

Assessment of Lawful Harvesting & Sustainability of US Hardwood Exports

Prepared for
American Hardwood Export Council

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SUMMARY & FINDINGS

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SUMMARY & FINDINGS

Background

This research and report was commissioned by the American Hardwood Export Council (AHEC) as part of its effort to ascertain the legitimacy of US hardwoods in international trade. In certain export markets, most notably in Europe and Japan, government procurement policies are requiring that wood products be shown to be from legal and sustainable sources. Private market purchasers are increasingly requesting similar assurances. This report evaluates the risk of illegal hardwood timber being in the mix of US hardwood product exports.

Certification often provides an accepted demonstration of legality and sustainability. However, at the present time, very few of the hardwood products produced in the US are from certified sources. The US hardwood sector is characterized by a dispersed supply chain involving millions of mostly small individual landowners and a complex network of timber buyers, processors, wood dealers, concentration yards, harvesting contractors and traders that makes chain of custody tracking for certification challenging if not extremely difficult. Instead, the current project reviews available data suitable for assessing the probability or risk that US hardwood products might not comply with relevant laws and regulations governing ownership rights, harvests and sustainable forest management. The material presented in this report is not intended to substitute for forest certification, but instead to meet procurement policies that seek acceptable assurances other than certification.

Information in this report covers commercial production of US hardwoods which is concentrated in states along and east of the Mississippi River with some additional production in the Pacific Northwest. Thirty-three (33) states in the North, South and Pacific Northwest form what we define as the hardwood-producing region or Hardwood States. These 33 states account for 96% of US hardwood production; each contributes in varying degrees to the supply of US hardwood exports. As collaborating analysts, we compiled and reviewed comprehensive information regarding the legal frameworks governing timber ownership, forest management and harvests in the Hardwood States. In addition, US hardwood supply, within the context of selected wood procurement guidelines, were evaluated. The main the objectives of the study were to:

- (1) Describe and assess the legal frameworks that ensure clear ownership and contractual rights to sell timber in the US hardwood regions;
- (2) Describe and assess the legal and policy frameworks designed to foster sustainability in the states where US hardwoods are produced;
- (3) Evaluate the US hardwood supply situation within the context of:
 - (a) Forest Stewardship Council (FSC) Controlled Wood Standard;
 - (b) Programme for the Endorsement of Forest Certification (PEFC) requirements for the avoidance of the procurement of raw material from controversial sources; and,

- (c) UK government procurement guidelines for legal and sustainable wood products developed by the Central Point of Expertise on Timber (CPET);

Study Team

The collaborating authors are a group of highly respected analysts with backgrounds and experience in academia as well as consulting for environmental groups, government and industry. **Mr. Alberto Goetzl** of *Seneca Creek Associates, LLC* is a consulting natural resources economist who has advised government and private sector clients on forestry, market and trade issues. His 2004 report on the competitive impacts of illegal logging is the most widely cited reference on the topic. **Dr. Paul Ellefson** is the most recognized authority on regulations and programs that affect forest management in the United States. He teaches and researches at the *University of Minnesota*. **Mr. Phil Guillery** is currently Director of North American Programs for the *Tropical Forest Trust*. He has been a consultant to FSC and has served on the FSC-US board of directors. **Dr. Gary Dodge** is a consulting biologist/ecologist with *Trailhead Associates* who has consulted with FSC and has held positions with US land management agencies and conservation organizations. **Mr. Scott Berg** of *R.S. Berg & Associates, Inc.* is a consulting forest certification specialist who has participated in the development of SFI standards and has prepared pre-audits, internal audits and external audits for forest-based companies seeking certification under SFI, PEFC and FSC standards.

Illegal Wood Sourcing

Definitions of what constitutes unlawful harvesting vary. Some definitions are broad and encompass any violations of national, state or local law governing harvesting and all related activities including transporting, processing, buying or selling of timber. For purposes of this study, we focus on two broad categories of illegal forest activities:

- (1) legal ownership and use which relates to timber theft and buyer/seller fraud, and
- (2) violations of laws and rules related to forest management (and thus sustainability).

Because certain social welfare issues, such as child labor and health and safety, are of some consequence globally, we address those issues as well. Other legal compliance issues related to energy, transportation and manufacturing of wood products could be examined, but we believe that it is primarily the laws and rules that control timber theft and forest management abuses that are of most interest

Key Findings and Observations

- (1) Based on the data compiled and analyzed, the weight of evidence strongly indicates that there is very low risk that US hardwood exports contain wood from illegal sources.
- (2) There can be high confidence that rights of timber ownership are well-established and respected. Approximately 92% of hardwood produced in the US is sourced from private lands. The vast majority of private landowners own small family forests that average less than 10

hectares in size. Numerous legal processes are available to landowners to resolve disputes involving proper title and/or the unauthorized taking or sale of timber property.

(3) While timber theft occurs and is of concern to private landowners, it not believed to be a pervasive or systemic problem, especially with regards to US hardwood exports. The extent of unlawful timber harvesting across the hardwood producing region is not easily determined and many cases go unreported, but most appear to involve a relatively small numbers of trees. The most commonly reported incidents of timber theft and trespass involve poorly marked or disputed boundary lines. The experience of states with the most detailed information allows an estimate that on the order of 800 to 1,000 significant timber theft cases occur annually in the hardwood region, involving an estimated 20,000 to 25,000 cubic meters (including both softwood and hardwood). Even if half or more were hardwood trees, stolen timber would represent a very small portion of total US hardwood production – very likely less than 1%.

(4) The legal frameworks governing forest management vary widely. Every state has both regulatory and non-regulatory authorities and programs that address different aspects of forest management. While resources are limited, and efficiencies and effectiveness are debated, state programs are responsive in promoting and ensuring sustainable forest practices. When considered in their totality, national and state forest programs contribute to ensuring sustainable and legal hardwood supplies.

(5) Comparisons of international governance indicators, such as those compiled by the World Bank, strongly indicate that the US is perceived as a country with a high regard for the rule of law, an effective environmental, labor and public welfare regulatory environment, and a low level of corruption.

(6) Based on published data, as available, and information compiled from state officials and the wood products trade, there can be high confidence regarding adherence to national and state laws in the hardwood sector.

(7) The US re-exports very little imported temperate hardwood products. Most hardwood imports are from Canada, a country with similarly robust governance as the US. With very few exceptions, and involving low quantities, US temperate hardwood imports from China, Russia and South America are generally not re-exported.

(8) We have addressed each of the five risk categories of wood that should be avoided according to the FSC Controlled Wood standard (FSC-STD-40-005) that applies to the non-certified portion of mixed products. These categories are:

- (1) illegally harvested wood;
- (2) wood harvested in violation of traditional or civil rights;
- (3) wood harvested in forests where high conservation values are threatened by management activities;
- (4) wood harvested in forests being converted to plantations or non-forest use; and
- (5) wood harvested from forests where genetically modified trees are planted.

We have a high confidence that hardwood procured from anywhere in the Hardwood States could be considered Low Risk in all five risk categories of the standard. Minor and occasional instances contrary to this finding are present in one or more of the risk categories, and where they do occur, they should be further evaluated by companies procuring wood in those areas. However, we determine the level to be within the threshold for being low risk through our interpretation of the FSC standard and its requirements.

(9) Based on a review of media reports, concerns expressed by stakeholder groups, and other sources examined for this report, there exists a low risk that US hardwoods are produced from controversial sources as defined in the Chain of Custody standard of the Programme for the Endorsement of Forest Certification (PEFC).

(10) We have compiled comprehensive information on federal and state programs, both regulatory and non-regulatory, that describe the frameworks and effectiveness of programs that relate to timber theft and sustainable forest management. This evidence, when considered in its totality, should qualify under the Central Committee of Expertise (CPET) Category “B” criteria as evidence from “programmes and initiatives other than recognised certification schemes.”

(11) In assessing multiple parameters related to the breadth and effectiveness of various regulatory and non-regulatory programs that bear on the issues of legality and sustainability (and thus relate to the CPET criteria), all states in the US hardwood-producing region score in a low risk range.

(12) Finally, given the safety-net of national and state regulations and programs that address unlawful conduct and faulty forest practices, the need for traceability, independent chain of custody and/or controlled wood certification to demonstrate legality should not be a crucial consideration for US sourcing of hardwood products.

SUMMARY OF SUPPORTING EVIDENCE

US Hardwood Resources (Report Section 2.0)

Statistical information on US forests is collected by the US Forest Service under its Forest Inventory and Analysis program (FIA). These data are highly reliable. The data strongly indicate that US hardwood resources are widely distributed, extensive and not in any immediate or future risk of declining. Annual hardwood growth exceeds removals in each of the 33 states by a substantial margin -- by nearly two to one -- and the hardwood inventory has consistently increased during the past five decades. Although forest area has declined in some of the individual states, in aggregate it has remained stable over five decades and has, in fact, increased by 3% since 1987. While the state, regional and national data may mask local situations where hardwood forests are being converted and/or removals exceed current annual growth, the data for the US overall do not show any worrisome inventory trends. This is also true for any particular US hardwood species analyzed using the FIA data, including red and white oak, American black walnut and black cherry.

US hardwood resources are concentrated in small family forest ownerships of less than 10 hectares on average. Family forest owners harvest irregularly, if at all, and perhaps only once or twice in a generation. Given the large area in small family forest ownerships, the task of tracking chain of custody of American hardwoods is complicated. Hardwood timber operators purchase from hundreds of different landowners each year, usually in small quantities. Much is sold through wood dealers who amass logs from many different sources and merchandize them by species as the market allows. On average, hardwood sawmills and veneer mills purchase between 30 and 50 percent of their supplies at the mill gate. However, those engaged in the export trade report that they only deal with reliable suppliers that they know by reputation or with whom they have a long-standing relationship.

Global Indicators of Good Governance (Report Section 3.0)

The World Bank compiles and annually updates a series of indicators that are a useful tool to assess the effectiveness of governance in over 200 countries. These indicators measure six components of good governance: (1) voice and accountability; (2) political stability and absence of violence; (3) government effectiveness; (4) regulatory quality; (5) the rule of law; and (6) control of corruption. The data supporting the World Bank Governance Indicators (WBI) come from published surveys of firms and individuals, assessments of commercial risk rating agencies, non-governmental organizations, multilateral aid agencies and other public sector organizations. Of the World Bank Governance Indicators that measure government effectiveness, regulatory quality and rule of law, the US ranks in the top 10% of all countries.

The comparative quality of forest resource information can serve as an additional indicator of the attention a country gives to forest resources. The US forest resource data collection and analysis system (FIA) is comprehensive and statistically verified. Relatively few other countries with significant forest resources have similar systems in place that are as sophisticated and allow for broad (on-line) access to detailed forest resource data. Because it relies on actual and multi-period field measurements, is updated annually and is statistically tested and verified, FIA data can be confidently referenced and used for analysis of sustainability trends.

A further indication of the importance given to sustainable forestry in the US is participation in the Montreal Process, a multi-lateral working group formed in 1994 to develop and implement internationally agreed upon criteria and indicators for the conservation and sustainable management of temperate and boreal forests. The Montreal Process has developed 7 criteria and 67 associated indicators that characterize sustainable management of temperate and boreal forests. The US has issued a First Approximation Report under the Montreal Protocol entitled National Report on Sustainable Forests – 2003. The development of the Montreal Process assessment has been, and continues to be, a multi-stakeholder process in the US.

Forest Certification Systems (Report Section 4.0)

Forest certification in the US has been expanding since first introduced in the 1990s and currently encompasses over 34 million hectares. The three most prevalent forest certification systems operating in the US are the Forest Stewardship Council (FSC)®, the Sustainable Forest

Initiative (SFI)® and the American Tree Farm System (ATFS)®. The SFI Program is endorsed by the Programme for the Endorsement of Forest Certification schemes (PEFC); the ATFS is in the process of seeking PEFC endorsement. Of the three programs, the SFI is the largest, accounting for 55% of the certified acres in the US. The FSC and ATFS represent 22% and 23% respectively of the certified acres. About 5.8 million hectares are dual certified under SFI and FSC.

States with a high proportion of certified timberland provide an additional assurance that hardwood products are produced legally. In aggregate, an estimated 19% of timberland in the hardwood-producing region is certified and in some states, the area of certified forests approaches one-third or more of the available timberland. States with certified timberland that exceeds 25% are: Minnesota, Maine, Wisconsin, Louisiana, Michigan and Washington.

While the area of certified forest in some states is significantly high, as a practical matter, much of the certified land is not regularly supplying the hardwood timber market. This is due to a high proportion of certified forests in public ownership and the preponderance of small owners who only occasionally harvest timber. Based on average saw log and veneer log harvest per acre of timberland, we estimate that less than 7% of US hardwood (solid wood) products are produced from certified forests. The volume of hardwood lumber (and other hardwood products) that carries a certified Chain of Custody (CoC) product label is even smaller – certainly less than 5% at the present time. Moreover, the supply of certified product is bound to be uneven and of a limited mix of species and grades.

Certification presents certain challenges to the hardwood sector given the structure of forest ownerships. Family forest landowners that supply the vast majority of the hardwood timber consumed in the US are neither generally familiar with certification nor willing to incur its on-going costs. The number of ownerships with certified forests is very small relative to the 9.7 million private landowners (9.1 million family forest owners) in the hardwood-producing region. The SFI program includes certification of procurement systems for firms that are not engaged in land management thus enabling a third-party certification of sustainable wood supply. Although not currently widely used, group certification provides an opportunity for certification of family forests. A program in Wisconsin (Managed Forest Law program) extends ATFS group certification to participating landowners. The FSC Certified Land Manager Program enables FSC certification on behalf of a group managed by a consulting forester.

Occupational Licensing and Certification (Report Section 5.0)

Legality and sustainability issues are partially addressed through programs directed at registering, licensing and/or certifying operators and professionals engaged in forest management, timber harvesting, and in the buying and selling of timber products. These programs are sometimes mandated by state law and sometimes voluntary. When considered in conjunction with other characteristics of the US hardwood supply chain, these various programs contribute to a low risk of illegal or unsustainable forest practices.

Timber harvesters (i.e. loggers) are registered or certified in nearly all states within the hardwood-producing region either through public or private programs (such as the Master

Logger Program). Only New York and New Jersey have not yet established any kind of registration or certification program for timber harvesters.

In five hardwood-producing states, timber buyers are formally licensed (Connecticut, Maryland, Indiana, Illinois, and Iowa) and in three of those states (Indiana, Illinois and Iowa), timber buyers are required to be bonded. Failure of a licensed timber buyer to pay a timber grower can lead to forfeiture of a security bond and other penalties. Maryland's statute requires anyone engaged in a forest products business to be licensed and commercial forest practitioners in Connecticut are required to be state-certified.

The licensing or registration of professional foresters occurs in 14 states within the hardwood-producing region. In addition, professional societies, most notably the Society of American Foresters, sponsor certification programs.

Ownership Rights, Timber Theft and Buyer-Seller Fraud (Report Section 6.0)

Recognizing the legal rights of ownership and the right to sell timber is fundamental to determining legal and lawful use. The US hardwood resource is overwhelmingly privately owned and, except where prohibited or restricted, landowners can transfer those ownership rights freely. Over 90% of US hardwood production is privately supplied. Most of the US hardwood resource is owned by small family forest owners who, as a general rule, are highly protective of their private property. Administrative and judicial options are available to all landowners (and timber buyers) to resolve disputes over title to timber assets. Landowners are always advised to clearly mark property boundaries, obtain bids for timber sales, and have written contracts when harvesting timber. Most timber sales and timber cutting contracts of any significant value are conducted pursuant to written contracts and many of the major timber purchasers check to verify that the timber seller has clear title to the timber being sold.

As with all crime, timber theft and trespass (the unauthorized entry onto private property to remove trees) occurs to some degree throughout the hardwood-producing region. Timber crimes are necessarily of concern to US timberland owners, but the extent of unlawful timber harvesting across the hardwood producing region is not easily determined. Available data suggest that incidents typically involve a relatively small number of trees and are usually linked to poorly marked property or cutting boundaries. Many cases go unreported because they involve a low value or because they go undiscovered for a period of time. Absentee landowners that account for approximately 38% of family forest acreage are at the most risk according to reports and surveys. However, the preponderance of media coverage and interviews with timber security professionals suggest that the most onerous cases of timber theft -- those involving repeat offenders and high value timber -- are pursued and the perpetrators prosecuted.

Based on a review of the literature, media reports with supporting information, and interviews with state officials, the frequency of timber-related crimes is likely to be no greater, and probably less, than property crimes involving other stolen goods. State records and studies that are available suggest that perhaps in the range of 800 to 1,000 significant timber theft cases occur annually in the hardwood-producing region. By applying some assumptions about volume and value of stolen timber, we can derive an estimate that hardwood timber valued on the order

of \$12 million could be affected annually. This represents a tiny fraction of one percent of all hardwood timber produced in the US (estimated at \$4 billion annually). While difficult to ascertain, US hardwood exports are likely affected to an even lesser degree because stolen timber is most likely taken to dealers or processors supplying limited, local markets. This conclusion is not intended to minimize or dismiss the problem of timber theft, but rather to provide perspective on the risk that stolen timber enters the supply chain of US hardwood exports.

Compliance with Federal Statutes (Report Section 7.0)

Several federal environmental laws and statutes governing federal land management have either a direct or indirect impact on forest practices. As a general rule, these laws allow for severe penalties to be imposed on violators, although the federal government relies on the states to enforce many of their provisions except those that require federal permits or establish specific federal requirements on land managers. At the federal level, major environmental laws that regulate activities on public and private forest land include:

Endangered Species Act (ESA): forest landowners and managers cannot cause injury or death by direct harm or through habitat modification to a species listed as threatened or endangered.

Clean Water Act (CWA): control activities in forested wetlands and requires states to have programs to control non-point source pollution, usually accomplished through Best Management Practices (BMPs).

Clean Air Act (CAA): states must have programs to protect air quality and visibility, including controls on prescribed burning and the use of ozone-depleting chemicals.

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA): regulates chemical use in forest stands, whether for insect control or for vegetation management.

Certain federal statutes govern federal land management directly (about 20% of US timberland but less than 1% of US hardwood supply). The most significant of these are: the *National Forest Management Act (NFMA)*, *Federal Land Policy and Management Act (FLMPA)*, the *Wilderness Act*, and the *National Environmental Policy Act (NEPA)*. The latter mandates that federal agencies assess the environmental impacts of their activities on government-owned forest land. As result, all federal timber management activities require some form of environmental assessment or impact analysis. Hardwood management is mainly impacted in the national forests of the eastern US that contain significant inventory of hardwood species. Planning and harvest activities on federal forest lands are frequently delayed, altered or cancelled pending completion of administrative or judicial reviews as a result of stakeholder group challenges.

Beyond federal laws that have a regulatory impact on forestry, other federal programs contribute to protecting unique or special environments, encouraging conservation, promoting environmental education, supporting environmental related research or otherwise enhancing environmental values. Among these are Cooperative Forestry, the Conservation Reserve Program (CRP) and Forest Legacy (FL). These programs fund and support technical assistance, afforestation of erodible agricultural land and the conservation of high conservation value forests. Collectively, these non-regulatory programs play a significant role in the sustainability

of US hardwood forests by encouraging forest use, reforestation, and conservation of environmentally sensitive or unique areas.

A compendium of federal laws also governs fair labor, worker safety and health. For example, the *Occupational Safety and Health Act (OSHA)* protects forest workers by prescribing that specific safety measures be taken and safety equipment used while engaged in commercial forestry activity. Detailed records of accidents, injuries, and corrective measures must be maintained. The *Fair Labor Standards Act (FLSA)* establishes minimum wage, overtime pay, recordkeeping, and child labor standards affecting full-time and part-time workers in the private sector and in federal, state, and local governments. The US Department of Labor rigorously enforces labor and worker safety laws usually in cooperation with corresponding state agencies. Websites of state labor and OSHA agencies can be accessed to review enforcement actions that include payment of back wages and civil or criminal prosecutions with attached penalties.

We conclude that the available data indicate a high level of compliance and an aggressive prosecution of violations of federal environmental, labor and worker safety laws.

Compliance with Regulatory Initiatives (Section 8.0)

A large number of state agencies have jurisdiction over various aspects of sustainable forest management in the hardwood producing region. More than 1,000 government entities (variously identified as agencies, bureaus, offices, departments, commissions or councils) are responsible for public programs focused on forest resources, including hardwood forests. Employing more than 4,500 natural resource professionals, these agencies are responsible for implementing more than 800 forestry programs of various kinds. Of these, approximately 155 are regulatory in nature.

Every state (and in many cases, local governmental jurisdictions) has environmental and forestry-centered laws that in some form control the way in which hardwood forests are used and managed. An average of nearly six agencies per state are responsible for regulatory programs focused on forests, over half of which are considered to be extensively or moderately engaged in regulatory matters. An estimated 715 full-time equivalent staff are responsible for administering regulatory programs in the hardwood region.

The number and types of forestry practices that are regulated in each state varies, but some form of regulation over one or more practices exists in most states. The categories of forest practices that might be regulated to some degree at the state level include road and trail practices, timber harvest practices, reforestation practices, silvicultural practices, chemical application practices, and forest protection practices. The probability of all or some forestry practices being regulated in any given state is about 75 percent.

A common focus of state programs is protecting water quality through Best Management Practices (BMPs). Every state in the hardwood-producing region has a regulatory or voluntary program to implement BMPs on forest lands. In 2007, 24 of the 33 Hardwood States also reported having a formal monitoring program for evaluating the extent to which landowners and timber harvesters apply recommended or required forestry practices. The rate of BMP

implementation and compliance are generally high. For states which have initiated monitoring programs, the average range of compliance for all practices is about 70 to 90 percent, depending on the practice or practices being measured. To promote higher levels of compliance, 29 states sponsor education and training sessions for landowners and timber harvesters.

Non-Regulatory Initiatives (Report Section 9.0)

With forest ownership predominantly private, the federal and state governments are engaged in various programs of a voluntary or incentive-based nature to encourage conservation, protection of water quality, wildlife habitat, forest retention and other sustainable forestry practices. In 2007, federal funding of cooperative fire protection, cooperative forestry and related programs approached \$130 million. State funding for forestry programs totals approximately \$937 million annually, indicating a combined federal/state investment of over \$1 billion annually in forestry-related programs. Non-regulatory programs that influence forest practices include technical assistance, education, fiscal incentives and funding for protection of areas with important conservation values. Many landowners avail themselves of federal and state programs. Data from the 2006 National Woodland Owners Survey (NWOS) indicate that 523,000 family forest owners representing 19 million hectares (18% of family forest area) have participated in cost-share programs for implementing forest practices. Through 2006, the Forest Legacy Program (FLP) has protected over 550,000 hectares of forests within the hardwood producing region. Conservation organizations and land trusts also sponsor acquisitions and fund conservation easements that have covered an estimated 5.1 million hectares of private forests. This does not include the addition of large blocks of formerly forest industry lands placed under easements in recent years which has increased substantially the amount of protected area.

We conclude that when considered along with regulatory initiatives, non-regulatory programs contribute to a legal and institutional framework that places a high importance on sustainable forestry and helps to ensure the legality of US supplies.

Tax Policy (Report Section 10)

The US has an income tax that includes special provisions for certain kinds of timber income and expenses. For example, expenses for reforestation and conservation practices are treated favorably (with limits). The federal government also imposes an estate tax that can affect forest properties upon transfer to estate beneficiaries. In turn, the states have various forms of taxation that include income tax, estate and gift tax, property tax and severance or yield taxes. In many states, property taxes are adjusted so that forest properties are valued for current use while some states apply a tax at harvest in lieu of (and sometimes in addition to) annual assessments. Compliance rates to both federal and state tax requirements in general are very high -- at least 84% for compliance to federal income taxes according to government studies. There are no data to suggest that failure to pay assessed taxes on hardwood timber income or property occurs to any significant extent in the US.

Trade Issues (Report Section 11)

Hardwood exports are economically important for US producers, having totaled \$2.9 billion in 2007. The largest single market for US hardwood exports is Canada, but the European Union and Greater China account for 31% and 19% of hardwood exports, respectively. The US does not impose any form of export tax on exported goods, including US hardwood exports. The only significant export prohibition for wood products affects unprocessed logs harvested from state and federal lands west of the 100th meridian. This could potentially affect some hardwood log exports from Oregon and Washington, but as a practical matter, the impact is likely very small. A review of information sources did not reveal any allegations that hardwood logs are being exported in violation of the prohibition of log exports from public lands.

Available information suggests that re-exports of temperate hardwood products also represent a very low share of total US hardwood exports and are, in any case, principally sourced in Canada or Europe. Because the volumes are believed to be very small, and the source countries are perceived to have robust governance frameworks, the risk that US re-exports of temperate hardwood products are sourced from suspicious sources is very low.

Since no US temperate hardwood species are listed under CITES, compliance with the convention's permitting requirements have little or no applicability to US hardwood exports. Thus, the risk of US temperate hardwood exports non-conforming to CITES requirements is also very low.

Several documents are commonly required for exporting and phytosanitary certificates are often necessary depending on the product and destination. Not usually required for wood products, but occasionally required or requested, is a statement of origin. Information about the country of origin and species of imported wood products will be required if amendments to the Lacey Act are enacted as expected. Similar documentation for US hardwood exports, while not currently required, may offer some assurance of legality and sustainability accompanying US exported shipments. Many exporters currently provide that information on invoices, packing lists or other documentation that accompanies exports.

Forest Stewardship Council (FSC) Controlled Wood Standard (Report Section 12)

The FSC Controlled Wood standard was written to ensure that wood coming from unacceptable forestry practices is not mixed with FSC-certified wood and included in FSC-mixed certified wood products. The standard, FSC-STD-40-005, applies to the non-certified portion of mixed products and states that wood should be avoided that presents high risk of:

- (1) illegally harvested wood;
- (2) wood harvested in violation of traditional or civil rights;
- (3) wood harvested in forests where high conservation values are threatened by management activities;
- (4) wood harvested in forests being converted to plantations or non-forest use; and
- (5) wood harvested from forests where genetically modified trees (GMO) are planted.

The policy calls for a risk-based assessment, where forest products coming from areas where there is low risk to the five categories could be considered “controlled” and usable in FSC-mixed certified products. FSC provides guidance for how to conduct the risk assessment and sources that can be used for data and evidence.

We conducted a risk assessment by referencing forest resource data, existing reports and available ecological assessments of the region. For *illegally harvested wood*, *wood harvested in violation of traditional and civil rights* and *wood from GMO trees*, evidence is cited that describes the US situation and enables a straight-forward determination of low risk. The evaluation of forests with high conservation values (HCV) and wood from forest conversion required more detailed analyses of ecological assessments and forest change data.

The analysis revealed ten ecoregions in the study area that were determined to have high concentrations of biodiversity values as defined by WWF Global 200 Ecoregions, Conservation International Biodiversity Hotspots, and Smithsonian/IUCN Center of Plant Diversity designations. However, there is also strong citable evidence that the notable biodiversity values of these ten ecoregions are relatively well-protected or are not threatened by forestry activities.

Based on detailed analysis of changes in forest area, we found two ecoregions in the study area that do not meet the ecoregional threshold (0.5% annual decrease in forest cover) to be determined LOW RISK in relation to threat of conversion through compliance with the FSC Controlled Wood criterion. They are: (1) the Everglades (located in Southern Florida) and (2) the Pacific Lowlands Mixed Forests (comprising the Puget Lowland Forests and the Willamette Valley Forests). While these areas might warrant a more robust controlled wood assessment, additional information strongly suggests that hardwood sourced from these ecoregions are also at LOW RISK. For example, very little hardwood is produced in the Everglades area and the volume represented in US hardwood exports is certainly minor. The most significant hardwood species exported from the Pacific Lowlands Mixed Forests is red alder. A closer examination strongly suggests that the red alder supply region can also be considered to be LOW RISK for the threat of forest conversion. Only the Puget Trough ecosection (also known as the Puget Lowland Forests) is determined to be NOT LOW RISK. While the range of red alder overlaps broadly with the Puget Trough, as well as the Pacific Lowland Mixed Forests province and the adjacent province (M242), most is grown and harvested in managed timber stands, and the data show an increase in forest area in the red alder supply region as a whole. The most recent published studies of timber resources in Oregon and Washington show only minor reductions in forest (or timberland) area between the 1980s and the early part of the current decade. In addition, approximately 20% of the red alder in western Washington is produced from state lands, not at risk of forest conversion. Finally, both Oregon and Washington have comprehensive forest practice rules. In Washington, harvest permit applications require that any forest conversions conform to growth management plans and thus require that the permit be subject to both state and local county approval, processes that require comprehensive review and stakeholder input.

The conclusions from the FSC Controlled Wood analysis is that wood procured from the study area could be considered Low Risk in all five risk categories of the standard. Minor and occasional instances contrary to these findings are present in all risk categories except GMO use

(there is no commercial GMO use in the US). The Controlled Wood standard is a global standard and the risk determinations made in this study are made with a global perspective. Thus, even though there may be occurrences of non-compliance with the Controlled Wood standard in parts of the study area (as noted in the ecoregion assessments), we can conclude it to be non-systematic and low risk in comparison with other areas of the world.

Programme for the Endorsement of Forest Certification (PEFC) Standard for Controversial Sources (Report Section 13)

PEFC has developed a procedure and set of indicators to help ensure that the certified products do not include raw material from controversial sources. PEFC generally defines controversial sources as those where harvesting is unauthorized, legally prohibited or planned to become strictly protected by law. The PEFC standard requires an assessment of risk at the country/region level, and an assessment at the supply chain level addresses the likelihood that the supply chain has not been able to identify a potential controversial source of supply.

The US has very clear delineation of protected forests at both the federal and state/local level. At the federal level, 1964 Wilderness Act established a process by which federal land could be permanently set-aside from all but the most benign hiking and camping experiences in a National Wilderness Preservation System. It currently comprises 43.3 million hectares of roadless areas. Approximately 24 million additional hectares of roadless areas are under various forms of planning review with no timber harvests occurring on roadless areas subject to review. This is in addition to an extensive system of national parks and recreation areas. Similarly, states have various protection designations for forest areas that are protected in parks or reserves. We found no cases where hardwood forests that have been slated for protection are currently subject to timber harvest.

In the international context, under the PEFC indicators, the US is low risk of controversial sources. None of the following PEFC indicators apply:

- (1) The country/region is covered by a UN Security Council ban on timber exports.
- (2) The country/region is known as a country with low level of forest law, enforcement and high level of corruption.
- (3) The country is one where official FAO statistics show a decrease in forest area.

A fourth PEFC indicator would invalidate a low risk finding if an organization has received *comments supported by reliable evidence from their customers or other external parties, relating to its supplies with respect to controversial sources, which have not been disproved by the organization's own investigation*. Well over 100 environmental organizations operate at the national, regional and/or local level in the US with issues ranging from specific development projects at the local level to global issues such as climate change and deforestation. In order to assess possible contentious issues surrounding hardwood product exports, websites of selected US environmental organizations were checked for mention of issues related to hardwood forests and/or hardwood product production. None of the sites indicated a specific concern about hardwood resource management where the sites are naturally regenerated and retained in hardwood species composition. A major concern is the conversion of natural or semi-

natural hardwood forests to commercial fiber plantations and other land uses. As part of the detailed FSC Controlled Wood analysis summarized earlier, the conversion issue was analyzed. The hardwood-producing region was found to be “low risk” of conversion to plantations and other land uses.

Allegations have also been made that specific companies have violated forest practice rules or have not complied with certification standards despite third-party audits. These have generally not involved hardwood timber harvests. However, where allegations are credible, processes within the certification review systems or through state regulatory agencies can and have been triggered to investigate and respond. In some cases, they have led to changes in company policies or prompted further reviews by state authorities. As they involve few hardwood forests, the risk that US hardwood exports include material harvested from these controversial areas is very low.

Based on a detailed analysis we can conclude US hardwood production, and particularly exported hardwood products, are LOW RISK with respect to PEFC controversial sources.

US Hardwoods and CPET Legality and Sustainability Criteria (Report Section 14)

The UK’s Central Point of Expertise (CPET) has developed guidelines to ensure that wood products purchased by the UK government originate from legal and sustainable sources. Category “A” evidence is documentation that the wood products are certified under an approved scheme. For products produced in US, both the Forest Stewardship Council (FSC) and Sustainable Forestry Initiative (SFI) certification programs are recognized by CPET as meeting the criteria it has established for evidence of legal sourcing. FSC and SFI certified product lines containing greater than 70% certified or recycled raw material also meet the sustainability standard.

CPET has also developed guidelines for evidence other than certification that may be acceptable for documenting sourcing that is legal and moving toward sustainable. This type of evidence is described as Category “B” evidence. CPET provides four specific criteria that must be met with regard to legality as follows:

- (1) The forest owner/manager holds legal use rights to the forest.*
- (2) There is compliance by both the forest management organisation and any contractors with local and national laws including those relevant to:
 - (a) Forest management*
 - (b) Environment;*
 - (c) Labour and welfare;*
 - (d) Health & safety.*
 - (e) Other parties’ tenure and use rights**
- (3) All relevant royalties and taxes are paid.*
- (4) There is compliance with the requirements of CITES*

For this part of the assessment, we rely on the review in other sections of the report describing the extensive legal and institutional frameworks that influence US hardwood forest

management and production. The category “B” evidence criteria enable using a risk-based approach to evaluating compliance to laws and regulations governing legal compliance and sustainability. Under the CPET criteria, it may be only necessary to show that a country or region has a *low risk for illegality based upon*:

1. *The existence of forestry legislation*
2. *Clear legal use rights for forest areas*
3. *Evidence that the law is effectively enforced (e.g. evidence that prosecutions are carried out)*
4. *No substantive claims of corruption against local, regional or national forestry officials.*

As summarized earlier, a range of federal and state/local laws and regulations address sustainable forest management in the US. The data show that over 90% of the US hardwood timber harvest is from private lands with structured and well-enforced legal use rights. Landowners have legal options to pursue redress if timber is taken without authorization or if less than the full agreed-to payment is made. All public timber harvests – federal and state/local – are subject to comprehensive planning, stakeholder review, written contracts and public oversight. Timber theft and trespass is a concern to landowners, but the data suggest that the problem is localized and not systemic nor significant in the totality of hardwood timber produced and harvested in the US.

Legislative, administrative and judicial records strongly indicate that laws affecting hardwood forest management and production are implemented and enforced. Laws governing labor practices and occupational health and safety are also strictly enforced. Information on compliance rates and occupational hazards/accidents are publicly available. There is evidence from international organizations, including the World Bank, of a high respect for the rule of law and low perceptions of corruption. In addition, the US has an extensive network of federal, state and private programs that are voluntary or incentive-based and that also contribute importantly to ensuring sustainable forestry practices.

While state programs vary widely in their specific objectives and coverage, every state in the hardwood-producing region has a mix of programs designed to foster forest retention and sustainability. The range of programs include: regulation of specific forest practices; certification of timber operators; fiscal incentives for reforestation; technical assistance to landowners; purchasing of development rights on forest land; and many others. When considered in their totality, the various forestry-related laws and non-regulatory programs enable a conclusion that US hardwood products are LOW RISK of being sourced illegally or unsustainably.

Opportunities/Recommendations for AHEC Member Companies (Report Section 15)

The study team has arrived at a series of recommendations for the US hardwood industry to consider based upon the findings of the report. These recommendations are advisory only. *The following recommendations are directed at AHEC and affiliated associations:*

(1) Develop and publish (or post) a procurement/environmental policy that would apply to all members or require that members develop a procurement/environmental policy. The policy should describe business practices that ensure hardwood supplies are from legal sources.

(2) Encourage or support a policy that requires exported wood shipments to include a clear indication of the country of origin (i.e. the United States unless the product is a re-export) and, if practical, the state or region in the United States where the timber was produced. This can be accomplished with a stamp or addendum on the shipment's invoice, with a phytosanitary certificate issued by an APHIS authorized certification official in the originating state, or with documentation similar to what will be required of importers if the Lacey Act amendments are enacted.

(3) Participate in public and private sector initiatives at the state and local level to work collaboratively to address timber theft and sustainable forestry challenges in the following ways:

- (a) In cooperation with state forestry organizations and/or universities, developing and implementing an information system for tracking reported incidences of illegal activities involving the harvest of hardwood timber.
- (b) Where such programs are being considered at the state level, consider supporting licensing or certification of timber harvesters and timber buyers.
- (c) At the state level, encourage state forestry organizations to provide clear and concise information to landowners, timber operators and timber buyers as to the legal requirements for selling timber.
- (d) At the state level, and where it is not currently provided, encourage state forestry organizations to publish (post) recommendations to landowners on how to minimize risk of being victimized by timber theft and trespass.
- (e) At the state level, encourage state forestry organizations to foster cooperative relationships with enforcement agencies to deter timber theft.
- (f) Where state agencies may have overlapping responsibilities, encourage state forestry organizations to examine timber and forestry enforcement programs to prevent widespread inconsistencies.
- (g) In cooperation with the US Forest Service, state forestry organizations and universities, periodically review the extent of illegal timber harvesting activities occurring nationally and assess the effectiveness of programs used to respond to such activities.
- (h) Promote research (nationally and globally) to improve the effectiveness of institutions and programs focused on unlawful timber harvesting and marketing activities.

Companies and firms directly engaged in the production and export of hardwood products can take other steps to communicate and assure their customers that US hardwood products are sourced legally and sustainably. *Recommendations for consideration by firms engaged in hardwood production and exporting:*

- (1) Develop and publish (or post) a procurement/environmental policy that includes (among its provisions) a description of business practices that ensure hardwood supplies are from legal sources.
- (2) Evaluate the feasibility of tracking the chain of custody of wood and fiber from the forest to the customer to be in a position to demonstrate that all harvested wood is legal and in compliance with applicable laws and regulations. Consider third-party certification for tracking the chain-of-custody of hardwood products.
- (3) For timber purchasers:
 - (a) As relevant to the business, ensure that formal contracts exist with contractors to require compliance with applicable laws and regulations and state BMPs.
 - (b) Consider formalizing BMP monitoring and/or support state efforts for BMP monitoring.
 - (c) Encourage logging contractors to implement the Master Logger Program requirements and consider independent certification.
- (4) For timber owners/managers:
 - (a) Consider conducting security audits where there is a high risk of timber trespass and illegal harvesting.
 - (b) Consider certification through one of the recognized certification systems, including the American Tree Farm System and its group certification opportunity.
- (5) Coordinate with law enforcement and association timber security task forces to investigate and resolve timber trespass and illegal harvesting.
- (6) Encourage associations and cooperators to conduct sustainable forestry and certification training to increase awareness of the basic requirements of the certification standards.
- (7) Encourage the use of existing mechanisms, including the SFI Implementation Committee Inconsistent Practices provision, to report those that do not adhere to the principles of sustainable forestry.

Assessment and Reporting Tools

Finally, to assist AHEC members in evaluating and documenting practices that demonstrate a high confidence that wood products are at low risk of being produced illegally or from controlled/controversial sources, the study team has developed a forest sustainability self-assessment toolkit for use at their discretion. Intended to serve as a guide for companies desiring to examine and document their supply chain with respect to legal and non-problematic sourcing (as defined in procurement and certification schemes), it is provided as Appendix C in the report.