The forest products industry faces growing internal and external pressures to demonstrate sustainability. Global concerns about the environment and a growing demand for forest products have led to international treaties and agreements to protect natural resources, such as the International Tropical Timber Agreement, and also to a search for valid measures of environmental quality, such as indicators of sustainable forest management (Russell 1999; USDA-FS 2000). In the United States, regulations affecting forest management on private lands have been increasing; 43 states now suggest best management practices for forest management (USDA-FS 2000). Consumer and environmental organizations with vocal and increasingly global memberships also urge the industry to demonstrate the use of sustainable practices. These external pressures for sustainability add to internal pressures on forest products companies to develop sustainable sources of supply and use available resources efficiently.

The forest products industry has responded by adding costly forest management certification programs and environmental management systems to demonstrate corporate responsibility. In this article, we identify problems with an “add-on” approach and recommend that companies approach sustainability as a business value that is integrated into core business strategies. We review the components and processes of an integrated management system and develop five criteria that companies can use to assess success at integrating sustainability into a management system. Finally, we discuss the efforts of two forest products companies—UPM-Blandin and MeadWestvaco—to integrate sustainability using these criteria.

Integrating Sustainability

Beginning in the 1980s, businesses heard calls to implement ethical values to enhance social justice (diversity, human rights issues) and environmental sustainability. We add quality to those values, because producing a safe and effective product is also a socially responsible action. At first, companies assigned responsibility for these three values—quality, diversity, and sustainability—to specialized personnel segregated from line operations: Quality managers inspected company products, affirmative action officers reviewed company hiring practices, and environmental officers monitored compliance with governmental regulations. Companies conceptualized the values as responses to external pressures and added them to existing practices. In the forest products industry, this add-on approach to sustainability did not produce financially successful companies (Hart et al. 2000).

Several studies have concluded that...
add-on approaches failed because they did not significantly change organizational values. Despite procedures to implement quality and diversity initiatives, employees as a whole did not “own” the values and therefore did not fully implement the procedures (Carter 1999; Dass and Parker 1999). Research on implementing quality and sustainability initiatives suggests that success requires that

- Socially responsible goals align with organizational goals (Grant et al. 1994).
- Senior managers provide leadership to develop and maintain a performance-oriented system (Blumenthal and Haspeslagh 1994; Dering 1998).
- Implementation involve the entire workforce and include strategic and human dimensions, including cultural change, training, communication, and commitment (Jones 1992; Camisón 1998; Carter 1999).

Those lessons reflect three basic requirements for managing systemic organizational change—leadership commitment, systemic change, and employee involvement (Juechter et al. 1998).

**Management Systems Framework**

An effective way to align socially responsible values, including sustainability, with organizational values is to consider them core business values that are fully integrated into business strategies and goals. A study of sustainable forest management practices recommended they be embedded in a company's core business values and competitive strategies (Hart et al. 2000). A study of ISO 14001 (the international standards for environmental management, intended to guide firms in minimizing harmful effects on the environment and improving environmental performance) concluded that managers needed to emphasize not only environmental impacts but also strategic and operational impacts of their management systems (Corbett and Kirsch 2001). It is important to recognize that socially responsible values can generate business strategies for competitive advantage (Kirkpatrick and Pouliet 1996; Tushman 1999).
Five Steps for Integrating Sustainability Values

1. Senior management leads and supports value change.
2. Senior management identifies how sustainability practices impact core business values and strategies.
3. Senior management implements performance-oriented management system.
   a. Policy.
   b. Planning.
   c. Implementation and operation.
   d. Measuring and monitoring.
   e. Management review.
   f. Independent audit.
4. Senior management trains, communicates, and rewards performance.
5. Employees “own” new values across the organization.

and Anderson 1997; Kreitner and Kinicki 2001). The incentive to integrate sustainable practices with product, cost, and quality goals is that the core business will fail if actions are not sustainable. Conversely, implementing expensive new programs without integrating them into the company’s overall business strategies and values may impair value instead of adding it. As the Dow Jones Sustainability Indexes (2003) states,

Corporate Sustainability is a business approach that creates long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social developments. Corporate sustainability leaders achieve long-term shareholder value by gearing their strategies and management to harness the market’s potential for sustainability products and services while at the same time successfully reducing and avoiding sustainability costs and risks.

A consistent approach for embedding multiple core business values in an organization is to use an integrated management systems framework (Carter 1999; Johnson and Walck 2001). Such a framework includes components of strategy development (policy and planning) and strategy deployment that are clearly identified and integrated across management processes (fig. 1).

A management systems framework begins with a written business policy developed and supported by managers. The policy provides broad statements of organizational values, intentions, and principles that create a framework for establishing business goals, targets, and objectives. A company then develops a management plan by focusing on specific actions to achieve the goals, targets, and objectives that measure the performance or success of their plans. The business policy and management plan, along with a mission statement, constitute the company’s core business values and strategies.

With a policy and plan in place, the company focuses on implementation and operation by developing processes and procedures for implementation. The next step is measuring and monitoring. Based on the management plan, specific, quantifiable performance measurements and key performance indicators are identified to measure company progress. Monitoring includes three critical activities: internal audit, corrective and preventive action, and continuous improvement. Although this process is not unique to international standards, the ISO 14001 standard requires that internal audits be conducted at planned intervals to verify that procedures and processes are being followed (ANSI 1996). Internal auditors identify “nonconformances,” defined as deficiencies in the application of procedures or lack of procedures to comply with the standard. A company must not only remedy the deficiencies with corrective actions but also eliminate their cause with preventive actions.

The next step is management review, supported by an independent audit. This feedback mechanism verifies the measuring and monitoring component and ensures that the required changes occur. It is not uncommon for most companies to have an annual internal management review and financial audit, followed by an independent review and audit. Continuous improvement opportunities are generated as a result of measuring and monitoring activities to promote the identification of innovative and new processes to improve efficiency.

Those management system components and processes operate not only at the strategic level of core business values and strategies but also at the level of financial, health and safety, quality, and human resource management systems, and more recently forest management and environmental management systems (fig. 2). Although the subsystems can be linked while retaining their individual identities, true integration occurs when they are linked in a way that results in some loss of independence—or, stated positively, in a way that results in true subsystems interdependence (Karapetrovic and Willborn 1998). When a company pursues organizational change, these supporting systems must be altered, too (Riggs 1993). Once a management system framework is in place, it is easier to see how new programs fit into the overall business values and strategies.

Integrating Sustainability

The forest products industry has responded to pressures for sustainability by developing certification programs, such as the Sustainable Forestry Initiative (SFI) and Forest Stewardship Council (FSC), and environmental management systems, guided by conformance to ISO 14001. All are expensive to implement.

Increasingly, certifying bodies are developing certification standards to demonstrate that management processes are in place to meet specific standards for quality or sustainability. The major sustainability standards and
guidance documents to consider when making a decision to certify or register to a particular standard are as follows:

- Sustainable Forestry Initiative certification (AF&PA and SFSC 2002).
- Forest Stewardship Council certification (FSC 2002).

Certifiers do not assess whether the new processes are embedded in a company’s core business policies and strategies; it remains management’s challenge to do so. A certification standard may not explicitly state all the components of a management systems framework, but for true integration, all are necessary.

Environmental management standards may be easier to integrate than forest management certification because they follow the ISO process model (ANSI 1996, 2000), which is based on a management systems model. Companies that achieved ISO 9000 quality management certification did not consider the ISO 14001 environmental management standards onerous (Corbett and Kirsch 2001); in fact, they found significant overlap (Rondinelli and Vastag 2000). SFI and FSC do not clearly reflect a management systems framework and will require more work to integrate (Johnson and Walkc 2001).

When companies integrate sustainability into their management systems, two points are important to remember. First, environmental and forest management policies and practices by themselves do not create the overall management system for the organization—these policies and practices need to be integrated into core business values and processes. For example, Arnold and Day (1998) demonstrate that the practice of certifying sustainably harvested wood products supports the core business values of product enhancement and franchise protection, and the practice of using efficient cuts supports the value of environmental impact reduction. Second, environmental and forest management systems are best viewed as subsystems in an integrated management system. For example, program-specific practices for forest and environmental management affect other aspects of the business, such as health and safety or financial practices, so they must be formulated interdependently under the guidance of the core business values.

Finally, effectiveness of the management system depends on the ability to track and monitor performance. Because program-specific measures identified in the individual standards affect other aspects of the business, measuring only those measures without looking at the overall business impact does not produce integration. Likewise, internal and independent audits along with management review, required by individual standards, should not stand alone. A company must integrate all internal audits—operational, financial, certification, environmental management—and report the results at periodic management reviews.

Without integrating all aspects into the overall management system, a company will not achieve long-term systemic change. Integrating sustainability values and practices into a company’s core business values and strategies thus requires more than adding on a certification. Combining our understanding of organizational change requirements with the requirements of an integrated management system, we can now identify five criteria that companies need to meet (see “Five Steps for Integrating Sustainability Values”). Senior managers must lead and support the value change and identify how sustainability practices affect core business values and strategies; the company must then implement a performance-oriented management system and communicate it through training and reinforce it with rewards so that employees organization-wide will embrace sustainability values.

A recent case study of an aluminum plant certifying to ISO 14001 clearly demonstrated all five criteria: senior management leadership, high awareness of environmental impacts by managers and employees, implementation of training programs, a rigorous environmental management system, and the core business value of waste reduction (Rondinelli and Vastag 2000). How do forest products companies compare when assessed against these criteria?

**Forest Products Examples**

We selected two forest products companies to determine how well sustainability was integrated into their management systems when assessed against the five criteria. Both companies have achieved SFI certification, and one has achieved ISO 14001 certification. Employees were interviewed, and company websites and other publicly available information were examined for evidence of sustainability values and practices, depth of organization-wide change and commitment, and integration of sustainability into the overall management system.

Background information on each company follows; Table 1 (p. 36) presents a comparison against the five criteria for integrating sustainability practices.

**UPM-Blandin**. This company is the North American subsidiary of UPM-Kymmene, which is headquartered in Helsinki, Finland, and had global revenues of $10.5 billion in 2002 (UPM-Kymmene 2003). UPM-Blandin operates paper mills and manages company-owned forests. In 1999, it received both SFI and ISO 14001 certification. Cheryl Adams, forest ecologist at UPM-Blandin in Grand Rapids, Minnesota, was asked about sustainability practices and the level of management system integration. According to Adams, the primary purpose of the forest ecologist position is to ensure that sustainability certification activities are integrated with the existing management system framework. Adams reports that certification represents a way for UPM-Blandin to publicly demonstrate its long-standing management commitment and support of sustainability values.

An interview was also conducted with James Marshall, forest manager for UPM-Blandin. According to Marshall, certification has produced
Table 1. Application of five criteria for integrating sustainability values.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>UPM-Blandin</th>
<th>MeadWestvaco</th>
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<tbody>
<tr>
<td>1. Senior management leads and supports value change.</td>
<td>Senior management has integrated SFI Program Standard and ISO 14001 Standard requirements into the management and strategic plan of the business. Referring to the management systems as an integrated management system, they integrate environmental and forest management practices into overall business practices.</td>
<td>The chairman and CEO participates in the Sustainable Forestry Board (which is independent from the SFI Program Standard). MeadWestvaco’s high-level participation in SFB demonstrates management’s commitment to sustainability. There is proactive involvement in national and international forest certification development.</td>
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<td>2. Identify how sustainability practices affect core business values and strategies.</td>
<td>During the first two years of integration, management created major changes in policy and procedure development and deployment to understand how sustainability practices would affect core business values and strategies. The company saw the need to train all employees to varying degrees in sustainable management practices and to hire a forest ecology/environment professional to ensure that integration occurred and changes were implemented.</td>
<td>Since 1995, SFI has been a major part of how MeadWestvaco conducts business. The strategic plans include coordination between wood procurement and the forestry division to ensure land management planning with company and supplier fiber resources and compliance with SFI.</td>
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<td>3. Implement performance-oriented management system</td>
<td>Prior to certification and acquisition by UPM-Kymmene, Blandin monitored its performance; many measures identified in the SFI and ISO 14001 standards were already being monitored by UPM-Blandin. This allowed UPM-Blandin to focus its efforts on continuous improvement.</td>
<td>The company has emphasized monitoring and measuring forestry and mill performance measures, including SFI core indicators. The forest information management system allows for tracking not only key performance information but also continuous improvement activities.</td>
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<tr>
<td>Policy</td>
<td>Core values and corporate, land management, mill, and department-level policies emphasize sustainability. Several SFI standards are not considered applicable to UPM-Blandin’s North American operations (e.g., biodiversity hotspots in tropical forests). Business policies are integrated into overall management system.</td>
<td>Forest management policies emphasize sustainability. As a result of SFI, specific business policies regarding sustainability have been developed and new sustainability procedures have been developed to address SFI core indicators.</td>
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<tr>
<td>Planning</td>
<td>Business planning between business functions is integrated with a process-focused orientation.</td>
<td>Forest management practices are integrated with mills and forestry division through process-focused orientation.</td>
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<td>Implementation and operation</td>
<td>Process orientation required a redesign of business procedures for better integration, including increased emphasis on ecological resources and improvement in forest resource management.</td>
<td>Forest management focus required a redesign of forest management procedures. SFI and sustainability efforts prompted 17 new guidelines and related procedures.</td>
</tr>
<tr>
<td>Measuring and monitoring</td>
<td>Chain-of-custody activities fit well with management system. Measuring and monitoring activities on land focus on site plan with evaluation during and after plan development and implementation. Contractors and loggers are involved in the corrective and preventive action process. Internal audits occur every six months, and external audits occur once a year. As a result of continuous improvement efforts, new forest management techniques are being applied.</td>
<td>SFI performance is monitored through an active internal forestry audit program and third-party certification audits. Independent internal audits of all locations are conducted two to three times per year; nonconformances are noted and corrective action plans are required. Performance in the field and at the mills has improved. Foresters are better recognized within the company and are taking pride in their work.</td>
</tr>
<tr>
<td>Management review</td>
<td>Audit results become part of the business management review process.</td>
<td>Audit results are a part of the forest management review process.</td>
</tr>
<tr>
<td>Independent audit</td>
<td>Company achieved SFI third-party certification in 1999. ISO 14001 third-party certification was achieved in 1999; a recertification audit was conducted in 2003.</td>
<td>SFI third-party certification was achieved in 2001. The company has no plans to pursue ISO 14001 third-party certification.</td>
</tr>
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(continued on page 37)
Table 1 (continued). Application of five criteria for integrating sustainability values.

<table>
<thead>
<tr>
<th>Criteria</th>
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<th>MeadWestvaco</th>
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<tbody>
<tr>
<td>4. Training, communication, and rewards for performance</td>
<td>Contractors and loggers participate in regular training initiatives alongside company personnel. State-of-the-art business addresses provide communication regarding sustainability. Foresters, contractors, and loggers are better recognized within the company and are taking greater pride in their work.</td>
<td>All loggers, contractors, and suppliers undergo training in SFI practices. Foresters conduct inspections, and all nonconformances trigger a corrective action plan. After implementation of the plan, a forester completes a followup inspection.</td>
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<tr>
<td>5. Organization-wide employees “own” new values</td>
<td>All employees and contractors are expected to “live the system.” Employees are responsible for documentation—creation, implementation, and updates associated with the business processes and procedures.</td>
<td>Certification creates increased workload and stress for employees. No additional resources are available to handle the extra work.</td>
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<tr>
<td>Overall company comment</td>
<td>UPM-Blandin understands the meaning and importance of an integrated management system. The integration process is a continual activity.</td>
<td>MeadWestvaco has implemented a forest management program that is fully integrated and institutionalized as a part of an integrated management system framework.</td>
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</tbody>
</table>

Sources (Telephone Interviews): (1) Cheryl Adams, forest ecologist, UPM-Blandin; (2) James Marshall, forest manager, UPM-Blandin; (3) Joseph Lawson, manager, Forest Sustainability for Corporate Woodlands Group, MeadWestvaco; (4) John Johnson, forest technical manager, MeadWestvaco Forestry Division, Michigan Region; (5) James D. Okraszewski, director of Fiber Supply, MeadWestvaco Escanaba Operations.

direct financial and economic benefits because it enhances the firm’s relationship with customers. Additionally, certification has benefited UPM-Blandin in the following ways:

- By streamlining the processes and procedures associated with forest management, ecological, environmental, safety, quality, and business operations.
- By integrating components of sustainability into the management system, which the company describes as an integrated management system.
- By demonstrating that it practiced sustainable management practices even before pursuit of ISO 14001 and SFI certification.

**MeadWestvaco.** In 2002, Mead and Westvaco merged to become MeadWestvaco Corporation, headquartered in Stamford, Connecticut. MeadWestvaco is a leading global producer of packaging, coated and specialty papers, consumer and office products, and specialty chemicals; it also manages forestlands MeadWestvaco operates in 29 countries and serves customers in nearly 100 nations; global revenues were $7.5 billion in 2002 (MeadWestvaco 2003). Both Mead and Westvaco had been certified by SFI in 1999; MeadWestvaco obtained SFI certification in 2001. MeadWestvaco Chairman and CEO John A. Luke Jr. is one of four industry members on the Sustainable Forestry Board (SFB), chartered in July 2000 to oversee development and improvement of the SFI program standard (SFB 2003).

Joseph Lawson, manager of forest sustainability for the firm’s Corporate Woodlands Group, was interviewed about sustainability practices and the level of management system integration. According to Lawson, MeadWestvaco has implemented all aspects of forest management through SFI certification, which has had a marked impact on the way MeadWestvaco conducts forestry.

Interviews were also conducted with Jim Okraszewski, director of fiber supply, Escanaba Operations, and John Johnson, forest technical manager, Forestry Division. As a result of the higher standard, they say, wood utilization is better, wildlife and aesthetic considerations are taken more seriously, logging site design and roads over stream crossings are improved, and there are overall new expectations for forestry impacts on the ground.

**Discussion**

Using information from the interviews, both companies were assessed against the five criteria for integrating sustainability values. Activities and actions undertaken by each company are summarized in Table 1. Available information suggests that both companies have met the five criteria for integrating sustainability into core business values:

1. Senior managers led the way to making sustainability a core value.
2. Managers identified how sustainability practices affected core business values and strategies from the forest floor to the mill and beyond.
3. Measuring and monitoring activities led to continuous improvement.
4. Sustainability values were communicated throughout the organizations via training and reinforced with rewards.
5. Employees organization-wide owned sustainability values.

UPM-Blandin and MeadWestvaco demonstrate ways forest products companies can use certification to integrate sustainability values into their management systems as a whole, instead of pursuing them as an add-on. Nonetheless, both organizations can improve on rewarding and recognizing all employees and managers for performance on sustainability values as measured and monitored through the strategic business plan goals and objectives.

**Benefits of Integration**

We have argued that companies should integrate sustainability values...
into their core business values and strategies, through integrated management systems, because this is the optimal way to achieve sustainability. Add-on approaches are quick fixes that do not generate consistent results from top to bottom of the organization.

Certifications become calling cards for customers who are interested in sound and sustainable environmental management. Not all customers are willing or able to pay the higher price of certified products (Johnson and Walck 2001), but companies that do not demonstrate sustainability as part of their overall business strategy can lose existing or future business and compromise their competitive advantage in the marketplace.

There are economic costs to pursuing certification and demonstrating sustainability values. For example, if

the forest practices of a company’s loggers and wood fiber suppliers are also undergoing certification, the resulting increase in wood stumpage supply costs cannot be simply passed on to the customer. Small companies in particular may believe they cannot afford to be certified. However, alternatives such as joint and group certification have been a cost-effective route in Sweden for small and medium-sized businesses (Ammenberg et al. 1999). Moreover, even without pursuing certifications, small companies can still identify core business values that are affected by sustainability, develop an integrated management system, and engage in organizational change.

An integrated management system has the potential to generate savings that can offset the increased costs of sustainability initiatives and certifications by enabling a less costly approach to conformance to standards. Integration allows companies to capitalize on the advantages of all systems and eliminates confusion and suboptimization from the outset. This goes beyond satisfying demands from external sources to recognizing the internal benefits of integration. Some major benefits of implementing an integrated systems approach cited by Beechner and Koch (1997) include the following:

• Improved joined operational performance.
• Improved internal management methods and cross-functional teamwork.
• Increased focus on process orientation and improved operational efficiency.
• Streamlined internal audit, external audit, and management review processes.
• Enhanced confidence of customers and positive market and community image.
• Reduced costs (after initial investment) and more efficient reengineering of process.

Failure to integrate sustainability into a forest products company’s overall core business values and strategies will slow the process of institutionalizing sound forest and environmental management practices on the ground. If that happens, certifications are likely
to be seen as a “check in the box” management fad rather than an integral approach to good management.

Literature Cited


FOREST STEWARDSHIP COUNCIL (FSC). 2002. FSC principles and criteria for forest management. Oaxaca, Mexico.


