

Toward Sustainability

*The Roles and
Limitations
of Certification*



EXECUTIVE SUMMARY

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Prepared by
the Steering Committee
of the State-of-Knowledge
Assessment of
Standards and Certification

Toward Sustainability

The Roles and Limitations of Certification

EXECUTIVE SUMMARY

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THE ASSESSMENT AT A GLANCE

Twenty years ago, civil society and business leaders launched a movement to establish market preference for sustainable goods. They led initiatives to certify forest products, seafood, chemicals, buildings, electronics, jewelry, and other materials and services. Over two decades, certified products have become increasingly common in the marketplace. For example, recent studies have reported that 20 percent of world exports of bananas and 7 percent of global wild landings of fish for human consumption were certified.

As certification and labeling systems have proliferated, interest in their impact and potential has also increased. In a globalized market where quality is difficult to assure and supplies are insecure, market-leading firms are developing business cases for improving social and environmental sustainability, including using standards and certification in ways not foreseen a decade ago.

This State-of-Knowledge Assessment sought to discover what is known and what is most important to learn about the performance and potential of voluntary standards and certification. It found substantial evidence of improvements in social, environmental, and economic practices resulting from certification at the site level, as well as some instances of unintended effects, positive and negative. However, much of the evidence is case specific, preventing generalizations, and in many cases, it is difficult to attribute outcomes directly to certification.

It appears that voluntary standards and certification are most effective as part of a suite of integrated public and private sustainability tools. Standards and certification can bring about rapid changes in production practices when firms use them to support better practice and performance by their suppliers. They can also complement regulation, by filling gaps and introducing mechanisms for adapting to technological and social change.

The report concludes with recommendations that actors engaged in certification redouble their efforts to improve the effectiveness of these tools, give more attention to designing them to work in concert with other approaches, and work together to research the impacts of certification and alternative or complementary approaches.

Executive Summary

In today's marketplace, consumers facing an in-store or online display of products typically have to choose from among items produced in distant places under unknown conditions. High-profile cases of contaminated food, child labor, animal welfare problems, and the collapse of fisheries and other resources have raised consumer concerns about how products are made or harvested.

The page numbers noted in parentheses throughout this summary indicate where the corresponding topic is discussed in more detail in the full report.

Companies also face challenges in assuring that their sources of supply will be available over the long term and that their brands and reputations will thrive. Major global brands have been called into question concerning practices associated with their products. Certified products—such as sustainable seafood, organic food, fair trade coffee, and responsibly harvested wood—are often presented as part of the solution.

But are certified products really better for the environment? Are they better for people and communities? Can they catalyze more sustainable production and consumption across whole sectors? Under what circumstances do they promote sustainable practices? This document summarizes the findings of an assessment of the state of knowledge available to companies, investors, practitioners, and consumers seeking answers to questions about the performance and potential of certification and voluntary standards.

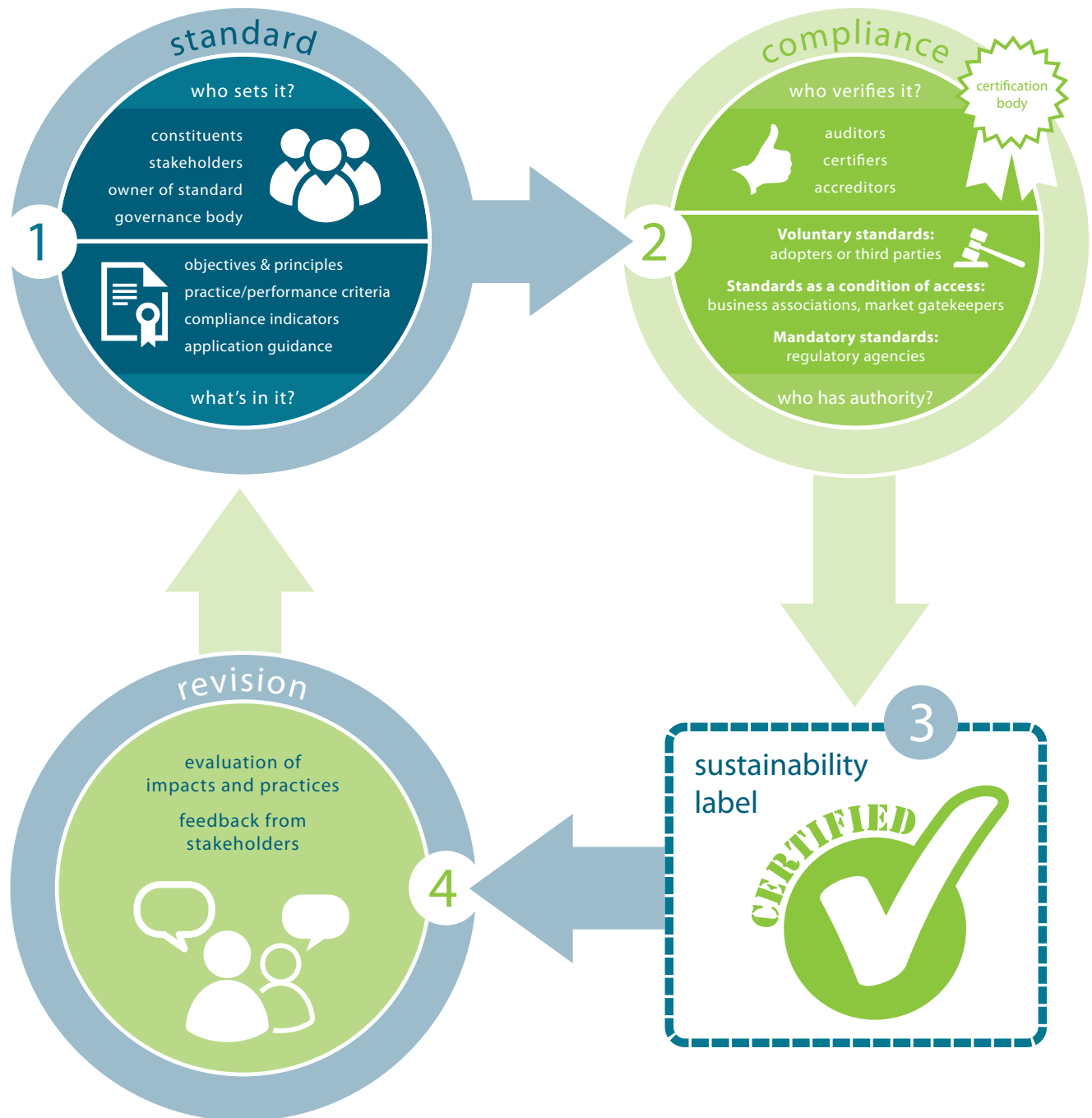
The full Assessment report can be found at www.resolv.org/certificationassessment. The page numbers noted in parentheses throughout this summary indicate where the corresponding topic is discussed in more detail in the full report.

The Certification Movement

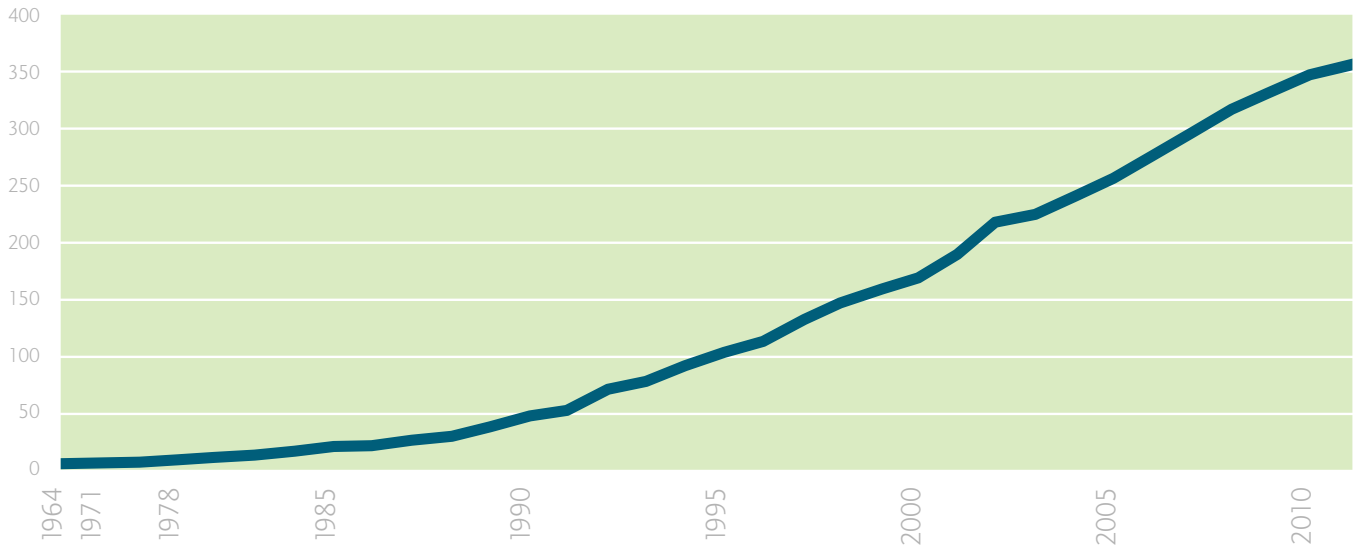
Voluntary standards and certification systems have existed for decades to affirm product safety, quality, and production practices. In the 1990s, forest certification was one of the first large-scale applications to address a global social, economic, and environmental challenge. (See pp. 6–7.)

At that time, certification became the preferred tool of a coalition of philanthropic foundations, environmental advocates, and business partners. International advocacy for a global forestry treaty had failed, and there was little hope for national regulations favoring timber harvesting practices with less environmental damage. Coalition leaders sought to shift the forum of action and the strategic approach. They would establish a new form of governance—standard-setting by representatives of social, environmental, and economic interests, with third parties accredited to certify when the standards had been met. The idea was to generate enough demand for standards-compliant products that certification would become a de facto condition for market access. Figure 1 illustrates this model.

Figure 1



At the core of each certification system is the *standard*—a defined set of social, environmental, and/or economic criteria. Standards systems determine who has a voice in setting the standard, how it evolves over time, who audits and verifies or certifies compliance, who accredits the certifiers, and how compliance is signaled—with corresponding effects on legitimacy and credibility, costs and benefits, and ability to achieve goals. A continuous learning approach supports improved quality and effectiveness of the system over time.

Figure 2

This chart shows the total number of ecolabels by year of launch. The data are from the Ecolabel Index, which monitors voluntary standards and labeling initiatives. The Index included more than 425 labels in 246 countries and 25 industrial sectors at the end of 2011. (See www.ecolabelindex.com.)

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The model spread, as shown in Figure 2. Convinced that their coalitions could have influence where governments and intergovernmental agencies had declined or were unable to intervene, standards and certification systems such as the Forest Stewardship Council (FSC), the Marine Stewardship Council (MSC), and the Rainforest Alliance/Sustainable Agriculture Network (RA-SAN) emerged in the 1990s. While they differed in some ways from organic agriculture and fair trade systems, they shared similar ambitions of market viability and societal legitimacy. In 2002, they joined similar “multi-stakeholder” systems—including those of the International Federation of Organic Agriculture Movements (IFOAM), the Fairtrade Labeling Organization (FLO), and Social Accountability International (SAI)—to establish the ISEAL Alliance as a network of leading standards systems seeking greater cooperation, mutual learning, and recognition for certification based on an agreed core set of operating principles. Beginning in 2004, “roundtables” that focused on agricultural commodities causing significant environmental impact (including palm, soy, sugar, and cotton) engaged industry leaders and nongovernmental organizations (NGOs) in developing standards to address those impacts. As certification initiatives proliferated and grew, increasing volumes of certified product became available. By the end of 2011, 7 percent of wild landings of fish for human consumption, 9 percent of the world’s productive forests, and 17 percent of coffee produced globally were certified. (See p. 9.)

BOX 1**State-of-Knowledge Assessment of Standards and Certification**

In early 2009, the David and Lucile Packard Foundation and Walton Family Foundation wanted to assess the impacts of their significant investment in the development of the Marine Stewardship Council and its fisheries certification system. Packard was also beginning to support the Roundtable on Sustainable Biofuels, a new certification organization. A National Academies of Sciences Roundtable on Sustainability meeting generated a discussion between the Packard Foundation and Mars, Incorporated, one of the largest chocolate-makers in the world. Mars had recently committed to sourcing 100 percent of its cocoa from sustainable sources by 2020. The company began to seek a certification system that could work at the scale required. In late 2009, these three organizations joined forces to support the formation of a multi-stakeholder collaborative that came to be called the State-of-Knowledge Assessment of Standards and Certification. Chaired by Patrick Mallet of the ISEAL Alliance, the Assessment was governed by a 12-person Steering Committee composed of leading experts representing a diverse array of interests. RESOLVE—a nonprofit mediation organization—served as secretariat.

The Assessment's Key Questions

- What is known about the environmental, social, and economic impacts of certification and labeling?
- What is known about whether standards and certification systems are effective tools for promoting sustainability, and if so, under what conditions?

Assessing the State of Knowledge: Approach and Methods

The State-of-Knowledge Assessment of Standards and Certification (see Box 1) sought to determine what is known about the impacts, performance, and influence of standards and certification systems. The 12-member Steering Committee that guided the Assessment considered several types of evidence, with peer-reviewed literature on impacts and governance providing the foundation. The Committee commissioned reviews synthesizing the literature in four natural resource sectors: agriculture, fisheries, forestry, and aquaculture. These sectors include some of the older and more well-established standards and certification schemes, about which the literature was expected to be more robust. The Committee also considered gray literature, while recognizing that the quality of this information is less secure and sometimes more difficult to evaluate. In addition, the Steering Committee convened and interviewed business leaders, applied its own experience and expert judgment, and consulted external experts and peer reviewers to arrive at conclusions. (See pp. 1–5.)

What Is Known about Impacts

The Assessment was designed to examine the evidence available to address questions about the *performance* of voluntary standards and certification—i.e., their achievement of intended outcomes—as well as their *influence* and *potential* to leverage large-scale change. Addressing the *performance* question, the Assessment

There are few large-scale qualitative and quantitative studies documenting outcomes and impacts sufficient to determine what effects occurred and whether they were attributable to certification.

These impact measurement challenges are not unique to voluntary standards and certification. Independent and peer-reviewed evaluations of the impacts of public and private policy instruments being deployed in pursuit of sustainability are also scarce.

The Assessment finds reasonable evidence to suggest significant though not universal positive changes in near-term ecological, social, and economic well-being resulting from standards-compliant practices.

found a wide variety of literature, including hundreds of case studies and before/after or certified/noncertified comparisons of varying quality, dozens of relatively large-sample-size quantitative and qualitative studies, and a few peer-reviewed large-scale outcomes evaluations. The evidence base to judge whether certification systems achieved their claimed social, environmental, and economic benefits at the level where they work (i.e., the farm or enterprise) appears relatively robust, but it is difficult to draw conclusions with confidence given the variability in methodologies.

Practitioners and enterprises considering certification can anticipate the near-term outputs and outcomes from the adoption of standards-compliant practices, but those who seek answers to questions about certification as a tool to drive large-scale change will find little empirical evidence regarding whether such change has occurred. (See pp. 58–60.) There are few large-scale qualitative and quantitative studies documenting outcomes and impacts sufficient to determine what effects occurred and whether they were attributable to certification. In addition, very little is known about the durability of impacts. These findings are not surprising—standards and certification systems are complex and dynamic, many are relatively new, and studies of them are in short supply. Serious methodological challenges linked to the complexity and dynamic nature of ecosystems and communities also limit the potential for academically rigorous, experimentally designed and controlled studies of long-term, large-scale impacts. (See pp. 58–60; 71–72.)

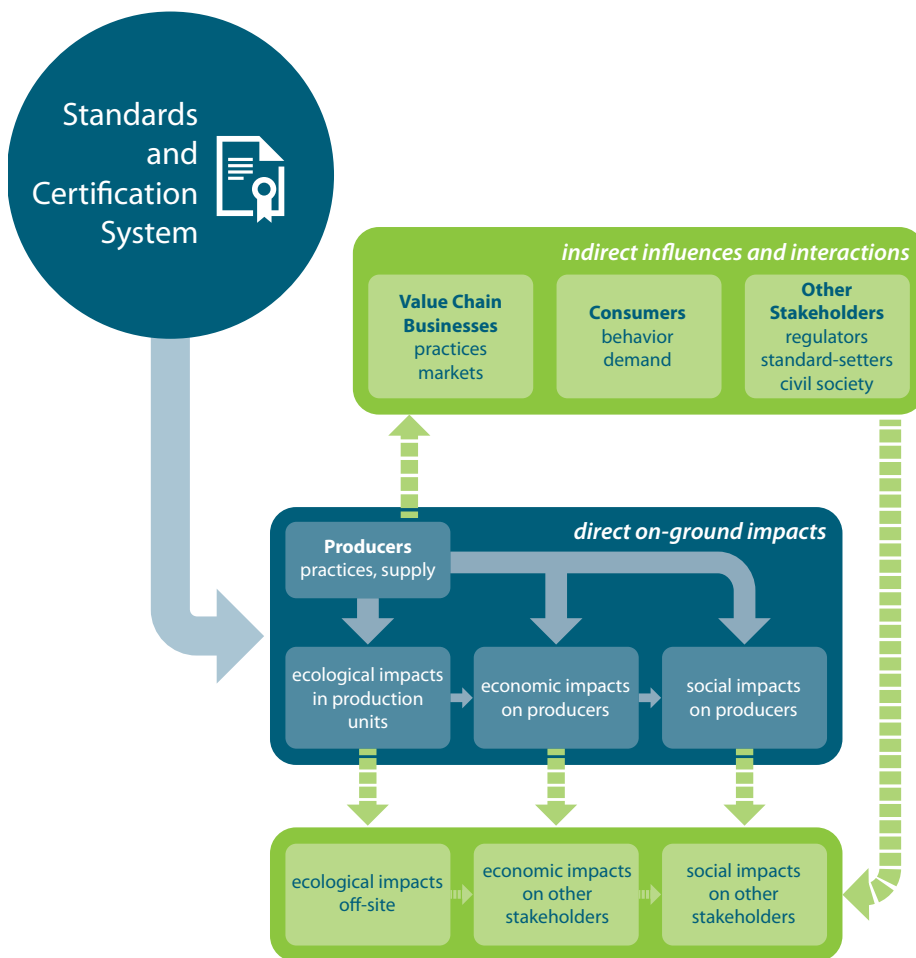
These impact measurement challenges are not unique to voluntary standards and certification. Independent and peer-reviewed evaluations of the impacts of public and private policy instruments being deployed in pursuit of sustainability are also scarce. (See pp. 71–72.) Thus, learning and strategy development at this level must draw on considered interpretation of experience and data, which may evolve to support different conclusions over time. Regular review and revision based on the results of monitoring and evaluation are therefore important as components of standards systems, as well as across systems. (See pp. 58–60.)

DIRECT IMPACTS

The *direct impacts* of certification systems are the changes in certified enterprises' practices and the ecological, economic, and social consequences of those changes. (See Figure 3.) Certification systems have generally been designed so that the standard sets requirements for production practices, such as harvesting or the use of inputs. Certification occurs upon verification of compliance. Adoption of the specified practices should lead to improvements in the quality and resilience of local ecosystems, in the livelihoods dependent on the production system in question, and in social welfare. (See pp. 9–10; 57.)

The Assessment finds reasonable evidence to suggest significant though not universal positive changes in near-term ecological, social, and economic well-being resulting from standards-compliant practices, although, as noted above, literature clearly attributing large-scale sustainability impacts to standards and certification systems is rare. Moreover, rigorously designed studies do not always find the impacts expected. However, available research contains many insights and lessons to be learned that can inform future research and practice. (See pp. 71–72.)

Figure 3



This model of a standards and certification system shows how these systems affect the practices and performance of producers, leading to impacts beyond the farm or enterprise level. These broader impacts affect other stakeholders, either by influencing the uptake of certain practices or by affecting the broader economy or society. These direct effects, in turn, affect the attitudes and behaviors of stakeholders, consumers, and businesses, which influence how they engage with producers.

Ecological Impacts

Most standards operating in the four sectors reviewed focus primarily on environmental issues; this aspect of sustainability also dominates the literature. Ecosystem integrity is a key overarching concept for resource-extraction industries such as forestry and fisheries. The research on this issue is limited to understanding the changes in practices resulting from certification, with anticipated correlations to ecosystem health. Some studies highlight the difficulty in correlating management improvements with long-term ecosystem health. (See pp. 61–62.) Numerous case studies show evidence of specific positive (and some negative) effects of certification on biodiversity and individual species. However, quantifying these impacts proves challenging, and there is limited understanding of the impacts on nontarget species. (See pp. 63–65.) Evidence of impacts linked to air, water, and soil pollution; to a reduction of inputs in cultivated systems; and to waste management is more limited, although most of the findings are positive. One of the key challenges in the

research has been the variability in environmental conditions among sites, limiting the ability of researchers to extrapolate results. (See p. 66.)

Economic Impacts

While a number of standards include economic criteria, fair trade puts an explicit focus on income by way of minimum prices, social premiums, and other factors, and has been more studied in this regard than other systems. The impact of certification on revenue and profitability from forestry and fisheries operations has received little attention. Price premiums are fairly rare and are most consistently available for high-profile or niche items such as certified coffee and tea. Several studies have identified other economic benefits to producers, including technical assistance, access to credit, and opportunities to diversify income sources. A common economic benefit is better access to market channels and business opportunities. Effects on yields and quality of products are not yet well studied. Though not strictly speaking impacts of certification, the challenges faced by small and medium-sized enterprises in meeting certification standards is important to note, as it prevents access to some markets and points to a challenge in scaling up. (See p. 69.)

Social Impacts

The social impacts of standards and certification are much less studied than the ecological or economic impacts. Social impacts include working and living conditions; rights and benefits; and community relationships. Evidence of impacts on living and working conditions comes primarily from the study of fair trade and ethical trade systems. These standards were designed, in part, to improve the welfare of farmers in developing countries. The few studies of these systems that have sound research designs with clear attribution reveal mixed evidence. (See pp. 69–70.) Claims that standards and certification empower and secure rights and benefits are widespread, though evidence is limited and of modest quality. Evidence of community benefits, such as development investments or conflict resolution, is also mixed, with cases of reinforcement of existing patterns of exclusion and variability in distribution of benefits between men and women, in addition to cases of enhanced community participation and equality of benefits. (See p. 70.)

INDIRECT IMPACTS

The *indirect impacts* of certification systems involve changes in the behavior of actors other than the certified enterprises, and the economic, social, and environmental consequences of those changes. (See pp. 73–75; 83–85.) They include a wide range of interactions and influences. Sustainability standards and associated practices have been adopted not only by enterprises seeking certification, but also more broadly through peer influence and integration into company supply chain requirements and governmental regulation. The evidence examined supports a finding that the indirect impacts of voluntary standards and certification are substantial and probably greater than the direct impacts. (See pp. 88–89.) However, the evidence considered to date is often based on cases, resulting in generalizations mostly at the level of “this can happen,” rather than about the likelihood of results.

The evidence examined supports a finding that the indirect impacts of voluntary standards and certification systems are substantial and probably greater than the direct impacts.

The Assessment found abundant case examples of improved practices demonstrated by certification processes, then adopted more widely.

Learning, Demonstration, and “Spill-Over” Effects

The Assessment found abundant case examples of improved practices demonstrated by certification processes, then adopted more widely. The infrastructure put in place to enable certification has also promoted the learning and uptake of sustainable practices. (See pp. 83–85; 88–89.) For example, the Rainforest Alliance’s technical assistance to farmers fostered their understanding of the economics of their own businesses, in a role analogous to extension agents. Consultants who develop knowledge of the business case for more sustainable practices while working in certification processes market that expertise to the business community at large. Suppliers discover and create markets for “greener” products.

In several sectors, there is evidence that the number of producers and volume of goods produced in compliance with sustainability standards are substantially greater than the number and volume bearing a certification label. For example, about 17 percent of coffee is produced in compliance with standards, but only 8 percent is sold as such. Similarly, the Assessment’s fisheries sector review noted that only 10 percent of the seafood certified under the MSC carries the MSC label in the marketplace. (See pp. 88–89.)

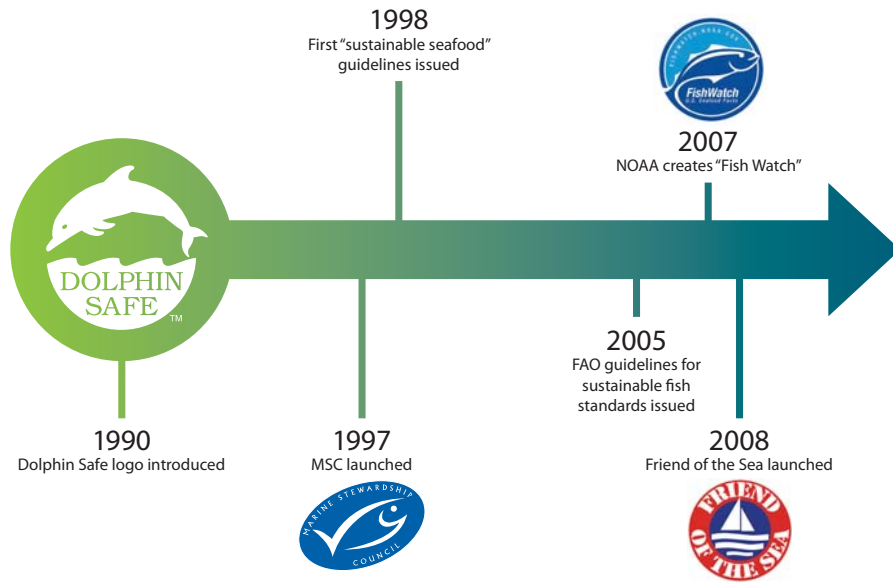
One example of spill-over effects is the emergence of standards and certifiers competing with the MSC, and the widespread adoption by major retailers of “sustainable seafood procurement policies” that rely on certification and other means of assurance. Substantial evidence indicates that coalitions organized to develop and promote MSC certification played important roles in raising awareness and creating demand for more sustainable seafood. How much of the movement is directly attributable to certification is not known, but there is a good deal of information available about the influence of certification in its evolution. (See Figure 4.) (See pp. 88–89.)

Enhancing Institutional Capacity

The existence of voluntary standards and certification systems has made it possible for public and private institutions to adopt procurement and permitting policies favoring more sustainable goods and services that would not be feasible if they had to rely on their own capacity to evaluate the performance of each product or project. The emergence of credible voluntary standards has created an industry of certifiers to whom governments and businesses can turn. For example, certifiers of forest products have offered their expertise in compliance verification and chain-of-custody tracking to help enforce U.S. and European Union bans on the import of illegally harvested timber. (See pp. 79–80.) Supply chain tracking mechanisms developed for certified products can also enhance the capacity of businesses to ensure more sustainable practices and performance from their suppliers. There is also case evidence of direct financial benefits, such as market share or cost savings attributable to supply chain efficiencies and chain-of-custody management.

The emergence of credible voluntary standards has created an industry of certifiers to whom governments and businesses can turn.

Figure 4: The Case of Marine Certification



Above is a timeline showing the emergence of marine certification programs.

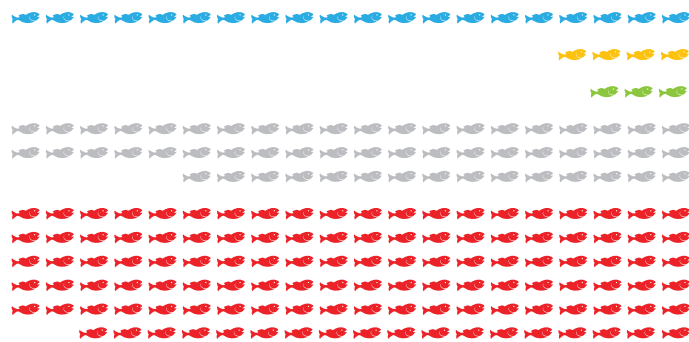
Walmart

Unilever

TESCO

McDonald's

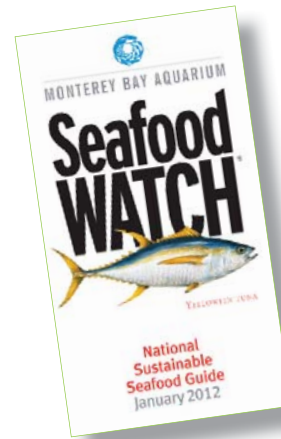
The greatest increase in fisheries entering the certification process came when market-leading firms made commitments to sustainability.



KEY

- MSC certified
- engaged in Fisheries Improvement Partnerships
- Friend of the Sea approved
- not certified, not in need of rebuilding
- not certified, fully or over harvested

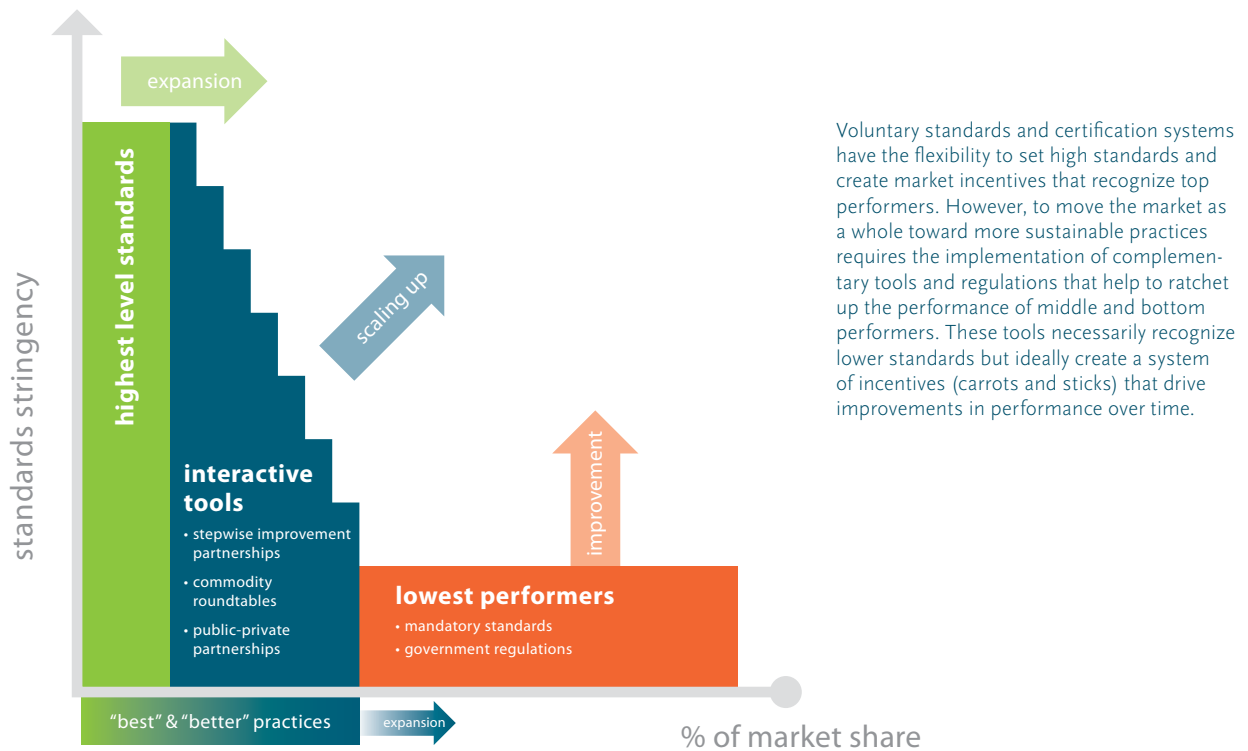
Over the past 10 years, the percentage of wild fish landings certified, or in the process of certification and improved management, has approached 20 percent. This illustration shows that the percentage certified or in process toward certification remains less than a third of the world's fish, and of the two-thirds, a large share are in serious trouble.



Seafood guides, including wallet cards and information accessible by cell phone, offer consumers convenient guidance at the point of purchase, but are not as precise as labeling backed by certification or assessment of particular fisheries. They recommend for or against a type of fish, but the consumer generally does not know why, or if some fish of that type are exceptions to the general guidance.

BEST CHOICES	GOOD ALTERNATIVES	AVOID
Arctic Char (farmed) Barramundi (US farmed) Catfish (US farmed) Clams (farmed) Cobia (US farmed) Cod: Pacific (US non-trawled) Crab: Dungeness, Stone Halibut: Pacific (US) Lobster: California Spiny (US) Mussels (farmed) Oysters (farmed) Sablefish/Black Cod (Alaska & Canada) Salmon (Alaska wild) Sardines: Pacific (US) Scallops (farmed) Shrimp: Pink (OR) Striped Bass (farmed & wild*) Tilapia (US farmed) Trout: Rainbow (US farmed) Tuna: Albacore (Canada & US Pacific, troll/pole) Tuna: Skipjack, Yellowfin (US troll/pole)	Basa/Pangasius/Swai (farmed) Caviar: Sturgeon (US farmed) Clams (wild) Cod: Atlantic (imported) Cod: Pacific (US trawled) Crab: Blue*, King (US), Snow Flounders, Soles (Pacific) Flounder: Summer (US Atlantic)* Grouper: Black, Red (US Gulf of Mexico)* Herring: Atlantic Lobster: American/Maine Mahi Mahi (US) Oysters (wild) Pollock: Alaska (US) Sablefish/Black Cod (CA, OR, WA) Salmon (CA, OR, WA*, wild) Scallops (wild) Shrimp (US, Canada) Squid Swordfish (US)* Tilapia (Central & South America (farmed) Tuna: Bigeye, tongol, Yellowfin (troll/pole)	Caviar: Sturgeon* (imported wild) Chilean Sea Bass/Toothfish* Cobia (imported farmed) Cod: Atlantic (Canada & US) Crab: King (imported) Flounders, Halibut, Soles (US Atlantic, except Summer Flounder) Grouper (US Atlantic*) Lobster: Spiny (Brazil) Mahi Mahi (imported longline) Marlin: Blue, Striped (Pacific)* Monkfish Orange Roughy* Salmon (farmed, including Atlantic)* Shark* & Skates Shrimp (imported) Snapper: Red (US Gulf of Mexico) Swordfish (imported)* Tilapia (Asia farmed) Tuna: Albacore*, Bigeye*, Skipjack, Tongol, Yellowfin* (except troll/pole) Tuna: Bluefin* Tuna: Canned (except troll/pole)

Figure 5



Interactions and Synergy

Perhaps the most compelling evidence of indirect impacts comes in cases of interactions among certification systems and between such systems and other forms of governance. These include cases where standards, practices, and performance expectations established in the context of voluntary systems become the norm for producers and consumers or are institutionalized in public regulations, in some cases helping to ratchet up performance in the pursuit of sustainability. (See Figure 5.) (See pp. 88–89.)

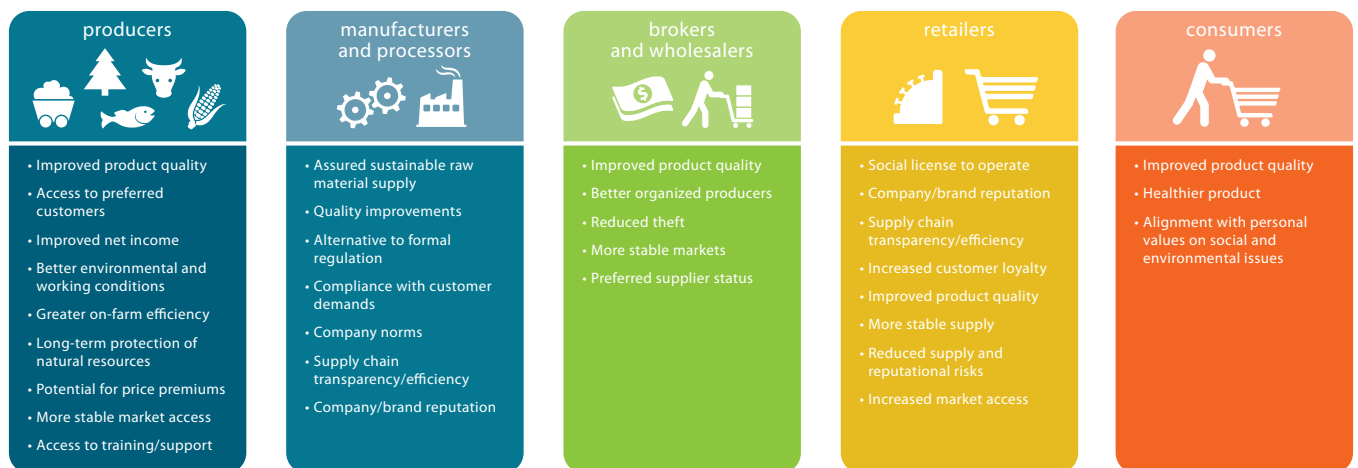
For example, the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) certification offered a voluntary arena for developing, testing, and marketing "green" building practices, and created infrastructure that enabled permitting jurisdictions to establish incentives for green building, or even to embed standards in building codes. The U.S. Environmental Protection Agency's Energy Star certification sought to identify "best-in-class" efficiency in a standard that would adapt as innovation and competition brought better products to market. When the higher voluntary standard was established and consumer expectations for products were raised, the average efficiency of products increased overall. (See pp. 75–77.) The Clean Development Mechanism Gold Standard fills a gap in an existing regulatory mechanism by certifying projects that meet extra conditions—conditions that were left out of the negotiated official standard but were still important to achieve its stated goals. These and other cases shed light on complex and often unanticipated sequences of outcomes and adaptations that offer insights into the pathways of change and suggest strategies for accomplishing sustainability objectives in the future. (See pp. 78–79.)

Indirect and unanticipated impacts are not universally positive. There are examples of certification and standards systems that have failed to foster sustainability, and performance that does not improve. (See pp. 88–89) Tradeoffs among competing values and interests have resulted in certification that addresses some aspects of performance (e.g., the elimination of synthetic pesticides and fertilizers) while neglecting others (e.g., mono-cropping or aquifer depletion). Standards can be set at a level insufficient to address the problem, and thus lead to “greenwashing,” by accident or by design. Conflicts can arise with regulatory authorities. One frequently raised concern is that standards may forestall regulation that might have greater impact and enforceability. (See pp. 88–89.) However, evidence that certification has “locked in” suboptimal standards is lacking; most examples offered to support such criticisms fail to address the likelihood or plausibility of alternative preferred scenarios. (See p. 87.) The Assessment also finds that the majority of certification schemes are not designed to interact with other governance systems. The evidence suggests a potential for greater impact if synergy with other standards and regulatory systems is considered at the design stage. (See p. 86.)

Key Players and the Outcomes They Seek

Businesses participate in standards and certification systems for reasons that vary by sector, industry, and the position of the firm in the supply chain. (See Figure 6.) The research revealed cases of direct financial benefits, such as market share or cost savings attributable to increased supply chain efficiencies, and the protection of product quality and quantity through chain-of-custody management. Improved natural resource management and secure access to supply are important goals, since natural resources are the basis for future supplies of raw materials.

Figure 6



This graphic provides a preliminary understanding of elements of the potential motivations that value chain actors take into account when considering the adoption of standards and practices aimed to enhance sustainability. The Steering Committee recommends advancing the state of knowledge about this business case through further research, to help investors (of both business and philanthropic capital) to identify and differentiate standards and practices that will pay for themselves, and those that are likely to require economic or policy interventions, such as regulations, to take root.

Increasingly, businesses are communicating and cooperating on issues relating to supply chain risk and assurance of supply. The Assessment also found anecdotal evidence of other benefits, such as share price, employee retention, and brand and reputation value. (See pp. 43–52.)

Foundations and civil society organizations spearheaded the formation of multi-stakeholder standards and certification systems (which themselves were often established as NGOs) and led market campaigns to engage consumers and create pressure for certification. Perhaps most important, by mobilizing coalitions of producers, manufacturers, retailers, scientists, and sustainability advocates, NGOs and foundations have helped to create space for collaboration and negotiations that seek agreement on feasible standards for improved production practices. These organizations now play more diffuse roles in developing, monitoring, and working with standards and certification systems, in accordance with their particular capacities, goals, and theories of change. When these goals diverge, NGOs are just as likely to realign their activities around other strategies. (See pp. 19–28.)

As different stakeholders come together to develop sustainability standards, expectations about responsible practices can converge and help to shape global norms. With the globalization of trade, an increasing focus on market-based solutions, and various forces aligned as obstacles to the expansion of regulatory approaches, some governments have embraced standards and certification as a strategy to achieve public policy objectives. (See pp. 29–39.) In some cases, certification has enhanced opportunities for public participation and accountability, while in others, such as with shrimp farms in Thailand, certification can result in lost opportunities to participate in decision making on resource management. (See pp. 37–39.) Certification systems remain limited in their ability to compel compliance in the same way as regulations enforceable by law. Governments continue to play a critical role not only in creating an enabling environment for certification but in complementing standards with regulations and other measures that ensure minimum acceptable performance.

Conditions that Enhance or Impede Effectiveness

Voluntary standards and certification systems have achieved their greatest traction in commodities with prominent product labeling, such as coffee, timber, and fish. (See pp. 73–89.) Markets for certified products have developed almost exclusively in industrialized countries in which customer recognition of sustainability issues and labels is relatively strong. However, both markets and products are changing. Growing middle classes in industrializing countries such as China, India, and Brazil may be potential markets for certified products, while new models of certification and growth in the certified production of commodities such as palm oil and materials for green building show potential to increase supply. (See pp. 90–99.)

The certification of harvested resources, such as forestry and fisheries, occurs mostly in jurisdictions and ecosystems in which resource management was already relatively well established—i.e., in the temperate regions of North America and Europe. In contrast, key agricultural commodities such as coffee, cocoa, tea, and

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sugar are grown exclusively in tropical climates. Organic agriculture, as a whole-farm approach, is implemented worldwide. (See pp. 71–72.)

In many certification systems, there is evidence to suggest that certification has functioned to maintain and, potentially, continue to improve the practices of those enterprises that were already close to meeting the standards, by providing a market-based incentive and reward for good practices. However, with the growth in volume and share of certified production in certain sectors, it is clear that certification is reaching at least a few of those producers and enterprises that are required to make significant changes in their practices in order to meet the standards. In these instances, certification is most effective when there is a commensurate focus on capacity building and other strategies to support improved performance. (See pp. 85–87.)

Certification is unlikely to drive a sector to fully transform to meet sustainability objectives. In particular, certification has not demonstrated consistent capacity to affect the “bottom of the market”—the producers and harvesters operating farthest from the standard. In many situations, governments are uniquely capable to set minimum requirements, while certification systems set a “gold standard” with incentives for those who take steps in that direction. (See pp. 88–89.)

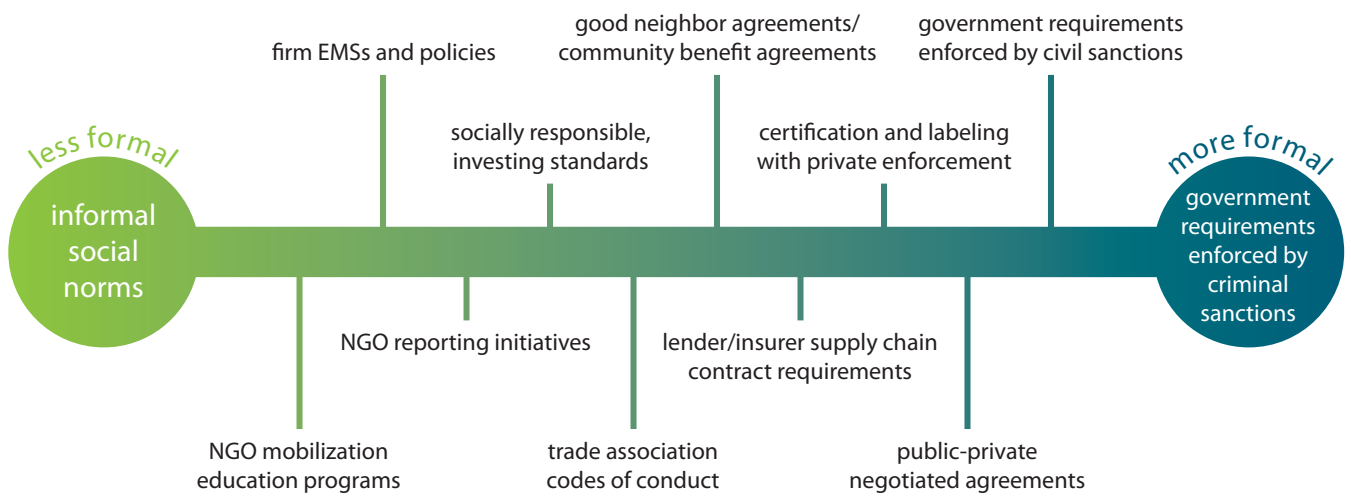
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Certification systems have expanded most rapidly when market-leading firms choose them as a means to incorporate improved practices into a supply chain. This is not surprising; when a firm representing a significant share of the market in a given product adopts a standard, the standard’s market share would be expected to rise accordingly. It is less clear whether or when there is a point of “market tipping,” when demand for certified products is great enough to make certification (or other assurances of improved performance) a de facto condition of market entry, and if so, what conditions would contribute to that effect.

Given the tension and trade-offs between how difficult the standard is to meet and how many enterprises will be able to adopt it, standards and certification systems make these decisions about where to set the standard in varied, pragmatic, and often strenuously negotiated ways. Some of the most vocal critics of certification are those who believe that these systems have compromised too much toward business interests or their own need to gain market share and set standards too low to achieve meaningful change. These critics tend to express opinions and hypotheses about what should have been attempted or achieved. Evidence-based comparisons of likely or plausible net outcomes of alternative approaches are often missing from these arguments, but they highlight the concern that voluntary standards have limits in terms of both the extent of change they can bring about and the proportion of a market they can affect. (See pp. 73–89.)

Certification is thus best seen as one instrument in a portfolio of tools (see Figure 7). It is effective in bringing about rapid changes in production practices when market-leading firms use it to verify and enforce contractual requirements for better practice and performance by their suppliers. (See pp. 73–89.) It also is effective in establishing standards for practices in instances in which governments are unwilling or unable to act. (See pp. 29–39.) It is useful as a complement to regulatory policies, to fill gaps and to introduce mechanisms for adapting to rapid

Figure 7



This graphic shows a typology of policy instruments for improving sustainability of production-consumption systems.

technological change. Other tools, including regulatory mandates and incentives, are better situated to influence the parts of the market in which certification is less attractive, less well understood, or unimportant to consumers and producers. In circumstances in which certification is insufficient to achieve sustainability objectives, it may still fill important complementary or supporting roles. (See pp. 73–89.)

Recommendations

PRIORITIES FOR KEY ACTORS

Given the proliferation of standards and certification systems, it is vital to understand the factors that influence their effectiveness. Through experimentation and shared learning, the stakeholders involved in these systems have identified a number of core design principles that should inform the structure and implementation of these systems. Among these are transparency, clarity of standards and means to verify the accuracy of claims, balanced and open stakeholder engagement, competency and accessibility, and a focus on learning and continual improvement.

The Steering Committee believes that **certification systems** should make a more concerted effort to collect information and data on their results. To be most credible, evaluations should be conducted by external parties. However, this should not discourage standards systems from measuring and analyzing their own progress, for continuous improvement. The performance of certification systems should be evaluated in comparison with other plausible public and private governance alternatives, against a backdrop of what would have happened in their absence. Where

Strategic cooperation and coordination among certification systems and with other actors may increase efficiency. Certification systems should be explicitly designed to interact with other governance systems.

feasible, the addition of performance-based criteria to existing practice-based criteria could facilitate outcome evaluation.

Comparison and learning among systems should also be encouraged, even when such systems focus on different commodities or resources, as many of the incentive, behavioral, and governance issues are related. Strategic cooperation and coordination among certification systems and with other actors may increase efficiency. Certification systems should be explicitly designed to interact with other governance systems.

There is considerable potential value in sharing with the business community information and knowledge generated by certification, engaging firms in efforts to learn about and evaluate risk and sustainability problems in supply chains, and thinking through transitions to more sustainable value chains.

Businesses are key drivers for scaling up standards and certification systems. They are in an influential position to drive innovation and continuous improvement in standards. Companies are interested in efficiencies both within and between standards systems. They should use this position of influence to encourage efficiency gains through greater cooperation and harmonization between standards systems.

Government agencies should look to certification programs for demonstrations of potentially useful and adaptable technologies, practices, and approaches. They should take advantage of the broad solution-seeking coalitions that often converge around certification initiatives, and of the opportunity to use certification systems to enable sustainable procurement policies. They should use their power to regulate advertising and trade to keep misleading claims from the market. Finally, they should not expect certification to solve the most intractable problems, and should focus their own efforts on improving the performance of actors with the greatest adverse impacts.

NGOs play an array of key roles. To improve the performance of standards and certification systems, a critical role for NGOs is helping to ensure the robustness of certification audits and the quality of the standards. Where NGOs engage companies to improve their practices, they should seek opportunities to encourage companies to adopt credible standards.

As key players in the establishment of voluntary standards and certification systems, **foundations** are well positioned to support the evolution of those systems toward greater effectiveness, as well as their integration with complementary tools. There is a particular need to develop self-sustaining business models, support research essential to understanding impacts and how they are achieved, and mitigate adverse effects when certification systems displace traditional producers and practices.

BOX 2**Theory of Change**

In recent years, many experts and practitioners have come to understand that the context in which standards and certification operate is in fact much more complex than originally envisaged. The Steering Committee hopes to contribute to a new, emerging theory of how these systems contribute to sustainability goals by making the following observations:

- Evidence of the direct impacts of standards and certification systems suggests significant though not universal positive changes in near-term social and economic well-being and environmental practices.
- Evidence also suggests indirect impacts are substantial and probably greater than the direct impacts. Sustainability standards have been adopted broadly through integration into company supply chain requirements and government regulations.
- Evidence reveals cases of direct financial benefits for businesses engaging in standards and certification through market share or cost savings attributable to increased supply chain efficiencies. Businesses are also increasingly cooperating to address supply chain risk and assurance of supply.
- To scale up the positive impacts of standards and certification, enterprises must have the capacity to meet the standards and strong incentives to do so. Scaling up also requires exploiting interactions or synergies with complementary market and regulatory tools.
- Certification together with on-product labels continues to communicate the benefits of a standards system to consumers. However, on-product labels and price premiums are neither as essential nor as universal as previously assumed. New models of certification are emerging that do not rely on consumer-facing labels or marketing.
- A more appropriate measure of the scale of impact may be the level of adoption of better management practices (whether certified or not), rather than the market share of certified products or the number of participating companies. However, even this is just a proxy for impact that may eventually be replaced by concrete data showing on-the-ground sustainability outcomes.

What Is Not Known That Is Most Important to Learn?

A concerted research effort is needed to bridge significant gaps in knowledge about the impacts of standards and certification systems and the conditions under which they are more or less effective. Methods need to be designed for the systematic collection, analysis, and application of impacts data. Because more is known about the practices of individual certified producers than about longer-term impacts that result from those practices, additional research on sustainability impacts is a priority. This effort could include filling gaps in knowledge about the baseline status of relevant socio-cultural or ecological systems, as well as linking into research on the relationships between prescribed management practices and outcomes. Research on the ways in which different systems interact, and outcomes occur, is also needed. (See Box 2.)

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In addition to advancing the understanding of the “outcomes chain” from practice to performance, and the contexts and interactions that produce desired or undesirable results, the research community could make substantial contributions by examining the use of standards and certification (and complementary or alternative tools) in developing countries and emerging markets, and by small and medium-sized enterprises. It is particularly important to understand the “business case” or drivers for engaging actors at less-well-understood points in the supply chain (for example, brokers and traders) to improve overall sustainability outcomes within those chains.

Since it is unlikely that comprehensive, integrated research will emerge without investments in coordination and collaboration, businesses and philanthropic organizations already engaged in certification and other approaches to enhancing sustainability should support more formal cooperative efforts to develop lines of research and share findings.

Conclusion

Standards and certification systems have introduced a new form of partnership between civil society organizations and leading businesses, shifting the landscape of sustainable production and consumption in important ways. They have opened avenues for public and stakeholder interests to participate in defining standards that become societal and even regulatory norms. They have created mechanisms for standards to adapt as science and technology offer new insights and possibilities, and to respond to unanticipated outcomes. They have offered regulators the ability to peg requirements to voluntary standards that are regularly updated. They have defined and tested “gold standards,” resulting in proof that raising the bar of existing norms is technically and practically possible. They have raised public awareness of and, possibly, demand for more sustainable products. They have put missing pieces of a sustainable supply chain in place, from technical assistance and extension to supply chain tracking systems. And, they have served as a learning laboratory—a set of experiments well founded in theory, attending to rigorous analysis of outcomes, as well as the contexts and trends that affect them.

Globalization and other forces are changing markets at a rapid pace. Business decisions rely on best-available knowledge. The movement that coalesced behind voluntary standards and certification has much to gain by working together to fill gaps in that knowledge, especially about how to improve the effectiveness of standards and certification as one tool to achieve desired sustainability outcomes.

Standards and certification systems have introduced a new form of partnership between civil society organizations and leading businesses, shifting the landscape of sustainable production and consumption in important ways.

Toward Sustainability

The Roles and Limitations of Certification

EXECUTIVE SUMMARY

For more information, please visit www.resolv.org/certificationassessment or contact RESOLVE, the Secretariat organization, at 202.944.2300 or info@resolv.org.