

INTERIM REPORT  
DOCUMENT #2010-10-1

# An Overview of Ecolabels and Sustainability Certifications in the Global Marketplace

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**October 2010**

**Corporate Sustainability Initiative**

Nicholas Institute for Environmental Policy Solutions  
Duke University



NICHOLAS INSTITUTE  
FOR ENVIRONMENTAL POLICY SOLUTIONS  
DUKE UNIVERSITY

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## *Acknowledgements*

This report was funded by the Sustainability Consortium as part of the Sustainable Systems and Policy Working Group.

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## **Corporate Sustainability Initiative**

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## DUKE UNIVERSITY

[www.duke.edu](http://www.duke.edu)

Situated on nearly 9,000 acres in Durham, North Carolina, Duke University students and world-class faculty are helping to expand the frontiers of knowledge. The university has a strong commitment to applying knowledge in service to society around the world. In fact, nearly half of Duke undergraduates study abroad before graduating. Duke University consistently ranks among the very best research institutions in the world. Its graduate and professional schools—in business, divinity, engineering, the environment, law, medicine, nursing, and public policy—are among the leaders in their fields.



## CORPORATE SUSTAINABILITY INITIATIVE (CSI) NICHOLAS INSTITUTE FOR ENVIRONMENTAL POLICY SOLUTIONS

<http://nicholasinstitute.duke.edu/sustainability>

The Corporate Sustainability Initiative (CSI) at Duke University is housed in the Nicholas Institute for Environmental Policy Solutions and is a university-wide collaborative that supports the development of a new generation of organizational strategies and technologies for global sustainability through the creation of innovative research and educational initiatives.

CSI draws upon the broad expertise of students, researchers, and faculty at Duke University to work in partnership with the industrial, NGO, and governmental sectors on pressing global sustainability issues where corporations play a vital role. The three main areas of focus are the nexuses of corporations and (1) firm sustainability, (2) manufactured goods and services sustainability, and (3) infrastructure and development sustainability.

### CSI Director

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Dr. Golden is Director of the Corporate Sustainability Initiative at Nicholas Institute at Duke University. Golden focuses his teaching and research on sustainable systems and analytics to explore the nexus of organizational strategies and technology innovations for sustainability. He received his PhD in Engineering from the University of Cambridge, and Master's Degree in Environmental Engineering and Sustainable Development from a joint program of the Massachusetts Institute of Technology and the University of Cambridge. He also holds Professional Mastery of Project Management from Stanford University and has a bachelor's degree in management. He was appointed to the UN Life Cycle Management Task Force and was named an AT&T Industrial Ecology Fellow. Golden has testified before Congress and is routinely asked to speak to business and government leaders around the world on Corporate Sustainability. Golden is the Co-Founder of the Sustainability Consortium and served as its Co-Director until 2010.

In 2009 Golden was awarded the Faculty Pioneer Award by the Aspen Institute for his leadership in the field of Sustainability Research & Education and was also named in 2009 by Ethisphere as one of the 100 Most Influential People in Business Ethics.

## EXECUTIVE SUMMARY

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The Corporate Sustainability Initiative at Duke University is undertaking a two-part research effort to examine the scientific underpinnings, transparency, and use of ecolabels and certifications in the global marketplace. This interim report provides an initial broad overview of the use of ecolabels. The second part of the research, which launched in the third quarter of 2010, will result in an in-depth examination of the science that has been used to create and implement the numerous labels and certifications.

The initial findings presented within this document provide a broad overview of the landscape and general construct of how ecolabels and certifications are being used in the global marketplace. The report includes three main sections: (1) a summary of relevant literature, (2) a review of key findings resulting from a global survey of over 150 existing ecolabels and certifications, and (3) a series of parallel studies of ecolabels and certifications as they have evolved in the food and agriculture, personal care, electronics, and textiles and apparel sectors. The results of this initial work are intended to provide greater insights into the design and utilization of ecolabels and certifications.

In the interim report, we have taken a step back from the headlines to understand the broader context and history of certification and ecolabeling efforts. Increasing focus on corporate environmental and social performance has led to a proliferation of “green marks,” including standards, codes, labels, indices, and certifications. Although companies and ratings agencies have developed a multitude of sustainability metrics, there are few comprehensive efforts to assess the relationships between and effectiveness of various systems. The focus of the literature review was to understand the current ecolabel and certification landscape, factors that make these systems effective or ineffective, lessons learned from the last 20 years of experience, and how to better design these systems in the future. This knowledge was then incorporated into a comprehensive analysis of the survey data.

The results of the survey were in some cases quite unexpected, for example:

- Most ecolabeling organizations are unaware of the market share of products, services, or organizations carrying their ecolabels. Only 25% of labelers were aware of studies that assessed the market share of products carrying their label.
- Only 44% of single-standard labels have conducted an impact study to assess the effect of their certification efforts on the environment. This is surprising, given that one criterion for a successful label is the extent to which the organization can demonstrate positive on-the-ground impacts resulting from its labeling program.
- One-third of labelers surveyed had made no attempt to monitor or evaluate the environmental and social benefits of their ecolabels programs and have no intention of doing so.

The survey was designed to examine if there might be a first-mover advantage in ecolabeling. Yet, the data shows that the labels that entered the market earlier generally have certified fewer products. Interestingly, there is a large cluster of labels established recently (within the last five years or so) that have hardly issued any certifications.

The survey data provides a snapshot of descriptive statistics in the field of ecolabeling. The average time to certification across single-standard labels is 4.33 months. However, the standard deviation is 4.37 months, indicating that there is still a significant lack of uniformity in the market. Once a product is certified, there is no clear standard for the length of time the manufacturer is allowed to display the label before reassessment. Transparency in the ecolabeling process was also addressed in the survey. Three indicators of transparency were examined. Unsurprisingly, nonprofit ecolabelers score higher in all three transparency categories.

The final component of this report is a parallel set of studies regarding the evolution ecolabels and certifications in four primary industry sectors: food and agriculture, personal care, electronics, and textiles and apparel. These

sector assessments explored the extent to which ecolabels and certifications have demonstrated “success in the field,” meaning that they have driven empirical improvements in social and environmental performance. These assessments also examine the level of “success in the marketplace,” meaning that the extent that ecolabels have raised their visibility to claim market share for the products that go through the labeling/certification process.

Analysis of ecolabels within the food and agriculture sector shows that high market volume of labeled products coupled with intense marketing of the label itself can lead to economic success. Furthermore, examples in the forestry sector illustrate carryover benefits of certification into enhanced economic efficiency. Examples from the electronic industry show that the reach of a government-run label exceed that of a nonprofit. The textile industry illustrates the importance of not only environmental considerations in the labeling process. The most successful textile certifications also examine health and safety issues along with workers rights.

The goal of this report was to assess the role that certification and ecolabels play in accelerating green production and use/consumption. Moving forward these results will inform a thorough evaluation of the scientific foundations of ecolabels and certifications.

# INTRODUCTION

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## Problem definition

For ecolabels and certification systems, is it the best of times or the worst of times? On one hand, ecolabels are proliferating in the marketplace. Recent estimates suggest that there are over 400 existing labels (Bogdan 2010) marking consumer products in nearly every category, and the number is growing rapidly. On the other hand, headlines in recent months have scrutinized the real impact of these systems; for example, imaginary products like a gas-powered alarm clock (NPR 2010) have been certified by the U.S. Government-run ENERGY STAR program, one of the largest and most established and respected certification organizations in the world. Additionally, in the wake of the economic crisis, it appears that consumers are less motivated to purchase green products. For example, in the United Kingdom, sales of certified-organic fruits, vegetables, and meat have plummeted 12.9% in the past year (Soil Association 2010). In other words, green claims are proliferating fast in the marketplace, but there are serious questions about their efficacy in driving sustainability outcomes and their success in creating real consumer preference.

In this interim report, we have taken a step back from the headlines to understand the broader context and history of certification and ecolabeling efforts in order to define pathways to accelerate green production and consumption and to assess the role that certification and ecolabels may play in that transition. In recent years, companies have been under increasing pressure to communicate their sustainability performance to interested stakeholders. Reliable metrics and third-party validation in particular play an important role in the effort to quantify a company's impact on the environments and communities in which it operates. This increasing focus on corporate environmental and social performance has led to a proliferation of "green marks," including standards, codes, labels, indices, and certifications. Although companies and ratings agencies have developed a multitude of sustainability metrics, there are few comprehensive efforts to assess the relationships between and effectiveness of various systems.

The focus of this research is twofold. The first is to understand the current ecolabel and certification landscape, the factors that make these systems effective or ineffective, the lessons learned from the last 20 years of experience, and how to better design these systems in the future.<sup>1</sup> The second part of this larger research effort is to delve deeper into the scientific underpinnings and transparency of the approximately 400 ecolabels and certifications around the globe. That effort will result in both a written research report and a web-enabled platform to support the research community in the development of metrics and indicators that can be used in the accomplishment of sustainability measurement and reporting standards.

## Project overview

In this paper, we provide an analysis of ecolabel and certification systems. Specifically, the report includes three main sections: first, we summarize some of the relevant academic literature that has evaluated sustainability and market performance of ecolabels and certification systems.

Second, we review the findings of a global survey we conducted in partnership with Big Room/Ecolabelling.org and the World Resources Institute in the fall and winter of 2009. This survey of nearly 150 labeling organizations identified key salient features of several existing ecolabels and certifications, including topical and regional scope, governance, quantification approaches, uses, verification, etc. This survey provides a broad perspective on the current landscape of ecolabels and certification (Malthouse 2009).

Third, our research team has completed a set of parallel studies of ecolabels and certifications as they have evolved in four primary sectors: food and agriculture, personal care, electronics, and textiles and apparel. These sector assessments explored the extent to which ecolabels and certification have demonstrated "success in the field," meaning that they have driven empirical improvements in social and environmental performance,

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<sup>1</sup> Throughout this report, we refer to the scope of analysis being "ecolabels and certification," since these are the most common forms of "green marks" in the marketplace.

and “success in the marketplace,” meaning that they have been able to raise their visibility and claim market share for the products that go through the labeling/certification process. This analysis was conducted based on existing academic and general interest literature.



## LITERATURE REVIEW

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The modern-day concept of labeling consumer products has been in existence for some time. In the United States it began in the realm of food product safety with the adoption of the Pure Food and Drug Act (the Wiley Act) signed by President Theodore Roosevelt on 30 June 1906 (FDA 2008). Expanding their regulatory oversight from food and drug products, Congress established the Consumer Product Safety Commission (CPSC) labeling regulations as codified in 16 CFR 1500 et seq. These labels apply to products which are directly marketed to consumers and to products where it is reasonably foreseeable that they may end up in the hands of general consumers and compel disclosure of all acute and chronic health hazards associated with the various chemicals used in household products (Wagner 2001).

At present, there are over 300 ecolabels, according to cataloguer Ecolabelindex.com (2010). Competition between labels carries benefits and pitfalls; it can raise the bar on performance, but it also tends to create confusion among consumers, who are left wondering whether organic trumps local, whether recycled or recyclable matters more. To date, there has been limited research on ecolabel design, and very little is known about what drivers affect a label's market penetration and associated product sales. Gallastegui (2002) notes that the published literature is lacking in a systematic analysis of the problems facing label design.

As with any emerging industry, inefficiencies will arise from rising poor coordination, duplicative activity, and confusion over language (Olsen and Galimidi 2008). In a study examining approaches to impact measurement in private ventures, a key finding was that there could be no single measurement answer. Rather, solutions must be tailored to meet the needs of each investor and their unique "impact profile." To do this properly, the investor will define the appropriate metrics based on consideration of their level of risk tolerance and desired financial return, the particular sector in which they operate, geography, and credibility level of information about impact that the investor requires (Olsen and Galimidi 2008).

### **Current ecolabel landscape**

The landscape of sustainability labels is dominated by environmental as opposed to social metrics. This is consistent with the content of supply chain management literature research, which also still favors environmental issues. Seuring and Muller (2008) note that integration of the three dimensions of sustainability and social metrics are rare. This is likely due to the varied nature of social aspects of interest. In addition there exists no common foundation on which to build a library of social metrics that is comparable to the natural science basis for environmental metrics (Figge, Hahn, Schaltegger, and Wagner 2002). Creating linkages between integrated supply chain management and social measurements remains a challenge for future research (Seuring and Muller 2007).

### **External influences: competitive and regulatory implications**

Although the ecolabels market has been growing rapidly over the last few decades, it is unclear what the trend will be going forward. Kim and Mauborgne (1999) argue that the shared set of intra-industry beliefs about customer identity and values has resulted in competitive convergence. Many companies have centered their efforts on improving their competitive positioning within their industry, when they should be striving to create new market space altogether. Successful companies must recognize that profitable growth cannot be sustained without constant evolution of new and existing markets (Kim and Mauborgne 1999). Of course, not any market will do. In order for trends to have the potential to create a new value curve, they must be decisive to business, they must be irreversible, and they must have a clear trajectory (Kim and Mauborgne 1999). Sustainability is arguably decisive to business and irreversible, but the lack of clear regulations governing environmental impact reporting and emission reduction requirements has meant that the trajectory is unclear.

Most businesses want to take the high ground. They want a market advantage for taking environmental factors into consideration throughout their supply chains. They know their customers want this and they seek to provide it for them. This is where the ecolabel system enters the market. The problem then becomes which label to choose? Which labels and standards are the best? How are they better with regard to market advantage

or environmental mitigation? Standardization becomes the key issue. The quality of an ecolabel is function of the standards it selects. This becomes the argument in favor of increased government oversight of labeling organizations (Sustainability: the Journal of Record 2008). Srivastava (2007) states that regardless of whether or not the Federal Trade Commission becomes involved in regulating environmental claims, greater collaboration both within and between firms regarding best practices, green technology transfer, and environmental performance measurement is needed.

### **Green consumerism**

Some manufacturers argue that the green consumer doesn't really exist—that customers might say they are willing to pay more for environmentally friendly products, but that when it comes time to pay at the register, the price premium on ecofriendly goods mean they rarely make the cut. Gallastegui (2002) accounts for the gap between what consumers say they are willing to pay and what they really pay by acknowledging the skepticism that exists about misleading and unverified environmental claims. The implication is that accurate ecolabels can create trust in environmental claims, improve information symmetry between producer and consumer, and ultimately elevate actual payment levels to meet stated willingness-to-pay.

For the conscious consumer, environmental performance should be a necessary but not sufficient condition for purchase. Ottoman (1992) notes that consumers purchase functional products for functional reasons. This means that a laundry detergent that is 100% biodegradable and manufactured with a miniscule carbon footprint will never outcompete any other product if it is not an effective detergent. A product that cannot deliver consumers needs will fail in the marketplace, no matter how ecofriendly it is.

Ecolabels do not impact purchasing decisions equally across product categories. Four variables in particular determine consumption practices when it comes to buying green: purchase visibility, consumption visibility, durability, and perishability. Ecolabels matter more for nondurable, frequently used, and highly visible consumer goods (Gallastegui 2002). So, being an environmentally responsible soft drink producer should carry more of a competitive advantage than being an ecofriendly insulation manufacturer.

### **The role of retail and institutional buyers**

Retailers and governmental agencies, acting as institutional buyers, have a powerful role to play in the future of ecolabeling. The momentum for the development of standards to measure and report on sustainability (SMRS) led by the Sustainability Consortium, Walmart, Best Buy, and a variety of global manufacturers is pulling the marketplace and garnering international attention. Seuring and Muller (2008) reason that the introduction of sustainability-focused supplier evaluation schemes has a double aim to avoid risk and improve supply chain management.

### **Challenges in ecolabel design**

Successful ecolabeling efforts face a variety of challenges. Gallastegui (2002) outlines many common pitfalls an ecolabel design team may fall into. First, the criteria or standards must be selected objectively. Ideally, performance measures will be selected that measure true environmental outcomes rather than industry process outputs. Second, specific definitions must be made throughout the process. Product boundaries must be clearly delineated, as no two goods are perfect substitutes. Third, objective design of the certification process is necessary for the present and the future. The design team needs to define not only the certification process itself, but also the method and time frame by which standards can be updated. This is important so that the certification itself doesn't become arbitrary. Finally, a market analysis is necessary to gauge demand and market share for labeled goods. This should include a component for improvement across environmental metrics. How will these improvements be rewarded within the labeling system? Teisl et al. (2008) found that consumers' perception of the ecofriendliness of a durable good (such as a car) is primarily driven by comparisons between goods in the same category. The implication for nondurable goods is that ratings should, at a minimum, compare products that are functionally equivalent.

Hart (1997) writes that firms must educate consumers through marketing efforts. Labels should be informative, rather than simply exclamatory. But there are tradeoffs. Atlee and Kirchain (2006) argue that in developing

impact metrics that are useful, feasible, and robust, primary consideration should be given to the balance between information value and cost. Label developers must recognize the importance of logistical difficulty when selecting metrics. An assessment ratio of informative value to data collection expense needs to be made on a metric by metric basis (Atlee and Kirchain 2006).

A Social Venture Technology Group study (Olsen and Galimidi 2008) found a key dichotomy in tracking performance and improvement over time. Namely, the methodology can vary where either true outcomes or proxies are measured. In the latter case, the validation impact can be adequately accessed via indicators that predict outcomes rather than using outcomes directly. In their stages of impact assessment framework, Olsen and Galimidi (2008) also draw distinctions between implied impact (“we believe it works”), proven impact (i.e., “we can predict our impact using proxies”), and optimized impact (i.e., “we assess our proven impact and its interrelationship with financial performance”).

### **Creating value from information**

Olsen and Galimidi (2008) highlight the importance of not only the content, but also the accessibility of the information gathered in ecolabeling certification programs. They state that value in impact measurement increases exponentially when the results are easily found and understood by consumers. This suggests that information design presents one of the greatest emerging potentials for impact measurement. In creating a standard information design protocol, it will be important to improve both access and the ease of use of the information (Olsen and Galimidi 2008).

Ultimately, the goal is not to increase the volume of information, but to help consumers make more informed decisions. Teisl et al. (2008) show that the effectiveness of an ecolabel depends both on how the information is presented and on the ability of the consumer to absorb and act upon it. There are conflicting views as to whether more information is better. A label is more effective when consumers are able to differentiate competing products based on key environmental performance attributes (Lee and Geistfeld 2008). More information can improve the perceived credibility of a label, but too much information creates an overload that confuses consumers (Teisl 2003). This confusion extends to the practice of ecolabeling as well. A UK study related to fair trade found that consumers perceived the information as scarce, uncontrollable, unprofessional, beyond the bounds belief, and in need of justification (De Pelsmacker and Janssens 2007).

McGovern (2009) writes that we must evaluate information based upon the results it produces. To achieve the desired results we must frame the discussion around the task at hand. He emphasizes the importance of managing the task rather than the content or the technology by relating the story of a woman who manages a health website. The woman claims that task success did not apply to her website, which was just a repository of information. McGovern (2009) counters with the example of a rash on the hand. The user of the website is not goal-oriented around searching for information. Rather, that individual is task-oriented on getting rid of the rash. Noted marketing consultant Marshall (2010) writes, “nobody who bought a drill ever really wanted a drill. They wanted a hole. Therefore, if you want to sell drills, you should deliver information about making holes, not about drills!” In the case of ecolabels, what consumers want is to make responsible purchases, not to be inundated with data about greenhouse gas emissions.

The particular challenge with ecolabels is that the easiest metrics to report are usually not very informative (Chatterji and Levine 2006). What labeling organizations must do is make a greater effort to communicate relevant information, rather than simply more information to consumers at the point of sale.

Information matters on the manufacturing side, too. Reporting metrics must be viewed as a preliminary step. Improvement in metrics must become a management goal. This means that, over time, negative environmental impacts decline and social values rise (Vaccaro 2009).

### **The role of business**

Manufacturers stand to gain from their involvement with ecolabeling programs. The Rainforest Alliance conducted a study to analyze the changes that SmartWood, a forestry certification program of Rainforest Alliance

that is accredited by the Forestry Stewardship Council, required of forestry operations in order to become certified. The study found SmartWood certification provided economic benefits to businesses in addition to improved protection of high-value conservation habitat. Specifically, certification enhanced economic sustainability, through increasing efficiency and, therefore, profitability. This went hand in hand with improvements in accountability, transparency, management planning, monitoring, and chain-of-custody practices (Green Biz Staff 2005). In the case of forestry, the high standards of certification make economic sense for two fundamental reasons. First, there is a growing consumer demand for environmentally friendly products. Second, the certification process itself improves efficiency and profitability. The interplay between manufacturers and labelers is a complicated one because of the lack of clearly defined roles, the exchange of finances, and the overlap between labeler and labeled.

Chatterji and Levine (2006) acknowledge that defining the appropriate role for industry to play in developing metrics is a challenge. On the one hand, businesses must be involved in the process in order for the metrics to become widely accepted and improved upon. At the same time, the excessive participation of industry can cause both legitimacy and validity issues with the metrics. There is a fine line of acceptable corporate involvement in the process. Firms must act as partners with NGOs and other stakeholders rather than leaders. Businesses may drive the discussions pertaining to common language and cost reductions while NGOs push for the specific levels of performance required for accreditation (Chatterji and Levine 2006).

### **What do ecolabels measure?**

The question “what does a label measure?” has varied answers. Ecolabels can be categorized as either single-attribute or multi-attribute standards. Single-attribute standards relate to only one environmental characteristic, such as energy efficiency or recycled content. Single-attribute labels have been criticized for failing to accurately define “how green” a product is, since it is difficult to compare the environmental impact of products with two different single-attribute labels. For example, a product manufactured with recycled content is not necessarily better for the environment than one created from virgin materials. Although single-attribute labels are criticized for oversimplifying, they are simple, easy to understand by consumers, and can be uniformly applied to products across industries. As a result, retailers tend to favor single-attribute labels. Multi-attribute labels, on the other hand, assess products across a range of environmental impacts, generally across lifecycle stages. Although multi-attribute labels are generally less complex than a full lifecycle assessment, they are significantly more data-intensive than single-attribute labels. Both types of labels play an important role in product certification. Sanders (2009) argues that competition between label types provides solutions to a variety of needs that exist in the market. While a consolidation of ecolabels is likely to occur, there will remain a variety to address the diversity of consumer concerns.

### **What don't ecolabels measure?**

When all is said and done, do labels even matter? At the end of the day, what labels *don't* measure could be equally, if not more important, than what they *do* measure. Labels that cut across the product life cycle to include the consumer use phase make a lot of assumptions about how consumers will use the product, so the environmental impact assessment of the product is, at best, a guess. The *Wall Street Journal* suggests that the end use of a product may be the dominant impact it has on the environment (Ball 2009). A notable example of a consumer-packaged good whose environmental impact is heavily determined by the consumer use phase is laundry detergent. Although the manufacturer might have gone to great lengths to improve factory efficiency, use biodegradable materials, and minimize packaging, at the end of the day, what determines the size of the product's environmental footprint is the consumer's decision to use hot or cold water to do the wash (Ball 2009).

## ECOLABELS AND CERTIFICATION LANDSCAPE

### Defining ecolabels

An ecolabel identifies a product that meets a wide range of environmental performance criteria or standards. Developed by governments, manufacturers, and third-company organizations, ecolabeling is a voluntary approach to environmental certification practiced around the world. In contrast to “green” symbols or claims, an ecolabel is given to products that have met specific environmental criteria. As there is a wide range of products available on the market, environmental performance labels and declarations vary greatly. The growing number of environmental claims led the U.S. Federal Trade Commission (FTC) in 1992 to issue Title 16-Part 260 CFR: Guides for the Use of Environmental Marketing (“Green Guides”).

The FTC issued Green Guides to help marketers avoid making environmental claims that are unfair or deceptive under Section 5 of the FTC Act. This includes guidance on claims for biodegradable, compostable, recyclable, recycled, and ozone-safe content. The FTC has updated the guides and is currently undergoing an extensive review process.

Largely due to the FTC guidelines, misleading environmental claims had nearly disappeared by the late 1990s, and third-party certification programs had gained greater popularity and influence. The International Organization for Standardization (ISO) has identified three broad types of voluntary environmental labels.

**Table 1.** ISO-defined voluntary label schemes.

Type I	Voluntary, multiple-criteria-based, third-party program that awards a license that authorizes the use of environmental labels on products indicating overall environmental preference of a product within a particular product category based on life cycle.
Type II	Informative environmental self-declaration claims.
Type III	Voluntary programs that provide quantified environmental data of a product, under pre-set categories of parameters set by a qualified third party and based on lifecycle assessment, and verified by that or another qualified third party.

Many types of products, from paint to electronics, are evaluated by ecolabeling organizations worldwide. When comparing similar products, ecolabels and other voluntary environmental performance criteria can be used to inform purchasing decisions and procure greener products.

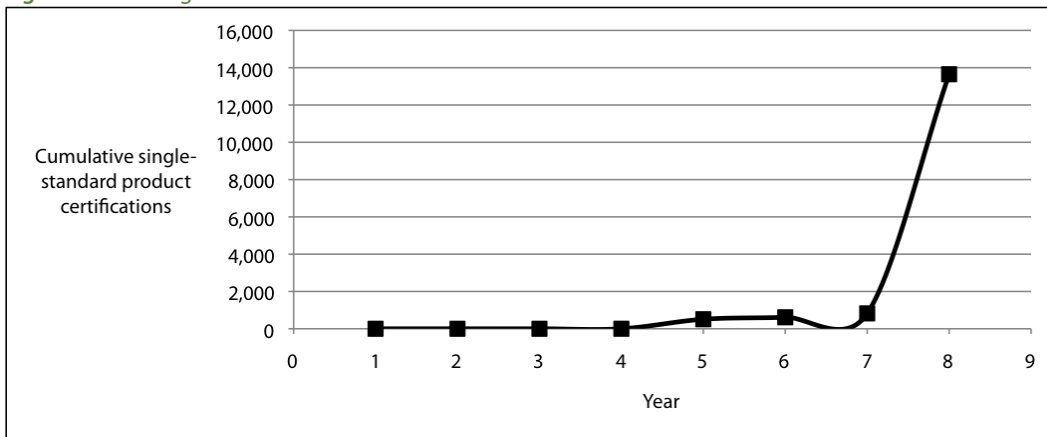
### Analysis of the ecolabel survey

Beginning in the fall of 2009, a web-based survey was launched by the World Resources Institute and Eco-Labels.org in conjunction with Duke University. This report analyzes the data of over 100 respondents. The findings of this preliminary research are presented in comparison with the findings from the literature review.

### Market penetration

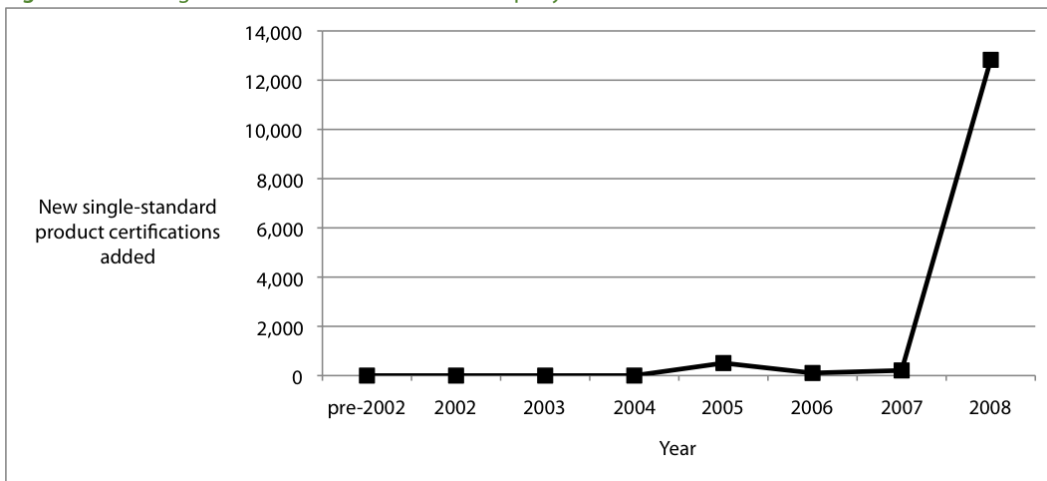
To better understand the pace of adoption of ecolabels, the numbers of certificates or registrations awarded by ecolabels per year were analyzed. Among responding single-standard certifications, there was virtually no market penetration until 2004, at which point the cumulative number of products certified grew rapidly, expanding from 510 in 2005 to 13,650 in 2008 (see Figure 1).

Figure 1. Total single-standard certifications.



Growth in the number of certified products on the market has experienced increased acceleration, as the number of new single-standard certifications added per year has followed a growth trend similar to that of cumulative certifications (see Figure 2).

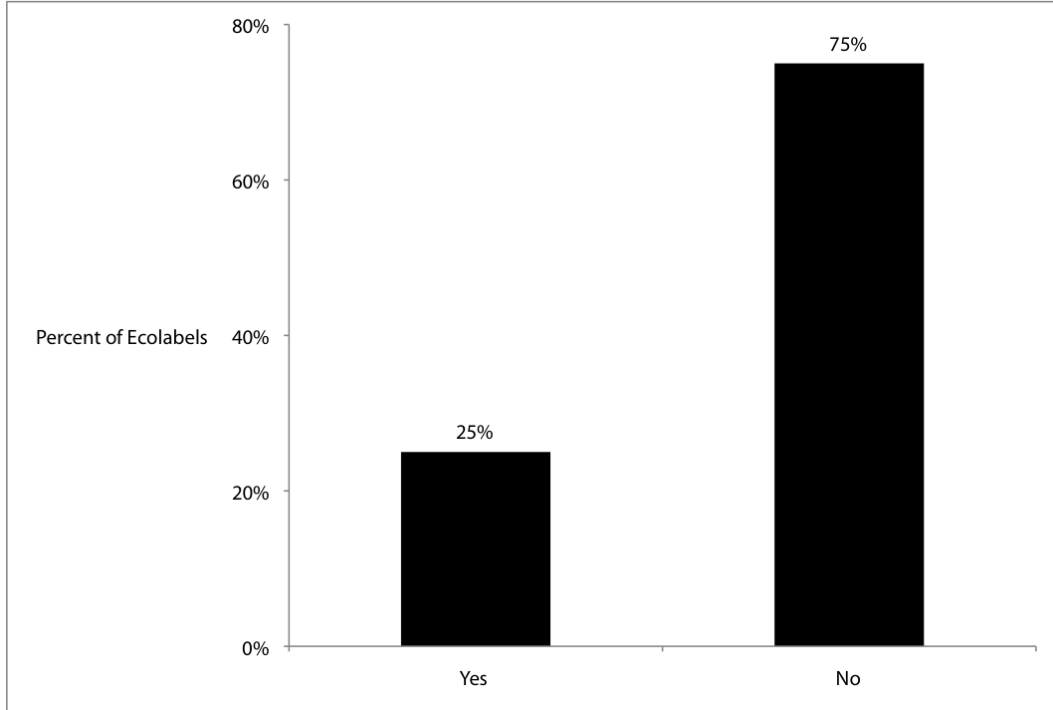
Figure 2. New single-standard certifications added per year.



### Market share

Most ecolabeling organizations do not know the market share of products, services, or organizations carrying their ecolabels. Only 25% of labelers were aware of studies that assessed the market share of products carrying their label (see Figure 3).

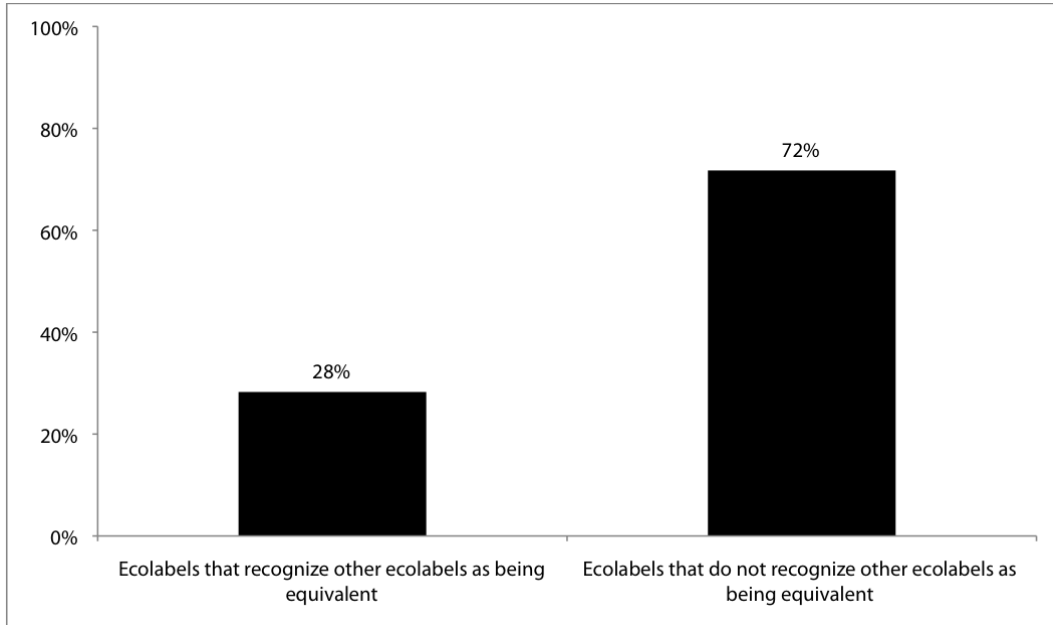
**Figure 3.** Has the market share of products/services or organizations carrying your ecolabel ever been assessed?



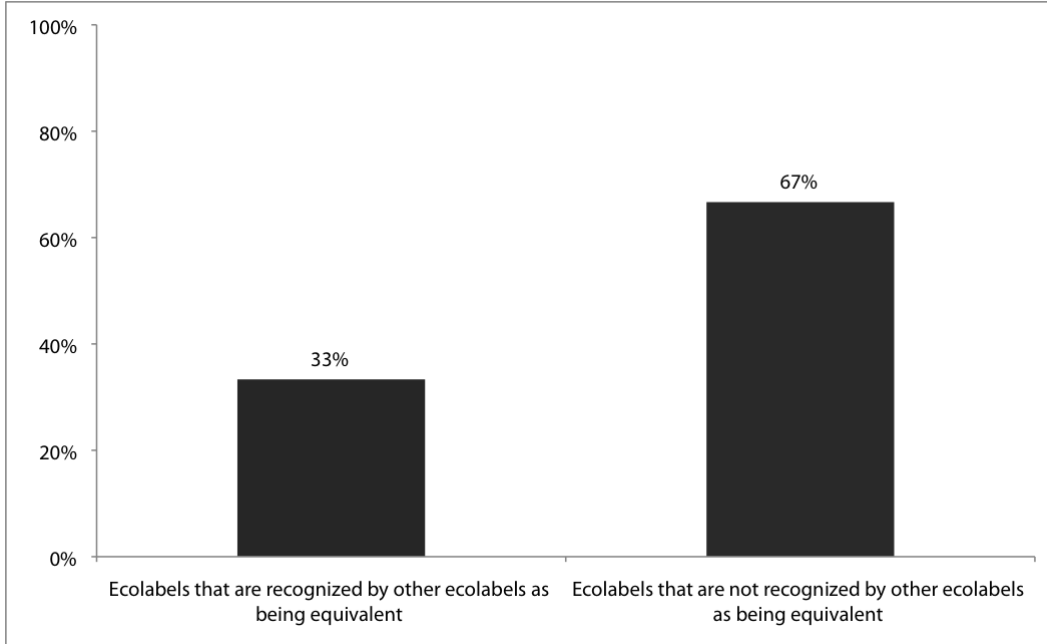
### Redundancy

The rapid increase in proliferation of ecolabels in the market is accompanied by a high level of redundancy among ecolabels. Twenty-eight percent of responding ecolabels recognized other labels as being equivalent (see Figure 4), while 33% of responding labels were recognized by other labels as equivalent (see Figure 5).

**Figure 4.** Recognition of others: ecolabels that recognize other ecolabels or certifications as equivalent (as % of total responses).

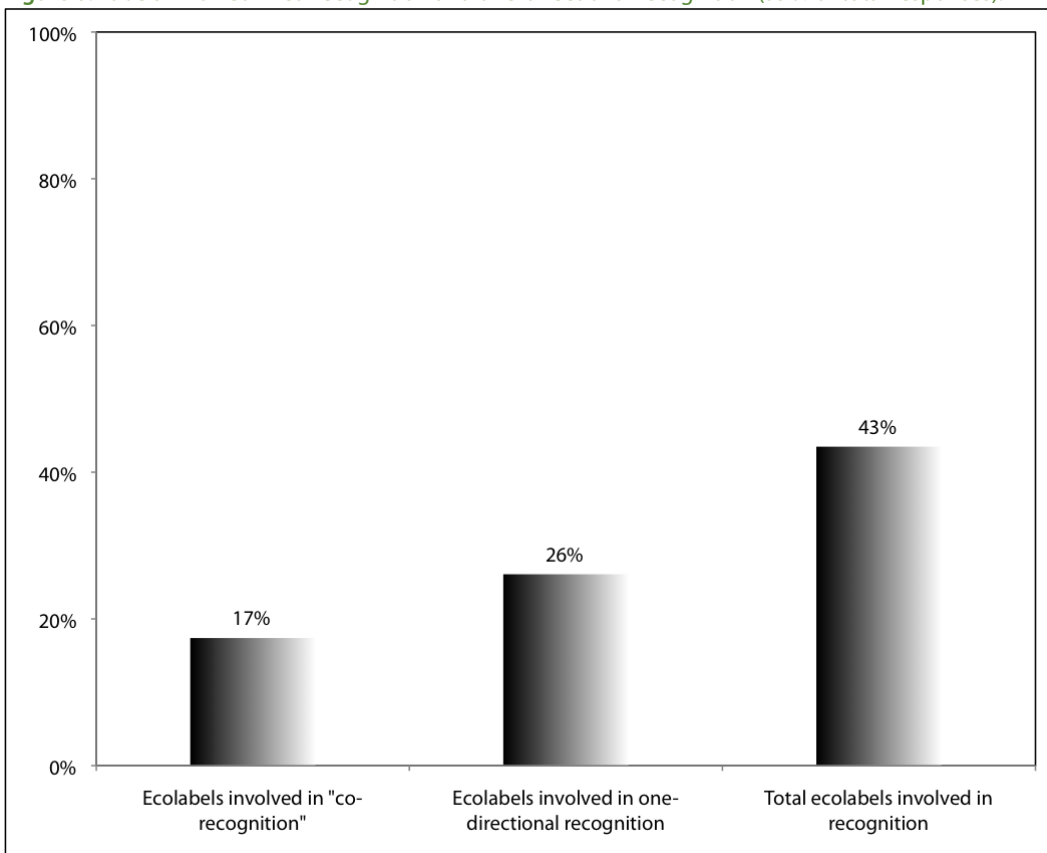


**Figure 5.** Recognition by others: ecolabels that are formally recognized by other labels as being equivalent (as % of total responses).



In total, 43% of ecolabels surveyed recognized redundancy of their label in the marketplace (see Figure 6). This suggests that there is some form of redundancy among close to half of all ecolabels.

**Figure 6.** Labels involved in co-recognition and one-directional recognition (as % of total responses).

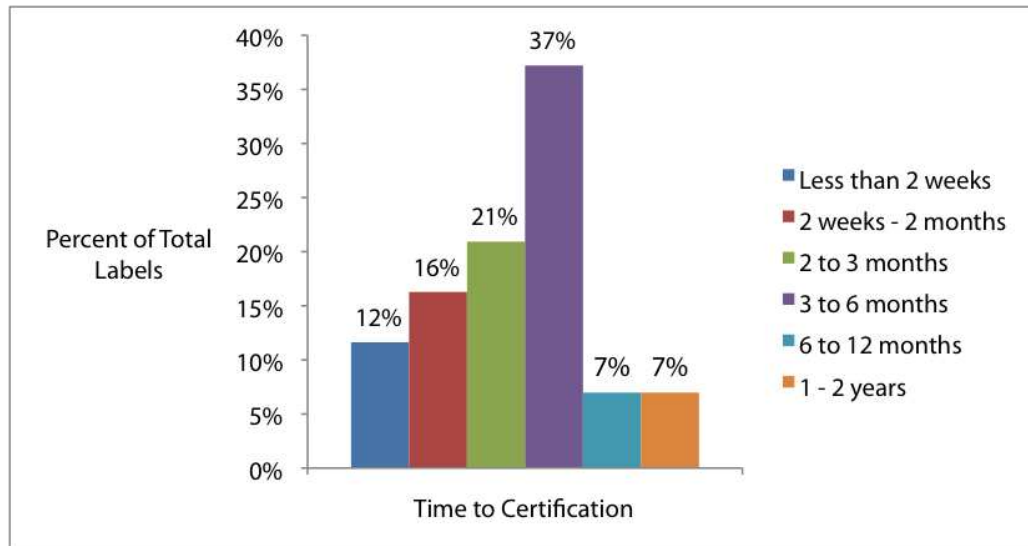




## Time to certification

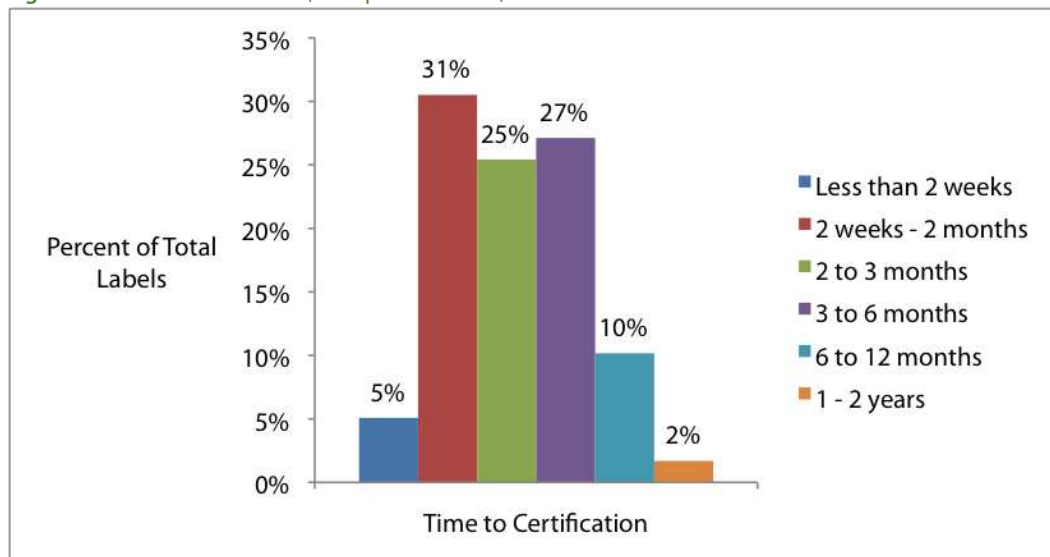
There is a fair amount of variation in the length of time it takes a manufacturer to become certified. Among single-standard ecolabels, the most common response among labels for time required to certification was three to six months, with 37% of respondents falling into this category (see Figure 7). However, 12% of labels offer certification in less than two weeks, with some providing next-day certification. At the other end of the spectrum, some labels require one to two years for certification. Although the average time to certification across single-standard labels is 4.33 months, the standard deviation is 4.37 months, indicating that there is still a significant lack of uniformity in the market.

Figure 7. Time to certification.



The time to certification among multiple-standard ecolabels is more concentrated, with an average of 3.48 months and a standard deviation of 3.06 months (see Figure 8).

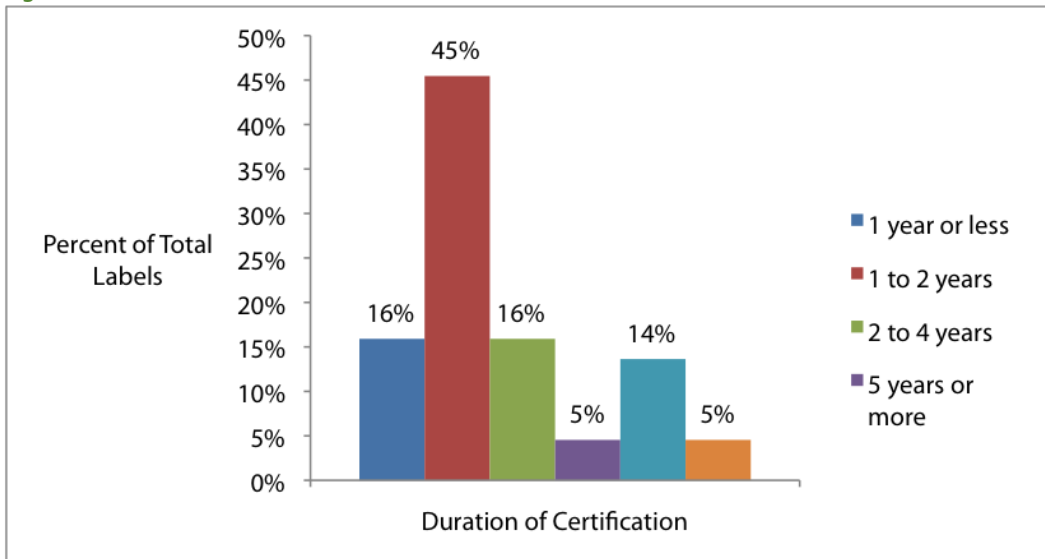
Figure 8. Time to certification (multiple standards).



## Duration of certification

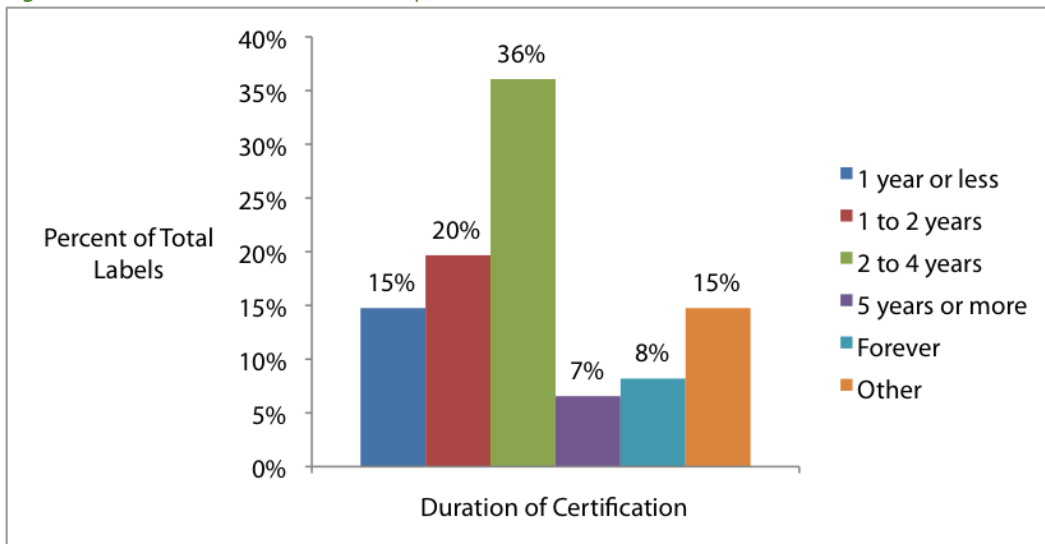
Once a product is certified, there is no clear standard for the length of time the manufacturer is allowed to display the label before reassessment. In the single-standard category, 45% of labels offer certification that lasts one to two years, but 16% of labels last less than one year, and 14% last forever (see Figure 9).

Figure 9. Duration of certification.



There is even more variation among multiple-standard ecolabels. Roughly one-third of these ecolabels certify for less than two years, one-third certify for two to four years, and the final third certify for five years or more (see Figure 10).

Figure 10. Duration of certification (multiple standards).

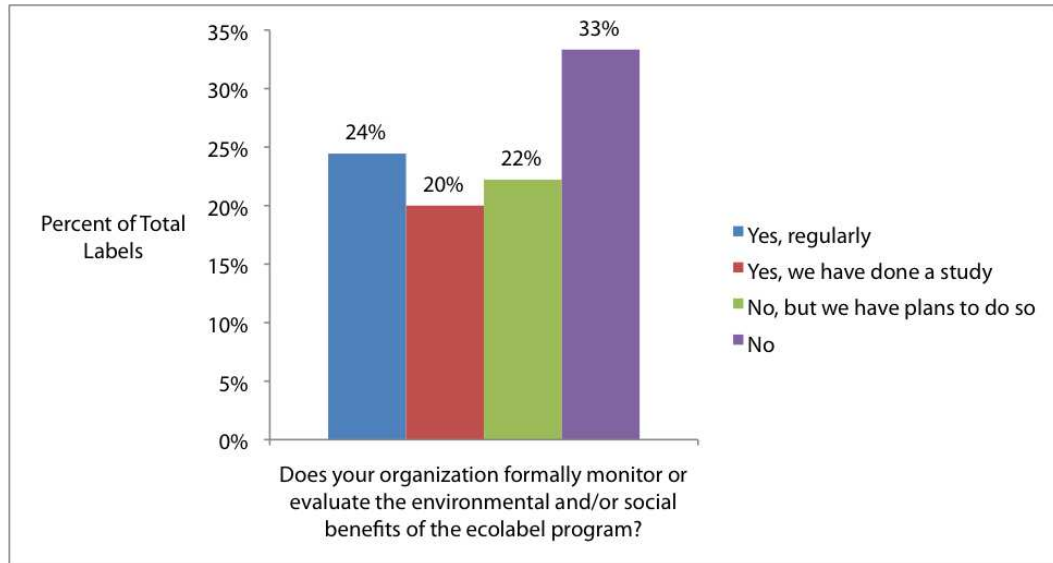


## Impact measurement

One criterion identified for a successful label is the extent to which the organization can demonstrate positive on-the-ground impacts resulting from its labeling program. It was expected that the majority of labels would have conducted studies to assess the benefits of their labeling programs. Instead, the survey data analysis indicates that only 44% of single-standard labels have conducted an impact study (see Figure 11). Fifty-five

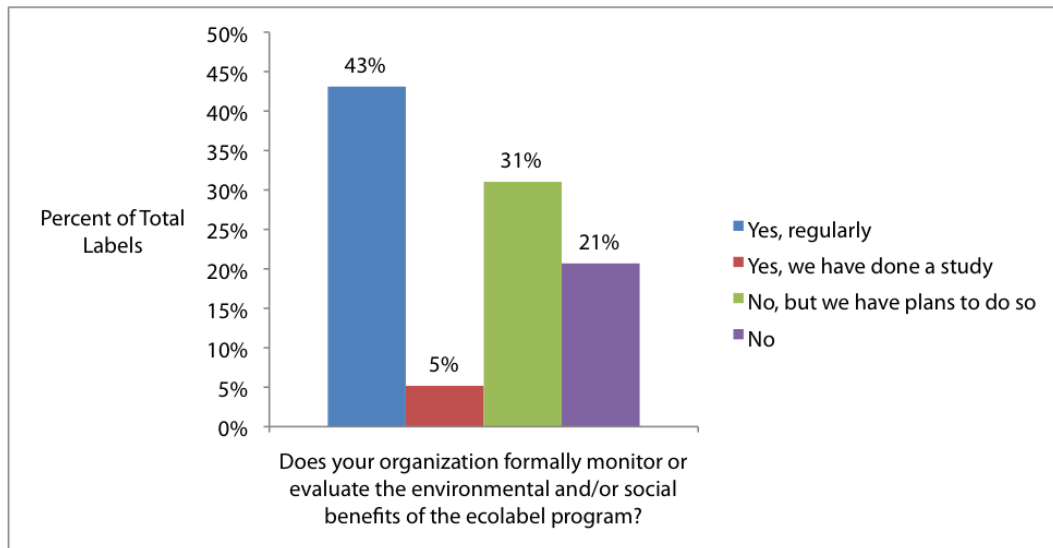
percent of responding labels indicated that they had not conducted such a study; 22% indicated that they had plans to do so. One-third of labelers surveyed had made no attempt to monitor or evaluate the environmental and social benefits of ecolabel programs and have no intention of doing so.

**Figure 11. Monitoring and evaluation of environmental and social benefits of ecolabel programs.**



Impact measurement appears to be more the norm among multiple-standard ecolabels, where 43% of labels regularly conduct such studies, and only 21% do not indicate plans to do so (see Figure 12).

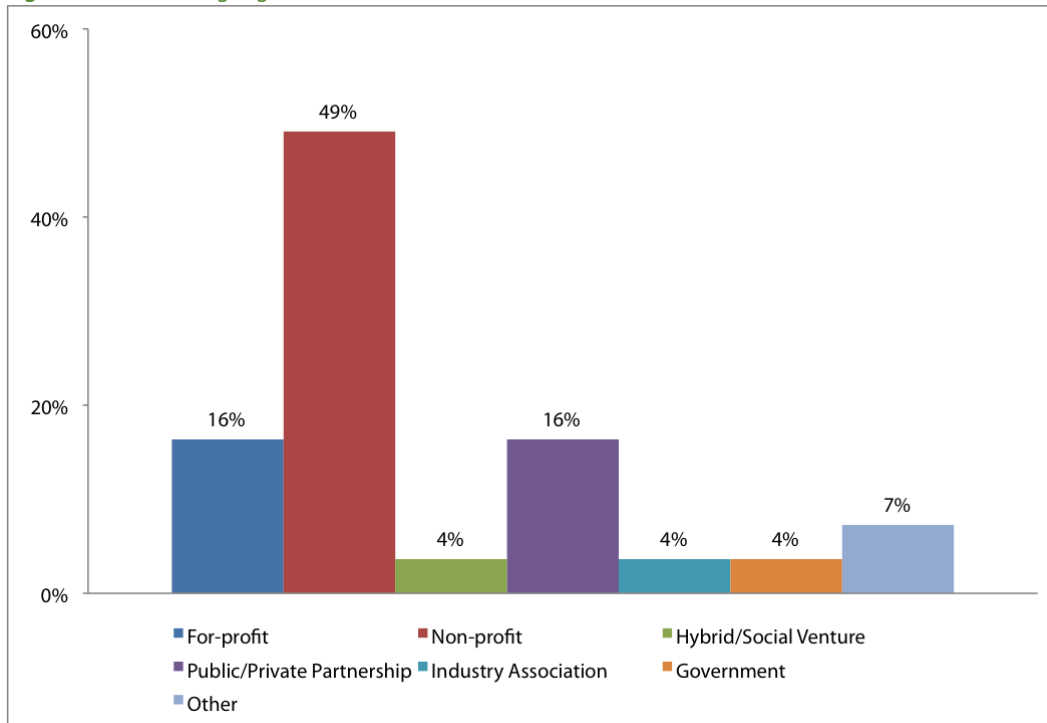
**Figure 12. Monitoring and evaluation of environmental and social benefits of ecolabel programs (multiple standards).**



### Organizational structure

Ecolabels can be administered by a variety of organizations. The respondents to Ecolabelling.org’s survey were largely nonprofits (49%), with 15% indicating that they are for-profit and 15% public/private partnership (see Figure 13). The remaining categories (hybrid/social venture, industry association, government, and other) each comprise no more than 8% of the total.

Figure 13. Ecolabeling organizational structure.



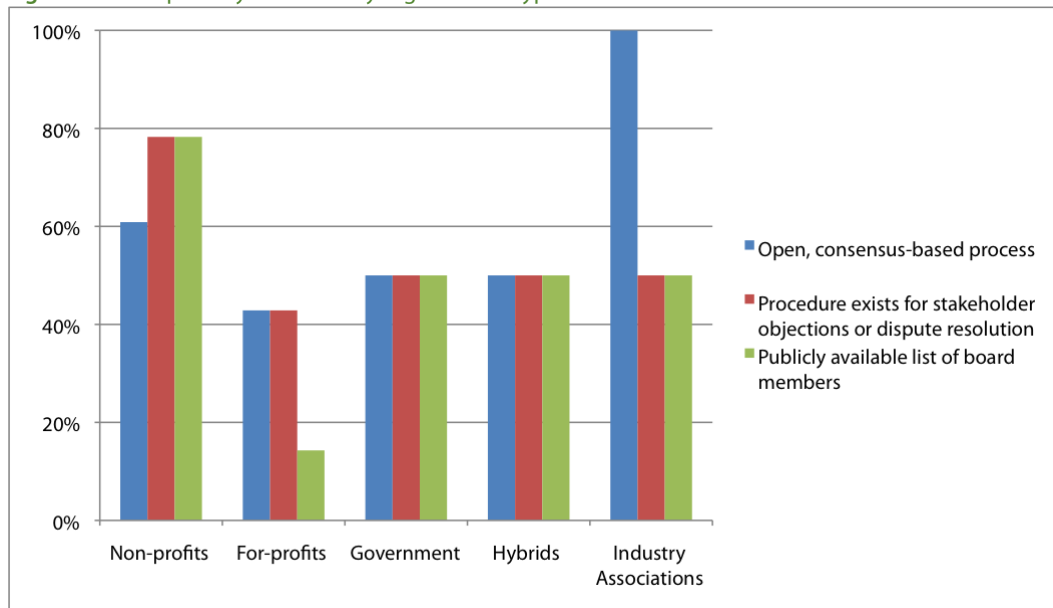
## Transparency

The Survey results were analyzed to assess three key indicators of transparency in ecolabel design:

1. Was the ecolabel's standard developed using an open, consensus-based process?
2. Does the labeling organization have a procedure for stakeholders to raise objections, or a dispute resolution procedure?
3. Is the list of current board members for the ecolabels publicly available?

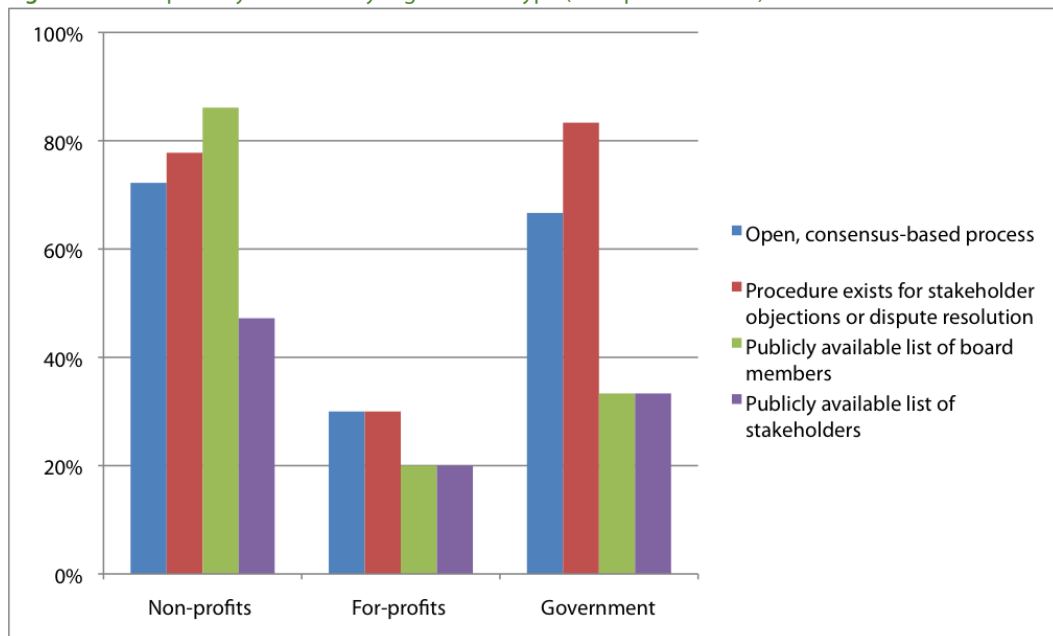
We aggregated the data by organization type to see if there was a difference in responses for ecolabelers run by nonprofits, for-profits, government, hybrid/social ventures, or industry associations. As expected, nonprofits scored highest on stakeholder objections/dispute resolution and public listing of board members (see Figure 14). Only industry associations scored higher on the consensus-based process dimension. It is worth noting, however, that of the respondents for this question, there were only two labeling organizations each in the categories of government, hybrids, and industry associations. Because 65% of single-standard labeling organizations responding were either nonprofits or for-profits, we focused our analysis on a comparison of these two organization types. Nonprofits score higher in all three transparency categories, with the greatest difference in the public availability of the list of board members.

Figure 14. Transparency measures by organization type.



Multiple-standard ecolabels had more government organizations, but even in this category, nonprofits were more consistently transparent (see Figure 15).

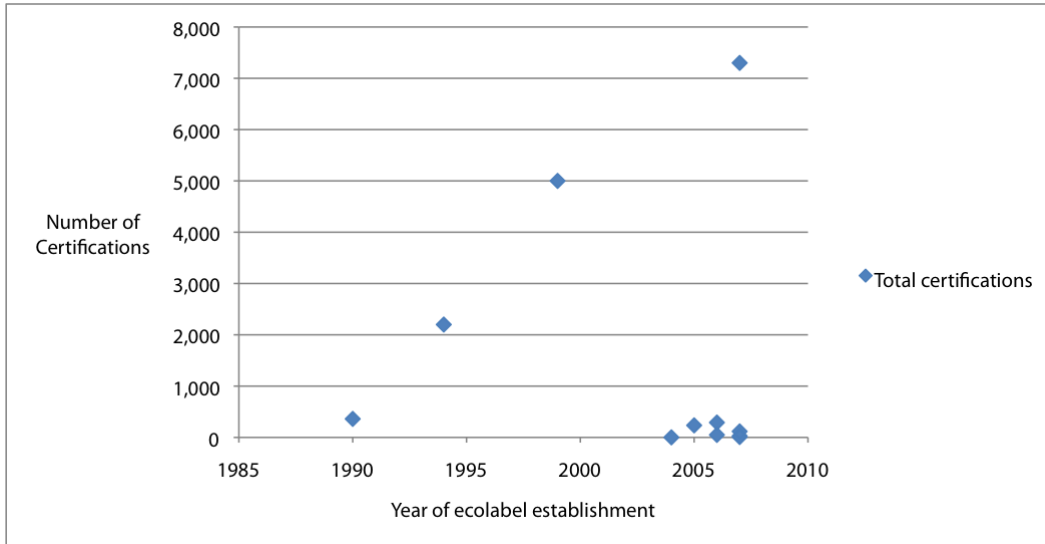
Figure 15. Transparency measures by organization type (multiple standards).



### Speed to market advantage

The survey was designed to examine if there might be a first-mover advantage in ecolabeling, such that labels that entered the market early on would be able to secure more market share (as measured by the number of certifications issued). However, the evidence does not support this theory. Instead, it appears that the labels that entered the market earlier generally have certified fewer products (see Figure 16). Interestingly, there is a large cluster of labels established recently (within the last five years or so) that have hardly issued any certifications.

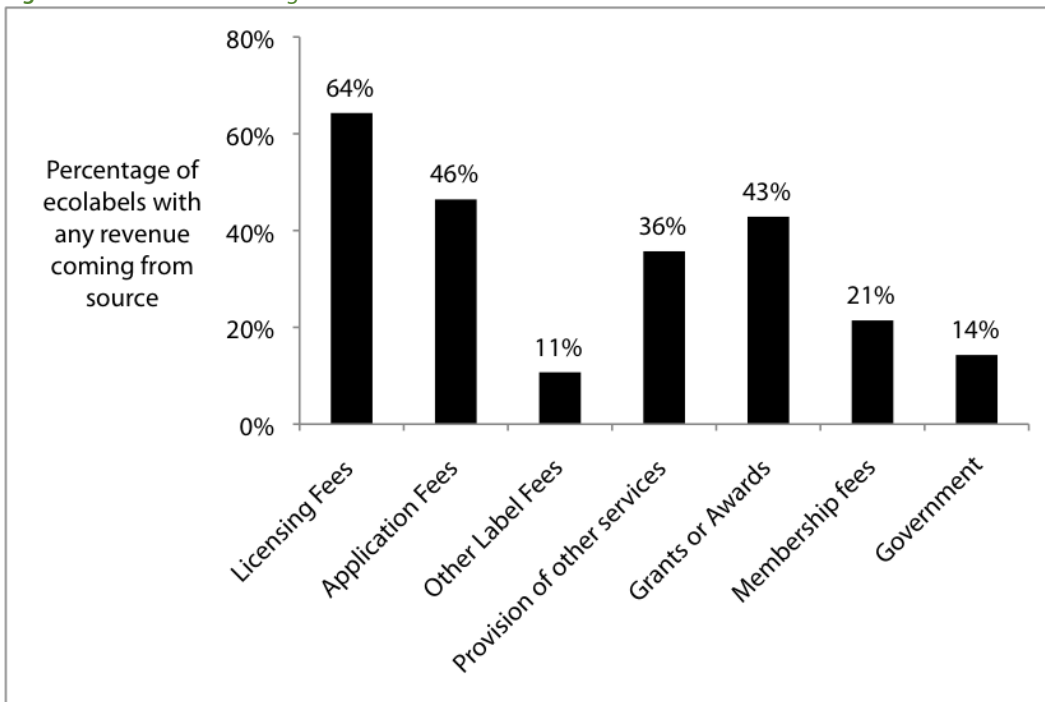
**Figure 16.** Comparison of certifications based on year of ecolabel's founding.



### Financing

Ecolabeling organizations draw their funding from a variety of sources. Licensing fees are the most common source of funding, with 67% of labels securing at least some revenue from this source (see Figure 17). However, application fees and other services are also common funding pools, with 47% and 42% of labels, respectively, relying upon them. Only 13% of labels secure funding from the government.

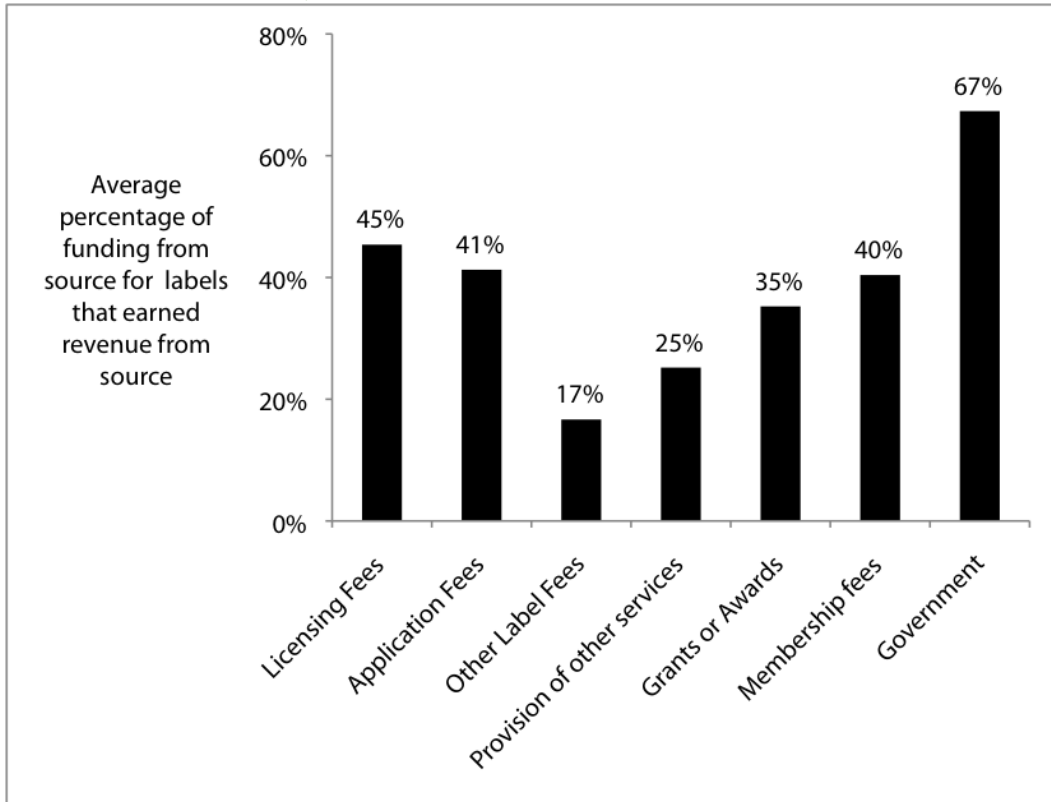
**Figure 17.** Sources of funding.



It is important to consider not only the source of funding but also the extent of funding by source. To assess this, the survey addressed the average percentage of funding from each source for labels that earned at least some revenue from that source. The data shows that although governments are rarely a source of funding, when they do provide funding, they play a major role (see Figure 18). In cases where labeling organizations

received government funding, the government provided 87% of the organization's funding. Similarly, although only 17% of organizations received funding from membership fees, the membership fees that were collected accounted for 43% of their labeling organizations' revenue. Although licensing fees were the most common funding source, they accounted for a proportionally smaller amount of revenue for labelers that licensed.

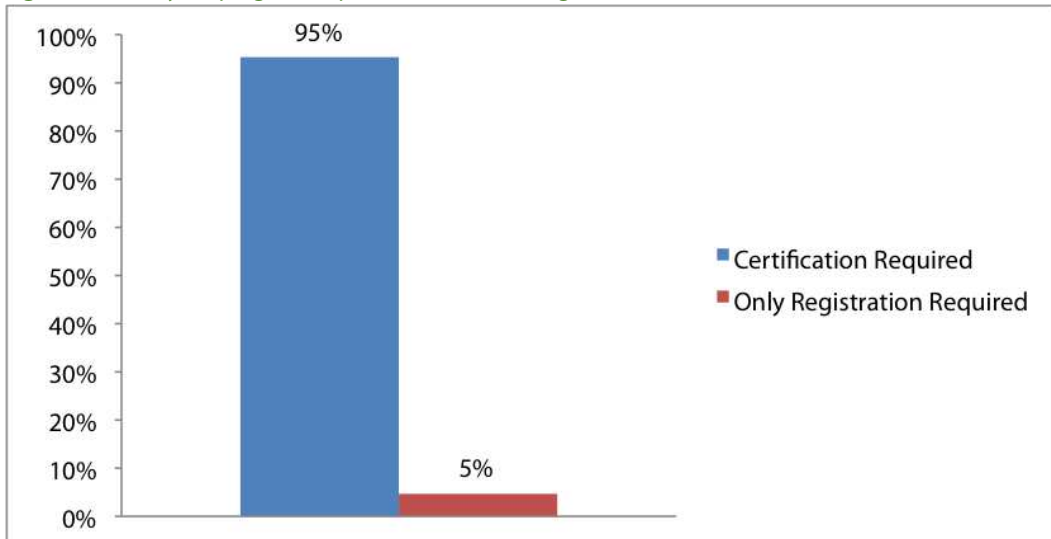
Figure 18. Extent of funding by source.



### Rigor

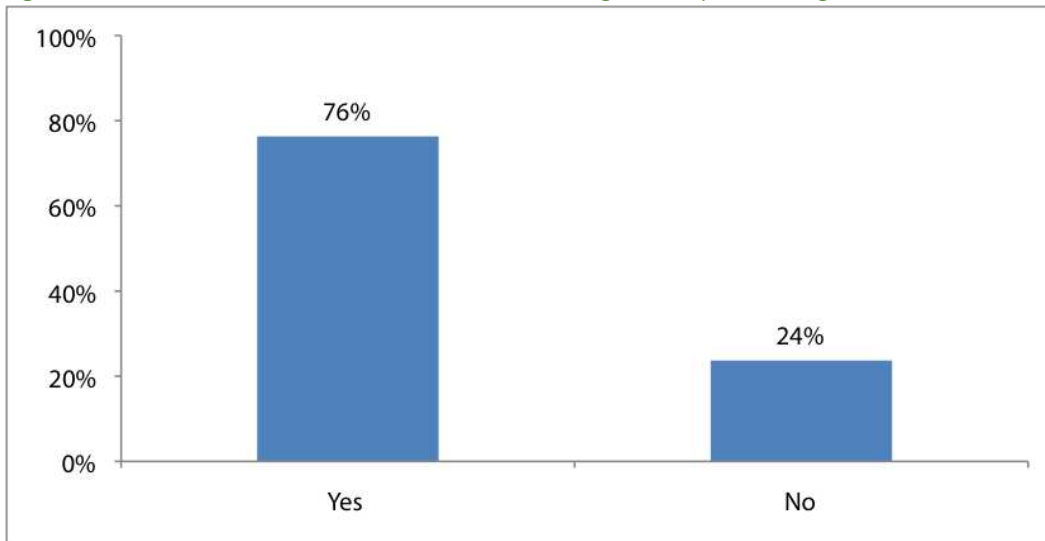
Ecolabels vary in the rigor of their standards. Some signs point toward a high degree of credibility among ecolabels. For example, the vast majority of ecolabels (95%) do require certification before the ecolabel is awarded (see Figure 19).

Figure 19. Does your program require certification or registration before the ecolabel is awarded?

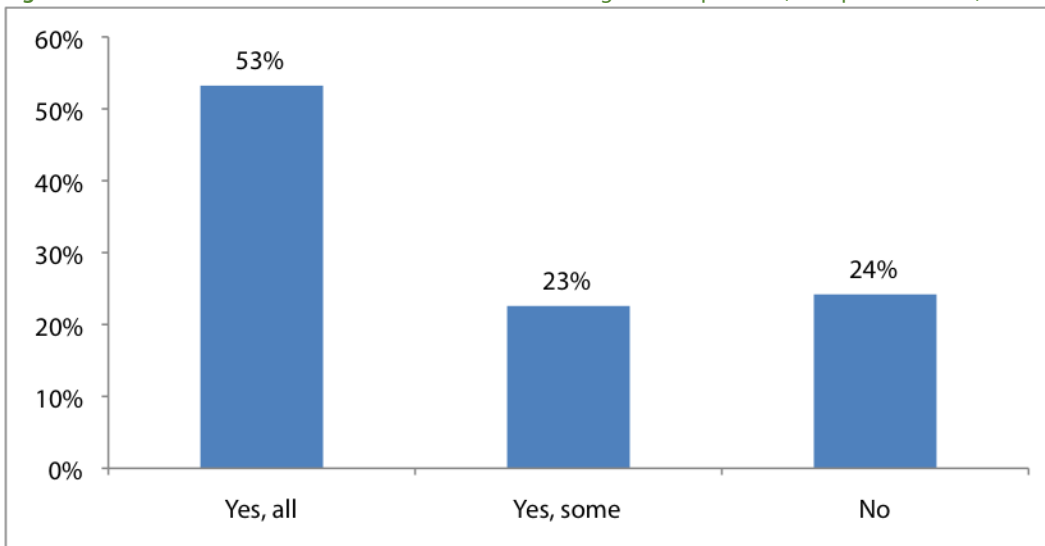


Additionally, most ecolabels require site or field visits prior to certification, with 76% of both single-standard and multiple-standard ecolabels requiring at site visits in at least some cases (see Figures 20 and 21).

**Figure 20.** Are field/site visits included in the certification/registration process (single standard)?



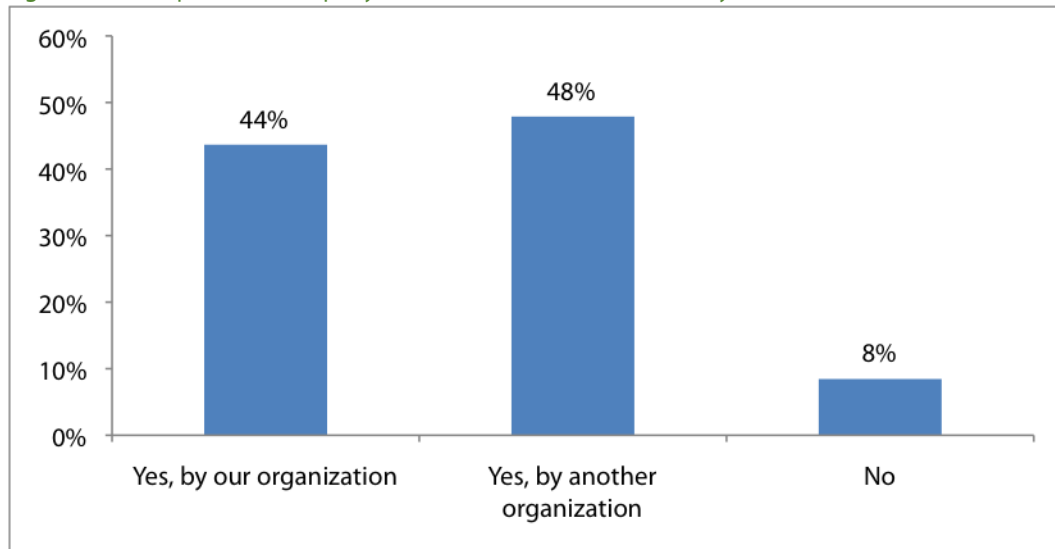
**Figure 21.** Are field/site visits included in the certification/registration process (multiple standards)?



When ecolabeling organizations issue certifications, some do so through third-party verifiers or certifiers. When third-party organizations are used, they must be accredited (by either the labeling organization itself or another organization) 92% of the time (see Figure 22).

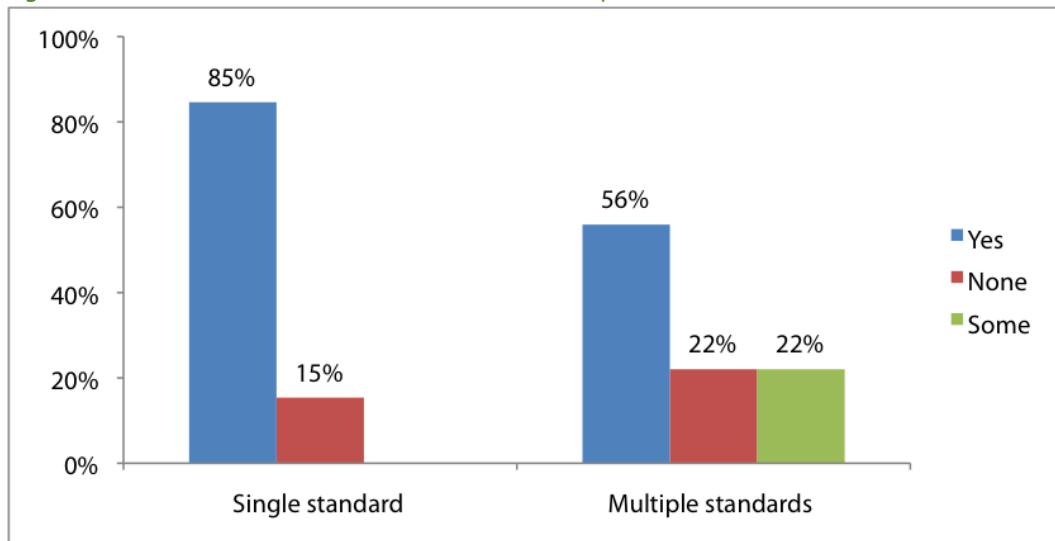


Figure 22. If independent third-party verifiers/certifiers are used, do they need to be accredited?

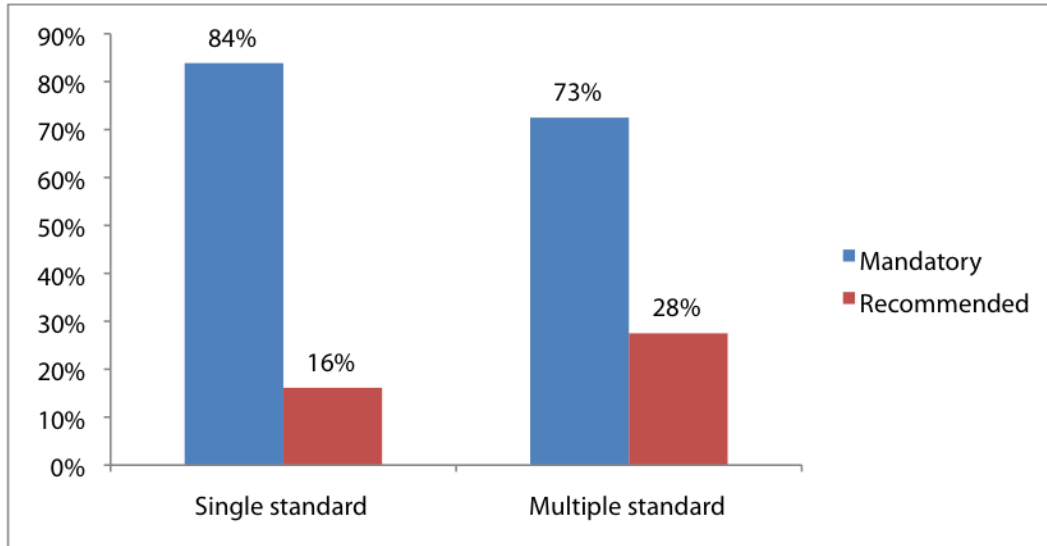


Auditors range in their post-report actions. Among single-standard labels, 85% of them issue corrective action reports, and of those reports, 84% of them are mandatory prior to certification (see Figures 23 and 24). Among multiple-standard labels, 56% issue corrective action reports in all of their standards and 22% issue them in some standards. Here though, 73% of the time the actions are mandatory, while 28% of the time they are only recommended.

Figure 23. Do auditors or certifiers issue corrective action reports?

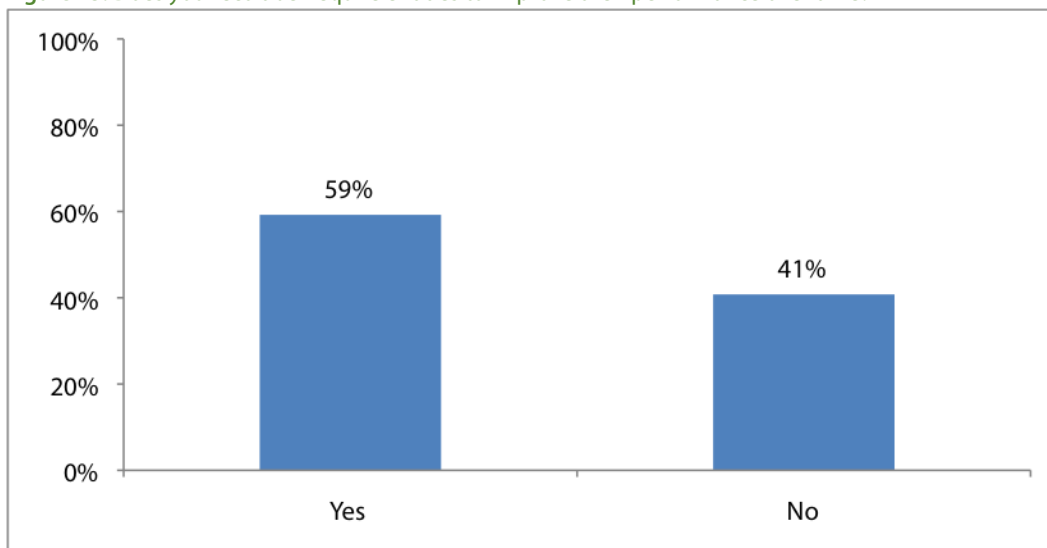


**Figure 24.** If corrective action reports are used, are actions mandatory or recommended before the ecolabel is awarded?



Fifty-nine percent of labels require improvement in performance over time, while 41% have static standards (see Figure 25).

**Figure 25.** Does your ecolabel require entities to improve their performance over time?



### Improving effectiveness

Finally, the survey asked labelers “what would help you to improve the overall effectiveness of your ecolabels program?” The project team created 10 categories of “effectiveness factors” to accommodate the variety of responses received. These categories were:

- Increased membership
- Increased public awareness or consumer awareness
- Increased marketing
- More funding
- Partnerships
- Increased consumer purchases of labeled products

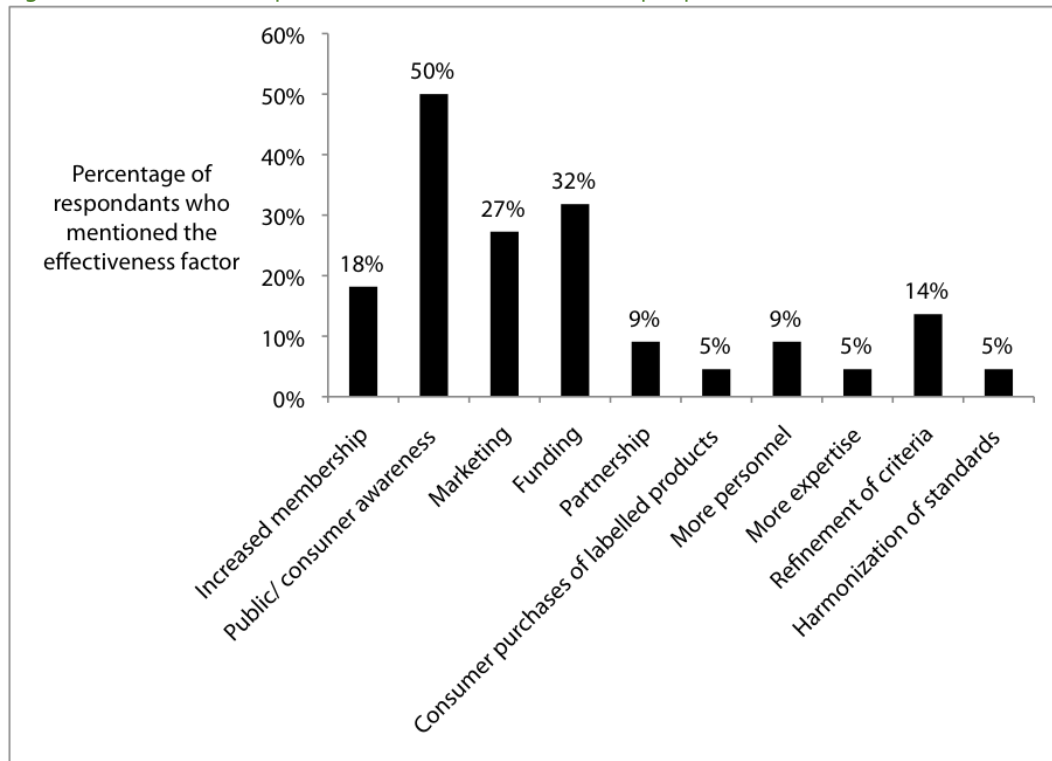
- More personnel
- More expertise
- Refinement of ecolabel criteria
- Harmonization of the various ecolabel standards

Some responses mentioned only one “effectiveness factor,” while others mentioned multiple factors, and responses were recorded accordingly.

Responses to this question suggest that most labeling organizations see opportunities for improvement in their external relations rather than internal operations. Few labels saw a need for more staffing, improved expertise, or more refined criteria (with 14% or fewer of label respondents mentioning each of these criteria). However, 51% cited a need for more public/consumer awareness (see Figure 26). Perhaps unsurprisingly, 27% of labelers believed that increased funding would make them more effective. What was surprising was that only 2% of respondents listed increased consumer purchases of labeled products as something that would increase their effectiveness. The survey design might account for this statistic, since this question was an open-ended question with a text box provided for the response. We suspect that if the survey were re-administered with each of these 10 categories listed and radio buttons provided for responses, we might see different results.

Increased membership, marketing, and funding were cited more frequently by single-standard labelers, while partnership, personnel, and expertise resonated more with multiple-standard labelers.

**Figure 26.** Effectiveness improvement factors from the labelers’ perspectives.



## CASE STUDIES OF SELECTED SECTORS

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### Introduction

The history and evolution of ecolabels and certification varies dramatically from one sector to another. In some sectors, concerns related to personal health and safety has been the primary forces behind certification efforts (e.g., textiles and apparel) whereas other sectors prioritized broader environmental or social considerations (e.g., forestry). Sectors also vary based on the maturity of the leading systems used to certify products, the relative roles of different sponsoring organizations, the level of consumer awareness, global application, and a variety of other factors.

This approach was used to assess the development of certification and labeling systems in four important sectors: food and agriculture, personal care, electronics, and textiles/apparel. All four of these sectors have well-established certification systems in place, a history in their respective marketplaces, and a different story to tell about the impact and success of certification in the world and in the marketplace. The goal was to use the primary and secondary literature available on certification in each sector to formulate a qualitative account of its evolution. The literature review was supplemented with interviews and discussions with leading experts in each sector to understand the current state and possible future of certification efforts.

For each sector, we have addressed the following questions:

- When did certification and ecolabeling emerge in this sector and what were the factors contributed to its formulation and evolution?
- What are the leading certifications and labels in a particular sector, and how have they established their visibility, credibility, and market success?
- What criteria does the certification/ecolabel define as their scope, and what evidence demonstrates a causal relationship between the certification and real social/environmental improvements in the field?
- What cross-cutting insights emerge from these analyses that might suggest better ways to design and implement certification/ecolabel systems?

### Food and agriculture

Consumer demand for ecolabeled agricultural products has been growing in conjunction with knowledge about pesticides and the potential ill effects from consumption. Consumer demand for products labeled as “organic” arose in response to popular publications written as early as the 1960s such as Rachel Carson’s *Silent Spring* (1962). Over approximately 50 years, ecolabels in this sector have increased their scope from a strictly health-related focus to one that includes labels focused on rising consumer concerns over deforestation, biodiversity, and fair labor. While some of these labels can be seen in large volumes on the shelves of grocery stores, others have failed to obtain significant consumer awareness and thus can no longer be found.

This section of the paper attempts to answer the question of what makes some ecolabels more successful than others. In the first part of this section, the paper focuses on a broad view of agricultural ecolabels, including their crossover with other industries, their geographic presence, and a brief look at some of the most prolific labels. The second part of this segment reviews general industry trends and key insights into the successes and failures of agricultural ecolabels. The final section examines three key ecolabels to determine the factors enabling their success.

#### OVERVIEW

Ecolabels within the food category tend to be found only on food products and are unlikely to be used in other industry categories, such as textiles, electronics, or forest products. There is very little crossover to other industries or products, especially when ecolabels are used to identify only one product attribute, such as organic. However, when ecolabels review multiple product attributes there is some crossover with other products.

Ecolabels within the food category overlap most with the “other” category (12 labels cross both categories),

followed by retail goods (11 labels) and textiles (10 labels). The least overlap is with buildings (two labels) and energy (only one label crosses both categories here). As mentioned above, the food labels with less penetration across industry categories tend to be single-attribute, more recently developed (1990s or later), and highly country- or product-specific.

#### GEOGRAPHIC DISTRIBUTION

Food ecolabels are most common in the United States, where there are 19 labels. Canada is next with 9, followed by Australia and the United Kingdom with six each. China, Germany, and New Zealand each have five food ecolabels, while Switzerland has four. Brazil, Finland, France, and Spain each have three. The remaining countries (Austria, Belgium, Denmark, Estonia, Greece, India, Italy, and Japan) have only two each.

Food labels are unevenly distributed at the regional level as well. Of the 90 labels in the food category, Europe and North America have the highest proportion of labels, with 29 in each country. Asia and the general “global” category each have 13 labels, while Oceania has 10, Latin America 5, and Africa only one (EcolabelIndex.com 2010).

#### ECOLABELS IN FOOD AND AGRICULTURE

The most widely adopted food label is the USDA Organic label, which has certified 35,000 products and companies (Dimitri and Oberholtzer 2009). This certification was initiated in 1992 and covers multiple environmental and social attributes. Certification holders are audited annually by an independent third party.

Other prominent labels include the Rainforest Alliance Sustainable Agricultural Network, which has 23,929 certifications, Fairtrade, with 5,246 products and company certifications, and the Marine Stewardship Council with 2,643. Other labels generally have certified no more than 200 or 300 products (EcolabelIndex.com 2010).

A more in-depth view of three of these labels is presented towards the end of this section. The investigation examines the history of the label and key success factors in achieving market recognition.

#### USDA ORGANIC

**Evaluation criteria.** Organic products have been on the shelves of grocery stores in the United States since the 1960s, although standardization and certification was not established until 30 years later. In 1990, the U.S. Department of Agriculture (USDA) responded to consumer demands to standardize and regulate the term “organic.” The Organic Foods Production Act (OFPA) was passed by Congress in 1990 requiring the USDA to develop national standards for organically produced agricultural products. The OFPA and the National Organic Program (NOP) regulations required agricultural products labeled as organic to originate from farms or handling operations certified by a state or private entity that is accredited by USDA. By 2002, the USDA implemented the national organic standards. The USDA Organic certification is one of three organic certification programs run by a national governing body. The other two regions include Japan and the EU.

For a product to meet the USDA Organic standard, several criteria must be met. Meat, poultry, eggs, and dairy products have to come from animals that are given no antibiotics or growth hormones. Organic produce has to be grown without using most conventional pesticides, fertilizers made with synthetic ingredients or sewage sludge, bioengineering, or ionizing radiation. To obtain USDA Organic certification for either of these product lines, these standards have to be upheld regardless of the products country of origin. Currently, the USDA defines three levels of organics that are permitted to use the USDA label. Products that are made entirely of certified organic ingredients can market the term “100% organic” while those that are made with at least 95% organic ingredients can only use the word “organic.” If a product contains a minimum of 70% organic ingredients it can be labeled “made with organic ingredients.” Once a food producer is deemed certified, the duration of the certificate is indefinite, although farmers are audited every year by an independent third party. In the United States there are 35,000 certified product lines (Dimitri and Oberholtzer 2009).

**Evidence of impact and market success.** Although the demand for organic food began in small specialty food stores, over half of the organic food sold today is off the shelves of mainstream supermarkets. Since 1997 organic food sales have increased over \$17 billion, reaching \$21.2 billion in retail sales in 2008. The rapid market growth has resulted in a doubling of organic farmland from 1997 to 2005. However, due to the speed of market

growth and to the challenges of growing organic food, farmers have often struggled to produce a sufficient supply. This has led to periodic shortages of organic products (Dimitri and Oberholtzer 2009).

The result of this market growth has had significant impacts on the environment. According to Research at the Rodale Institute, organic practices can remove about 7,000 pounds of carbon dioxide from the air and sequester it in an acre of farmland per year. Another nine-year study by USDA Agricultural Research Service (ARS) has shown that organic farming can build up soil organic matter better than conventional no-till farming can. Other studies have been conducted on specific watersheds to prove the benefits of reduced pesticide use and some have provided scientific evidence of increased biodiversity (Organic Trade Associate 2008).

**Enabling factors and insights.** Figure 29 above shows the rise of organic agriculture over a 12-year period. In 2002, the national organic standards were implemented, and literature suggests that the rapid growth of retail sales thereafter was a result of the improved visibility and confidence brought about by the integrity of the certification that was backed by the U.S. government. By the time USDA implemented national organic standards in 2002, certified organic farmland had doubled, and it doubled again between 2002 and 2005 (Dimitri and Oberholtzer 2009).

In addition to the standards, the government provided significant funding for research to transition farmers and to promote the awareness of the certification in the marketplace. In 2008, the farm act allocated \$5 million in spending for data collection that included surveys and analysis, reports on handling, distribution, retail, and trend studies (consumer purchasing patterns) (Dimitri and Oberholtzer 2009). There is reason to believe that the significant amount of money invested in this program by the U.S. government has helped with adoption rates.

#### RAINFOREST ALLIANCE CERTIFIED

**Evaluation criteria.** The Rainforest Alliance certification is a conservation tool whereby an independent, third party awards a seal of approval guaranteeing consumers that the products they are buying are the result of practices carried out according to a specific set of criteria balancing ecological, economic, and social considerations. The Sustainable Agriculture Network (SAN), the global parent, awards the North America-based Rainforest Alliance Certified ecolabel to farms, not to companies or products. Farmers may apply for certification for all land in production, and companies may request that all of their source farms be certified. As mentioned above, certification for farms is conducted by an independent certification company called Sustainable Farm Certification International. The use of the ecolabel lasts one year, and annual audits are required to become re-certified. Common areas of certification under the Rainforest Alliance include farms growing coffee, tea, bananas, cocoa, orange, pineapple, flowers, and ferns. Some smaller crops, often grown in association with these commodities, are also certified, including macadamia nuts, passion fruit, and plantains. This certification was established in 1991 and there are currently 23,939 farms certified (Rainforest Alliance 2010).

Rainforest Alliance Certified differs from the USDA Organic certification in that it allows for some limited uses of agrochemicals, requiring continual reduction of agrochemical use and encouraging the use of biological alternatives whenever possible. It also has standards for wildlife conservation and worker welfare, which the USDA Organic label does not (Rainforest Alliance 2010).

**Evidence of impact and market success.** Market adoption of the Rainforest Alliance Certified logo has grown significantly over the past decade. In the UK, awareness of the branded logo went from 12% to 44% in under a year. In Australia, recognition of their brand doubled, from 21% to 42%, in 1999. In the U.S., large multinational companies, such as Mars, Inc., Heinz, Walmart, and IKEA have adopted the certification, bringing more attention and awareness of the brand logo (Rainforest Alliance 2010).

The impact of the certification process has also had increasing benefits for farmers. A 2008 study of Salvadoran farmers who were preparing their land for Rainforest Alliance Certification increased their coffee harvest by 76% over the previous year on average. In Cote d'Ivoire certified cocoa farmers increased their yield by 49% per hectare. Over a 10-year period in the program, a large multinational banana company increased its yields by 27% while decreasing costs by 12%. The Rainforest Alliance Certification program suggests that benefits to the community and the avoided impacts on the environment are significant from farms that are part of the

certification program. These benefits include less water pollution and soil erosion, protected wildlife habitat, less waste and water used, and improved conditions for farmers, such as higher wages and access to health care (Rainforest Alliance 2010). Despite such claims, there is little evidence or data to support claims.

**Enabling factors and insights.** The Rainforest Alliance is not the only certification that is attempting to promote ecological and social improvements in farming. However, they are clearly a leading certification in this field, and literature suggests that this is due to a couple of key factors. First of all, timing was key. In the late 1980s and early 1990s, when consumers were concerned about destruction of old-growth forests and biodiversity, the organization developed the world's first global forestry certification. This credibility gave them a strong position to add certifications as the market began to demand improved working conditions and environmental practices along consumer packaged goods (CPG) supply chains. Another advantage of the Rainforest Alliance was the development of a clear and concise logo.

Combining the green frog image with the words "Rainforest Alliance Certified" communicates quickly and effectively the message of a company's legitimate commitment to sustainability. The logo has gained significant recognition because it covers many industries, including paper, beauty, wood, packaging, and consumables. And as mentioned above, it is used by several large consumer product companies with large marketing capabilities (Rainforest Alliance 2010).

#### MARINE STEWARDSHIP COUNCIL

**Evaluation criteria.** Unilever and the World Wildlife Fund partnered in 1997 to create a marine-based certification. Today, the certification is known as MSC certification or the Marine Stewardship Council (MSC). The organization is a nonprofit organization that has developed a global environmental standard for sustainable fishing. Some of the standards measured by MSC include the maintenance of a sustainable population level and the minimization of environmental impacts. Well-managed fisheries that are independently certified as meeting these standards may use the blue MSC ecolabel on seafood from their fishery. However, strict rules are in place to control how the ecolabel can be used. Before a store can sell fish or seafood with the MSC label, every company in the supply chain must be certified as meeting the MSC chain of custody standard for seafood traceability. This ensures that products with the MSC ecolabel can be traced back to a certified fishery. The certification lasts five years, although compliance with standards is verified by an independent third party and certification holders are audited every year. The MSC ecolabel was initiated in 1999 (Marine Stewardship Council 2010). Today there are 64 certified fisheries under the label, which is the equivalent of four million metric tons, or 7% of the total global seafood capture for direct human consumption (Marine Stewardship Council 2009).

**Evidence of impact and market success.** MSC certification has been successful in a couple of different ways. For certified fishers, price premiums for MSC certified products have increased. In Australia price premiums range from 30%–50%. In Britain the price premiums for MSC certification seafood ranged from 10%–25%. In the U.S., tuna price increased from \$1,700 to \$2,250/ton as soon as it became MSC-certified in August 2007. Additional benefits to fishers included access to new markets and new processing opportunities for value add. From an environmental point of view, MSC's annual report suggests numerous benefits to various fisheries. In the South Africa Hake fishery, the number of seabird kills was reduced from 18,000 to 200 over a one-year period. Additional benefits across fisheries were noted, including significant reductions in the amount of bycatch and increases in population numbers. However, much of this data is difficult to obtain. MSC certification does require fishers to record this kind of data, but because it was not required prior to certification, there are no benchmarks for comparison (Marine Stewardship Council 2009).

**Enabling factors and insights.** According to the MSC annual report, adoption of certification is reliant upon a strong third-party supplier. Without it, the label contains less rigor and validity among consumer groups.

Another enabling factor for MSC has been the target towards large-scale fisheries. With limited resources initially and a desire to attract large retail chains, MSC certifiers wanted to ensure that they could meet demand and reduce the risk for retailers. An emphasis was placed on large-scale fisheries for this reason. Furthermore, the cost of certification for small-scale fishers was cost-prohibitive (Seafood Source Staff 2010).

## LESSONS LEARNED

The agricultural ecolabeling space has grown from a focus on the safety of consumable products to include a wider range of issues spanning environmental and social sectors. Over this span of approximately 40 years, ecolabels have experienced varying degrees of success, with some labels reaching mass adoption and others vanishing from product shelves. After examining the industry for insights, several key lessons were learned that could be applied to the future launch of ecolabels. According to a comprehensive study conducted by the Bridgespan group (Searle et al. 2004), ecolabels that were developed in response to consumer demand were more successful than those that tried to stimulate a new trend. Also, labels that started by certifying a large number of producers typically did better in the marketplace.

However, it is important to note that starting with a “soft” certification standard can be good to ensure critical volume, but according to Searle et al. (2004) it is important to increase the rigor of the certification over time to ensure validity among discerning consumers. The last point proposed by Searle is that retailers and ecolabeling organizations should assist producers in achieving certification. It benefits the small producer in overcoming a significant financial hurdle and it benefits the ecolabeling organization and retailers by ensuring a consistent supply that can meet a growing demand.

A deeper look at three key ecolabels in the agriculture space revealed additional lessons. From an investigation into the USDA organic certification, it was evident that the government provided significant trust among consumers, and the funding they provided was key for promoting large-scale acceptance of the certification. Literature on the Rainforest Alliance suggests that their certification was successful because the organization understood the entire value chain from the farmers to the CPG companies and therefore had an appealing argument for all stakeholders. This certification experienced rapid growth and recognition because it was placed on numerous popular products across industries, and because some of the best marketing companies in the world promoted the Rainforest Alliance label on their products. The MSC certification continues to be a force in the industry because it has targeted its approach towards large-scale fisheries in an effort to obtain a significant supply volume so that the products could be purchased by Whole Foods, and more recently, by Walmart. In each of these labels a third-party certifier was also essential.

## INDUSTRY TRENDS AND KEY INSIGHTS

Ecolabels in the food industry have met varied success over time. Some labels have achieved significant brand awareness, reaching 50% growth rates and significant presence on the shelves of conventional grocery stores. However, other labels have failed to gain significant recognition among consumers and retailers. This section attempts to understand and explain this difference in success and failure of ecolabels within the food industry.

Searle et al. (2004) state that the criteria for creating an effective food ecolabel comes from three critical steps: (1) meeting consumer demand and not trying to create a receptive market, (2) pushing the awareness and the advancement of the certification standard, and (3) creating an attractive value proposition for producers.

## MEETING THE MARKET

It is essential that agriculture-based ecolabeling organizations understand the market and recognize where a demand already exists. “Long before producers contemplate auditing their production processes for ecolabeling, environmental advocates will have begun to influence the market by building awareness.” Producers must see a market benefit of undergoing what can be a costly certification process. In addition, producers and retailers need to know that there will be a secure supply so that they can build a brand and respond to growing consumer demands for consumer goods. Failure to balance demand and supply adequately is likely to create significant frustration in the marketplace, which can kill a certification program before it starts. In the eyes of a consumer, interest in certified products often arises when they perceive a direct benefit from their purchase. Therefore, it is essential that labels have clearly identified benefits associated with them.

The United States is “not yet particularly receptive to certified products because U.S. social and environmental groups are still seeding market awareness” (Searle et al. 2004). Understanding of this market has led certification such as the fishery MSC certification to focus different across geographic regions. “In Europe, where both industry and consumers value sustainable practices more highly, certified fish account for 1.5 percent of all



seafood sold through stores in the U.K., versus 0.05 percent in the U.S.” At this point in time, MSC certification has not made it into conventional retailers as the perception is that most U.S. consumers do not care. MSC is looking towards environmental advocates to stimulate consumer demand that would eventually lead to large-scale adoption by retailers and producers.

#### **PUSHING, NOT JUST SETTING, THE STANDARD**

Setting the right standard can be tricky, even if the market is receptive to an eco-product. Over-stringent regulations may not gain mass adoption, and loose regulations can fail to influence environment or social change, resulting in negative press from consumers. Several successful ecolabeling organizations have set the bar low for entry while making strong claims as to how producers are expected to improve over time. Other successful labeling initiatives have provided a number of levels such as gold, silver, and bronze. These types of labeling initiatives can continue to driver producers and retailers towards better practices.

### **Consumer electronics**

As a response to increased consumer demand for green products in the 1980s, the electronics sector began distinguishing products based on issues such as recycled content, biodegradability, and toxic emissions. While the issues addressed by ecolabels in the electronics sector vary, a majority of current labels focus on energy efficiency and sustainability. This section will provide an overview of ecolabels, including a summary of labeling programs in the electronic sector.

#### **ENERGY STAR**

In 1975, Congress passed the Energy Policy and Conservation Act to establish minimum standards for energy efficiency in many appliances. However, as an effort to promote energy conservation and reduce greenhouse gases, the Environmental Protection Agency (EPA) started the ENERGY STAR program in 1992. ENERGY STAR was initially designed as a voluntary program to encourage manufacturers to produce energy-efficient products, with much of the focus on computers and monitors. As the ENERGY STAR logo became more widely recognized, office equipment and residential heating and cooling equipment were added to the list over the next three years. The program gained the most traction in 1996 when the EPA partnered with the Department of Energy (DOE) to certify additional product categories.

To use the ENERGY STAR label, manufacturers must verify that they have tested their products to meet an ENERGY STAR standard. The standards usually require products to operate a specified percent more efficiently than ordinary products. When a manufacturer meets the energy-efficiency criteria set by the EPA and DOE for a particular product category, it is allowed to display the ENERGY STAR logo on that product and in its advertising. The EPA promotes ENERGY STAR Partnerships with businesses, government agencies, schools, and other public and private organizations that volunteer to buy and use ENERGY STAR products.

Products that are currently considered by the ENERGY STAR program include:

- Appliances: clothes washers, dishwashers, refrigerators, and room air conditioners
- Heating and cooling: central air conditioners, furnaces, and programmable thermostats
- Home envelope: windows, roofing materials, and insulation
- Home electronics: televisions, VCRs, DVD players, and home audio systems
- Office equipment: computers, monitors, photocopiers, notebook computers, and printers
- Lighting: fixtures and bulbs
- Commercial products: exit signs, vending machines, and water coolers

There are currently more than 1,400 manufacturers utilizing the ENERGY STAR logo, with more than 28,000 products certified in 50 different product categories. The label has become a national symbol for energy efficiency; it is estimated that it is recognized by approximately 55% of Americans (Schmeltz and Abelson 2005). The most successful ENERGY STAR category has been for office equipment, in which the EPA introduced the low-power sleep mode. In less than a decade, the program accomplished a virtual 100% market transformation with all the major manufacturers today using the logo.

To date, Americans have bought more than one billion ENERGY STAR–certified products. This has resulted in a decrease of approximately 485 billion pounds of greenhouse gas emissions. According to the Department of Energy, the use of ENERGY STAR–certified products saved enough energy to power 10 million homes and avoid greenhouse gas emissions from 12 million cars, all while saving \$6 billion (EPA 2010a).

#### GREEN SEAL

Green Seal is an independent, nonprofit organization involved in promoting the manufacture and use of environmentally responsible consumer products through ecolabeling. Established in 1989, Green Seal issues a third-party, seal-of-approval label to products that cause less harm to the environment than other similar products (Green Seal 2010). Green Seal certifies a wide range of products, including energy-efficient appliances such as refrigerators, heaters and coolers, washers, ovens, lights, and other products. In order to use the Green Seal label, manufacturers are charged a monitoring fee and an annual certification fee of \$5,000 to \$10,000.

In addition to the labeling program, Green Seal established the Environmental Partners Program in 1994. Businesses, government agencies, universities, schools, or other organizations may join the program by agreeing to the Environmental Partners Pledge and committing to choose environmentally preferable products and services. In exchange, Green Seal provides its partners with guidance in ecofriendly purchasing in the form of advice and reports.

Green Seal also uses lifecycle assessments to analyze a product's environmental impacts from raw material extraction, manufacturing, transportation, and distribution to use and disposal. The environmental impacts taken into consideration include toxic releases, energy consumption, resource consumption, air and water pollution, and impacts on wildlife. Combined with independent testing and studies by their own experts, Green Seal compares the lifecycle assessment of products within the same category. Products within a category must also comply with minimum performance standards (Green Seal 2010).

Market studies on consumer response to Green Seal have not been conducted. However, in a study conducted during its preliminary market research in 1991, Green Seal reported that four out of five consumers said that they would choose a product with the Green Seal logo over a product without it, quality and price being equal (EPA 1994). This was just the stated willingness to purchase and no later studies were conducted to gauge actual consumer awareness or behavior. Since Green Seal has a limited advertising budget, it tries to increase its presence by targeting institutional buyers who agree to buy certified "green" products through its Environmental Partners program. To date, more than 500 organizations have joined the program as partners, which is an indirect measure of consumer response (Petruzzi 2003).

Green Seal revealed that when all their labeling activities are taken together, standards cover more than 90 product categories. Among these, 300 individual products have already been certified to represent a total of 14 companies. When considering solely electrical appliances, standards have been developed for 19 categories. Approximately 50 to 75 models of appliances have been certified representing seven companies. Green Seal certification for appliances was going well before the government-run ENERGY STAR program was launched. Since then, market interest in the Green Seal for energy appliances has largely evaporated (Petruzzi 2003).

#### EPEAT (ELECTRONIC PRODUCT ENVIRONMENTAL ASSESSMENT TOOL)

In 2003, EPA funded a nonprofit organization to convene a diverse group of large purchasers, environmental advocates, manufacturers, academic researchers, and other stakeholders to develop a common definition of green products. This led to the formation of EPEAT in 2006 as a system designed to help purchasers evaluate, compare, and select electronic products based on their environmental attributes. EPEAT is managed and operated by the Green Electronics Council, which is part of the International Sustainable Development Foundation. This led to President Bush issuing on January 24, 2007 Executive Order 13423, titled, "Strengthening Federal Environmental, Energy, and Transportation Management." This order requires agencies to acquire EPEAT-registered electronic products for at least 95% of electronic product acquisitions, unless there is no EPEAT standard for the product (White House 2007).

A product is analyzed based on a set of 51 environmental criteria that take into account eight main categories: (1) materials selection, (2) environmentally sensitive materials, (3) design for end of life, (4) end-of-life management, (5) energy conservation, (6) product longevity and lifecycle extension, (7) packaging, and (8) corporate performance. EPEAT uses 23 required criteria and 28 optional criteria to determine if the product ranks as gold, silver, or bronze. Although EPEAT is a fairly new program, the system currently covers desktop computers, notebooks, thin clients, workstations, and monitors. As of June 2007, approximately 532 products manufactured by 19 manufacturers are were EPEAT-registered and listed on the EPEAT Product Registry website according to the U.S. EPA (2010b).

The label informs consumers on whether or not the product is in compliance with environmental performance standards for electronic products as established by IEEE 1680-2006. Companies that believe they are in compliance with these standards can register with EPEAT, at which time the organization will verify whether or not the product is truly in compliance. If the product meets the 23 required criteria, it receives a bronze certification. If it meets all of the required criteria and at least 14 of the optional criteria, it receives a silver rating. Those products meeting all 23 required criteria and at least 21 of the optional criteria receive a gold ranking.

Furthermore, IEEE 1680 requires conformity with ENERGY STAR standards so that an EPEAT product would also be ENERGY STAR-compliant (EPEAT 2010). Amazon.com is now featuring the EPEAT electronics rating system on its site by identifying products that carry the EPEAT rating and making it easy to browse products by rating level. It is estimated that 2008 U.S. purchases of EPEAT-registered laptops, desktops, and monitors over conventional products reduced the use of toxic materials by 1021 metric tons and eliminated 14,353 metric tons of solid waste. In addition, due to EPEAT's requirement that registered products meet ENERGY STAR's energy efficiency specifications, these products will consume less energy throughout their lifetime. EPEAT estimates that this will result in a savings of over 8.39 billion kWh of electricity (enough to power over 700,000 U.S. homes for a year), a reduction of over 1.57 million metric tons of greenhouse gas emissions (equivalent to taking one million cars off the road for a year), and a reduction of over 71,000 metric tons of water pollutant emissions.

According to the Green Electronics Council (2010), worldwide sales of EPEAT products provide significant environmental benefits beyond the borders of the United States. The Council estimates that EPEAT will contribute to the reduction of 2.8 million metric tons of primary materials, elimination of over a million kilograms of toxic materials, and the reduction of 16,297 metric tons of solid waste, although no independent referencing was provided in their report (Green Electronics Council 2010).

#### KEY FINDINGS

Government-run programs have higher market penetration, as evidenced from the number of certified products and manufacturers as compared with the private ones. It can be argued that the more successful or reputable a labeling program is, the more manufacturers will try to get certified in their own interest. Government-run programs have thus far been more successful than the private ones, but there is a shifting trend towards third-party certification.

As seen with EPEAT, government support of a labeling program not only increases its credibility and recognition, but also improves financial stability, legal protection, and long-term viability. In the U.S., private labeling programs have enjoyed limited success in niche markets with participation primarily restricted to smaller companies interested in increasing their market share. This is mainly because the private programs have not yet satisfactorily established their credibility and long-term viability, making larger corporations reluctant to join (Bentham 1998).

Particularly after ENERGY STAR became widely recognized and accepted, manufacturer interest in energy-efficiency labeling by the private programs largely disappeared. When compared to private labeling programs, the success of government labels can also be attributed to larger budgets. In particular, ENERGY STAR's budget is 10–100 times that of the private programs. For a program such as Green Seal that is not exclusively an energy label like ENERGY STAR, its small budget is further divided for each of the wide range of product categories certified, making the amount of money available to energy labeling efforts even smaller.

## Personal care products

In 2005, the worldwide personal care products sector represented a \$55 billion industry, with growth to \$60 billion expected to occur by 2010 (Edser 2009). The sector can be broadly defined as including cosmetics and toiletry products, with hair and skin care products capturing the largest and second-largest market segments, respectively. The steady growth seen in this industry is a reflection of the global economy, particularly the growth in developing countries, as demand in developed nations is approaching maturity and the economic crisis has slowed growth (Rajaram 2009). Recent trends in the U.S. and European markets indicate a consumer shift away from products that use harsh chemicals toward natural ones (Edser 2009). Natural and organic products in the personal care sector have earned a reputation for being gentle on the skin and for not causing allergic reactions.

In 2007, the natural and organic personal care market represented a \$7.3 billion industry in the United States, with significant growth expected in the coming decade. Over the next eight to 10 years, the natural and organic market is predicted to grow by approximately 12% per year, to around \$22 billion by 2017 (Rhea 2008).

Several countries have instituted their own ecolabels on personal care products, including Germany (BDIH), France (EcoCert), the United Kingdom (the Soil Association), and Italy (ICEA). Additionally, a unifying European ecolabel for cosmetics and toiletries, the COSMOS-standard, is in the final stages of development, with input from several of the major personal care companies and certification organizations. The United States and Canada have several different eco-certification groups for personal care products, but neither country has a national standard like those that exist in Europe. These comprise the Green Seal, NaTrue, Cradle to Cradle, the Natural Seal, and the U.S. Department of Agriculture's (USDA) Certified Organic program.

In addition to differences between national and organizational personal care sustainability certifications, there are also differences in the focus and the scope of the different labels. There are three main focuses for ecolabels in this arena: sustainability/safety, organic, and natural. Sustainability- and safety-focused labels look at the incorporation of those two values to varying degrees through the life cycles, as well as natural or organic products used. EcoCert, BDIH, and Cradle to Cradle are examples of sustainability/safety labels. Organic labels, like the USDA's Certified Organic and the Soil Association Certification, have developed standards for evaluating the organic content of the products. Finally, natural product certifications look at products from renewable or plentiful sources, and include certifications like NaTrue and the Natural Seal.

This section of the paper will examine three of the most recognized ecolabels in the personal care sector: BDIH, EcoCert, and the Green Seal. BDIH focuses primarily on products in the personal care sector, while EcoCert and the Green Seal certify products in many different industries. All three organizations have transparent certification procedures and stricter standards than the existing governmental legislation. BDIH and EcoCert are the primary eco-certifications in Germany and France respectively, while the Green Seal is one of many organizations in the fragmented American marketplace.

### BDIH

One of the most successful and recognized eco-certifications available in the personal care sector comes from the German brand, BDIH (Bundesverband deutscher Industrie- und Handelsunternehmen [the Federation of German Industries and Trading Firms]). The BDIH Certified Natural Cosmetics Seal began in 1996 (Valdez 2008), and was developed by BDIH and a working group of manufacturers who were concerned by the loose definitions of "natural" personal care products in the German Cosmetics Regulation of 1985, and the standards issued by the Ministry of Health in 1993 (Valdez 2008).

The BDIH Cosmetic Seal Standard has achieved widespread adoption in Germany and the European Union, with over 500 member companies and over 2,000 products. After enjoying initial success in Germany, BDIH worked to ensure that standards are maintained around the world, by creating the International Organic and Natural Cosmetics Corporation (IONC) to institute a system of checks for cosmetic companies (Heinze 2008). BDIH also worked with European natural cosmetics federations and certification companies for six years, and was able to help harmonize national and international standards for natural and organic cosmetics for the European COSMOS-standard, which has yet to take effect.

Though the largest market for natural or organic personal care products is found in the United States, according to the Organic Monitor's European Market for Natural and Organic Products Report, Germany has the largest market in Europe, and the second largest in the world (International Organic and Natural Cosmetic Corporation 2010). This is due in part to an estimated 12 million-member demographic of middle class, predominantly female consumers who have committed to a lifestyle of health and sustainability, and are willing to pay a premium to support their commitment (Caldwell 2006). BDIH recognized that market, and by establishing a well-recognized and transparent certification, has contributed to pushing the personal care sector in a more sustainable direction.

BDIH employs transparent standards for consumer verification of certified products and focuses on the overall sustainability of the products. These standards include obtaining raw materials from plants (and taking quality/availability into account), rejection of any animal testing performed or commissioned, rejection of raw materials obtained from dead vertebrates, rejection of synthetic dyes/fragrances and petroleum products, and use of nature-identical preservatives. A third-party certification board, Ecocontrol in Osterode, confirms compliance and verifies these standards. Because of the time required to complete the independent auditing process and the comprehensive nature of the metrics used to make the label meaningful, BDIH certifies fewer than 150 products per year on average (Lennard 2010).

The BDIH Natural Cosmetic Seal Standard is currently stricter than the regulations that exist in Germany and in the European Union. The European COSMOS-standard was designed with input from BDIH, and will incorporate many of the same sustainability metrics. The COSMOS-standard, however, is designed to define minimum requirements and common language, so it is likely that when the final language is published, BDIH will still have higher standards in some areas (European Cosmetics Standard Working Group 2010).

#### ECOCERT

Perhaps the most internationally recognized ecolabel in the personal care products sector, the French label EcoCert, has expanded to 80 countries outside of the EU, and can be found on all six continents. Founded in 1991, EcoCert is deeply involved in environmental protection efforts, as well as social responsibility and sustainable development. Unlike some other personal care product certifications, EcoCert operates in many different industries and is responsible for certifying over 70% of the producers in France. Though personal care products are not the full scope of the EcoCert line, EcoCert is the first organization to develop certification standards specifically for cosmetics, rather than simply adapting standards from other sectors (EcoCert 2003)

EcoCert requires compliance with the following categories in order to consider products for certification:

- Products must have 95% minimum content (by weight) of natural ingredients or of natural origin, with a maximum of 5% synthetic ingredients (some synthetic ingredients are banned outright, such as petroleum products).
- In products labeled "Natural," a minimum of 50% of the total plant products used and 5% of the total product weight must be organic.
- In products labeled "Natural and Organic," a minimum of 95% of the total plant products used and 10% of the total product weight must be organic.
- Raw materials derived from living or dead animals are prohibited, as is any animal testing.

As is the case with BDIH, companies seeking to use the EcoCert label on their products must undergo an independent third-party audit, conducted by COFRAC, the French Committee for Accreditation. This process is more stringent than the conventional regulation governing cosmetics, which EcoCert believes helps to ensure genuine practice of environmental respect throughout the production line.

The advertising regulatory body in France is working to make it harder for companies to use terms like "natural" and "organic" in their promotional marketing. The standards this body is proposing are very similar to the natural/organic content levels set by EcoCert, which will hopefully help to reduce consumer uncertainty when searching for truly environmentally friendly products (GreenPlanet.net 2010).

EcoCert has come under fire within the last three years, when it was discovered that some of the certified products did not meet the organic standard or included petrochemicals (Cummins 2008). Additionally, the branch of EcoCert that certifies organic cotton was recently challenged when it was found that roughly 30% of the certified cotton leaving India was genetically modified (Dufault 2010). These issues have contributed to brand skepticism, which further obfuscates the effectiveness of ecolabels in the personal care sector.

In addition to certifying personal care products, EcoCert is increasingly studying how product packaging can be incorporated into the certification. The proposed standard includes requiring that the packaging be recyclable and use minimum energy in the manufacturing. It also bans the use of PVC and other types of plastic.

#### THE GREEN SEAL

Products evaluated using the Green Seal have been examined using a lifecycle approach to ensure that any significant environmental impacts are accounted for, beginning with material extraction and ending with product use and disposal. Green Seal is an independent, nonprofit organization dedicated to certifying and monitoring products in a number of industries (Johnson 2009). The Green Seal developed its standards in 1989 with input from industry, the government, academia, and the public. The are designed to certify a number of different product sectors. Though the Green Seal does work internationally through the use of mutual recognition agreements, the certification scheme was created in the U.S. market, and maintains its strongest presence there (Green Seal 2010)

Currently, the Green Seal endorses soaps, cleansers, and shower products, with a similarly transparent certification scheme under development for cosmetics and the rest of the personal care sector. Like EcoCert, Green Seal uses lifecycle analysis to examine a product's environmental impacts from raw material extraction through use and disposal. There are several environmental impacts that are taken into consideration, include toxic releases, energy consumption, resource consumption, air and water pollution, and impacts on wildlife (Green Seal 2010). The standard currently addresses health, environmental, and labeling concerns, and also includes definitions for commonly used terms like "organic" and "natural." Packaging must be lightweight and consist of at least 25% post-consumer recycled material. In addition to addressing these metrics, Green Seal also has performance metrics that require the product to perform as well as or better than a conventional product in the same concentration (Green Seal 2009).

In the United States, the most consistent ecolabel regulation in the personal care sector is on the use of the word "organic," which the USDA has declared can only be used when plant products are grown without the use of pesticides and without using genetically modified variations (Fulmer 2001). Because federal ecolabel regulation in this sector is largely absent, and because many of the existing standards are still in the development stages, greenwashing has flooded the industry, making label differentiation much more challenging for consumers. The Green Seal has constructed a stringent examination process for certified products, and is much more comprehensive than existing legislation in the U.S.

Green Seal certification costs between \$3,500 and \$8,500 per product, depending on the total revenues of the client organization. Monitoring fees will typically double those amounts. Unlike the aforementioned European standards, the Green Seal has not been certifying in the personal care sector for a significant amount of time, though it is positioning itself to become a leader in the industry (Whitaker 2009).

#### KEY FINDINGS

In Europe, the standards that are dominating national markets were established over a decade ago. They have gained governmental, industry, and consumer support, and have third-party authentication bodies. The European Union COSMOS-standard has yet to take effect and will likely be less stringent initially than existing national standards, but will provide common language and a standardized baseline to move from.

In America, no single label has yet gained a majority of the market share, and the distinctions between different types of ecolabels are serving to further add confusion to the sustainable personal care sector products. If an organization fails to meet the criteria for a particularly strict ecolabel, they can apply to be certified by another label, and most consumers do not know the difference, despite the fact that many organizations' standards

are publicly available. Part of the problem in the United States is the minimal federal legislation on the issue. Only nine ingredients have been restricted or prohibited by the FDA, as opposed to over 1,100 in the European Union (FDA 1991).

The futures of ecolabels in Europe and the United States are likely to follow different trajectories. With the establishment of the COSMOS-standard, the EU will be able to enact gradually stricter requirements for certification, thus establishing legitimacy and pulling the European personal care sector along too. This will be harder to achieve in the United States, as many of the existing labels are relatively new and do not have significant market penetration. Since the natural cosmetic industry in the United States is growing, however, it is possible that a few certification brands may be able to position themselves and quickly gain market share as the industry shifts toward greater environmental consciousness.

## Textiles and apparel

### TIMELINE AND EVOLUTION

In considering the evolution of ecolabels in the textile and apparel industry, it is important to recognize the two separate movements, focused on different aspects of textile and apparel production, which ultimately gave rise to the ecolabels in the market today.

The push for *environmental safety* in textile production was rooted primarily in Europe, and began roughly in 1992 when the European Economic Council adopted Council Regulation No. 880/92 establishing a Community Eco-Label award scheme. Textiles were one of the first product groups for which Eco-Label criteria were established. Criteria were mainly targeted at concerns regarding environmental pollution and human health and safety. The criteria established therefore related to toxicological and environmental considerations in the production of textiles, covering such products as textile clothing and accessories, home textiles, yarns, fibers, and fabrics. This and subsequent ecolabeling schemes for textiles required multiple production standards for maximum allowable heavy metal residues in dyes used in eco-textiles, as well as use of other inputs including pesticides, allergens, and biologically active compounds.

The movement for *improved working conditions and wages* in textile and apparel production became strongest in the 1990s. The Campaign for Labor Rights was started in 1993, and the overwhelming majority of new organizations formed to address labor conditions in textile factories were formed in the mid-1990s, on the heels of high-profile exposés of working conditions in the factories of many global product manufacturers.

### SCALE AND SCOPE OF LABELS

A survey of the textile and apparel labels presented on Ecolabelling.org show that most of the certifications presented are not textile-specific, only 16 of the 38. Textiles are often grouped under broad-ranging ecolabels, which cover products as varied as building supplies, agricultural goods, and all consumer goods. Environmental issues addressed across this category include organic production, energy usage, pollution, and biodiversity conservation. Social issues addressed across this category include labor practices, worker health and safety, consumer health and safety, economic development, and animal treatment.

Some of the major categories that the 38 certifications listed can be divided into include:

- All consumer goods: Cradle-to-Cradle, BASF Efficiency, Healthy Child Healthy World
- Raw materials only: Soil Association Organic Standard, Organic Farmers and Growers Certification, Global Organic Textile Standard
- Processing only: Oeko-Tex Standard 1000
- Full life cycle, product only: Oeko-Tex Standard 100
- Full life cycle, product + process: Oeko-Tex Standard 100Plus
- Multiple environmental/social attributes: Ecoproof, Zque, Naturtextil
- Environmental attributes only: EcoLogo
- Country-specific multi-product certifications: Environmental Choice New Zealand, Thai Green Label, Ecomark:India
- End product-specific certifications, all of which pertain to carpets/rugs (industrially made or handmade):

## Rugmark, NSF Sustainable Carpet Assessment Standard, Label STEP

The textile-only certifications presented on Ecolabelling.org are:

- Oeko-Tex (100, 100plus, 1000)
- Ecoproof
- Zque
- AIAB Bio Fiber
- Rugmark
- NSF Sustainable Carpet Assessment Standard
- Naturtextil
- Migros ECO Global Organic Textile Standard
- GUT
- Coop Naturaline: Switzerland
- Label STEP
- OE-100
- Bluesign Standard

Textile labels with global applicability include: Better Cotton Initiative, Oeko-Tex (100, 100plus, 1000), Organic Exchange 100, NSF-140-2007 Sustainable Carpet Assessment Standard, Bluesign Standard, and Global Organic Textile Standard. Country-specific textile-only labels are:

- Switzerland: Coop Naturaline
- Italy: AIAB Bio Fibre
- New Zealand: Zque

According to work published in 2009 by IFTH (French Institute for Textiles and Apparel), more than 50 textile labels currently in existence are differentiated across the following issues: (1) environment, (2) consumer health and safety, and (3) other aspects of sustainable development (including labor standards).

### OEKO-TEX STANDARD 100

The Oeko-Tex Standard is one of the most successful consumer health and safety standards in the textile industry. The goal of this ecolabel is threefold: (1) to mitigate disagreements in manufacturing on which products are “ecologically harmless for humans;” (2) to provide a streamlined process for manufacturers and retailers, and (3) to help consumers easily identify safe textiles. By 2005, the Oeko-Tex Standard had been adopted by over 53,000 companies (compared to 63 that had adopted the EU’s Eco-Label by 2007).

The standard was established in 1992 by the International Association for Research and Testing in the Field of Textile Ecology. The two precursors to this standard were the Austrian Textile Research Institute’s OTN 100, developed in the late 1980s, and the German Hohenstein Textile Research Institute’s Oko-Check. These two institutes joined forces and built on their combined knowledge to create the new Association that launched the standard.

The standard requires more than 100 tests aimed at limiting and regulating the use of chemical substances in textiles, including prohibited carcinogenic dyestuffs and regulated substances, including formaldehyde, heavy metals, and softeners. The standard goes further than even many national laws, including substances that are not yet prohibited or regulated by law, but for which scientific evidence of their harmfulness to humans exists—including tin-organic compounds, pesticides, and allergy-inducing dyestuffs. It also covers other parameters to safeguard consumer health, including checking for pH values that are within the skin-friendly range and fastness of prints and dyes. Both finished items and source materials at all stages of the production process can be certified.

Requirements relating to the safety of textiles are checked on a regular basis and revised annually. The International Oeko-Tex Association holds technical meetings with groups of experts from member institutes to decide upon changes and additions to the criteria. Testing is conducted at 14 member institutes located across Europe and Japan. Certification is offered for a 12-month period, and is unique in that the label is awarded not on the basis of intent, but only after compliance with criteria has already been ensured through testing.

One strength of this label is that it ensures transparency and comparability on a global level. The standard is described in a comprehensive document that details prohibited substances, test criteria for each substance,



and relevant limits. Another strength of the label is that it has become enough of an industry standard that many companies regard Oeko-Tex certification as a critical component of quality control. Consequently, an international network of Oeko-Tex-compliant suppliers has been built, allowing manufacturers to cut certification costs, as supplier selection is made easier and duplicate tests are avoided.

#### GLOBAL ORGANIC TEXTILE STANDARD (GOTS)

The GOTS will be seen on retail shelves beginning in Spring 2010. This label has been adopted so far by Walmart, Nordstrom, H&M, Banana Republic, Target and Levi's, among others. More than 2,000 textile facilities are currently participating in the GOTS inspection and certification system. Participating groups cover processors, manufacturers, importers and exporters, serving mainly the North American market. The objective of the standard is to unify the more than 50 existing standards and draft standards regarding organic textiles under one harmonized label, as the multiplicity of labels has contributed to confusion among market participants and consumers, and has potentially served to hamper free international trade in organic textiles.

The standard was developed by the International Working Group on Global Organic Textile Standards, which was formed in 2002 as a joint initiative of leading organic textile standards organizations. It is a comprehensive fiber certification, containing provisions to reduce environmental impact across the various stages of fabric production—from raw materials harvesting to dyeing, bleaching, and processing. Two levels of certification are offered: (1) "organic" or "organic in conversion" for those products containing at least 95% certified organic fibers or fibers from fields transitioning to organic; and (2) "made with X% organic materials" for those products containing 70%–95% certified organic or organic in conversion fibers. GOTS also forbids the use of dangerous substances, including heavy metals, formaldehyde, toxic dyes, and chlorine bleach.

GOTS works cooperatively with approved certification bodies on inspection and certification. Certifiers must be accredited ISO 65, and must also be approved by the International Working Group for GOTS certification. Furthermore, certifying agencies must discontinue certification using a pre-existing standard, to move towards a harmonized global standard. This requirement has resulted in various certifiers, including Control Union Certifications (formerly Skal International), EcoCert, ETKO and ICEA dropping their already established standards and introducing GOTS standards to their clients.

One of the success factors of this label is the publication of "positive lists" which outline acceptable dyestuffs and chemicals that can be used in meeting the criteria requirements of GOTS. These lists have been created through collaboration between approved certifiers and the chemical supply industry, and leading suppliers of chemicals for fabric production are actively advertising the compliance of their products with GOTS standards. One critique of the GOTS label is that it does not address social issues in the production of organic fabrics. Although GOTS does request that certified manufacturers meet minimum social requirements, they do not address farm-level social criteria.

#### FAIR TRADE CERTIFIED

With the November 2009 release of Transfair USA's Fair Trade Certified Apparel and Home Goods pilot standard, the fair trade label has been extended beyond the agricultural sphere, where it has predominated in the U.S. to date. Transfair USA is the only third-party certifier of fair trade products in the U.S., and is an affiliate of the international umbrella group Fairtrade Labelling Organizations International (FLO). Fair Trade Certified apparel and home goods will appear on retail shelves in Spring 2010, although the names of participating companies have not yet been released. The standard represents the culmination of nearly five years of work by Transfair, which consulted and collaborated with advocacy organizations, workers' rights groups, trade unions, factory managers, garment workers, companies, and consumers in developing the standard. The objective of the label is to facilitate consumer choice, higher earnings for cotton farmers and garment workers, and worker empowerment and participation.

The pilot standard extends the strong labor protections of the International Labour Organization (ILO) Conventions to factory workers and sewing cooperatives involved in the apparel and home goods industry. Cut-and-sew workers also receive a fair trade premium, which they democratically decide how to use. The standard also offers a guaranteed minimum price to cotton farmers, as well as a fair trade premium to invest

in community projects, including health centers, schools, and infrastructure. The fair trade premium comes from an additional percentage above the price of the garment that U.S. companies sourcing Fair Trade Certified apparel and home goods will pay.

In order to track the chain of custody from farm to finished product, Transfair USA will collaborate with FLO. FLO will use its Fairtrade standard to certify cotton producers and audit processors (such as ginners and spinners), while Transfair will certify cut-and-sew operations using the pilot standard. In order for a finished product to receive the Fair Trade Certified label, the whole chain of custody must be certified.

#### KEY FINDINGS

The examples from the textile and apparel ecolabels sector provide a few key insights that are worth noting:

1. The three most important issues that textile and apparel ecolabels cover are human health and safety (i.e., Oeko-Tex), environmental pollution (i.e., GOTS), and worker's rights (i.e., Fair Trade).
2. The labels that have emerged or are emerging as leaders in this space have one key thing in common—they all aim to cover the entire supply chain for textiles and apparel, from raw materials through cut-and-sew operations. This is important, as it cuts out the need for a number of smaller labels that will certify the different steps of the supply chain. It also reduces the likelihood of consumer label fatigue.
3. An additional benefit of this full-supply-chain perspective is that it allows for the creation of supplier networks specific to each ecolabel, which in turn increases the ease of doing socially and environmentally responsible business and helps make these movements self-sustaining.
4. An ecolabel may avoid individual countries' highly politicized debates about what standards should be set in national policy by following the Oeko-Tex model, in which the label's standards are more stringent than those of any given country. Convening an independent standards advisory council of verifiable experts is key to such an effort.
5. For issues for which ecolabels are highly fragmented and numerous, the GOTS model of bringing people involved in the multiple existing labels together to discuss a uniform global standard to replace multiple labels is prudent. This kind of global participatory effort increases not only the legitimacy of the resulting ecolabel, but is also likely to drive adoption, as each of the agencies involved in developing the global label then becomes an exclusive promoter of the global label.

These lessons aside, one thing about ecolabels in the textile and apparel sector is very clear. There are already definitive “winners” in this industry's ecolabel space. Comprehensive labels that cover each of the three issues that are most important in this industry have been developed, and are enjoying high levels of adoption. While it may be worthwhile for an individual company to require Oeko-Tex, GOTS and Fair Trade certification for any textiles/apparel it carries, developing a different set of standards or company-specific codes of conduct for textile/apparel suppliers may raise the effort and cost without driving any real improvement in field or market success.

#### Future work

This research provides a first glimpse into the incredibly complex and rapidly changing landscape of ecolabels and certification systems. While this analysis does provide many intriguing insights into the current state of play, the conclusions are preliminary, since they are based mostly on self-reports and secondary literature sources.

#### SCIENTIFIC UNDERPINNINGS DATABASE

The next phase of this work is to construct a detailed and in-depth analysis of the scientific underpinnings used for a roster of approximately 400 existing ecolabels and certifications. This will culminate in a user-friendly integrated database on the web to allow an examination by product category, sectors, geographies, transparency, and types of environmental impacts being addressed.

The work is intended to support the development of measurement and reporting standards for product sustainability. Where the science supports, it will be of usefulness to utilize existing labels and certifications as indicators in lifecycle assessments of products.

## NON-SCOPE RESEARCH

Additionally, there are several rich avenues for future research to pursue. These include:

***Making the ecolabel/certification business case.*** Ecolabels and certification are only relevant when they are used. Yet we know little about how business managers decide to use certification, how they gather information about their options, and crucially, how they make the case that the qualification is worth the time and effort for the company. There are diverse array of potential drivers for business to adopt certification, including reducing risk, differentiating products from competitors, finding new efficiency and cost savings opportunities, ensuring long-term supply, reputational gains, and realizing a price premium for the product. However, there is little investigation of how managers prioritize these elements, and whether they can demonstrate the value from their investment improving outcomes in these areas. This research could inform the efforts of certifiers to provide real value and service to customer organizations, and would also help educate managers that are new to certification on how they might make the case in their organizations.

***Evaluating real outcomes.*** Despite this extensive review of the literature, we found very little evidence of empirical studies that assessed the causal link between certification/ecolabeling efforts, and real improvements in social and/or environmental outcomes. This kind of research is difficult because it requires the researcher to unwind the specific impacts of the certification from an uncontrolled, dynamic environment with complex feedback loops. One strategy to address this may be to perform an analysis of the specific standards employed in a certification program, how these standards are similar or different from recognized best practices in the domain, and the degree of documentation on the actual implementation of the standards. Connecting best practices, standards, and actual practice may begin to provide insight into the critical question of certification efficacy.

## REFERENCES

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- Atlee, J., and Kirchain, R. 2006. Operational Sustainability Metrics: Assessing Metric Effectiveness in the Context of Electronics-Recycling Systems. *Environmental Science & Technology*, 4506-4513.
- Ball, J. 2009. What “Green” Labels Can Tell Us. *The Wall Street Journal*, July 16.
- BDIH Certified Natural Cosmetics. 2010. Trend to Natural Cosmetics. [http://www.kontrollierte-naturkosmetik.de/e/index\\_e.htm](http://www.kontrollierte-naturkosmetik.de/e/index_e.htm) (accessed February 15, 2010).
- Bogdan, L. 2010. ECO Labels 101: Green Certifications Explained. *Inhabit.com* April 6. <http://www.inhabit.com/2010/04/06/demystifying-eco-labels/> (accessed September 27, 2010)
- Caldwell, G. 2006. Natural and Organic C&T – The Simple Life. *Cosmetics Business*, September.
- Carson, R. (1962) *Silent Spring*. Houghton Mifflin.
- Chatterji, A. K. and Levine, D. I. 2006. Breaking Down the Wall of Codes: Evaluating Non-Financial Performance Measurement. *California Management Review*.
- COSMOS. 2010. Cosmetic Organic Standard. *European Cosmetic Standards Working Group*, January <http://www.cosmos-standard.org/docs/COSMOS-standard-final-jan-10.pdf> (accessed March 1, 2010).
- Cummins, R. 2008. Organic Consumers Association. *OCA and Dr. Bronner’s Challenge Weak EcoCert and OASIS Standards*. <http://www.organicconsumers.org/bodycare/OASISrelease080317.cfm> (accessed March 2, 2010).
- De Pelsmacker, P. and Janssens, W. 2007. A Model for Fair Trade Buying Behaviour: The Role of Perceived Quantity and Quality of Information and of Product-specific Attitudes. *Journal of Business Ethics* 75: 361–380.
- Dimitri, C. and Oberholtzer, L. 2009. Marketing U.S. Organic Foods: Recent Trends from Farms to Consumers. *USDA*. September.
- Dufault, A. 2010. The Ripple Effect of India’s Cotton Scandal. *EcoSalon.*, January 25 <http://www.ecosalon.com/the-ripple-effect-of-indias-organic-cotton-scandal/> (accessed March 1, 2010).
- EcoCert. 2003. EcoCert Guidelines. *Standards for Natural and Organic Cosmetics*, January <http://www.ecocert.com/IMG/pdf/standards-en.pdf> (accessed February 19, 2010).
- EPEAT, 2010. Management and Governance. EPEAT. <http://www.epeat.net>. 2010 (accessed October 5, 2010).
- Edser, C. 2006. Personal Care Sector Under Review. *Focus on Surfactants*, 2006 (6), 1–2.
- EPA, 1994. Determinants of effectiveness for environmental certification and labeling programs. EPA-742-R-94-001. *Abt Associates, Inc.*, Washington, D.C.
- EPA, 2010a. EnergyStar Qualified Products. *U.S. Environmental Protection Agency*. <http://www.energystar.gov/>. 2010. (accessed October 5, 2010).
- EPA, 2010b. Electronic Product Environmental Assessment Tool (EPEAT). *U.S. Environmental Protection Agency*. <http://www.epa.gov/epp/pubs/products/epeat.htm> 2010 (accessed October 5, 2010).
- FDA, 1991. Federal Regulations – Cosmetics Labeling Manual. *Health and Human Services*. <http://www.fda.gov/Cosmetics/CosmeticLabelingLabelClaims/CosmeticLabelingManual/default.htm> (accessed March 2, 2010).
- FDA, 2009. Federal Food and Drugs Act of 1906. U.S. Food and Drug Administration. <http://www.fda.gov/regulatoryinformation/legislation/ucm148690.htm>. Last updated May 20, 2009 (accessed October 5, 2010).
- Figge, F., Hahn, T., Schaltegger, S., and Wagner, M. 2002. *The Sustainability Balanced Scorecard – Theory and Application of a Tool for Value-Based Sustainability Management*. Luneburg, Germany: Center for Sustainability Management, University of Luneburg.
- Fulmer, M. 2001. Can Consumers Trust “Eco-Labels”? *The Los Angeles Times*, August 26.

- Gallastegui, I. G. 2002. The Use of Eco-labels: A Review of the Literature. *European Environment*, 316–331.
- Green Electronics Council. 2010. Environmental Benefits of 2009 EPEAT Purchasing. *Green Electronics Council*. <http://www.epeat.net/Docs/EPEATEBReport2009.pdf> (accessed October 5, 2010).
- Green Biz Staff. 2005. New Study Shows Benefits of Sustainable Forestry Certification. Retrieved August 28, 2009, from *GreenBiz*, July 21 <http://www.greenbiz.com> (accessed August 28, 2009).
- GreenPlanet.net. 2010. France, stricter rules for natural & organic cosmetics. *GreenPlanet.net*, January 7, <http://en.greenplanet.net/lifestyle/personal-care/1282-france-stricter-rules-for-natural-a-organic-cosmetics.html> (accessed March 2, 2010).
- Green Seal. 2009. GS-44. Green Seal Environmental Leadership Standard for Soaps, Cleansers and Shower Products. [http://www.greenseal.org/certification/GS-44\\_shower\\_and\\_soap.cfm](http://www.greenseal.org/certification/GS-44_shower_and_soap.cfm) (accessed February 26, 2010).
- Green Seal. 2010. About Green Seal: Frequently Asked Questions. <http://www.greenseal.org/about/faq.cfm> (accessed September 29, 2010).
- Hart, S. L. (1997). Beyond Greening: Strategies for a Sustainable World. *Harvard Business Review*, 67–76.
- Heinze, K. 2008. Certification of natural cosmetics: status quo and the future. *Organic Market Information*, April 24 pp. 1–3.
- IONC. 2010. IONC: Be Natural. *International Organic and Natural Cosmetics Corporation*: <http://www.ionc.info/index.php?id=8&L=1> (accessed February 23, 2010)
- Johnson, K. 2009. 82 Percent of Consumers Buying Green Despite Battered Economy. Austin: *Enviromedia Social Marketing*.
- Kim, W. C., & Mauborgne, R. 1999. Creating New Market Space. *Harvard Business Review*, 83–93.
- Lee, J. and Geistfeld, L. V. 1998. Enhancing consumer choice: Are we making appropriate recommendations? *Journal of Consumer Affairs*, 227–251.
- Lennard, C. 2010. Germany: The Heartland of Natural Cosmetics. *Cosmetics* <http://www.in-cosmetics.com/page.cfm/Link=392> (accessed March 1, 2010).
- Malthouse, J. 2009. Global Survey to Index Ecolabel Universe Launches. *EcolabelIndex.com*, November 23 Retrieved September 27, 2010 from <http://www.ecolabelindex.com/news/2009/11/23/global-survey-to-index-ecolabel-universe-launches/> (accessed September 27, 2010).
- Marine Stewardship Council 2009. Net Benefits – 10 Years of MSC Certified Fisheries. *Marine Stewardship Council*, September 30 <http://www.msc.org/newsroom/news/net-benefits-ten-years-of-msc-certified-fisheries> (accessed September 29, 2010).
- Marine Stewardship Council. 2010 “Certified Fisheries.” *Marine Stewardship Council* <http://www.msc.org/track-a-fishery/certified> (accessed September 29, 2010).
- Marshall, P. 2010. Perry Marshall. <http://www.perrymarshall.com> (accessed February 28, 2010).
- McGovern, G. 2009. Information is a Task. *Task Management: Giraffe Forum* June 14 Web site: <http://giraffeforum.com/wordpress> (accessed August 28, 2009).
- NPR. 2010. Some “ENERGY STAR” Appliances May not be that Green. *National Public Radio*, April 14 <http://www.npr.org/templates/story/story.php?storyId=125912545> (accessed September 27, 2010).
- Olsen, S., & Galimidi, B. 2008. Catalog of Approaches to Impact Measurement: Assessing Social Impact in Private Ventures. *Social Venture Technology Group with the support of the Rockefeller Foundation*.
- Organic Trade Association 2008/ Environmental Facts. *Organic Trade Association* <http://www.ota.com/organic/environment/environmental.html> (accessed September 28, 2010).
- Ottoman, J. 1992. Industry’s response to green consumerism. *Journal of Business Strategy*, 3–7.

- Bentham, P. 1998. Green power in perspective: Lessons from green marketing of consumer goods. *The Electricity Journal*, 11: 46–5.
- Petruzzi M. T. 2003. Ecolabeling, Environmental Standards, and Certification: A Green Seal guided tour, *UGCA Meeting 5*, February 20.
- Rainforest Alliance 2010. Sustainable Agriculture Network. *Rainforest Alliance* <http://www.rainforest-alliance.org/agriculture.cfm?id=san> (accessed September 29, 2010).
- Rajaram, S. 2009. Chemicals for Cosmetics and Toiletries (CHM018F). *BCC Research*.
- Rea, P. 2008. U.S. Natural and Organic Care. *Nutrition Business Journal*.
- Sanders, J. 2009. The War Over Eco-Labels. *GreenBiz*, April 28 <http://www.greenbiz.com> (accessed August 28, 2009).
- Schmeltz, R. and Abelson, J. 2005. Update on ENERGY STAR 2005. *U.S. Environmental Protection Agency*. [http://www.energystar.gov/ia/partners/downloads/international/2005\\_US.pdf](http://www.energystar.gov/ia/partners/downloads/international/2005_US.pdf). 2005 (accessed on October, 5, 2010).
- Seafood Source Staff 2010. Global Trust Nets MSC Accreditation. *SeafoodSource.Com*, March 12 <http://www.seafoodsource.com/newsarticledetail.aspx?id=4294989634> (accessed September 29, 2010).
- Searle, B. Colby, S.J. and Milway, K.S. 2004. Moving Eco-Certification Mainstream. *The Bridgespan Group*, July 1 <http://www.bridgespan.org/moving-eco-certification-mainstream.aspx> (accessed September 29, 2010).
- Seuring, S., & Muller, M. 2007. Integrated chain management in Germany – Identifying schools of thought based on a literature review. *Journal of Cleaner Production*, 699–710.
- Seuring, S., & Muller, M. 2008. From a literature review to a conceptual framework for sustainable supply chain management. *Journal of Cleaner Production*, 1699–1710.
- Soil Association. 2010. Organic Market Report 2010: Summary Version. *Soil Association* <http://www.soilassociation.org/LinkClick.aspx?fileticket=KeVgcGlE0ac%3d&tabid=116> (accessed September 27, 2010).
- Srivastava, S. K. 2007. Green supply-chain management: A state-of-the-art literature review. *International Journal of Management Reviews*, 53–80.
- Sustainability: The Journal of Record. (2008). Roundtable: Green Labeling – Are Products Tagged “Eco-Friendly” Really Environmentally Correct? *Sustainability*, 299–303.
- Teisl, M. F. 2003. What we may have is a failure to communicate: Labeling environmentally certified forest products. *Forest Science*, 668–680.
- Teisl, M. F., Rubin, J., and Noblet, C. L. 2008. Non-dirty dancing? Interactions between eco-labels and consumers. *Journal of Economic Psychology*, 140–159.
- Vaccaro, A. 2009. Live from the Ceres Conference: Corporate Sustainability Reporting and Beyond. *GreenBiz*, April 15 <http://www.greenbiz.com> (accessed August 28, 2009).
- Valdez, J. 2008. Peeling Back the Label: A Who’s Who of Organic Certification. *Bio Organic Concepts*, October.
- Wagner, D. 2001. Precautionary Labeling for Consumer Products. International Sanitary Supply Association. [http://www.issa.com/data/files/articles/88/consumer\\_precautionary\\_label.pdf](http://www.issa.com/data/files/articles/88/consumer_precautionary_label.pdf) (accessed October 5, 2010).
- White House, 2007. Instructions for Implementing Executive Order 13423: Strengthening Federal Environmental, Energy, and Transportation Management. *White House*. [http://www.whitehouse.gov/sites/default/files/omb/assets/procurement\\_green/eo13423\\_instructions.pdf](http://www.whitehouse.gov/sites/default/files/omb/assets/procurement_green/eo13423_instructions.pdf) (Accessed October 6, 2010).
- Whittaker, M., Engimenn, E., and Sambrook, I. 2009. GHI: Beauty Business, Brand Impact. *Eco-labels: Environmental Marketing in the Beauty Industry*, August 11 <http://www.gcimagazine.com/marketstrends/segments/natural/52976687.html> (accessed February 15, 2010).

## GLOSSARY AND ACRONYMS

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**CSI** – Corporate Sustainability Initiative at Duke University

**CPSC** – Consumer Product Safety Commission

**EPA** – United States Environmental Protection Agency

**BDIH** – (Bundesverband deutscher Industrie und Handelsunternehmen – the Federation of German Industries and Trading Firms)

**FDA** – Food and Drug Administration of the United States

**SMRS** – Standards for the Measurement & Reporting on Sustainability

**FTC** – U.S. Federal Trade Commission

**Green Guide** – Title 16 Part 260 Code of Federal Regulations (U.S.) Guides for the Use of Environmental Marketing

**ISO** – International Standards Organization

**USDA** – U.S. Department of Agriculture

**EU** – European Union

**SAN** – Sustainable Agriculture Network

**MSC** – Marine Stewardship Council

**EPEAT** – Electronic Product Environmental Assessment Tool

**COFRAC** – the French Committee for Accreditation

## **APPENDIX A: SINGLE-ATTRIBUTE SURVEY QUESTIONS**

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## TRACKING INFORMATION

### 1. Name of the host organization responsible for operating the ecolabel

### 2. What is the website or link for more information about this ecolabel?

### 3. Public contact information

This information is for the purposes of contact from the public (and **will** be displayed on ecolabelling.org).

#### E-mail address

#### Phone number

Include '+' and the country code. Example: +1-xxx-xxx-xxxx.

#### Street number and name

#### City

#### Province / State

#### Postal / Zip Code

#### Country

### 4. Private contact

The following details are requested in case we have questions about the survey or to contact you in the future about ecologia. This information will **not** be displayed to the public.

#### Your name

#### Job title

Save and proceed to next page

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### ABOUT THE ECOLABEL

#### 1. Logo of the ecolabel program

Please upload the logo of your ecolabel. This will be shown on ecolabelling.org.

no file selected

#### 2. Please briefly describe your ecolabel - its goals, scope and main components:

This information will be used as a basis to create a profile on ecolabelling.org. Please limit yourself to 100 words or less.

#### 3. What does your ecolabel certify?

Tick all that apply:

- |                                      |                                                                |                                                              |
|--------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------|
| <input type="checkbox"/> Buildings   | <input type="checkbox"/> Companies                             | <input type="checkbox"/> Facilities                          |
| <input type="checkbox"/> Farms       | <input type="checkbox"/> Fisheries                             | <input type="checkbox"/> Forests / Land holdings             |
| <input type="checkbox"/> Individuals | <input type="checkbox"/> Products                              | <input type="checkbox"/> Processes (e.g. management systems) |
| <input type="checkbox"/> Services    | <input type="checkbox"/> Supply Chains (e.g. chain of custody) | <input type="checkbox"/> Organizations                       |
| <input type="checkbox"/> Other       |                                                                |                                                              |

If other, please specify

#### 4. Is the ecolabel constructed as pass / fail (awarded / not awarded) or tiered (e.g. platinum, gold, silver) system?

- Pass / Fail  
 Tiered  
 Other

If other, please specify

#### 5. Is the ecolabel geographically restricted in terms of where applicants may apply for it?

- It is available to applicants globally.  
 More than one country (e.g. US and Canada, or all of Europe)  
 Single Country  
 Local Region  
 Other

If other, please specify

#### 6. Do multiple standards exist within the ecolabelling program?

e.g. Energy Star has standards for dishwashers, washing machines, air conditioners, etc.

- Yes    No

If yes, how many are there?

7. Do you have any additional standards for this ecolabel currently in development?

Yes  No

If yes, how many are currently in development?

If yes, please list the standards that are in development

8. Does your ecolabel formally recognize other ecolabels or certifications as being equivalent?

Yes  No

If yes, please list those ecolabels your label recognizes

9. Is your ecolabel formally recognized by other ecolabels standards, certifications or regulations as being equivalent?

Yes  No

If yes, please list those ecolabels that recognize your label

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HELP

GLOSSARY

**CONFORMITY ASSESSMENT****1. Does your program require certification OR registration before the ecolabel is awarded?**

- Applicants are certified against the ecolabels's criteria before using the label  
 Applicants register for the ecolabel in order to use the label (but certification is not required)

**2. When someone applies for recognition by your ecolabel, who verifies or certifies compliance with its criteria?**

- The company or organization applying for the label (first party)  
 Our own organization (second party)  
 An independent organization (third party)  
 N/A no verification/certification is required

**If independent third-party verifiers/certifiers are used, do they need to be accredited?**

- Yes, and are accredited by our organization  
 Yes, and are accredited by another organization  
 No  
 Not applicable

**3. On average, how long does it take an applicant to get certified or registered for using the ecolabel?**

Please estimate the time taken on average from when an entity first initiates the certification / registration process, to the final awarding of the ecolabel.

- less than 2 weeks  
 2 weeks to 2 months  
 2-3 months  
 3-6 months  
 6-12 months  
 12-24 months  
 more than 24 months  
 Other

**If other, please comment****4. Does your ecolabel require entities to improve their performance over time?**

- Yes  No  Other

**If other, please comment****5. Are field / site visits included in the certification/registration process? <sup>?</sup>**

- Yes  No  Other

**If other, please comment****6. Is proving chain of custody part of the certification/registration process? <sup>?</sup>**

- Yes  No  Other

**If other, please comment**<http://survey.ecolabelling.org/survey/page.html?pid=2>

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7. Are applicants for the ecolabel required to report on specific metrics or data? ?

- Yes  No  Other

If other, please comment

8. Is time-series data collected as part of the certification/registration process? ?

- Yes  
 No  
 Other

If other, please comment

If time-series data is collected, how often is it required?

- Monthly  
 Quarterly  
 Yearly  
 More than yearly  
 Other

If other, please comment

9. Do auditors or certifiers issue "corrective action reports" (or similar instruments)? ?

- Yes  No  Other

If other, please comment

If corrective action reports are used, are actions mandatory or recommended before the ecolabel is awarded?

- Mandatory actions  
 Recommended actions

10. Once awarded the ecolabel, how long can the entity use it for?

- Less than 1 year  
 between 1-2 years  
 between 2-4 years  
 5 years  
 more than 5 years  
 unlimited time period  
 Other/ Comment

Comments

11. Once awarded the ecolabel, are there any additional audits or surveillance before the next full assessment?

- Yes  No

Comments

12. If audits are required after being awarded the ecolabel, who performs the audit?

- The entity that was awarded the ecolabel (first party)  
 Our own organization (second party)  
 An independent organization (third party)  
 No follow-up audit is required

13. Once awarded the ecolabel, are subsequent audits performed randomly or are they scheduled?

- Random / Surprise
- Scheduled
- No audits are performed

**14. Are verification, certification and / or audit reports publicly available?**

- Yes
- No

If no, please comment

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HELP

GLOSSARY

## ECOLABEL CRITERIA AND SCOPE

### 1. Is the ecolabel's standard or set of criteria publicly available?

We define 'standard' as the set of criteria that an entity is evaluated against in order to be awarded the label.

Yes  No

If yes, please provide a link to it

### 2. Is there a process in place to regularly update or revise the standard or set of criteria?

Yes  No

If yes, how often is it revised?

- More than once per year  
 Every 1 Year  
 Every 2 years  
 Every 3 years  
 More than 3 years  
 As needed  
 Never

### 3. Is the standard for the ecolabel adapted for national or regionally relevant conditions and issues?

Yes  No

### 4. Is the ecolabel intended for applicants in specific product or service categories? If so, which ones? <sup>?</sup>

Tick all that apply:

- |                                                                          |                                                                   |
|--------------------------------------------------------------------------|-------------------------------------------------------------------|
| <input type="checkbox"/> Agricultural Produce                            | <input type="checkbox"/> Arts, Entertainment & Media              |
| <input type="checkbox"/> Beverages                                       | <input type="checkbox"/> Building Products                        |
| <input type="checkbox"/> Carbon Offsets                                  | <input type="checkbox"/> Cars                                     |
| <input type="checkbox"/> Cleaning products                               | <input type="checkbox"/> Clothing                                 |
| <input type="checkbox"/> Construction/Real Estate                        | <input type="checkbox"/> Cosmetics/Personal Care                  |
| <input type="checkbox"/> Education                                       | <input type="checkbox"/> Electricity/heat                         |
| <input type="checkbox"/> Energy                                          | <input type="checkbox"/> Financial Services                       |
| <input type="checkbox"/> Fish/ Fisheries                                 | <input type="checkbox"/> Food/Food Services                       |
| <input type="checkbox"/> Forest Products/ Paper                          | <input type="checkbox"/> Health Care Services & Equipment         |
| <input type="checkbox"/> Household Appliances                            | <input type="checkbox"/> Information Technology & Software        |
| <input type="checkbox"/> Machinery & Equipment                           | <input type="checkbox"/> Pharmaceuticals                          |
| <input type="checkbox"/> Professional, scientific and technical services | <input type="checkbox"/> Raw Materials                            |
| <input type="checkbox"/> Retail                                          | <input type="checkbox"/> Semiconductors & Semiconductor Equipment |
| <input type="checkbox"/> Technology Hardware                             | <input type="checkbox"/> Telecommunications                       |
| <input type="checkbox"/> Textiles                                        | <input type="checkbox"/> Tourism                                  |
| <input type="checkbox"/> Transportation                                  | <input type="checkbox"/> Waste Management & Recycling             |
| <input type="checkbox"/> Water                                           | <input type="checkbox"/> Other                                    |

If other, please specify

### 5. Ecolabel Applicability - Environment

Please indicate which of the following environmental issues are addressed by your ecolabel's criteria. Tick all that apply.

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- Animal welfare
- Carbon/ GHG Emissions
- Chemicals
- Energy - Use / Efficiency
- GMOs
- Natural Resource
- Recycling
- Toxics
- Water Quality
- Wastewater/Sewage
- Biodiversity
- Carbon/ GHG Offsets
- Energy - Production / Sources
- Forests
- Material use
- Pesticides / Herbicides / Fungicides
- Soil
- Waste
- Water Use
- Other

If other, please specify

**6. Ecolabel Applicability - Social**

Please indicate which of the following social issues are addressed by your ecolabel's criteria. Tick all that apply.

- Community Services (health care, schools etc.)
- Diversity
- Gender
- Human Rights
- Philanthropy
- Worker Health Conditions
- Other
- Cultural / Indigenous / Minority Rights
- Fair Trade
- Housing / Living Conditions
- Labor Relations / Human Resource Policies
- Training and Education
- Work Safety

If other, please specify

**7. Ecolabel Applicability - Supply Chain**

Please indicate which of the following portions of the product's supply chain are addressed by your ecolabel's criteria. Tick all that apply.

- Mining / Extraction
- Processing / Manufacturing
- Trade / Retail
- Product Recovery / Recycling
- Other
- Commodity Production
- Transportation / Logistics
- End / Consumer Use
- Chain of custody

If other, please specify

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### IMPACTS

1. What are the main expected environmental and/or social benefits being created by the ecolabel program?

2. Does your organization formally monitor or evaluate the environmental and/or social benefits of the ecolabel program?

- Yes, regularly
- Yes, we have done a study
- No, but we have plans to do so
- No

3. Please describe the tools your organisation uses (if any) to determine the environmental and/or social benefits of your ecolabel program

4. If a monitoring/evaluation tool or program exists, is there any information on the tools or methodology publicly available?

- Yes
- No

If yes, please link to it here

http://

5. If such monitoring is undertaken, what data is gathered?

6. How is data gathered and by whom?

7. Do you have any other evidence that points to positive environmental and/or social impacts as a result of the ecolabel program? If so, please describe here.

8. Are any of the results of an environmental/social benefits study public? If so, please provide a link here

http://

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### MARKET PENETRATION

1. Is there a list of the products, services or organisations that have been awarded the ecolabel available on your website?

- Yes
- No

If yes, please provide a link:

If there is a list of labeled products, services or organisations available online, how often is this list updated?

- As soon as a new label is awarded
- Every 3 months
- Every year
- Every 2 years
- Ad-hoc

2. Please select the countries where your ecolabel is currently found:

To select multiple countries, hold down your CTRL (PC) or OPTION (Mac) key while selecting.

- United States
- Canada
- Afghanistan
- Albania
- Algeria
- American Samoa
- Andorra
- Angola
- Anguilla
- Antarctica
- Antigua and Barbuda
- Argentina
- Armenia
- Aruba
- Australia
- Austria

3. Please select the countries where facilities, fisheries or land have been certified according to your ecolabel:

To select multiple countries, hold down your CTRL (PC) or OPTION (Mac) key while selecting.

- United States
- Canada
- Afghanistan
- Albania
- Algeria
- American Samoa
- Andorra
- Angola
- Anguilla
- Antarctica
- Antigua and Barbuda
- Argentina
- Armenia
- Aruba
- Australia
- Austria

4. Who is the primary target audience of the ecolabel?

Tick all that apply.

- Individual consumers
- Government purchasers
- Corporate purchasers (excluding retail)
- Specifiers and designers
- Retailers
- Other

If other, please specify:

5. Has the market share of products / services or organizations carrying your ecolabel ever been assessed?

Yes  No

If you have undertaken or know of specific studies that provide evidence of this, please attach, link to them or cite them here.

http://

If yes and the study is public, please provide a link:

http://

If a market share study was undertaken, who performed the study?

- Our own organization
- We participated in a study
- Another external organization

6. What percentage of your target audience do you estimate recognizes the ecolabel?

7. How does your organization seek to encourage purchasers or consumers to prefer products that meet the label? What marketing programmes do you have in place?

8. How many certificates or registrations have been awarded your ecolabel per year? Please fill in what you can with any data you have available.

	pre-2002	2002	2003	2004	2005	2006	2007	2008
Buildings	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Companies	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Facilities	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Farms	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Fisheries	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Forests	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Individuals	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Products	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Processes	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Services	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Supply chains	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Organizations	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>Total</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

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HELP GLOSSARY

## CREATION OF THE ECOLABEL

### 1. What body or group in the organization is responsible for devising or revising the ecolabel's standard (set of criteria)?

e.g. A Technical Advisory Board

### 2. In creating the ecolabel, did your organization follow any of the following standards or norms for standard-setting?

Tick all that apply:

- |                                                                                   |                                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> WTO Technical Barriers to Trade (TBT) Agreement, Annex 3 | <input type="checkbox"/> ISEAL Code of Good Practice for Setting Social and Environmental Standards |
| <input type="checkbox"/> ISO 14024                                                | <input type="checkbox"/> ISO Guide 59                                                               |
| <input type="checkbox"/> ANSI Essential Requirements                              | <input type="checkbox"/> ASTM                                                                       |
| <input type="checkbox"/> NSF                                                      | <input type="checkbox"/> Other                                                                      |

If other, please specify

### 3. In creating the ecolabel, did your organization follow any of the following standards or norms for certification or accreditation?

Tick all that apply:

- |                                                                                      |                                                                    |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| <input type="checkbox"/> ISO Guide 65 Product Certification                          | <input type="checkbox"/> ISO 17021 Management system certification |
| <input type="checkbox"/> ISO 19011 QMS and EMS auditing (and auditor qualifications) | <input type="checkbox"/> ISO 17011 Accreditation                   |
| <input type="checkbox"/> ISO/IEC 17025 Testing and Calibration Laboratories          | <input type="checkbox"/> Other                                     |

If other, please specify

### 4. What stakeholders, if any, were involved in developing the standard (set of criteria) for the ecolabel?

Tick all that apply:

- |                                                        |                                                                                                |
|--------------------------------------------------------|------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Customers                     | <input type="checkbox"/> Companies                                                             |
| <input type="checkbox"/> Consumer Associations         | <input type="checkbox"/> Experts / Consultants                                                 |
| <input type="checkbox"/> Foundations                   | <input type="checkbox"/> Governmental Agencies / Representatives                               |
| <input type="checkbox"/> Industry Associations         | <input type="checkbox"/> International Government Organizations (e.g. UN, European Commission) |
| <input type="checkbox"/> International NGOs            | <input type="checkbox"/> Investors                                                             |
| <input type="checkbox"/> Local Communities             | <input type="checkbox"/> Local NGOs                                                            |
| <input type="checkbox"/> National NGOs                 | <input type="checkbox"/> Producers                                                             |
| <input type="checkbox"/> Research & Academic           | <input type="checkbox"/> Suppliers                                                             |
| <input type="checkbox"/> Workers' associations, unions | <input type="checkbox"/> Other                                                                 |

If other, please specify

### 5. Are the stakeholders who participated in developing the standard or criteria for the label listed publicly?

- Yes  No

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If yes, provide link

http://

6. Was the ecolabel's standard developed using an open, consensus based process?

Yes  No

If yes, provide link to background material

http://

7. Do you have a procedure for stakeholders to raise objections, or a dispute resolution procedure?

Yes  No

If yes, please link to it here

http://

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### ORGANIZATION DETAILS

**1. What type of organization are you?**

- Non-Profit
- For-Profit
- Hybrid / Social Venture
- Public / Private Partnership
- Industry Association
- Government
- Other

If other, please specify

**2. What year was the organization established?**

**3. What year was your ecolabel established?**

**4. Please list the organizations, if known, who initially funded the creation of the ecolabel**

**5. How does your organization sustain itself financially?**

For the following sources, please give the ESTIMATED PERCENTAGE of total income of your ecolabelling program.

Licensing Fees

Application Fees

Other Label Fees

Provision of other services

Grants or Awards

Other, please specify



**6. Is your organization a member of, or accredited by, any of the following organizations?**

Tick all that apply:

- GEN – Global Ecolabelling Network
- IFOAM – International Foundation for Organic Agriculture
- ISEAL – International Social and Environmental Accreditation and Labelling Alliance
- ISO – International Organization for Standardization
- Other

If other, please specify

**7. Is the list of current board members for the ecolabel publicly available?**

- Yes  No

If yes, provide link

http://

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### FINAL QUESTIONS

1. What would help you to improve the overall effectiveness of your ecolabel program?

2. How can we improve this survey in the future to make the results of maximum help and use to your organization?

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## **APPENDIX B: MULTIPLE-ATTRIBUTE SURVEY QUESTIONS**

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## TRACKING INFORMATION

### 1. Name of the host organization responsible for operating the ecolabel program

### 2. What is the website or link for more information about this ecolabel?

### 3. Public contact information

This information is for the purposes of contact from the public (and **will** be displayed on ecolabelling.org).

**E-mail address**

Please provide an email address that can be publicly displayed on ecolabelling.org, for inquiries about the ecolabel.

**Phone number**

Include '+' and the country code. Example: +1-xxx-xxx-xxxx.

**Street number and name****City****Province / State****Postal / Zip Code****Country**

### 4. Private contact

The following details are requested in case we have questions about the survey or to contact you in the future about ecolabelling.org Note: This information will **not** be displayed to the public.

**Your name****Your job title****Your e-mail address****Your phone number**

Include '+' and the country code. Example: +1-xxx-xxx-xxxx.

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### ABOUT THE ECOLABEL

#### 1. Logo of the ecolabel program

Please upload the logo of your ecolabel. This will be shown on ecolabelling.org.

no file selected

#### 2. Please briefly describe your ecolabel - its goals, scope and main components:

This information will be used as a basis to create a profile on ecolabelling.org. Please limit yourself to 100 words or less.

#### 3. How many standards exist within the ecolabelling program currently?

A standard is a sub-category of the label. For example, Energy Star has standards for dishwashers, printers, air-conditioners etc.

#### 4. For each of the following types of entities, how many standards does your ecolabelling program have?

Buildings

Companies

Facilities

Farms

Fisheries

Forests / Land holdings

Individuals

Products

Processes (e.g. management systems)

Services

Supply Chains (e.g. chain of custody)

Organisations (non-company)

Other

If other, please specify

**5. How many standards are of the following types:**

**Pass/Fail**

Pass-fail type ecolabels are those that are either awarded or no-awarded to the entity.

**Tiered**

Tiered ecolabels are those that offer different levels, e.g. gold, silver, bronze.

**6. Is the ecolabel geographically restricted in terms of where applicants may apply for it?**

- It is available to applicants globally.  
 More than one country (e.g. US and Canada, or all of Europe)  
 Single Country  
 Local Region  
 Other

If other, please specify

**7. Are any of your existing standards being revised currently - in terms of updating their criteria?**

- Yes  No

If yes, how many of your existing standards are being revised currently?

**8. Do you have any new standards currently in development?**

- Yes  No

If yes, how many are currently in development?

If yes, please list the standards that are in development

**9. Does your ecolabel formally recognize other ecolabels or certifications as being equivalent?**

- Yes  No

If yes, please list those ecolabels your ecolabel recognizes

**10. Is your ecolabel formally recognized by other ecolabels standards, certifications or regulations as being equivalent?**

Yes  No

If yes, please list those ecolabels that recognize your ecolabel

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## CONFORMITY ASSESSMENT

### 1. Does your program require certification OR registration before the ecolabel is awarded?

- Applicants are certified against the ecolabels's criteria before using the label  
 Applicants register for the ecolabel in order to use the label (but certification is not required)  
 Depends on the Standard

### 2. When someone applies for recognition by your label, who verifies or certifies compliance with its criteria?

- The company or organization applying for the label (first party)  
 Our own organization (second party)  
 An independent organization (third party)  
 It varies depending on the standard  
 N/A no verification/certification is required

If independent third-party verifiers / certifiers are used, do they need to be accredited?

- Yes, and are accredited by our organization  
 Yes, and are accredited by another organization  
 No  
 Not applicable

### 3. On average, how long does it take an applicant to get certified or registered for using the ecolabel?

Please estimate the time taken on average from when an entity first initiates the certification / registration process, to the final awarding of the ecolabel.

- less than 2 weeks  
 2 weeks to 2 months  
 2-3 months  
 3-6 months  
 6-12 months  
 12-24 months  
 more than 24 months  
 Other

If other, please comment

### 4. Does your ecolabel require entities to improve their performance over time?

- Yes  No

Comments

### 5. For any of your standards, are field/site visits included in the certification/registration process? ?

- ALL of our standards require site visits  
 SOME of our standards require site visits  
 NONE of our standards require site visits

Comments

### 6. For any of your standards, is proving chain of custody part of the certification/registration process? ?

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- ALL of our standards require chain of custody proof
- SOME of our standards require chain of custody proof
- NONE of our standards require chain of custody proof

Comments

7. For any of your standards, do you require applicants for the label to provide specific metrics or data? ?

- ALL of our standards require data and metrics
- SOME of our standards require data and metrics
- NONE of our standards require data and metrics

Comments

8. For any of your standards, is time-series data collected as part of the certification/registration process? ?

- ALL of our standards require time series data
- SOME of our standards require time series data
- NONE of our standards require time series data

If other, please specify

If time-series data is collected from applicants, on average how often is it required?

- Monthly
- Quarterly
- Yearly
- More then yearly
- Other

If other, please specify

9. For any of your standards, do auditors or certifiers issue "corrective action reports" (or similar instruments)? ?

- ALL of our standards use corrective action reports
- SOME of our standards use corrective action reports
- NONE of our standards use corrective action reports

If corrective action reports are used, are actions mandatory or recommended before the ecolabel is awarded?

- Mandatory actions
- Recommended actions

10. Once awarded the ecolabel, how long on average can the entity use the ecolabel for?

- Less than 1 year
- between 1-2 years
- between 2-4 years
- 5 years
- more than 5 years
- unlimited time period
- Other, please comment

Comments

11. Once awarded the ecolabel, are there any additional audits or surveillance before the next full assessment?

- Yes
- No

Comments

**12. If audits are required after being awarded the ecolabel, who performs the audit?**

- The entity that was awarded the ecolabel (first party)
- Our own organization (second party)
- An independent organization does the verification (third party)
- No follow-up audit is required

**13. Once awarded the ecolabel, are subsequent audits performed randomly or are they scheduled?**

- Random / Surprise
- Scheduled
- No audits are performed

Comments

**14. Are verification, certification and / or audit reports publicly available?**

- Yes
- No

If no, please comment

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## ECOLABEL CRITERIA AND SCOPE

### 1. Are the ecolabel's standards (set of criteria) publicly available?

Yes  No

If yes, please link to the list of standards

### 2. Is there a process in place to regularly update or revise the standard or set of criteria?

Yes  No

If yes, how often are the criteria revised on average?

- More than once per year  
 Every 1 Year  
 Every 2 years  
 Every 3 years  
 More than 3 years  
 As needed  
 Never

### 3. Are any of the standards adapted for national or regionally relevant conditions and issues?

- ALL of our standards are adapted for local conditions  
 SOME of our standards are adapted for local conditions  
 NONE of our standards are adapted for local conditions

### 4. Please tick the following product/service categories which your label has standards for.

Tick all that apply

- |                                                                          |                                                                   |
|--------------------------------------------------------------------------|-------------------------------------------------------------------|
| <input type="checkbox"/> Agricultural Produce                            | <input type="checkbox"/> Arts, Entertainment & Media              |
| <input type="checkbox"/> Beverages                                       | <input type="checkbox"/> Building Products                        |
| <input type="checkbox"/> Carbon Offsets                                  | <input type="checkbox"/> Cars                                     |
| <input type="checkbox"/> Cleaning products                               | <input type="checkbox"/> Clothing                                 |
| <input type="checkbox"/> Construction/Real Estate                        | <input type="checkbox"/> Cosmetics/Personal Care                  |
| <input type="checkbox"/> Education                                       | <input type="checkbox"/> Electricity/heat                         |
| <input type="checkbox"/> Energy                                          | <input type="checkbox"/> Financial Services                       |
| <input type="checkbox"/> Fish/ Fisheries                                 | <input type="checkbox"/> Food/Food Services                       |
| <input type="checkbox"/> Forest Products/ Paper                          | <input type="checkbox"/> Health Care Services & Equipment         |
| <input type="checkbox"/> Household Appliances                            | <input type="checkbox"/> Information Technology & Software        |
| <input type="checkbox"/> Machinery & Equipment                           | <input type="checkbox"/> Pharmaceuticals                          |
| <input type="checkbox"/> Professional, scientific and technical services | <input type="checkbox"/> Raw Materials                            |
| <input type="checkbox"/> Retail                                          | <input type="checkbox"/> Semiconductors & Semiconductor Equipment |
| <input type="checkbox"/> Technology Hardware                             | <input type="checkbox"/> Telecommunications                       |
| <input type="checkbox"/> Textiles                                        | <input type="checkbox"/> Tourism                                  |
| <input type="checkbox"/> Transportation                                  | <input type="checkbox"/> Waste Management & Recycling             |
| <input type="checkbox"/> Water                                           | <input type="checkbox"/> Other                                    |

If other, please specify

### 5. Environmental Attributes

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How many of your standards cover a single environmental attribute?

How many of your standards cover multiple environmental attributes?

**6. Environmental Attributes Keywords**

Please tick any of the following environmental attributes which might apply to your ecolabel as keywords.

- Animal welfare
- Carbon/ GHG Emissions
- Chemicals
- Energy - Use / Efficiency
- GMOs
- Natural Resource
- Recycling
- Toxics
- Water Quality
- Wastewater/Sewage
- Biodiversity
- Carbon/ GHG Offsets
- Energy - Production / Sources
- Forests
- Material use
- Pesticides / Herbicides / Fungicides
- Soil
- Waste
- Water Use

**7. Social Attributes**

How many of your standards cover a single social attribute?

How many of your standards cover multiple social attributes?

**8. Social Attributes - Keywords**

Please tick any of the following social attributes which might apply to your ecolabel as keywords.

- Community Services (health care, schools etc.)
- Diversity
- Gender
- Human Rights
- Other
- Training and Education
- Work Safety
- Cultural / Indigenous / Minority Rights
- Fair Trade
- Housing / Living Conditions
- Labor Relations / Human Resource Policies
- Philanthropy
- Worker Health Conditions

If there are other social attributes, please list here

**9. Life Cycle Attributes**

If your ecolabel certifies products, how many of your standards cover environmental and / or social issues across:

The full product life cycle

2 or more stages of the product's life cycle

1 stage of a product's life cycle

Other

If other, please specify

### 10. Supply Chain Keywords

Please tick any of the following keywords which might apply to your ecolabel.

- |                                                       |                                                     |
|-------------------------------------------------------|-----------------------------------------------------|
| <input type="checkbox"/> Mining / Extraction          | <input type="checkbox"/> Commodity Production       |
| <input type="checkbox"/> Processing / Manufacturing   | <input type="checkbox"/> Transportation / Logistics |
| <input type="checkbox"/> Trade / Retail               | <input type="checkbox"/> End / Consumer Use         |
| <input type="checkbox"/> Product Recovery / Recycling | <input type="checkbox"/> Chain of custody           |

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**IMPACTS**

1. What are the main expected environmental and/or social benefits being created by the ecolabel?

2. Does your organization formally monitor or evaluate the environmental and/or social benefits of the ecolabel program?

- Yes, regularly  
 Yes, we have done a study  
 No, but we have plans to do so  
 No

3. Please describe the tools your organisation uses (if any) to determine the environmental and/or social benefits of your ecolabel program

4. If a monitoring/evaluation tool or program exists, is there any information on the tools or methodology publicly available?

- Yes  No

If yes, please link to it here:

http://

5. If such monitoring is undertaken, what data is gathered?

6. How is data gathered and by whom?

7. Do you have any other evidence that points to positive environmental and/or social benefits as a result of the labelling programme? If so, please describe here.

8. Are any of the results of an environmental/social benefits study public? If so, please provide a link here

http://

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## MARKET PENETRATION

1. Is there a list of the products, services or organisations that have been awarded the ecolabel available on your website?

Yes  No

If yes, please provide a link:

If there is a list of labeled products, services or organisations available online, how often is this list updated?

- As soon as a new label is awarded  
 Every 3 months  
 Every year  
 Every 2 years  
 Ad-hoc

2. Please select the countries where your ecolabel is currently found:

To select multiple countries, hold down your CTRL (PC) or OPTION (Mac) key while selecting.

United States
Canada
Afghanistan
Albania
Algeria
American Samoa
Andorra
Angola
Anguilla
Antarctica
Antigua and Barbuda
Argentina
Armenia
Aruba
Australia
Austria

3. Please select the countries where facilities, fisheries or land have been certified according to your ecolabel:

To select multiple countries, hold down your CTRL (PC) or OPTION (Mac) key while selecting.

United States
Canada
Afghanistan
Albania
Algeria
American Samoa
Andorra
Angola
Anguilla
Antarctica
Antigua and Barbuda
Argentina
Armenia
Aruba
Australia
Austria

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**4. Who is the primary target audience of the ecolabel?**

Tick all that apply.

- Individual consumers
- Government purchasers
- Corporate purchasers (excluding retail)
- Specifiers and designers
- Retailers
- Other

If other, please specify:

**5. Has the market share of products / services or organizations carrying your ecolabel ever been assessed?**

- Yes
- No

If yes and the study is public, please provide a link:

If a market share study was undertaken, who performed the study?

- Our own organization
- We participated in a study
- Another external organization

**6. What percentage of your target audience do you estimate recognizes the ecolabel?**

**7. How does your organization seek to encourage purchasers or consumers to prefer products that meet the label? What marketing programmes do you have in place?**

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## CREATION OF THE ECOLABEL

**1. What body or group in the organization is responsible for devising or revising the ecolabel's standards (set of criteria)?**  
e.g. A Technical Advisory Board.

**2. In creating the ecolabel, did your organization follow any of the following standards or norms for standard-setting?**

Tick all that apply:

- |                                                                                   |                                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> WTO Technical Barriers to Trade (TBT) Agreement, Annex 3 | <input type="checkbox"/> ISEAL Code of Good Practice for Setting Social and Environmental Standards |
| <input type="checkbox"/> ISO 14024                                                | <input type="checkbox"/> ISO Guide 59                                                               |
| <input type="checkbox"/> ANSI Essential Requirements                              | <input type="checkbox"/> ASTM                                                                       |
| <input type="checkbox"/> NSF                                                      | <input type="checkbox"/> Other                                                                      |

If other, please specify

**3. In creating the ecolabel, did your organization follow any of the following standards or norms for certification or accreditation?**

Tick all that apply:

- |                                                                                      |                                                                    |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| <input type="checkbox"/> ISO Guide 65 Product Certification                          | <input type="checkbox"/> ISO 17021 Management system certification |
| <input type="checkbox"/> ISO 19011 QMS and EMS auditing (and auditor qualifications) | <input type="checkbox"/> ISO 17011 Accreditation                   |
| <input type="checkbox"/> ISO 17025 Testing and Calibration Laboratories              | <input type="checkbox"/> Other                                     |

If other, please specify

**4. What stakeholders, if any, were involved in developing the standards (sets of criteria) for the ecolabel?**

Tick all that apply

- |                                                        |                                                                                                |
|--------------------------------------------------------|------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Customers                     | <input type="checkbox"/> Companies                                                             |
| <input type="checkbox"/> Consumer Associations         | <input type="checkbox"/> Experts / Consultants                                                 |
| <input type="checkbox"/> Foundations                   | <input type="checkbox"/> Governmental Agencies / Representatives                               |
| <input type="checkbox"/> Industry Associations         | <input type="checkbox"/> International Government Organizations (e.g. UN, European Commission) |
| <input type="checkbox"/> International NGOs            | <input type="checkbox"/> Investors                                                             |
| <input type="checkbox"/> Local Communities             | <input type="checkbox"/> Local NGOs                                                            |
| <input type="checkbox"/> National NGOs                 | <input type="checkbox"/> Producers                                                             |
| <input type="checkbox"/> Research & Academic           | <input type="checkbox"/> Suppliers                                                             |
| <input type="checkbox"/> Workers' associations, unions | <input type="checkbox"/> Other                                                                 |

If other, please specify

**5. Are the stakeholders who participated in developing the standards or criteria for the label listed publicly?**

Yes  No

<http://survey.ecolabelling.org/survey/page.html?pid=6>

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If yes, provide link

http://

6. Were the ecolabel's standards developed using an open, consensus based process?

Yes  No

If yes, provide link to background material

http://

7. Do you have a procedure for stakeholders to raise objections, or a dispute resolution procedure?

Yes  No

If yes, please provide a link to it here

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## ORGANIZATION DETAILS

### 1. What type of organization are you?

- Non-Profit  
 For-Profit  
 Hybrid / Social Venture  
 Public / Private Partnership  
 Industry Association  
 Government  
 Other

If other, please specify

### 2. What year was the organization established?

### 3. What year was the first standard for your ecolabel launched?

### 4. Please list the organizations, if known, who initially funded the creation of the ecolabel

### 5. How does your organization sustain itself financially?

For the following sources, please give the ESTIMATED PERCENTAGE of total income of your ecolabelling program.

Licensing Fees

Application Fees

Other Label Fees

Provision of other services

Grants or Awards

Other, please specify

<http://survey.ecolabelling.org/survey/page.html?pid=7>

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**6. Is your organization a member of, or accredited by, any of the following organizations?**

Tick all that apply:

- GEN – Global Ecolabelling Network
- IFOAM – International Foundation for Organic Agriculture
- ISEAL – International Social and Environmental Accreditation and Labelling Alliance
- ISO – International Organization for Standardization
- Other

If other, please specify

**7. Is the list of current board members for the ecolabel publicly available?**

- Yes  No

If yes, provide link

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### FINAL QUESTIONS

1. What would help you to improve the effectiveness of your ecolabel program?

2. How can we improve this survey in the future to make the results of maximum help and use to your organization?

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## APPENDIX C: LISTING OF EXISTING ECOLABELS AND CERTIFICATIONS

Ecolabel	Organization
100% Green Electricity – 100% Energia Verde	Re-energy Foundation
80 PLUS	Ecos Consulting
AB (Agriculture Biologique)	L'Agence BIO
AENOR Medio Ambiente	Association Espanola de normalizacion y Certificacion (AENOR)
AIAB Bio Fibre	Italian Association for Organic Agriculture
AlnaturA	No Org Name
Altmühltaler Lamm	Landschaftspflegeverband VöF
AMA Biozeichen	AMA Marketing Gmb
Argue TQ	ArgeTQ
Asociación para el Sello de Comercio Justo: Spain	Asociación para el Sello de Comercio Justo Spain
AsureQuality Organic Standard	AsureQuality Ltd
AUB-Zertifikat	Arbeitsgemeinschaft umweltverträgliches Bauprodukt e.V. (AUB)
Audubon Green Leaf Eco-Rating Program	Audubon Green Leaf Eco-Rating Program
Australian Certified Organic	Australian Certified Organic – subsidiary of Biological Farmers of Australia
Australian Forest Certification Scheme	Australian Forestry Standard Limited
B Corporation	B Lab
BASF Eco-Efficiency	BASF
BCA Green Mark	Building and Construction Authority
BDIH Certified Natural Cosmetics Seal	Bundesverband deutscher Industrie- und Handelsunternehmen (BDIH)
Beluga	Beluga
Best Aquaculture Practices	Global Aquaculture Alliance, Aquaculture Certification Council
Better Environmental Sustainability Targets (BEST) Standard 1001	Occupational Knowledge International
Bio aus ökologischer Erzeugung	Tegut – Gutberlet Stiftung & Co
Bio Eco cosmesi AIAB	ICEA (Institute for the Ethic Certification)
Bio Suisse	Bio Suisse
Bio-Siegel	The Federal Ministry for Food, Agriculture and Consumer Protection
Bio-Wertkost	Edeka Zentrale AG
Bio-Zeichen Baden-Württemberg	Ministerium für Ländlichen Raum, Ernährung, Landwirtschaft und Forsten
BioBlo	Plus Warenhandelsgesellschaft mbH
BIODAR	The Union of Slovenian Organic Farmers' Associations (ISOFA)
Biodegradable Materials: China	BMG: Biodegradable Materials Group (China)
BioGro New Zealand	BioGro New Zealand Ltd
Biokreis	Biokreis e.V. Verband für Ökologischen Landbau und gesunde Ernährung
Bioland	BIOLAND-Verband für organisch-biologischen Landbau e.V.
Biopark	Biopark e.V.
BioPreferred	USDA – <a href="http://www.biopreferred.gov">www.biopreferred.gov</a>



<b>Ecolabel</b>	<b>Organization</b>
Bird Friendly® Coffee	Smithsonian Migratory Bird Center at the National Zoological Park
Blaue Schwalbe	fairkehr GmbH
Blue Angel	Ministry of the Environment, Nature Protection and Nuclear Safety
Blue Flag	Foundation for Environmental Education
Bluesign-standard	bluesign technologies ag
BOMA Go Green	Building Owners and Managers Association (BOMA) of Canada
BRE Environmental Profile	BRE Global
BREEAM	BRE Global
British Allergy Foundation Seal of Approval	Allergy UK
British Columbia Certified Organic	British Columbia Certified Organic
Built Green	Built Green Society of Canada
Bundesverband Deutscher Fertigbau (BDF)	BDF
California Certified Organic Farmers – CCOF	California Certified Organic Farmers
Canada Organic	Canadian Food Inspection Agency
Canadian Certified Environmental Practitioner	Canadian Environmental Certification Approvals Board
Carbon Reduction Label	The Carbon Trust
Carbon Trust Standard	The Carbon Trust Standard Company Ltd.
carboNZero	Landcare Research
Carrefour Eco-Planete	Carrefour
Cen Keymark	The Scheme Development Group 5
Cerflor Forest Certification Programme: Brazil	National Institute of Metrology, Standardization and Industrial Quality
Certfor	CertforChile Forest Certification Corporation
Certified CarbonFree	Carbonfund.org
Certified Envirodesic	Small & Rubin Ltd.
Certified Environmental Assessor of Sites	Canadian Environmental Certification Approvals Board (CECAB)
Certified Environmental Professional	Academy of Board Certified Environmental Professionals
Certified Humane Raised and Handled	Humane Farm Animal Care (HFAC)
Certified Natural Cosmetics	BDIH (Association of German Industries and Trading Firms)
Certified Naturally Grown	Certified Naturally Grown, Inc.
Certified Vegan	Vegan Action/Vegan Awareness Foundation
Certified Wildlife Friendly	Wildlife Friendly Enterprise Network
China Ecolabelling	China Standard Certification Center
China Energy Conservation Program (CECP)	China Standard Certification Center
China Energy Label	China Energy Label Administration Center
China Environmental Labelling	NULL
China Organic Food Certification	China Organic Food Certification Center (COFCC)
China Water Conservation Certification	China Standard Certification Center

<b>Ecolabel</b>	<b>Organization</b>
Choose Cruelty Free	NULL
Clean Marine Green Leaf Eco-Rating Program	Ontario Marine Operators Assn (and others)
Cleaner and Greener Certification	Leonardo Academy Inc.
Climate Change Friendly	Tropical Science Center
Climate Cool	Climate Cool Network
Climate Counts	Climatecounts.org
CNET Asia Green Tag	CNET Networks Asia Pacific Pte Ltd
Co-op America	Co-op America
Compost Label RAL	Bundesgütemeinschaft Kompost e.V. (BGK)
Compostable: Biodegradable Products Institute Label	BPI – Biodegradable Products Institute
Composting Association Certified	The Composting Association
Coop Naturaline: Switzerland	Coop Switzerland
Corporate Lands for Learning	Wildlife Habitat Council
Cradle to Cradle Certification	McDonough Braungart Design Chemistry, LLC (MBDC)
CSA Sustainable Forest Management	Canadian Standards Association
David Bellamy Conservation Award	UK Conservation Foundation
Degree of Green	Degree of Green, LLC
Demeter: Austria	Demeter-Bund Österreich
Demeter: Denmark	Foreningen for Biodynamisk Jordbrug
Demeter: Finland	The Biodynamic association in Finland
Demeter: France	Association Demeter-France
Demeter: Ireland	Biodynamic Agricultural Association in Ireland
Demeter: Italy	Demeter Associazione Italia
Demeter: Luxembourg	Veräin für biologesch-dynamesch Landwirtschaft a.s.b.l
Demeter: Sweden	Svenska Demeterförbundet
Demeter: Switzerland	Demeter Verband Schweiz
Demeter: UK	The Biodynamic Agricultural Association
Demeter: USA	U.S. Demeter Association Inc.
Design for the Environment (DFE)	U.S. EPA, Office of Pollution Prevention and Toxics (OPPT)
Deutsches Güteband Wein	Deutsche Landwirtschafts-Gesellschaft (DLG)
DIN-Geprüft	Din Certo (TÜV Rheinland Group and DIN, the German Institute for Standardization)
DIP approved – trade’N’aid	Double Income Project
Dolphin Safe	Earth Island Institute
Earth Advantage	Earth Advantage
EarthRight Business Certification	EarthRight Business Institute
ECMA-341: Environmental Design Considerations for Electronic Products	ECMA International
ECMA-370 – The Eco Declaration	ECMA International
Eco Crown Hospitality	No Org Name

<b>Ecolabel</b>	<b>Organization</b>
Eco Kries	TÜV Rheinland Product Safety GmbH
eco-INSTITUT	eco-Institut
Eco-Leaf Japan	Japan Environmental Management Association for Industry
Eco-OK Sustainable Agriculture Network	Rainforest Alliance
Eco-Rail Mark	Japanese Ministry of Land, Infrastructure and Transport
eco-tex	The eco-tex Consortium
EcoBroker	EcoBroker International
Ecologically Safe	Institute for Synthetic Materials and Paints
EcoLogo	TerraChoice Environmental Marketing Inc.
Ecomark: India	Central Pollution Control Board (CPCB) (Ministry of the Environment and Forests, India)
EcoMark: Japan	Japan Environment Association
Ecoproof	TÜV Rheinland Sicherheit and Umweltschutz GmbH
EcoSchools	Foundation for Environmental Education
Ecovin	ECOVIN – Bundesverband Ökologischer Weinbau
Eier aus kontrollierter Haltungsform	Verein für kontrollierte alternative Tierhaltungsfomen (KAT) e.V.
Einkaufen auf dem Bauernhof	Förderungsgemeinschaft Einkaufen auf dem Bauernhof
Ekolabel: Indonesia	Ministry for Environment
EMAS: European Eco-Management and Audit Scheme	DG Environment (EC) Council
Emblem of Guarantee of Environmental Quality: Catalonia	Government of Catalonia
EnerGuide for Appliances	Natural Resources Canada, Office of Energy Efficiency
EnerGuide for New Houses	Natural Resources Canada, Office of Energy Efficiency
Energy Efficiency and Conservation Authority (EECA) Biofuels Label	The New Zealand Energy Efficiency and Conservation Authority
Energy Label, Taiwan, ROC	Energy Commission of Taiwan
Energy Labelling of Buildings: EU	European Commission and INIVE EEIG
Energy Performance Certificate	The EPBD Buildings Platform
Energy Rating Programme: Australia	Australian Environment Ministry
Energy Saving Labeling Program: Japan	Japan Minister of Economy, Trade and Industry
Energy Saving Recommended	Energy Savings Trust
ENERGY STAR: Canada	Natural Resources Canada, Office of Energy Efficiency
ENERGY STAR: New Zealand	Energy Efficiency and Conservation Authority (EECA)
ENERGY STAR: USA	U.S. Environmental Protection Agency (EPA)/U.S. Department of Energy
Environment 2000: Zimbabwe	Environment 2000 Foundation
Environmental Choice New Zealand	The New Zealand Ecolabelling Trust
Environmental Management Systems Auditor	Canadian Environmental Certification Approvals Board
Environmental Management Systems Lead Auditor	Canadian Environmental Certification Approvals Board
Environmental Product Declaration	Swedish Environmental Management Council

<b>Ecolabel</b>	<b>Organization</b>
Environmentally Friendly Label: Croatia	Ministry of Environmental Protection and Physical Planning and Construction, State Directorate for Environment
Environmentally Friendly Product: Czech Republic	Czech Ecolabelling Agency
Environmentally Preferred Rating (EPR)	California Film Extruders and Converters Association (CFECA)
EPEAT	Green Electronics Council
EQUITRADE	EQUITRADE
Estonian Ecotourism Quality Label	Estonian Ecotourism Association
EU Ecolabel	European Commission, DG Environment
EU Energy Label	European Commission
Eugene Standard	European Network for Green Electricity (EUGENE)
European Bioplastics	Din Certo
European Computer Manufacturers Association EMCA: TR/70	European Computer Manufacturers Association
Fair Flowers Fair Plants	European Union
Fair Labor Practices and Community Benefits	Scientific Certification Systems (SCS)
Fairtrade	Fairtrade Labelling Organizations International (FLO)
Fairtrade Label: Japan	Fairtrade Label Japan
Fairtrade Labelling Australia & New Zealand (FLANZ)	Fairtrade Labelling Australia and New Zealand (FLANZ)
Fairtrade Mark: Ireland	Fairtrade Mark Ireland
Fairtrade TransFair: Italy	Fairtrade TransFair Italy
FairWertung	FairWertung
Farm & Ranch Certification Program	Food Alliance
Finnish Forest Certification System	Finnish Forest Certification Council
FloorScore	Resilient Floor Covering Institute (RFCI)
Florimark	MPS-Florimark Production
Florverde	Asocolflores
Flower Label Program (FLP)	FLP e.V.
Flybe Aircraft Ecolabel	Flybe
Food Alliance Certified	Food Alliance
Forest Garden Products	International Analog Forestry Network
Forest Stewardship Council (FSC) Chain of Custody Certification	Forest Stewardship Council
Forest Stewardship Council (FSC) Forest Management Certification	Forest Stewardship Council (FSC)
Friend of the Sea	Earth Island Institute
Fuel Consumption Label: Australia	Department of Infrastructure, Transport, Regional Development and Local Government
Füllhorn	REWE Zentral-AG
Future Collection Label	No Org Name
GEEA Energy Label	Group for Energy Efficient Appliances
GEV-Emicode	NULL

<b>Ecolabel</b>	<b>Organization</b>
Global Organic Textile Standard	International Association Natural Textile Industry e.V.
Gold Standard	The Gold Standard Foundation
Good Agricultural Practice (GAP)	GlobalGAP
Good Environmental Choice "Bra Miljöval"	Swedish Society for Nature Conservation (SSNC)
Good Environmental Choice: Australia	Good Environmental Choice Australia (GECA) Ltd.
Good Shopping Guide Ethical Company	The Ethical Company Organisation
Green Certificate: Latvia	Latvian Country Tourism association „Lauku ceļotājs“
Green Choice: Phillipines	Clean and Green Foundation
Green Crane: Ukraine	Living Planet
Green Electricity Label – Grüner Strom Label	Grüner Strom Label e.V.
Green Food: China	China Green Food Development Center
Green Globe Community Standard	Green Globe Asia Pacific Pty Ltd
Green Globe Company Standard	Green Globe Asia Pacific Pty Ltd
Green Globes	Green Building Initiative
Green Ink	Southeastern printing
Green IT	Fujitsu Siemens
Green Key	Foundation for Environmental Education (FEE)
Green Key (Hotel Association of Canada)	Hotel Association of Canada
Green Label & Green Label Plus (Carpet)	Carpet & Rug Institute (CRI)
Green Label: Israel	The Standards Institution of Israel
Green Mark	Environment and Development Foundation (EDF)
Green Office	Green Office Association
Green Power Australia	Joint initiative of ACT, NSW, SA, QLD, VIC and WA government agencies
Green Restaurant Association Seal	Green Restaurant Association
Green Seal	Green Seal
Green Shield Certified	IPM Institute of North America
Green Table	Green Table Network
Green Tick	Green Tick Certification Ltd
Green Tourism Business Scheme	Green Business UK Ltd
Green-e	Center for Resource Solutions
GreenGuard	GreenGuard Environmental Institute (GEI)
GreenhouseFriendly	Australian Greenhouse Office
Greenlist – SC Johnson	SC Johnson
GreenPla	Japan BioPlastics Association (JBPA)
Greenstar Certified	Greenstar
Group for Energy Efficient Appliances Label	GEA Foundation
GUT	Gemeinschaft Umweltfreundlicher Teppichboden e.V.
Hand in Hand	Rapunzel Naturkost AG
Hautfreundlich, weil schadstoffgeprüft	Otto GmbH

<b>Ecolabel</b>	<b>Organization</b>
Healthy Child Healthy World	Healthy Child Healthy World
Home Depot Eco Options	Home Depot
Hong Kong Eco-label	Hong Kong Federation of Environmental Protection (HKFEP) Limited
Hong Kong Green Label (HKGLS)	Green Council
Hungarian Ecolabel/Környezetbarát Termék Védjegy	Hungarian Eco-Labeling Organization/Környezetbarát Termék Kht.
IBD Certifications	IBD Certifications
IBO	IBO – Österreichisches Institut für Baubiologie und -ökologie (Verein) und IBO GmbH
Indoor Advantage	Scientific Certification Systems (SCS)
International Ecotourism Standard	Green Globe
IPM Star	IPM Institute of North America, Inc.
ISO 14001	International Standards Organisation (ISO)
Korea Product Environmental Declaration Program	Korea Eco-Products Institute (KOECO)
Korean Ecolabel	Korea Eco-products Institute
Korean Environmental Labelling Programme	Korea Eco-Products Institute (KOECO)
Krav	KRAV Ekonomisk förening
Label STEP	Label STEP is an unit of the Max Havelaar Foundation Switzerland.
LamuLamu	Landjugendverlag (LJV) GmbH
LEAF Marque	Linking Environment and Farming (LEAF)
Leaping Bunny	Coalition for Consumer Information on Cosmetics
LEED Accredited Professional	U.S. Green Building Council
LEED Green Building Rating System	Leadership in Energy and Environmental Design
LEED Project Certification	U.S. Green Building Council
Legambiente Turismo	Legambiente Turismo
Lembaga Indonesia Ekolabel	Lembaga Indonesia Ekolabel
Lily: Lithuania	Joint Research Centre of the Ministry of Environment
Luomu Sun Label	Finland Ministry of Agriculture and Forests
Luomuliitto – The Ladybird label	Luomuliitto
Malaysia Product Certification Program	Standards and Industrial Research Institute of Malaysia (SIRIM)
Marine Aquarium Council (MAC) Certification	Marine Aquarium Council (MAC)
Marine Stewardship Council	Marine Stewardship Council (MSC)
Max Havelaar	Max Havelaar Foundation
Max Havelaar: Belgium	Max Havelaar Belgium
Max Havelaar: Denmark	Max Havelaar Denmark
Max Havelaar: France	Max Havelaar France
Max Havelaar: Netherlands	Stichting Max Havelaar Netherlands
Max Havelaar: Norway	Fairtrade Max Havelaar Norway
Max Havlaar: Switzerland	Max Havlaar Foundation
Migros ECO	Migros

<b>Ecolabel</b>	<b>Organization</b>
Milieubarometer Ecolabel	Stichting Keurmerk Milieu
Milieukeur Ecolabel: The Netherlands	Milieukeur Foundation (SMK)
Minergie	MINERGIE® Association
National Programme of Environmental Assessment and Ecolabelling in the Slovak Republik (NPEHOV)	Slovak Environmental Agency
Nature's Best Ecotourism	Swedish Ecotourism Society; The Swedish Society for Nature Conservation
Naturemade	Association for Environmentally Sound Electricity (VUE)
natureplus	natureplus e.V.
Naturkind	Kaiser's Tengelmann AG
Naturland E.V	National Association for Organic Agriculture
Naturtextil	International Association Natural Textile Industry (IVN)
neufarm (Naturkosmetik)	neufarm Vereinigung deutscher Reformhäuser e.G.
Neuland	Neuland Verein für tiergerechte und umweltschonende Nutztierhaltung e.V.
NF-Environnement Mark (Norme Française)	AFNOR (Association Française de Normalisation) the standards institute of France.
Nordic Ecolabel or "Swan"	Nordic Council of Ministers
Norppa	The Finnish Association for Nature Conservation
NSF-140-2007 Sustainable Carpet Assessment Standard	NSF International
NutriClean	Scientific Certification Systems (SCS)
Ocean Wise	Vancouver Aquarium
OE-100	Organic Exchange
Oeko-Tex Standard 100	International Association for Research and Testing in the Field of Textile Ecology (Oeko-Tex)
Oeko-Tex Standard 1000	Oeko-Tex International – Association for the Assessment of Environmentally Friendly Textiles
Oeko-Tex Standard 100plus	International Association for Research and Testing in the Field of Textile Ecology (Oeko-Tex)
OK Power	EnergieVision e.V
ÖkoControl	ÖkoControl Gesellschaft für Qualitätsstandards ökologischer Einrichtungshäuser mbH
OMOA Clean Marine Green Leaf Eco-Rating Program	Ontario Marine Operators Association
ORC-Cert Organic Seal	Hong Kong Organic Resource Centre Certification Limited
Oregon Tilth	Oregon Tilth
Organic Farmers & Growers Certification	Organic Farmers & Growers Ltd
Organic Food China	The Organic Food Development Center (OFDC)
Organic Food Federation	The Organic Food Federation (OFF)
Österreichisches Umweltzeichen (Austrian Ecolabel)	Federal Ministry of Agriculture, Forestry, Environment and Water Management (Division: Environmental Management and Technology)
PEFC: Austria	PEFC Austria
PEFC: Czech Republic	PEFC Czech Republic
PEFC: Denmark	PEFC Denmark

<b>Ecolabel</b>	<b>Organization</b>
PEFC: Estonia	Estonian Forest Certification Council
PEFC: France	PEFC France
PEFC: Gabon	PEFC Gabon
PEFC: Germany	PEFC Deutschland e.V.
PEFC: Ireland	PEFC Council of Ireland
PEFC: Italy	PEFC Italy
PEFC: Luxembourg	PEFC Luxembourg
PEFC: Poland (Polish Forest Certification Scheme)	PEFC Polska
PEFC: Sweden (Swedish Forest Certification Scheme)	Swedish PEFC Co-operative
PEFC: UK	Programme for the Endorsement of Forest Certification schemes (PEFC) UK Ltd.
Phillips Green Logo	Phillips
Preservando El Medio Ambiente (Preserving the Environment)	Torres
Processed Chlorine Free	Chlorine Free Products Association
Programme for the Endorsement of Forest Certification schemes (PEFC)	PEFC Council (Programme for the Endorsement of Forest Certification schemes)
Protected Harvest	SureHarvest
QCS Organic	Quality Certification Services
Quebec Organic Reference Standard	Conseil des appellations agroalimentaires du Québec (CAAQ)
R-2000	Natural Resources Canada/Canadian Home Builders Association
Rainforest Alliance Certified	Rainforest Alliance
Rättvisemärkt: Sweden	Rättvisemärkt Sweden
RECS International Quality Standard	RECS International
Recycled Content	U.S. Federal Trade Commission
Reilun kaupan edistämisyhdistys ry: Finland	Association for Promoting Fairtrade in Finland
Rhode Island Certified Organic	Rhode Island Department of Environmental Management, Division of Agriculture and Resource Marketing
Rugmark	Rugmark Foundation
SA8000	Social Accountability International
Safe Agri-Food Product	Center for Agri-Food Quality and Safety
Salmon-Safe	Salmon-Safe Inc. (Founded by Pacific Rivers Council, 1995)
SCS Indoor Advantage	Scientific Certification Systems
SCS Indoor Advantage Gold	Scientific Certification Systems (SCS)
SCS Sustainable Choice	Scientific Certification Systems (SCS)
SEE Companies	SEE Potential Ltd.
Singapore Green Label Scheme (SGLS)	Singapore Environment Council
Skal Eko Symbol	SKAL
SMaRT Consensus Sustainable Product Standards:	Institute for Market Transformation to Sustainability (MTS)



<b>Ecolabel</b>	<b>Organization</b>
Smart Wood – Rediscovered Wood Certification	Rainforest Alliance
SmartWood – Chain of Custody Certification	Rainforest Alliance
SmartWood – Forest Management	Rainforest Alliance
SmartWood – Non Timber Forest Products Certification	Rainforest Alliance
Soil Association Organic Standard	Soil Association Certification Ltd
SPCA Certified	British Columbia Society for the Prevention of Cruelty to Animals (BC SPCA)
Speil Gut	Arbeitsausschuß Kinderspiel und Spielzeug e.V.
State of Utah Organic Certification Program	Utah Department of Agriculture and Food
Steinbock	OE Plus
Stemilt Responsible Choice	Stemilt Growers, Inc.
Sustainable Agricultural Network	Sustainable Agricultural Network SAN and Rainforest Alliance
Sustainable Business Achievement Ratings (S-BAR)	Sustainable Business Achievement Ratings
Sustainable Forest Management Certification (CAN/CSA Z809)	Canadian Standards Association
Sustainable Forestry Initiative (SFI)	Sustainable Forestry Initiative, Inc
Sustainable Travel Eco-Certification Program	Sustainable Travel International
Sustainable Winegrowing New Zealand	Wineries New Zealand
Swiss Q-label	PEFC Switzerland and HWK- Zertifizierungsstelle
Swiss Quality	Swiss Quality
TCO Development	TCO (The Swedish Confederation for Professional Employees)
Texas Certified Organically Produced	Texas Department of Agriculture
Thai Green Label	Thailand Environmental Institute
Totally Chlorine Free	Chlorine Free Products Association
Tourism Ecolabel: Luxembourg	Fondation Öko-Fonds
TransFair Minka: Luxembourg	TransFair Minka Luxembourg
TransFair: Canada	TransFair Canada
TransFair: Germany	Transfair Germany
TransFair: USA	TransFair USA
TÜV Mark EE01/02	TÜV Management Service GmbH.
TÜV Mark UE01/02	TÜV Management Service GmbH.
UK Fuel Economy Label	The Low Carbon Vehicle Partnership
Umweltbaum (The Environment Tree)	Otto GmbH & CO KG
USDA Organic	USDA/National Organic Standards Board/National Organic Program
UTZ Certified	UTZ Certified Foundation
VeriFlora	VeriFlora
Vermont Organic Certified	Northeast Organic Farming Association of Vermont
Viabono	Viabono

<b>Ecolabel</b>	<b>Organization</b>
Vitality Leaf	Saint Petersburg Ecological Union
Voluntary Carbon Standard 2007	VCS Association
Waitrose Foundation	Waitrose
Water Efficiency Labelling & Standards (WELS) Scheme	Commonwealth of Australia
WaterSense	U.S. EPA
Waterwise Marque	Waterwise
Whole Trade™ Guarantee	Whole Foods
Wholesome Food Association	Wholesome Food Association
Wildlife at Work	Wildlife Habitat Council
Woodnet Forest Certification Scheme: Belgium	WoodNet – Commission PEFC Belgique
World Wildlife Fund – WWF	World Wildlife Fund
WSDA Organic	Washington State Department of Agriculture
Zque	The New Zealand Merino Company Limited
Ø-label: Norway	Debio

### **CORPORATE SUSTAINABILITY INITIATIVE**

**Dr. Jay S. Golden, Director**

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