Corporate Strategies to Increase Market Share of Sustainably Managed Forest Products

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Terminology

AHFA	American Home Furnishings Alliance
ATFS	American Tree Farm System
CDP	Carbon Disclosure Project
CoC	Chain of Custody
CSA	Canadian Standards Association
CSR	Corporate Social Responsibility
DCS	Document Control System
EFEC	Enhancing Furniture's Environmental Culture
EHS	Environment, Health, and Safety
EPAT	Environmental Performance Assessment Tool
FAO	Food and Agriculture Organization
FBI	Furniture Brands International
FP	Forest Product
FSC	Forest Stewardship Council
GRI	Global Reporting Initiative
GHG	Greenhouse Gas
HP	Hewlett-Packard
LEED	Leadership in Energy and Environmental Design
NGO	Non-Governmental Organization
NRDC	Natural Resources Defense Council
P&G	Proctor & Gamble
PCR	Post-Consumer Recycled
PEFC	Programme for the Endorsement of Forest Certification
PET	Polyethylene terephthalate plastic
PREPS	Publishers' Database For Responsible Environmental Paper Sourcing
PVC	Polyvinyl Chloride
PWG	Paper Working Group
SBD	Sustainable by Design
SFI	Sustainable Forestry Initiative
SMFP	Sustainably Managed Forest Products

UNECE	United Nations Economic Commission for Europe
USPS	United States Postal Service
U.S. SEC	U.S. Securities and Exchange Commission
WWF	World Wildlife Fund

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Executive Summary

Forests face immense pressures and are increasingly threatened by deforestation due to an increasing world population and growing consumption of wood-based products. Land conservation and sustainable forest management are important strategies to reduce and reverse deforestation. Market-based mechanisms, such as third-party certification, can also create incentives to support forest stewardship and are needed in light of increasing consumption.

Increasing corporate demand for sustainably managed or certified forest products is key to addressing threatened forests. If companies consistently demand all forest products they use come from ecologically sustainable sources, then ecologically sustainable practices will become the norm throughout the supply chain.

The research in this report was conducted in support of GreenBlue's efforts to work with business leaders to make forest products more sustainable. The research goals are to analyze current and trending demand for sustainably managed forest products (SMFP) by leading corporate consumers (or buyers) in the U.S., and to identify the major supply-demand gaps for sustainably managed forest products and the challenges to closing them.

To research the demand for SMFPs, corporate procurement policies and strategies for consumption of forest products were evaluated in three sectors of wood product consumers: paper & publishing, packaging, and solid wood. Qualitative data on 74 total companies in these sectors was collected, using publicly available sources such as sustainability reports and company websites. From this information, the companies were evaluated based on 17 criteria relating to the sourcing of sustainable forest products, and then ranked them in 4 categories: leader, progressing, mildly engaged, uncommitted. Each company's progress was also analyzed over a 5 year period. Best practices in each sector were identified to evaluate trends.

In the paper & publishing sector, leading companies have paper procurement policies with clear goals to increase their percentage of certified sustainable paper. Also, they have supply chain platforms to ensure chain of custody (CoC) compliance, initiatives to increase certified forestland to address supply imbalances, and recycling and paper use reduction initiatives. Over the past five years, the general trend has been towards greater certified paper use by the established leaders and the proliferation of new sustainable paper sourcing policies by previously uncommitted companies. Some leaders are also involved in working groups to develop online assessment tools for paper sourcing.

In the packaging sector, corporate sustainability strategies tend to focus more on recycled content and packaging reduction, than on sustainably sourced packaging fiber. The few leaders that focus on certification often have tiered goals with timelines, but only a few companies are increasing their targets for SMFPs. Overall, recycled content, recyclability and weight and volume reductions of packaging material appear to be valued more than sourcing certified forest products.

In the solid wood sector, homebuilders appear to be uncommitted to sustainable sourcing, although a small number of leaders expressed fiber awareness, some degree of sustainable or certified sourcing, and promotion of forest conservation through ancillary initiatives. In general, homebuilders tend to focus their efforts on the energy efficiency of the homes they build, rather than on wood sourcing. The leading household durables (furniture) companies in the solid wood sector have more emphasis on wood procurement, with leaders focusing on certification and avoiding illegally harvested wood. However, these companies are mostly at the top and bottom of the sector, with the few leaders improving rapidly, while the bulk of uncommitted companies remain so.

Certification of forest products is implemented and used differently across the three sectors due to differences between sectors. Certification strategies compete with multiple sustainability initiatives, a number of which have direct economic and social impacts. Recycling initiatives, in particular, are likely to overshadow other strategies due to opportunities for corporate visibility. Where certification of forest products is widespread, Forest Stewardship Council (FSC) is the main certification scheme accepted within all sectors.

To research the supply-side of the SMFP market, quantitative and qualitative data were analyzed to gain an understanding of the certification process, supply trends, and factors impacting supply.

There are many bottlenecks along the supply chain that prevent the widespread consumption of sustainably certified forest products. Small, non-industrial, and private owners represent more than 60% of total U.S. fiber production (Metafore, 2007, p. 10). These owners may be largely uncertified because certification is not cost effective for them. The wood-fiber supply chain is highly complex, includes numerous intermediaries, and is driven by low margins. Certified products are not likely to yield price premiums in each sector, thus costs for certification may not be recoverable for forest owners and other supply chain participants. In addition, vertical integration of companies is rare, making it more difficult for a product to move through the supply chain with its certification intact, and creating a disincentive for companies at the end of the chain to seek certification.

In order to increase the supply of SMFPs, the report makes recommendations in four categories, which are outlined in detail in the report’s recommendation section: (1) outreach and education, (2) reporting, (3) supply chain influence, and (4) targeted industry associations. Within outreach and education, it is recommended to develop marketing campaigns targeted at the buyers and sellers along the forest product supply chain to increase general awareness. To improve reporting on SMFPs, it is suggested to work towards a standardized reporting framework, including forestry metrics and performance indicators. As part of improving supply chain dynamics, the promotion of an “open source” sharing of supply chain certification and procurement technology is considered necessary. Finally, it is recommended to engage targeted industry associations to promote sector-specific and cross-sector collaboration for wider awareness of and commitment to SMPFs.

Introduction

Forests are highly productive ecosystems that play numerous critical roles for our society, economy, and environment. With an increasing world population and growing consumption of a vast variety of wood-based products, forests face immense pressures and are increasingly threatened by deforestation. As defined by the United Nations Food and Agriculture Organization (FAO), deforestation is the conversion of forest to other uses, such as agriculture or urban development (FAO, 1998). Land conservation and sustainable forest management are important strategies to reduce and hopefully reverse deforestation.

Responsible forest stewardship ensures economic productivity of forests, while sustaining and protecting their indispensable ecosystem functions and services. This requires the cooperation and effort of many parties, each approaching the topic with their own goals and concerns for the industry. Market mechanisms are effective tools for influencing behavior. When used properly, they can create incentives for the many players involved in the market to support forest stewardship and conservation measures.

Demand from the corporate sector is one critical component for increasing the share of sustainably managed forests worldwide. If companies consistently demand all forest products they use come from ecologically sustainable sources, then ecologically sustainable practices will become the norm throughout the supply chain. Environmentally conscious companies have made the connection between consumption and its impact on forestry practices. The World Resource Institute reports that corporate procurement policies have an underlying objective to contribute to environmental protection (WRI, 2011).

Third-party certification plays an essential part in ensuring and verifying the credibility of sustainable forest management claims across different regulatory environments around the world. Certification schemes set independent standards for sustainable forestry. They also provide a means to track products produced in sustainably managed forests throughout the supply chain using chain-of-custody certification. By providing independent verification of sustainability claims, certification has the potential to influence behavior throughout the value chain, and in doing so, to safeguard the world's forest resources.

The purpose of this research was to gain an understanding of the current market for sustainably managed forest products and to identify where action could be taken to increase the share of certified forest products from sustainably managed sources. As part of that, on the demand side, corporate strategies from some of the largest consumers of forest products were evaluated for their level of commitment to sustainable sourcing and their resulting market impact on sustainable forestry. On the supply side, an overview of the forest products production market, certification procedures and costs, and forestry demographics were compiled to identify factors influencing certification levels. Finally, this research aimed to identify gaps between the supply and demand of sustainably managed forest products and address the challenges to closing potential gaps.

The research was conducted for GreenBlue, an organization that works closely with business leaders and provides advisory services for making products, including forest products, more sustainable. The Columbia University Master of Science in Sustainability Management Capstone Workshop Program is providing GreenBlue with report recommendations to engage with industry leaders to increase market share of sustainable forest products.

Methodology

The methodologies for the demand and supply side varied and are explained in detail below.

Demand

The review of corporate demand focused on evaluating corporate procurement policies or strategies for consumption of forest products (i.e. paper, packaging and solid wood). The study focused on several industry leaders that spanned the three product categories and were primarily identified by GreenBlue.

Three Sectors and Market

The scope of the demand research focused on the following three sectors:

1. Paper & Publishing
2. Packaging
3. Solid Wood

The paper, writing and publishing sector included companies such as Avon, Staples, Time, and Hearst that produce printed materials such as mail order catalogues, magazines, and newspapers. Packaging included companies from a broad range of industries that produce packaged consumer products, such as Proctor & Gamble, Pfizer, FedEx, Nike, and Amazon. Solid wood included homebuilders and furniture manufactures, including KB Homes, Home Depot, Ashley Furniture, La-Z-Boy, Williams Sonoma, and others.

The prime focus was on U.S. based companies; however, non-U.S. companies with a considerable U.S. market share, such as IKEA, Novartis, and Adidas, were also considered. GreenBlue provided a preliminary list of companies. Direct competitors of those companies were identified based on market size, purchasing power, major business, value of brand recognition, and were included in the study. The ReferenceUSA database was used to help identify both public and private companies. Research was conducted independently within each sector, but utilized the same framework for data collection and analysis.

Literature Review and Data Collection

Publicly Accessible Information

Publicly available information and communications issued by the relevant companies were studied. Reported information included corporate social responsibility and sustainability reports, annual financial reports, and U.S. Securities and Exchange Commission (SEC) filings. In addition, other web-based information was also considered and evaluated when available. This included information from procurement working groups and databases, as well as industry specific trade associations.

A keyword search was used to conduct the initial research. The key words used were: forest, wood, fiber, paper, stewardship, sourcing, procurement, tracking, sustainable, recycled, post-consumer content, logging, and certification and certified.

A research matrix was developed to outline the key criteria necessary to consistently evaluate each company's performance. The matrix included basic company demographics, but focused mainly on forestry metrics, procurement policies, reported forest certification schemes, bottlenecks of sourcing strategies and information about the Lacey Act. Based on the initial research, preliminary conclusions were made for each sector about the overall significance of and demand for sustainable and certified forest products. These preliminary findings provided direction for additional research and guided the ongoing analysis and are presented in Appendix A.

Information from analyzed companies about their suppliers would provide valuable insight into corporate procurement policies and how suppliers respond to purchasers' requests for certified or sustainable forest products. Unfortunately, most companies do not disclose their suppliers and there was not enough publicly available information to conduct this research.

Type of Data Collected

The collected data was primarily qualitative, relying on statements and reports produced by subject companies. In addition, the data collection also revealed a range of quantitative targets that appeared inconsistently across the sectors. This information was critical when judging the effectiveness and extent of a company's sustainability goals.

The combination of qualitative and quantitative data revealed the need to distinguish between soft and hard goals. "Soft goals" were defined as a company's statement of intent to source sustainable or certified fiber, whereas "hard goals" were defined as percentages or units of sustainable fiber, and sometimes included a targeted timeline for achieving an action.

The main challenge in the data collection process was streamlining the different reporting styles of each company into a similar format and translating the information into commeasurable data. For example, some companies follow standardized reporting metrics, such as Global Reporting Initiative (GRI) or Environmental, Health, and Safety (EHS), but neither of these reporting schemes specifically addresses forestry metrics. The broad majority of companies have their own reporting systems and mechanisms, which made it more complex to distill the information. Company specific reports are often in the format of public sustainability reports or Corporate Social Responsibility (CSR) reports. Because the reports are produced internally, the priorities may change from year to year.

Given the different reporting styles, there were some companies for which questions could not be answered. An absence of information was assumed to mean that a company does not emphasize a specific sustainability issue, or may not be aware of its corporate impact on forestry issues. In general, reporting from private companies was limited.

Alternative Research Methods

Different methods for research and analysis were not discussed because the reliance on publicly available corporate information was without any distinguishable alternative. Most of the companies researched are publicly owned companies and thus report on most of their business practices, in part for compliance and in part voluntarily. Based on the increasing public awareness of sustainability and corporate social responsibility, it was assumed that sufficient information and data were publicly available (with some expected exceptions for private companies, in particular).

Analysis and Trends

Initial findings indicated significant differences in the business drivers that push companies to engage in Sustainably Managed Forest Products (SFMP) between sectors. This finding indicated that strategies and actions would be more comparable within each sector than between sectors.

In order to identify best practices in corporate sourcing initiatives related to sustainable forest products, companies were categorized into one of four groups: (1) Leader, (2) Progressing, (3) Mildly Engaged, or (4) Uncommitted.

These categories are intended to distinguish advanced sustainability initiatives for forest products from initiatives that are vague, misleading, or seemingly unguided altogether. Another purpose was to standardize the initial results, allowing comparison across industries and identification of trends.

To categorize companies into the four groups listed above, 17 criteria were established to evaluate corporate commitment to sustainable forest practices. Those criteria were divided into four levels: (1) Basic, (2) Intermediate, (3) Advanced and (4) Other, which helped to rank the companies and to differentiate between their level of commitment and comprehensiveness of sustainability initiatives in related to forest products (Figure 1). The Company Allocation Tables are presented in Appendix B.

In order to avoid results being skewed by any one sector's distinctive attributes, the categorizations were made at the sector level and based upon a company's performance relative to its peer group. For example, a simple, cross-sector ranked analysis may have suggested that all of the leaders fell into the paper & publishing sectors, which could devalue the leading efforts from the other two industries. In short, each company was only compared and evaluated against the best practices of its sector.

To create the table below, researchers completed a simple check-list (or absence/presence test) of the 17 criteria for each company in a particular sector. Presence of a criterion is represented as '1' and absence as '0'. A company's points were then totaled for a maximum of 17 points. Because of differences in each sector's primary business drivers, the point ranges were not equal for each sector. For example, a company in paper & publishing was classified as 'uncommitted' if it scored 0 to 4 points, while a solid wood company was classified as 'uncommitted' if it scored 0 to 2 points. The best practices of each sector dictated the difference in point ranges between sectors. Overall, a company's grouping was determined based on a combination of two methods: 1) quantitative, or total points per company from checklist, and 2) qualitative, or assessment based on sector-specific definitions (see below).

Figure 1 - Sustainability and Criteria for Forestry Practices

Sub-Criteria for Group Classification (SAMPLE TEMPLATE)					
Legend					
1 = Yes					
0 = No					
Company/Criteria	**Definitions**	***Company A***	***Company B***	***Company C***	***Company D***
	Year of Report/Policy/Information	2010/2011	2009/2010	2010/2011	2010/2011
Basic					
CSR report (or environmental reporting)	Company actively reports on sustainability issues (Social, Environmental etc.).	1	1	1	1
Fiber Awareness	Company shows concerns and interest in forest stewardship in some form or another. Company is aware of the issues surrounding the use of wood fiber.	1	1	1	1
Intermediate					
Forest product sourcing policy (paper or wood)	Company has a policy, guidelines or sourcing standards in relation to forest products.	1	1	0	0
Sourcing "sustainable" forest products	Defined as anything company claims to be doing sustainably, but is not specified as certified. Includes any definition that a company assigns as sustainable.	1	1	1	0
Hard goal = % indicated for sustainable (recycled, post-consumer) material	Company indicates a % in relation to sourcing sustainable forest products. (Can also be reported in unit(s) of measurement.)	1	0	1	0
Soft goals	Soft statement on sourcing sustainable fiber.	1	1	0	0
Other goals/strategies (e.g. reducing volume/weight of packaging)	This can be any other type of goal/strategy that are related to the use of forest fiber.	0	1	0	1
Advanced					
Sourcing "certified" forest products	Defined as a stated intent to source certified forest products but not supported by %.	1	0	1	0
Hard goal = % indicated for sourcing certified fiber/material	Company indicates a % in relation to sourcing certified forest products. (Can also be reported in unit(s) of measurement.)	1	0	1	0
Soft goals	Soft statement on sourcing certified fiber.	0	1	0	0
Chain of Custody	Specifically mentions Chain of Custody.	1	0	0	0
Milestone reporting/evaluation	Company reports on the progress of its sourcing practices of forest fiber.	1	1	0	0
Other					
Member of targeted industry association	Company is a member of any industry association concerned with forest conservation, sustainable sourcing, etc.	1	0	0	0
	Total Points	14	10	8	3
	Group Classification	**1**	**2**	**3**	**4**

Sector-specific definitions, criteria, and considerations for categorization:

(Note: Hard goals refer to percentage goals; soft goals to general and non-quantified statements)

a. **Paper & publishing**

i. **Leader:** Identifies a paper procurement policy with goals, reports sustainable forestry metrics, active commitment to sustainable sourcing with working groups, policies in place to avoid illegal material sourcing. (13-17 points)

ii. **Progressing:** Identifies a paper procurement policy with some mention of certification (either certification preferences or accepted certifiers), but no specific goals or reported metrics on paper procurement. States efforts to avoid illegally harvested material, may participate in a working group, but not required. (9-12 points)

iii. **Mildly engaged:** Mentions specific environmental initiatives and may have a robust sustainability program, but paper procurement policies are vague. (5-8 points)

iv. **Uncommitted:** No mention of sustainable forestry sourcing efforts, minimal or no environmental information. (0-4 points)

b. **Packaging**

i. **Leader:** Provides strong evidence for fiber awareness in publicly available information. Indicates a percentage goal for sourcing certified fiber. Reports and differentiates between post-consumer-recycled content and sourcing of virgin fiber, or sources 100% recycled material. (10-17 points)

ii. **Progressing:** In the process of establishing goals for forest conservation issues and sourcing. Shows evidence of increasing concern and awareness. Indicates intent to source certified products as either a percentage goal or soft statement. Reports on recycled and post-consumer content or other sustainable packaging methods. Outlines other sustainable metrics or soft goals. (8-9 points)

iii. **Mildly engaged:** Shows less evidence of fiber awareness and concern for sourcing fiber sustainably. Limited reporting on wood fiber-based packaging material. Corporate focus may be more on reduce, renew and recycle and other sustainability issues (e.g. water, energy, waste). May show decreasing fiber concern in recent reports. (4-7 points)

iv. **Uncommitted:** No reference to sourcing forest products in any specific way. Limited reference to packaging material overall. May not report on environmental issues. (0-3 points)

c. **Solid Wood**

i. **Leader:** Establishes public sourcing policy that includes hard goals for a percentage of certified wood products with deadlines, thereby demonstrating a high degree of fiber awareness. Gives preference or indicates that a percentage of wood should be certified. (9-17 points)

ii. **Progressing:** Demonstrates established awareness of forest conservation issues and sourcing. Has some public mention (in the form of a web page or a short statement) regarding sustainability efforts**.** Gives preference to recycled or sustainably managed wood. Outlines other sustainability metrics or soft indicators. (5 -8 points)

iii. **Mildly engaged:** Policies discuss greenhouse gas issues, energy efficiency, water efficiency, or other sustainability initiatives. Has established soft goals for sustainability. 1 Does not demonstrate strong awareness of fiber issues and conservation impacts. Engages with Non-Governmental Organization (NGO)'s or funds sustainability projects (including carbon offsets and corporate social responsibility projects). (3-4 points)

iv. **Uncommitted:** Little mention of sustainability or environmental efforts. (0-2 points)**.**

Trends

In order to identify trends in corporate sustainability strategies, a company's most current sustainability report was compared with its sustainability report from five years before. For example, if the most recent sustainability report was from 2010, it was compared to the company's report from 2005. If a report from five years prior was not available, a report three years prior was analyzed, i.e. 2007. If the most recent report was from 2009, reports from 2004 or 2006 were reviewed, respectively, if available.

The goal was to identify company trends and also sector trends. In particular, the analysis distinguished between the progress of companies and the general development of specific strategies within each sector. The analysis sought to determine if reporting on forest products had evolved over time. Questions, such as the following, drove the analysis:

- How has fiber awareness changed in the past 5 years?
- Do companies address wood fiber more diligently in their sustainability strategies?
- What are their strategies for forest products?
- Do these always relate to certification of forest products and supply chain management?
- What are the priorities and basic criteria for procurement policies?
- Are forestry procurement metrics prioritized among other sustainability initiatives?
- How concrete are the policies or metrics?
- What are the current best practices for sourcing wood fiber?

Company Dashboard

A company "dashboard" was developed to provide a visualization of the upward, downward or unchanged trends of companies over the past years and for the immediate future related to corporate sustainable forestry-related initiatives. The dashboard looked at several criteria that are fundamental to sustainable sourcing of forest fiber. Criteria 1-3, including fiber awareness, sustainable sourcing practices and sourcing of certified forest products, were applied equally to all three sectors. Sector specific items were captured in Criterion 4, and Criterion 5 was used for any other conservation initiative that related to forestry, such as funding of forest projects (Figure 2). Sector dashboards can be found in Appendix C.

Figure 2 - Company Dashboard Sample (trends in sustainable forestry-related initiatives)

	Trends: Company Dashboard (SAMPLE TEMPLATE)							
	Legend							
	Upward	⇧						
	Downward	⇩						
	Unchanged	➲						
	Criteria							
	Company	**1. Fiber awareness**	**2. Sustainable sourcing practices**	**3. Sourcing certified forest products**	**4. Sector specific criterion (add if applicable)**	**5. Other (add if applicable)**	**6. Years reviewed/Timeframe from oldest to most recent report**	**7. Short comment**
	Explanations	*Company shows increasing, decreasing or unchanged concerns and interest in forest stewardship in some form or another. Company is aware of the issues surrounding the use of wood fiber.*	*Sustainable sourcing practices other than purchasing certified products (i.e. recycled)*	*Specifically sources certified forest fiber*	*Other sustainable practices that may not directly be linked to sourcing fiber (i.e. weight and volume reductions of packaging)*	*Other forest conservation initiatives (i.e. funding afforestation projects, carbon offsets etc.)*	*Indicate the years that the company was reviewed. Example: 2006 / 2010 or 2005 /2009*	*Short comment describing the trend of the company (2-3 brief sentences)*
1	Company A	⇧	⇧	⇧	⇧	⇧	2006 / 2010	Company shows upward trend.
2	Company B	➲	➲	➲	⇧	⇧	2005 / 2009	Company does not show increasing demand for sustainable or certified forest products. Priorities are on other initatives such as weight and volume reduction of packaging and funding of forest projects.
3	Company C	➲	➲	⇩	➲	➲	2004 / 2008	Company shows a negative trend in sourcing certified forest products. Company stopped reporting on forestry metrics.

Sector Strategy Dashboard

This sector strategy "dashboard" was created to provide a visualization of the upward, downward or unchanged trends for specific types of sector strategies or policies related to corporate sustainable forestry-related initiatives. For example: Does the strategy of certification appear more repeatedly? Do companies pay more attention to carbon offsets? Criteria 1-4, which include sustainable sourcing practices, sourcing certified forest products, carbon offsets and conservation of forests, were applied to all sectors equally. Criterion 5 was sector-specific and includes metrics such as volume and weight reduction in packaging. This dashboard also includes brief, descriptive comments for each strategy (Figure 3). Sector dashboards can be found in Appendix C.

Supply

The goal of the supply research was to provide an overview of the supply of certified forest products available in North America, the forest certification process, and factors impacting forest certification levels. Estimates were also made for the percent of certified sustainably managed productive forest within North America and for major importers of forest product to North America. Due to the many factors affecting a forest's yield, as well as differences between growing and production cycles, no specific factor was identified that could reliably estimate forest product supply from acreage.

Literature Review and Data Collection

Publicly available information was used, including the 2011 United Nations Report on the State of the World's Forests, the 2005 United Nations Economic Commission for Europe's Timber Bulletin, 2010 Forest Products Annual Market Review, websites from the various forest certification schemes, academic studies, and governmental reports. When information was sourced from periodic reports, the most recently available report was used. Quantitative data was used to calculate the percent of sustainably managed forests in North America and around the globe. Both quantitative and qualitative data were reviewed to gain an understanding of the certification process, supply trends, and factors impacting supply.

Analysis and Trends

Forest Certification Rates

An estimate of the percentage of sustainably managed forests used for production was created based on the assumption that forest owners would not incur the costs of obtaining and maintaining forest certification unless they planned to use the land for productive purposes. The calculation was performed using the steps outlined below.

For total certified forest land, a list was created by country of total acreage certified under the Forest Stewardship Council (FSC), the Sustainable Forestry Initiative (SFI), the American Tree Farm System (ATFS), the Canadian Standards Association (CSA), and all other certification schemes endorsed by the Programme for the Endorsement of Forest Certification (PEFC). The acreage certified under each scheme was added by country to determine the total certified forest land.

The United Nations FAO conducts periodic surveys of the world's forests that include information by country on total acreage of forest land and on forest usage as a percent of total area in seven categories (production, protection of soil and water, conservation of biodiversity, social services, multiple use, other, and unknown). This data, found in the 2011 United Nations FAO Report on the State of the World's Forests, was used to create conservative, optimistic, and likely estimates of productive forest land using various assumptions. Conservative estimates of production area result in higher certification rate estimates and vice versa. The assumptions are as follows:

1. Conservative: the most conservative estimate of productive forest assumes that only acreage classified as "production" is used in production. This estimate ignores any production from "multiple use" areas and other classifications.
2. Optimistic: The optimistic estimate of productive forest use assumes all forests are used for "production" unless specifically set aside for "conservation of biodiversity" or for "soil and water protection".
3. Likely: When responding to the FAO survey, some countries commonly categorize forest use as "multiple use" or "other", while other countries classify forest land as "production" if any production takes place. Also, some countries do not know how their forest land is used. The likely estimate focuses on countries where certification exceeds 100% of stated "production" area and makes assumptions regarding the forest use in those areas. The assumptions are as follows:
    a. If no data is provided, total forest acreage is used. This was never the case for North America or major importers to North America.
    b. If certified forest land was less than or equal to acreage classified as production, the acreage classified as production is used.

c. If certified forest land exceeds acreage classified as production, multi-use and production classifications are added together to estimate productive forest.
d. If the acreage determined above is greater than the certified acreage, then the certified acreage is limited to 100% of c.

Major trading partners with North America were identified using the 2003-2004 United Nations Economic Commission for Europe (UNECE) Timber Bulletin (UNECE-FAO, 2006). For each country identified, the value of that country's total forest product export in U.S. dollars was compared to the total value of forest products imported to North America from that country in order to create an estimated percentage of its forest product export market consumed by North America. Countries with low forest certification, and for which North America constituted a significant portion of their export market, were identified as opportunities to influence certification levels.

North American Supply of Certified Sustainably Managed Forest Products

Numerous reports on the structure and economics of the forest products market in North America were reviewed to create an overview of the North American supply of certified sustainably managed forest products. Understanding the market provided insights into the economics of the certification decision for forest owners, and chain of custody certification for supply chain intermediaries.

Time and Costs of Certification

Information on certification criteria and processes was collected from various certifying agencies' websites, as well as studies and reports on forest certification. Studies and research reports were reviewed to understand the economics of the forest products market and how it impacts certification decision-making.

Supply Trends

Information on supply trends over the past five years was obtained chiefly from the UNECE Forest Products Annual Review.

Findings and Discussion

Demand

Forest Product Procurement Policies

Background of Forest Product Procurement and Policy Development:

In their most basic form, procurement policies provide financial controls for a corporation. If environmental or forest product considerations are incorporated, those policies have the potential to create a growing demand for sustainably managed forest products. The overall objective underlying sustainable procurement policies related to wood and wood fiber based products is to contribute to environmental protection (WRI, 2011). Companies that take initiative in establishing sustainable procurement policies are considered leaders in the sustainable forest products area.

Sustainable procurement policies reflect a level of commitment to environmental protection not provided by general procurement practices. Organizations with those policies assess their suppliers according to several key issues, including credibility of product information, legality of sourcing, use of sustainable forestry practices, protection of special places, and consideration of workers and local communities (WRI, 2011).

The number of companies with sustainable forest product procurement policies has been increasing over the past three years, with a concentration of newly established or reported policies appearing in 2010 and 2011. Also, NGO engagement appears to be influencing the quality of procurement policies. Companies engaging with conservation focused NGOs (for example, Natural Resources Defense Council (NRDC), The Nature Conservancy and World Wildlife Fund (WWF)) show a higher incidence of adopting sustainable forest product procurement policies.

The product procurement policies reviewed commonly address legal requirements and sustainable sourcing, but there are differences in relation to the degree of obligation, detailed requirements, and requirements for acceptable sustainable sources (or certification schemes). The most advanced policies issue hard goals as percentage targets that represent the total volume of SMFPs sourced annually by corporations for material or product uses. Companies apply these targets towards some or all purchased products or product material components. For example, Avon currently sources 74% of paper from recycled content or certified sources and their 2020 goal is to source 100% of their products from recycled or certified sources (Avon, 2011a). Toll Brothers' website states that their wood flooring comes from engineered wood. However, the Toll Brothers website does not state any sustainable procurement policy for the other wood products used for the remaining homebuilding components (Toll Brothers, 2011).

Progressive and mildly engaged companies have less robust procurement policies, with softer goals but without specific targets or timelines that indicate an interest in purchasing SMFP's. Bank of America issued a paper procurement policy in 2005 stating that "suppliers of paper products will be required to possess independent third party certification of sustainable forestry practices for all forests they own or manage (Bank of America, 2005)." However the company has not created a timeline for completion, nor reported any hard goals, volume or percentage targets on this policy to date. Therefore it serves as a soft goal, due to lack of reported implementation.

Industry-Specific Analysis

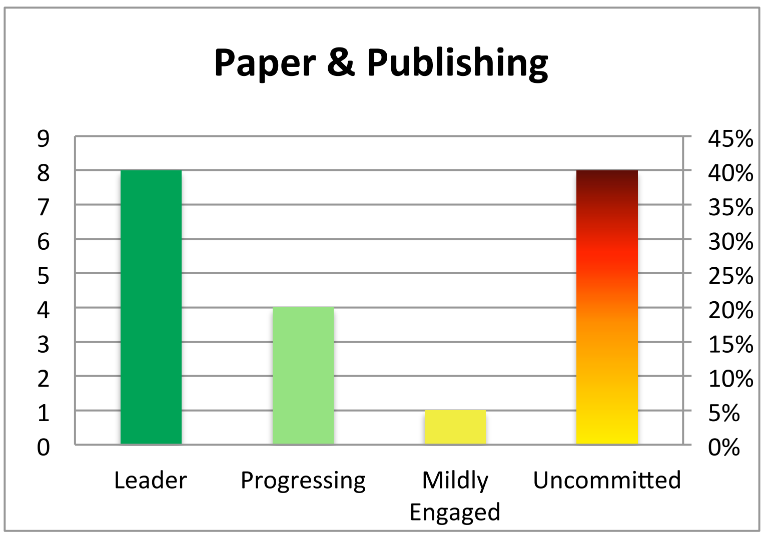
Each sector's unique products, manufacturing processes, and market demands dictate the demand for sustainably harvested fiber. These differences translate into sector-specific expectations and concerns relating to forest product certification. In order to develop overall conclusions and recommendations, the research explored reporting and milestones, certification, general sustainability initiatives, and industry specific trends within each sector.

Paper & Publishing: Procurement Policy Analysis

Reporting and Milestones

Figure 3 summarizes the distribution of the twenty-one paper & publishing companies across the four classifications of sustainable forestry practices. Outcomes were skewed toward the extremes with eight leaders and eight uncommitted companies. Four progressing companies and one mildly engaged company comprise the remainder. All but the uncommitted P&P companies surveyed had CSR reporting or a specific environmental policy report in which fiber awareness was mentioned. Leaders and progressive companies have forest product (FP) sourcing policies in place, or intend to have them by 2012, as in the case of Avery Dennison (Avery Dennison, 2011, p. 23). Several leaders have had procurement policies or have been tracking FP sourcing for five years or more (Time, 2010, pp. 7, 11, 14) (Hearst, 2009, pp. 2, 6) (Reed Elsevier, 2011, p. 9). A number of these are recent initiatives (Avon, 2011a) (Staples, 2011b). Nearly all of the leaders, with the exception of two, express awareness of illegal logging issues. Company policies range from statements of intent to not purchase illegally harvested products (Bank of America, 2005) to explicit references to the Lacey Act and the imposition of supplier compliance agreements.

Figure 3 - Paper & Publishing Sector: Company Distribution By Sustainable Forestry Practices



The most advanced procurement policies have been in place for five years or more. Time Inc., considered an industry leader, has established hard goals for increasing the volume of certified wood products and is publicly reporting this progress through annual metrics. In 2002, Time Inc. procured 25% of wood products from sources that had been certified and tracked along the entire supply chain, and increased its certification level to 80% by 2009 (Time, 2010, pp. 7, 11, 14). Time Inc.'s dramatic progress shows a commitment to implementing the procurement policy. Other industry leaders with established procurement policies dating back at least five years include: Hearst, Reed Elsevier, and Office Depot (Hearst, 2009) (Reed Elsevier, 2010) (Office Depot, 2011, pp. 2-3).

Many of the publishing sector companies established new sustainable procurement policies in 2011 and some of these new policies include hard goals (Avon, Staples, and Office Depot). Office Depot's procurement policy has metrics for sourcing FSC certified products and outlines specific percentage increases for certified products sourced between 2010 and 2012 (Office Depot, 2011, pp. 2-3).

Research identified a significant commitment to performance tracking in the paper & publishing sector. Many leaders launched new tools in 2010 for tracking environmental performance data. Data tracking tools include procurement policies and supply chain assessments (Time, 2010, pp. 10-15) (Hearst, 2009), (Reed Elsevier, 2010); (Reed Elsevier, 2011); (McGraw-Hill, 2010).

Companies that are mildly engaged in the procurement policy area, such as United Stationers, express interest in sustainable procurement without clearly outlining goals and timelines. However, United Stationers has made an effort to increase recycled content (United Stationers, 2011).

Uncommitted companies comprised four public and four private companies. Only three of the eight uncommitted companies indicated any form of sustainability awareness. Only one has an environmental or CSR report (News Corp, 2010) (News Corp, 2011a) (News Corp, 2011b), while two indicate fiber awareness and sourcing policies (Office Max, 2011) (State Farm, 2011). The other seven have no clearly stated forestry or sustainability policies or procedures.

Certification

Procurement policies in the paper & publishing sector generally accept all of the major certification organizations, such as FSC, SFI, PEFC, or they at least make reference to FSC Chain of Custody (CoC) products. Some leaders such as Avon and Staples also indicate a preference for FSC certified products over other certification, although other specified certification schemes are accepted (Avon, 2011a) (Staples, 2011b, pp. 1-2). Some of the sector's top leaders, such as Avon, will also accept certification schemes that meet certain performance-based criteria. The trend among the sector leaders is therefore twofold: They are open to a wide variety of certification in order to meet their goals for certified paper procurement, but they are also encouraging FSC certification because they consider it to be the highest standard.

General Sustainability Initiatives

Leaders and progressive companies tend to have active sustainability initiatives apart from forest product sourcing. The most prevalent initiatives include recycling, materials reduction, energy reduction or renewable energy, greenhouse gas (GHG) reduction, and waste reduction. It is possible that these more "traditional" sustainability efforts take precedence over SMFP sourcing because they often result in direct cost savings.

Staples, a leader in sustainable paper procurement, claims to have reduced its overall U.S. energy use by 11% from 2007-2010, while also providing customers with e-waste, ink, and toner recycling programs (Staples, 2011b). Hearst Corporation, another leader in sustainable paper sourcing, is engaged in greenhouse gas reduction initiatives and magazine recycling partnerships with municipalities (Hearst, 2009).

The correlation between sustainable paper sourcing and overall sustainability reporting extends to the paper & publishing sector's uncommitted companies as well, as publishers and retailers without a focus on sustainable wood fiber sourcing also have few overall sustainability initiatives. Examples of these uncommitted companies include Readers Digest (Readers Digest, 2011) and Tribune Co. (Tribune Co., 2011), which have not published any sustainability-related information, and Gannett Company, which published an environmental policy statement with no initiatives or goals. (Gannett Co., 2011)

Sector-Specific Trends

Through involvement in various working groups, leaders are investing resources to promote greater awareness among buyers and sellers of different papers' environmental performance. Time Inc., for example, is a member of the Paper Working Group (PWG), an effort put forth by ten major paper purchasers along with Metafore to increase the availability and affordability of environmentally friendly paper. One product developed by this group is the Environmental Performance Assessment Tool (EPAT) (Time, 2010, p. 13). EPAT measures environmental performance data including: supply chain information such as certification, recovered content, mill performance, climate change and more (GreenBlue, 2011). While the PWG no longer convenes, GreenBlue's new Forest Products Working Group (FPWG), which includes cross-industry representation of leading companies committed to addressing unmet needs in the forest products sector, will focus on developing practical tools and resources to address challenges and opportunities around forest resources. The eight founding members of the group include Avery Dennison Corporation, Avon Products, Inc., Bank of America, Catalyst Paper, Domtar, HAVI Global Solutions, Sappi Fine Paper North America, and Staples.

A second initiative within this industry is the PREPS (Publishers' Database for Responsible Environmental Sourcing) database, developed by members like Reed Elsevier Group, McGraw Hill, and Scholastic. The database is the largest of its kind and grades more than 6,700 papers from almost 200 mills, based on sustainability criteria including forest certification (Reed Elsevier, 2010) (Reed Elsevier, 2011, pp. 38, 44, 46) (McGraw-Hill, 2010, pp. 2-3).

In response to growing consumer demand for certified fiber, a relatively small proportion of certified forestland (about 10% worldwide) and a continuing commitment by companies to raise their own paper targets, a number of leaders are actively engaged in efforts to increase forest certification, especially in the U.S., where forest ownership is highly fragmented and mostly private. Time Inc. and Hearst, for example, both of whom have attained high levels of certified sourcing already, are now in partnership with several paper companies, SFI, and ATFS to promote more efficient and cost-effective forest certification among collectives of small and mid-sized landowners in Maine (Hearst, 2009) (Time, 2010). Staples has teamed up with conservation groups, wood products companies, and private landowners in the Southern U.S. to protect forests, combat climate change, and increase the supply of certified wood products from that region. (Staples, 2011a; Carbon Canopy, 2009).

Finally, all but one leader attests to using third-party verification services for various aspects of their paper sourcing. These include auditing to ensure a given paper's provenance when standard CoC certification is absent, and auditing of environmental management systems for ISO14001 compliance, including forest product sourcing.

Five of eight leading companies in the paper & publishing and one progressing company are engaged in a wide range of forest conservation or afforestation projects. The range of projects includes Staples program to incentivize certification for private landowners, Avon's Hello Green Tomorrow global program with the Nature Conservancy for restoration of the Atlantic

Rainforest in South America (Avon, 2011b), and Hearst's partnership with the American Land Conservancy and California Rangeland Trust to preserve 18 miles of the California coastline (Hearst, 2005). Time Warner is supporting a study to promote protection of forest biodiversity (Time Warner, 2011). Bank of America, a progressing company, issued loans to a U.S. based redwood forest project (Bank of America, 2011). News Corp reports being active with carbon offset purchasing to meet GHG reductions although it is not specific on the activities underlying the offsets (News Corp, 2011a).

Packaging Procurement Policy Analysis

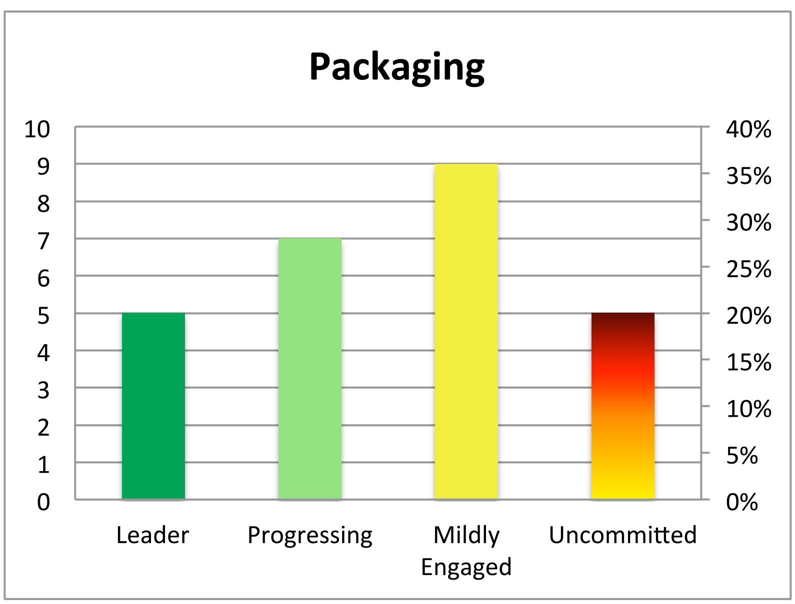
Sector Distinction

Packaging is substantially different from the other two sectors (solid wood and paper, writing & publishing) in that packaging is not the key product produced by any of the analyzed companies. As a result, it appears that procuring packaging material with a forest certification is not a prevalent sustainability strategy for the packaging sector.

Reporting and Milestones

Twenty-six companies representing a broad industry spectrum, and with major product packaging operations, were reviewed for this sector's analysis. The packaging sector results are concentrated toward the middle classifications, with seven progressive and nine mildly engaged companies (Figure 4). Leading and uncommitted companies comprised five each. All surveyed companies have CSR or other environmental reporting except Amazon, although the company mentions some environmental issues, including recycled material, on its website (Amazon, 2011). Fiber awareness is generally present throughout all four classifications, but the responses and initiatives vary from sourcing certified forest products, to using recycled content, to reducing packaging weight and volume.

Figure 4 - Packaging Sector: Company Distribution By Sustainable Forestry Practices



The companies in this sector have established fairly comprehensive sustainability reporting, and packaging in general terms is widely addressed. However, paper-based packaging is not addressed equally. More attention is given to polyethylene terephthalate plastic (PET), polyvinyl chloride (PVC), glass, and other types of packaging. In particular, Coca-Cola does not consider paper or wood fiber as main components of its packaging. While the company does not address paper-based packaging specifically, it takes plastic packaging very seriously and addresses plastic at large in its sustainability reporting (Coca-Cola, 2011, pp. 24-27).

Leaders in this category report considerably on SMFPs and make their procurement policies publically available. For example, Hewlett-Packard (HP) demonstrates extensive concern in relation to SMFPs throughout its reporting. They commit to sourcing from responsibly managed forests and ask their suppliers to eliminate wood fiber from any endangered regions (HP, 2011). Companies, like Johnson & Johnson (J&J) (Johnson & Johnson, 2007), Sears Holdings (Sears Holdings Corporation, 2011), HP (HP, 2011) and Proctor & Gamble (P&G) (Proctor and Gamble, 2010, p. 27) refer to CoC certification in their sourcing policies.

While P&G continues to increase its current share of 68% certified pulp supply (Proctor and Gamble, 2010, p. 28), others do not provide sufficient proof for increasing their targets. J&J, for example, exceeded their 30% post-consumer recycled (PCR)/certified content for office paper and packaging in 2009 and have not updated that goal (Johnson & Johnson, 2010, p. 35). J&J's overall FP policy and reporting is comprehensive which validates their present leader status.

Progressive companies exhibit increasing fiber awareness. They may have a formal procurement policy or are engaged in sourcing sustainable or certified products, and in some cases, expressed hard targets for sustainable procurement. However, their reporting and procurement strategies are generally less comprehensive in relation to SMFPs. Some initiatives by companies in this category are either new or are being established in 2011.

The U.S. Postal Service (USPS) is an example of a progressing organization that engages in sustainable sourcing and provides relevant reporting, but its policies are not as well articulated (USPS, 2010, pp. 28, 31) (USPS, 2011a, p. 22) (USPS, 2011b). Another progressive firm is Nike. In its latest sustainability report, Nike reports using FSC certified shopping bags. But it is not clear how this commitment to certification translates to other packaging items, such as shoeboxes (Nike, 2009, p. 126). Along with other organizations in this category, Nike is currently reviewing its packaging strategy and is developing new targets and metrics.

Another interesting example is FedEx, which discloses the existence of a forest product procurement policy, but not its content. An older press release from Kinko's (acquired by FedEx) comprehensively outlines forest product procurement (FedEx, 2003). However, it remains unclear how or whether FedEx implemented these guidelines into its current packaging policies. FedEx only states to buy paper for FedEx Office Print and shipping centers from FSC certified suppliers (FedEx, 2011).

Mildly engaged companies in this sector demonstrate limited fiber awareness and do not explicitly include SMFP procurement in their sourcing policies. They are primarily focused on sustainable alternatives such as recycling, reusing and volume reductions. Some companies, like Novartis, report and are very advanced in numerous sustainability issues and often follow GRI metrics. However, forestry metrics are not explicitly part of GRI (Novartis, 2009a). Novartis responded to a packaging supplier challenge initiated by Wal-Mart in 2005, but it is unclear what actions were taking in relation to paper-based packaging (Novartis, 2009b). A particular case of a mildly engaged company is Pfizer, which has stopped reporting forestry metrics in a subsequent report, demonstrating inconsistencies (Pfizer, 2007, p. 105).

Uncommitted packaging companies exhibit limited or no fiber awareness and have no formal forest product procurement policies. While they may engage in some sustainable product sourcing, such initiatives are usually with respect to recycled materials. One example is Amazon's use of corrugated packaging with a high percentage of recycled content (Amazon, 2011). Amazon also focuses on the recyclability of its packaging. However, the available information falls short for a company with such a reliance on packaging (Amazon, 2011).

Leading and progressing companies generally report achieved milestones, set targets and evaluate their progress. Third-party verification of internal practices and reporting was occasionally present among all but uncommitted organizations. A number of companies are members of targeted industry associations, but only some are directly related to forestry or packaging.

Certification

Procuring certified forest products is a sustainability strategy that some companies use, but it is not a predominant strategy in the packaging sector. Companies sourcing certified forest products predominantly refer to FSC and SFI. Generally products from other certification schemes, such as CERFLOR (a Brazilian certification scheme endorsed by PEFC), PEFC, or CSA are also accepted.

Leaders in the packaging sector demonstrate substantial commitment to sourcing certified products, in addition to using recycled and post-consumer content for their packaging. They express hard targets ranging from 30-100% certified content and require supplier certification of compliance with illegal logging statutes. As an example, P&G distinguishes between recycled and virgin fiber; has a strong compliance effort to addressing illegal logging; and has an ultimate goal of 100% certified packaging, although it does not give a timeline for accomplishing the last goal (Proctor and Gamble, 2010, p. 74). HP explicitly mentions that it prefers robust certification programs, such as the FSC, that follow strong environmental and social criteria and embrace controlled standards throughout the supply chain (HP, 2011).

General Sustainability Initiatives

In the packaging sector, most of the analyzed companies have very comprehensive sustainability and corporate responsibility initiatives concerning energy use, greenhouse gas emissions, water use and waste reduction. The pharmaceutical companies, in particular, emphasize health and safety throughout their sustainability initiatives.

Because packaging is not the prime product of any of these companies, it receives less direct attention than the companies' products and operations. While non-leading companies are usually deficient in a number of criteria related to FP procurement policies, they follow sustainable sourcing strategies for their main product, rather than the packaging material. For instance, Starbucks prioritizes its coffee sourcing (Starbucks, 2011), while Nike and Adidas focus on leather and cotton (Adidas, 2010, p. 32) (Nike, 2009, p. 16).

PepsiCo, which is currently further developing its FP procurement, intends to eliminate all solid wastes sent to landfills as a result of its production and operations (PespiCo, 2009, p. 17). Some of these policies are only tangentially related to sustainable forestry.

UPS is pursuing the goal of carbon neutral shipping, which involves the purchase of voluntary carbon offsets that support avoided deforestation and reforestation (UPS, 2010, p. 35).

In addition to its comprehensive FP policies, P&G envisions powering all its plants with 100% renewable energy, using 100% renewable and recycled materials for all products and packaging, and producing zero consumer and manufacturing waste sent to landfills (Proctor and Gamble, 2010, pp. 4, 27-28).

Sector-Specific Trends

The most notable sector-specific trend in packaging is that several companies take a different approach to packaging, and instead of outlining their underlying sourcing strategies, they report entirely on efficient packaging, such as weight and volume reductions. One example is Burger King's packaging initiatives, which focus on material reductions and the use of recycled materials. Burger King's transition from cardboard boxes to the less fiber intensive paper wrapping was the company's most significant effort, other than the use of 100% recycled napkins (Burger King, 2010, p. 42). Kraft Foods Inc. follows a very similar approach and appears to be pursuing this strategy rather aggressively (Kraft Food, 2010a, p. 21) in comparison to some other companies analyzed.

Other progressing companies have recently developed sustainability procurement policies, which heavily focus on the reusability or decomposability of their packaging, intending to reduce their share of landfill waste. Specifically, Starbucks has a program for reusable cups (Starbucks, 2011).

It is important to note that there is no direct relationship between a company's forest product policies and other forest conservation efforts. Some companies work with organizations and NGOs on various forestry-related initiatives. For instance, Novartis and Kraft Foods, are engaged in conservation or afforestation efforts. While Kraft Foods does not report sourcing certified FP, it partnered with the Rainforest Alliance to invest in forest conservation relating to its palm oil, coffee, and cocoa footprint (Kraft Foods, 2010b, p. 21). Novartis is involved in FSC carbon offset projects in Argentina (Novartis, 2009a, pp. 10, 51). And leaders like J&J and P&G have collaborated with WWF and modeled their sourcing policies after the WWF's "Responsible Purchasing Guidelines" for forest products (WWF, 2006) (Johnson & Johnson, 2007) (Proctor and Gamble, 2010, p. 66).

Homebuilding and Household Durables: Procurement Policy Analysis

Sector Distinction

The solid wood sector is comprised of two subsectors, homebuilders and household durables, where the latter group encompasses mostly furniture manufacturers. Figures 5 – 7 show the results from the analysis for the consolidated sector and the subsectors.

Figure 5 - Solid Wood Sector - Company Distribution By Sustainable Forestry Practices

Figure 6 – Homebuilders

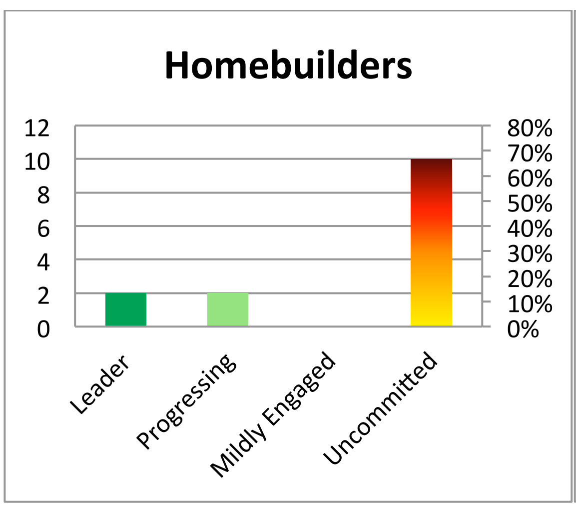
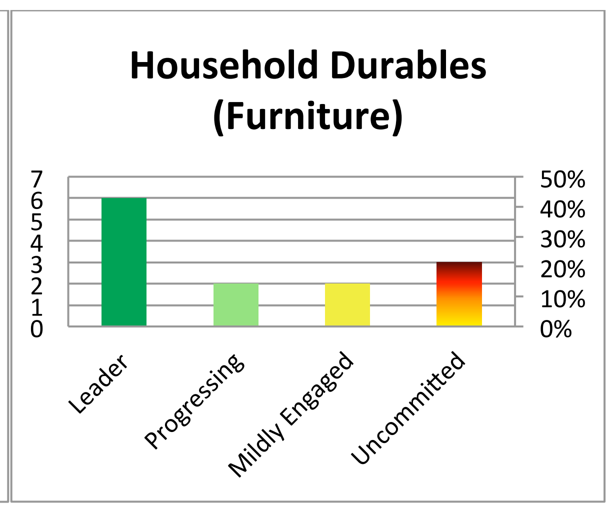


Figure 7 – Furniture Manufacturers



Homebuilders

Reporting and Milestones

Of fourteen homebuilder companies in this sample, all of which are public, ten appeared uncommitted by virtue of having no CSR reporting or indications of fiber awareness, no stated policies on FP sourcing or illegal logging, and no participation in working groups or ancillary forest conservation initiatives (see Figure 6). Some uncommitted homebuilders discussed the energy efficient design of their homes and/or corporate efforts at waste reduction, sustainable building strategies, and sustainable appliance design. However, forestry practices were not mentioned.

Two homebuilders, KB Home and Toll Brothers, were categorized as progressive. They generally expressed fiber awareness, some degree of sustainable or certified sourcing and promotion of forest conservation through ancillary initiatives. As an example, Toll Brothers is increasing its sustainable sourcing efforts, as evidenced by its Green Webpage reflecting a wood policy where preference is given to engineered wood for some homebuilding products. However, this is only a soft goal since no milestones are listed for sourcing engineered wood products (Toll Brothers, 2011). Also, KB Home had CSR reporting and expressed increasing fiber awareness since 2008 (KB Home, 2009). The company stated a policy of sourcing lumber supplies that are certified or from non-endangered forests (KB Home, 2011); (KB Home, 2009, p. 15). While no specific percentage goals or timelines were presented, some milestones for certified wood volume were noted (KB Home, 2009) (KB Home, 2010). KB reports its environmental performance using the GRI format (KB Home, 2000).

The two leaders in this subsector, Home Depot and Lowes, are more accurately, home center retailers. Home Depot, in particular, satisfied all group classification criteria except those for third party verification and ancillary forest conservation initiatives. It has had a wood procurement policy since 1999, the longest observed in the survey, which specifies a preference for certified FPs, the intention to avoid wood from endangered forests, and the expectation that its suppliers will comply with all laws and regulations (Home Depot, 2011). Home Depot also reports on sourcing milestones related to its procurement goals and its website shows the rate of deforestation (Home Depot, 2011) (Lowes, 2010). Lowes shows increasing fiber awareness in CSR reports dating from 2007. Although it mentioned a preference for FSC certified wood in 2007, no goals or milestones have been noted since (Lowes, 2010, pp. 64, 67). The company does make explicit reference to its support of the Lacey Act and has helped to fund various forest conservation efforts across the U.S. and Canada.

Certifications

Home Depot and Lowes indicated a preference for FSC-certified wood (Home Depot, 2011) (Lowes, 2010). The two progressing companies in this sample expressed no certification preferences. The weakly committed and uncommitted companies make no mention of certification and they have not issued policy statements regarding future targets or soft goals. There is a lack of industry wide cooperation on the certification issue.

General Sustainability Initiatives

The subsector also focused on some general sustainability initiatives. For example, KB Home has entered into a forest conservation initiative with the NRDC (KB Home, 2000).

Companies such as Beazer, Meritage, and PulteGroup focus mainly on energy efficient and sustainable operations of the homes they build and do not engage in sustainability initiatives such as waste reduction or water efficiency (Pulte Group, 2010).

Home center retailers are involved in a wide range of corporate sustainability initiatives. Lowes engages in energy efficiency programs in its stores (Lowes, 2010). Other conservation initiatives include Home Depot's Conservation Fund's Go Zero program, for reforesting the metro Atlanta region by planting 38,000 trees in protected parks (Home Depot, 2011).

Sustainability efforts are tracked according to achieving targets in the GRI Reporting format. KB Home distinguishes themselves because they show progress in achieving general sustainability initiatives using the GRI reporting format for tracking progress of its metrics (KB Home, 2011).

Sector-Specific Trends

Due the limited availability of sustainability reports, specific trends were difficult to discern for this subsector. Compared to the other analyzed sectors, it is notable that no company was classified as mildly engaged. The relatively few leaders and progressing companies all demonstrate a general concern for sustainable forestry through their procurement policies and/or additional forest initiatives. Generally there is increasing awareness for forest products. However, the vast majority of companies do not report long-term metrics or hard goals.

Household Durables (Furniture)

The furniture manufacturer sample is comprised of thirteen companies, six of which are categorized as leaders and three of which are considered uncommitted (see Figure 7). There were five privately owned companies among the group and their results are distributed among the four categories with two uncommitted. All leading, progressive, and one mildly engaged company have CSR or other environmental reporting and demonstrate fiber awareness. Most of these companies appear to have implemented their sustainability reporting within the last few years.

The leaders and progressives all indicate FP sourcing policies, some level of sustainable sourcing, and goals. Only three leaders, IKEA (private), Williams-Sonoma, and Knoll, express clear policies against illegal logging. Knoll and IKEA have stated procurement goals of 100% certified SMFPs (Knoll, 2009b) (Ikea, 2010, p. 62) (Williams Sonoma, Inc, 2011, p. 1) (Knoll, 2009b, p. 2). Knoll and IKEA have stated procurement goals of 100% certified SMFPs (Knoll, 2009b) (Ikea, 2010, p. 61) (Knoll, 2009a, p. 1). Knoll is the only leader to have reported its significant progress toward that end and was the dominant leader in this subsector, satisfying all criteria except membership in a targeted industry association (Knoll, 2011a); (Knoll, 2011b). All of the leaders have their reporting verified by a third-party.

Of the three uncommitted companies, all of which lack any form of environmental reporting, two are privately owned (Klaussner and Z-line Design) and one (Samson Holding) is domiciled in China, but has significant North American revenues.

Certification

Certifications used in the solid wood industry include FSC, SFI, Rainforest Alliance, American Home Furnishings Alliance (AHFA)'s Enhancing Furniture's Environmental Culture (EFEC), and Sustainable by Design (SBD). Knoll reports that it uses FSC certification because it has the most stringent standards (Knoll, 2011a, p. 7). It is also the only company that reports on the percentage of their products that are made from certified wood (Knoll, 2011a, p. 6). For companies other than leaders, only a few have sustainable wood procurement policies and none refers to certification.

General Sustainability Initiatives

In the household durables subsector, some, but not all, of the sustainable wood sourcing leaders are engaged in a broad range of sustainability initiatives. Knoll not only has very well defined procurement policies, but is also implementing a number of other environmental performance programs, including life cycle analysis of its manufacturing (Knoll, 2011a); (Knoll, 2011b). Sauder Woodworking, reported greenhouse gas emissions, waste reduction, water use, and energy efficiency metrics from 2008-2010 (Sauder, 2011a, pp. 10-15). However, most of the other companies are not engaged in general corporate sustainability, as they work only on specific initiatives such as factory energy efficiency or community outreach rather than corporate-wide initiatives (Wisconsin Business, 2010).

Sector-Specific Trends

Several leaders in the household durables subsector, Furniture Brands International (FBI), La-Z-Boy, and Flexsteel, have implemented the AHFA environmental management system EFEC (AHFA, 2011) (Flexsteel, 2010, p. 6) (Angara, 2011, p. 10). La-Z-Boy and Flexsteel, and one subsidiary of FBI have also become certified under AHFA's SBD program, which builds upon the EFEC implementation by adding social responsibility and environmental footprint initiatives, including a chain-of-custody process for tracking certified FPs.

Overall in the solid wood sector, recent upward trends are not industry-wide, but remain concentrated among leaders who continue to advance their procurement policies. Research did show that sustainability has become a priority demonstrated by reporting efforts and sustainability webpages. Non-leaders focus on sustainability initiatives that are unrelated to wood fiber sourcing, such as energy efficiency, waste reduction, and water efficient designs.

Results and Trends

In the paper & publishing sector, leading companies have been reporting their sustainable paper sourcing metrics for several years and have shown significant improvement. Time Inc. increased its percentage of CoC certified content from 25% in 2002 to 80% in 2009 (Time, 2010, pp. 7, 11, 14), while Hearst Corporation doubled its percentage of certified fiber from 2004-2009 (Hearst, 2009, pp. 2, 6). These early adopters launched their first procurement policies and reporting initiatives in the early 2000's and are now releasing second-generation sourcing policies that specify preferred certification standards and set quantitative goals for the percentage of certified products used. Several companies launched paper procurement policies more recently, mirroring the standards of the current leaders, and skipping directly to second-generation procurement policies. For example, for Avon and Staples, no formal FP policies were located prior to 2010. But both firms launched new and sophisticated initiatives in 2010 to measure paper certification and improve the percentage of certified paper used in their operations (Avon, 2011a) (Staples, 2011a). Their comparatively aggressive action and commitment to SMFPs justifies their leader status. Overall the paper & publishing sector has shown steady improvement in reporting and performance from the leaders, along with a rapidly expanding base of companies that are quickly catching up.

The packaging sector has shown steady progress among its leaders, such as Procter & Gamble and Johnson & Johnson, which have been reporting forest product metrics for several years and have been showing improvements (Proctor and Gamble, 2011, p. 28) (Johnson & Johnson, 2010, p. 35). Several progressive companies are in the middle of reviewing and renewing their packaging strategies, indicating increased commitment to sustainable packaging. Companies showing little or no progress in relation to SMFPs seem more focused on other sustainability initiatives, or they simply do not report enough information to fully evaluate their commitment to sustainable forestry initiatives. For instance, Wal-Mart published sustainable sourcing initiatives in 2007, but recent reports fail to mention sustainable fiber (Wal-Mart Stores, 2011). Similarly, Pfizer last reported sourcing sustainable forest products in 2007, despite consistently releasing sustainability reports since then (Pfizer, 2007, p. 105) (Pfizer, 2010, pp. 1-2). In its environmental goals, Merck expresses its intent to source more sustainable paper products by 2015. However, the content of certified fiber in relation to this target is only mentioned in a footnote and the percentage indicated does not differentiate between post-consumer recycled content and certified fiber (Merck, 2011, p. 2). UPS shows improved fiber sourcing awareness, but its key focus is recycled and post-consumer packaging material; sourcing of certified virgin fiber is not specifically mentioned in its sustainability reporting (UPS, 2011) (UPS, 2010, p. 103).

Packaging is not a central sustainability concern to several of these companies, and if it is, they tend to focus more on sourcing recycled material than on sourcing sustainably harvested virgin wood fiber. This lack of focus on sustainably harvested fiber seems to be responsible for the general unchanged demand for certified packaging material beyond the sector leaders. It also remains unclear why companies that focus on recycled content do not explicitly address recycled certified SMFPs.

In the homebuilding subsector of the solid wood sector, Home Depot has demonstrated steady progress on sourcing sustainably certified wood for several years (Home Depot, 2011), but most other companies in this sector have not demonstrably improved their reporting or performance. Homebuilding companies across the board have not published wood sourcing policies that outline specific certified wood sourcing goals or certification preferences. In the household durables subsector, Ikea and Knoll are leaders that have shown evolving procurement policies and continued increases in their goals, both aiming for 100% sustainable procurement in the future (Ikea, 2011) (Knoll, 2009b, p. 105). Sauder Woodworking began publishing a Sustainability Report in 2011 that includes mostly soft goals (Sauder, 2011b, p. 8), and Ethan Allen shows concern for forestry conservation (Ethan Allan, 2011), but discloses vague policies. Overall, the trends in the solid wood sector suggest that the companies will continue in a pattern of leaders and uncommitted companies. Most industry leaders showed improvements when their current performance was compared to past years, while the uncommitted companies don't appear to be making any improvements.

The company and sector strategy dashboards show a visual representation of the overall trends identified in each of these sectors (see Appendix C).

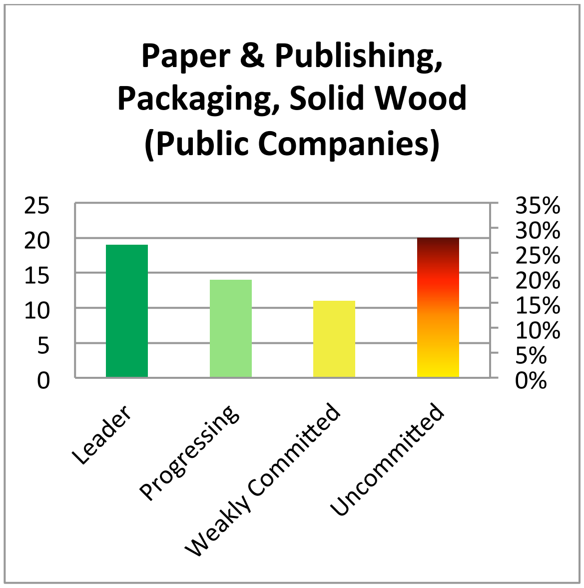
Conclusions

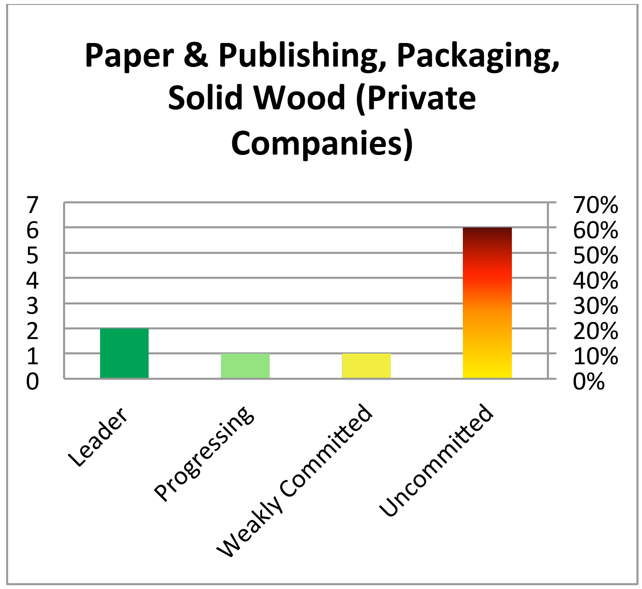
Across sectors, the companies that have environmental reporting (of any kind) are generally more engaged in efforts to recycle and reduce consumption of materials, and to decrease their environmental footprint. These types of efforts are less supply chain-dependent than the production of SMFPs, and therefore more easily implemented and managed, and generally yield immediate and positive financial and social benefits for a company. Since these efforts offer such advantages, they could be drawing focus away from SMFPs.

Also noted is the fact that the packaging sector often places a higher priority on other content (plastic and glass) while the paper & publishing and solid wood sectors' primary products are inherently fiber-based, potentially making forest product procurement of greater interest. It may also be true that greater virgin fiber content is needed to meet publishing standards and, therefore, sustainability for this sector requires a greater focus on SMFPs. Whatever the impetus, the paper & publishing industry, in particular, is distinguished by a greater number of sustainable forestry policies and initiatives and more transparency, and thus, seems the most committed of the three sectors to the procurement of SMFPs.

Figures 8 and 9 reflect the consolidated results of all three sectors for public and private companies respectively. (Note that there were no private companies among the packaging sample.) The public company aggregates are more balanced by comparison, albeit they are still dominated by the extremes: leaders and uncommitted. The private company sample size (10) is small but nonetheless, it is interesting to observe its apparent bias toward uncommitted companies. Many large, institutional investors have clearly expressed a growing interest in corporate sustainability policy in recent years as evidenced by their support of various environmental reporting initiatives (e.g. GRI, Carbon Disclosure Project (CDP), etc.) and their stated socially responsible investment policies. Public companies that fail to respond to this growing demand for tangible and transparent sustainability policies increasingly risk losing investor funding. Private companies, on the other hand, do not have institutional shareholders to appease; a feature that undoubtedly reduces the impetus to adopt SMFP practices. The apparent absence of SMFP policies by private companies poses a challenge for encouraging greater corporate SMFP demand and, ultimately, supply, as the sampled private companies are large consumers of forest products.

Figure 8 & 9 - Public and Private Company Distributions By Sustainable Forestry Practices





Activism

Few of the researched companies mentioned environmental activism as a primary driver in their SMFP initiatives, but activist campaigns, or the threat of activist campaigns, likely play a role behind the scenes as secondary drivers. For example, Kimberly Clark was the target of a Greenpeace campaign protesting the company's use of clear-cut wood from Canadian boreal forests to manufacture tissue paper (New York Times, 2009). In 2009, the two sides agreed to a partnership as Kimberly Clark set ambitious goals for wood fiber sourcing (Kimberly Clark, 2009a, p. 1). However, Kimberly Clark's paper procurement policy does not refer to the Greenpeace campaign as a driver, instead referring to Greenpeace as a partner with whom the company can "discuss implementation" and "review emerging issues related to wood fiber, climate and other issues of mutual interest" (Kimberly Clark, 2009b, p. 8).

More recently, Greenpeace targeted Mattel Inc. for its use of Indonesian rainforest wood pulp in toy packaging (Southern California Public Radio, 2011), resulting in the company changing its sourcing policies and setting SMFP goals (Mattel Inc., 2011). From these examples it is reasonable to conclude that targeted activism plays a direct role in driving the adoption of specific SMFP initiatives. However, companies that have not been directly targeted do not acknowledge the threat of activism as a driver of pre-emptive SMFP initiatives, so it is difficult to assess the secondary effect of activism on the broader environment of corporate SMFP initiatives.

Findings and Discussion

Supply

Part 1: The Process of Maintaining a Certified or Sustainably Managed Forest in the U.S.A.

Forest Products Certification: An Overview

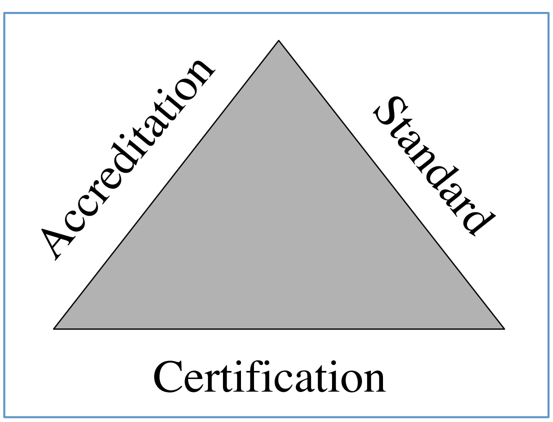
At the 1992 United Nations Conference on Environment and Development, over 120 countries endorsed the Forest Principles, which state that forest resources and forest lands should be maintained to meet the social, economic, ecological, cultural and spiritual needs of present and future generations. The large-scale development of certification systems, based on the principles of market-based incentives and voluntary compliance, was born out of this commitment (Baharuddin, 1995).

According to Baharuddin, the ultimate goal of forest certification is to link the (environmentally conscious) consumer with the producers of these products and the raw materials they source (Baharuddin, 1995).

The main assumptions behind the system are that a) product differentiation based on social and environmental attributes can influence consumer purchasing decisions, b) creating a price premium will incentivize producers to become certified, which ultimately results in c) the increased efficiency and competitiveness of the market by internalizing environmental and social concerns (Baharuddin, 1995).

Forest products certification consists of two main components: forest management and product certification. Forest management certification provides third-party verification that a parcel of land is sustainably managed in accordance with certain sustainable forestry practices. Product certification tracks round wood and processed wood along the supply chain, which can extend beyond the country of origin in the case of exports. Certification may be based on meeting performance targets, such as adhering to a given removal rate, or system targets, which relate to having systematic controls in place (Baharuddin, 1995). The Forest Stewardship Council is an example of a performance-based system, while the Canadian Standards Association's Sustainable Forest Management system is system-based.

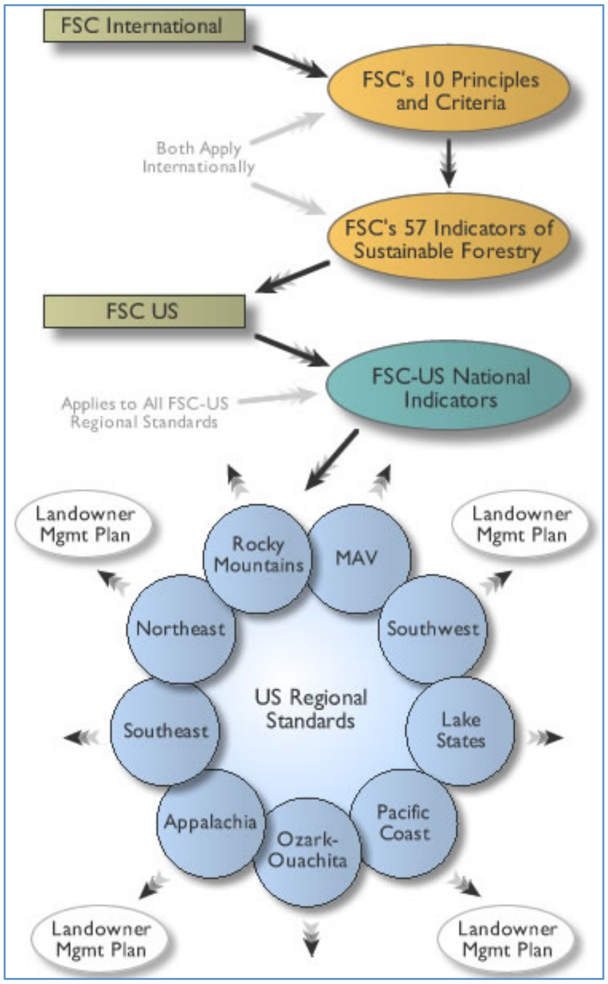
Figure 10 - Three Pillars of Certification (Nussbaum, 2000)



Certification systems develop standards with the input of relevant international and local stakeholders and accredit third-party certifiers who evaluate the operations of forest managers and product manufacturers wishing to be certified (see Figure 10) (Nussbaum, 2000, p. 6).

Certification systems begin with the development of overarching principles and criteria. Indicators are developed based on these principles and criteria. Those indicators can then be adapted to national and regional circumstances and needs. FSC uses the following flowchart to explain the development of regional indicators for the U.S.:

Figure 11 - FSC Principles & Criteria Flowchart (FSC, 2011)



Certification at Forest Level

Though many forest certification schemes exist throughout the world, the two major schemes are the FSC and the PEFC. PEFC endorses various national certification systems, such as the SFI and the ATFS in the U.S. (see Figure 11).

All major certification schemes cover the following topics:

- Management plan
- Monitoring processes
- Protection of rare, threatened or endangered species and plant communities
- Implementation of best management practices for soil and water quality
- Regeneration and reforestation goals
- Clear cutting average acreage limits
- Other broad environmental impact considerations

(Minnesota Department of Natural Resources, 2011)

Not all forest operations have the same environmental, operational, and socio-economic complexity, so the financial and managerial burden to meet the requirements for certification can differ substantially. Furthermore, existing environmental regulations already require some form of adherence to several of the principles that certification schemes use to assess sustainability of forest operations. The main additional burden to landowners relates to submitting a management plan and monitoring operations. Those requirements can be onerous for owners, especially non-industrial, small landowners.

Management Plan

Certification schemes require that forest managers create a management plan that states the objectives they have for their land, followed by a series of activities that will take place in order to meet those objectives. The management plan must be updated yearly.

Generally, certification plans contain the following elements:

- Management objectives
- Description of the forest resources to be managed, environmental limitations, land use and ownership status, socio-economic conditions, and a profile of adjacent lands
- Description of the silvicultural and/or other management system, based on the ecology of the forest in question and information gathered through resource inventories
- Rationale for rate of annual harvest and species selection
- Provisions for monitoring forest growth and dynamics
- Environmental safeguards based on environmental assessments
- Plans for the identification and protection of rare, threatened and endangered species
- Maps describing the forest resource base including protected areas, planned management activities and land ownership
- Description and justification of harvesting techniques and equipment to be used (FSC, 2011)

Monitoring Process

Certification schemes require that monitoring processes be put in place. According to FSC "Monitoring shall be conducted — appropriate to the scale and intensity of forest management — to assess the condition of the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts." (FSC, 2011)

The following data needs to be collected, inventoried, and reported on a yearly basis in accordance with the FSC (FSC, 2011):

- Yield of all forest products harvested
- Growth rates, regeneration and condition of the forest
- Composition and observed changes in the flora and fauna
- Environmental and social impacts of harvesting and other operations
- Costs, productivity, and efficiency of forest management

Process for certifying forests

The forest certification process follows the same track for all major certification schemes. It begins with formal a formal certification application, followed by pre-assessment preparation, assessment, and creation of a report, which will provide information upon which the certification decision is made. If a certificate is issued annual audits are required to maintain the certification. These steps are discussed in more detail below.

The landowner must first decide under what scheme they wish to certify their forest. Once that decision is made they secure the services of an accredited certification agency. A certification agency is an independent third party accredited by a certification scheme to assess and report on the management of the forest as it relates to certification criteria. The availability of certification agencies is scheme-and country-specific, which will in turn drive the price. For example, FSC-accredited certifiers may not have a presence in Africa, so if African landowners want to have their land certified, they might have to fly in certifiers from abroad, which will in turn drive up the cost of certification.

Once the application process is started, an assessment of operations needs to occur. This starts with an on-site pre-assessment of the operations, performed by the landowner together with the certifier, to help determine whether any gaps exist between the current operations and the required standard. Armed with this information the forest manager then has the ability to make any operational changes necessary to meet the certifying agency's standards.

When forest managers feel that their operations are in compliance, an official on-site assessment can take place, after which a certification report can be issued, and a certification decision will be made. The on-site assessment itself can take from half a day up to two days, depending on the complexity of the forest and its operations.

Certification is valid up to five years, depending on the scheme, contingent upon the performance of yearly audits to determine whether a forest remains in compliance. The yearly audit includes a review of existing management plans, an inspection of operations (e.g. herbicide application and logging operations), review of monitoring data, and interviews of people familiar with the landholder's practices and approaches. If compliance gaps are recorded, a corrective action request is issued and the manager has between three months and one year to correct any gaps (Minnesota Department of Natural Resources, 2011). An additional certification scheme overview can be found in Appendix D.

Process for Certifying Products

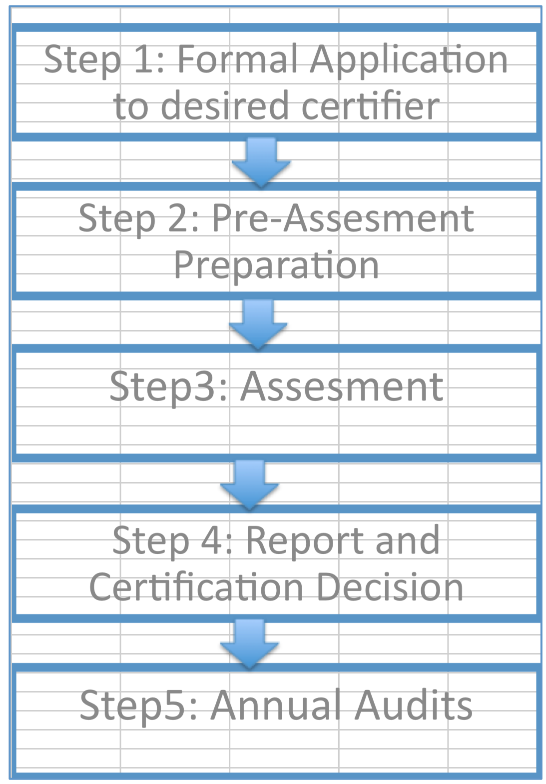
Chain of custody is the process that ensures certified forest products can be tracked along the supply chain. The steps for chain of custody certification are similar to those for forest certification, though the criteria and processes examined are different. Another difference is that facilities may be chain of custody certified under more than one scheme. Facilities are assessed based on the quality of the management and operational procedures, guidelines, and systems in place that enable compliance with the chain of custody requirements.

As part of the pre-assessment phase, the facility decides what product groups it wants to sell under the certification label. To meet the requirements for certification, a facility must have the necessary management systems and infrastructure capabilities in place to ensure that certified inputs can be identified and segregated, that material balances and processing waste (conversion factors) can be tracked, that products sold with certification claims can be identified, and that the trademark use of certification labels can be secured (Rainforest Alliance, 2011). One of the required management systems is a document control system (DCS) that tracks and stores electronic documents and images of paper documents to the certifier, and must then assign CoC responsibilities and facilitate audits of inflows and outflows of certified product. This DCS is necessary to ensure that certified forest products can be tracked along the supply chain. Personnel will have to be are then trained to operate the system in accordance with the guidelines of the certification scheme(s).

[1] Original Columbia research using input from the following document: Rainforest Alliance, 2011

The facility assessment consists of a client meeting, a physical inspection of the facilities, interviews with personnel and other relevant individuals, and a debriefing on the result of the assessment. An assessment report is issued, and then the certification decision is made based on the findings of the report. Once certified, the facility can use the label for three to five years[2], provided it successfully passes annual surveys of compliance to CoC requirements. Annual audits are similar in structure and execution to the initial assessment. For brokers that do not take physical possession of the goods they trade, a desk survey is sufficient, as they do not have actual facilities that can be surveyed (Rainforest Alliance, 2011).

Figure 12 - Process for Certification[1]



For certification purposes, the inputs can come from certified forests, from controlled wood, which is wood that is not explicitly certified but that meets certain scheme-dependent criteria, and from recycled sources. The outputs can be pure label, mixed label or recycled label. However, the specific requirements vary among the different certification schemes. The process for certification can be seen in Figure 12.

Economics of Certification

Costs

The cost of certification can be split into two general categories. The first category is the indirect opportunity cost of having to amend management practices, such as the reduction of yield, which may be required in order to make the operations of the forest more sustainable. These initial costs, recognized in the form of lost revenue, may be offset in the long-term by lower operating costs and increased production capacity of a forest and will vary between forest owners, depending on the measures necessary to close the gap between current forest management practices and those required for certification. Generally, the additional cost to comply with certification requirements tends to be lower in developed countries where a higher baseline of environmental regulations exists, than in developing countries, where regulations tend to be more lax and less frequently enforced (Baharuddin, 1995).

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[2] Depends on the certification scheme used. For example, an FSC certification is valid for five years, while a PEFC certification is valid for only three years.

The second category, direct certification costs, includes audits, assessments, identification of fauna and flora and monitoring. These costs can be substantial, especially for small operations that do not have existing management plans or monitoring systems in place (Baharuddin, 1995) (Simula, Astana, Ismael, Santana, & Schmidt, 2004, p. 5).

Rosenberger and Huff estimated that for a parcel of land less than 1,000 acres, the fixed management cost (mainly consultancy costs related to the management plan) was around $325; the management cost was $4.25 per acre; the assessment was $5,800 (assuming that a two person team worked on it for five days); and the yearly audit was $1,500. Based on those estimates, the minimum cost of certifying a 1,000-acre parcel or less would be $11.87 per acre (Rosenberger & Huff, 2001, p. 4).

These costs can apparently create enough of an impact to be an impediment to certification for small, non-industrial landowners. Those landowners often have multiple motivations for holding a tract of land (such as recreation, hunting, aesthetics, etc.) and their margins on selling wood are very slim (Rosenberger & Huff, 2001, p. 2) (Vogt, Larson, Gordon, Vogt, & Fanzeres, 2000, p. 306). If the cost of getting certified, not only in terms of actual monetary expenses, and but also in terms of time and effort, exceeds the real or perceived benefit, small landowners may forego the process of certification altogether (Rosenberger & Huff, 2001, p. 2).

The relative cost of CoC certification is only a fraction of that of forest certification. The cost of CoC certification is mainly related to the separation of raw materials and products, as a typical facility will produce both certified and non-certified products. Some international operations can also produce under multiple certification schemes, (Simula, Astana, Ismael, Santana, & Schmidt, 2004), which drives up the cost of separation (and thus certification), because they will have to separate products certified under one scheme from products certified under a competing scheme (Simula, Astana, Ismael, Santana, & Schmidt, 2004, p. 6). The direct cost of CoC certification is estimated to be around $3,000 per facility (Hansen, 1998, p. 2).

Benefits

The benefits of certification can be divided into three categories, market benefits, non-market benefits, and indirect monetary benefits. Market benefits include increased supply base security (because sustainably managed forests will be able to produce more over the long term), existence of price premiums, and increased sales and market access. Non-market based benefits include the benefits to society and the environment (Baharuddin, 1995). Simula et al. (2004) also identified indirect monetary benefits, such as cost reductions related to improved management practices, and avoided loss of sales revenue, in cases where a customer wants to switch to certified products (Simula, Astana, Ismael, Santana, & Schmidt, 2004, p. 8).

One of the main assumptions behind the efficient functioning of a market-based mechanism, such as product certification, is that there is a profit potential that incentivizes suppliers to modify their behavior. In the case of forest products, there are a number of factors that may be undermining that assumption. One concern is that costs and benefits are not evenly distributed among market players. For example, the cost for primary producers to become certified is higher than for processors, while the benefits are captured disproportionately by processors and other actors down the supply chain, in the form of higher price premiums. Also, certified organizations are not able to monetize all non-market benefits, such as environmental and social benefits, as there are no government schemes redistributing societal benefits toward certified producers. Possibly the most glaring issue is that there does not seem to be much evidence in the market for the existence of price premiums for certified products, especially in the long-term as the supply of them increases (Simula, Astana, Ismael, Santana, & Schmidt, 2004, p. 8).

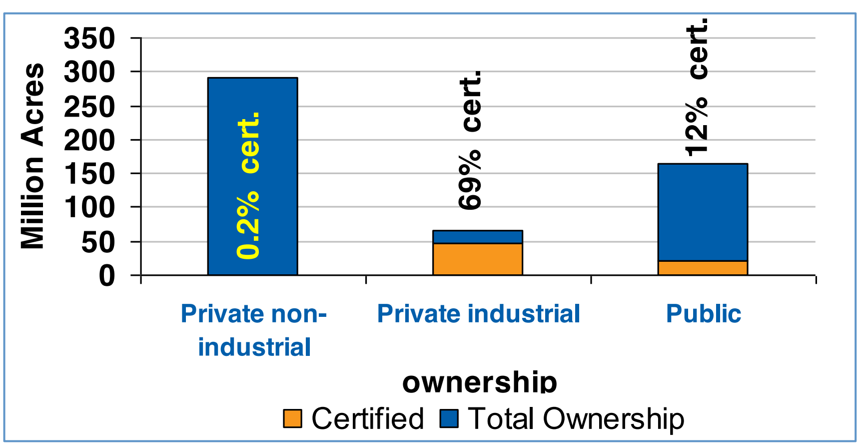
It is important to understand the cost-benefit dynamics for forest products certification, as it will help understand and solve potential bottlenecks to increased forest certification. For small non-industrial landowners, the perceived benefit of getting certified might not justify the cost and effort of seeking certification, as there does not seem to be much monetary incentive to do so. Therefore the focus should be on increasing the benefits of certification for certification holders and simplifying the process of certification.

Demographic Differences between Owners/Managers of Certified Forests vs. Non-Certified Forests

Private ownership is the dominant ownership structure in the United States, in contrast to Canada, where the government owns the majority of forests. More than two thirds of U.S. forestland is in hands of private entities such as forest industry companies, other businesses or corporations, partnerships, tribes, families, and individuals. Families constitute a big share of private ownership and most of these families do not have industrial forest operations in place on their properties, but rather hold their land for recreational purpose (Butler & Leatherberry, 2004, p. 4).

While non-industrial family forests produce up to 63% of U.S. fiber, only 0.2% of these forestlands are certified, as opposed to 69% of industrial forests and 12% of public lands, which is illustrated in Figure 13 (Metafore, 2007). This is attributable to higher relative certification costs for small landowners. (Vogt, Larson, Gordon, Vogt, & Fanzeres, 2000, p. 306)

Figure 13 - Certified Area by Land Ownership (Metafore, 2007)

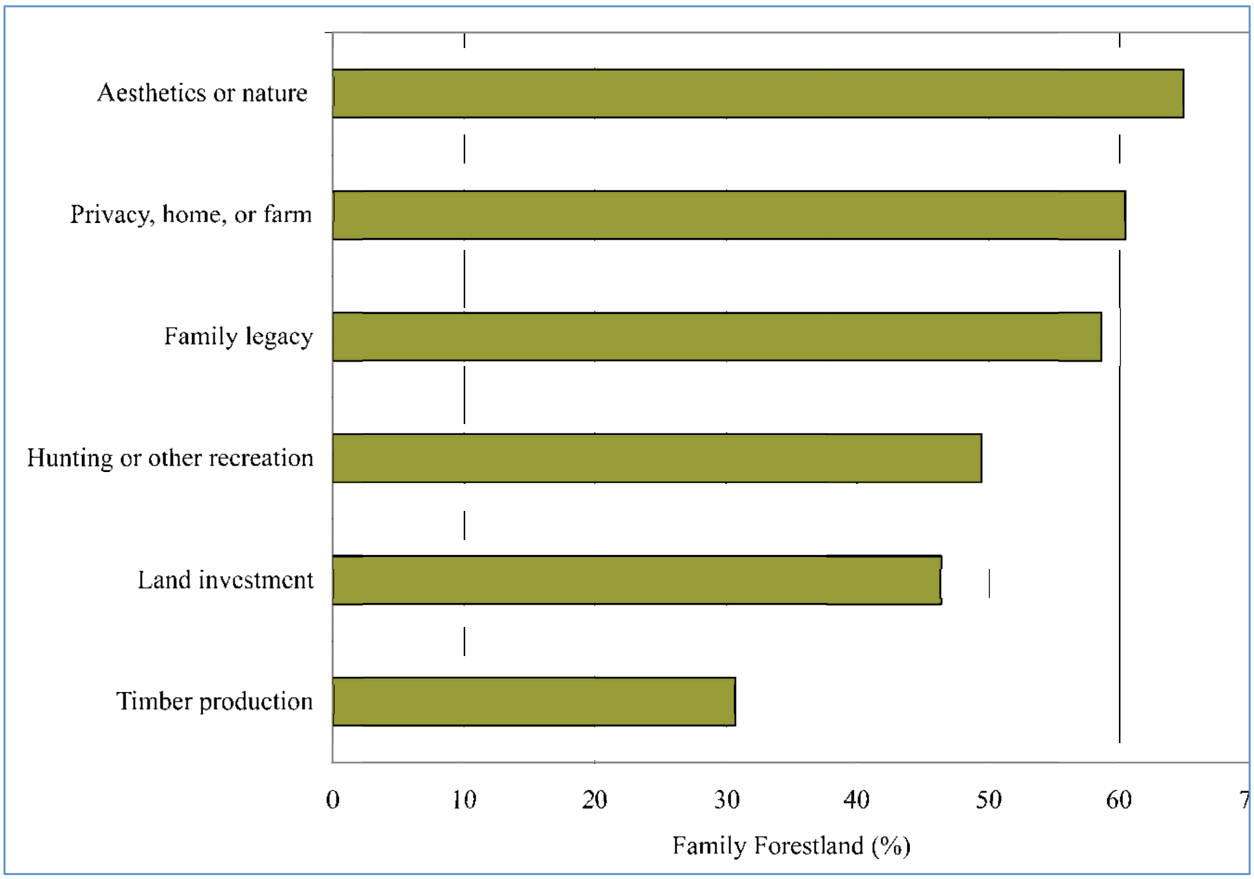


Family Landholder Statistics in the United States

Family ownership is a significant proportion of industrial and privately owned forests in the U.S. More than 42% of all forestland in the U.S. is family-owned, and that percentage projected to continue to increase (Zhang, Liao, Butler, & Schelhas, 2008, p. 2). Of these families, around 26% harvest their wood for timber production, but only 3% of these parcels have a management plan in place (Zhang, Liao, Butler, & Schelhas, 2008, p. 2). Families buy and hold land for many varied reasons, and only 9% of family owners report that timber production is an important reason for holding a tract of land, but in terms of total acreage, around 30% of family owned forests are mainly held for timber production. (Butler & Leatherberry, 2004, p. 8)[3].

There are regional variations in ownership across the U.S., mainly between the East and the West, which is reflective of early settlement patterns (see Figure 14). In the Eastern United States, more than 80% of land is privately owned; while in the West, only around 35% is privately owned. Instead, the government primarily owns Western forests (Butler & Leatherberry, 2004, pp. 4-5).

Figure 14 - Reasons Family Owners Hold Forest Land in the U.S. (Butler & Leatherberry, 2004, p. 7)



In addition, there are also regional variations in terms of reasons for holding a piece of forestland. In the South for example, timber production is one of the top three reasons for

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[3] Reasons for owning family forestland in the United States, 2003. Numbers include land-owners who ranked each potential reason as very important (1) or important (2) on a seven-point Likert Scale. Categories are not exclusive.

holding a piece of land while in the North East timber production is relatively less important (Butler & Leatherberry, 2004, pp. 6-7).

The above-mentioned regional variations in private versus public ownership and reasons for holding land will drive the regional variations between policies and programs that will have to be set up to stimulate certification as the challenges that will need to be overcome will be different (see Figures 15 and 16).

Figure 15 - Map of Regional Variations in Private and Public Ownership Across the U.S. (Butler & Leatherberry, 2004, pp. 4-5)

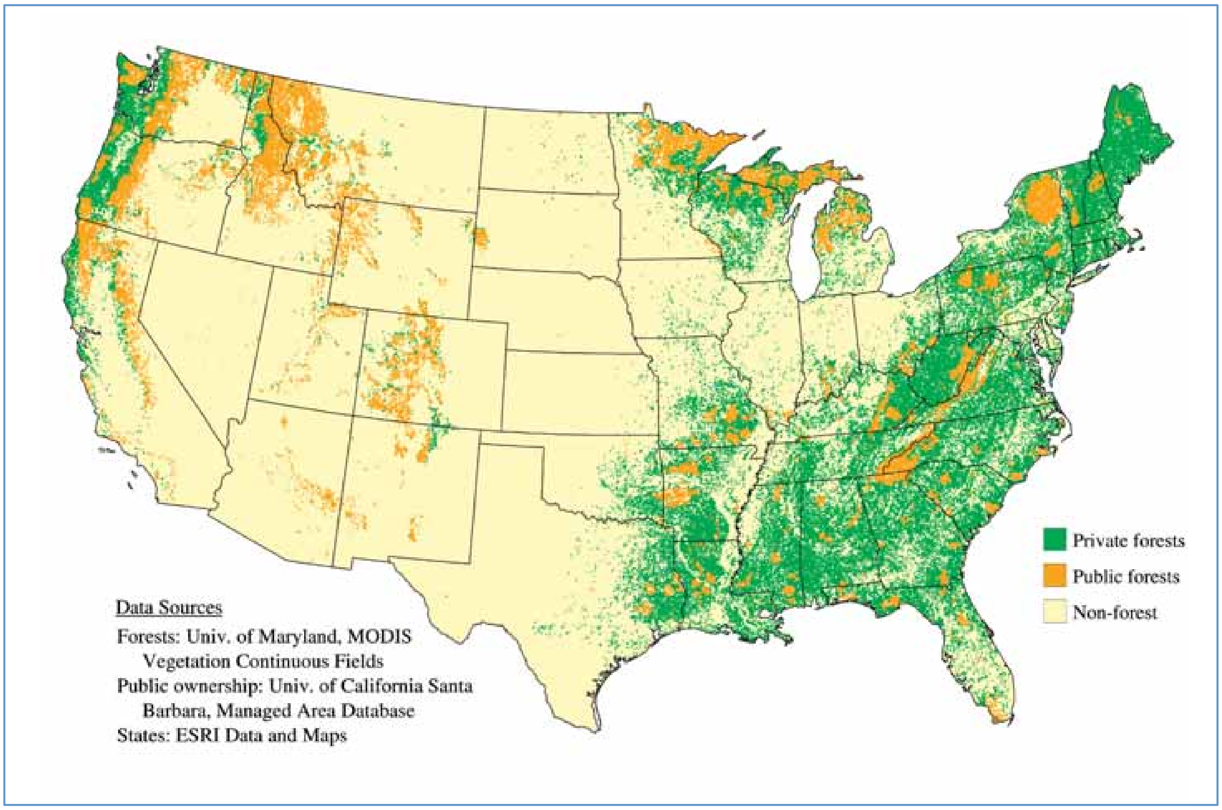
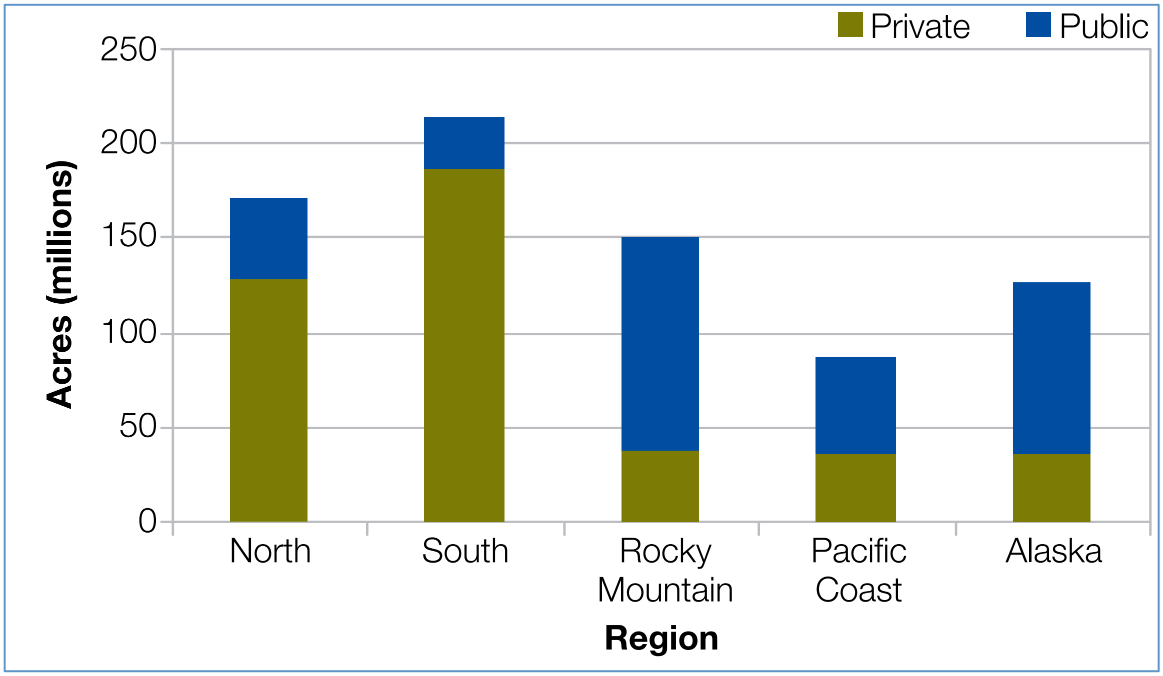


Figure 16 - Regional Variations in Private and Public Ownership Across the U.S. (USDA, 2011, pp. 11-18)

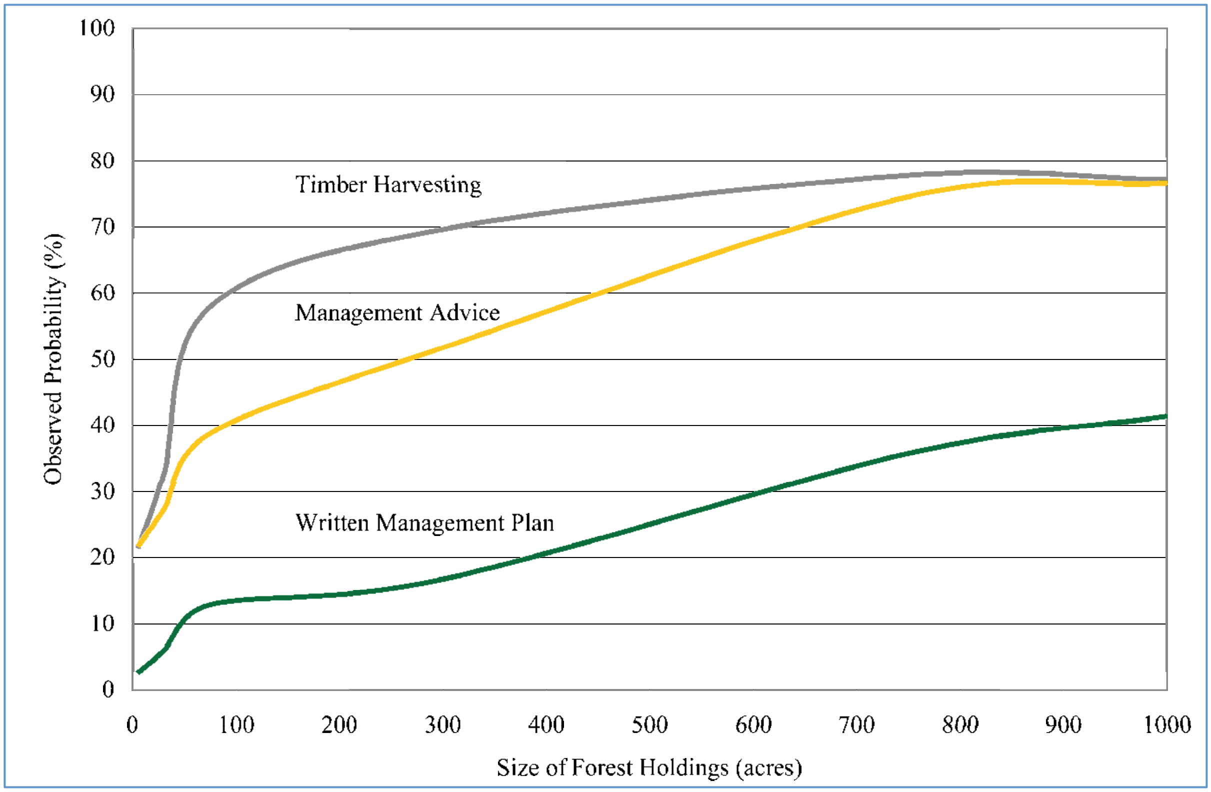


The majority of landholdings range from 1 to 9 acres and 10 to 49 acres (see Figure 17), and this trend toward smaller holdings is only strengthening (Zhang, Liao, Butler, & Schelhas, 2008, p. 2). This is problematic because as Figure 18 illustrates, the chances that a land holding will be used for timber harvesting, that land owners have sought management advice, and/or that a written management plan in place for the land holding, increase with for holding size. As for small landowners, whose main purpose may not be to harvest timber, having a management plan in place might be burdensome and unnecessary. Furthermore, a management plan is one of the main requirements for certification, so the burden to become certified would be great. Certification will be high for increasing number of family owners.

Figure 17 - Number of Family Owners per Holding Size (Butler & Leatherberry, 2004)

Year 2003	Number of family owners
Holding Size 1-9 acre	6 million
Holding Size 10-49 acre	3 million
Holding Size 50-99 acre	0.5 million
Holding Size 100-499 acre	0.5 million

Figure 18 - Correlation Between Holding Size and Management Plan and Timber Harvesting (Butler & Leatherberry, 2004)



Certification is a market-based mechanism that uses the potential for a higher price for harvested wood sold as an incentive for forest owners to manage their land in a more sustainable way. Its potential as an incentive will only be realized if owners are actually interested in going to the market with their product and if they can achieve the scale necessary that justifies the costs that have been described in the previous sections. As above statistics illustrate, that is not always the case for the U.S. and its multitude of small forest owners.

Existing Approaches to increase forest certification among small non-industrial owners

Group Certification

In a group certification scheme, different landholders are pooled together and a group manager oversees certification compliance. One certification is issued for the whole group, the overhead costs and reporting requirements are shared, and the group manager ensures compliance.

Several U.S. states, such as Wisconsin, Indiana and Massachusetts have set up agencies to administer the programs and have provided additional incentives (mainly tax-based) for landholders to become certified. Currently up to 40% of FSC certified area is administered through a state-administered group certification program (Bowyer, Howe, Bratkovich, & Bowyer, 2010, p. 10).

Further developing group certification as a tool for more small non-industrial landowners to certify their land could potentially be one of the ways to increase the share of certified forestland in the U.S.

Government Incentives

Governments can provide incentives to increase the benefits of certification for small landowners, in the form of tax credits and subsidies. For example, the state of Minnesota, through its managed forest law, offers a reduction in property taxes when landowners make a 25 to 50 year commitment to forest management (UNECE-FAO, 2010).

By increasing the benefits of certification, governments can help tip the scale in favor of certification, especially for small non-industrial landowners for which seeking certification may be too costly or complex undertaking. It can help address the inherent inefficiency in the current model of certification, which was described in the paragraph on ownership demographics.

Amendments to certification requirements for small and low-intensity operations

Certification systems such as FSC have initiatives that target small and low-intensity forest operations, and that could reduce the cost of certification. The initiatives relate mainly to adjusting the level of due diligence in assessing and monitoring the compliance to the standards to provide assurance levels reasonable relative to the size and complexity of the forest operations (UNECE-FAO, 2010, p. 119) (Durst, McKenzie, Brown, & Appanah, 2006)**.**

By making it easier for managers of small and low-intensity forest operations to obtain and maintain certification, it will reduce the initial burden of certification and will help in tipping the economic scale in favor of certification for many landowners in the U.S.

Part 2: Analysis of U.S. Sourcing Practices

The forest products supply chain is decentralized and very complex, including many processes and players from harvest through delivery to the end consumer (UNECE-FAO, 1998, p. 23) (D'Aveni & Ilinitch, 1992, p. 619). In order for a product to make it to the end user with a certification, every actor along the supply chain must be certified. In practice, this means having a management and monitoring system in place that can separate the “certified” inputs from the “non-certified” inputs. The indirect compliance costs can be high as well, since certified inputs need to be stored separately. For small intermediaries, this cost can be high, especially when they cannot achieve economies of scale due to lack of primary supply (UNECE-FAO, 1998, p. 23).

The estimated proportion of global round wood supply from certified forestland is roughly a quarter of the total supply. However, not all-potential supply ends up as certified consumer products. In some cases, the wood’s certified status gets “lost” as products proceed through the supply chain and intermediaries do not deem it beneficiary to keep track of the certification and/or retail chains may use their own labels, rather than an agency sponsored certification. It is very hard to quantify this “lost” amount as trade statistics do not differentiate between certified and non-certified products (UNECE-FAO, 2003, p. 86).

Supply chain planning is driven from the bottom up, based on market forecasts of customer demand, a phenomenon called "push marketing." When push marketing highly priced sensitive and commoditized products, the focus of the actors along the supply chain is to increase margins by optimizing operations. This is accomplished by increasing throughput and capacity utilization, and by reducing work-in-progress inventories (Haartveit, Kozak, & Maness, 2004, p. 26). In this kind of environment, it is hard to effectively balance supply with demand, especially for more sophisticated products, such as certified forest products (Haartveit, Kozak, & Maness, 2004).

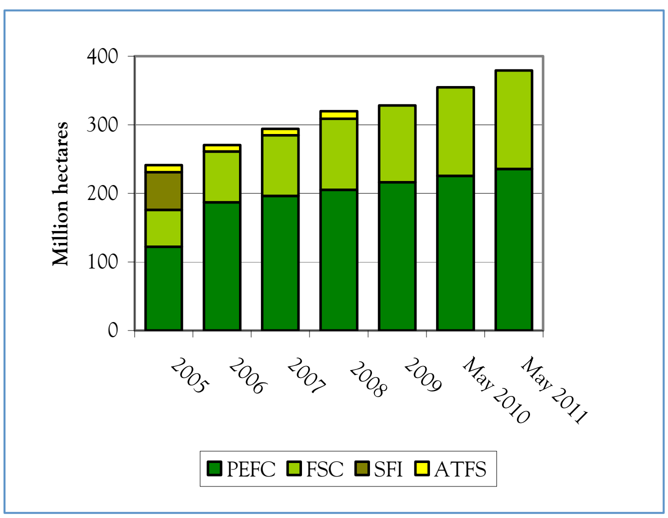
In practice this means that it is entirely possible that a product starts its descent down the supply chain as a certified product, but then loses that status in one of the intermediate steps, for example when a broker that trades the product does not hold a CoC certificate. Furthermore for some processors that need to source their products from many different sources, as the market is very fragmented, it can be hard to procure the volumes of certified inputs that are needed to make their production process cost-efficient. Therefore it is important that steps are undertaken that facilitate the flow of the certified products from the forest to the end-consumer.

Part 3: Analysis of North American Volume of SMF

Certified Forest Land

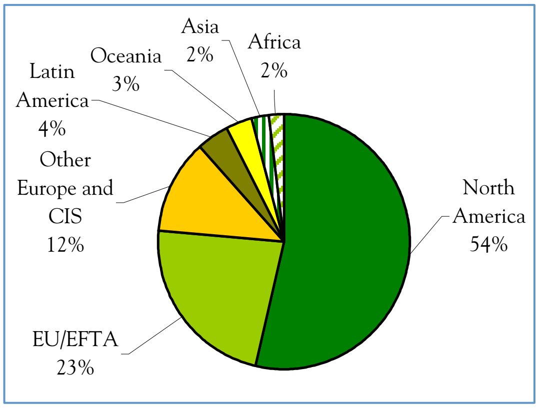
The forest area certified by major certification schemes stands at approximately 400 million hectares worldwide, which represents about 9.3% of the total forest area (see Figure 19) (UNECE-FAO, 2011, p. 100). If all the certified forests around the world were combined it would create a forest have the size of the United States.

Figure 19 - Forest Area Certified By Major Certification Schemes 2005-2011 (UNECE-FAO, 2011, p. 100)



North America accounts for more than 50% of the share of certified forestland worldwide (see Figure 20):

Figure 20 - Relative Shares of Total Global Certified Forest Area By Region (UNECE-FAO, 2011, p. 102)



Within North America, the United States and Canada account for more than 90% of the total. The United States has the largest area designated for production at 91 million hectares, and another 142.6 million hectares are designated as multiple use. In Canada, most of the forest land is publicly owned and is classified as multiple use. Only 1%, or 3.1 million hectares, of Canada's forest land is classified as productive, which is less than that country's certified acreage, indicating that in Canada, forests classified as multiple use are used for production purposes. When estimating the likely percent of certified productive acreage, multiple use forest land was included in total productive acreage in cases where certified acreage exceeded production acreage. As a result, Canada's estimated productive forest land includes forest land classified as multiple use, but the United States estimate does not. Using this methodology, Canada and the U.S. have similar productive forest certification rates; approximately 59% and 53% of productive forest land, respectively. However, if you consider that the Canadian government holds an effective monopoly on its forests (as 93% of the forest land is publicly owned), the certification rate in Canada could be as high as 100%. Also, if multiple use forest is included in the U.S. estimate, the U.S. certification rate falls to approximately 21%. These wide variations (59% – 100% for Canada, and 21% – 53% for the U.S.) demonstrate the inherent difficulty in making an estimate given the wide variety of circumstances within each country.

North America's European trading partners have very high certification rates (Finland and Austria 100%, Germany 95%)[4], while most trading partners in the developing world, such as Indonesia and Brazil, do not even register double-digit shares. The authors considered, among other things, deforestation rates among North America's trading partners to identify certification opportunities. Not surprisingly, among North America's trading partners, deforestation rates are highest in those countries with the lowest certification rates (FAO, 2011).

Trading partners' certification rates and export markets were analyzed to identify opportunities where North America can encourage increased certification levels. Indonesia, Malaysia, New Zealand and Brazil were identified as opportunity countries because they have low certification rates and a significant percentage of their exports are consumed within North America. While

[4] Original Columbia research using the methods described in Methodology – Supply, showing calculation methodology for certification level with input from the following documents: (FAO, 2011) (FSC, 2011)

opportunities exist in these countries, they may be tempered by local considerations. For example, about a quarter of Brazil's exports are consumed in North America (see Figure 21); however, Brazil is cutting forests and repurposing the land for agriculture and urbanization. Those policies make it unlikely that country will respond to pressure to increase certification rates.

Figure 21 - Certification Rates for North America's Major Trading Partners (FAO, 2011) (FSC, 2011)

Country	Total forest area (1,000 ha)	"Likely" Estimate of Productive Forest (1,000 ha)*	High End Estimate of Production Forest (All but Set Aside) (1,000 ha)*	Total Certified (1,000 ha)	Estimated "Likely" Certification Rate*	"Conservative" Estimate of Certification Rate*
Indonesia	94,432	50,049	56,659	801	1.60%	1.41%
Malaysia	20,456	12,683	15,751	5,148	40.59%	32.68%
Austria	3,887	2,332	2,332	2,518	100.00%	100.00%
Belgium	678	373	366	305	81.85%	83.37%
Czech Republic	2,657	1,993	2,072	1,933	97.00%	93.27%
Finland	22,157	20,163	20,163	20,787	100.00%	100.00%
France	15,954	11,966	15,475	5,092	42.55%	32.90%
Germany	11,076	8,196	8,196	7,797	95.13%	95.13%
Netherlands	365	274	274	137	49.91%	49.91%
Russian Federation	809,090	412,636	720,090	28,930	7.01%	4.02%
Sweden	28,203	20,870	25,383	19,853	95.12%	78.21%
New Zealand	8,269	1,985	1,902	1,385	69.80%	72.83%
Brazil	519,522	36,367	431,203	7,589	20.87%	1.76%
North America's Trading Partners	**1,536,746**	**579,885**	**1,299,867**	**102,273**	**17.64%**	**7.81%**

*Calculated in accordance with parameters set forth in supply methodology section.

Certified Products

In terms of volumes of forest products certification there are two main components: the first one is the pool of potential forest products available for trade as expressed in amounts of certified forestland and the second one is the actual amount of certified forest products traded for which number of chain of custody certificates issued could be used as a proxy measure. In order for a forest product to reach the end-consumer with its certification intact, all the actors along the supply chain that handle the certified product, must hold a chain of custody certification. As of May 2011, major certification organizations had issued 28,423 chain of custody certifications worldwide. The market has been growing exponentially since 2005 (see Figure 22), driven by demand from large publishers such as Time Inc. and other customers of the paper sector, by green public procurement policies targeted at forest products, by policies aiming to promote green building practices and by tightened illegal logging legislation (UNECE-FAO, 2010, pp. 122-123).

Figure 22 - Chain of Custody Certified Trends Worldwide, 2005-2011 (UNECE-FAO, 2011)

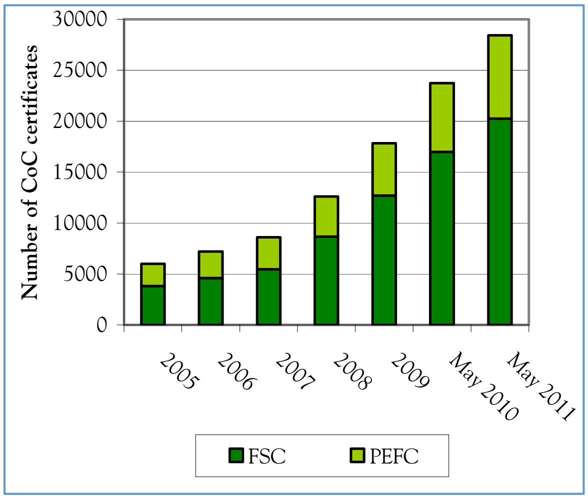
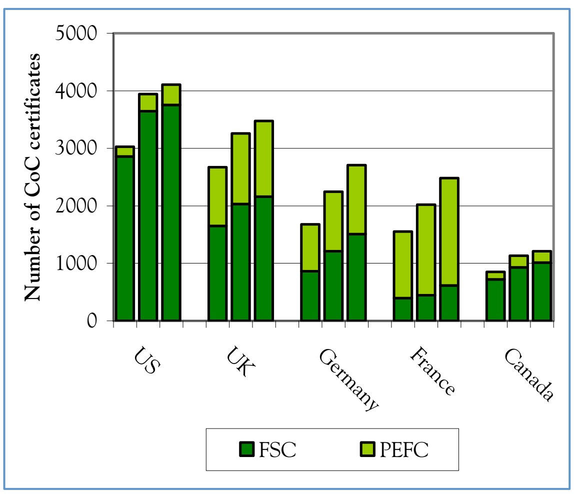


Figure 23 - Chain of Custody Certificates In Five Countries Within the UNECE Region, 2009-2011 (UNECE-FAO, 2011, p. 105)



The United States has the most CoC certificates (see Figure 23), followed by the United Kingdom, Germany, France and Canada. Data is limited in terms of actual volumes and market shares, as trade statistics do not track certified products separately (UNECE-FAO, 2003, p. 86).

Recommendations

In order to guide GreenBlue and its Forest Products Working Group in their efforts, a series of recommendations have been developed based on the report analysis. The proposed recommendations aim to address the existing supply and demand imbalances by promoting awareness, creating incentives, and increasing demand for SMFPs. The recommendations are categorized into four all-encompassing areas: (1) outreach and education, (2) reporting, (3) supply chain initiatives, and (4) targeted industry associations.

Outreach and Education

Develop marketing campaigns, possibly with the help of larger industry associations, targeted at the buyers and sellers along the supply chain to gain support, spread awareness, and increase demand at various levels of the forest product supply chain. Also, develop educational programs targeted at the general public to increase overall awareness of forestry issues and beneficial affects of SMFPs. This may include promoting existing certification labels and explaining their underlying meaning to the public.

Disclose a list of companies that demonstrate exemplary promotion of sustainable forestry and responsible sourcing practices, in order to foster competitiveness and public awareness. Such a list has two potential benefits. It would reward the companies that already publically report their SMFP efforts, which can improve their brand image or standing within the industry. It also draws attention to uncommitted companies not on the list. This could be similar to the "Carbon Disclosure Project", which holds large amounts of information on greenhouse gas emissions of corporate business and encourages companies to partake in the disclosure process (CDP, 2011).

Develop the statistics necessary to determine the supply of SMFPs. It is difficult to determine accurate levels of sustainably managed forests that are available for production. USDA Forest service reports overall harvest rates, but does not seem to specify whether the sources are certified. Good estimates of these figures would help determine potential sustainable supply volume. Likewise, it is difficult to determine the volume of certified wood products that are shipped each year to U.S. companies. The U.S. Census Bureau, for example, has gross statistics on shipments of wood products by dollar value, but does not seem to have data on certified volumes. Lobbying to expand the scope of these data sources should be explored to ascertain what percentage of U.S. sustainably managed forest capacity is being converted to actual supply.

Target small, non-industrialized landowners and educate them on initiatives available to have their forest acreage certified through group certification. As the majority of industrial forests in the developed world have been certified, the focus to increase certified acreage is shifting towards smaller, non-industrial, privately owned forests. For example, promote state-administered programs supporting small landowners to adopt certification. Presently there are some large-scale, state-administered programs promoting group certification. Further subsidies and tax breaks, such as property tax reductions in return for certification, could encourage more small forestland owners to join group certification schemes. Several states, including Wisconsin, Indiana, and Massachusetts, have programs in place that could serve as examples for other regions.

There are also initiatives taking place on the corporate level. One example is how Time Warner has engaged the support of Maine to help with its small to midsized landowner initiative (Time Warner, 2011, p. 25) (Time Inc., 2010, pp. 11-12). To foster similar initiatives, draw attention to the Lacey Act. The Lacey Act is federal statute that greatly influences forest product procurement practices. In its simplest terms, it prohibits the purchase of illegally logged timber sourced domestically or internationally; it requires the declaration of origin and species and establishes penalties for any violation (EIA, 2007). For the corporate consumer, increased certification levels domestically and internationally could lower the instances of illegal logging, and in turn have the potential to reduce the risk of being out of compliance for FP buyers.

Reporting

Promote responsible forest product purchasing guidelines, similar to or in cooperation with WWF and WRI. The WWF guidelines focus on traceability and environmental status of forest supplies. In particular, they outline a step-by-step approach to accomplish souring from credibly certified sources (WWF, 2006, pp. 1, 4). WRI divides its guidelines into three topics: (1) sourcing, which covers origin, information accuracy and legality; (2) environmental aspects includes themes like ecological protection and (3) social aspects focus on the impact on local communities (WRI, 2011, p. 2). Each framework alone, a combination of both, or building upon them to create comprehensive guidelines could provide valuable assistance to companies implementing FP sourcing practices.

Standardize a reporting framework for SMFPs, including forestry metrics and performance indicators to guide strategic planning and implementation across industries. Make use of best practices and second generation policies set forth by industry leaders to further develop goal setting and benchmarking processes. In addition to providing guidance to companies, standardized reporting requirements will also make it easier to compare their relative performance.

Finally, encourage the GRI to explicitly include metrics for procurement of forest products and content indicators for certified products. Assuming this is successful, the following step would be to encourage more companies to report using quantitative GRI standards.

Supply Chain Influence

Identify any cost savings from certification or price neutrality in comparison to non-certified products. Perform a cost-benefit or other financial analysis, in order to better understand the costs involved with sourcing certified fiber compared to other FP initiatives for each of the sector's products. If cost savings can be determined and communicated to procurement managers, demand for SMFPs could increase and have a positive impact on supply. In addition, encourage companies to allocate portions of cost savings to fund certification efforts to foster supply.

Promote an "open source" supply chain procurement and certification technology in order to stimulate SMFP demand by overcoming capital investment costs, and facilitating the engagement of a wide range of FP buyers. Promoting standardized tracking software among all buyers further up the supply chain could encourage CoC certification. It would help to track CoC manifests, supplier certifications, and ensure availability of data and information. Encourage leading companies to share their technology and knowledge.

Develop online assessment tools for evaluating forest products, possibly building on existing examples. Making online tools accessible to all potential FP buyers is critical. Some of the existing tools (PREPS and EPAT) appear to be successful in promoting sustainable procurement, but they also require financial outlays to develop and are accessible only to companies that supported their development. Overcoming this financial barrier could yield better results by engaging more users.

Targeted Industry Associations

Encourage both sector-specific and cross-sector collaboration through the new GreenBlue working group. Sector-specific cooperation is critical to address particular bottlenecks and complexities, like the lack of price premiums, related to certified products. Specifically, consumer expectations and willingness to pay for packaging and solid wood products are different due to the products' varying attributes and thus require distinctive attention. Obtaining detailed information and insight from progressive companies could facilitate this approach. Cross-sector cooperation is needed for wider participation and awareness of SMFP issues. These joint efforts may foster responsible forestry and SMFP standards.

Collaborate with a supply chain organization, like the Institute for Supply Management (ISM), in order to benefit from and leverage their strong influence. The ISM is one of the largest supply chain management associations in the world with over 34,000 members across industries, including chief procurement and supply officers (ISM, 2008). Their monthly economic indicators are closely followed by Wall Street and serve to influence market direction. They have a published sustainability manifesto titled "ISM Principles of Sustainability and Social Responsibility with a Guide to Adoption and Implementation" (ISM, 2008). There is another document on sustainability metrics that mentions forest product sourcing as the 9th of 28 lettered metrics (ISM, 2011, pp. 2-3). Both documents show a limited commitment to SMPFs, however, a strong collaborative effort could be an opportunity to stimulate progress in this area.

Recommendations for Further Research

To further estimate future supply of SMFPs, it would be helpful to have statistics from the various certification organizations on the size of their pending certifications. Also, it would be interesting to know if the organizations are experiencing any difficulties managing and processing the applications. If backlogged applications exist, determining the timeline for resolving issues and processing applications could help with estimating future supply.

For the homebuilders subsector, it could be useful to investigate whether the U.S. Green Building Council's LEED for Homes rating system is an effective tool for increasing consumption of certified forest products, and possibly driving certifications. Under this scheme, buildings are awarded one point for their use of FSC certified wood. If more points were allocated to this category, it might stimulate demand. LEED periodically undergoes changes to address market readiness (USGBC, 2011a), making this a possibility to explore. Additionally, some state and local governments have adopted standards that include LEED certification, which should result in some increased demand for certified forest products. The ability for public policy to incorporate LEED and drive demand for SMFPs should also be explored (USGBC, 2011b).

In order to drive demand for SMFPs, it could be helpful to analyze consumer behavior to develop effective consumer marketing campaigns. For the household durable subsector, furniture buying is both discretionary and infrequent. It could be interesting to investigate what is motivating consumers to buy from a specific household durable company and if environmental attributes, such as certified wood, influence purchasing behavior. If this specific attribute plays a role, is it true for all price levels, from low-end to high-end priced furniture and are there ways to influence consumers.

A second area of consumer behavior worth exploring is whether certified packaging material influences consumer purchasing. Certified packaging is only one of several environmental attributes, such as recycled content, that can characterize packaging. It could be worthwhile to evaluate whether the introduction of certified packaging, in comparison to a different environmental attribute, could impact the purchasing decisions of consumers.

Finally, this report is focused on large industry players and does not assess the impact of small companies on the SMFP market. It may be valuable to explore the option of forming "procurement cooperatives" among smaller buyers interested in sourcing SMFPs in order to give them purchasing power influence on suppliers and foster demand for sustainable forest products.

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Appendix A: Demand Research Matrices

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Demand Research Matrices: Paper and Publishing Sector

Company Name (Paper)	International Paper	Office Depot
Location (Company Headquarters)	Memphis, TN	Boca Raton, FL
Total Annual Revenue	$23.36B (Forest Disclosure, 2010, p. 22)	
Market Cap	$10.51B (Yahoo! Finance, 2011)	$585.27M (Yahoo! Finance, 2011)
Business segments	Paper and Packaging	Office Supplies
Which additional forestry metrics are reported by the company?	Do not report total certified fiber or sustainably managed land, just claim that most operations are certified.	% of FSC certified marketing papers, % CSA,PEFC,SFI certified marketing materials, Percent of materials that are recycled vs. total waste (Office Depot, 2010), % of certified copy paper sold,
Notes on available metrics:	Pages 12-17 on 2010 report	No information available
Type of certification reported (Forest Management, Fiber Procurement, CoC?)	PEFC, FSC, SFI, Cerflor, ATFS. Forest Management Certification, Fiber Procurement Certification, Chain of Custody Certification	Accepts all certifications, but report FSC separately. (Office Depot, 2010)

Company Name (Paper)	International Paper	Office Depot
What are the company's sourcing policies?	"Most of International Paper's operations are certified to one or more of these third-party fiber procurement, chain of custody or forest management certification standards. Our fiber certification programs assure that all of the fiber we use originates from responsibly managed sources. It is our policy that in countries or regions of the world that do not have established forest certification standards, we will establish International Organization for Standardization (ISO) 14001 environmental management systems on our wood procurement systems." (International Paper, 2011, p. 14) Do not provide hard data.	"Between 2010 and 2012, Office Depot plans to increasingly buy green by: 1. Sourcing third party certified green products in each major category we sell where there is a credible third party eco-label 2. Ensuring 80% of our marketing materials come from certified well-managed forests, with 40% from FSC-certified forests 3. Ensuring 80% of the office products we use internally are from Office Depot's Green Book" (Office Depot, 2011, p. 1)
What are the reasons given for these policies?	"When trees are grown in responsibly managed forests, they are a renewable resource." (International Paper, 2011, p. 6)	"Our environmental leadership has helped us win and retain contracts with some of the most environmentally conscious organizations" (Office Depot, 2010, p. 1) "1. We care about the planet and want to reduce our environmental footprint. 2. We consider our environmental strategy to be a business strategy that helps us attract and retain customers who are interested in going green. 3. We listen to our customers and aim to serve their growing environmental needs. 4. We know that environmental initiatives that reduce our carbon or waste footprint often save costs and drive long-term operational efficiency." (Office Depot, 2011, p. 1)
Are there any policies specifying the amount of	See above	See above

Company Name (Paper)	International Paper	Office Depot
sourcing from sustainably managed forests?		
If so, are those current requirements or goals?	Goals	Goals
What - if anything - does the company say about the Lacey Act or illegal logging?	No information available	No information available
Does the company identify any bottlenecks in the sourcing process?	"More than 90 percent of International Paper's fiber supply in the United States comes from privately owned forests, most of which are small and family-owned." They participate in the Sustainable Forestry Initiative's State Implementation Committees (SICs) and created a handbook for small landowners: http://www.internationalpaper.com/documents/EN/Sustainability/LandOwnersBrochure.pdf	No information available
Other relevant sustainability efforts	"It is our policy that in countries or regions of the world that do not have established forest certification standards, we will establish International Organization for Standardization (ISO) 14001 environmental management systems on our wood procurement systems." (International Paper, 2011, p. 14) Forest Footprint Disclosure Project (International Paper, 2011, p. 16)	Recycling metrics available (Office Depot, 2010)
Waste Flow data (Wood)		

Company Name (Paper)	**International Paper**	**Office Depot**
Additional Links to Sources	http://www.internationalpaper.com/documents/EN/Sustainability/SustainabilityReport.pdf	http://www.officedepot.cc/environment/
Competitors to follow up on		
Overall conclusion	No apparent hard policies, specific goals, or metrics. Difficult to conclude that IP has strong/active policies for procuring SMFPs.	Publish relevant, detailed metrics, and the data goes back several years.

Company Name (Paper)	**New York Life Insurance**	**Bank of America**	**State Farm**
Publicly traded/Privately owned	Private	Public	Private
Location (Company Headquarters)	New York, NY, USA	Charlotte, NC, USA	Bloomington, IL, USA
Total Annual Revenue	2010: $34,947,200,000 (Fortune, 2011)	2010: $111,390,000,000 (Bank of America, 2011a)	2010: $61,479,600,000 (Fortune, 2011)
Market Cap	Not Available	$56,040,000,000 (Yahoo! Finance, 2011)	Not Available
Business segments	Insurance	Banking	Insurance
Which additional forestry metrics are reported by the company?	No Metrics Reported	Total Paper Consumption, Paper with Recycled Content, Percentage of office supplies with recycled paper content, Bank of America branded content with recycled paper (Bank of America, 2011b, p. 70)	No Metrics Reported
Notes on available metrics:	No sustainability report	No forestry data available.	No forestry data available

Company Name (Paper)	New York Life Insurance	Bank of America	State Farm
Type of certification reported (Forest Management, Fiber Procurement, CoC?)	No information available	FSC preferred, also SFI. (Bank of America, 2011c, p. 1)	No certification information reported by the company, but according this article they recently switched from SFI to FSC certified paper on certain documents. This information is not in their CSR report. (Godelnik, 2011)
What are the company's sourcing policies?	No information available	"Sustainable Forest Practices: When procuring paper products containing virgin wood fiber, we require suppliers to use environmentally preferable practices that ensure the source forests from which fiber is procured are managed properly. Protection of Endangered Forests: We require suppliers of paper products to identify and appropriately manage forests threatened by human or commercial activity. We require that our forest products suppliers document the sustainability of their fiber sources and that they be third-party certified to an acceptable forest certification standard." (Bank of America, 2011e)	No information available
What are the reasons given for these policies?	No information available	To align policy with previous environmental commitments (Bank of America, 2011e)	No information available
Are there any policies specifying the amount of sourcing from sustainably	No information available	No, but the new policy will require all suppliers to provide audits that ensure the wood fiber is harvested using sustainable harvesting practices. Sustainable harvesting practices are not	No information available

Company Name (Paper)	New York Life Insurance	Bank of America	State Farm
managed forests?		described in detail. (Bank of America, 2011e)	
If so, are those current requirements or goals?	No information available	Requirements	No information available
What - if anything - does the company say about the Lacey Act or illegal logging?	No information available	Company policy: "the bank will not knowingly do business with companies that collude with, or purchase wood products from illegal logging operations" (Bank of America, 2011e)	No information available
Does the company identify any bottlenecks in the sourcing process?	No information available	"But our society has a long way to go, because no single forest certification system yet comes close to certifying enough U.S. forest acreage to supply the variety of paper grades that we and our customers need. The reason is inescapable and is unlikely to change soon: the overwhelming percentage of forestland in the United States (70 percent) is owned by private non-industrial landowners, most of whom are currently indifferent to certifying their forestlands to one or any of the standards." (Bank of America, 2011c, p. 1)	No information available
Other relevant sustainability efforts	No information available	No relevant information available	Recycling initiatives, but mostly for electronics. Also building LEED-certified buildings. (State Farm, 2011)
Waste Flow data	No information	No information available	8499.5 tons of mixed paper and

Company Name (Paper)	**New York Life Insurance**	**Bank of America**	**State Farm**
(Wood)	available		cardboard recycled in 2009 (State Farm, 2011)
Additional Links to Sources	http://www.newyorklife.com/	http://webmedia.bankofamerica.com/environment/pdf/Paper_Procurement_Policy.pdf	http://www.statefarm.com/aboutus/community/green/green.asp
Competitors to follow up on	AIG	Barclays, Wells Fargo, Citigroup, Goldman Sachs, JP Morgan Chase	
Overall conclusion	No public information on sustainability available except an Earth Day press release.	The company recently changed its policy to require all paper to be certified, but does not have a timeline.	The company is in the process of creating a paper sourcing policy, but has not reported substantial data yet.

Company Name (Paper)	**Avon**	**Staples**
Publicly traded/Privately owned	Public	Public
Location (Company Headquarters)	New York, NY, USA	Boston, MA, USA
Total Annual Revenue	2010: $10,900,000,000 (Avon, 2011c)	2010: $24,000,000,000 (Staples, 2011)
Market Cap	$8,170,000,000 (Yahoo, 2011)	$9,070,000,000 (Yahoo! Finance, 2011)
Business segments	Beauty Products	Office Supplies
Which additional forestry metrics are reported by the company?	Percentage of paper brochure products from certified or recycled sources (74%) (Avon, 2011c)	Estimated sales of FSC certified products (Staples, 2011)

Company Name (Paper)	Avon	Staples
Notes on available metrics:	Mostly a pledge, hard data available for only one year.	No further information
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	The accepted certification schemes are: Forest Stewardship Council (FSC); Sustainable Forest Initiative (SFI); Canadian Standards Association's National Sustainable Forest Management Standards (CSA); Sistema Brasileiro de Certificacao Florestal (CERFLOR) in Brazil; and Program for the Endorsement of Forest Certification Schemes (PEFC) and other forest certification schemes meeting broadly recognized performance based criteria (Avon, 2011b)	FSC is preferred. PEFC, SFI, and SFM are also acceptable (Staples, 2010, p. 2)
What are the company's sourcing policies?	The company will give preference to wood fiber with higher levels of FSC certification. Also, "Avon will give preference to paper suppliers who supplement their land management plans with natural forest restoration and recovery initiatives" (Avon, 2011b)	The company's long-term goals are to only procure paper products that are "Certified under the Forest Stewardship Council (FSC) standard, or if market conditions do not support sourcing of FSC certified paper products, certified to an alternative certification standard listed in this policy; •Made with post-consumer recycled or sustainable alternative fibers where market conditions allow, and; •Harvested, manufactured, and distributed to minimize life-cycle environmental and social impacts." (Staples, 2010, p. 1)
What are the reasons given for these policies?	Corporate citizenship (Avon, 2011b)	Corporate Sustainability, Customer Demand (Staples, 2010, p. 1)
Are there any policies specifying the amount of sourcing from sustainably	Goal of sourcing 100% of paper brochure products from certified or recycled sources by 2020. (Avon, 2011b)	Goal of all FSC certified paper but no stated timeline. (Staples, 2010, p. 1)

Company Name (Paper)	Avon	Staples
managed forests?		
If so, are those current requirements or goals?	Goals	Goals
What - if anything - does the company say about the Lacey Act or illegal logging?	The company will phase out paper sourced from regions identified by stakeholders as providing illegally harvested wood. (Avon, 2011b) No direct mention of the Lacey Act.	Claims to work with the World Resources Institute's Forest Legality Alliance (http://www.forestlegality.org/) (Staples, 2011) to prevent illegal logging.
Does the company identify any bottlenecks in the sourcing process?	No specific bottlenecks identified, but the company will give paper suppliers time and support to be certified by 2020, indicating anticipation of a long process.	"One of the challenges of shifting our paper purchasing to mostly FSC-certified stock is the difficulty of finding enough certified fiber in the areas where we source paper, particularly in the southeastern United States" (Staples, 2011)
Other relevant sustainability efforts	Goals: Reduce GHG emissions per unit produced by an additional 10 percent by 2012 from already reduced 2008 baseline levels. Reduce energy consumption per unit produced by 10 percent by 2012 from already reduced 2008 baseline levels. Reduce water consumption per thousand units produced by 7 percent by the end of 2012, from already reduced 2008 baseline levels. (Avon, 2011a)	Carbon Canopy- a program in the Southeastern US to "create financial incentives for private landowners to increase forest conservation and restoration efforts and work toward FSC certification" (Staples, 2011) -Works with Rainforest Alliance's SmartSource Program (Staples, 2011) -Works with GreenBlue's Environmental Paper Assessment Tool (Staples, 2011)
Waste Flow data (Wood)	No Information Available	Waste metrics are reported but they don't specify paper waste. (Staples, 2011)
Links to Sources	http://avoncompany.com/CorporateCitizenship/corporateresponsibility/whatwecareabo	http://www.staples.com/sbd/cre/marketing/staples_soul/environment.html

Company Name (Paper)	Avon	Staples
	ut/environment/paperpromise.html	
Competitors to follow up on		
Overall conclusion	The company's goal is 100% of all paper certified, with a preference for FSC, but other schemes will count towards the goal. The company will try to achieve this this by working with their existing suppliers to help them achieve certification and to incentivize them to do so by giving preference to fully certified suppliers.	The company's sustainable paper procurement policy is new and has serious goals but no timeline. 2011 is the first year of the company's efforts, so more information will be available next year when they start reporting on progress.

Company Name (Paper)	Time Warner Inc.	Hearst Corp.	RR Donnelley & Sons Co.
Publicly traded/Privately owned	Public (TWX)	Private	Public (RRD)
Location (Company Headquarters)	New York, NY	New York, NY	Chicago, IL
Total Annual Revenue	$26.888B (Fidelity.com, 2011)	$3.72B (ReferenceUSA, 2011)	$10.019B (Fidelity.com, 2011)
Market Cap	$31.31B (Fidelity.com, 2011)	NA	$2.65B (Fidelity.com, 2011)
Business segments	Film production, distribution; newspaper, periodical, book publishing; cable; television; interactive services (ReferenceUSA, 2011)	Publishing; cable; broadcasting, production, distribution; internet; real estate. (ReferenceUSA, 2011)	Commercial and financial printing; direct mail; print fulfillment; forms and labels; logistics; call centers; print management; online services; digital photography; content & database management (ReferenceUSA, 2011)

Company Name (Paper)	Time Warner Inc.	Hearst Corp.	RR Donnelley & Sons Co.
Which additional forestry metrics are reported by the company?	Supports all major forest certification standards (FSC, SFI, CSA, PEFC, ATFS) (Time Inc., 2010, p. 10)	Recognizes several certification standards (Hearst Corporation, 2009, p. 6)	FSC, SFI, PEFC (RR Donnelley, 2011a, p. 10)
Notes on available metrics:	No further information	No further information	No further information
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	-Certified Sustainable Forestry Program: Work with governments and landowners providing majority of fiber to U.S. marketplace (Time Warner, 2008, p. 25) -Chain of custody certification (COC) of fiber for magazines (Time Inc., 2010, pp. 10-11) -Specific third-party audits sometimes required where COC certification is absent. (e.g. supplier: Nippon Paper; fiber source: Australia) (Time Inc., 2010, p. 14)	-Hearst Sustainable Forestry Initiative (HSFI) started in 2004 --All suppliers report -Chain-of-custody (COC) certification of 100% of fiber entering their supplier paper mills (Hearst Corporation, 2009, p. 6)	-Forest management (FSC, SFI, PEFC) -COC certification (RR Donnelley, 2011a, p. 10)
What - if anything - does the company say about the Lacey Act or illegal logging?	Requires paper suppliers to demonstrate compliance (Time Inc., 2010, p. 15)	See COC under Sourcing policies	-Vows to vigorously support compliance -Informs all suppliers of expectation of compliance -Implemented declaration system for suppliers to certify compliance with Lacey and other environmental regulations (RR Donnelley, 2011c)
What are the company's sourcing policies? What are its major programs	-Increased chain-of-custody-certified fiber in magazines from 25% to 80% from 2002 – 2009. Goal to remain at 80% by 2010. Five major paper suppliers. Two – UPM and Verso Paper – are being measured vs.	-75% certified fiber in 2009; goal of 80% from 38% in 2004 -90% of paper sourced from North America	-140 triple-certified (FSC, SFI, PEFC) manufacturing operations worldwide, including 100% COC-certified (FSC) printing facilities in

Company Name (Paper)	Time Warner Inc.	Hearst Corp.	RR Donnelley & Sons Co.
or efforts?	carbon footprint reduction targets. (Close to or exceeding targets.) Monitoring others is currently "complex" and requires consistent state and federal emissions standards. (Time Inc., 2010, pp. 7,11,14) -Currently, increased focus on increasing % of world's certified forests from current level of ~10% (Time Inc., 2010, pp. 11-12) -Working with consortium – Hearst, SFI, ATFS, Verso, NewPage, et al. to make certification more efficient and affordable to small-mid landowners (20K – 50K acres) by grouping the landowners. -Expect to add 3K-4K certified landowners and 1MM acres in Maine by 2010. (Maine has highest % of certified forests in U.S. but still 10MM acres un-certified.) -Partner with UPM on sustainable harvesting study of birds in Canada conducted by a university. -Founding member of Paper Working Group (10 major paper purchasers + Metafore) (Time Inc., 2010, p. 13) -Make environmentally friendly paper more available and affordable -Developed EPAT: web-based tool: -Suppliers provide 19 perf. Indicators -Purchasers rank each based on importance to them -Overall score to identify best-match suppliers	-Requires 100% of fiber entering mills to be Chain-of-Custody certified by third party --Legally harvested (Lacey Act) --Not from endangered forests -Launched pilot program with Time to increase certified fiber (Hearst Corporation, 2009, p. 2) -Stops sourcing from mills that fail to meet certification targets -Works with govt., landowners, third parties to increase certification (See Maine initiative) (Hearst Corporation, 2009, pp. 2,6)	North America, 95% worldwide -Pursues COC certification for all its suppliers (RR Donnelley, 2011a, p. 10)
What are the reasons given for these policies?	-Supporting sustainable forestry is an environmental responsibility and Time can leverage its size to promote sustainability	-Environmental stewardship is at the core of the company's	-Sustainability is not a choice between being cost-effective and environmentally

Company Name (Paper)	Time Warner Inc.	Hearst Corp.	RR Donnelley & Sons Co.
	(Time Inc., 2010, p. 10) -Prudent business practice to ensure continued, affordable paper supply (Time Inc., 2010, p. 10)	identity, not just an integrated component of doing business (Hearst Corporation, 2009, p. 4)	conscious. It is an integration of the two. (RR Donnelley, 2011b)
Policies specifying amount of sourcing from sustainably managed forests?	See above	-COC program requirements (see above) do not seem to include strict certification	No information available
Are those current requirements or goals?	See above	See above	No information available
Does the company identify any bottlenecks in the sourcing process?	-Access and cost are two main problems for the many small – midsize landowners who supply timber to paper and pulp mills. (Time Inc., 2010, pp. 11-12) -As implied above, many timber suppliers are small, family-owned forests.	-Too many small – midsize landowners (See Time Warner) -Cost and availability of certification (See Time Warner) -Demand for recovered/recycled fiber > Supply and Asia's printing industry is an increasing demand	No information available
Other relevant sustainability efforts	-ReMix campaign for recycling magazines (run in major cities but not continuous); ongoing recycling efforts include "Please Recycle this Magazine" participation by many of Time's magazines (Time Inc., 2010, pp. 8-9) -Energy-use reduction -GHG reduction	-See Time's ReMix campaign -"Please Recycle" campaign -Reduce material content -Reduce # of printed magazines	-Waste minimization -Ink reclamation/reuse -Packaging recycling (shrink wrap -Electronics recycling -Waste heat recycling -Energy efficiency programs -Employee awareness

Company Name (Paper)	Time Warner Inc.	Hearst Corp.	RR Donnelley & Sons Co.
	-LCA of magazines -Materials reduction → Waste reduction -Increased recycled content -Green building (Time Warner, 2008, pp. 22-27)	-Increased recycled content; currently using 15% PCR paper (See bottlenecks above) -Green recycling/disposal of IT equipment -Land/water conservation & preservation programs -Hearst Tower (NYC): greenest in NYC history -GHG reduction efforts (Hearst Corporation, 2009)	(RR Donnelley, 2011a)
Comments, Impressions	Industry leader in promoting sustainable forestry procurement	Industry leader in promoting sustainable forestry procurement	Committed to sustainable forestry procurement
Links to Sources	-www.timewarner.com http://www.timewarner.com/our-company/corporate-responsibility/sustainability/ 2009-2010 Sustainability Report: http://b2bcdn.timeinc.com/tw/ourcompany/corporate-responsibility/pdf/timeinc_sustainability_report2009-2010.pdf 2008 CSR: http://b2bcdn.timeinc.com/tw/ourcompany/corporate-responsibility/pdf/tw_csr_report08.pdf	www.hearst.com http://www.hearst.com/beinggreen/	-www.rrdonnelley.com CSR: http://www.rrdonnelley.com/Docs/AboutUs/2010CSRReport.pdf http://www.rrdonnelley.com/Sustainability/Sustainability.asp http://www.rrdonnelley.com/Sustainability/GreenProcurement/GreenProcurement.asp

Company Name (Paper)	McGraw-Hill Co. Inc.	United Stationers	Readers Digest Assn Inc.
Publicly traded/Privately owned	Public (MHP)	Public (USTR)	Public (Holding company structure)
Location (Company Headquarters)	New York, NY	Deerfield, IL	New York, NY
Total Annual Revenue	$6.168B (Fidelity.com, 2011)	$4.832B (Fidelity.com, 2011)	$2.386B (ReferenceUSA, 2011)
Market Cap	$12.35B (Fidelity.com, 2011)	$1.21B (Fidelity.com, 2011)	No information available
Business segments	Financial information services; education and business information, publishing (ReferenceUSA, 2011)	Wholesale business product distributor: office products, office furniture, technology, janitorial (ReferenceUSA, 2011)	Publishes and markets books, magazines, music, video, and educational products (ReferenceUSA, 2011) Note: Emerged from bankruptcy in 2010
Which additional forestry metrics are reported by the company?	COC-certified by FSC, SFI, PEFC (McGraw-Hill, 2010, p. 3)	No information available	No information available
Notes on available metrics:	No further information	No information available	No information available
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	See above	No information available	No information available
What are the company's sourcing policies? What are its major programs or efforts?	-2010: >90% of paper purchased directly in the U.S. will be COC certified to FSC, SFI, or PEFC requirements -Environmental Paper Procurement Policy including: ---Reduce consumption for GHG reductions	-Supplier surveys used to indicate: ---Recycled content, Material content, Sources, Certifications, EPA compliance, Other -Paper procurement	No information available

Company Name (Paper)	McGraw-Hill Co. Inc.	United Stationers	Readers Digest Assn Inc.
	---Work with suppliers to help ensure local country environmental compliance ---Working to maximize COC-certified fiber ---Pursuing further recycling of paper ---Suppliers must meet EPA requirements on chemical content ---Review suppliers' environmental policies ---Periodic review of policies and suppliers -Joined PREPS (Publishers Database for Responsible Environmental Paper Sourcing) ---20 publishers ---Database of technical specs and details of pulp and forest sources for each of the papers in use to help ensure responsible sourcing (McGraw-Hill, 2010, pp. 2-3)	policy: ---Preference for (FSC) certified fiber (United Stationers, 2011b, p. 5)	
What are the reasons given for these policies?	-Reduce costs – good for business -Good for the environment (McGraw-Hill, 2011a, p. 11)	Committed to sustainability, Good for business (United Stationers, 2011a)	No information available
Are there any policies specifying the amount of sourcing from sustainably managed forests?	See above	-Paper procurement policy: commitment not to purchase from endangered or controversial sources, preference for FSC certified sources	No information available

Company Name (Paper)	McGraw-Hill Co. Inc.	United Stationers	Readers Digest Assn Inc.
		(United Stationers, 2011b, p. 5)	
If so, are those current requirements or goals?	->90% of direct-purchased paper in the U.S. to be COC certified by FSC, SFI, or PEFC standards. (See above)	No information available	No information available
What - if anything - does the company say about the Lacey Act or illegal logging?	-Added Lacey Act language on trading certain plant products to environmental paper survey and printer paper policies and procs -Requires suppliers to have policies prohibiting illegal logging and/or use of illegal fiber (McGraw-Hill, 2010, pp. 2-3)	No information available	No information available
Does the company identify any bottlenecks in the sourcing process?	No information available	No information available	No information available
Other relevant sustainability efforts	-Reduced consumption of paper from lighter paper stock weights -Work to promote increased paper recovery and use of recycled content -Environmental Sustainability Framework: targets to reduce emissions, waste, and water by 2015 (McGraw-Hill, 2010, pp. 2-3) (McGraw-Hill, 2011a, pp. 11,13)	-Manufacturing audits of private-label products: for social accountability, quality, etc. -Supplier qualification program for private label products: includes third-party audits of business, social, and environmental aspects of suppliers' operations -Tracking of "green product" flows	No information available

Company Name (Paper)	**McGraw-Hill Co. Inc.**	**United Stationers**	**Readers Digest Assn Inc.**
		-Recycling -Energy reduction programs (United Stationers, 2011b)	
Waste Flow data (Wood)	No information available	No information available	No information available
Comments, Impressions, Notes	The company is committed to sustainable procurement: Purchased ~104MM short tons of paper in 2010 (McGraw-Hill, 2011b) Used 93,602 metric tons of paper in 2010 (McGraw-Hill, 2011a, p. 13)	The company demonstrates interest in sustainable procurement.	No sustainability programs are publicly reported.
Links to Sources	www.mcgraw-hill.com http://www.mcgraw-hill.com/site/cr/environment/overview http://www.mcgraw-hill.com/Content/cr/paper-procurement-policy.pdf http://www.mcgraw-hill.com/Content/cr/2010-corporate-responsibility-annual-report.pdf http://www.mcgraw-hill.com/Content/cr/McGraw-Hill_EMS.pdf	www.unitedstationers.com http://www.unitedstationers.com/diversity/Sustainability%20Initiatives%20Overview.pdf http://www.unitedstationers.com/diversity/sustainability.html	www.rda.com

Company Name (Paper)	**Scholastic**	**OfficeMax**
Publicly traded/Privately owned	Public	Public

Company Name (Paper)	**Scholastic**	**OfficeMax**
Location (Company Headquarters)	New York, NY	Naperville IL
Total Annual Revenue	$1.37B (Yahoo! Finance, 2011)	
Market Cap	$923.9M (Yahoo! Finance, 2011)	$395.62M (Yahoo! Finance, 2011)
Business segments	Publishing	Office Supplies
Which additional forestry metrics are reported by the company?	% FSC Certified metrics reported (Scholastic, 2011)	No metrics reported
Notes on available metrics:	No further information	No further information
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	FSC-preferred. The goal by 2012 is 30% FSC-certified, no other certifications are mentioned. (Scholastic, 2011)	No mention of certification

Company Name (Paper)	Scholastic	OfficeMax
What are the company's sourcing policies?	"We have engaged our paper suppliers in an ongoing dialog to monitor and remain informed about opportunities to design, produce and procure an increasing amount of environmentally responsible paper. Scholastic challenges our partners to develop new grades that offer economically feasible high quality paper suitable for use in our products. Scholastic will give purchasing preference to companies who practice and encourage sustainable forest management, and sustainable manufacturing based on concepts of continuous improvements." (Scholastic, 2011)	Their policy is not strict: "We expect our suppliers to: -maintain compliance with laws and regulations applicable to their operations; -eliminate products from endangered areas and work with appropriate organizations and others to identify these areas; and -track the source of paper products to the country, region, mill of origin or beyond when practicable and data is available and avoid sourcing our paper products from industrial forest suppliers that convert natural forests to industrial plantations." (Office Max, 2011)
What are the reasons given for these policies?	No reason, general environmental stewardship. (Scholastic, 2011)	"Responsible environmental stewardship is a component of our success as a company." (Office Max, 2011)
Are there any policies specifying the amount of sourcing from sustainably managed forests?	"By year-end 2008, we will expect all paper manufactured for Scholastic product to be free of unacceptable sources of fiber as described by the Forest Stewardship Council (FSC) controlled wood standard. By 2012, Scholastic's goal for publications paper purchases will be for 30% to be FSC-certified. " (Scholastic, 2011)	No information available
If so, are those current requirements or goals?	goals	No information available
What - if anything - does the company say about the Lacey Act or illegal logging?	"We will not knowingly do business with companies that collude with or purchase wood products from illegal logging operations. By year-end 2008, we will expect all paper manufactured for Scholastic product to be free of unacceptable sources of fiber as described by the Forest Stewardship Council (FSC) controlled	No information available

Company Name (Paper)	Scholastic	OfficeMax
	wood standard." (Scholastic, 2011)	
Does the company identify any bottlenecks in the sourcing process?	No information available	No information available
Other relevant sustainability efforts	"By 2012, we will increase our use of recovered fiber to a total of 25% with 75% of that being post-consumer waste fiber." (Scholastic, 2011)	No information available
Waste Flow data (Wood)	No information available	No information available
Links to Sources	http://www.scholastic.com/aboutscholastic/paperpolicy.htm	http://about.officemax.com/html/officemax_environmental_policy.shtml
Competitors to follow up on	No information available	No information available
Overall conclusion	Goals and progress on FSC-certification is reported.	No concrete goals, no mention of plans for future goals.

Company Name (Paper)	Avery Dennison Corp	News Corp	Reed Elsevier Group PLC
Publicly traded/Privately owned	Public (AVY)	Public (NWSA)	Public U.K.-based (RUK – U.S. ADRs)
Location (Company Headquarters)	Pasadena, CA	New York, NY	London, Amsterdam, New York, NY
Total Annual Revenue	$6.513B (Fidelity.com, 2011)	$33.405 (ReferenceUSA, 2011)	$9.089B (ReferenceUSA, 2011)
Market Cap	$2.54B (Fidelity.com, 2011)	$27.5B (Fidelity.com, 2011)	$9.22B (Fidelity.com, 2011)

Company Name (Paper)	**Avery Dennison Corp**	**News Corp**	**Reed Elsevier Group PLC**
Business segments	Office and consumer products; pressure-sensitive materials; retail information services; stamps, labels, specialty tapes, performance films (ReferenceUSA, 2011)	Film; television; cable; satellite broadcasting; magazines; newspapers; book publishing (ReferenceUSA, 2011)	Scientific, technical, and medical journals publishing; business, legal, tax, regulatory information; risk information and analytics (ReferenceUSA, 2011)
Which additional forestry metrics are reported by the company?	No information available	No information available	-Forest Disclosure Project (sector leader): investor-led -PREPS grading (see below) -CITIES (see below) -IUCN (see below) -Forest Footprint Disclosure (FFD) – Project to measure implied deforestation due to a business' activities (Forest Disclosure, 2011) (Reed Elsevier, 2011a) (Reed Elsevier, 2010)
Notes on available metrics:	About 60% of procurement is paper-based (Avery Dennison, 2010)	No information available	No further information
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	-FSC COC -Exploring other certifications to increase sustainable paper supply (Avery Dennison, 2010)	No information available	-PREPS 3 – 5: -Largest paper database in the world with 6,743 papers from 191 mills -Encompasses FSC certification standards among the criteria (Need to find the sustainability criteria of PREPS) (Reed Elsevier, 2011a) (Reed Elsevier, 2010)

Company Name (Paper)	Avery Dennison Corp	News Corp	Reed Elsevier Group PLC
What are the company's sourcing policies? What are its major programs or efforts?	-Completed FSC COC certifications for 49 operating plants (out of 204) in 27 countries -Established Responsible Paper Working Group to develop sourcing policies -2012 goals: --Responsible Paper Sourcing Policy --Join an industry working group to address the major sourcing issues (Avery Dennison, 2010)	-HarperCollins (book subsidiary) entered into supply chain contract – print, fulfillment, and shipping - with RR Donnelley (News Corp, 2011a)	-"Reject species on CITIES (Convention on International Trade in Endangered Species of wild fauna and flora) list or the IUCN (International Union for Conservation of Nature and Natural Resources) red list" -"Founding member of the Publishers Database for Responsible Environmental Paper Sourcing (PREPS), a sectoral approach to paper sustainability. PREPS reviews and stores technical specifications of pulps and forest sources for paper, and awards grades of 1-5 stars for each based on sustainability criteria (with 5 being the highest)" -Procure from well-managed forests and known and legal sources -Only purchase PREPS grade 3 - 5 paper where possible (96% of paper by weight at EOY 2010 were part of PREPS but what grade? And all were from known and legal sources) -Increase amount of certified paper and recycled content -Require suppliers to sign Supplier Code of Conduct (standards on labor practices, environment, health & safety, corruption) (60% signup rate in 2010; 75% goal for 2011) -Review policies and performance of suppliers through Socially Responsible Suppliers (SRS) network (Reed Elsevier, 2011a) (Reed Elsevier, 2010)

Company Name (Paper)	Avery Dennison Corp	News Corp	Reed Elsevier Group PLC
What are the reasons given for these policies?	New opportunities to reduce environmental footprint while increasing supply-chain efficiencies (Avery Dennison, 2011a)	No information available	-Supports their commitment to the UN Global Compact -Committed to reducing negative environmental impacts and improving environmental performance -Committed to ethical supply chain (Reed Elsevier, 2010)
Are there any policies specifying the amount of sourcing from sustainably managed forests?	No information available	No information available	-Based on PREPS 3 – 5 grades (Reed Elsevier, 2011a)
If so, are those current requirements or goals?	No information available	No information available	No information available
What - if anything - does the company say about the Lacey Act or illegal logging?	Product Integrity Management System (PIMS) helps ensure compliance with local and international regulations (Avery Dennison, 2010)	No information available	-Stated objection to illegal logging of old growth forests -Lacey Act and the European version – The Illegal Timber Law – are mentioned under Environmental Risks and Opportunities. The response is to note their commitment to purchasing sustainable paper wherever possible and that 100% of paper able to be graded in 2010 was PREPS 3 or above (Reed Elsevier, 2011b)
Does the company identify any bottlenecks in the sourcing process?	No information available	No information available	No information available

Company Name (Paper)	**Avery Dennison Corp**	**News Corp**	**Reed Elsevier Group PLC**
Other relevant sustainability efforts	-Promotes sourcing of sustainable cotton from small African farms -PVC-free binders -Materials and waste reduction (ThinStream technology, Flexis Steam Valve packaging) (Avery Dennison, 2011b) -Since 2000, environmental management system (EMS) has led to 19 sites achieving ISO 14001 environmental standards -Energy reduction initiatives (Energy Kaizen) -Water reduction initiatives -Integrating LCA and sustainability issues into product R&D (Greenprint tool) -Long-term goal of 0 manufacturing waste to landfills -Working with customers to recycle used labeling materials (cuttings, liners) (Avery Dennison, 2010)	-Global energy initiative to reduce carbon footprint through waste reduction, renewables, offsets -UK businesses procure 100% of electricity from renewable (News Corp, 2011b) -Measuring and reporting carbon footprint -By 2015: ---Reduce GHG emissions by 15% ---Reduce emissions intensity by 15% ---Clean energy = 20% of electricity needs ---Engage 100 suppliers on improving environmental impacts (no details) ---Develop strategy to reduce waste footprint (News Corp, 2011a) (News Corp, 2007)	-Signatory to UN Global Compact (10 principles of responsibility) -60% of key suppliers now signatories to Supplier Code of Conduct in 2010 -26 sites achieved 5 Reed Elsevier environmental standards -Apparently high scores on various external CR metrics: CDP, DJ Sustainability Index, etc. -CO2 emissions reductions targets: 10% by 2015 vs. 2006 -ISO 14001 goal for EMS -(See 5 year progress report on p. 9 of CR 2010) (Reed Elsevier, 2010)
Waste Flow data (Wood)	No information available	No information available	No information available
Comments/Impressions, Notes	The company is working on formal paper procurement policies, but all initiatives are very recent.	The company reports its intention to reduce carbon footprint but reports little on	-An apparent leader in sustainability policy -Not clear how much of procurement is certified under PREPS grading -Need to research PREPS criteria (Could be

Company Name (Paper)	Avery Dennison Corp	News Corp	Reed Elsevier Group PLC
		certified forest product procurement.	a candidate for universal adoption) -66K tons of paper produced in 2010 (Reed Elsevier, 2010)
Links to Sources	www.averydennison.com http://www.averydennison.com/vgnfiles/AvyDen/Static%20Files/media/pdf/Avery_Dennison_2010_Sustainability_Report.pdf http://www.averydennison.com/avy/en_us/Sustainability http://www.averydennison.com/avy/en_us/Sustainability/Environmental-Responsibility http://www.averydennison.com/avy/en_us/Sustainability/Sustainability-in-Action	www.newscorp.com http://gei.newscorp.com/letter.html http://gei.newscorp.com/what/type/supply-chain/ http://www.newscorp.com/energy/carbon_report.pdf	www.reed-elsevier.com http://reports.reedelsevier.com/documents/pdfs/reed_cr_2010.pdf (ALSO see p. 36 of CR 2010 above for other supply chain website links) http://www.reed-elsevier.com/corporateresponsibility/Documents/policies/reed-elsevier-paper-policy.pdf http://reports.reedelsevier.com/cr10/environment/why-it-matters/risks-and-opportunities/material-environmental-risks-and-opportunities.htm

Company Name (Paper)	Advance Publications, Inc.	Tribune Co.	Gannett Co. Inc.
Publicly traded/Privately owned	Private	Private	Public (GCI)
Location (Company Headquarters)	Staten Island, NY	Chicago, IL	McLean, VA
Total Annual	$7.7B (ReferenceUSA,	$5.5B (ReferenceUSA, 2011)	$5.439B (ReferenceUSA, 2011)

Company Name (Paper)	Advance Publications, Inc.	Tribune Co.	Gannett Co. Inc.
Revenue	2011)		
Market Cap	No information available	No information available	$2.68B
Business segments	Magazine and newspaper publishing; cable television; online content (ReferenceUSA, 2011)	Newspaper publishing; television broadcasting; news and information websites (ReferenceUSA, 2011) Note: Entered Chap. 11 bankruptcy in 2008; still operating while attempting to reorganize	Newspaper, magazine, and trade publications; television broadcasting; online newspaper and television; online employment and other advertising services (ReferenceUSA, 2011)
Which additional forestry metrics are reported by the company?	No information available	No information available	No information available
Notes on available metrics:	No information available	No information available	No information available
Type of certification reported (Forest Management, Fiber Procurement, CoC)	No information available	No information available	No information available
What are the company's sourcing policies? What are its major programs or efforts?	No information available	No information available	No information available
What are the reasons given for these policies?	No information available	No information available	No information available

Company Name (Paper)	**Advance Publications, Inc.**	**Tribune Co.**	**Gannett Co. Inc.**
Are there any policies specifying the amount of sourcing from sustainably managed forests?	No information available	No information available	No information available
If so, are those current requirements or goals?	No information available	No information available	No information available
What - if anything - does the company say about the Lacey Act or illegal logging?	No information available	No information available	Policy statement includes compliance with environmental laws and regulations (Gannett, 2011)
Does the company identify any bottlenecks in the sourcing process?	No information available	No information available	No information available
Other relevant sustainability efforts	No information available	No information available	The company reports only very general statements about operating in an environmentally sound manner and conserving and recycling materials and reducing waste. Policy statement indicates that the organization is de-centralized and local operations

Company Name (Paper)	**Advance Publications, Inc.**	**Tribune Co.**	**Gannett Co. Inc.**
			are responsible for following environmental policies (Gannett, 2011)
Waste Flow data (Wood)	No information available	No information available	No information available
Comments/Impressions, Notes	No apparent corporate responsibility information online (Advance Publications, 2011) Spoke to purchasing department at Conde Nast: -They said they were familiar with the concept of sustainably-managed forests and FSC certification but, as a private company they do not comment on their policies	The company does not report corporate responsibility information online (Tribune, 2011)	The company makes general statements pledging to operate according to sound environmental principles but does not mention specific procurement policies. Operations appear to be de-centralized
Links to Sources	www.advance.net	www.tribune.com	www.gannett.com http://www.gannett.com/apps/pbcs.dll/article?AID=/99999999/INVESTORREL0304/100429013/-1/INVESTORREL03/

Demand Research Matrices: Packaging Sector

Company Name (Packaging)	**Johnson & Johnson**
Publicly traded/Privately owned	Public
Website	http://www.jnj.com/connect/
Location (Company Headquarters)	New Brunswick, New Jersey, USA
Total Annual Revenue	US Companies: 2010: $29.5 billion, 2009: $30.9 billion, 2008: $32.3 billion International Companies: 2010: $32.1 billion, 2009: $31.0 billion, 2008: $31.4 billion (Johnson & Johnson, 2010b, p. 31)
Market Cap	174,533.15 million (Johnson & Johnson, 2011a)
Business segments	Health care products Pharmaceuticals Manufacturer of medical treatment and diagnostic devices
Which additional forestry metrics are reported by the company?	The company reports the following information on minimizing consumption of forest products: J&J design teams are encouraged to minimize weight and volume of packaging J&J professionals should use practices of double-sided copying and printing use of electronic alternatives to minimize consumption of paper in the workplace Purchasing Guidelines (Johnson & Johnson, 2007) 1.Understand the source of purchased forest products Search AFPA and CEPI for local forest product sourcing trends Use J&J Forest Products Supplier Questionnaire Purchase credibly certified forest products 2.Assess the risk associated with the source of purchased forest products a. Identify if source is at high-risk for illegal logging

Company Name (Packaging)	Johnson & Johnson
	b. Follow: WWF guidelines: “Responsible Purchasing of Forest Products, 2nd edition” (see WWF, 2006) 3. Verify high-risk sources of forest products are legal a. J&J expects all suppliers of forest products to be in compliance with all applicable legal requirements for forest management, harvest, manufacturing and trade 4.Purchase forest products with recycled content Forest products with greater than 30% post-consumer recycled content are preferred 5.If forest products contain virgin fiber that originates from high-conservation value forests, verify the source is credibly certified 6.Work to eliminate controversial sources of virgin fiber in forest products 7.Purchase forest products that are manufactured without chlorine 8.Work to achieve J&J’s Healthy Planet 2010 Goals for forest products
Notes on available metrics:	The company: ecognizes that forest product supply chains are complex 2005: formed partnership with WWF to establish forest products purchasing guidelines It is unclear from the public information if these guidelines are enforced
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	Guidelines refer to: “chain of custody” certification such as the Forest Stewardship Certification (FSC)
What are the company's sourcing policies?	See above: Forest Products Purchasing Guidelines

Company Name (Packaging)	Johnson & Johnson
What are the reasons given for these policies?	Responsibility, Stewardship, Size and geographic spread of the company: Our membership in the World Wildlife Fund's North America Forest and Trade Network has helped us understand both the threats to our forests and the ways to protect them. When it comes to forest products, we use our purchasing power to help support sustainable forestry (Johnson & Johnson, 2010, p. 24)
Are there any policies specifying the amount of sourcing from sustainably managed forests?	Goal: 90 percent of office paper and 75 percent of paper-based packaging will contain more than 30 percent post-consumer recycled (PCR) content or fiber from certified forests by 2010. Actual: Achieved. 97 percent of packaging and 92 percent of office paper contain more than 30 percent PCR content or fiber from certified forests. (Johnson & Johnson, 2010, p. 35)
If so, are those current requirements or goals?	See above Note that the goal does not differentiate between PCR and certified content From the public information it is unclear if a new goal has been established
What - if anything - does the company say about the Lacey Act or illegal logging?	The company's forest guidelines have not been updated since 2007 and the Lacey Act was passed in 2008, however, sourcing from illegal logging should be avoided by following the guidelines mentioned above.
Does the company identify any bottlenecks in the sourcing process?	No information available
Other relevant sustainability efforts	Transparency, Water Use, Energy Use, Waste reduction, Paper and Packaging, Product Stewardship, Environmental Literacy, Biodiversity, Compliance, Supplier Sustainability, Building sustainable facilities, Conservation efforts

Company Name (Packaging)	**Johnson & Johnson**
	The company reports to have a very comprehensive sustainability plan encompassing a wide variety of metrics (Johnson & Johnson, 2010, pp. 1-37)
Waste Flow data (Wood)	No information available

Company Name (Packaging)	**Nike**	**Adidas**
Public/Private	Public	Public
www	http://www.nikebiz.com/	http://www.adidas-group.com/en/home/Welcome.aspx
Location (Company Headquarters)	Beaverton, Oregon, USA	Herzogenaurach, Germany
Total Annual Revenue	2010: $19,014 million 2009: $19,176 million 2008: $18,627 (Nike Inc., 2011)	2010: Euro 11,990 million 2009: Euro 10,400 million 2008: Euro 10,800 million (Adidas, 2011)
Market Cap	$39.76billion (Yahoo! Finance, 2011b)	Euro 9.94billion (Yahoo! Finance, 2011a)
Business segments	Athletic footwear, apparel and equipment	Athletic footwear, apparel and equipment

Company Name (Packaging)	**Nike**	**Adidas**
Which additional forestry metrics are reported by the company?	The company reports metrics on its "A better bag" initiative involving retail bags certified by FSC. This initiative involves bags using 100-percent FSC-certified paper printed at FSC-certified printers using soy-based inks and distributed by an FSC-certified fulfillment company. The complete chain of custody allows Nike to use the FSC certification number and logo on all retail bags in North America and Singapore. (NIKE, 2009, p. 126)	The paper consumption target per employee, set to 20% for 2010, has not been achieved. However, the reduction of paper consumption by 17.7% shows that we are on track towards our linear target for 2015. (Adidas, 2010a, p. 38). Milestone 2011: Review packaging status and define 2015 target. In 2011, we will review all packaging concepts used throughout our brands and different product groups. Following this review, we will specify environmental targets for further packaging reduction and optimization for 2015 (Adidas, 2010a, pp. 21, 32) Adidas • Transport cartons: • Contain 100% recycled material • 33% reduction in weight since 2006 • Shoe boxes: • 200 million units in 2010 • Overall recycled content is 95% based on weight • most shoe boxes are made from 100% recycled fiber + clay coating/varnish; the ink used is soy-origin and water-based • Between 38% and 60% weight reduction for shoe boxes since 2006 • Ball box: 95% recycled material based on weight (100% recycled fiber + clay coating/varnish) • No hangtag policy except for product warning labels. Reebok • Transport cartons • Contain 100% recycled material • Shoe boxes: 65 million units in 2010, Overall recycled content is 95% based on weight, most shoe boxes are made from 100% recycled fiber + clay coating/varnish (Adidas, 2010a, p. 32)
Notes on available metrics:	Nike reports to have initiatives in a broad variety	Very specific supply-chain guidelines, limited information particular on forest products. Prime focus on cotton and leather sourcing.

Company Name (Packaging)	Nike	Adidas
	of environmental areas, yet its forest products initiatives are relatively limited. Key focus is on leather products. They are also concerned with tropical deforestation. Nike is concerned with reducing packaging overall. Unclear about PC content, certified content. Strong focus on reducing weight and material use for corrugated cardboard shoebox (reengineered shoe box is fully recycled and recyclable, lighter weight and stronger) (NIKE, 2009, p. 124)	Initiatives against deforestation of Amazon rain forest for cattle ranching. Take action against illegal logging. Better place products are identified in stores by a special hangtag or shoe box, both of which are made from 100% recycled paper (Adidas, 2010a, p. 31)
Type of certification reported (Forest Management, Fiber Procurement, CoC?)	The company's shopping bags are FSC certified. From the public information it is not clear if shoeboxes and other paper products are also certified (NIKE, 2009, p. 126)	ISO 14001 certifications
What are the company's sourcing policies?	No information available regarding an overall forest products sourcing policy, though the company does have a leather sourcing	Very specified sourcing policies for leather, cotton, many more. Not specific on forest products. Claim to use 95% recycled material for paper products (Adidas, 2010a, p. 32).

Company Name (Packaging)	Nike	Adidas
	policy (NIKE, 2009, p. 16) The company reports to be in the process of building a general sustainable sourcing strategy, though from the information available it is unclear if forest products are a part of it.	
What are the reasons given for these policies?	No information available	No information available
Are there any policies specifying the amount of sourcing from sustainably managed forests?	No information available	Follows the Eco Index initiative, led by the Outdoor Industry Association (OIA) and the European Outdoor group (EOg) (Adidas, 2010a, p. 31).
Are those current requirements or goals?	No information available	No information available
What does the company say about the Lacey Act or illegal logging?	No information available	No information available
Does the company identify any bottlenecks in the sourcing process?	No information available	No information available
Other sustainability efforts	Environmentally preferred materials (EPM's)	Protection and enhancement of sinks and reservoirs of greenhouse gases, e.g. through reforestation (Adidas, 2010b, p. 13)

Company Name (Packaging)	**Nike**	**Adidas**
	Sustainable Chemistry Guidelines (NIKE, 2009, p. 89)	
Waste Flow data (Wood)	No information available	No information available

Company Name (Packaging)	**Amazon**	**Target**	**Starbucks**
Publicly traded/Privately owned	Public	Public	Public
Website	www.amazon.com	http://sites.target.com/site/en/company/page.jsp?contentId=WCMP04-030795	http://www.starbucks.com/
Location (Company Headquarters)	Seattle, WA, USA	Minneapolis, MN, USA	Seattle, WA, USA
Total Annual Revenue	2010: $34,204 million 2009: $24,509 million 2008: $19,166 million (Amazon, 2010)	2010: $67,390 million 2009: $65,357 million 2008: $64,948 million (Target, 2011)	2010: $10.7billion 2009: $9.8billion 2008: $10.4billion (Starbucks, 2010a)
Market Cap	$ 98.15billion (Yahoo! Finance, 2011c)	$33billion (Yahoo! Finance, 2011d)	$27.82billion (Yahoo! Finance, 2011e)
Business segments	Online retailer	Retailer	Specialty coffee
Which additional forestry metrics are reported by the company?	No information available	No additional metrics found, only: - Sells furniture made from wood derived from sustainably managed forests	Recycling and Post-consumer content of packaging, Greener cups (Starbucks, 2011a)
Notes on available	Most Amazon.com orders	Target Sourcing Services	Starbucks™ Shared Planet™ focus

Company Name (Packaging)	Amazon	Target	Starbucks
metrics:	are shipped in corrugated containers which on average contain 43% recovered fiber content. Introduced paper packing materials that are 100% recyclable and are made from 50% recycled content. Packaging Feedback program (Amazon, 2011)	(TSS) Reducing packaging and compostable bag (Target, 2010, p. 2)	areas: ethical sourcing (buying), environmental stewardship and community involvement. Focus on coffee (Starbucks, 2011b). Recycling & Reusable Cups front-of-store recycling. Certifications focus on coffee sourcing not on paper products
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	No information available	No information available	No information available
What are the company's sourcing policies?	No information available	Sources owned-brand packaging materials that are: Recyclable and made with recycled content: The top sheet for all of our owned-brand corrugated packaging contains 80 percent post-consumer recycled content. For our organic cotton bath-and-bedding program	Starbucks ethical sourcing does not elaborate on sourcing sustainable forest products. Clear focus is on coffee (Starbucks, 2010b, pp. 1, 5)

Company Name (Packaging)	**Amazon**	**Target**	**Starbucks**
		launched in 2007, we sourced 100 percent post-consumer recycled paper printed with vegetable/soy-based inks. We also migrated from plastic to corrugated packaging for owned-brand dinner and salad plates. Made with renewable resources: Polylactic acid, or PLA, is a non-petroleum-based plastic made from corn; using eight new PLA packages in SuperTarget bakery and deli areas has removed more than 491,000 pounds per year of petroleum-based packaging from our shelves. (Target, 2008)	
What are the reasons given for these policies?	No information available	No information available	No information available
Are there any policies specifying the amount of sourcing from sustainably managed forests?	No information available	No information available	Goals: 1) Develop comprehensive recycling solutions for our paper and plastic cups by 2012 2) Implement front-of-store recycling in our company-owned stores by 2015 3) Serve 25 percent of beverages made in our stores in reusable cups

Company Name (Packaging)	Amazon	Target	Starbucks
			by 2015 (Starbucks, 2011)
If so, are those current requirements or goals?	No information available	No information available	Comprehensive recycling solutions for paper and plastic cups by 2012 (Starbucks, 2010b, p. 9)
What - if anything - does the company say about the Lacey Act or illegal logging?	No information available	No information available	No information available
Does the company identify any bottlenecks in the sourcing process?	No information available	No information available	No information available
Other relevant sustainability efforts	Eco-friendly building design, Green products on Amazon, Reducing packaging waste (Amazon, 2011)	- No more PVC packaging - Low impact development - Managing Carbon footprint - Water conservation - Preservation - Reuse or recycle roughly 70 percent of the materials that would have been sent to a landfill in years past. - Maximizing the Life Cycle of Materials: Reduce, reuse, recycle and beyond - Stationery and office paper: We offer paper products,	Recycling, green building, energy and water conservation, Efforts of Aforestation, forest carbon markets Business for Innovative Climate and Energy Policy (BICEP) (Starbucks, 2010b, p. 3)

Company Name (Packaging)	**Amazon**	**Target**	**Starbucks**
		including greeting cards and notebooks, made from recycled paper. (Target, 2008)	
Waste Flow data (Wood)	No information available	No information available	No information available

Company Name (Company Name)	**Bayer**	**Novartis**	**Proctor and Gamble**
Public/Private	Public	Public	Public
www	http://www.bayer.com/	http://www.novartis.com/	http://www.pg.com/en_US/index.shtml
Location (Company Headquarters)	Leverkusen, Germany	Basel, Switzerland	Cincinnati, Ohio
Total Annual Revenue	2010: €35,088 Million 2009: €31,168 Million (Bayer, 2010, pp. 4-5)	2010: $ 50,624 million 2009: $ 44,267 million (Novartis, 2011)	2010: $ 78,938 million 2009: $ 76,697 million 2008: $ 79,257 million (Proctor and Gamble, 2011a)
Market Cap	$44.8billion (Yahoo! Finance, 2011f)	$136.20billion (Yahoo! Finance, 2011g)	$175.61billion (Yahoo! Finance, 2011h)
Business segments	Healthcare & Pharmacy	Healthcare & Pharmacy	Beauty, Grooming, Healthcare, Snacks, Pet care, Baby and family care

Company Name (Company Name)	Bayer	Novartis	Proctor and Gamble
Which additional forestry metrics are reported by the company?	No specific information available; the reporting standards do not incorporate forestry metrics but focus on numerous other environmental issues.	No specific information available; the reporting standards do not incorporate forestry metrics but focus on numerous other environmental issues.	P&G is partnering with the World Wildlife Fund (WWF) to focus on sustainable sourcing of materials for P&G products, including renewable forest products and palm oil. As we move to using more renewable materials, particularly materials such as pulp and palm oil, we need to ensure that production does not lead to loss of natural ecosystems, with associated loss of biodiversity. Our sustainable forestry policy already requires us to only source pulp from certified sustainable operations. P&G's Family Care business has been a member of WWF's Global Forest & Trade Network - North America for over a year, and we plan to extend and broaden our joint work in this area. In addition, we are working to ensure that we only source palm oil and derivatives from confirmed responsible and sustainable sources by 2015. (Proctor and Gamble, 2011b) Reduce packaging Smart packaging (Proctor and Gamble, 2010, p. 20)
Notes on available metrics:	GRI reporting standards Does not include forestry metrics Focus on recycling and waste reduction	Health, Safety and Environment (HSE) / GRI reporting Does not include additional forestry metric (Novartis, 2011) - Are installing waste segregation programs at many sites that allow better use of recycling routes for	Goals: Using 100% renewable or recycled materials for all products and packaging Having zero consumer waste go to landfills Designing products to delight consumers while maximizing the conservation of resources (Proctor and Gamble, 2010, p. 74) At the end of Fiscal Year 2009/2010, 68% of our pulp supply was FSC Controlled Wood Certified (Proctor and Gamble, 2010, p. 28)

Company Name (Company Name)	Bayer	Novartis	Proctor and Gamble
		materials such as paper, cardboard. Recycling and waste reduction. (Novartis, 2009, pp. 57-58)	
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	No information available	No information available	Preferred: Forest Stewardship Council (FSC) And/or SFI, CERFLOR, PEFC, or CSA. As a minimum standard, P&G requires that any wood pulp supplier ensures that their forest certification systems are consistent with the following generally accepted criteria for sustainable forest management: • A commitment to forest regeneration and reforestation. • Protection of soil quality, riparian zones and water quality. • Protection of ecologically and culturally unique forest areas. • Maintenance and conservation of biological diversity. • Participation of interested and affected stakeholders. • Continuous improvement in forestry practices. • Compliance with legislation, agreements and accords. • Support of universal human rights and respect for ownership and use rights of local communities and indigenous people. • Avoidance of unwanted wood sources (Proctor and Gamble, 2010, pp. 27-28)

Company Name (Company Name)	Bayer	Novartis	Proctor and Gamble
What are the company's sourcing policies?	No information available	No information available	P&G purchases wood pulp from suppliers that: • Ensure the safety of forestry and manufacturing operations for employees and the environment • Document that wood is legally harvested and that other legal requirements are met. P&G will not knowingly use illegally sourced wood fiber in our products. • Practice principles of sustainable forest management and continuous improvement in their own operations and in sourcing of wood, as verified by independent forest and chain-of-custody certification Do not obtain wood from High Conservation Value Forests. P&G supports multi-stakeholder efforts to develop information sources and tools that will help suppliers identify these areas on their own forestlands and in their procurement of wood raw materials from third parties (e.g., www.hcvnetwork.org). • Do not obtain the wood from genetically modified tree sources. • Reflect our social values and support of universal human rights through work with local governments and communities to improve the educational, cultural, economic and social well-being of those communities • Do not source wood from conflict timber (timber that was traded in a way that drives violent armed conflict or threatens national or regional stability (Proctor and Gamble, 2010, p. 27)
What are the reasons given for these policies?	No information available	No information available	P&G is the largest consumer packaged goods company in the world today. This very fact, coupled with our Purpose-inspired Growth Strategy—improving the lives of more consumers, in more parts of the world, more

Company Name (Company Name)	Bayer	Novartis	Proctor and Gamble
			completely—requires us to continue to grow responsibly. And it also requires us to accelerate our commitment to helping solve some of the world's sustainability challenges. (Proctor and Gamble, 2010)
Are there any policies specifying the amount of sourcing from sustainably managed forests?	No information available	No information available	Long-term vision: 100% renewable energy will power all plants 100% renewable and recycled materials will be used for all products and packaging 0 consumer and manufacturing waste will go to landfills (Proctor and Gamble, 2010, p. 4)
If so, are those current requirements or goals?	No information available	No information available	Firm standards and goals.
What - if anything - does the company say about the Lacey Act or illegal logging?	No information available	No information available	P&G does not knowingly source illegally logged fiber. -Illegal logging occurs when timber is harvested, transported, processed, bought or sold in violation or circumvention of national or subnational laws. Illegal activities often have a devastating impact on biodiversity as well as human communities. Conflict timber -Timber that was traded in a way that drives violent armed conflict or threatens national or regional stability. (Proctor and Gamble, 2010, p. 28)
Does the company identify any bottlenecks in the sourcing process?	No information available	No information available	Conflict timber and illegally harvested timber (Proctor and Gamble, 2010, p. 28)

Company Name (Company Name)	Bayer	Novartis	Proctor and Gamble
Other relevant sustainability efforts	Reducing emission, reduction of water, water pollution, conserving water resources etc. The company has numerous sustainability initiatives. Nothing specified regarding forest products (Bayer, 2010)	Reducing emission, reduction of water, water pollution, conserving water resources etc. The company has numerous sustainability initiatives. Nothing specified regarding forest products Some Novartis sites actively support rehabilitation projects for biodiversity, such as reforestation, or garden and park projects. Funds reforestation projects in Argentina (Novartis, 2009, pp. 10, 51)	P&G is committed to reducing demand on the world's forests and other resources. P&G believes that we should invest our resources where we can make the greatest sustainability improvements and will continue to: • Focus on source reduction in the long term or use of less fiber through development of innovative technologies that provide maximum product performance using minimal fiber. • Evaluate the use of non-forest derived sources of fiber, recognizing that alternatives must also meet principles of sustainable management. • Explore and implement energy and water conservation opportunities in our paper making operations (Proctor and Gamble, 2010, p. 27)
Waste Flow data (Wood)	No information available	No information available	No information available

Company Name (Packaging)	FedEx	Kinko's = FedEx Office
Publicly traded/Privately owned	Public	See FedEx, just adding additional notes on Kinko shown on FedEx website

Company Name (Packaging)	FedEx	Kinko's = FedEx Office
Location (Company Headquarters)	Memphis, Tenn., USA	See FedEx
Total Annual Revenue	2011: 39'304 million (YTD) 2010: 34'734 million (FedEx, 2011a, p. 8)	See FedEx
Market Cap	$21.52billion (Yahoo! Finance, 2011i)	See FedEx
Business segments	Shipping, Freight Transportation Air/ground express industry Logistics	See FedEx
Which additional forestry metrics are reported by the company?	Recycling, 5.3 million pounds of paper, cardboard, plastic and metal for recycling Packaging: - Most FedEx envelopes are made from 100 percent recycled content and are recyclable - FedEx 10kg and 25kg boxes contain a minimum of 40 percent recycled content and are recyclable. - FedEx boxes sold at our locations contain a minimum of 20 percent recycled content and are recyclable. - Most FedEx paks contain 45 percent recycled content and are recyclable at select locations. Paper: - numerous paper and packaging materials used in FedEx Office contain post-consumer recycled (PCR) fiber - Approximately 75 percent of our paper offerings contain recycled material - FedEx Office also offers paper certified by the Forest Stewardship Council (FSC)	Kinko's Sustainable Forest Management Practices Committed to purchasing virgin forest-based materials from only sustainable, well-managed forests, or ecologically and socially sound tree farms Not knowingly purchase any paper or wood products that are derived from the harvesting of old-growth, endangered or high conservation value forests Actively manage and engage forest-based products suppliers to ensure the company does not align itself with organizations that operate outside Kinko's guidelines Only purchase forest-based products from suppliers that have independently third-party certified, well-managed forests by the end of 2004 (FedEx News, 2003)

Company Name (Packaging)	FedEx	Kinko’s = FedEx Office
	(FedEx, 2011b)	
Notes on available metrics:	FedEx’s forest procurement policy is not further specified	It is not 100% clear based on public information how Kinko’s policy was adopted by FedEx Office
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	No certification information is mentioned specifically, only that the company offers certified paper by FSC. The company seeks to buy paper for FedEx Office Print and Ship Centers from suppliers certified by the FSC to ensure sustainable forest management (FedEx, 2011b)	See FedEx
What are the company's sourcing policies?	Sourcing policies are not further outlined. The company provides only the following: Supplier Selection Process includes: Sustainability — Improving our business practices so that they are more sustainable from environmental, economic and social perspectives.	See FedEx
What are the reasons given for these policies?	No information available	See FedEx
Are there any policies specifying the amount of sourcing from sustainably managed forests?	No information available	See FedEx
If so, are those current requirements or	Goals only FY2010: 79.09% Waste recycling: 41.5%	See FedEx

Company Name (Packaging)	FedEx	Kinko's = FedEx Office
goals?		
What – if anything – does the company say about the Lacey Act or illegal logging?	No information available	See FedEx
Does the company identify any bottlenecks in the sourcing process?	No information available	See FedEx
Other relevant sustainability efforts	Environment: Conservation of fuel, material resources (Recycling, Packaging, Paper), noise Alternative energy, Industry leadership (FedEx, 2011b)	See FedEx
Waste Flow data (Wood)	No information available	See FedEx
www	http://about.van.fedex.com/	http://www.fedex.com/us/office/indexnew.html

Company Name (Packaging)	UPS	US Postal
Publicly traded/Privately owned	Public	Independent federal government agency
Location (Company Headquarters)	Atlanta, Ga., USA	Washington, D.C., USA
Total Annual	2010: $49.6 billion	2010: $67 billion

Company Name (Packaging)	UPS	US Postal
Revenue	(UPS, 2011a)	(USPS, 2011a)
Market Cap	$61.94billion (Yahoo! Finance, 2011j)	Not Applicable
Business segments	Shipping, Freight Transportation Air/ground express industry Logistics	Shipping, Postal Service
Which additional forestry metrics are reported by the company?	Sustainable forestry is not directly mentioned.	- 2011 Strategies Performance plan - Cradle-to-cradle certification for packaging (USPS, 2011b, p. 23) - Most products are certified by SFI - Interested in purchasing and using sustainable materials and products when cost-effective options are available. Currently, we use water-based inks to print stamps. And soy-based inks and recycled paper from sustainably managed forests to make our expedited shipping products (USPS, 2010, p. 31)

Company Name (Packaging)	UPS	US Postal
Notes on available metrics:	UPS invests in carbon offsets, but no evidence found that they are active in sustainable sourcing of paper products. Initiated the Eco Responsible Packaging Program which evaluates packaging material for (UPS, 2010, pp. 35, 65) Damage prevention: Do your items arrive intact? Right sizing: Are your shipping containers no larger than necessary? Materials content: What is the environmental impact of the chosen materials? 81 percent of the 43,789 U.S. tons of packaging material and office paper purchased are recycled materials (UPS, 2010, p. 103)	- Earned Cradle to Cradle® Certification (USPS, 2010, p. 28) (USPS, 2011b, p. 22) for the environmentally friendly design and manufacturing of its stamps, postcards, Priority Mail and Express Mail boxes and envelopes, which considers energy and water use through manufacturing Focus on: - Recycling - Post-consumer content USPS suggests to: When sourcing paper, make sure that it comes from forests managed with practices certified by independent, third-party organizations such as the Sustainable Forest Initiative and the Forest Stewardship Council (USPS, 2011c)

Company Name (Packaging)	UPS	US Postal
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	No information available	Their products are certified by the SFI for post-consumer content.
What are the company's sourcing policies?	No information available	No information available
What are the reasons given for these policies?	No information available	No information available
Are there any policies specifying the amount of sourcing from sustainably managed forests?	No information available	No information available
If so, are those current requirements or goals?	No information available	Goals and commitments: Our goal is to increase the number of environmentally preferable products by 50 percent by FY 2015. This is compared to a FY 2010 baseline of 11,000 products (USPS, 2010, pp. 31-32)
What – if anything – does the company say about the Lacey Act or illegal logging?	No information available	Reports all articles of the Lacey Act, but the organization reports nothing specific in relation to sourcing.
Does the company identify any bottlenecks in the	No information available	No information available

Company Name (Packaging)	**UPS**	**US Postal**
sourcing process?		
Other relevant sustainability efforts	Eco Responsible Packaging Program, verified by Société Générale de Surveillance (SGS) (UPS, 2011), Carbon Neutral Shipping, Green packaging, Solid waste recycling, Air Fleet Efficiency, Carbon emission reductions (UPS, 2010)	Promotion of alternative fuels Encouraging vehicle technology Water-based inks Energy reduction (USPS, 2011b, p. 2)
Waste Flow data (Wood)	No information available	No information available
www	http://www.ups.com/content/us/en/index.jsx?WT.svl=BrndMrk	http://about.usps.com/

Company Name (Packaging)	**PepsiCo**	**Cola-Cola**	**Kraft Foods**
Publicly traded/Privately owned	Public	Public	Public
Company HQ	Purchase, NY	Atlanta, Georgia	Northfield, IL
Total Annual	2010: $ 57,838 million	2010: $ 35,119 million,	2010: $ 49.2 billion, 2009: $ 38.8 billion,

Company Name (Packaging)	PepsiCo	Cola-Cola	Kraft Foods
Revenue	2009: $ 43,232 million (PepsiCo, 2010, p. 15)	2009: $ 30,990million, 2008: $ 31,940million (The Coca-Cola Company, 2010, p. 88)	2008: $ 40.5 billion (Kraft Foods Inc., 2010a, p. 4)
Market Cap	$95.55billion (Yahoo! Finance, 2011l)	$153.52billion (Yahoo! Finance, 2011m)	$60.75billion (Yahoo! Finance, 2011n)
Business segments	Beverages, Snacks	Beverages Bottling company	Food
Which additional forestry metrics are reported by the company?	Global Sustainable Packaging Policy: Remove, Reduce, Recycle, Renew, Reuse! PepsiCo will develop and maintain a deeper understanding of its paper-based packaging supply chain and its supply base sourcing as close to the forest of origin as possible. (This is not mentioned in Sustainability Report) (PepsiCo, 2011, p. 2)	Reduce, Recycle and Reuse. Key focus on bottling (The Coca-Cola Company, 2009/2010)	"Since 2005, we've significantly increased our purchases of certified coffee and cocoa" (Kraft Foods Inc, 2010b, p. 5) Smarter Packaging: "Between 2005 and 2010, we cut nearly 100,000 metric tons (200 million pounds) of packaging from our supply chain. We're working to eliminate another 50,000 metric tons (100 million pounds) by 2015" (Kraft Foods Inc, 2010b, p. 27) -Strong Focus on reducing packaging volume, weight and therefore waste. -Certification of forest products not mentioned
Notes on available metrics:	-Work to eliminate all solid waste to landfills from our production facilities (PespiCo, 2009, p. 17) - Reduce packaging	Sustainable packaging policies/strategies aim at bottles, plastics etc. and not at paperboard packaging -Aspire to make our packaging a valuable	Goal 2015: Eliminate 50,000 metric tons (100 million pounds) of packaging material (Kraft Foods Inc, 2010b, p. 21)

Company Name (Packaging)	PepsiCo	Cola-Cola	Kraft Foods
	weight by 350 million pounds — avoiding the creation of one billion pounds of landfill waste by 2012 (PespiCo, 2009, p. 14) - Named Maura Abeln Smith EVP of Government affairs, former at International Paper - Sustainable Packaging: Optimizing our use of materials and driving to continuously improve our packaging (PepsiCo, 2011)	resource for future use. • Improve packaging material efficiency per liter of product sold by 7% by 2015, compared with a 2008 baseline. • Recover 50% of the equivalent bottles and cans used annually by 2015. - Source 25% of our polyethylene terephthalate (PET) plastic from recycled or renewable material by 2015. (The Coca-Cola Company, 2009/2010, pp. 24-27)	
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	CERFLOR CSA FSC PEFC SFI (PepsiCo, 2011, p. 2)	No information available	No information available
What are the company's sourcing policies?	See above	No information available	Companies sourcing strategies aim at sourcing more sustainable agricultural products (Kraft Foods Inc, 2010b, p. 23)
What are the reasons given for these policies?	PepsiCo reports that it will continuously work with its suppliers to be environmentally sustainable in their practices by following	No information available	No information available

Company Name (Packaging)	PepsiCo	Cola-Cola	Kraft Foods
	credible forestry standards and ensuring their fiber purchasing is only from sources that support responsible forest management (PepsiCo, 2011, p. 2)		
Are there any policies specifying the amount of sourcing from sustainably managed forests?	No information available	No information available	No information available
If so, are those current requirements or goals?	The company reports no goals and no requirements, only a general policy on sourcing certified products (PepsiCo, 2011, pp. 1-3) The company's packaging goal concerns weight and volume reductions (see above)	No information available	Goals to reduce packaging material -Smarter packaging initiatives: delICIOUS @ WORK Kenco coffee refill pouch 97 percent less packaging compared to the glass jar, formerly the product's sole container. Oscar Mayer Deli Creations 30 percent less paperboard; eliminating 544 metric tons (1.2 million pounds) of packaging. Milk chocolate bars 60 percent less packaging weight from fewer layers; saving 2,600 metric tons (5.7 million pounds) in Europe and rolling out the process in Latin America (Kraft Foods Inc, 2010b, p. 21)

Company Name (Packaging)	PepsiCo	Cola-Cola	Kraft Foods
What - if anything - does the company say about the Lacey Act or illegal logging?	No information available	No information available	No information available
Does the company identify any bottlenecks in the sourcing process?	No information available	No information available	No information available
Other relevant sustainability efforts	Water, climate, agriculture, solid waste (PespiCo, 2009)	Reforestation projects in Mexico (The Coca-Cola Company, 2009/2010, p. 33) Recycling bottles Strong focus on water management (The Coca-Cola Company, 2009/2010, pp. 28-33)	Six areas of focus are: agricultural commodities, packaging, energy, water, waste and transportation/distribution. Roundtable on Sustainable Palm Oil (RSPO) RainForest Alliance (Kraft Foods Inc, 2010b, p. 21)
Waste Flow data (Wood)	No information available	No information available	No information available
www	http://www.pepsico.com/Company/Our-Mission-and-Vision.html	http://www.thecoca-colacompany.com/index.html	http://www.kraftfoodscompany.com/home/index.aspx

Company Name (Packaging)	Pfizer	Merck
Publicly traded/Privately owned	Public	Public
www	http://www.pfizer.com/about/	http://www.merck.com/index.h

Company Name (Packaging)	**Pfizer**	**Merck**
		tml
Location (Company Headquarters)	New York, New York, USA	Whitehouse Station, NJ
Total Annual Revenue	2010: $67.8 billion 2009: $50 billion (Pfizer, 2010a, p. 16)	2010: $45.9 billion 2009: $27.42 billion 2008: $23.8 billion (Merck, 2011a) and (Merck, 2011b, p. 34)
Market Cap	137.94 billion (Yahoo! Finance, 2011k)	100.74 billion (Yahoo! Finance, 2011k)
Business segments	Pharmaceuticals	Pharmaceuticals
Which additional forestry metrics are reported by the company?	EHS criteria (Environment, Health and Safety) Based on 2007 report: "green purchasing" benefits - office paper 68% of the printer and copier paper purchased in the US in 2005 was recycled paper. - Paper bought was certified as sustainable under the Sustainable Forestry Initiative. - Purchasing printer and copier paper with 30 percent post-consumer waste recycled content (Pfizer, 2007, p. 105)	The company reports nothing specific about packaging sourced from forest products. The company reports on other packaging materials (Merck, 2011b, p. 18) Merck mentions that it partnered with GreenBlue for advisory services on packaging, and is a member of the GreenBlue Sustainable Packaging Coalition (SPC) (Merck, 2011d)

Company Name (Packaging)	Pfizer	Merck
Notes on available metrics:	Pfizer now mainly reports on waste reduction, EHS metrics (Pfizer) and (Pfizer, 2010, pp. 1-2), mentions to reduce GHG emissions, develop a strategic approach to environmental sustainability. Information on forest product procurement only found in 2007 report. No recent information found on progress!	Key categories of their CSR: Access to health, environmental sustainability, employees, ethics and transparency
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	No information available	No information available
What are the company's sourcing policies?	No information available	No information available
What are the reasons given for these policies?	No information available	No information available
Are there any policies specifying the amount of sourcing from sustainably managed forests?	2007 report: helped save 8,068 trees, 1,645,887 kilowatt hours of energy (enough to power 61 homes for one year), and 321 metric tons of related carbon dioxide (CO2) and other atmospheric greenhouse gas emissions (equal to the amount of CO2 from the operation of 64 cars per year) (Pfizer, 2007, p. 105)	Packaging goals: Eliminate PVC (-100%) Use more sustainable paper products, 50% by 2015 Sell more products with sustainable packaging (Merck, 2011c, p. 2) Certification is only mentioned as a footnote: Sustainable paper products include paper and packaging made from at least 30% post-consumer recycled

Company Name (Packaging)	Pfizer	Merck
		content or from certified fiber (Merck, 2011c, p. 2)
If so, are those current requirements or goals?	From the public documents it is unclear if Pfizer has any new goals or requirements in relation to paper & forest products as the company last reported on this information in 2007.	The company reports to have environmental goals for 2015 but does not report to have a detailed strategy or plans
What - if anything - does the company say about the Lacey Act or illegal logging?	No information available	No information available
Does the company identify any bottlenecks in the sourcing process?	No information available	No information available
Other relevant sustainability efforts	Environmental Sustainability, Managing our footprint, Product Stewardship, EHS External Supply, Health and Safety (Pfizer, 2010, pp. 1-2)	Water use, waste, air, climate change
Waste Flow data (Wood)	No information available	No information available

Company Name (Packaging)	Sears Holding Corporation	Hewlett-Packard Company	Dell, Inc.
Publicly traded/Privately owned	Public	Public	Public
Location (Company Headquarters)	Hoffman Estates, IL	Palo Alto, CA	Round Rock, TX
Total Annual Revenue	$43,326,000 (Google, 2011a)	$126,033,000 (Google, 2011b)	$15,658,000 (Google, 2011c)

Company Name (Packaging)	Sears Holding Corporation	Hewlett-Packard Company	Dell, Inc.
Market Cap	$6,190,000,000	$45,300,000,000	$25,540,000,000
Business segments	Retailer, parent company of Kmart and Sears	Technology, products, software, services	Technology, mobility products, PCs, software and peripherals, servers and networking products, storage and services
Which additional forestry metrics are reported by the company?	Responsible sourcing, Sustainable Paper Procurement Policy	Forest Stewardship Council-certified, Responsible forestry practices policy	Forest Stewardship Council
Notes on available metrics:	No hard numbers reported	Link to the policy is broken	No numbers reported specifically for fiber
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	Certified forest sources, Chain of custody forms, Procurement system certification, CSA, FSC, PEFC, and SFI (Sears Holding Company, 2011)	Forest Stewardship Council certification (HP, 2011)	Forest Stewardship Council (Dell, 2011)
What are the company's sourcing policies?	The company reports to be phasing out non-sustainable sources of fiber, eliminating the conscious use of illegal fiber, and instituting a preferred paper supplier program	The company's reported goal is to have 40% of fiber be Forest Stewardship Council-certified or have more than 30 percent post-consumer waste content by the end of 2011.	The company are moving towards sustainable packaging, but by using new materials such as bamboo and mushrooms, though these new boxes will still contain some amount virgin fiber.
What are the reasons given for these policies?	Commitment "to having a positive role in promoting the sustainability of forests and other natural resources"	No information available	Saves plastics, virgin fiber must still be used in boxes for stability

Company Name (Packaging)	Sears Holding Corporation	Hewlett-Packard Company	Dell, Inc.
Are there any policies specifying the amount of sourcing from sustainably managed forests?	Goal of 100% sustainably sourced forest products	The company's reported goal is to have 40% of fiber be Forest Stewardship Council-certified or have more than 30 percent post-consumer waste content by the end of 2011.	No information available
Are those current requirements or goals?	Goal	Goals	No information available
What - if anything - does the company say about the Lacey Act or illegal logging?	The company reports that it does not knowingly buy illegally sourced fiber	No specific policy found	No information available
Does the company identify any bottlenecks in the sourcing process?	No bottlenecks identified. If there are unknown sources in the supply chain, then the company reports it will change suppliers	No information available	No information available
Other relevant sustainability efforts	The company reports to work on mill performance, claim transparency, Carbon Disclosure Project, ISO 14001, efficient use of packaging in appropriateness of size, weight, and reduction initiatives	Sustainable design of products, waste reduction, recycling, water	Dell reports to be focused on alternative materials, and this singular focus is different from other companies in the sector, though there still seems to be potential for sustainable sourcing of forest products
Waste Flow data (Wood)	No information available	No information available	No information available

Company Name	Apple, Inc.	eBay	Burger King
Public/Private	Public	Public	Public
Location (Company Headquarters)	Cupertino, CA	San Jose, CA	Miami, CA
Total Annual Revenue	$65,225,000 (Google, 2011d)	$9,156,270 (Google, 2011e)	$2,502,200 (Google, 2011f)
Market Cap	$391,230,000,000	$43,420,000,000	$3,370,000,000
Business segments	Technology, mobile products	Marketplaces for the sale of goods and services, ecommerce, online payment solutions	Fast-food hamburger restaurant (FFHR)
Which additional forestry metrics are reported by the company?	No information available	Cradle-to-cradle data	No information available
Notes on available metrics:	Reducing packaging amount through design	No information available	No particular metrics other than percentages on recycled content
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	No information available	Nothing in particular; refers to the cradle t- cradle packaging they have cobranded with USPS (eBay, 2011)	No information available
What are the company's sourcing policies?	No information available	No information available except for the cradle to cradle program	No information available
What are the reasons given for these policies?	Saves transportation costs with packaging changes	Desire to be Eco-friendly	Health of our planet

Company Name	Apple, Inc.	eBay	Burger King
Are there any policies specifying the amount of sourcing from sustainably managed forests?	No information available	No information available	No information available
If so, are those current requirements or goals?	No information available	No information available	No information available
What - if anything - does the company say about the Lacey Act or illegal logging?	No information available	No information available	No information available
Does the company identify any bottlenecks in the sourcing process?	No information available	No information available	No information available
Other relevant sustainability efforts	Reducing material amounts in products, efficiency through product design, packaging made partially from recycled content	Reusable boxes they have designed, so that a box can easily and reliably be reused a second time.	Replacing boxes with paper wrapping in food packaging, lightest weight paper cups, claims to have the lowest weight consumer packaging of their competitors (not specified). 50% recycled paper on the FryBox container, napkins are 100% recycled paper
Waste Flow data (Wood)	No information available	No information available	No information available

Company Name (Packaging)	McDonalds	KFC	Wal-Mart
Publicly traded/Privately owned	Public	Public	Public
Location (Company Headquarters)	Oak Brook, IL	Part of Yum Holdings	Bentonville, AR
Total Annual Revenue	$24,074,600 (Google, 2011g)	---	$418,952,000 (Google, 2011h)
Market Cap	$89,140,000,000	---	$179,090,000,000
Business segments	Restaurant industry	Restaurant industry	Retail stores
Which additional forestry metrics are reported by the company?	Forest Stewardship Council, SFI, PEFC, CSA International (Canada), Cerflor (Brazil)	SFI	Forest Stewardship Council
Notes on available metrics:	They report 100% legal fiber supplies in Canada and Europe	"More than 90% of KFC paperboard is SFI Certified"	No information available
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	The report using Forest Stewardship Council, SFI, PEFC, CSA International (Canada), Cerflor (Brazil) (McDonald's, 2011)	SFI (KFC, 2011)	Forest Stewardship Council, Sustainable Forestry Initiative, National Standard for Sustainable Forest Management (Canadian Standards Association) (Wal-Mart Stores, 2011)
What are the company's sourcing policies?	They hold their suppliers accountable for not providing fiber sourced from land converted to plantation after November 1994, land protected from logging, not sourced from endangered species, and conforming to international trade sanctions	No information available	No information available

Company Name (Packaging)	McDonalds	KFC	Wal-Mart
What are the reasons given for these policies?	No information available	Commitment to reducing environmental footprint	No information available
Are there any policies specifying the amount of sourcing from sustainably managed forests?	In Europe the company reports 61% of fiber from sustainable sources and 15% in Canada as of 2011. The company reports a goal of 100%	Each packaging product varies, but generally each product contains at least 40% post consumer recycled, some SRI certified, some recycled content of 100% for some products	Yes, 80% of paper notebooks and 100% of copy paper are from certified responsibly managed forests
If so, are those current requirements or goals?	Goals	No information available – no goals or requirements found	Goal for higher amounts
What - if anything - does the company say about the Lacey Act or illegal logging?	No information available	No information available	No information available
Does the company identify any bottlenecks in the sourcing process?	No information available	No information available	No information available
Other relevant sustainability efforts	The company published a guide for suppliers	Replacing some paper packaging with reusable plastic containers	Very comprehensive goals for themselves and suppliers
Waste Flow data (Wood)	No information available	No information available	No information available

Demand Research Matrices: Solid Wood Sector – Homebuilders

Company Name (Homebuilders)	KB Home	Meritage Homes Corp.	Ryland Group
Publicly traded/Privately owned	Publicly Traded	Publicly Traded	Publicly traded
Location (Company Headquarters)	10990 Wilshire Boulevard, Los Angeles, California 90024	17851 North 85th Street, Suite 300, Scottsdale, Arizona	24025 Park Sorrento, Suite 400, Calabasas, California 91302
Total Annual Revenue	$1,589,996 (2010 Annual Revenue)	219,548 (2010 Retained Earnings)	1,063,892 (2010 Revenue)
Market Cap	11.51B (10/2/11)	490.67M (10/2/11)	472.95M (10/2/11)
Business segments	Homebuilding and financial services business nationwide (Google, 2010)	Homebuilder (Meritage Home, 2010)	Homebuilding and financial services in markets nationwide
Which additional forestry metrics are reported by the company?	No information available	No information available	No information available
Notes on available metrics:	No information available	No information available	No information available
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	NRDC Initiative NRDC's Forestry Initiative promotes wood-efficiency through building methods and materials that reduce wood use in construction, including alternatives to wood. It also promotes certification as a seal of	No information available	No information available

Company Name (Homebuilders)	KB Home	Meritage Homes Corp.	Ryland Group
	approval for wood that is harvested using environmentally and socially responsible forest management practices.		
What are the company's sourcing policies?	"We require all our lumber suppliers to provide us only with wood that is not from endangered forests or is certified by a recognized sustainable forestry management program. We also utilize building materials with recycled content whenever possible to minimize the cutting of new trees and help preserve forests" (KB Home, 2011).	No information available	No information available
What are the reasons given for these policies?	When announcing the NRDC initiative, KB Homes Chief Operating Officer explained the reason for this conservation effort saying, "We know that the world's old growth forests are threatened and, ultimately, it is the responsibility of every individual and corporate citizen to do their part for forest conservation," Homes. The seal enables consumers to identify wood products from well-managed sources, so they can use their purchasing power to influence and reward improved forest management activities around the world. (KB Home, 2000)	No information available	No information available
Are there any policies specifying the amount of sourcing from sustainably managed forests?	No information available	No information available	No information available

Company Name (Homebuilders)	KB Home	Meritage Homes Corp.	Ryland Group
If so, are those current requirements or goals?	The company reports no set targets, though it is possible some will be set through their partnership with NRDC	No information available	No information available
What - if anything - does the company say about the Lacey Act or illegal logging?	No information available	No information available	No information available
Does the company identify any bottlenecks in the sourcing process?	No information available	No information available	No information available
Other relevant sustainability efforts/ awards	33% of office supplies purchased that are earth friendly (KB Home, 2010)	Meritage Green means every home we build includes these energy efficiency and/or environmentally friendly features: Energy Star Certified Appliances, Minimum SEER 14, Low-E Windows, Low Flow Faucets, Programmable Thermostat, Low VOCs paints and finishes, Third Party Inspections, A home energy rating	No information available
Waste Flow data (Wood)	No information available	No information available	No information available
Links to Sources	(KB Home, 2011) (KB Home, 2010) (KB Home, 2000)	(Meritage Home, 2010)	(Ryland Group, 2010)

Company Name (Homebuilders)	**Pulte Group/ Centex**	**NVR, Inc.**	**Beazer**
Publicly traded/Privately owned	Publicly Traded	Publicly Traded	Publicly traded
Location (Company Headquarters)	100 Bloomfield Hills Pkwy. Ste. 300 Bloomfield Hills, MI48304	11700 Plaza America Drive, Suite 500 Reston, Virginia 20190	1000 Abernathy Road, Suite 1200, Atlanta, Georgia 30328,
Total Annual Revenue	4,447,62 (2010 Revenue-this does not include revenue from financial services, it covers Home-building and Home sale revenues) (Pulte Group, 2010)	289,468 Homebuilding revenue only 206,005 (2010 includes homebuilding and financial services)	1,009,841 (Beazer Homes, 2010)
Market Cap	1.51B (10/2/11)	3.3B (10/2/11)	111.98M (10/2/11)
Business segments	Homebuilding is the company's core business. The company is also engaged in the acquisition and development of land primarily for residential purposes, and the construction of housing on such land targeted for first-time development.	Homebuilding and mortgage banking. The homebuilding unit sells and constructs homes under the Ryan Homes, NVHomes, Rymarc Homes and Fox Ridge Homes trade names	Homebuilder with active operations in 15 states

Company Name (Homebuilders)	Pulte Group/ Centex	NVR, Inc.	Beazer
Which additional forestry metrics are reported by the company?	No information available	No information available	No information available
Notes on available metrics: GG KWH Co2 avoided Sustainable Wood Sourced	No information available	No information available	No information available
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	No information available	No information available	No information available
What are the company's sourcing policies?	No information available	No information available	No information available
What are the reasons given for these policies?	No information available	No information available	No information available
Are there any policies specifying the amount of sourcing from sustainably managed forests?	No information available	No information available	No information available
If so, are those current requirements or goals?	No information available	No information available	No information available

Company Name (Homebuilders)	Pulte Group/ Centex	NVR, Inc.	Beazer
What - if anything - does the company say about the Lacey Act or illegal logging?	No information available	No information available	No information available
Does the company identify any bottlenecks in the sourcing process?	No information available	No information available	No information available
Other relevant sustainability efforts/ awards	Energy and water efficient home design which includes: right-sized HVAC systems which reduce energy consumption; low-flow or dual-flush toilets that can reduce a home's water usage by thousands of gallons per year; ENERGY STAR® appliances; low-water xeriscaping; recycled building materials; weather-sensitive irrigation systems and preservation of walking trails and natural habitats.	No information available	Energy and water efficient home design with the E-smart label. -Beazer strives to work with partners who share our commitment to building eco friendly communities. We explore energy and water saving innovations and implement environmentally conscious building technologies.
Waste Flow data (Wood)	No information available	No information available	No information available
Links to Sources	(Pulte Group, 2010)	(NVR Incorporated, 2010)	(Beazer Homes, 2010)

Company Name	Lowes	Home Depot
Publicly traded/Privately owned	Publicly traded: Lowe's was incorporated in North Carolina in 1952 and has been publicly held since 1961.	Publicly traded: The Home Depot, Inc. is a Delaware corporation that was incorporated in 1978. (Home Depot, 2010)

Company Name	Lowes	Home Depot
Location (Company Headquarters)	1000 Lowe's Blvd. in Mooresville, NC 28117.	2455 Paces Ferry Road, N.W., Atlanta, Georgia 30339
Total Annual Revenue	17,371 (2011 Retained Earnings)	14,995 (2011 Retained Earnings)
Market Cap	24.38B	51.42B
Business segments	Building Material and Garden Equipment and Supplies Dealers Subsector (United States Securities and Exchange Commission, 2011a)	U.S. home improvement market. (United States Securities and Exchange Comission, 2011b)
Which additional forestry metrics are reported by the company?	No information available	"From 2006 to 2009 we sold over 630,000,000 pieces of FSC certified wood products. -Worked with our vendors to shift more than 80% of our lauan wood used in the production of doors to wood from more sustainable sources. Replaced mahogany levels with domestically engineered wood. Reduced our purchases of Indonesian lauan by more than 70%. The minimal amount of lauan purchases that remain in Indonesia are strategically placed with vendors that are aggressively pursuing certification, and have been engaged in third-party audits. Moved more than 90% of our cedar purchases to second- and third-growth forests in the United States. The remaining cedar purchases are sourced from coastal British Columbia and have been through the local community stakeholder review. In addition, our vendors are participating in the Joint Solutions Process negotiations. Significantly increased our FSC certified redwood. Our two primary suppliers of redwood both give a strong purchasing preference for FSC certified wood and we will continue to exercise a preference or certified redwood. Introduced a line of building materials manufactured from wheat straw,

Company Name	Lowes	Home Depot
		including shelving, panel products and underlayment; many of these products are used as substitutes for tropical hardwoods. Committed to not purchase uncertified wood products sourced from the 10 most vulnerable forest eco-regions as identified by the World Wildlife Fund in February 2001." Global Forest Cover and Consumption Metrics.
Notes on available metrics: **GG** **KWH** **Co2 avoided** **Sustainable Wood Sourced**	Green Power: "In 2010, we purchased 111 million kilowatt-hours of green power. Lowe's ranks sixth among America's top retail green power purchasers and 15th in the FORTUNE 500 in green power purchasing."	The company has set a 2015 target to reduce its domestic supply chain greenhouse gas emissions by 20 percent from its 2008 levels. "Through this program, The Home Depot will plant 38,000 trees in protected parks in the Metro Atlanta region as part of The Conservation Fund's Go Zero program. Along with offsetting carbon emissions through reforestation, the trees will help reduce the heat-island effect in urban areas, reduce erosion and storm-water runoff, and help clean the air."
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	FSC is the preferred wood for Lowe's.	In 1999 the company began prioritizing FSC wood, dictating this policy to suppliers. The company also uses chain of custody certification.
What are the company's sourcing policies?	"Lowe's long-term goal is to ensure that all wood products sold in our stores originate from well-managed, non-endangered forests."	The Home Depot Wood Purchasing Policy 1) The Home Depot will give preference to the purchase of wood and wood products originating from certified well-managed forests wherever feasible. 2) The Home Depot will eliminate the purchase of wood and wood products from endangered regions around the world. 3) The Home Depot will practice and promote the efficient and responsible use of wood and wood products. 4) The

Company Name	Lowes	Home Depot
		Home Depot will promote and support the development and use of alternative environmental products. 5) The Home Depot expects its vendors and their suppliers of wood and wood products to maintain compliance with laws and regulations pertaining to their operations and the products they manufacture. We sell less than 1% of all the wood cut worldwide with 94% coming from North America. The forest land coverage in North America has grown by 1.5% from 1990 to 2005.
What are the reasons given for these policies?	"Lowe's is concerned about the protection of these critical resources and recognizes that, through the products we sell, our company can play an important role in determining whether these forests will remain for future generations."	As the world's largest home improvement retailer and an industry leader on sustainability issues, we have the ability to effect change by doing the right thing. To help protect endangered forests and to ensure that there will be timber for future generations, The Home Depot first issued its Wood Purchasing Policy in 1999. From 1999 through 2010 we have been very successful in leading our suppliers to understanding and practicing sustainable forestry throughout the world.
Are there any policies specifying the amount of sourcing from sustainably managed forests?	The company did not report SMFP metrics or percentages in the CSR report or website	"One of the certification standards is the Forest Stewardship Council (FSC). We sell more FSC certified wood than any retailer in America and at the same time we have transitioned more vendors to FSC certified wood than any other retailer in America. We began to give preferential treatment to FSC certified products in 1999. We have worked closely with domestic and international manufacturers to help develop a supply chain that enables consumers to purchase FSC wood products. During the timeframe 2006 to 2008 we developed programs and

Company Name	Lowes	Home Depot
		purchased FSC wood products from over 60 global suppliers. These products currently include categories of doors, boards, patio furniture, molding, plywood and much more.”
If so, are those current requirements or goals?	No information available	No information available
What - if anything - does the company say about the Lacey Act or illegal logging?	“Lowe’s commitment to global forest conservation is also reflected in our continued support of the Lacey Act, an effort to end illegal logging globally. We actively engage with environmental and industry groups, our suppliers and government agencies to help interpret and implement this important initiative.”	The company reports to adhere to FSC standards to avoid illegal logging.
Does the company identify any bottlenecks in the sourcing process?	The company claims the housing market and the economy created a decline in sales	No information available
Other relevant sustainability efforts/ awards	In 2010, our employees’ success promoting energy and water conservation brought Lowe’s unprecedented recognition from the Environmental Protection Agency and the Department of Energy. Expanded our appliance recycling program companywide in 2010. We also installed recycling centers in more than 1,700 U.S. stores, and expanded our Energy Center nationwide to provide a one-stop destination for energy saving products.	No information available
Waste Flow data (Wood)	No information available	No information available

Company Name	**Lowes**	**Home Depot**
Links to Sources	(Lowes, 2010a) (Lowes, 2011) (Lowes, 2010b)	(Home Depot, 2011) (Home Depot, 2010)

Company Name (Homebuilders	**Standard Pacific Homes**	**Toll Brothers**
Publicly traded/Privately owned	Publicly traded	Toll Brothers
Company Headquarters	Irvine, California	Publicly traded since 1986 on the New York Stock Exchange (TOL)
Total Annual Revenue	912,418 (2010 Annual Revenue)	
Market Cap	489.13M (10/2/11)	1,494,771 (2010 Annual Report)
Business segments	Homebuilder and Financial services	HomeBuilder
What are the company's sourcing policies?	No information available	MANUFACTURED WOOD COMPONENTS, including engineered roof trusses, floor systems, and wall panels, use less material and reduce waste, and by using faster-growing, sustainably harvested trees help to save our old-growth forests. Our panelized walls and engineered roof and floor systems are constructed in a climate-controlled setting to increase quality and reduce job site waste. Plywood and trusses are examples of engineered wood products that allow us to use an environmentally responsible, renewal material to build our homes.
What are the reasons given for these policies?	No information available	Company-wide philosophy: homes are designed to reduce environmental impact and provide energy savings.

Other relevant sustainability efforts/ awards	No information available	One Complex has achieved LEED Gold Standards Many of our communities also offer a number of additional optional "green" features mostly regarding energy efficiency home design.
Waste Flow data (Wood)	No information available	No information available
Links to Sources	(Standard Pacific, 2010)	(Toll Brothers, 2011)

Demand Research Matrices: Solid Wood Sector – Household Durables

Company Name (Solid Wod- Household Durables)	**Ashley**	**Furniture Brands International**	**La-Z-Boy**	**Klaussner**	**Sauder Woodworking**
Publicly traded/Privately owned	Private	Public	Public	Private	Private
Location (Company Headquarters)	Arcadia, WI	St Louis, MO	Monroe, MI	Asheboro, NC	Archbold, OH
Total Annual Revenue	$2.77B (Forbes, 2011)	1.14B (Capital IQ, 2011b)	$1.2B (Capital IQ, 2011c)	Undisclosed	$450M (Sauder, 2011)
Market Cap (Ethan Allen, 2011)	No information available	114.34M (Capital IQ, 2011b)	385.74M (Capital IQ, 2011c)	Undisclosed	Undisclosed
Business segments	SIC - 259901 Furniture Manufacturers NAICS - 33712709 Institutional Furniture Manufacturers	SIC - 251998 Household Furniture NEC NAICS - 33712501 Household Furniture Exc Wood Or Metal	SIC – 259901 Furniture Manufacturers NCAIS - 33712709 Institutional Furniture Making	Home Furnishings	Ready to Assemble Furniture, furnishings for the home. (Sauder, 2011)

		Mfg			
Which additional forestry metrics are reported by the company?	No information available	No information available	No information available	No information available	No information available
Notes on available metrics:	- Engineered Wood: utilizes 95 percent of the tree in its manufacturing process compared to only 63 percent of a tree for solid lumber uses. - Sawmill residuals, other wood byproducts can be used engineered wood (Wisconsin Business, 2011)	- Presentation report shows some metrics/efforts	No information available	The company is privately owned, very little information is disclosed.	The company is privately owned but self-reports on website.
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	No information available	Chain of Custody, EFEC & 'Sustainable by Design' being implemented (Angara, 2011)	EFEC and SBD both through AHFA	No information available	FSC Certified, Rainforest Alliance
What are the company's sourcing policies?	No information available	No information available	No information available	No information available	"Sauder uses highly sustainable natural resources in our products and we protect the environment

					through efficient operational strategies." (Sauder, 2011)
What are the reasons given for these policies?	No information available	No information available	No information available	No information available	
Are there any policies specifying the amount of sourcing from sustainably managed forests?	No information available	No information available	No information available	No information available	Policies are implied but not specifically stated.
If so, are those current requirements or goals?	No information available	No information available	No information available	No information available	No information available
What - if anything - does the company say about the Lacey Act or illegal logging?	No information available	No information available	No information available	No information available	"We expect our suppliers to adhere to the applicable social and environmental laws of the countries, regions, and cities in which they operate." (Sauder, 2011)
Does the company identify any bottlenecks in the sourcing process?	No information available	No information available	No information available	No information available	No information available
Other relevant sustainability efforts	The company reports to have	Limiting formaldehyde in	EFEC and SBD	No information available	Key Areas of Focus:

	energy efficiency programs in place at plants, and reports on contributions to local society (Wisconsin Business, 2011)	products			- Energy - Waste and recycling - Water - GHGs (Sauder, 2011)
Waste Flow data (Wood)	Limited wood waste by using engineered wood.	No information available	No information available	No information available	No information available
Links to Sources	(See Bibliography)	(See Bibliography)	(See Bibliography)	(See Bibliography)	(See Bibliography)

Company Name (Solid Wood-Household Durables)	**Dorel**	**Samson Holding – (Lacquer Craft, etc.)**	**Flexsteel**
Publicly traded/Privately owned	Public (TSX)	Public (HKSE)	Public
Location (Company Headquarters)	Montreal, PQ	Dong Guan, China.	Dubuque, Iowa
Total Annual Revenue	2.34B (Capitla IQ, 2011i; Capital IQ, 2011f)	447.032M (Holding)	339.43M (Capitla IQ, 2011j)
Market Cap	733.46M (10/2/2011) (Capital IQ, 2011f)	2.35B (10/2/2011) (Capital IQ, 2011g)	100.66M (10/2/2011) (Capitla IQ, 2011j)
Business segments	Largest juvenile products distributor worldwide. Recreational/Leisure. Home furnishings.	Household furniture manufacturer	Home furniture, vehicle seating, hospitality seating.
Which additional forestry metrics are	No information available	No information available	No information available

reported?			
Notes on available metrics:	Brief 'Sustainability' section in the Annual Report.	No mention of sustainability or environmental commitments	No information available
Type of certification reported (Forest Management, Fiber Procurement, CoC?)	No information available	No information available	EFEC through AHFA Goal of achieving SBD (Flexsteel, 2011)
What are the company's sourcing policies?	No information available	No information available	No information available
What are the reasons given for these policies?	No information available	No information available	No information available
Are there any policies specifying the amount of sourcing from sustainably managed forests?	No information available	No information available	No information available
If so, are those current requirements or goals?	No information available	No information available	No information available
What - if anything - does the company say about the Lacey Act or illegal logging?	No information available	No information available	No information available
Does the company identify any bottlenecks in the sourcing process?	No information available	No information available	No information available
Other relevant	- Recycling or elimination of	No information available	"Reduce, reuse, and recycle

sustainability efforts	packaging materials such as shrink wrap, cardboard, plastics and Styrofoam. - Energy management systems for lighting - - Many offices also utilize multiple high volume scanners to reduce paper usage and storage. (Dorel Industries, 2010)		whenever possible." Energy efficiency at facilities. (Flexsteel, 2011)
Waste Flow data (Wood)	No information available	No information available	No information available
Links to Sources	(See Bibliography)	(See Bibliography)	(See Bibliography)

Company Name (Solid Wood- Household Durables)	**MDC Holdings**	**Ethan Allen**	**Z-Line Design**
Publicly traded/Privately owned	Public	Public	Private
Location (Company Headquarters)	Denver, CO	Danbury, CT	San Ramon, CA
Total Annual Revenue	2,765,981 (MDC 2007 Annual Report)	678.96M (Capital IQ, 2011a)	No information available
Market Cap	1.02B	391.86M (10/2/2011) (Capital IQ, 2011a)	No information available
Business segments	Industrial Goods, Residential Construction	Home furniture manufacturer.	Manufacturer of home and ready to assemble furniture.
Which additional forestry metrics are reported by the company?	Engineered wood: As a major purchaser of wood, MDC specifies wood species that are not only cost-effective for our business and our homebuyers, but that often are from	No information available	No information available

Company Name (Solid Wood- Household Durables)	MDC Holdings	Ethan Allen	Z-Line Design
	new and high-growth forests or harvested from tree farms specifically designated for homebuilders. Our wood varieties typically are new softwoods and our firs often come from inland areas of the western U.S., not the coastal areas that are populated by endangered redwoods and other species. The Company does not purchase exotic or old-growth woods. Further, hardwoods used for floors and cabinetry usually are American or Canadian oak, maple, hickory and cherry. MDC's lumber suppliers are the leading building products companies and include Louisiana Pacific, Boise Cascade, Georgia Pacific and Weyerhauser. These companies are recognized for their proactive stance toward protecting old-growth forests and ensuring the long-term sustainability of the world's forests. Moreover, a significant percentage of wood products used in the structure of each home are of the engineered or manufactured type, such as oriented strand board, which is a cost-effective, environmentally conscious alternative. Other composite products and assemblies are continually being evaluated, all to help ensure the long-term		

Company Name (Solid Wood- Household Durables)	**MDC Holdings**	**Ethan Allen**	**Z-Line Design**
	sustainability of the environment.		
Notes on available metrics:	No information available	Forestry info on website under 'Community Relations'	No information available
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	No information available	No information available	No information available
What are the company's sourcing policies?	No information available	-Most lumber requirements are satisfied with native hardwood species that trees grow in the forests along the mountain ranges of the eastern United States. They regenerate naturally and do not have to be planted. (Ethan Allan, 2011)	No information available
What are the reasons given for these policies?	No information available	To protect the forests. (Ethan Allan, 2011)	No information available
Are there any policies specifying the amount of sourcing from sustainably managed forests?	No information available	No information available	No information available
If so, are those current	No information available	No information available	No information

Company Name (Solid Wood- Household Durables)	MDC Holdings	Ethan Allen	Z-Line Design
requirements or goals?			available
What - if anything - does the company say about the Lacey Act or illegal logging?	No information available	No information available	No information available
Does the company identify any bottlenecks in the sourcing process?	No information available	No information available	No information available
Other relevant sustainability efforts	The ranking of the most environmental and sustainable builders was compiled by Calvert Group Ltd. of Bethesda, Md., with Boston College's Institute for Responsible Investment in Boston. Calvert underwrites and distributes mutual funds that specialize in "sustainable and responsible investing," through its Calvert Distributors Inc. subsidiary. None of the 13 homebuilders, according to the report, has "fully embraced the emerging market of sustainable building design and construction." The report ranked the homebuilders in three categories -- policy, programs and performance -- and used those to compile an overall score. MDC Holdings was No. 3 for policy, No. 13 for programs and No. 12	-Recycling - Technology - Energy conservation - Chemical substitution - Brownfield Economic Redevelopment Initiative	No information available

Company Name (Solid Wood- Household Durables)	MDC Holdings	Ethan Allen	Z-Line Design
	for performance. lthough the report included MDC Holdings on its so-called "sustainability bottom rung," it noted the company has shown some positive signs. "MDC has a corporate commitment to limiting land conversion and using sustainable materials, while half the industry still does not recognize their responsibility on this issue." (http://www.bizjournals.com/denver/stories/2008/05/05/daily18.html)		
Waste Flow data (Wood)	No information available	No information available	No information available
Links to Sources	(See Bibliography), (http://ir.richmondamerican.com/statement.cfm)	(See Bibliography)	(See Bibliography)

Company Name (Solid Wood- Household Durables)	D.R. Horten	Lennar	Beazer	The Ryland Group
Publicly traded/Privately owned	Public	Public	Public	Publicly traded
Location (Company Headquarters)	Fort Worth, TX	700 Nw 107th Ave. Miami, FL, 33172	Atlanta, GA	24025 Park Sorrento, Suite 400, Calabasas, California 91302

Company Name (Solid Wood-Household Durables)	D.R. Horten	Lennar	Beazer	The Ryland Group
Total Annual Revenue	3.49B (Capital IQ, 2011h)	3.00B (Capital IQ, 2011d)	694.93M (Capital IQ, 2011e)	1,063,892 (2010 Revenue) 2010 Annual Report
Market Cap	2.86B (Capital IQ, 2011h)	2.53B (Capital IQ, 2011d)	111.98M	472.95M (10/2/11)
Business segments	Residential Construction	Residential Constructio n	Residential Construction	No information available
Which additional forestry metrics are reported by the company?	No information available	No information available	No information available	No information available
Notes on available metrics:	No information available	No information available	No information available	No information available
Type of certification reported (Forest Management, Fiber Procurement, Chain of Custody?)	No information available	No information available	No information available	No information available
What are the company's sourcing policies?	No information available	No information available	No information available	No information available
What are the reasons given for these	No information	No information	No information available	No information

Company Name (Solid Wood-Household Durables)	D.R. Horten	Lennar	Beazer	The Ryland Group
policies?	available	available		available
Are there any policies specifying the amount of sourcing from sustainably managed forests?	No information available	No information available	No information available	No information available
If so, are those current requirements or goals?	No information available	No information available	No information available	No information available
What - if anything - does the company say about the Lacey Act or illegal logging?	No information available	No information available	No information available	No information available
Does the company identify any bottlenecks in the sourcing process?	No information available	No information available	No information available	No information available
Other relevant sustainability efforts	No information available	No information available	"eSMART homes provide substantial energy efficiencies that translate to a lower ongoing cost of ownership. Plus, with the opportunity to increase energy and water savings, and improve your indoor air even further with eco-friendly upgrades of your choice, you can achieve even more economical savings. Beazer strives to work with partners who share our commitment to building eco friendly communities.	No information available

Company Name (Solid Wood-Household Durables)	**D.R. Horten**	**Lennar**	**Beazer**	**The Ryland Group**
			We explore energy and water saving innovations and implement environmentally conscious building technologies. Working in concert with our partners we create environmentally friendly homes that are also designed to save money.”	
Waste Flow data (Wood)	No information available	No information available	No information available	No information available

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Appendix B: Allocation Tables

Group Classification - Paper & Publishing

Legend
1 = Yes
0 = No

Company/Criteria	Definitions	*Time Warner Inc.*	*Hearst Corp.*	*RR Donnelley & Sons Co.*	*McGraw-Hill Co. Inc.*	*United Stationers*	*Readers Digest Assn Inc.*	*Avery Dennison Corp*	*News Corp*	*Reed Elsevier Group PLC*	*Advance Publications, Inc.*	*Tribune Co.*	*Gannett Co. Inc.*	*Avon*	*Staples*	*New York Life*	*Bank of America*	*State Farm*	*International Paper*	*Office Depot*	*Scholastic*	*OfficeMax*
	Year of Report/Policy/Information	2010	2009	2010	2010	2010	None	2010	2007	2010	None	None	None	2010	2010	None	2010	2010	2010	2010	2008	2010
Basic																						
CSR report (or environmental reporting)	Company actively reports on sustainability issues (Social, Environmental etc.).	1	1	1	1	1	0	1	1	1	0	0	0	1	1	0	1	1	1	1	1	1
Fiber Awareness	Company shows concerns and interest in forest stewardship in some form or another. Company is aware of the issues surrounding the use of wood fiber.	1	1	1	1	1	0	1	0	1	0	0	0	1	1	0	1	1	1	1	1	1
Intermediate																						
Forest product sourcing policy (paper or wood)	Company has a policy, guidelines or sourcing standards in relation to forest products.	1	1	1	1	1	0	0	0	1	0	0	0	1	1	0	1	1	1	1	1	1
Sourcing "sustainable" forest products	Defined as anything company claims to be doing sustainably, but is not specified as certified. Includes any definition that a company assigns as sustainable.	1	1	1	1	0	0	1	0	1	0	0	0	1	1	0	1	0	1	1	1	1
Hard goal = % indicated for sustainable (recycled, post-consumer) material	Company indicates a % in relation to sourcing sustainable forest products. (Can also be reported in unit(s) of measurement.)	1	1	0	1	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1	1	0
Soft goals	Soft statement on sourcing sustainable fiber.	1	1	1	1	1	0	1	0	1	0	0	0	1	1	0	1	0	1	1	1	0
Other goals/strategies (e.g. reducing volume/weight of packaging)	This can be any other type of goal/strategy that are related to the use of forest fiber.	1	1	1	1	1	0	1	0	1	0	0	0	1	1	0	1	0	1	1	1	0
Advanced																						
Sourcing "certified" forest products	Defined as a stated intent to source certified forest products but not supported by %.	1	1	1	1	0	0	1	0	1	0	0	0	1	1	0	1	0	1	1	1	0
Hard goal = % indicated for sourcing certified fiber/material	Company indicates a % in relation to sourcing certified forest products. (Can also be reported in unit(s) of measurement.)	1	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0
Soft goals	Soft statement on sourcing certified fiber.	1	1	1	1	1	0	1	0	1	0	0	0	1	1	0	1	0	1	1	1	0
Chain of Custody	Specifically mentions Chain of Custody.	1	1	1	1	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Milestone reporting/evaluation	Company reports on the progress of its sourcing practices of forest fiber.	1	1	1	0	0	0	1	0	1	0	0	0	1	1	0	0	0	1	1	0	0
Other																						
Member of targeted industry association	Company is a member of any industry association concerned with forest conservation, sustainable sourcing, etc.	1	1	0	1	0	0	0	0	1	0	0	0	1	1	0	0	0	1	1	1	0
Issue of illegal logging (Soft goal)	Shows awareness of the issue of illegal logging. Addresses this vaguely.	1	1	1	1	1	0	1	0	1	0	0	0	1	1	0	1	0	0	0	1	0
Issue of illegal logging (Hard goal)	Shows awareness of the issue of illegal logging and addresses this with a statement of intention and appropriate sourcing metrics and/or requires supplier declarations.	1	1	1	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
Conservation of forests (e.g. funding of projects)	Refers to other activities for forest conservation (i.e. offsets, sponsoring afforestation projects, etc.)	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0
Third-party verification	Any third-party verfication of reporting process.	1	0	1	1	0	0	0	0	1	0	0	0	1	1	0	1	0	1	1	0	0
	Total Points	17	16	13	15	8	0	10	1	14	0	0	0	17	14	0	10	3	12	14	12	4
	Group Classification	**1**	**1**	**1**	**1**	**3**	**4**	**2**	**4**	**1**	**4**	**4**	**4**	**1**	**1**	**4**	**2**	**4**	**2**	**1**	**2**	**4**

Group Classification - Packaging

Legend
1 = Yes
0 = No

Company/Criteria	Definitions	*FedEx*	*UPS*	*US Postal*	*Johnson&Johnson*	*Pfizer*	*Merck*	*Bayer*	*Novartis*	*Proctor&Gamble*	*Amazon*	*Target*	*Starbucks*	*Nike*	*Adidas*	*PepsiCo*	*Coca-Cola*	*Kraft Foods*	*Sears Holding Company*	*HP*	*Dell*	*Apple*	*eBay*	*Burger King*	*McDonalds*	*KFC*	*Wal-Mart*
	Year of Report/Policy/Information	2010/2011	2009/2010	2010/2011	2010/2011	2007/2010	2010/2011	2009-2010	2010	2010	2010/2011	2010/2011	2010	2007-2009	2010	2010	2010	2010	2011	2011	2011	2011	2010	2009	2010	2010	2011
Basic																											
CSR report (or environmental reporting)	Company actively reports on sustainability issues (Social, Environmental etc.).	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fiber Awareness	Company shows concerns and interest in forest stewardship in some form or another. Company is aware of the issues surrounding the use of wood fiber.	1	1	1	1	1	1	0	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1
Intermediate																											
Forest product sourcing policy (paper or wood)	Company has a policy, guidelines or sourcing standards in relation to forest products.	1	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	1	1
Sourcing "sustainable" forest products	Defined as anything company claims to be doing sustainably, but is not specified as certified. Includes any definition that a company assigns as sustainable.	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	1	1	0	1	0	1	1	0
Hard goal = % indicated for sustainable (recycled, post-consumer) material	Company indicates a % in relation to sourcing sustainable forest products. (Can also be reported in unit(s) of measurement.)	1	0	1	1	1	1	0	0	1	1	1	1	0	1	0	0	0	1	1	0	0	0	0	1	0	0
Soft goals	Soft statement on sourcing sustainable fiber.	1	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0	0	1	1	0	0	0	0	1	0	0
Other goals/strategies (e.g. reducing volume/weight of packaging)	This can be any other type of goal/strategy that are related to the use of forest fiber.	0	1	0	1	0	0	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Advanced																											
Sourcing "certified" forest products	Defined as a stated intent to source certified forest products but not supported by %.	1	0	1	1	0	0	0	0	1	0	0	1	1	0	1	0	0	1	1	0	0	0	0	1	1	0
Hard goal = % indicated for sourcing certified fiber/material	Company indicates a % in relation to sourcing certified forest products. (Can also be reported in unit(s) of measurement.)	0	0	1	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1	0	0
Soft goals	Soft statement on sourcing certified fiber.	1	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	1	0
Chain of Custody	Specifically mentions Chain of Custody.	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Milestone reporting/evaluation	Company reports on the progress of its sourcing practices of forest fiber.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1	1	0
Other																											
Member of targeted industry association	Company is a member of any industry association concerned with forest conservation, sustainable sourcing, etc.	0	1	0	1	0	1	0	0	1	0	0	0	0	1	1	1	1	1	1	1	0	0	0	1	0	1
Issue of illegal logging (Soft goal)	Shows awareness of the issue of illegal logging. Addresses this vaguely.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	0	0
Issue of illegal logging (Hard goal)	Shows awareness of the issue of illegal logging and addresses this with a statement of intention and appropriate sourcing metrics and/or requires supplier declarations.	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0
Conservation of forests (e.g. funding of projects)	Refers to other activities for forest conservation (i.e. offsets, sponsoring afforestation projects, etc.)	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Third-party verification	Any third-party verfication of reporting process.	0	1	1	0	0	0	0	1	1	0	0	1	1	0	0	1	1	0	0	0	0	0	0	1	0	0
	Total Points	8	7	8	11	4	6	2	4	14	3	3	8	8	8	10	5	5	15	15	5	3	4	3	15	8	5
	Group Classification	**2**	**3**	**2**	**1**	**3**	**3**	**4**	**3**	**1**	**4**	**4**	**2**	**2**	**2**	**2**	**3**	**3**	**1**	**1**	**3**	**4**	**3**	**4**	**1**	**2**	**3**

Group Classification - Solid Wood

Legend
1 = Yes
0 = No

Homebuilders

Company/Criteria	Definitions	*Lowes*	*Home Depot*	*KB Home*	*Toll Brothers*	*Standard Pacific*	*Lennar*	*NVR, Inc.*	*Beazer*	*Meritage Homes Corp.*	*Ryland Group*	*Standard Pacific Homes*	*D.R. Horton*	*Hovnanian Enterprises*	*MDC Holdings*
	Year of Report/Policy/Information	2003-2009 CSR Reports	1993-2011 Environmental Milestone Webpage	2007-2011 Sustainability Reports	N/A	N/A	N/A	N/A	Green Press Releases since May 2010	N/A	N/A	N/A	N/A	N/A	N/A
Basic															
CSR report (or environmental reporting)	Company actively reports on sustainability issues (Social, Environmental etc.).	1	1	1	0	0	0	0	0	0	0	0	0	0	0
Fiber Awareness	Company shows concerns and interest in forest stewardship in some form or another. Company is aware of the issues surrounding the use of wood fiber.	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Intermediate															
Forest product sourcing policy (paper or wood)	Company has a policy, guidelines or sourcing standards in relation to forest products.	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Sourcing "sustainable" forest products	Defined as anything company claims to be doing sustainably, but is not specified as certified. Includes any definition that a company assigns as sustainable.	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Hard goal = % indicated for sustainable (recycled, post-consumer) material	Company indicates a % in relation to sourcing sustainable forest products. (Can also be reported in unit(s) of measurement.)	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Soft goals	Soft statement on sourcing sustainable fiber.	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Other goals/strategies (e.g. reducing volume/weight of packaging)	This can be any other type of goal/strategy that are related to the use of forest fiber.	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Advanced															
Sourcing "certified" forest products	Defined as a stated intent to source certified forest products but not supported by %.	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Hard goal = % indicated for sourcing certified fiber/material	Company indicates a % in relation to sourcing certified forest products. (Can also be reported in unit(s) of measurement.)	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Soft goals	Soft statement on sourcing certified fiber.	1	1	1	0	0	0	0	0	0	0	0	0	0	0
Chain of Custody	Specifically mentions Chain of Custody.	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Milestone reporting/evaluation	Company reports on the progress of its sourcing practices of forest fiber.	1	1	1	0	0	0	0	0	0	0	0	0	0	0
Other															
Member of targeted industry association	Company is a member of any industry association concerned with forest conservation, sustainable sourcing, etc.	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Issue of illegal logging (Soft goal)	Shows awareness of the issue of illegal logging. Addresses this vaguely.	1	1	1	0	0	0	0	0	0	0	0	0	0	0
Issue of illegal logging (Hard goal)	Shows awareness of the issue of illegal logging and addresses this with a statement of intention and appropriate sourcing metrics and/or requires supplier declarations.	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Conservation of forests (e.g. funding of projects)	Refers to other activities for forest conservation (i.e. offsets, sponsoring afforestation projects, etc.)	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Third-party verification	Any third-party verfication of reporting process.	1	0	1	0	0	0	0	0	0	0	0	0	0	0
	Total Points	13	16	12	7	0	0	0	0	0	0	0	0	0	0
	Group Classification	**1**	**1**	**1**	**2**	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**4**

Household durable

Company/Criteria	Definitions	*Ashley Furniture*	*Furniture Brands International*	*La-Z-Boy*	*Klaussner*	*Sauder Woodworking*	*Dorel*	*Samson Holding*	*Flexsteel*	*Ethan Allen*	*Z-Line Design*	*Ikea*	*Williams Sonoma*	*Knoll*
	Year of Report/Policy/Information	Website 2011/ Report 2010	2011	Website 2011	n/a	Website 2011	Annual Report 2010	n/a	2011	AR 2010, Website 2011	n/a	2010 Ikea Report/ 2011 website	WSI Report 2009	AR 2010, Website 2011
Basic														
CSR report (or environmental reporting)	Company actively reports on sustainability issues (Social, Environmental etc.).	1	1	1	0	1	1	0	1	1	0	1	1	1
Fiber Awareness	Company shows concerns and interest in forest stewardship in some form or another. Company is aware of the issues surrounding the use of wood fiber.	1	1	1	0	1	0	0	1	1	0	1	1	1
Intermediate														
Forest product sourcing policy (paper or wood)	Company has a policy, guidelines or sourcing standards in relation to forest products.	0	1	1	0	1	0	0	1	1	0	1	1	1
Sourcing "sustainable" forest products	Defined as anything company claims to be doing sustainably, but is not specified as certified. Includes any definition that a company assigns as sustainable.	0	1	1	0	1	0	0	1	1	0	1	1	1
Hard goal = % indicated for sustainable (recycled, post-consumer) material	Company indicates a % in relation to sourcing sustainable forest products. (Can also be reported in unit(s) of measurement.)	0	1	1	0	0	0	0	1	0	0	1	1	1
Soft goals	Soft statement on sourcing sustainable fiber.	0	1	1	0	1	0	0	1	1	0	1	1	1
Other goals/strategies (e.g. reducing volume/weight of packaging)	This can be any other type of goal/strategy that are related to the use of forest fiber.	0	1	1	0	1	0	0	1	1	0	1	1	1
Advanced														
Sourcing "certified" forest products	Defined as a stated intent to source certified forest products but not supported by %.	0	1	1	0	1	0	0	1	0	0	1	1	1
Hard goal = % indicated for sourcing certified fiber/material	Company indicates a % in relation to sourcing certified forest products. (Can also be reported in unit(s) of measurement.)	0	1	1	0	0	0	0	1	0	0	0	1	1
Soft goals	Soft statement on sourcing certified fiber.	0	1	1	0	1	0	0	1	0	0	1	1	1
Chain of Custody	Specifically mentions Chain of Custody.	0	1	1	0	0	0	0	1	0	0	0	1	1
Milestone reporting/evaluation	Company reports on the progress of its sourcing practices of forest fiber.	0	0	0	0	0	0	0	0	0	0	0	0	1
Other														
Member of targeted industry association	Company is a member of any industry association concerned with forest conservation, sustainable sourcing, etc.	0	0	0	0	0	0	0	0	0	0	0	0	0
Issue of illegal logging (Soft goal)	Shows awareness of the issue of illegal logging. Addresses this vaguely.	0	0	0	0	0	0	0	0	0	0	1	1	1
Issue of illegal logging (Hard goal)	Shows awareness of the issue of illegal logging and addresses this with a statement of intention and appropriate sourcing metrics and/or requires supplier declarations.	0	0	0	0	0	0	0	0	0	0	1	1	1
Conservation of forests (e.g. funding of projects)	Refers to other activities for forest conservation (i.e. offsets, sponsoring afforestation projects, etc.)	1	0	0	0	0	0	0	0	0	0	0	0	1
Third-party verification	Any third-party verfication of reporting process.	0	0	0	0	0	0	0	0	0	0	0	1	1
	Total Points	3	11	11	0	8	1	0	11	6	0	11	14	16
	Group Classification	**3**	**1**	**1**	**4**	**2**	**3**	**4**	**1**	**2**	**4**	**1**	**1**	**1**

Appendix C: Company and Sector Dashboards

	PAPER & PUBLISHING Trends: Company Dashboard							
	Criteria							
	Company	1. Fiber awareness	2. Sustainable sourcing practices	3. Sourcing certified forest products	*4. Sector specific criterion*	*5. Other*	6. Years reviewed	7. Short comment
1	***Time Warner Inc.***	↑	↑	↑	↑	↑	2004 - 2009/2010	Time Inc. continues to raise its own bar on sustainability through its industry working groups, supplier policies, and forestry initiatives. It is an "alpha-leader". Promotes greater certification for small forest owners, greater use of certified product, forest biodiversity. Engages in recycling initiatives; targets increased recycling content, reduced fiber content/materials reduction. Has been increasing certified content since at least 2004 (COC-certified from 25% in 2002 to 80% in 2009). Seeks materials and energy reduction; environmentally safe pulping and bleaching; overall carbon footprint reductions; green building for offices. Partnering in a study to promote protection of forest biodiversity.
2	***Hearst Corp.***	↑	↑	↑	↑	↑	2004-2009	Hearst is a model organization for forest sustainability. It is actively engaged in industry working groups and forestry initiatives to increase sustainable sourcing and recycling. Promotes greater certification for small forest owners. Targets greater recycling, reduced fiber content. Doubled certified fiber content (38% to 75%); achieved 100% COC certification w.r.t. sourcing from legally logged and non-endangered forests. Recycles used technology equipment; greenbuilding for offices. Engages in tree planting; land conservation easements.
3	***RR Donnelley & Sons Co.***	↑	↑	↑	↑	No reference found	2010	Through its pursuit of COC certification for printing facilities, the company seems to be committed to sustainable forestry. It just lacks clearly stated targets and initial benchmarks. Continues to pursue increased numbers of certified printing facilities. Promotes recycling, reuse, repurposing. Pursues COC certification for all suppliers. Reuse, recycling, repurposing, and repairing of materials to minimize waste (Includes packaging materials). No reference to past reports was found.
4	***McGraw-Hill Co. Inc.***	↑	↑	↑	↑	➲	2008 - 2010	McGraw-Hill's environmental policies seem to have a recent (2008) baseline but they are aggressively pursuing sustainable sourcing. The company is actively involved with industry working groups and supplier compliance monitoring. The mostly up arrows are based on overall environmental effforts since trend data on sourcing is difficult to find. High level of certified procurement; works to ensure supplier compliance with certification standards and logging laws.Increasing recycling of paper products. Expanded certified fiber purchasing to all grades (>90% of directly-purchased paper in 2010). Continues to lower paper weight for workbook products; reducing consumption of paper; increasing recovery efforts.
5	***United Stationers***	➲	↑	➲	No reference found	No reference found	2010	United Stationers expresses an interest in sustainable procurement, but no clearly outlined goals and timelines. They have been increasing recycled content. Stated preference for certified fiber; committed not to purchase from endangered or controversial sources. Seems to be increasing recycled content since 2007. Stated preference for certified fiber.
6	***Readers Digest Assn Inc.***	No reference found	No reference found	No reference found	No reference found	No reference found	No reference found	Readers Digest Assn does not seem to have any sustainability programs.
7	***Avery Dennison Corp***	↑	↑	↑	↑	No reference found	2008 - 2010	Avery Dennison is actively pursuing COC certifications for for operating plants and is in the early stages of developing formal paper procurement policies and becoming involved in industry working groups. Establised Responsible Paper Working Group to develop sourcing policy (2012 goal); developed system to ensure compliance with regulations. Increasing recycling and working with customers to recycle used labeling materials. Increasing FSC COC certification for worldwide operating plants (49 currently) since 2008. Developing materials and waste reduction technologies
8	***News Corp***	No reference found	No reference found	No reference found	↓	➲	2007	Only the Harper Collins book publishing subsidiary is engaged in some sourcing initiatives as a member of PREPS and through its supply-chain contract with RR Donnelley. The parent - News Corp. - does not seem to have any clearly defined policies/goals regarding sourcing of fiber. Plans to develop waste footprint reduction strategy. Claims to be active with carbon offset purchasing to meet GHG reductions.

	PAPER & PUBLISHING Trends: Company Dashboard						
	Criteria						
	Company	1. Fiber awareness	2. Sustainable sourcing practices	3. Sourcing certified forest products	*4. Sector specific criterion*	*5. Other*	6. Years reviewed	7. Short comment
9	***Reed Elsevier Group PLC***	↑	↑	↑	↑	No reference found	2007 - 2010	Reed Elsevier continues to pursue increased sustainability of its paper sourcing and use. As a founding member of the PREPS database, it continues to drive an expanding source of sustainability metrics for thousands of different papers sourced from hundreds of international mills. Committed to increasing certified and recycled content. Increasing recycling of paper products. Increasing certified sourcing through the PREPS grading system. Reduced production paper use 30% from 2006 - 2010 (direct and through increased online content); Additional 50% office paper reduction goal.
10	***Advance Publications, Inc.***	No reference found	No reference found	No reference found	No reference found	No reference found	None	Advance Publications Inc. does not seem to have any sustainability programs.
11	***Tribune Co.***	No reference found	No reference found	No reference found	No reference found	No reference found	None	Tribune Co. does not seem to have any sustainability programs.
12	***Gannett Co. Inc.***	No reference found	No reference found	No reference found	No reference found	No reference found	None	Gannett Co. makes very general statements about operating according to sound environmental principles, but there are no specific forestry policies mentioned.
13	***Avon***	↑	↑	↑	→	↑	2010 is the first mention of paper sourcing. The company reported sustainability metrics from 2004-2009	One of the few companies to actually report its current certified/recycled paper use (74%), Avon launched a 3-year measurement initiative in 2010 with the goal of 100% certified and/or recycled paper use by 2020. These are just goals but the company says all the right things. Launched a 3-year paper procurement plan in 2010, set goal of 100% certified or post-consumer recycled paper by 2020. Currently sources 74% of paper from recycled content or certified sources. Recycling Efficiency increased to 71% by 2009, but no reported metrics since. In 2010 procurement policy, Avon claimed it will participate in REDD, will try to eliminated sourcing from sensitive areas.
14	***Staples***	↑	↑	↑	↑	↑	2006-2011	No full metric reporting yet but they plan to launch a measurement system in 2012, and they've launched other sourcing initiatives and policies in the past two years. Launched new procurement policy in 2010 with goals of protecting forests and reducing demand for virgin wood fiber. Developing "SmartSource" program with Rainforest Alliance, due out in late 2011. Updated paper procurement policy prefers FSC-certification. In 2010 launched a Go Green Guide, eco-labels, and "Small Order Reduction Initiative" to help customers choose lower impact products. Carbon Canopy-a program to incentivize certification for private landowners.
15	***New York Life Insurance***	No reference found	No reference found	No reference found	No reference found	No reference found	No reference found	No paper policy or reporting.
16	***Bank of America***	↑	↑	↑	↑	→	2004-2011	Lots of new initiatives this year, before 2011 the forest initiatives involved loans to sustainable forestry projects and did not involve the company's consumption of paper. Company has made sustainable forestry investments since 2004, launched a new paper procurement policy in 2011. New paper procurement policy. New forest certification statement, specifying preferences. New paper consumption reduction and recycling policy. Made loan to sustainable forestry project in the USAL Redwood Forest in 2007, nothing similar mentioned since.
17	***State Farm***	↓	No reference found	No reference found	→	No reference found	2009-2011	No paper policy or reporting. There is chatter online that they may have initiatives that they have not publicly reported yet. No publicly available statements on sustainable forestry etc. Paperless billing, they report a modest amount of cardboard recycling, but these initiatives are not new.
18	***Office Depot***	↑	↑	↑	↑	No reference found	2007 - 2010	Thorough reporting of certified paper metrics, new initiatives to improve performance by 2012. They have several years of sustainable paper metrics but are launching a new initiative from 2010-2012. Has new procurement policy from 2010-2012. New policy has FSC preference, certification metrics well-reported.Recycling metrics well-reported.
19	***Scholastic***	↑	↑	↑	↑	→	2007 - 2011	Set goals starting in 2008 and has reported recycling and certified percentages every year since, showing steady improvement. Introduced a paper procurement policy in 2008, updated every year with reported metrics. Reported recycled content since 2007. Reported FSC-certified metrics since 2007, shows significant improvement. Working on design changes to minimize packaging. No direct forest programs reported.

	PAPER & PUBLISHING Trends: Company Dashboard							
	Criteria							
	Company	1. Fiber awareness	2. Sustainable sourcing practices	3. Sourcing certified forest products	*4. Sector specific criterion*	*5. Other*	6. Years reviewed	7. Short comment
20	***OfficeMax***	➲	➲	➲	No reference found	➲	2007-2009	OfficeMax published a procurement policy in 2009 with very broad statements and no goals. There have been no updates since. Published paper procurement policy in 2009 but no updates. Reported recycled content metrics from 2007-2009. Procurement policy has preference for certification, but no updates since 2009. Procurement policy expects suppliers to avoid endangered areas but no specifics and no updates since 2009

PAPER & PUBLISHING Trends: Strategy Dashboard

	Legend	
	Upward	↑
	Downward	↓
	Unchanged	➔

	Criteria		Comments (add if applicable)
1	**Sustainable sourcing practices (incl. Recycling/ Post-consumer content)**	↑	Leaders have developed strong goals for recycled content and those who reported metrics have shown an increase in the percentage of recycled fiber used.
2	**Sourcing certified forest products**	↑	Leaders have developed clear goals and procurement policies for certified paper and many are updating their goals this year.
3	**Carbon Offsets**	➔	Some companies mention REDD (Reducing Emissions from Deforestation and forest Degradation) or claim to have carbon offset activity, but no definite action or reporting.
4	**Conservation of forests (e.g. Afforestation projects, others)**	➔	Some market leaders have small initiatives to plant trees, create buffer zones, and study biodiversity but nothing comprehensive.
5	**Other sector specific strategy (add if applicable)**	↑	Some leaders have paper reduction strategies. This is a weak up arrow.

	PACKAGING Trends: Company Dashboard							
	Criteria							
	Company	**1. Fiber awareness**	**2. Sustainable sourcing practices**	**3. Sourcing certified forest products**	***4.Reduction of packaging material, volume, weight***	**5. Forest conservation**	**6. Years reviewed**	**7. Short comment**
1	FedEx	↑	↑	→	↑	↑	2009, 2010	FedEx recognizes their responsibility to source sustainable forest products. They do so by sourcing recyceled and certified virgin fiber. It remains unclear how stringent their procurement policies are. Goals are only indicative. Certification of forest products is only mentioned in relation to their printing centers, not their packaging. No older report than 2009 was found.
2	UPS	↑	↑	↓	↑	↑	2005, 2010	Compared to 2005, UPS shows more fiber awareness. They key focus are recycled and post-consumer packaging materials. Sourcing of certified virgin fiber is not specifically mentioned. UPS uses GRI reporting metrics. They invest in forest conservation projects and purchase carbon offsets to promote their carbon-neutral-shipping program.
3	US Postal	↑	↑	↑	↑	→	2008, 2010	USPS shows strong evidence for fiber awareness. They source recycled material and show strong preference for certified forest products. Most of their packaging is already SFI certified.They earned Cradle-to-Cradle certification for environmentally friendly design. Other forest conservation projects are not mentioned. No older report than 2008 was located.
4	Johnson & Johnson	↑	→	→	↑	↑	2005, 2009	Based on a partnership with WWF, J&J established forest product purchasing guidelines that outline to source forest products from sustainable and certified sources. The problematic of high-risk and illegal sources is addressed. According to their 2009 report they have exceeded their goals (97 percent of packaging and 92 percent of office paper contain more than 30 percent PCR content or fiber from certified forests). However, no new goals were established. The upward trend over the recent years seems to be stagnating as of 2010.
5	Pfizer	→	→	↓	↑	→	2007, 2010	Pfizer last mentioned sustainable and certified forest products in their 2007 report. Their position in relation to forest stewardship remains unclear. Actual goals and actions could not be found. Pfizer uses GRI and EHS reporting metrics, however paper based packaging is not specifically a part of their reporting. Older reports than 2007 were not found.
6	Merck	↑	↑	→	↑	→	2004/5, 2010	Merck shows an overall upward trend in relation to their concern about paper products. However, goals stated are not backed up with clear sourcing policies. Information on forest products remains limited. Certification is only mentioned in a footnote of their reporting.
7	Bayer	→	→	No reference found	↑	→	2005, 2010	For many years, Bayer has been reporting on numerous sustainability issues and follows GRI metrics. However, foresty metrics do not seem to be part of it. Through their own business structures they research on packaging, but it is unclear what actions they are taking in relation to their paper based packaging. No sourcing policy, guidelines or other information could be located.
8	Novartis	→	→	No reference found	↑	↑	2005, 2010	For many years, Novartis has been reporting on numerous sustainability issues and follows GRI metrics. However, foresty metrics do not seem to be part of it. They launched sustainable packaging initiatives in partnership with Walmart, but it is unclear what actions they are taking in relation to their paper based packaging. No sourcing policy, guidelines or other information could be located that specifically mentions certification of forest products. They are involved in carbon offset projects in Argentina, certified by FSC.
9	Proctor&Gamble	↑	↑	↑	↑	↑	2005, 2010	P&G is an early adoptor of forestry metrics and has a very comprehensive plan and strategy in relation to their packaging. It includes a clear forest product sourcing principles, strong focus on recycled and certified content, as well as reduction of overall packaging material. P&G does not knowingly purchase forest products from unknown or illegal sources. Their overall aim is to source 100% certified forest products. Todate they claim to have accomplished 68%.
10	Amazon	→	→	No reference found	↑	No reference found	2011	It was difficult to distinguish any specific trends for Amazon. They do not publish a sustainability reports. Information on their environmental initiatives are only on their website. They are committed to reducing packaging waste. They do not pursue any specific goals in relation to certified forest product. They claim that up to 50% of their packaging is sourced from recycled content and is 100% recyclable.
11	Target	→	→	No reference found	↑	↑	2007, 2010	Target shows stagnating trends in relation to packaging. In their 2007 report has a section on sustainable packaging that indicated some soft goals for packaging. These are not specifically addressing paper-based packaging. Foresty metrics are not part of the 2007 nor the 2010 sustainability report. The only positive trend is the development of Environmental packaging guidelines for suppliers. Yet, nothing more is specified.
12	Starbucks	↑	→	→	↑	↑	2007, 2010	Starbucks ethical sourcing does not elaborate on sourcing sustainable forest products. It focuses clearly on coffee. In the 2007 report, Starbucks indicated that all solid wood in their branches should be sourced from FSC certified sources. Certification of packaging material is not further mentioned. In addition, they strongly focus on recycled and post-consumer content of their packaging.
13	Nike	↑	↑	↑	↑	↑	2005/06, 2007/08/09	Nike shows an upward trend in relation to their concern on sustainable packaging material. In their 2005/06 report packaging was only addresses in relation to waste reduction. In their recent report, they state that 100% of their shopping bags in North America are FSC certified. They are working on weight, volume reduction of corrugated shoeboxes, as well as increasing recycled contents. In addition, they are strongly concerned with deforestation in relation to cattle farming for their leather products and thus take other forest conservation actions in cooperation with Greenpeace. They have issues a leather sourcing policy.

	PACKAGING Trends: Company Dashboard							
	Criteria							
	Company	**1. Fiber awareness**	**2. Sustainable sourcing practices**	**3. Sourcing certified forest products**	***4.Reduction of packaging material, volume, weight***	**5. Forest conservation**	**6. Years reviewed**	**7. Short comment**
14	Adidas	↑	↑	No reference found	↑	↑	2005, 2010	Adidas expresses a strong intention to review its packaging strategies in 2011 and to set new target for 2015. Overall their trend is positive, as packaging was not on their radar in the 2005 report. They have very specific sourcing policies for leather, cotton, many more. But nothing specific on forest products. They claim to use 95% recycled material for paper products. Certification of forest products is not mentioned in particular, yet they are involved in reforestation projects.
15	PepsiCo	↑	↑	↑	↑	↑	2009	PepsiCo's overall packaging goal: Remove, Reduce, Recycle, Renew, Reuse! Their intention is to develop and maintain a deeper understanding of its paper-based packaging supply chain and its supply base sourcing as close to the forest of origin as possible.They do not have hard goals. Their policy only states that certified forest products are preferred. Even though older reports were not located, PepsiCo seems to just be taking paper-based packaging seriously and is launching initiatives accordingly. Their packaging policy does not have a specific date.
16	Coca-Cola	→	→	No reference found	↑	↑	2009/10	The Coca-Cola Company strongly focuses on the environmental impact of its packaging (Reduce, Recycle and Reuse). However, this mainly includes plastics, glass and other non-wood-fiber materials. Consequently, no trends in relation to this were identified. Coca-Cola funds reforestation initiatives in Mexico.
17	Kraft Foods	→	→	No reference found	↑	↑	2010	Kraft Foods is a good example of a company that is going a very different direction in relation to packaging. Recycling is one of their initiatives, but this does not relate to actual content of their packaging. Certfied forest fiber is not addressed. Instead they strongly focus on reducing packaging volume, weight and therefore waste. Forest conservation is on their agenda, however this mainly relates to their palm-oil, coffee and cocoa footprint. They are a partner of the Rainforest Alliance. An older report than 2010 was not located.
18	Sears Holding Company	↑	↑	↑	↑	→	2011	Sears is a model company for sustainable fiber. They have mastered the understanding of it's purpose and use, as well as the distribution and reduction efforts.
19	HP	↑	↑	↑	→	→	2011	HP has been slow to integrate sustainable fiber products, and only refers to it as sustainable paper, not inclusive of their cardboard. The company does however have goals with projections up to four years out.
20	Dell	→	↑	→	→	↑	2006/2011	Dell seems to have transitioned away from fiber packaging in favor of nonfiber sources. There is however still significant opportunity to achieve highter amounts of sustainable fiber. The focus for Dell has been on their mailings rather than many of their shipping products. Over the past ew years, the direction has changed and seems to be keeping the pace rather than trending upwards.
21	Apple	→	→	No reference found	↑	→	2008/2011	Apple has not taken any initiatve in sustainable fiber. The sustainability initiatives in packaging include consistant reductions in the amount of packaging, design efficicncies, and annual reductions. Apple needs to further address recycled content and needs to begin to report on certified sustainable fiber.
22	eBay	↑	↑	No reference found	→	→	2010	eBay began their move into sustainable packaging with a reusable box that they collaborated on with the US Postal Service. Because they primarily facilitate transactions between buyers and sellers, ebay's sustainability efforts in packaging are comedable and moving in the right direction.
23	Burger King	→	↑	No reference found	↑	→	2009	Burger King has lost their way in terms of sustainable fiber. Their packaging initiatives focus purly on material reductions and the use of recycled materials. The transition from cardboard boxes to the less fiber intensive paper wrapping was Burger King's most significant effort along with their 100% recycled napkins.
24	McDonalds	↑	↑	↑	→	→	2010	McDonald's reports on limited information related to their packaging. They are moving consistantly in the right direction, and are one of few companies that utilize third party verification of sources for their fiber. Through all of their initiatives, they are taking a multidirectional approach to sustainable packaging with sourcing, recycling, and reductions.
25	KFC	↑	↑	↑	↑	→	2010	KFC does not include a significant amount of information about their history in achieving sustainable forestry products in their packaging. They have focused on integrating sustainable fiber into the packaging and replacing fiber products with reusable plastic containers.
26	Wal-Mart	→	→	↓	→	→	2005/2011	Wal-mart showed directionality in 2007 with sustainable sourcing initiatives, but since then seems to have fallen off the wagon. They began to focus on including the furnature and pallets in certified fiber. Recent reports fail to mention any sustainable fiber for any purpose.

PACKAGING Trends: Strategy Dashboard

Legend	
Upward	↑
Downward	↓
Unchanged	→

	Criteria		Comments (add if applicable)
1	**Sustainable sourcing practices (incl. Recycling/ Post-consumer content)**	↑	Recycled and PC content received increased attention by the companies.
2	**Sourcing certified forest products**	→	No increasing trend can be identified for sourcing certified forest products
3	**Carbon Offsets**	↑	Some companies purchase carbon offsets, including from forest projects (e.g. UPS)
4	**Conservation of forests (e.g. Afforestation projects, others)**	↑	Companies invest in forest projects in several developing nations
5	**Reduction of weight and volume, increase of recyclability of packaging material**	↑	This seems to the key driver in packaging. Efficiency of packaging and reduction of landfill output.

	SOLID WOOD-HOMEBUILDERS Trends: Company Dashboard							
	Criteria							
	Company	**1. Fiber awareness**	**2.Sustainable sourcing practices**	**3. Sourcing certified forest products**	***4. Sector specific criterion***	***5. Other***	**6. Years reviewed**	**7. Short comment**
1	Lowes	⋒	➲	➲	⋒	⋒	2003-2010	2003-2010 CSR reports, Lowes has committed to implementing a wood policy preference for FSC wood. Their reports indiciate annual progress in sustainability efforts, however the metrics reported are determined by lowes, they do not include volume metrics for certified wood products.
2	Home Depot	⋒	⋒	⋒	⋒	⋒	1993-2011	19993-2011 sustainability milestone webpage. Global Leader of forest issues and global wood supplies. Clear metrics reported for sustainble milestones and volume of FSC products progressing each year. Policy established in 1993. Publicly available Sustainability Milestones.
3	KB Home	⋒	⋒	⋒	⋒	⋒	2007-2010	2007-2010 Sustainability Reports. Clear sustainability reporting metrics (volume of certified wood) from 2008-2010, GRI third party report, uses performance indicators for all social and environmental projects.
5	Meritage Homes Corp.	➲	➲	➲	➲	⋒	2010-2011	No wood policy publicly available, Meritage Green Webpage focuses on Energy Efficiency standards, green press releases date back to May 2010.
7	Beazer Homes	No reference found	No reference found	No reference found	No reference found	⋒	No reference found	No wood policy publicly available, other efforts include E-smart Sustainable Home Design.
9	Pulte Group Inc	No reference found	No reference found	No reference found	No reference found	⋒	No reference found	Environmental mission listed on website for Energy Star appliances and water efficiency, no metrics or reporting publicly available.
11	NVR Ince	No reference found	No reference found	No reference found	No reference found	⋒	No reference found	No metrics or reporting publicly available, only sustainability efforts deal with Energystar labels
13	The Ryland Group	No reference found	No reference found	No reference found	No reference found	No reference found	No reference found	No metrics or reporting publicly available.
14	Standard Pacific	No reference found	No reference found	No reference found	No reference found	No reference found	No reference found	No metrics or reporting publicly available.
15	Toll Brothers	➲	⋒	➲	➲	⋒	➲	Toll Green Webpage indicates a wood policy. Preference is given to engineered wood for some homebuilding products. Other efforts include energystar, water efficiency, and waste reduction. No milestones or public reports listed.
17	Lennar	➲	➲	➲	➲	⋒	➲	No reports or milestones, RESNET energy efficient homes.
18	D.R. Horton	➲	➲	➲	➲	⋒	➲	Energy Efficiency standards
19	Hovnanian Enterprises	➲	➲	➲	➲	➲	➲	no metrics or reporting publicly available.
20	MDC Holdings	➲	➲	➲	➲	➲	➲	no metrics or reporting publicly available.

	SOLID WOOD-HOUSEHOLD DURABLES Trends: Company Dashboard							
	Criteria							
	Company	**1. Fiber awareness**	**2. Sustainable sourcing practices**	**3. Sourcing certified forest products**	***4. Sector specific criterion***	***5. Other***	**6. Years reviewed**	**7. Short comment**
21	Ashley Furniture	No reference found	No reference found	No reference found	No reference found	No reference found	No reference found	Ashley does not issue yearly reports. Based on the website it is unclear as to when they began their environmental initiatives.
22	Furniture Brands International	↑	↑	↑	↑	↑	2008 - 2011	3 out of 9 FBI Brands are registered for AHFA's EFEC certification. Hickory Chair since 2008, Drexel since 2011, Thomasville since 2010. Hickory Chair is also registered with SBD since 2010. (www.sustainablebydesign.us). No reporting data found prior to these dates.
23	La-Z-Boy	↑	↑	↑	↑	↑	2009 - 2010	EFEC registered since 2009 and SBD registered since 2010. No prior reporitng found.
24	Klaussner	No reference found	No reference found	No reference found	No reference found	No reference found	No reference found	No metrics or reporting publicly available.
25	Sauder Woodworking	↑	→	→	→	→	2010	Produced first sustainability report in 2010. FSC, Rainforest and CPA but unclear since when.
26	Dorel	↓	→	→	→	→	2009/2010	2009 references someporducts that are made of FSC certified wood. 2010 has no mention of such products.
27	Samson Holding	No reference found	No reference found	No reference found	No reference found	No reference found	No reference found	No metrics or reporting publicly available.
28	Flexsteel	↑	↑	↑	↑	↑	2009 - 2011	EFEC registered since 2009 and SBD since 2011.
29	Ethan Allen	No reference found	No reference found	No reference found	No reference found	No reference found	2011	Website reports on environmental intiatives but there is no mention of past years.
30	Z-Line Design	No reference found	No reference found	No reference found	No reference found	No reference found	No reference found	No metrics or reporting publicly available.
31	Ikea	↑	↑	↑	↑	↑	2008/ 2010	Ikea's first SR was 2008. Reporting has increased since.
32	Williams Sonoma	→	→	→	→	→	2008 - 2011	WSI has good policies in place but they appear to be unchanged since implementation in 2008.
33	Knoll	↑	↑	↑	↑	↑	2005/2010	Knoll shows significant strides in its initiatives such as Life Cycle Analysis, implementing policies for exotic woods not previously addressed, increasing requirements for certified wood from 50% to 95% of their products.

SOLID WOOD Trends: Strategy Dashboard			
	Legend		
	Upward	↑	
	Downward	↓	
	Unchanged	➲	
Criteria			Comments (add if applicable)
1	**Sustainable sourcing practices (incl. Recycling/ Post-consumer content)**	↑	Some of the leaders have implementing hard goals for certified wood products, others have become increasingly aware of the issue and mention soft goals or the importance of forestry initiatives
2	**Sourcing certified forest products**	↑	The companies that are aware have made progress in their sustainability reports, or milestone tracking for certified forest products
3	**Carbon Offsets**	➲	None have publicly stated investments in carbon offsets
4	**Conservation of forests (e.g. Afforestation projects, others)**	➲	Many engage in afforestation projects (often with big Nonprofits like Nature Conservancy or NRDC), these do not necessarily accompany sustainable wood sourcing
5	**Other sector specific strategy**	↑	Energy efficiency and water efficiency was a focus in most sustainability web pages

Appendix D: Certification Scheme Overview

December 2011

Overview/ Cert Type	Sector	Certification	Criteria	Specific Policy	Sourcing Forest Products	Policy and Purpose	Sourcing	Illegal tracking	Chain of Custody	Year Established	Source
Third Party Certification		**SFI**		Responsible for maintaining, overseeing and improving a sustainable forestry certification program. SFI is internationally recognized and is the largest single forest standard in the world.	SFI certified sourcing: must show that the raw material in their supply chain comes from legal and responsible sources, whether the forests are certified or not. Primary producers must be third-party audited and certified to SFI Requirements: Section 2 – SFI 2010-2014 Standard (Objectives 8-20).	Developed in response to market concerns about forest management and illegal logging, primarily in developing countries.	SFI 2010-2014: promotes sustainable forest management, it includes unique fiber sourcing requirements to promote responsible forest management on all forest lands in North America.		**SFI chain-of-custody certification**	1994	http://www.sfiprogram.org/sustainable_forestry_initiative_standard.php
International Review Board, includes ATFS, and CSASFM (Canadana)		**PEFC (Programme for the Endorsement of Forest Certification)**	PEFC's sustainable forest management criteria are founded on internationally recognized criteria and indicators developed by government agencies around the world. Its endorsement process includes a detailed application, an independent assessment, 60 days of public comment and a report by an independent assessor with recommendations for the PEFC board As PEFC's National Governing Body for the United States, SFI Inc. participates in the PEFC General Assembly and has input into PEFC processes and technical documents, which affects forest certification programs globally.	In addition to the SFI Standard, PEFC has endorsed two other certification standards in North America – the U.S.-based American Tree Farm System and the Canadian Standards Association Sustainable Forest Management Standard.		Forest certification provides a mechanism to address these and ensure that wood and wood-based products reaching the marketplace have been sourced from sustainably managed forests. Developed in response to the specific requirements of small- and family forest owners as an international umbrella organization providing independent assessment, endorsement and recognition of national forest certification systems.	Sourcing is verified in COC verification, it is an overarching assessment of forest products.	PEFC Chain of Custody certification, including its requirements on non-controversial sources, is designed to prevent illegal wood from entering the production chain. **Third party auditing to verify system integrity provides assurances that PEFC-certified products entering the marketplace are not from illegal wood sources.**	PEC CoC certification outlines requirements for tracking certified material from the forest to the final product to ensure that the wood contained in the product or product line originates from certified forests. Only when this process has been independently verified and the product contains a minimum percentage of 70% PEFC-certified material is the product eligible to bear the PEFC logo.	1999	http://www.sfiprogram.org/sfi-standard/forest-certification-endorsement.php,
Voluntary Program	Furniture	**EFEC (Enhancing Furniture's Environmental Culture)**	EFEC is a voluntary environmental management system created by AHFA (American Home Furnishings Alliance) in 1999 to help its members develop and maintain strong, proactive environmental programs.	EFEC provides a systematic approach for reviewing and improving your company's operations for better environmental performance and improved profitability.						1999	http://www.pefc.org/about-pefc/who-we-are/mission-vision
Design Management Plan, not a wood certification. It is not a direct certifier of sustainable forest management. They do implement EFEC standards.	Furniture	**EFEC-SD (Sustainable by Design)**	Sustainable by Design requires implementation of the EFEC Environmental Management System for all domestic facilities. Measurable benefits of implementing EFEC include: better management of resources and raw materials; Reduced energy, water and waste disposal. It also requires sustainable supply chain management, calculating a corporate environmental footprint, and assessing social performance (labor impacts, community impacts, human rights.	Sustainable by Design provides companies with a comprehensive plan for continually improving sustainable business practices.	AHFA introduced its membership to Sustainable by Design in 1999, a corporate environmental program that provides a broader umbrella than EFEC. EFEC creates a culture of conservation and environmental stewardship within a specific facility.						http://sustainablebydesign.us/efec.aspx
Life Cycle Analysis	Starbucks etc.	**Cradle to Cradle Certification**	http://www.mbdc.com/detail.aspx?linkid=2&sublink=9	The Cradle to Cradle Certified^{CM} program is a multi-attribute eco-label that assesses a product's safety to humans and the environment and design for future life cycles.	Certification Clients include: Nike, Pepsico, New Balance	McDonough Braungart Design Chemistry (MBDC) is a global sustainability consulting and product certification firm focusing on products that create a 'positive footprint' on the planet (instead of reducing a negative footprint) by implementing the Cradle to Cradle® Framework.			MBDC services include two primary offerings. Cradle to Cradle® Certification, and Cradle to Cradle® Consulting design framework for product life cycle, operations and organizational decision making.	1995	http://www.mbdc.com/detail.aspx?linkid=2&sublink=8
Forest Management Plans, COC, and controlled wood certifications.		**FSC**	FSC Principles and Criteria The 10 Principles and associated Criteria describe how the forests have to be managed. They include managerial aspects as well as environmental and social requirements.	The FSC focuses on responsible forest management globally, forest certification in the endangered tropical forests of the economic south, small forest owners and growing the market share for FSC certified products.			CoC and criteria track the source of the wood products.	FSC also has strict requirements to control the non-certified material in FSC-Mixed Sources products. The non-certified material must comply with FSC Controlled Wood standards which ensures the material comes from forests that are not harvested illegally. This must also be independently verified before it is mixed with certified material. These certification requirements as well as accreditation control mechanisms ensure that FSC is not unwillingly certifying illegal logging. FSC is monitoring its performance and continuously improving the system to deal with particular difficult or new issues.	FSC chain of custody (CoC) allows credible tracking of FSC material from the forest, through all successive stages of the production process, to committed retailers and consumers. CoC certification is for operations that manufacture, process or trade in timber or non-timber forest products.	1993	http://www.fsc.org/global_strategy.html

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