources. To help implement this policy, the Dutch government established the Timber Procurement Assessment System (TPAS). TPAS seeks to provide assurance to national and local government institutions that the wood products they purchase meet the government sustainability and legality requirements. The Timber Procurement Assessment Commitment (TPAC) is a body within the TPAS to provide guidance to assess evidence of compliance. TPAC is also responsible for evaluating evidence of compliance provided by forest certification systems and other verification systems.	Timber Procurement Assessment System Phone: +31 (0)70 3586 300 E-mail: smk@smk.nl www.tpac.smk.nl
						A guide to 127 major initiatives that promote the legal production and trade of timber. The guide provides an overview of the array of initiatives, highlighting trends, gaps, and major opportunities.	Tropenbos International Phone: +31 317 481416 E-mail: tropenbos@tropenbos.org http://www.tropenbos.org/
		✓	✓			Policy to promote public green procurement, increase similarities among procurement criteria of EU member states, and provide guidance and advice. Priority products include paper and furniture.	European Environment Agency Phone: +45 33 36 7100 http://ec.europa.u/environment/gpp/index_en.htm

Table 2. Summary of resources for both wood and paper-based products

Scope/Resource	Type	Focus in supply chain				Geographic areas of interest	Thematic coverage				
		Forest production	Processing/manufacturing	Retail/use	Trade		Traceability	Monitoring and verification	Legality	SFM	Forest conversion
FLEGT and VPAs	Policy instrument	✓			✓	Global	✓	✓	✓	✓	✓
Forest Certification Assessment Guide	Assessment methodology	✓				Global	✓	✓	✓	✓	✓
Carbon Disclosure Project	Reporting mechanism	✓				Global	✓	✓		✓	✓
Forest Industry Carbon Assessment Tool	Assessment methodology	✓	✓	✓		Global	✓			✓	✓
Forest Legality Alliance	Project	✓			✓	Global			✓		

						Brief characterization	Contact details
Unique forest values	Climate change	Environmental protection	Fresh and recycled fiber	Use of other resources	Social issues		
					✓	The Forest Law Enforcement, Governance and Trade (FLEGT) Plan is the European Union (EU) response to illegal logging and deforestation concerns. The Plan recognizes that consumer countries' demand for forest products contributes to forest loss. The Plan seeks to (i) develop markets for legal products in Europe; and (ii) establish bilateral partnerships (Voluntary Partnership Agreements, VPAs) with producing countries to build their capacity and support reforms in the governance of their forest sectors, in order to reduce the production of illegally harvested timber. The VPAs also seek to establish and implement tracking and licensing systems (Legality Assurance Systems - LASs) to ensure that only legally produced products enter the European Union.	European Commission Environment DG http://ec.europa.eu/environment/contact/contact_en.htm
✓					✓	Framework for the evaluation of certification systems to assess compliance with World Bank and WWF policies.	World Bank / WWF International Phone: +41 (0) 22 364 91 11 or +1 202 473 10 00 www.forest-alliance.org
✓	✓					The initiative, now part of the Carbon Disclosure Project is designed to create transparency and improve companies' understanding of the "forest footprint" of their direct operations and the operations they finance. The «forest footprint» focuses on production, use, and trade of key commodities linked to global deforestation: timber, soy, beef and leather, palm oil and biofuels. Every year, a number of companies are invited to disclose information about policies related to the sustainable supply chains for these commodities, and the actions they are taking to manage risks.	Carbon Disclosure Project Phone: 44-20-7970-5660 http://www.cdproject.net
	✓		✓			An online, comprehensive, assessment tool to estimate direct and indirect (Scope 1, 2, and 3) GHG emissions for the forest products industry. FICAT incorporates elements of the WRI/WBCSD GHG Protocol, it is structured around CEPI's Carbon Footprint Framework, and it uses data from the Intergovernmental Panel on Climate Change (IPCC). The tool can be also used to educate users about the complexities associated with estimating GHG emissions of forest products.	National Council for Air and Stream Improvement, Inc and the International Finance Corporation Phone: +1 919 941 6400 www.FICATModel.org
						A public-private initiative to reduce illegal logging through supporting the supply of legal forest products. The Alliance seeks to raise awareness of demand-side legality requirements, produce innovative practical tools to help forest products supply chains to screen out illegal wood, and demonstrate compliance with legality requirements.	World Resources Institute / Environmental Investigation Agency Phone: +1 202-729-7600 E-mail: forestlegality@wri.org www.forestlegality.org

Table 2. Summary of resources for both wood and paper-based products

Scope/Resource	Type	Focus in supply chain				Geographic areas of interest	Thematic coverage				
		Forest production	Processing/manufacturing	Retail/use	Trade		Traceability	Monitoring and verification	Legality	SFM	Forest conversion
French Policy on Public Procurement of Timber and Wood Products	Government policy	✓			✓	Global	✓	✓	✓	✓	✓
FSC Controlled-Wood Standard	Certification standard	✓	✓		✓	Global	✓	✓	✓		
Global Forest and Trade Network (a WWF initiative)	Initiative	✓	✓	✓	✓	Global	✓	✓	✓	✓	✓
Global Forest Registry	Initiative/Project	✓			✓	Global			✓	✓	✓
Global Timber Tracking Network	Initiative/Project	✓	✓		✓	Global	✓	✓	✓	✓	✓
Green Purchasing Network	Organization		✓	✓		Japan		✓	✓	✓	✓

						Brief characterization	Contact details
Unique forest values	Climate change	Environmental protection	Fresh and recycled fiber	Use of other resources	Social issues		
						National forest products procurement policy; required for central government procurement officials; recommended to local authorities.	Ministère de l'Écologie, de l'Énergie du Développement durable et de l'Aménagement du territoire Phone: +33 (0) 1 40 81 83 32 E-mail: remy.risser@developpement-durable.gouv.fr www.ecoresponsabilite. environnement.gouv.fr
✓					✓	Within the FSC system, a standard to avoid trading of illegal and environmentally and socially damaging wood.	Forest Stewardship Council Phone: +49 (228) 367 66 26 E-mail: fsc@fsc.org www.fsc.org
✓	✓	✓	✓		✓	Promotes responsible forest management and trade through a step-wise approach toward credible certification.	WWF International Phone : +41 22 364 9111 www.gftn.panda.org
✓						The Global Forest Registry is a map-based database, designed to help evaluate the risk of obtaining wood from controversial sources, as defined by the Forest Stewardship Council in the Controlled Wood standard. The definition of controversial sources includes: wood harvested illegally; wood harvested in violation of traditional or civil rights; wood harvested from areas being converted from forests and other wooded ecosystems to plantations or non-forest uses; and wood from forests in which genetically modified trees are planted. The database builds on publicly-available global sources of information for more than 150 countries. The database also includes more detailed information for countries that have completed FSC-approved controlled wood risk assessments.	NEPCon Phone: +372 - 7 380 723 E-mail: rp@nepcon.net; hh@nepcon.net www.globalforestregistry.org
						The Global Timber Tracking Network (GTTN), coordinated by Bioversity International, is an effort to promote the use of DNA and stable isotopes to fight illegal control. The network is developing a global database of DNA and stable isotope fingerprints of major commercial timber species, which could help reinforce illegal logging laws and certification standards by helping verify that the species listed in the paperwork is legal and labeled correctly. The database will also allow importers and authorities to verify the declared origin of wood and wood products.	Bioversity International Phone: + (603) 89423891 E-mail: gttn@cgiar.org http://www.globaltimbertrackingnetwork.org/
		✓	✓	✓		Guidance for green purchasing, including various types of paper products and furniture.	Green Purchasing Network Phone: +81 (3) 3406 5155 E-mail: gpn@net.email.ne.jp www.gpn.jp

Table 2. Summary of resources for both wood and paper-based products

Scope/Resource	Type	Focus in supply chain				Geographic areas of interest	Thematic coverage				
		Forest production	Processing/manufacturing	Retail/use	Trade		Traceability	Monitoring and verification	Legality	SFM	Forest conversion
High Conservation Value (HCV) Resource Network		✓			✓	Global			✓	✓	✓
Illegal-logging.info	Initiative/Project	✓	✓	✓	✓	Global	✓	✓	✓	✓	✓
Japanese Government Procurement Policy	Government policy	✓	✓		✓	Japan/Global	✓	✓	✓	✓	✓
Mexican Federal Government Procurement Policy	Government policy	✓	✓			Mexico	✓	✓	✓	✓	✓

						Brief characterization	Contact details
Unique forest values	Climate change	Environmental protection	Fresh and recycled fiber	Use of other resources	Social issues		
✓					✓	The High Conservation Value Resource Network (HCVRN) is a member-based organization that supports the consistent implementation of the High Conservation Value (HCV) approach, which helps identify, manage and monitor significant biological, ecological, social or cultural values in a variety of production landscapes. The HCV approach is one of the main requirements of major voluntary sustainability standards schemes, such as the Forest Stewardship Council (FSC) and the Roundtable on Sustainable Palm Oil (RSPO), and procurement and investment policies. The HCVRN also provides guidance documents, tools and templates to improve HCV assessments, and licenses lead HCV assessors and monitors the quality of their work over time.	HCV Resource Network c/o Proforest Phone:+44 (0) 1865 243 493 Email: secretariat@hcvnetwork.org http://hcvnetwork.org
✓	✓				✓	Data warehouse maintained by the British organization Chatham House dedicated to illegal logging and associated trade. The warehouse contains documents, presentations, media records and links related to illegal logging and the trade in illegal timber. The web site provides a contextual framework, which outlines major themes related to illegal logging: causes and drivers of illegal logging and trade, initiatives and approaches to address the problem, relevant policies and legislation, key actors and stakeholders, indicators of progress and important sources of information. Information is provided at both the regional and country level.	Chatham House Phone: +44 (0) 20 7957 5711 E-mail: admin@illegal-logging.info http://www.illegal-logging.info/
		✓	✓	✓		Guidelines for verification of legality and sustainability of wood and wood products.	Forestry Agency, Ministry of Agriculture, Forestry and Fisheries of Japan http://www.maff.go.jp/e/index.html
		✓	✓			Within the Purchasing, Leasing and Public Services Law, all federal government agencies should ensure that the origin of the products is known, and that they originate from sustainably managed forests. In addition, the origin and sustainability of the products should be verified by third party auditing bodies recognized by the Ministry of Natural Resources.	Dirección General de Recursos Materiales Inmuebles y Servicios, SEMARNAT Phone: +52 562-80600 www.semarnat.gob.mx

Table 2. Summary of resources for both wood and paper-based products

Scope/Resource	Type	Focus in supply chain				Geographic areas of interest	Thematic coverage				
		Forest production	Processing/manufacturing	Retail/use	Trade		Traceability	Monitoring and verification	Legality	SFM	Forest conversion
NEPCon LegalSource Programme	Certification standard	✓	✓		✓	Global	✓	✓	✓		
New Zealand Timber and Wood Products Procurement Policy	Government policy	✓			✓	Global		✓	✓	✓	✓
PEFC Due Dilligence System	Certification Standard	✓	✓		✓	Global	✓	✓	✓		
Project LEAF	Initiative/Project	✓			✓	Global	✓	✓	✓		
Public Procurement Policies for Forest Products and their Impacts	Publication	✓			✓	Global		✓		✓	✓

						Brief characterization	Contact details
Unique forest values	Climate change	Environmental protection	Fresh and recycled fiber	Use of other resources	Social issues		
					<p>✓</p> <p>The NEPCon LegalSource Programme offers third party certification for forest product traders, processors and forest managers, confirming that they exercise due care to reduce the risk of sourcing and trading illegally harvested forest products.</p> <p>The LegalSource standard is designed to be compatible with laws that are established or coming into place in the US, EU and Australia, with the aim of excluding material originating from illegal harvesting from their markets. The standard is also applicable to forest operations and companies that export to such markets or simply want to reduce the risk of sourcing illegal forest products.</p>	<p>NEPCon Forest Legality Programme www.nepcon.net Email: cs@nepcon.net Phone: +4531587981</p>	
					<p>Procurement policy for New Zealand government agencies to address illegal logging and support international sustainable forest management.</p>	<p>Forest Policy Coordination Ministry of Agriculture and Forestry Phone: +64 (04) 894 0679 www.maf.govt.nz/forestry/twpp/index.htm</p>	
✓					<p>✓</p> <p>The PEFC's Due Diligence System requires participants to establish supply chain control systems to minimize the risk that certified products include raw materials from controversial sources.</p>	<p>PEFC Council Phone: +41 22 799 45 40 E-mail: info@pefc.org www.pefc.org</p>	
	✓				<p>A recently launched partnership between Interpol and the United Nations Environment Programme (UNEP), Project LEAF (Law Enforcement Assistance for Forests) is an initiative dedicated to combating forest crime, including illegal logging and timber trafficking. Project LEAF seeks to respond to organized transnational forest-criminal activity through an international, coordinated response and in collaboration with national law enforcement agencies. Specific activities involve gathering information and generating relevant analysis, build in-country law enforcement capacity, and providing insights into the way organized crime operates.</p>	<p>INTERPOL Fax: +33(0) 47244-7163 www.interpol.int environmentalcrime@interpol.int</p>	
					<p>✓</p> <p>Synthesis and a comparative review of public timber procurement policies around the world.</p>	<p>Ardot Phone: +358 (0) 9 44 88 61 E-mail: ardot@ardot.fi www.ardot.fi</p>	

Table 2. Summary of resources for both wood and paper-based products

Scope/Resource	Type	Focus in supply chain				Geographic areas of interest	Thematic coverage				
		Forest production	Processing/manufacturing	Retail/use	Trade		Traceability	Monitoring and verification	Legality	SFM	Forest conversion
SEDEX	Reporting mechanism	✓	✓		✓	Global			✓		
SmartSource	Service provider; offers a reporting mechanism for clients (SmartSource 360). Reporting mechanism	✓	✓		✓	Global	✓	✓	✓	✓	✓
Standard Practice for Categorizing Wood and Wood-based Products According to Their Fiber Sources	Certification standard	✓				Global, but available data are initially limited to the U.S.	✓	✓	✓	✓	✓

						Brief characterization	Contact details
Unique forest values	Climate change	Environmental protection	Fresh and recycled fiber	Use of other resources	Social issues		
	✓			✓	✓	<p>Sedex is a supply chain management tool that helps companies identify, manage and mitigate ethical risks in global supply chains. As the largest collaborative platform for managing ethical supply chain data, Sedex engages with all tiers of the supply chain with the aim of driving improvements and convergence in responsible business practices. Sedex members can share and manage information related to Labour Standards, Health & Safety, The Environment and Business Practices. Members also have access to a range of tools and reports, including industry specific questionnaires and risk analysis tools.</p> <p>Sedex members benefit from a flexible framework that can be used with any code, standard or company policy. Sedex does not prescribe a specific audit report or reporting requirements, but the organization does provide a publicly available common audit reporting format and methodology (the Sedex Members Trade Audit, or SMETA) designed to reduce duplication of effort in ethical trade auditing.</p>	<p>Sedex Phone: +44 (0)20 7902 2320 (UK) +86 (0)21 6103 1622 (China) +1-888-487-6146 (US/CAN) E-mail: helpdesk@sedexglobal.com (UK) helpdeskchina@sedexglobal.com (China) http://www.sedexglobal.com/</p>
✓						<p>A supply chain management resource that supports forest products purchasing programs by (a) tracing the origin of products throughout the supply chain; (b) evaluating various risks (of illegal logging, unsustainable forest management) associated with the supply chains; and (c) developing and implementing policies and actions to address the risk. Under the latter, SmartSource also provides support to their clients in educating their staff and communicating the policy with suppliers and other stakeholders. Under the upcoming SmartSource360 platform (applicable to a and b above), companies throughout the supply chain will be able provide information directly about the raw materials in the products, including the place of origin. Rainforest Alliance SmartSource program staff reviews and verifies claims made by suppliers regarding source category and country of materials they have sold, through an annual audit process.</p>	<p>Rainforest Alliance Phone: (802) 434-5491 E-mail: mcomolli@ra.org http://www.rainforest-alliance.org/forestry/sourcing</p>
						<p>A voluntary standard to communicate conformance of wood and paper-based products with requirements of different tracing systems, forest management certification programs, and voluntary and regulatory standards related to forest products.</p>	<p>ASTM International Phone: +1 -610- 832-9500 www.astm.org</p>

Table 2. Summary of resources for both wood and paper-based products

Scope/Resource	Type	Focus in supply chain				Geographic areas of interest	Thematic coverage				
		Forest production	Processing/manufacturing	Retail/use	Trade		Traceability	Monitoring and verification	Legality	SFM	Forest conversion
String	Reporting mechanism	✓	✓		✓	Global	✓	✓	✓		
Sustainable Forest Finance Toolkit	Publication	✓	✓		✓	Global	✓	✓	✓	✓	✓
Sustainable Forestry Initiative Procurement Objective	Certification standard	✓	✓		✓	U.S. and Canada	✓	✓		✓	✓
Swiss Declaration Duty for Timber	Government policy	✓			✓	Global	✓	✓	✓		
The Forest Governance Learning Group	Initiative/Project	✓			✓	Asia and Africa		✓	✓	✓	✓

						Brief characterization	Contact details
Unique forest values	Climate change	Environmental protection	Fresh and recycled fiber	Use of other resources	Social issues		
						String is an online, data recording, tool. The system enables users at all phases in the supply chain to request information about the product from their suppliers. If the data is missing, or if certain validation rules are not met, the data will be marked as incomplete or invalid. Users can generate reports from the data to get a complete picture of the flow of the product throughout the supply chain, and all the available data. By tracing products at a batch level, String makes it difficult for quantities of certified products to be falsified, and as each organization is responsible for their own data there is a clear record of who recorded what and when. String is flexible, and it can be customized to record any data about any type of product. The system has been piloted in a number of industries including timber, textiles and minerals.	Historic Futures Phone: +44 (0) 1993 886420 http://www.stringtogether.com/
✓	✓	✓	✓			The Toolkit is designed to assist and inform forest sector lending and investment decisions, specifically focusing on the production and processing of forest products, and carbon and ecosystem services markets. The Toolkit includes information and specific advice, in the form of questions, for finance officers to evaluate risk, manage investment portfolios, develop forest-sector investment policies, and sustainable procurement.	PriceWaterhouseCoopers LLP UK Sustainability and Climate Change Phone: +44 20 7804 3978 www.pwc.co.uk/sustainability
✓					✓	Purchasing requirements for wood and fiber under SFI certification standard.	Sustainable Forestry Initiative Phone: +1 202 596-3450 www.sfiprogram.org
						Requires suppliers of solid wood products to provide information about the species of wood and place of harvest. The Duty seeks to promote transparency and enable customers to choose responsible wood products.	Federal Consumer Affairs Bureau (FCAB) Phone: 031 322 20 00 Website: www.konsum.admin.ch/holzdeklaration/
	✓				✓	It is an informal network of national organizations in Africa and Asia focused on forest governance issues, particularly making connections between “those marginalized from forest governance” with decision-makers. The alliance’s goal is to improve governance of forest resources internationally and in the countries where it operates. The alliance conducts focused case studies, develops tools and strategies, and convenes stakeholders for dialogue and exchanges among other things. The Forest Governance Learning Group is active in Cameroon, China, Ghana, India, Indonesia, Malawi, Mozambique, South Africa, Tanzania, Uganda and Vietnam.	RECOFTC Phone: +44 (0) 20 7957 5711 E-mail: info@recoftc.org http://www.recoftc.org/site/resources/Forest-Governance-Learning-Group/

Table 2. Summary of resources for both wood and paper-based products

Scope/Resource	Type	Focus in supply chain				Geographic areas of interest	Thematic coverage				
		Forest production	Processing/manufacturing	Retail/use	Trade		Traceability	Monitoring and verification	Legality	SFM	Forest conversion
The Forest Trust	Organization	✓	✓	✓	✓	Global	✓	✓	✓	✓	✓
The Forest Trust's Good Wood, Good Business Guide	Publication	✓		✓	✓	Global	✓	✓	✓	✓	✓
Timber Tracking Technologies Review	Publication	✓	✓	✓	✓	Global	✓	✓	✓	✓	✓
UK Government Central Point of Expertise on Timber Procurement (CPET)	Organization	✓	✓		✓	Global	✓	✓	✓	✓	✓

						Brief characterization	Contact details
Unique forest values	Climate change	Environmental protection	Fresh and recycled fiber	Use of other resources	Social issues		
✓	✓		✓	✓	✓	Helps link business to responsibly managed forests. TFT members commit to sourcing from sustainable forests that are credibly certified, or TFT forest projects advancing towards credible forest certification. TFT supports companies to establish wood control systems that ensure no undesirable wood enters into their products.	The Forest Trust Phone: +41 (0)22 367 94 40 http://www.tft-forests.org/
✓					✓	Practical guidance to develop and implement sustainable procurement	The Forest Trust Phone: +41 (0)22 367 94 40 http://www.tft-forests.org/
						A report that provides a summary of electronic and semi-electronic timber tracking technologies and case studies aimed at providing guidance to timber tracking users, as well as general information on tracking technologies and drivers of its application. Timber tracking technologies and databases allows users to collect data on the source of timber and timber products, and store that information in an accessible and user-friendly database. It also allows users to track information about their supply chains, reduce the risk of illegal or unsustainable wood products entering the supply chain, or to fulfill requirements of forest certification schemes.	Bioversity International / CIGAR Phone: (39-06) 61181 E-mail: bioversity@cgiar.org http://www.bioversityinternational.org/
✓					✓	Provides guidance for compliance with UK central government purchasing requirements for sustainability and legality.	EFECA Phone: +44 (0)1305 236 100 E-mail: cpet@efeca.com www.cpet.org.uk

Glossary

bill of lading

A document establishing the terms of contract between a shipper and a transportation company to move freight from one point to another for a specific charge. (Source: Global Forest and Trade Network (GFTN). *Building a Better Business through Responsible Purchasing: Developing and Implementing a Wood and Paper Purchasing Policy*. WWF, GFTN-North America. 2005.)

biodiversity

Also, biological diversity. The variety of living organisms from all sources including terrestrial, marine and other aquatic ecosystems, as well as the ecological complexes of which they are part. This includes diversity within species, between species and of ecosystems. (Source: Convention on Biological Diversity. *Article 2. Use of Terms*. 2007.)

chain-of-custody (CoC)

The systematic tracking of wood-based products from their origin in the forest to their end-use.

carbon sequestration

The different processes through which carbon is removed from the atmosphere and stored in soil, biomass, geological formations and oceans.

environmental management system (EMS)

A set of processes and practices that enables an organization to reduce its environmental impacts and increase operational efficiency. (Source: US Environmental Protection Agency. 2007.)

forest land-use change

Also called deforestation – where forests are being converted from natural forests to other land uses (agriculture, cattle ranching, urbanization, etc.). Such land use change may or may not be legal and can result in forested areas that do not have the prospect of being sustainably managed.

forest conversion

When natural forests are converted to highly cultivated forests typically with an increased focus on wood production and decreased environmental benefits.

illegal logging

Logging in violation of an established legal framework.

old growth forests

A forest that has originated through natural succession and maintains significant portions of dead wood and old trees. A multi-layered structure is often

present and the forest may be at climax (mature) stage. (Source: Lund, H.G. *Definitions of Old Growth, Pristine, Climax, Ancient Forests, Degradation, Desertification, Forest Fragmentation, and Similar Terms*. Forest Information Services. 2007.)

protected areas

An area as an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means. (Source: World Conservation Union (IUCN). World Commission on Protected Areas Website at www.iucn.org/themes/wcpa/ (accessed September 2007) 2007.)

special forests

For the purpose of this guide, the term special forests is used as a generic term to mean areas in the forest landscape that have unique qualities and need special attention and treatment, including sensitive ecosystems.

supply chain

The different steps (from tree harvesting to product distribution) through which wood and paper-based products go: through from harvest to an end product.

threatened species

Threatened species is a group of three categories: critically endangered species, endangered species, and vulnerable species. Endangered species are considered to be facing a very high risk of extinction in the wild while vulnerable species are considered to be facing a high risk of extinction in the wild. (Source: World Conservation Union (IUCN). *Glossary of Biodiversity Terms*. IUCN/WCMC. 2007.)

traceability

The ability to track wood between two subsequent points of the chain-of-custody.

unwanted sources

In addition to illegal logging, a number of controversial sources of wood including: protected areas or forests that have been proposed for national parks but have not yet been formally protected; forests deemed to be special places; forests where there are serious tenure disputes, particularly where these involve the failure to respect the customary rights of indigenous or local people; forests that are inappropriately converted to other land uses. (Source: Nussbaum, R., and M. Simula. *The Forest Certification Handbook*. 2005.)

About

WBCSD

The World Business Council for Sustainable Development (WBCSD) is a CEO-led organization of forward-thinking companies that galvanizes the global business community to create a sustainable future for business, society and the environment. Together with its members, the council applies its respected thought leadership and effective advocacy to generate constructive solutions and take shared action. Leveraging its strong relationships with stakeholders as the leading advocate for business, the council helps drive debate and policy change in favor of sustainable development solutions. The WBCSD provides a forum for its 200 member companies – who represent all business sectors, all continents and a combined revenue of more than \$7 trillion – to share best practices on sustainable development issues and to develop innovative tools that change the status quo. The Council also benefits from a network of 60 national and regional business councils and partner organizations, a majority of which are based in developing countries.

The WBCSD Forest Solutions Group's mission is to provide business leadership in expanding sustainable forest-based solutions to meet the needs of people now and in the future. The group's working scope addresses a range of sustainability challenges and opportunities, often based on open stakeholder dialogue and engagement, clarifies misperceptions about the forest-based industry, and emphasizes the role of forests, forest products and the whole forest sector in developing and sustaining a low-carbon and bio-based economy.

www.wbcsd.org

World Resources Institute

WRI is a global research organization that works closely with leaders to turn big ideas into action to sustain a healthy environment—the foundation of economic opportunity and human well-being.

Our Challenge

Natural resources are at the foundation of economic opportunity and human well-being. But today, we are depleting Earth's resources at rates that are not sustainable, endangering economies and people's lives. People depend on clean water, fertile land, healthy forests, and a stable climate. Livable cities and clean energy are essential for a sustainable planet. We must address these urgent, global challenges this decade.

Our Vision

We envision an equitable and prosperous planet driven by the wise management of natural resources. We aspire to create a world where the actions of government, business, and communities combine to eliminate poverty and sustain the natural environment for all people.

Our Approach

COUNT IT

We start with data. We conduct independent research and draw on the latest technology to develop new insights and recommendations. Our rigorous analysis identifies risks, unveils opportunities, and informs smart strategies. We focus our efforts on influential and emerging economies where the future of sustainability will be determined.

CHANGE IT

We use our research to influence government policies, business strategies, and civil society action. We test projects with communities, companies, and government agencies to build a strong evidence base. Then, we work with partners to deliver change on the ground that alleviates poverty and strengthens society. We hold ourselves accountable to ensure our outcomes will be bold and enduring.

SCALE IT

We don't think small. Once tested, we work with partners to adopt and expand our efforts regionally and globally. We engage with decision-makers to carry out our ideas and elevate our impact. We measure success through government and business actions that improve people's lives and sustain a healthy environment.

www.wri.org

Photo credits Flickr
Copyright © World Resources Institute and WBCSD.
November 2014.

www.SustainableForestProducts.org

World Business Council for Sustainable Development – WBCSD

Chemin de Conches 4, 1231 Conches-Geneva, Switzerland

Tel: +41 (0) 22 839 31 00, Fax: +41 (0) 22 839 31 31, E-mail: info@wbcSD.org, Web: www.wbcSD.org

WBCSD US, Inc.

1500 K Street NW, Suite 850, Washington, DC 20005, US

Tel: +1 202 383 9505, E-mail: Washington@wbcSD.org

World Resources Institute – WRI

10 G Street, NE (Suite 800), Washington DC 20002, United States

Tel: +1 202 729 76 00, Fax: +1 202 729 76 10, E-mail: info@wri.org, Web: www.wri.org