

School Sustainability Rating Systems: Strengths, Limitations, and Future Prospects

by

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Abstract

Increased interest in school sustainability has led to the emergence of a variety of rating systems to assess schools' contributions to sustainability. Such tools should have substantial potential to contribute to school sustainability efforts but the few studies completed to date suggest limited impacts. This paper asks whether weaknesses in the design and governance of school sustainability rating systems (SSRSs) may be to blame for the limited evidence of impact. Specifically, it reviews the extent to which 32 existing SSRSs have the following desirable characteristics: accountability mechanisms, comprehensive scope, multiple levels of achievement, open governance processes, performance-focused criteria, public reporting, and transparent criteria.

Results show that most SSRSs have transparent criteria and offer multiple levels of recognition, but they also tend to have weak or non-existent accountability mechanisms, limited topical scope, closed governance processes, criteria that focus on strategies rather than performance, and minimal public reporting. Consolidation of SSRSs may help remedy these weaknesses by increasing capacity for managing an effective SSRS, improving brand recognition, facilitating benchmarking, and reducing duplication of effort within the school sustainability community.

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Introduction

Sustainability seems to be of growing importance to schools. Over the last decade, a variety of studies have found that components of sustainability education such as service learning, outdoor and place-based education, and environmental education can lead to improvements in academic performance and related indicators (Barrat Hacking, Scott & Lee, 2010; Bartosh et al., 2006; Lieberman, Celio, Durlak & Dymnicki, 2011; Ernst & Monroe, 2004; Hoody, & Lieberman, 2005;). There is also emerging evidence that common features of green buildings, such as improved indoor air quality, lighting, and acoustic conditions, and other sustainability practices like green grounds management can enhance not only student academic achievement but also student and teacher health (Okcu, Ryherd & Bayer, 2011; Issa et al, 2011; Dymment & Bell, 2008). Additionally, many school sustainability initiatives, especially those that cut energy, water, and resource consumption or reduce waste generation, can also reduce costs (Kats, 2006; Hu, 2011).

Increased interest in school sustainability has led to the emergence of a variety of rating systems to assess schools' contributions (Henderson & Tilbury, 2004; Mogensen & Mayer, 2005). These tools are typically comprised of a set of criteria that a school must meet to earn a rating, as well as technical support and other resources to help participants meet the criteria. School sustainability rating systems (SSRSs) have the potential to provide a number of benefits. They could:

- help schools to understand their current sustainability performance, set goals, and measure progress towards those goals;
- enhance the ability of schools to learn from and collaborate with each other by providing a common language for school sustainability;
- facilitate the identification of areas for improvement and aid decision makers in prioritizing sustainability efforts;
- support the use of the physical campus as a teaching tool;
- enable schools to communicate their sustainability efforts to stakeholders in a more credible and meaningful way; and
- reward school sustainability leadership and create incentives for continuous improvement.

However, little research exists on the extent to which SSRSs are achieving these potential benefits.

The research that does exist, focusing primarily on national incarnations of the Foundation for Environmental Education's Eco-Schools program, shows fairly disappointing results. For example, Krnel & Naglic (2009) found that environmental knowledge of eighth-graders in Slovenia was slightly higher among those attending an Eco-School but there was no statistically significant difference in environmental awareness or environmentally responsible behavior among the students. Kadji-Beltran's (2002) study of 5th graders in Cyprus found no difference in environmental cognition but slight improvements in taking environmental action resulting from participation in Cyprus' Eco-Schools program. O'Mahony & Fitzgerald (2001) found higher levels of environmental behavior and opinion leadership among Irish primary students attending

schools that had received Green-Flag Awards through Ireland's Green-Schools program but minimal differences in environmental knowledge. O'Mahony & Fitzgerald (2001) also found that Green-Flag recipients produced 45% less waste than other schools. However, this result did not appear to control for differences between primary and secondary schools or urban and rural schools despite clear differences in the sample on these dimensions.

This paper seeks to understand why SSRSs do not seem to be meeting their potential. It presents several characteristics related to the design and governance of existing SSRSs that, based on literature about sustainability rating systems in other sectors, seem likely to impact their efficacy. These characteristics inform an exploratory analysis of the strengths and limitations of SSRSs that concludes with suggestions for how these tools might be improved.

In contrast to the relative dearth of research on SSRSs, sustainability rating systems in other sectors have been analyzed and critiqued from a variety of perspectives by both academics and practitioners (e.g. Accenture, 2009; Big Room Inc. & World Resource Institute, 2010; Chatterji, Levine, & Toffel, 2009; Sadowski, Whitaker, & Ayars 2011; Synergy, 2002). Though the literature on sustainability rating systems continues to evolve, a consensus appears to be emerging around best practices for these tools. This emerging consensus is embodied in documents like the *Code of Good Practice for Setting Social and Environmental Standards* and draft *Credibility Principles* produced by the International Social and Environmental Accreditation and Labeling (ISEAL) Alliance (ISEAL Alliance, 2010a; ISEAL Alliance, 2010b), the World Wildlife Fund's (2009) *Principles for Setting and Implementing Credible Standards for Sustainability*, the Green Products Roundtable's (2011) *Preferred Practices for Organizational Credibility*, and the Natural Resources Defense Council's (2012) "leaf rating" scheme for ecolabels, as well as surveys of experts (e.g. ISEAL Alliance, 2007; ISEAL Alliance, 2011).

This paper compares SSRSs to the best practices recommended in the broader sustainability rating systems literature that seem most relevant to schools. It also includes some more speculative criteria that some authors have suggested may be important but about which there is less agreement. Specifically, I propose that SSRSs should have the following characteristics:

- **Accountability mechanisms** refer to means for providing assurance that the data used to determine a rating are accurate, typically in the form of verification by another party. Surveys of leaders in corporate social and environmental responsibility have found that the presence of a credible verification process is among the most important elements in creating trust in sustainability standards (ISEAL Alliance, 2007; ISEAL Alliance, 2011) and is included as a desirable characteristic of rating systems in ISEAL Alliance (2010b), World Wildlife Fund (2009), and Natural Resources Defense Council (2012). This is further supported by research suggesting that voluntary environmental programs with enforcement mechanisms produce better results than those without such mechanisms (Darnall & Sides, 2008; Lenox & Nash, 2003; Potoski & Prakash, 2005).

- **Comprehensive scope** refers to the range of sustainability topics (e.g. curriculum, energy, waste, community engagement and service, water, transportation, etc.) that the rating system addresses. By addressing a wide range of sustainability issues, programs can reduce the likelihood that improvements in one sustainability dimension will come at the expense of another. Comprehensive scope is important to avoid misleading users of the ratings, who are likely to believe that a rating signifies good overall sustainability performance (Font & Tribe, 2001). As the Green Products Roundtable (2011) argues, "if the name of the label implies that qualifying products are holistically green then the standard used by the labeling program must meaningfully address all environmental/public health hot spots" (p. 4). The value of a comprehensive scope is also supported by Anton, Deltas, & Khanna (2004), who find that more comprehensive Environmental Management Systems are associated with lower toxic emissions.
- **Multiple levels of achievement**, offering more than one level of recognition (e.g., Bronze, Silver, Gold), are useful for encouraging continuous improvements. Having multiple levels enables rating systems to be accessible to novices while providing higher performers with ambitious standards for which to strive. In this way, levels may help rating systems overcome the tradeoff between the stringency of the requirements and the number of participants; i.e., if the requirements are too challenging, few schools may be willing to participate but if the requirements are too easy, the rating system may not drive much change (Golden, 2011). Further, Bleda & Valentea's (2009) simulation model of consumer behavior in the presence of ecolabels found that the presence of a graded ecolabel (i.e. one with multiple levels) successfully shifted the market towards improved environmental performance while a binary ecolabel did not.
- **Open governance processes** means having publicly available governance processes that enable the involvement of a variety of stakeholders in creating and refining the system. Such processes help ensure that the rating system is relevant to stakeholders and are expected to create a sense of ownership, and thus increase support for the resulting rating system (ISEAL Alliance, 2010b). Consistent with Vallejo & Hauselmann's (2004) notion that the legitimacy of rating systems and similar tools "depends on the ability of the process to engage the stakeholders in a meaningful dialogue in which they feel ownership benefits" (p. 4), meaningful and balanced stakeholder engagement in the process is a requirement in ISEAL Alliance's (2010a) *Code of Good Practice* and is included as a desirable characteristic in World Wildlife Fund (2009), and Natural Resources Defense Council (2012). Indeed, fair representation of all major interest groups in the standard-setting process was the most important factor in the credibility of a sustainability standard in ISEAL Alliance's (2007) survey of experts.
- **Performance-focused criteria** quantitatively measure aspects of schools' sustainability performance. They differ from strategy-focused criteria that relate to the adoption or implementation of specified policies, practices, or processes believed to contribute to improved sustainability performance. For example, "total energy consumption per square foot of building space" is a performance-focused criterion, while "the implementation of an energy management system" or "the use of more efficient light bulbs" are strategy-focused criteria. Because

there is no guarantee that a given strategy will lead to improved performance, using performance-focused criteria is necessary to ensure that the system rewards and encourages actual improvements in sustainability performance (Honey & Stewart, 2002). A rating system comprised solely of strategy-focused criteria could reward the implementation of many ineffective strategies over the implementation of a small number of effective strategies. Performance-based criteria also do not prescribe particular strategies, which means they provide greater flexibility and may encourage more innovative solutions. The focus on performance-based criteria is consistent with World Wildlife Fund's (2009) call for sustainability standards to be "performance-based" and "results-oriented".

- **Public reporting** means that the data submitted in support of schools' ratings are made available publicly. Public reporting enables comparisons between participants, thus facilitating benchmarking and strengthening the ability of schools to learn from each other. Public reporting also provides greater accountability because it enables interested parties to learn what participants did to earn their ratings. Inclusion of this characteristic responds to World Wildlife Fund's (2009) support for public release of certification and accreditation reports as well as criticism that the ISO 14001 standard for Environmental Management Systems upon which some SSRs are based does not require public reporting (Morrison et al., 2000).
- **Transparent criteria** mean that the standards or requirements for earning a rating are publicly available. Transparent criteria enable the audience of the rating system as well as prospective participants to identify what recognition means and how to earn it. ISEAL Alliance's (2011a) *Code of Good Practice* requires that final standards be placed in the public domain and transparency about criteria is a desired characteristic in World Wildlife Fund (2009), Natural Resources Defense Council (2012), Green Products Roundtable (2011) and ISEAL Alliance (2010b).

This paper seeks to determine to what extent these characteristics are reflected in existing SSRs in the USA and other English-speaking countries. Though the list of desired characteristics is not comprehensive – ease of use, quality of criteria, and cost are also likely to influence the effectiveness of SSRs – the proposed characteristics do provide a starting place for describing SSRs and identifying potential areas for improvement.

Methods

English-language sustainability rating systems for primary and secondary schools were identified through Internet searches (using terms such as green school certification, school ecolabels, green school ranking, and school sustainability assessment) and through requests to subscribers of email discussion lists focused on environmental and sustainability education (e.g., sustaink12@umich.edu, env-ed-research@jiscmail.ac.uk, and grnsch-l@listserv.brown.edu). These searches and requests revealed over 80 programs and tools schools have used to assess or gain recognition for one or more aspects of their sustainability efforts, including:

- 21 stand-alone assessment frameworks and checklists intended for internal use (e.g., U.S. Environmental Protection Agency's Healthy School Environments Assessment Tool, Sustainable Schools' Sustainability Assessment Questionnaire for K-12 School, Illinois Environmental Protection Agency's Green Schools Checklist); these programs do not provide an overall score or rating or, if they do, not one for public use.
- 8 programs focused exclusively on one particular dimension of sustainability in schools (e.g., ENERGYSTAR for K-12 School Districts, Consortium for School Networking's Green Computing Certification Program)
- 4 businesses-focused rating systems in which small numbers of schools were participating (e.g., Green Business League's Certified Green Business program, Green Business Alliance's Greenify program)
- 7 awards programs with a limited number of prizes (e.g., America's Greenest School Contest, the U.S. Department of Education's Green Ribbon Schools program)
- 40 rating systems designed specifically for schools, covering multiple aspects of sustainability, with no limit on the number of schools that can be recognized (e.g., Wisconsin's Green & Healthy Schools program, Foundation for Environmental Education's Eco-Schools programs).
- 6 additional programs, including New Zealand's Enviroschools program, for which insufficient information was available through the Internet to enable reviewing them.

This review focused exclusively on SSRs. Of the 40 identified, 32 were reviewed (Table 1). The other eight SSRs were not included because they were closely related to another SSR included in the study (e.g., the Foundation for Environmental Education's Eco-Schools program operates similar SSRs in 52 countries but only Eco-Schools USA was included). Appendix 1 provides brief programmatic summaries and the website addresses for each of the SSRs reviewed here.

Twenty (63%) of the reviewed SSRs are administered by non-profit organizations while the remaining 12 (37%) are managed by government agencies. A large majority (84%, n=27) are administered by organizations based in the United States. Four (13%) are managed by Canadian organizations and the remaining one (3%) is administered by an Australian organization. In terms of geographic scope, eight (25%) are focused on schools in a specific city or county, 15 (47%) focus at the state or provincial level, and

one (3%) covers schools in several states. Seven (22%) are national in focus and the one remaining SSRS does not specify any geographic boundaries. Many of the SSRSs do not publicize information about the number of participants on their websites, but among those who do, the number of participants ranged from 17 to more than 6,000.

For the purpose of determining the strengths and limitations of the 32 SSRSs, their respective websites were examined to assess:

- **Accountability mechanisms** – whether or not any of the following accountability mechanisms were in place: independent third party verification, second party verification (i.e., verification by an individual or entity affiliated with the organization administering the rating system), first-party verification (i.e., verification by the school itself through, for example, the school principal's endorsement). Programs that did not clearly specify any accountability mechanism were assumed to rely on first-party verification.
- **Comprehensive scope** – whether or not there was at least one criterion that addressed each of the following 14 topics: administration and management; building design and construction; communication and school culture; curriculum; energy; engagement and service; food; greenhouse gas emissions; grounds; health, safety, and wellbeing; purchasing; transportation; waste; and water. This list of topics is taken from a complementary study that categorized the assessment indicators used in 43 green school assessment frameworks and rating systems (Dautremont-Smith, forthcoming).¹ Unlike this study, which focuses more on high-level characteristics related to the design and governance of SSRSs, Dautremont-Smith (forthcoming) provides a more detailed examination of the quality of the specific indicators and assessment criteria that are used to evaluate a school's sustainability performance (i.e. one level of analysis below the current study). The author was able to categorize virtually all of the indicators used in the 43 tools into these 14 topics, suggesting that they represent the range of topics that sustainable schools are currently expected to address. Table 1 shows subtopics that Dautremont-Smith (forthcoming) included under each of the major topic headings.
- **Multiple levels of achievement** – number of levels of recognition
- **Open governance processes** - whether or not information is provided about formal mechanisms through which stakeholders can contribute to rating system governance, or whether and how stakeholder input has been solicited (e.g., through a public comment period)
- **Performance-focused criteria** – whether criteria used to award a rating were performance-focused, strategy-focused, or a hybrid (i.e., systems with at least one of each type of criterion)
- **Public reporting** – if there was no public reporting (i.e., no data about rated schools publicly available on the website), partial public reporting (i.e., some

¹ Dautremont-Smith (forthcoming) includes more tools than the current study because it also includes some assessment frameworks and checklists that are intended for internal use in addition to the formal rating systems examined here. For example, it includes Sierra Youth Coalition's High School Sustainability Assessment Framework and UK Department for Children, Schools and Families' "s3: sustainable school self-evaluation."

information about participants made publicly available on the website), or complete public reporting (i.e., all data submitted by participants made publicly available on the website)

- **Transparent criteria** – whether or not criteria for earning a rating were identified

Results

This section describes the extent to which existing SSRs exhibit each of the proposed characteristics. Tables 2 and 3 present the data upon which the following analysis is based.

Accountability mechanisms

Most SSRs require very little in the way of verification. Almost 66 percent (n=21) of systems rely on first-party verification and 25 percent (n=8) use second-party verification. Only one (3%), U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) for Schools, requires third-party verification for all participants. Participants submit an application along with the relevant documentation through an online tool. The application is then reviewed by Green Building Certification Institute (GBCI), which determines what level of certification is warranted. Participants have the opportunity to appeal the GBCI's determination.

The remaining two SSRs (6%) used a hybrid approach in which initial levels of participation require only first-party verification but higher levels of recognition are reserved for schools whose submission has been verified by a second or third party. For example, the Bronze and Silver level recognition under the Eco-Schools USA program require only a self-assessment while the Green Flag level requires a site visit by Eco-Schools USA staff, partners, or volunteers. Similarly, Collaborative for High Performance Schools' (CHPS) Criteria for New Construction and Major Modernizations offers a "CHPS Designed" designation for first-party verification and "CHPS Verified" designation for projects verified by a CHPS-approved third-party assessor.

Comprehensive scope

The criteria used by most SSRs do not address sustainability in a comprehensive manner (Table 3). As shown in Figure 1, some topics are covered much more frequently than others. Waste and energy are the most commonly covered topics with coverage by 94% (n=30) and 88% (n=28) SSRs respectively. On the other hand, greenhouse gas emissions, food, and building design and construction are the least covered topics. Each of these topics is addressed by less than ten of the SSRs.

SSRs tend to use either specific criteria (e.g. "are there courses on environmental issues taught at your school?" and "are Energy Star's "sleep" features on computers and copiers activated?") or open-ended questions (e.g. "how does the school facilitate student awareness of the ecological and ethical implications of their actions and decisions?") to assess school performance. Most SSRs use specific criteria and of these, Green Omaha Coalition's Green Schools Scorecard, King County Green Schools Program, and Washington Green School were the most comprehensive. Each includes specific criteria about all topics except greenhouse gas emissions. Of the SSRs that take an open-ended approach, GREEN Schools Canada is the most open-ended one; and as a result is the only SSR to potentially reward action related to each of the sustainability topics. It awards

points for the implementation of very broadly defined class projects related to environmental education. Indeed, any classroom activity "to enhance the environment, to communicate to others about the environment, or to demonstrate the wise and sustainable use of resources" counts towards a school's rating.

Multiple levels of achievement

The majority of SSRSs provide multiple levels of recognition. Twelve (38%) offer four or more levels of achievement. GREEN Schools Canada offers the most with a potentially limitless number of levels. Because points for the implementation of class projects are accumulated year after year, it has developed a system of numbered tiers (e.g. Earth II, Earth III, etc) that can grow indefinitely. Nine SSRSs (28%) offer three levels of recognition, one (3%) provides two tiers, and nine (28%) offer only a single level of achievement. The remaining SSRS (3%), the CHPS Operations Report Card, uses a point-based system with no defined recognition levels.

Open governance processes

The websites of only two (6%) of the SSRSs, LEED and CHPS, describe a process for interested stakeholders to participate in the development or governance of the SSRS. LEED and CHPS both have public comment periods on new versions of their rating systems, as well as various technical and advisory committees on which stakeholders may serve. While the websites of a few other programs suggest that a variety of individuals had been involved in the creation of their respective rating systems, they appear to have no ongoing, formalized processes for interested individuals to get involved.

Performance-focused criteria

A large majority of SSRSs do not use performance-focused criteria to determine participant ratings. Only six (19 percent) of the SSRSs included at least one performance-focused criterion. Half of these still relied overwhelmingly on strategy-focused criteria and none used only performance-focused criteria. The three green building-focused rating systems, LEED for Schools and the two CHPS rating systems, are the only ones that use a substantial number of performance-focused criteria. The other 26 SSRSs (81%) base their ratings exclusively on whether schools had implemented particular strategies believed to lead to environmental improvement.

Public reporting

None of the SSRSs make public all of the data upon which their ratings are based. The majority (60%, n=20) of SSRSs provide no information at all about how participating schools achieved a rating. The other (40%, n=12) SSRSs make some information about participants available. However, this information typically consists only of brief summaries or case studies of a subset of participants. LEED for Schools provides the most detailed information about participants. A completed scorecard from each LEED-

certified school building is available through a searchable and publicly accessible online database.

Transparent criteria

All but one of the SSRSs make the criteria upon which their ratings are based publicly available on their websites. The National Green School Coalition Certification was the only SSRS that did not make a full list of its criteria publicly available.

Discussion

Taken together, these results suggest that SSRSs could be improved substantially. Although most have transparent criteria and offer multiple levels of recognition, they tend to have also weak or non-existent accountability mechanisms, limited topical scope, closed governance processes, criteria that focus on practices rather than performance, and minimal public reporting. In light of these weaknesses, school stakeholders like students, parents, and community members are unlikely to see ratings as meaningful and principals, superintendents and other school decision makers are unlikely to perceive ratings as valuable. This seems likely to severely limit the transformative potential of SSRSs. This section first discusses the implications of the results and concludes with proposing a way forward.

Accountability mechanisms

The lack of strong accountability mechanisms in SSRSs suggests that stakeholders should be skeptical of the ratings. In most cases, the ratings are being awarded without any mechanism for ensuring that schools have made a correct self-assessment. While intentional deceit by schools may seem unlikely, there is a danger that schools may unintentionally misinterpret the criteria or make an overly charitable assessment. This is especially true since many of the criteria in the SSRSs leave substantial room for interpretation. For example, one criterion in the Arizona Environmentally Healthy School Program Self-Evaluation is "School has incorporated environmental educational information in their science or other appropriate courses." No guidance is provided about what constitutes "environmental educational information", to what degree it must be incorporated in a course, and what should count as "appropriate courses." The extent to which unintentional score inflation or intentional cheating is occurring is an empirical question but, since no SSRS makes the assessments publicly available, researchers have limited ability to study this issue.

A significant barrier to implementing stronger accountability measures is likely cost. Indeed, participation in LEED for Schools and CHPS for New Construction, the only two SSRSs to require third party verification, costs at least two thousand dollars and potentially quite a bit more, depending on the size of the building. Such costs may put participation out of reach for many schools, especially those already facing budget challenges. However, cheaper accountability mechanisms such as creating a transparent way for stakeholders to raise questions about ratings or requiring review by a peer school or community organization could provide greater assurance that data are accurate. Such strategies create avenues for greater engagement by stakeholders, peer institutions, and community organizations and so also support other goals such as building and strengthening school sustainability networks.

Comprehensive Scope

The piecemeal treatment of sustainability by most SSRSs means that schools can earn sustainability credentials without addressing important sustainability topics. Worse, this

lack of comprehensiveness means that progress in one dimension of sustainability could come at the expense of performance in another. For example, school waste production might be reduced by switching to prepared foods but this could be at the expense of student health.

It is particularly worrisome that criteria related to food are included in only a quarter of the SSRs. Studies on the life-cycle impacts of total societal consumption suggest that food consumption, along with housing and transportation, is one of the top three drivers of negative environmental impacts (Tukker & Jansen, 2006). The lack of attention to greenhouse gas emissions is also a concern, but this is tempered by the fact that this topic was defined narrowly to include only criteria that ask directly about emissions; most SSRs did include criteria about major generators of greenhouse gas emissions like energy use and transportation.

It is also important to note that many social dimensions of sustainability (e.g. diversity or labor practices) were not addressed by this study. This is because criteria related to these topics are so uncommon in SSRs that they did not even emerge as a topic in Dautremont-Smith's (forthcoming) review of the indicators and assessment criteria used in SSRs and assessment frameworks. Had social topics also been considered, the SSRs would appear even less comprehensive.

Fortunately, the limited topical scope of most SSRs should be relatively easy to address. SSR administrators would need to add criteria so that at least the topics identified in Dautremont-Smith (forthcoming) are included. To be even more comprehensive, administrators should also explore ways to incorporate criteria relating to social dimensions of sustainability, perhaps drawing on criteria provided by corporate sustainability frameworks such as Global Reporting Initiative, Underwriters Laboratories' Standard for Sustainability for Manufacturing Organizations, and the Dow Jones Sustainability Indexes.

This study only sought to determine if particular topics were addressed by SSRs, not the depth to which they were covered. Many SSRs had only a small number of criteria addressing certain topics, suggesting that there may be room for greater depth as well as breadth of assessment. For example, the Arizona Environmentally Healthy School Program's only criterion related to transportation merely asks whether the school has begun the acquisition of "low-polluting" buses.

Multiple Levels of Achievement

It is encouraging that most SSRs are offering multiple levels of recognition. This structure provides an incentive for participants to make continued improvements in hopes of earning higher levels of recognition. Even in this respect however, there may be room for improvement. Krnel & Naglic (2009) noted that the top award in the Slovenian Eco-Schools program was "quite easy to achieve" (p. 10) and indeed, for many SSRs, the requirements to earn the highest level of recognition seem fairly weak and seem to fall well short of anything approaching true sustainability.

For example, earning the highest level of recognition in the Washington Green Schools program is largely a matter of persistence. Schools must conduct an assessment and implement one "lasting change" and four "action items" over a period of five years in each of the following categories: Energy Efficiency; Recycling & Waste Reduction; Toxics Reduction & Indoor Air Quality; Transportation & Outdoor Air Quality; and Water Quality & Conservation. The "lasting changes" tend to be steps with a longer duration such as the adoption of new policies or plans (e.g. "award preferential parking for carpooling vehicles"), the creation of new infrastructure (e.g. "create covered/secure bicycle parking facilities"), or the establishment of new programs (e.g. "establish a 'Walking School Bus' program"). Action items, on the other hand, are one-time efforts such as "offer a bicycle safety workshop" or "Celebrate International Walk to School Month." Within this framework, it seems quite possible for schools to earn the top-level of recognition without having made significant reduction in their environmental impact.

Having relatively weak requirements for the highest levels of recognition is problematic for several reasons. First, it means schools that reach the top level are not encouraged to make further improvements. Second, weak requirements may lead school administrators to underestimate the challenge of sustainability and as a result give it less attention than warranted. Lastly, it risks misleading users of SSRSs who might reasonably believe that a high rating means a school has achieved a high level of sustainability performance. SSRS administrators can address this concern by developing a vision of a sustainable school and then setting levels based on progress towards this ideal end state. The top levels of recognition could then be reserved for schools that are close to achieving this vision. This would provide participating schools with a clear long term target for which to strive. As an added benefit, setting rating levels based on a long term vision of sustainability minimizes the need to regularly ratchet up rating levels over time as what was once best practice becomes standard practice.

Open governance processes

Very few SSRSs appear to have publicly available governance processes. This increases the danger that SSRS administrators could make important decisions about the rating system without providing interested stakeholders opportunities for input. While some SSRS administrators do appear to have engaged at least some stakeholder groups in the initial design of the system, without public governance processes there is no guarantee that these stakeholders will continue to have a voice in the system's evolution. Moreover, not having publicly available governance processes severely limits the ability of stakeholders without strong connections to the SSRS administrator to participate in the process. To increase legitimacy and support from stakeholders, SSRS administrators should create formal governance mechanisms that give stakeholders a voice in the design and ongoing management of the system. These mechanisms might include a governing body comprised of different stakeholder representatives or providing opportunities for interested parties to comment on new versions of the rating system.

Performance-focused criteria

The minimal use of performance-focused criteria in SSRs means that most systems provide no meaningful basis for comparing participating schools with each other or for determining if a participant has improved over time. The emphasis on strategy-focused criteria seems likely to encourage hasty implementation of strategies and exposes SSRs to charges of faddishness in the strategies they choose to promote. Further, the focus on specified strategies can narrow the focus of school decision makers and discourage the development of innovative solutions. Wherever possible, SSR administrators should seek to incorporate quantitative performance-focused criteria into the determination of participant ratings. The strategy-focused criteria upon which ratings are currently based could be converted into suggestions for improvement that would accompany these new performance-focused criteria.

Public reporting

The failure of SSRs to make available the data upon which ratings are based represents a significant missed opportunity. This information could empower school sustainability advocates with examples of sustainability initiatives from other schools and enable schools to more easily learn from each others' experiences. The information could also be used to identify trends in how schools are approaching sustainability and determine where schools may need more support. Allowing potential users of school ratings to view these data can boost their trust in the validity of the ratings as well, because they would be able to evaluate the data themselves.

One challenge SSR administrators may face in moving to public reporting is that many do not currently appear to allow electronic submission. Instead, participants must mail in printed copies of their application. This makes public reporting very time intensive because data would need to be manually reentered into an electronic database to be accessible online. Requiring participants to submit their data through an online reporting system would minimize this problem, improve participants' experience, and reduce the time SSR administrators spend processing submissions.

Transparent criteria

In a bright spot for SSRs, almost all were fully transparent about their criteria. This enables potential participants and users of the ratings like parents, students, and community members to understand what the ratings mean. Sharing the criteria publicly also provides a starting place for harmonization of criteria among SSRs since it allows each SSR administrator to examine the criteria used by the others.

A way forward

The weaknesses identified by this study seem to be at least partly a function of the small size and limited staff capacity of most SSR administrators. It takes staff time to implement accountability mechanisms; design comprehensive, performance-focused criteria; coordinate participatory governance structure; and manage public reporting

systems. However, many of the SSRSs appear to be managed by a single individual, often someone with other responsibilities. Moreover, because almost all of the programs are free to participants, host organizations may find it difficult to hire additional staff. SSRS administrators will therefore likely struggle to act on many of the recommendations above.

Given these circumstances, a possible way forward is the consolidation of SSRSs. Exactly how such consolidation should proceed would need to be resolved through negotiations among SSRS administrators. One option would be for SSRS administrators in each country to collaborate with each other to launch a new national SSRS, managed either by an existing SSRS administrator or a new organization. SSRS administrators would then phase out their existing systems and deploy the resources that had been devoted to their SSRS to the provision of direct support and training to help schools perform well in the new SSRS. SSRS administrators that are focused on a particular state or region could also play a role in verifying the performance of schools within their regions.

Beyond increased capacity that can come from joining forces, consolidation of SSRSs is likely to bring additional benefits. A reduction in the number of SSRSs would, for example, reduce confusion among schools about which system to use. Further, the support of current SSRS administrators should enable the new SSRS to achieve greater brand recognition than that enjoyed by current SSRSs. Greater brand recognition would increase the value of earning a rating, which means more schools would likely be interested in participating. Moreover, consolidation would minimize duplication of effort within the school sustainability community and enable organizations to allocate scarce resources towards activities that could more directly help schools improve their sustainability performance. Finally, while the current hodgepodge of SSRSs with different criteria makes it very difficult for participants in one program to benchmark with participants in another program, a single national SSRS would also enable schools across the country to learn from each other. The Green Schools National Network's recent "Proposal for a K-12 School Sustainability Rating System" (Appendix 2) is an encouraging step towards unification behind a single SSRS.

The negotiations necessary to achieve the proposed consolidation of SSRSs probably will be quite tricky, because organizations may be hesitant to give up on the SSRS that they have been working hard to create. However, there are several factors that could lead SSRS administrators to support such a move. First, since very few SSRS administrators are charging participation fees, giving up the SSRS would not entail the loss of a regular income. Second, giving up administration tasks would allow organizations to allocate staff towards higher impact work. Third, participating organizations could be given a permanent voice in the governance process of the proposed national SSRS, perhaps through an advisory council of partner organizations. Lastly, SSRS administrators who would chose not to participate would risk irrelevance, as a well-designed national or international SSRS could outcompete most existing SSRSs.

This study is exploratory in nature and is intended to provide a starting place for further research on SSRSs. It provides some speculative suggestions for why research on SSRSs to date has found limited impact on student sustainability literacy. However, there clearly is a need for more empirical research on the impact of SSRSs, partly with the goal of identifying attributes linked to impact on student sustainability literacy and operational sustainability performance. Further, as this study was based on a review of content available on SSRS websites, future research would benefit from greater engagement with SSRS administrators to understand, for example, why SSRSs are designed as they are. Finally, it would be beneficial to review SSRSs in languages other than English to determine what insights these systems may have to offer.

With 56 million Americans – almost 20 percent of the population – spending their weekdays in schools, schools have a tremendous opportunity to be leaders for sustainability. A robust and well-designed rating system could drive continuing improvements in school sustainability performance with the resulting impacts of graduates who are more sustainability literate as well as direct reductions in environmental impact as a result of improvements in school operations. The recommendations presented here are intended to pave the way to such a rating system.

Figure 1

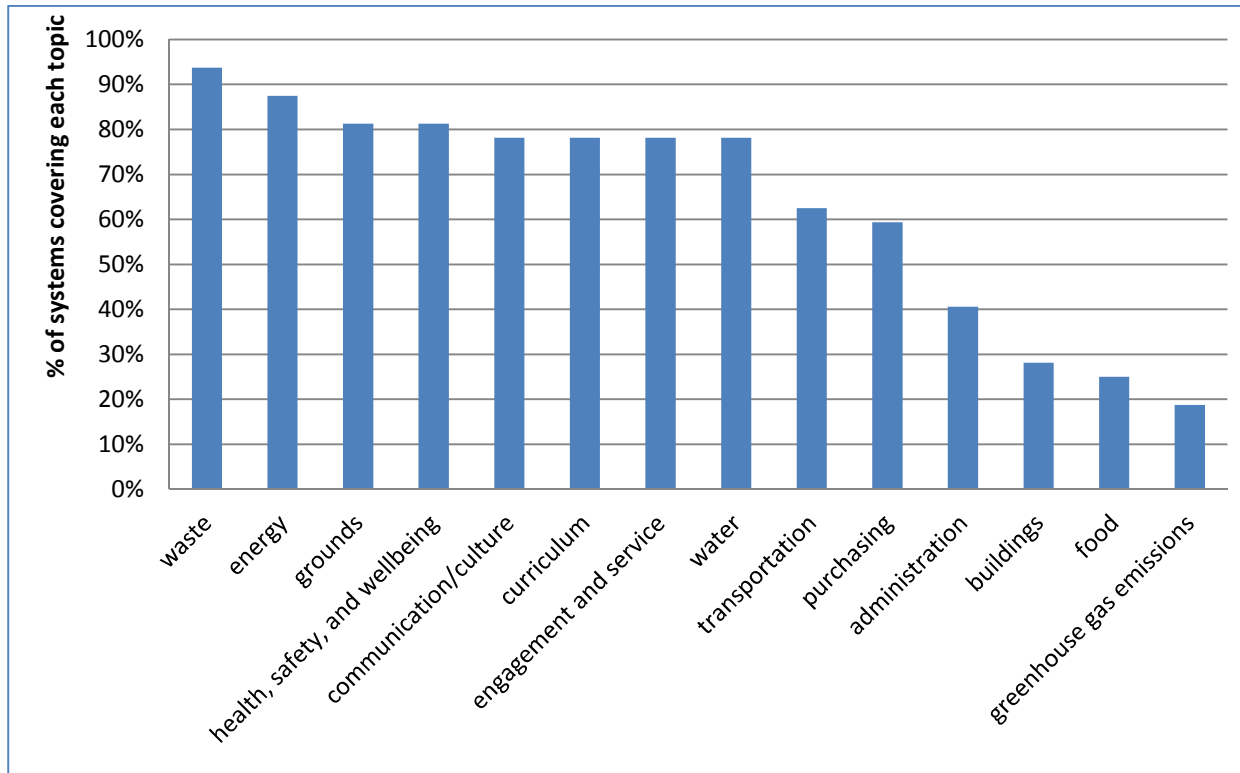


Table 1

Topic	Sub-topics
Administration and Management	Assessment and Monitoring; Mission/Vision/Policy; Planning and Goal Setting; Teams and Staff
Buildings	Acoustics; Design and Construction; Operations and Maintenance
Communication and School Culture	Communications, Marketing, and Publicity; Celebration; Culture; Events; Pledges; Professional Development and Training; Recognition Programs; Student Clubs; Student Leadership
Curriculum	Campus as a Learning Tool, Courses, Field Studies, Holding Class Outdoors, Sustainability/Environmental Literacy Assessment, Teaching Materials, Topical Education
Energy	Appliances and Equipment; Behavior Change Efforts; Building Consolidation, Shut Downs, and Setbacks; Energy Audits and Building Commissioning; Energy Consumption; Energy Costs; Energy Performance Rating; Energy Sources; Heating, Ventilation and Air Conditioning; Lighting; Metering and Monitoring; Renewable Energy
Community Engagement and Service	Community Education and Outreach; Community Involvement and Support; Connections to Environmental Groups; Donations; Global Connections; Partnerships; Public Access and Use; Service; Stakeholder Engagement; Support for the Green Schools Movement
Food	Drinking Water; Healthy Eating; Socially and Environmentally Preferable Foods
Greenhouse Gas Emissions	Emissions Inventorying and Reporting; Refrigerant Management
Grounds	Fertilizer Application; Gardens; Habitats and Wildlife; Heat Island Effect; Land Use; Mowing; Native Species; Outdoor Classrooms; Play and Recreation; Trees
Health, Safety and Wellbeing	Asthma and Allergies; Chemicals; Employee Wellness Programs; Exercise and Physical Activity; Hand-washing; Health Services; Idling; Indoor Air Quality; Mercury; Outdoor Air Quality; Swimming Pool Hygiene; Thermal Comfort; Tobacco and Other Drugs; Traffic Safety; Violence, Bullying and Harassment; Water Quality
Purchasing	Green Purchasing Policy/Guidelines; Recycled content materials
Transportation	Commuting; Field Trips; School Fleet; Transportation Plans
Waste	Biodegradable Items; Construction Waste; Diversion Rates; Electronics Waste; Field Trips Waste; Garbage; Hazardous Waste; Litter; Lunch Waste; Organic Waste and Composting; Packaging and Bulk Purchasing; Recycle; Reduce; Reuse; Waste Audits; Waste Oil and Grease
Water	Behavior Change Efforts; Consumption and Metering; Cost; Water Using Fixtures and Equipment; Inspection and Monitoring; Landscape Watering; Rainwater Collection; Runoff and Stormwater Management; Swimming Pools; Wastewater; Water Source

Table 2

School sustainability rating system	Host organization(s)	Geographic focus	Geographic scope	Non-profit or government	Number of participating schools (as of 4/15/12)
Arizona Environmentally Healthy School	Arizona Department of Environmental Quality	Arizona	State/Province	Government	Unspecified
Athens-Clarke County Green Schools	ACC Recycling Division, ACC Public Utilities (Water Conservation), ACC Transportation & Public Works (Stormwater) and Keep Athens-Clarke County Beautiful	Athens-Clarke County, GA	County/City	Government	17
Certified Green School	Sustainable Sandhills	Cumberland County, NC	County/City	Non-profit	Unspecified
Certified Green School Division	Virginia School Boards Association	Virginia	State/Province	Non-profit	Unspecified
CHPS Criteria for New Construction and Major Modernizations	Collaborative for High Performance Schools	CA, CO, MA, NY, TX, WA, NH, RI, CT, ME, VT	Multiple States	Non-profit	227
CHPS Operations Report Card	Collaborative for High Performance Schools	United States	National	Non-profit	Unspecified
Eco-Globe Schools	Manitoba Education	Manitoba	State/Province	Government	21
Eco-Schools USA	National Wildlife Federation	United States	National	Non-profit	883
Georgia Green and Healthy Schools	Georgia Department of Natural Resources	Georgia	State/Province	Government	20
GO GREEN! Program	Sunset Zoo	Manhattan, KS	None specified	Government	17
Green & Healthy School Program	Gwinnett Clean & Beautiful and Gwinnett County Public Schools	Gwinnett County, GA	County/City	Non-profit	77
Green Flag Schools Program	Center for Health Environment and Justice	United States	National	Non-profit	Unspecified
Green Ribbon Schools	Texas Children in Nature Coalition	Texas	State/Province	Non-profit	561
GREEN Schools Canada	Seeds Foundation	Canada	National	Non-profit	6000+
Green Schools	Green Omaha Coalition	Omaha	County/City	Non-profit	Unspecified

Scorecard					
GreenSchools!	Project Learning Tree	United States	National	Non-profit	61
Kentucky Green & Healthy Schools	Kentucky Environmental Education Council and Kentucky Department of Education	Kentucky	State/Province	Government	197
King County Green Schools Program	King County Department of Natural Resources and Parks, Solid Waste Division	King County, WA outside of the City of Seattle	County/City	Government	208
LEED for Schools	U.S. Green Building Council	United States	National	Non-profit	271
Maryland Green Schools	Maryland Association for Environmental and Outdoor Education	Maryland	State/Province	Non-profit	389
Michigan Green Schools	Michigan Green Schools	Michigan	State/Province	Non-profit	600+
Monterey Bay Area Green Business Program Schools Checklist	Monterey Bay Area Green Business Program	Monterey Bay Area	County/City	Government	31
National Green School Coalition Certification	National Green School Coalition	United States	National	Non-profit	Unspecified
Ontario EcoSchools	Consortium of education stakeholders	Ontario	State/Province	Non-profit	Unspecified
Oregon Green Schools	Oregon Green Schools Association	Oregon	State/Province	Non-profit	306
Palm Beach County Green School Recognition Program	Pine Jog Environmental Education Center	Palm Beach County, FL	County/City	Non-profit	49
ResourceSmart 5 Star Sustainability Certification Scheme	Sustainability Victoria	Victoria	State/Province	Government	Unspecified
South Carolina Green Steps Schools	Keep the Midlands Beautiful	South Carolina	State/Province	Non-profit	32
Tennessee Green Schools Program	Tennessee Pollution Prevention Partnership	Tennessee	State/Province	Government	339
Toronto EcoSchools	Toronto District School Board	Toronto	County/City	Government	401
Washington Green Schools	Washington Green Schools	Washington	State/Province	Non-profit	202
Wisconsin Green & Healthy Schools	Wisconsin Department of Natural Resources and Department of Public Instruction	Wisconsin	State/Province	Government	142

Table 3

School sustainability rating system	Accountability mechanisms classification	Number of rating levels	Open governance processes	Performance or strategy-based	Public reporting	Transparent criteria
Arizona Environmentally Healthy School	First	1	No	Strategy	No	Yes
Athens-Clarke County Green Schools	First	1	No	Strategy	No	Yes
Certified Green School	First	1	No	Strategy	No	Yes
Certified Green School Division	Second	4	No	Strategy	No	Yes
CHPS Criteria for New Construction and Major Modernizations	Hybrid	3	Yes	Hybrid	Partial	Yes
CHPS Operations Report Card	First	0	Yes	Hybrid	Partial	Yes
Eco-Globe Schools	First	3	No	Strategy	No	Yes
Eco-Schools USA	Hybrid	3	No	Strategy	No	Yes
Georgia Green and Healthy Schools	First	3	No	Strategy	Partial	Yes
GO GREEN! Program	First	1	No	Strategy	No	Yes
Green & Healthy School Program	First	4	No	Strategy	No	Yes
Green Flag Schools Program	First	3	No	Strategy	Partial	Yes
Green Ribbon Schools	First	1	No	Strategy	No	Yes
GREEN Schools Canada	First	infinite	No	Strategy	No	Yes
Green Schools Scorecard	Second	4	No	Strategy	No	Yes
GreenSchools!	First	1	No	Strategy	No	Yes
Kentucky Green & Healthy Schools	First	5	No	Strategy	Partial	Yes
King County Green Schools Program	First	3	No	Hybrid	Partial	Yes
LEED for Schools	Third	4	Yes	Hybrid	Partial	Yes
Maryland Green Schools	Second	2	No	Strategy	Partial	Yes
Michigan Green Schools	First	1	No	Strategy	No	Yes

Monterey Bay Area Green Business Program Schools Checklist	Second	1	No	Strategy	No	Yes
National Green School Coalition Certification	Second	6	No	Strategy	No	Partial
Ontario EcoSchools	Second	3	No	Strategy	No	Yes
Oregon Green Schools	First	3	No	Strategy	No	Yes
Palm Beach County Green School Recognition Program	First	3	No	Strategy	Partial	Yes
ResourceSmart 5 Star Sustainability Certification Scheme	Second	5	No	Hybrid	No	Yes
South Carolina Green Steps Schools	First	1	No	Strategy	Partial	Yes
Tennessee Green Schools Program	First	4	No	Strategy	Partial	Yes
Toronto EcoSchools	Second	4	No	Hybrid	Partial	Yes
Washington Green Schools	First	5	No	Strategy	No	Yes
Wisconsin Green & Healthy Schools	First	4	No	Strategy	No	Yes

Table 4

School sustainability rating system	administration and management	communication and school culture	curriculum	community engagement and service	Operations										percent of topics covered	
					buildings	energy	food	greenhouse gas emissions	grounds	health, safety, and wellbeing	purchasing	transportation	waste	water		
Arizona Environmentally Healthy School			✓		✓						✓		✓	✓		36
Athens-Clarke County Green Schools			✓	✓						✓				✓	✓	36
Certified Green School	✓	✓				✓	✓			✓	✓	✓	✓	✓	✓	71
Certified Green School Division	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓		86
CHPS Criteria for New Construction and Major Modernizations			✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	79
CHPS Operations Report Card					✓	✓				✓						21
Eco-Globe Schools	✓	✓	✓	✓						✓						36
Eco-Schools USA	✓	✓	✓	✓		✓		✓	✓	✓		✓	✓	✓		79
Georgia Green and Healthy Schools		✓	✓	✓		✓			✓	✓	✓	✓	✓	✓	✓	71
GO GREEN! Program		✓	✓	✓		✓			✓	✓	✓		✓	✓		64
Green & Healthy School Program		✓	✓	✓		✓			✓	✓	✓	✓	✓	✓	✓	71
Green Flag Schools Program		✓	✓							✓	✓		✓			36
Green Ribbon Schools		✓	✓			✓			✓	✓		✓	✓	✓		57
GREEN Schools Canada	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	100
Green Schools Scorecard	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	93
GreenSchools!		✓	✓	✓		✓			✓	✓	✓	✓	✓	✓	✓	71
Kentucky Green & Healthy Schools		✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	79
King County Green Schools Program	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	93

LEED for Schools			✓	✓	✓	✓		✓	✓	✓		✓	✓	✓	71
Maryland Green Schools		✓	✓	✓		✓			✓	✓		✓	✓	✓	64
Michigan Green Schools		✓	✓	✓		✓			✓				✓		43
Monterey Bay Area Green Business Program Schools Checklist		✓		✓		✓	✓		✓	✓	✓		✓	✓	64
National Green School Coalition Certification	✓	✓		✓		✓			✓	✓	✓		✓	✓	64
Ontario EcoSchools	✓	✓	✓	✓		✓							✓	✓	50
Oregon Green Schools	✓	✓		✓		✓			✓		✓		✓	✓	57
Palm Beach County Green School Recognition Program		✓	✓	✓		✓			✓				✓	✓	50
ResourceSmart 5 Star Sustainability Certification Scheme	✓	✓	✓	✓		✓		✓	✓		✓	✓	✓	✓	79
South Carolina Green Steps Schools						✓			✓	✓	✓		✓	✓	43
Tennessee Green Schools Program						✓				✓		✓	✓	✓	36
Toronto EcoSchools	✓	✓	✓	✓		✓			✓	✓	✓	✓	✓		71
Washington Green Schools	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	93
Wisconsin Green & Healthy Schools		✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	79
<i>Percent of SSRS that include this topic</i>	41	78	78	78	28	88	25	19	81	81	63	63	94	78	

Appendix 1 - SSRS Program Summaries

This Appendix presents brief programmatic summaries of each of the SSRSs reviewed in this study.

Arizona Environmentally Healthy School program (Arizona, U.S.)

<http://www.azdeq.gov/ceh/tools.html>

Under this program, Arizona schools that meet at least 14 criteria from a checklist of 22 possible criteria can receive recognition as an "Arizona Environmentally Healthy" school. It is administered by the Arizona Department of Environmental Quality.

Athens Green School Program (Athens-Clarke County, Georgia, U.S.)

<http://www.accgreenschools.org/>

This program is a project of the Athens-Clarke County Recycling Division, Water Conservation Office, Greenway, Stormwater, Planning and Keep Athens-Clarke County Beautiful. Through the program, schools can earn recognition as a "Green School" if at least five classrooms in the school complete five lesson plans/projects (i.e. 25 total lesson plans or projects) in the following areas: recycling/waste reduction, beautification/litter prevention/school improvement, water education, environmental education related community service, and other environmental education activity.

Certified Green School Program, Sustainable Sandhills (several counties, North Carolina, U.S.)

<http://www.sustainablesandhills.org/GreenSchoolsProgram.html>

This program offers recognition as a "Certified Green School" to schools that have implemented a minimum set of practices on a Green Schools Program Checklist. Sustainable Sandhills, a 501(c)(3) nonprofit, coordinates the program in partnership with participating school districts. Each district creates its own checklist.

Certified Green School Division, Go Green Virginia (Virginia, U.S.)

<http://www.gogreenva.org>

Go Green Virginia has separate recognition programs for public schools and independent schools. In the Green Public Schools Challenge, offered in partnership with the Virginia School Boards Association, school divisions can earn "Green School Division" status by earning at least 100 "green points" out of a possible 200 on a scorecard comprised of 30 action items. Public schools can earn Silver, Gold, and Platinum levels of recognition for scores of 125 points or higher. Similarly, the Green Independent Schools Challenge is offered in partnership with the Virginia Association of Independent Schools and awards "Green School" status to schools

that earn at earning at least 100 "green points" out of a possible 200. Independent schools use a different scorecard which has only 26 action items.

Collaborative for High Performance Schools' Criteria for New Construction and Major Modernizations (Various U.S. States)

<http://www.chps.net/dev/Drupal/node/212>

This is a set of mostly technical criteria for construction of high performance school buildings. The criteria are organized in seven categories: Leadership, Education and Innovation, Sustainable Sites, Water, Energy, Climate, Materials and Waste Management, and Indoor Environmental Quality. Buildings must meet a series of pre-requisites and earn a minimum number of points to get rated. Three levels of recognition are available. "CHPS Designed" is for school buildings that were designed using the criteria but that are not certified by a third party. "CHPS Verified" is awarded when compliance with the criteria is verified by a 3rd Party Assessor. "CHPS Verified Leader" is a higher level of recognition for school projects that perform well beyond minimum eligibility requirements. Participation is available to schools in California, Colorado, Hawaii, Massachusetts, New York, The Northeast (New Hampshire, Rhode Island, Connecticut, Maine, and Vermont), Texas, Virginia, and Washington. The criteria differ somewhat according to conditions in each region.

Collaborative for High Performance Schools' Operations Report Card (U.S.)

<http://www.chps.net/orc>

This tool provides schools with a report card and suggestions for improvement in five aspects of school operations: energy efficiency, thermal comfort, visual comfort, indoor air quality, and acoustics. Participants receive a numerical score on each aspect but there is no public recognition associated with participation. Scores in most categories are the result of occupant surveys and site measurements. The cost to participate is \$900 per school, with discounts for participation by multiple schools in the same district.

ECO-Globe Schools program (Manitoba, Canada)

http://www.edu.gov.mb.ca/k12/esd/eco_globe/index.html

This program, administered by Manitoba Education, offers three levels of recognition: Awareness, Action, and Transformation. Each level is associated with a series of high-level criteria with which participants must demonstrate compliance.

Eco-Schools USA (U.S.)

<http://www.nwf.org/Global-Warming/School-Solutions/Eco-Schools-USA.aspx>

This is the U.S. version of the Foundation for Environmental Education's International Eco-Schools programme, which has spread to over 50 countries since its beginning in 1994. The program promotes a seven steps process modeled on the steps involved with

implementing an environmental management system. These steps are to: 1) establish an Eco-Action Team, 2) perform an environmental audit, 3) develop an Eco-Action Plan, 4) monitor and evaluate implementation of the plan, 5) integrate Eco-Schools participation into the school curriculum, 6) involve the entire school and community in the Eco-Schools effort, and 7) creating an Eco-Code or mission statement. In the U.S., 3 levels of recognition are awarded based on the depth to which a school has implemented each of these steps. For example, at the Bronze level the Eco-Action team meets four times a year while at the Silver level the team must meet 6 times a year. Bronze and Silver levels are awarded based on a school's self-assessment. Verification by an Eco-Schools USA assessor is required to earn a Green Flag, the top-level of recognition. Initially, Green Flag status must be renewed every two years but once a school has earned its fourth Green Flag, it is considered to be a permanent Eco-School.

Georgia Green and Healthy Schools (Georgia, U.S)

<http://greenandhealthy.org>

GGHS is a voluntary green school recognition program for K-12 schools in Georgia coordinated by the Georgia Department of Natural Resources. Participating schools begin by forming a "Green and Healthy team" and pledging to become a Georgia Green and Healthy School. At this time, they choose one or more of six assessment areas on which they wish to focus. The assessment areas are: air, energy, facilities management, school grounds, solid waste management, and water. Schools become a "Level 1" school by completing a level 1 self-assessment for the chosen assessment area. They achieve "Level 2" status by completing a level 2 self-assessment for the chosen assessment area and implementing a lesson plan associated with the chosen assessment area. Finally participating schools reach "Level 3" by completing a community-based project related to the chosen assessment area. In addition, schools that achieve level 2 status for 3 assessment areas receive a GGHS banner. Schools that earn this banner and achieve Level 3 status in one or more areas are eligible to apply for a GGHS progress grant (as funding is available). Participants are expected to renew their participation at least every 2 years. There is no cost to participate.

GO GREEN! School program, Sunset Zoo (worldwide)

<http://www.ci.manhattan.ks.us/index.aspx?NID=830>

In this program, schools that involve at least 70% of the school's staff in implementing at least 16 green practices from a list of 32 options are recognized as GO GREEN! Schools. These practices are organized into the following categories: Reduce, Reuse, Recycle, and Respond. The program is administered by Sunset Zoo in Manhattan, Kansas.

Green & Healthy School Program, Gwinnett Clean & Beautiful and Gwinnett County Public Schools (Gwinnett County, Georgia, U.S.)

http://gwinnettcbo.org/index.php?option=com_content&task=blogcategory&id=110&Itemid=177

Participants in this program complete a Green & Healthy Achievement Profile through which they can earn points in the following topics: waste reduction & recycling, education and stewardship, water conservation and watershed protection, air quality, energy conservation, beautification and greenspace preservation, and community outreach. There are four levels of recognition (Discovering, Progressing, Taking Action, Reaching Higher) that are awarded based on the number of points earned in the profile.

Green Flag Schools Program, Center for Health Environment and Justice (U.S.)

<http://www.greenflagschools.org>

Initiated in 2003, the Green Flag Schools Program offers three levels of recognition. Schools can become a Level 1 Green Flag School by forming a Green Flag Team and completing the Green Flag School Environment Survey. Participants proceed to Level 2 by completing a classroom activity and a Level 2 survey for one of the following topics: Reduce, Reuse, Recycle; Integrated Pest Management; Indoor Air Quality; and Non-Toxic Products. They must also make a presentation to the school or community about the topic. To achieve Level 3 recognition, schools must complete another classroom activity and develop and implement a new or improved policy on the topic selected in step 2. Schools complete the program by completing the Level 2 and Level 3 steps for each topic.

Green Ribbon Schools, Texas Children in Nature Coalition (U.S.)

<http://www.greenribbonschools.org/>

This program designates participants as Green Ribbon Schools when they have completed one project in each of the following cornerstone areas: environmentally friendly campus; nature adventure; health, fitness and nutrition; and natural classrooms. Participants choose their own projects.

GREEN Schools Canada program, Seeds Foundation (Canada)

<http://seedsfoundation.ca//index.asp?pid=9>

The program awards recognition based on the number of class environmental projects that a school completes. Participants that complete 100 projects are designated as Green Schools. Subsequent levels are Jade (250 projects), Emerald (500 projects), and Earth School (1,000 projects). After reaching Earth School status, every additional 1000 projects increase a school's Earth School level. For example, an Earth IV school has completed 4000 projects.

Green Schools Scorecard, Green Omaha Coalition (Omaha, Oklahoma, U.S.)

<http://www.greenomahacoalition.org/councils/green-education/green-schools-program/>

This program provides a green scorecard for schools that includes criteria in the following categories: management strategies, water use and efficiency, energy use and efficiency, solid waste management, indoor environmental quality, grounds and landscaping, and other. Participants can earn one of four levels of recognition (Certified, One Leaf, Two Leaf, Three Leaf) based on the number of points they receive.

GreenSchools!, Project Learning Tree (U.S.)

<http://pltgreenschools.org/>

Project Learning Tree's GreenSchools! Program enables schools to earn recognition as a "PLT GreenSchool!". Participants earn this designation through a five step process:

1. Have at least two staff members attend a PLT Professional Development Workshop
2. Form a PLT GreenSchools! Team that includes students, teachers, staff, and community volunteers
3. Complete five "investigations" focusing on energy, water, waste and recycling, school site, and environmental quality.
4. Implement student-led action projects identified through the investigations and implement a small number of required practices such as incorporating of the investigation topics into the curriculum.
5. Share their results with their community

Project Learning Tree is a program of the American Forest Foundation.

Kentucky Green & Healthy Schools program (Kentucky, U.S.)

<http://greenschools.ky.gov/>

Started in 2007, Kentucky Green & Healthy Schools program is a joint project of the Kentucky Environmental Education Council and the Kentucky Department of Education. The program offers five levels of recognition. Participants can become a "Candidate School" by forming a Green and Healthy Team and pledging to become a Green & Healthy School. The next step is to complete an Instructional Leadership Inventory and two additional inventories from the following options: energy, green spaces, hazardous chemicals, health & safety, indoor air quality, solid waste, transportation, and water. After completing these inventories and implementing an improvement project of their choosing for each category, a school becomes a "School in Progress." Participants can earn "School Under Development" status by completing another three inventories and associated improvement projects. Schools then become an "Official Kentucky Green & Healthy School" by completing the remaining three inventories and improvement projects. The last level of recognition, "Model Kentucky Green & Healthy School," is awarded to schools that update the previous inventories and implement at least one new action project each year.

King County Green Schools Program (King County, Washington, U.S.)

<http://your.kingcounty.gov/solidwaste/greenschools/index.asp>

This program provides three levels of recognition. Participants achieve Level One status by forming a Green Team and implementing specified practices related to recycling and waste reduction. To receive recognition as a Level Two Green School, participants must meet criteria related to energy conservation and implement one more waste reduction or recycling practice from the Level One checklist. Finally, to reach Level Three, participants meet criteria related to water conservation and implement another waste reduction or recycling practice. The program provides additional criteria for environmental education, environmental purchasing, green building, hazardous materials management, litter reduction, and transportation options, but these are optional and no additional recognition is provided for completing them. The program is administered by the Solid Waste Division of the King County Department of Natural Resources and Parks. Only public and private K-12 schools and school districts in King County, outside the City of Seattle, are eligible to participate.

Leadership in Energy and Environmental Design (LEED®) for Schools (U.S.)

<http://www.usgbc.org/LEED/>

Administered by the U.S. Green Building Council (USGBC), LEED for Schools is a version of LEED for New Construction designed specifically for new school buildings. It offers four levels of recognition: Certified, Silver, Gold, and Platinum. A building must meet a variety of minimum standards to be eligible for LEED certification. The rating level is determined by the number of points a building earns. Points are earned by meeting performance standards and/or implementing various green practices.

Maryland Green School Awards Program (Maryland, U.S.)

<http://www.maeoe.org/greenschools/>

Started in 1999, this program is hosted by the Maryland Association for Environmental and Outdoor Education. To receive Maryland Green School status, a school must demonstrate that it meets: three curriculum and instruction criteria addressing Environmental Issue Instruction, professional development, and celebration; at least four of seven best management practices criteria related to water conservation/water pollution prevention, energy conservation, waste reduction, habitat restoration, structures for environmental learning, responsible transportation, and healthy school environment; and at least one of two criteria related to community partnerships. Maryland Green School status is good for four years. A school that recertifies twice chooses between becoming either a Model MAEOE MD Green School or MAEOE Maryland Green School, Emeritus. Model schools are required to continue to submit a renewal form every four years while Emeritus schools have no further requirements.

Michigan Green Schools (Michigan, U.S.)

<http://www.michiangreenschools.org/>

Administered by the Michigan Green Schools Foundation, this program awards the Michigan Green School designation to schools that meet at least ten out of 20 criteria. The program was initiated in 2006.

Monterey Bay Area Green Business Program Schools Checklist (multiple counties, California, U.S.)

<http://www.montereybaygreenbusiness.org>

This program recognizes businesses and government agencies in Monterey, Santa Cruz, and San Benito counties for their environmental achievements. It includes minimum requirements for all types of participants as well as a supplement checklist for schools. Schools must meet all of the criteria on the checklist to gain recognition as a Certified Green Business. The school checklist covers the following categories: pollution prevention, energy conservation, solid waste, water conservation, and employee awareness.

National Green School Coalition Certification (U.S.)

<http://nationalgreenschoolcoalition.com>

The National Green School Coalition offers green school certification for child care, early education and preschool centers in the United States. The certification program has six levels of recognition: Silver, Gold, Platinum, Titanium, Diamond, and Emerald. To earn certification, a school must implement a variety of mandatory initiatives related to indoor air quality, environmental toxins, waste, energy and water. Additionally, schools must have an environmental policy and action plan in place. Higher levels of recognition are earned through the implementation of more initiatives. Throughout the program, participants work with a Certified NGSC Representative who is responsible for carrying out the initial assessment and verifying compliance with the standard. After a school is certified, it is expected to complete and submit a full assessment every six months. The cost of participation varies according to facility size and population; the average is \$2,500. Certification programs for primary and secondary schools are under development.

Ontario EcoSchools (Ontario, Canada)

<http://ontarioecoschools.org>

Created in 2002, this program offers 3 levels of recognition (Bronze, Silver, Gold). The level is determined by the number of points a participant earns on the application form. The application has six sections: teamwork and leadership, energy conservation, waste minimization, school ground greening, curriculum, and environmental stewardship. Schools use a rubric to determine the number of points earned for each criterion. Certification lasts one year.

Oregon Green Schools (Oregon, U.S.)

<http://www.oregongreenschools.org>

This program offers 3 levels of recognition: Green, Merit and Premier. Participants earn Green status by: conducting a waste audit; setting measurable goals in the areas of garbage, recycling, energy, and water; and answering a variety of open-ended questions about their waste reduction and resource conservation efforts. To achieve Merit status, a participant must: meet the requirements for Green status; conduct a more detailed waste audit; provide waste reduction education and assistance to another school; adopt a waste reduction/resource conservation policy statement; and purchase at least one item containing post-consumer recycled content. Participants become a Premier Oregon Green School by: meeting the requirements for Merit status; providing waste reduction/resource conservation education or assistance to the local community; meeting previous resource conservation goals and setting new ones; reducing consumption of at least one product; reporting waste reduction efforts to the School Board; and submitting a brief description of the schools efforts for publication on the Oregon Green Schools website.

Palm Beach County Green Schools Recognition Program (Palm Beach County, Florida, U.S.)

<http://www.ourgreenschools.com/>

Coordinated by the Florida Atlantic University Pine Jog Environmental Education Center, this program offers three levels of recognition: Program of Promise, Program of Quality, and Program of Excellence. The level is determined based on the number of points a school receives on a rubric that covers school grounds enhancement, school sustainability, curriculum integration, community involvement, administrative support and administration. Cash prizes are awarded to the top schools.

ResourceSmart 5 Star Sustainability Certification Scheme (Victoria, Australia)

http://www.resourcesmart.vic.gov.au/for_educators.html

Coordinated by Sustainability Victoria, a government agency, the ResourceSmart 5 Star Sustainability Certification Scheme provides 5 levels of recognition for sustainability achievement. Schools earn "1Star" rating by completing a "Core Module" and reporting baseline data for resource use and habitat quality. Higher levels of recognition are achieved by implementing additional "Resource Modules," which focus on biodiversity, energy, waste, and water. Participants must also show improvement from their baseline to move up to higher levels and, starting at the 3Star level, must meet specific quantitative benchmarks for resource consumption and habit quality. To earn the 5Star rating, schools must also demonstrate whole school involvement in sustainability and community engagement, among other things. Certification is valid for 3 years and is verified by ResourceSmart-trained professional.

South Carolina Green Steps Schools (South Carolina, U.S.)

<http://www.greenstepsschools.com>

Established in 2003 by Keep the Midlands Beautiful, Sonoco Recycling, and the South Carolina Department of Health and Environmental Control's Office of Solid Waste Reduction and Recycling, Green Steps Schools provides recognition to schools that

implement green projects. Participants choose which projects to implement. Schools that have implemented two or more "model quality" projects in each of three categories - Conserve, Protect, and Restore – are designated as "Certified Green Step Schools". Model quality projects are those that are:

- significant - provides environmental and educational impact on the students and community
- well established - successful for at least 12 months
- sustainable - managed by a team of at least 3 staff members
- accessible - post an up-to-date detailed report of all your projects on your school's website and

Tennessee Green Schools Program (Tennessee, U.S.)

http://www.tennessee.gov/environment/ea/tp3/tp3_grschools.shtml

This program offers four levels of recognition. A school reaches Prospect level when any staff from that school signs up. Participations earn Pledge level by submitting a Pledge Card signed by the Principal describing green activities the school is doing as well as any new activities that are planned. They gain Partner level status by adopting an environmental policy, involving students in conducting a school environment evaluation, developing a plan for improvement that includes five projects, and implementing one of these projects. Finally, participants achieves Performer level by implementing the four remaining projects, involving the community in green initiatives, and mentoring another school. The program is part of the Tennessee Pollution Prevention Partnership, an initiative of the Tennessee Department of Environment and Conservation's Division of Community Assistance.

Toronto EcoSchools (Toronto, Ontario, Canada)

http://www.tdsb.on.ca/_site/ViewItem.asp?siteid=207&menuid=1425&pageid=1052

This program offers four levels of recognition to schools in Toronto (Bronze, Silver, Gold, and Platinum). The level is determined based on the school's score across five areas of assessment: Foster Leadership and Teamwork; Reduce Impact on the Environment; Care for and Create Vibrant School Grounds; Improve Student Achievement through Ecological Literacy; and Contribute to Healthy, Safe, and Caring School Communities. The assessment includes team self-assessment questions, performance indicators, and questions that are answered by a certification specialist who visits all applicants. Assessment for each question is based on a scale from zero to five.

Washington Green Schools program (Washington, U.S.)

<http://www.wagreenschools.org>

Launched in 2009, the Washington Green Schools program offers five levels of recognition corresponding to five "environmental categories". These categories are: Energy Efficiency; Recycling & Waste Reduction; Toxics Reduction & Indoor Air Quality;

Transportation & Outdoor Air Quality; and Water Quality & Conservation. To reach the first level, participants must form a green team, complete an assessment on one of the categories, implement a "lasting change" related to that category, implement an action item in the other four categories, and share results with others. Subsequent levels are achieved by following the same steps for a different category. Schools may tackle the categories in any order and each level is expected to take a full school year.

Wisconsin Green & Healthy Schools program (Wisconsin, U.S.)

<http://dnr.wi.gov/org/caer/ce/greenschools/>

Managed jointly by the Wisconsin Department of Natural Resources and the Wisconsin Department of Public Instruction, the Wisconsin Green & Healthy Schools program provides four levels of recognition. Schools achieve "Getting Started" status by forming a "Green & Healthy Team" and signing a pledge to become a Green & Healthy School. Participants get to the next level, "Under Construction", by completing assessments focused on Waste & Recycling, Energy, Water, School Facilities & Grounds, and Healthy Lifestyle. They must also meet complete two additional assessments from the following options: Transportation, Indoor Air Quality, Chemical & Mercury Management, Integrated Pest Management, and Community Involvement. Finally, schools must meet a small number of criteria related to these topics. The third level, "Green & Healthy School", is achieved by integrating the selected topics into the curriculum and implementing specific projects related to each topic. Schools must also meet additional requirements in some topic areas. Schools earn "Reaching Higher" status by completing the assessments and other required criteria for the three topic areas that were not previously selected.

Appendix 2 - Proposal for a K-12 School Sustainability Rating System

This proposal was presented at a pre-conference workshop hosted by the Green Schools National Network at their annual Green Schools National Conference in February 2012. The workshop was attended by approximately 60 leaders in the green school community, including representatives from several organizations that administer SSRs.



Proposal for a K-12 School Sustainability Rating System² Discussion Draft

February 27, 2012

Overview

Green Schools National Network (GSNN) proposes to develop – through a transparent and collaborative process involving key stakeholders – a formal rating system for school sustainability, with guidelines by which schools can measure themselves and qualify for different levels of recognition. This project responds to the need for a standardized system for measuring and comparing schools on progress toward sustainability, as described below.

Background/Rationale

Given the exciting and explosive growth of sustainability initiatives in every sector of school life, measuring and assessing progress toward sustainability goals has become increasingly important. While a variety of green and sustainability assessment tools and frameworks for schools

² This proposal is adapted from the "Proposal for a Campus Sustainability Rating System" that the Association for the Advancement of Sustainability in Higher Education (AASHE) used to launch the development of its Sustainability Tracking, Assessment & Rating System (STARS).

are available, there is currently no system that allows a large number of schools to meaningfully assess their progress over time or compare their overall level of sustainability achievement with other schools. Indeed, it is currently impossible to answer the frequently asked question, “Who are the leading schools in the green and sustainable schools movement?” with any degree of accuracy or confidence.

A widely-used and well-designed rating system would accomplish a number of important objectives to help advance the cause to provide green and sustainable schools for all children. Such a system would of necessity address all the dimensions of school sustainability (health, social, economic and ecological) and all the sectors and functions of school, including curriculum, extra-curricular activities, operations, and collaboration with communities. Benefits include:

- Helping schools to understand their current sustainability performance, set goals, and measure progress towards those goals;
- Enhancing the ability of schools to learn from and collaborate with each other by providing a common language and standardized criteria for school sustainability;
- Rewarding school sustainability leadership and creating incentives for continuous improvement by rewarding incremental progress toward sustainability with multiple levels of achievement (e.g. Level 1, 2, 3, 4, 5)
- Facilitate the identification of areas for improvement and aiding school decision makers in prioritizing sustainability efforts;
- Advancing environmental, health, and sustainability education at all levels of the curriculum, including using of the physical campus as a teaching tool, with measures that assess environmental literacy and civic engagement.
- Enabling schools to communicate their sustainability efforts to students, parents, teachers, administrators, and other stakeholders in a more credible and meaningful way that enables meaningful comparisons across schools; and
- Tracking trends and progress of the school sustainability community overall.

Current State of School Sustainability Assessment

Schools have been assessing their progress toward environmental and sustainability goals for a number of years, using a wide variety of different instruments and formats. GSNN has identified and reviewed over 50 English-language green school recognition programs and assessment frameworks. While many of the existing green school recognition programs have been effective at engaging large number of schools, none of the existing tools enable meaningful comparisons of schools based on a comprehensive assessment of sustainability performance. Moreover, most of the existing tools are intended for use in a particular state or region, which limits their utility for facilitating information sharing and benchmarking across state lines. The ability of schools and school districts to learn from one another is further inhibited by the fact that data submitted in support of schools’ ratings are generally not made available publicly. Additionally, few existing programs have transparent governance procedures.

A number of elements have recently come together to create a renewed interest in developing a new national green and sustainable schools rating system. First, the emergence of GSNN offers a potential organizing entity for the project. Second, the success of the Sustainability Tracking, Assessment & Rating System (STARS) in higher education has raised interest among K-12 schools in having a similar tool. Third, the creation of Department of Education's Green Ribbon Schools award program has underscored the need for a robust rating system that could help schools who

are just getting to clarify the multiple pathways to achieve Green Ribbon status. It also highlights the importance of having a consistent national framework for measuring green and sustainable schools.

Elements of the Proposed Rating System

Features

Informed by AASHE's experience with STARS, the proposed rating system would consist of a standardized assessment instrument to be filled out by participating institutions. Based on their scores, institutions would attain different levels of achievement.

Other proposed features include:

- Categories – these may be independently scored, with a total score determined by combining category scores according to an algorithm. Proposed categories include: operations, education, and administration & governance.
- Weighting - criteria would be weighted by point values, enabling data to be summarized numerically.
- Periodic Updates – GSNN will undertake periodic updates of the rating system criteria, released as new versions.
- Voluntary – it will be up to school to decide whether to participate. Since a school's level of achievement will be apparent after completing the checklist, it may decide at that time not to submit the data for posting. Because the system is voluntary, the process must be relatively streamlined and cost-effective, and schools must readily see the benefit of gathering and reporting data.
- Central, Public Posting – completed submissions, contact information, and related data will be posted on a single site open to inspection by other schools and the public.

Why a rating system instead of a ranking system?

As proposed by this project, a rating system refers to a voluntary self-reporting system, with broad levels of achievement. Any school that meets the criteria receives the rating. In contrast, a ranking system refers to a survey performed by a 3rd party, with schools ranked from best to worst. GSNN prefers a rating system for the following reasons:

- In a ranking system, only schools that expect to be in the top grouping would have an incentive to respond, since schools that are not yet very far along may look bad. In contrast, a rating system can have introductory levels that give even “beginner” schools something to work toward.
- A rating system can be self-sustaining through a submission fee while a ranking system would require outside funding each time for the 3rd party to perform its work.
- A rating system provides a clear "road map" of what one needs to do to reach a certain level of sustainability at any point in time. In contrast, a ranking system provides no clear “target” (you don’t know where you’ll end up in the rankings each year).
- In a ranking system, schools may end up at the top just by virtue of being ahead of the rest – even if they’re still far from achieving sustainability – while in a rating system the top classification could be empty for many years while schools work toward it. Thus a rating

system is better at promoting change as schools and school systems strive to achieve the highest rating, rather than simply trying to get ahead of other schools.

- Rating systems give positive recognition only through their levels of achievement, while ranking systems often also provide negative recognition to those at the bottom of the ranking, and therefore can generate bad feelings. Ranking systems may also lead to undesirable competitions between schools closely ranked in order, which creates incentives to “game the system.”
- Since a ranking system depends upon institutions filling out a survey for a 3rd party, the survey must be fairly easy to complete so that institutions will respond. In contrast, since those submitting an application to a rating system generally do so in anticipation of receiving positive recognition, a rating system has somewhat greater ability to ask more complex questions and therefore provide a better assessment of sustainability performance

Similarly, GSNN prefers a rating system to an awards program because, while awards programs are typically limited to a relatively small number of leading schools, any school that meets the criteria can earn a rating. In this way, a rating system can accommodate the participation of all schools, including those who are just embarking on sustainability and are not in a position to earn an award.

What about Third Party Certification?

Due to added costs, complexity, and time, initial versions of the rating system will not require third party certification. Instead, the system will rely on openness, public oversight, and institutional integrity. At some point in the future, as the need arises, additional verification mechanisms may be instituted.

Proposed Process

The development of the rating system will be as collaborative as possible, engaging stakeholders from schools, government, and NGOs. As the timeline below shows, there will be opportunities for input and revision during development of the rating system.

Development will be guided by a 7- to 9-person Steering Committee charged with the project’s overall management and direction, including assimilation of ideas proposed by stakeholders into a coherent system. The process will be highly deliberative, iterative, and interactive, with the Steering Committee having responsibility for approving versions of the rating system.

The Steering Committee will be supported by 3-5 technical advisors in each of the major categories of the rating system. Technical advisors will recommend criteria for consideration by the Steering Committee and will advise on point values and weighting of various criteria.

Finally, GSNN's Board of Directors has ultimate authority over the strategic direction and implementation of the rating system.

Assessment Criteria

Guidelines for selecting criteria

The criteria would be selected based on their utility for enabling meaningful benchmarking between schools. For this purpose, ideal criteria should be:

- **Comparable** – the criterion enables meaningful comparisons over time and among participants. Comparable criteria allow participants to gauge their progress and facilitate benchmarking and information sharing between participants. This is commonly achieved by controlling for factors like population size, the area of the building, or the local climate. For example, energy consumption per square foot of built area allows for more meaningful comparisons than just total energy consumption. Because it is impossible to fully control for all variables that might impact the criteria of interest, comparisons are always imperfect. However, comparisons do not need to be perfect to be meaningful.
- **Easily measurable** – the data needed to determine whether the criterion has been met are readily available and accessible. This implies that schools should be able to collect the data themselves and would not need to hire consultants to participate. Using easily measured criteria reduces the cost of data collection and enables greater participation.
- **Performance-focused** – the criterion focuses on actual performance rather than practices that are believed to lead to improved performance. For example, a criterion might focus on total energy consumption per square foot rather than on the initiation of an energy conservation campaign. Performance-focused criteria reward achievement rather than activity and outcomes rather inputs. Further, because performance-focused criteria don't prescribe any particular practice for improving performance, they provide greater flexibility and tend to be more conducive to innovation. Finally, since performance can often be improved in a huge variety of ways, focusing on performance directly requires substantially fewer criteria.
- **Multi-leveled** – the criterion allows for multiple levels of achievement, as opposed to criteria that are binary in nature. Multi-leveled criteria provide more information and are better able to reward improvements over time. For example, a criterion that asks about the percentage of a school's energy derived from a renewable resource would be preferable to a criterion that asks whether the school uses any renewable energy.
- **Non-redundant** – the criterion measures something distinctive that is not already captured by another criterion. Having multiple criteria that measure essentially thing adds unnecessarily to the work of collecting the data. More generally, limiting the number of criteria reduces the likelihood of overwhelming potential users.

- **Relevant** – the criterion addresses something that is important to stakeholders or is of particular significance to improving the school's total impact, as informed by lifecycle assessment or ecological footprint analysis. Focusing on the most relevant areas of concern helps to keep the total number of criteria manageable.
- **Verifiable** – the criterion is defined in such a way that independent observers could all agree on whether or not the criterion has been met. In other words, whether a school has met the criterion must be objective rather than subjective.³ This helps to minimize differences in measurement over time and across schools and is crucial for enabling meaningful comparisons.
- **Understandable** – stakeholders should be able to understand and correctly interpret the criterion. If the potential users of the rating system do not understand a criterion, they are unlikely to be able to act upon it.

In practical terms, very few criteria can have all of these attributes and it is almost always necessary to compromise on several of them. This is especially true because there are often tradeoffs between some of the criteria. For example, a performance-focused indicator may be really hard to measure and/or may not be understandable by stakeholders. Nevertheless, this list serves as a useful guide when choosing between several possible criteria.

Tentative list of criteria

This list suggests general concepts for criteria that could be used in the proposed rating system. The final list of criteria will provide more detailed definitions and much greater technical specifications to ensure consistent interpretation across schools.

Administration and Management

- Percentage of the following stakeholder groups that are represented on the school's sustainability committee (or similar body focused on the school's sustainability performance): students, teachers, school administrators, facilities maintenance staff, parents, public officials, and community organizations.
- Percentage of major guiding documents that incorporate a high-level commitment to sustainability. Major guiding documents include the school or district's mission statement, strategic plan, and master plan.
- Percentage of the following topics covered by a formally adopted plan or policy: green building, climate change, environmental and sustainability education, energy conservation, community engagement and service, healthy and sustainable food, green grounds

³ This is not to say that verifiable criteria cannot address subjective issues. For example, a verifiable criterion might require that at least 95 percent of employees are satisfied in their careers. While employee satisfaction is inherently subjective, it is still possible to verify that an employee survey has been done and that it found a particular level of satisfaction.

management, chemical use management, integrated pest management, indoor environmental quality, idling, bullying, environmentally preferable purchasing, sustainable transportation, waste management, water consumption, and stormwater management.

Buildings

- Percentage of the school's building area that was constructed or underwent major renovations in the past five years that was LEED or CHPS certified
- Percentage of classrooms that meet acoustical standards
- Percentage of classrooms that meet lighting standards

Communication and School Culture

- Percent of the following communications and outreach strategies employed: webpage(s) describing school's green efforts, bulletin board or other display highlighting green efforts, signage about school sustainability features, annual sustainability report, school-wide green event (e.g. Earthday celebration), green living pledge, green component in employee orientation, green component in student family handbook, and green focused competition between classes and/or grades.
- Percent of employees (including teachers) that have received professional development in a sustainability-related topic within the past three years.

Curriculum

- Average annual improvement in student science and environmental literacy scores.
- Average annual improvement in proficiency scores in literacy and math.
- Percent of teachers that incorporate sustainability and environmental themes into their classes

Energy

- Weighted average of the building efficiency score in EnergyStar Portfolio Manager for all eligible buildings
- Percent of energy consumption derived from renewable resources

Community Engagement and Service

- Percent of students who engage in at least one service learning project each year
- Average number of hours of school-supported community service per student

Food

- Rating in US Department of Agriculture's HealthierUS School Challenge

- Percent of food purchased that is certified as environmentally preferable (e.g. Organic, FairTrade, Food Alliance, MSC, Rainforest Alliance)
- Percent of food purchased that was grown and processed within 100 miles of the school

Greenhouse Gas Emissions

- Percent reduction in total greenhouse gas emissions per person relative to a baseline year

Grounds

- Percent of school grounds devoted ecologically or socially beneficial uses
- Percentage of paved area that is shaded, has a high solar reflectance, or is open-grid pavement

Health, Safety, and Wellbeing

- Percent of students that engage in at least 150 minutes of school-supervised physical education per week
- Percent of cleaning products (by cost) that are certified by an externally approved rating system
- Percent below a specified threshold of instances of violence, including assault, harassment, abuse, and bullying, per 100 students

Purchasing

- Percent of total office paper content purchased over the past year that is post-consumer material, tree-free fiber, or fiber from forests certified as responsibly managed by the Forest Stewardship Council
- Percent of total office paper content that is "totally chlorine-free" (TCF) or "processed-chlorine-free" (PCF)
- Percent of total computer purchases (by cost) that are Electronic Product Environmental Assessment Tool (EPEAT) certified
- Percent of total furniture purchases (by cost) that are "level" certified

Transportation

- Percent reduction in per person commuting-related greenhouse gas emissions below an baseline in which every person is assumed to drive a car with average fuel economy alone five days a week for a distance equal to the average roundtrip commuting distance
- Percent of school-owned vehicles that meet environmental specifications

Waste

- Percent of waste that is diverted from the landfill or incinerator by recycling, composting, reusing, donating, or re-selling
- Percent reduction in total waste generation per person relative to a baseline year

Water

- Percent reduction in total water consumption per person relative to a baseline year
- Percent of fixtures that meet water efficiency standards
- Percent of irrigation water that is non-potable
- Percent of wastewater that is treated ecologically

Timeline (subject to change)

Date	Accomplishment
March-December, 2012	Recruit partner organizations and funding to assist in development and rollout of proposed tool
June 1, 2012	Release Review of Green School Assessment Criteria, a report analyzing assessment criteria used by existing sustainable school rating systems and assessment instruments and recommending criteria for the proposed new rating system
January 1, 2013	Invite interested individuals to apply to serve on rating system Steering Committee
February 15, 2013	Form Steering Committee comprised individuals who represent the diversity of K-12 schools
June 15, 2013	Release first draft of rating system for public comment
January 1, 2014	Version 1.0 of system launched and ready to be used

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