A US Roadmap for Implementing the Global Action Program (GAP) on Education for Sustainable Development

Kim Smith
Portland Community College

Rosalyn McKeown
Portland State University

Debra Rowe
Oakland Community College

Victor Nolet
Western Washington University

Peter Adriance
National Assembly of the Bahai

Madison Vorva
Pomona College

ABSTRACT

Education for Sustainable Development (ESD) allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future. During the United Nations Decade of ESD (2005-2014), a broad spectrum of stakeholders in the US expanded sustainability efforts across schools, higher education institutions, non-profits, government agencies, industries, and faith communities. In November 2014, UNESCO launched the Roadmap for Implementing the Global Action Programme on Education for Sustainable Development (GAP) at the World Conference in Japan, to extend ESD efforts.

In response, the U.S. delegation of American non-governmental organizations, led by the Greater Portland Sustainability Education Network (GPSEN) - a UN University Regional Centre of Expertise (RCE) on ESD and other key stakeholders, developed a series of recommendations to increase education, public awareness, and training efforts in the US to foster a more sustainable future. With the launch of the UN's Sustainable Development Goals (SDGs) in 2015, countries have agreed to establish objectives to meet the 17 SDGs. ESD includes key issues through participatory teaching and learning methods that motivate and empower learners to change their behavior and take action, consequently promoting competencies like critical thinking, collaborative decision-making, and innovative problem-solving. The following ESD Roadmap and Implementation Recommendations seeks to engage all stakeholders to advance the GAP's priority action areas in the US by advancing policies, transforming institutions, building capacity, empowering and engaging youth, and strengthening local communities.

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BACKGROUND

Today's complex challenges require an educated, aware, and skilled citizenry to enact innovative solutions. As stated by Irina Bokova, Director-General of UNESCO, in the foreword of the Global Action Programme (GAP) on Education for Sustainable Development (ESD), "the risks and opportunities we face call for a paradigm shift that can only be embedded in our societies through education and learning" (2014). ESD allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future. ESD means including key sustainable development issues into teaching and learning; for example, climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption. It also requires participatory teaching and learning methods that motivate and empower learners to change their behavior and take systemic action for sustainable development. ESD consequently promotes competencies like critical thinking, imagining future scenarios and making decisions in a collaborative way. The GAP priorities seek to advance policies, transform institutions, build capacity, empower and engage youth, and strengthen local communities.

GLOBAL CONTEXT

The 2030 Agenda for Sustainable Development (2030 Agenda), adopted by the UN General Assembly in September 2015, is "a plan of action for people, planet and prosperity. It also seeks to strengthen universal peace in larger freedom. The eradication of poverty in all its forms and 5 dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development."3 Goal 4 of the 17 Sustainable Development Goals (SDGs) of the UN 2030 Agenda strives to ensure quality education for all and, along with the UNESCO Education 2030 Framework for Action (Education 2030), includes targets that address education for sustainable development (ESD) and global citizenship education (GCE). With input from stakeholders across the globe, the UNESCO Global Action Programme (GAP) on ESD offers a "roadmap" to identify the goals, objectives, and priority action areas, to focus efforts, inspire participation and commitment, and establish means of implementation and monitoring. UN agencies, member states, non-governmental organizations, academia, private sector entities, and other stakeholders are working to develop frameworks, strategies, and partnerships to support achievement of these visionary goals and targets, within their specific national and regional contexts.

ESD IN THE UNITED STATES

During the UN Decade for Education for Sustainable Development (2005-2014), a broad spectrum of stakeholders in the United States expanded sustainability programs and initiatives across schools, higher education institutions, non-profits, government agencies, industries, and in faith communities. Extensive efforts were made within the formal and nonformal education sectors to advance education, public awareness, and training for sustainable development. The UN Decade of ESD Final Report (2005-2014) highlights how ESD has made a difference, with ten core accomplishments ranging from institutional change and stakeholder

engagement to political leadership and learner-driven pedagogies. Many organizations and institutions in the United States address ESD. Their missions and programs are summarized in a supplementary report: "ESD in the United States" (Smith et al. 2015).

Much remains to be done, however. One particular challenge rests in the decentralized education system of the United States. Based upon our federal Constitution, power over education is reserved to the states and local authorities, as well as to individual schools and higher education institutions.6 In contrast to many other countries, the United States presents a unique narrative with respect to ESD that is inherently led at the local and grassroots level, primarily by representatives of the non-governmental sector and academia. Throughout federal, state, and local governments, ESD efforts are addressed at various levels of authority across a diverse and broad group of agencies.

An example of the state and local autonomy of the U.S. education system and the role of partnerships to support ESD in the United States is the U.S. Department of Education Green Ribbon Schools, a federal communications and outreach tool structured as a recognition award. Through the award, the U.S. Department of Education (ED) encourages schools to use resources from a variety of federal agencies and national non-profits, as well as to collaborate locally. This is especially important since many federal sustainability resources are not authorized at ED but at federal natural resource and health agencies. In many cases, they are offered by the non-profit and private sectors. ED plays the role of communicator and connector. Schools and districts leverage these nationally available public and private sector resources to build their own organic community partnerships with entities such as local parks, aquariums, farms, museums, and businesses.

The award has been transformational at the state level as well; it asks state education agencies to collaborate across facilities, health, and learning divisions; with state health, environment, and natural resource agencies; and pertinent non-profits. Using a variety of communications and outreach tools, ED then highlights the innovative practices of honorees that other schools may implement as well, recognizing that the precise partnerships and resources that make schools' sustainability practices possible will vary from locality to locality. Thus, in the absence of a single national authority over school facilities, health, or learning, a variety of actors are able to accelerate the sustainable schools movement in the United States.

A second challenge rests in higher education. While campus sustainability efforts have been made at colleges and universities across the United States, as documented by organizations such as the Association for the Advancement of Sustainability in Higher Education (AASHE) and Second Nature, ESD has yet to be integrated into standards for most disciplines and is not included in the accreditation standards for undergraduate and graduate programs throughout the country. At many campuses, students can still graduate without an understanding of core sustainability concepts and critical issues or the change management and systems-thinking skills necessary to participate in innovative solutions (Rowe, Gentile, and Clevey, 2014). Therefore, higher education institutions are being called upon to help lead the sustainability transformation, in order to train the global citizens and leaders of the future.

It is important to note that aspects of ESD are important to the successful implementation of all 17 SDGs. For example, to achieve sustainable production

and consumption targets, we need effective workplace training and consumer education. Similarly, specialists across formal education and non-formal education, in all sectors, will be needed to address specific SDGs from health and energy to climate change and biodiversity. The humanities and social sciences are relevant as well, in addition to science, technology, engineering, and math (STEM) programs. These efforts, however, will require critical-thinking, creativity, and collaboration, as well as the motivation necessary to mobilize individuals and communities to create the cultural, structural, and policy changes needed to address the critical issues of our time.

The GAP helps bring particular focus and processes to enable a concerted effort among leaders, organizations, formal and non-formal educators, and learners of all ages to envision a sustainable future through a renewed commitment to people, planet, prosperity, peace, and partnership. Partnership is a core part of Agenda 2030 and Education 2030. Successful implementation of the GAP and expansion of ESD in the United States will require cross-sector partnership models and collaborative strategies that engage appropriate government authorities, are driven at the local, grassroots level, and involve broad, inclusive groups of stakeholders. Success will include the efforts of many stakeholders to: 1) demonstrate expanded implementation of ESD priorities and activities; 2) increase partnerships across sectors and among diverse stakeholders – including government – to reduce duplication in addressing sustainability issues; 3) increase U.S. representation on ESD in international forums such as UNESCO and the United Nations to highlight U.S. models and activities, as well as learn from other country and regional examples. 4) improve reporting to UNESCO and the United Nations on U.S. activities supporting ESD and GCE, including indicators for Education 2030 and Agenda 2030. Through collaborative approaches to develop and demonstrate ESD practices and processes, we can discover synergies that raise our efficacy and collective impact for achieving a sustainable future.

The next steps are to turn these visions and aspirational goals into actions. As indicated in the GAP commitments already submitted by U.S. delegates, these strategies can come in many tangible forms. Curricula clearinghouses, train-the-trainer models, community forums, youth networks, and volunteerism related to sustainability issues are just a few examples. The following recommendations strive to highlight particular goals and objectives that can help achieve the GAP.

GAP RECOMMENDATIONS

The Global Action Programme on Education for Sustainable Development (ESD) offers a roadmap for nations and regions to identify their specific needs, resources, and strategies to utilize ESD to create a sustainable future. To guide the process, the GAP identifies five priority action areas for creating a sustainable future:

    1. Advancing policy by mainstreaming ESD
    2. Transforming learning and training environments through whole-institution approaches
    3. Building capacities of educators and trainers
    4. Empowering and mobilizing youth
    5. Accelerating sustainable solutions at the local level

With these action areas as a foundation, the U.S. ESD delegation of American non-governmental organizations – led by the Greater Portland Sustainability Education Network (GPSEN) – a UN University Regional Centre of Expertise (RCE) on ESD, the U.S. Partnership for Education for Sustainable Development, and other stakeholders - developed a series of recommendations to increase education, public awareness, and training efforts in the United States to foster a more sustainable future. Community members and ESD leaders throughout the nation are invited to develop indicators and metrics and suggest strategies to implement these objectives which meet their own regional and institutional needs.

PRIORITY 1: ADVANCING POLICY

Mainstream ESD into both education and sustainable development policies, to create an enabling environment for ESD and to bring about systemic change

1. Promote Education for Sustainable Development (ESD) in national and state policies, meeting the needs of people, planet, prosperity, peace, and partnership, in accordance with the UN's Sustainable Development Goals and international education declarations, as signed by the United States. In particular:
a. Address the policy implications of the outcomes from the UNESCO World Conference on ESD (Aichi-Nagoya, 2014), the World Education Forum (Incheon, 2015) and the Sustainable Development Goals (New York, 2015), as relevant to education, training, and public awareness campaigns
b. Establish initiatives and programs that support SDG Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
c. Align efforts and reporting structures with Goal 4.7, through the advancement of the Global Action Programme on ESD: "By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development."7
d. Review existing research and reports of national ESD thought leaders to highlight lessons learned and identify next steps [See References]
e. Engage with existing formal and informal inter-agency networks to establish coordinating bodies and mechanisms to facilitate the GAP, establish targets, assess outcomes, and collaborate with other regional, national, and international centers focused on ESD

2. Achieve legislative and institutional support to reorient educational systems and curricula toward sustainability literacy and principles of ESD
a. Integrate ESD as a component of all education reform policy initiatives to increase access and retention in quality education, support universal graduation, and benefit from ESD pedagogy
b. Integrate assessment of student's ESD knowledge and skills into educational standards and academic performance measures at different educational levels
c. Review current environmental, economic, and cultural literacy standards, plans and practices (e.g., Oregon Environmental Literacy Plan, PA Green & Healthy

Schools9) and identify strategies for integration, implementation and advancement of "sustainability literacy" plans

d. Work with accreditation bodies for higher education institutions and disciplinary programs to ensure sustainability and ESD language is included in standards

e. Develop indicators, frameworks and processes for educational institutions, governments and educators to monitor and evaluate teaching and learning approaches to determine their effectiveness and efficiency in promoting ESD

3. Work with government agencies to advance ESD by funding workforce training to meet social service and infrastructural development needs

a. Provide training through the humanities and social sciences to develop skillsets, such as conflict resolution, disaster preparedness, crisis adaptation, poverty alleviation and multicultural awareness, to support community challenges, e.g., violent extremism, climate refugees, etc.

b. Support sustainable energy policies, planning and implementation through funding of training programs, STEM initiatives and projects that foster innovation for a sustainable energy future

4. Increase engagement of citizens in policy discussions, design and implementation

a. Develop programs which help students and the public learn civil discourse and policy engagement across political spectrums to produce shared understandings, visions, and actions for a sustainable future

b. Include youth and underserved communities on advisory boards, enabled with the power to enact change, to ensure their active involvement in policy planning, implementation and evaluation to shape policies to strengthen ESD

5. Dedicate public and private funding, recognition, high-level backing and leadership to enable implementation of sustainable development-related policies

a. Expand resource availability and grant-funding for research in ESD, including in formal and nonformal education

b. Enable diverse ESD approaches and experimentation across disciplines and sectors in order to test and scale up the impact of successful learning approaches and meet varying regional needs and challenges within their geographic and institutional contexts

c. Develop certification and reporting structures to identify, replicate and adapt successful practices, increase scale and efficiencies by leveraging resources, and help advise policies, e.g., Maryland Green Schools, and Sustainable Jersey for Schools

PRIORITY 2: TRANSFORMING LEARNING AND TRAINING ENVIRONMENTS

Integrate sustainability principles into education and training settings

1. Identify whole-institution and systems approaches and lessons learned through the UN Decade on ESD and support the Global Action Programme on ESD by building on UNDESD accomplishments and challenges, recognizing the value of advancing ESD within agencies, institutions, and organizations [See References]

2. Integrate ESD best practices into the operations of institutions

a. Model sustainability values and practices in operations by promoting sustainable lifestyles, consumption and production, and building design and use

b. Address energy and infrastructure needs by promoting energy efficiency, increasing use of renewable energy technologies that pay for themselves and produce jobs, and advancing energy literacy through curricula and public awareness campaigns

c. Call for sustainability knowledge and skillsets in job descriptions and annual performance evaluations, to institutionalize sustainability through Human Resource practices in all employment areas

d. Emphasize civic responsibility, ethics, and skill building of all leaders, educators, staff and students

e. Engage leaders, educators, staff, students and community members in sustainable operational practices, including learning about and engaging in issues related to energy, food, water, waste and biodiversity

3. Collaborate with existing organizations that support whole institution approaches and create new mechanisms, as necessary

a. Build upon the success of sustainability models for schools, such as the U.S. Department of Education's Green Ribbon Schools program, the Center for Green Schools at the U.S. Green Building Council, the Cloud Institute, the National Wildlife Federation, and Shelburne Farms

b. Advance efforts in higher education institutions through national and international sustainability networks, including the Association for the Advancement of Sustainability in Higher Education (AASHE), Second Nature, the Higher Education Associations Sustainability Consortium (HEASC), and the Disciplinary Associations Network for Sustainability (DANS), along with their assessment tools: STARS12; the American College & University Presidents Climate Commitment13 and related Climate Action Plans; and the International Sustainability Literacy Test, plus ESD resources, such as the Climate Resiliency Toolkit, the Green Genome assessment, and other resources from the Sustainability Education and Economic Development (SEED) Center at the American Association of Community Colleges (AACC)

c. Work with teacher education professional organizations such as Kappa Delta Pi (KDP), the American Association of Colleges for Education (AACTE), The National Network of Education Renewal (NNER), and the Association of Teacher Educators (ATE) to engage Colleges of Education Deans, faculty and education students in the work of ESD

4. Orient institutional practices toward meeting campus and community needs, through engaged partnerships with stakeholders

a. Enhance collaboration and collective action within sustainability initiatives to support joint efforts of students, instructors, staff, leaders, businesses, and local communities, through the development of common visions, identities, projects and programs which are shared among all stakeholders

b. Develop inter- and trans-disciplinary outreach and engagement efforts to highlight how all disciplines can advise and contribute to education related to social, economic, and environmental sustainability issues

c. Empower youth to lead sustainability initiatives and projects on their campuses and in their communities, with the mandates, institutional support, mechanisms, resources and recognition necessary to be successful

d. Increase resiliency within local and national communities by connecting higher education institutions and disciplines to applied research, problem-solving, and trainings that address regional challenges, national security issues and disaster-preparedness needs

e. Work with faith communities to advance programs that not only transform their buildings and properties to reflect principles of sustainability, but serve as an example to inspire members to make changes in their homes, lifestyles, and the wider community, and engage community members through lecture series, youth programs, etc. (e.g. see Interfaith Power and Light; Green Faith, and Blessed Tomorrow

f. Host events that foster collaboration across sectors, institutions and organizations, allow for participation of all stakeholders, and increase public awareness, ownership, and engagement within ESD initiatives

PRIORITY 3: BUILDING CAPACITIES OF EDUCATORS AND TRAINERS

Increase the capacities of educators and trainers to more effectively deliver ESD
1. Recognize trends and successful practices in education (curricula, skill building, on-line education, etc.) in the context of ESD and develop professional development programs in various modalities that build upon the competencies of educators and trainers at all levels of formal and nonformal education systems for achieving progress toward sustainable development
a. Work with formal education, industry and nonprofit partners, to develop a robust resource clearinghouse that brings together existing curricula and professional materials, assesses their quality, and makes them readily available for teachers and teacher educators, e.g, the American Library Association's RTSustain initiatives
b. Create guidelines for development of ESD materials and evaluation of existing ESD materials

2. Work with national, state and local education agencies and boards to create model policy and standards based on ESD best practices for teachers and students
a. Develop national models of ESD education programs for new teachers, as well as the professional development of existing teachers and non-teaching staff on ESD, in order to institutionalize key ESD skillsets within teacher education systems
b. Coordinate with Council of Chief State School Officers to embed ESD in teacher education, building on existing strengths, e.g., the State of Washington's Environmental and Sustainability Learning Standards17, the accompanying Professional Educator Standards, and the Cloud Education for Sustainability Standards & Performance Indicators
c. Highlight existing programs and establish more sustainability related credentialing of Career Technical Education (CTE)/Technical Vocational Educational Training (TVET) programs and sustainability professionals

3. Collaborate with national and regional organizations to develop and offer

trainings and programs to build capacities among formal and nonformal educators

a. Offer regional and national train-the-trainer workshops via webinars, conferences, etc. to increase sustainability knowledge and capacities, within and across disciplines, for teachers in primary, secondary, and higher education

b. Create formal and nonformal professional development modules on ESD for teachers, students, and community leaders on relevant ESD skillsets, e.g., critical thinking, civil discourse, innovative teaching and learning techniques, ways to shape spheres of influence, and community-based learning and research

c. Insure quality workforce training through CTE/TVET programs by providing adequate public and private funding sources and professional development opportunities to address the sustainability needs of today and the future

4. Increase opportunities to advance research on ESD to address community and national needs

a. Partner with federally supported entities, such as the National Endowment for the Humanities, Academy of Science, and National Science Foundation, to create and fund meaningful ESD research projects

b. Share findings with communities and other stakeholders through research reports, conference and community presentations, and published articles in scholarly journals and mainstream media that can inform industries, academic communities, and policy-makers

5. Ensure inclusion of all sectors and demographics, including traditionally underrepresented communities, to scale up efforts and reach beyond traditional educational institutions

a. Empower and mobilize youth, life-long learners, professionals, practitioners, and citizens across all levels and sectors to serve as ESD peer educators and trainers

b. Develop new methods, technologies and approaches of ESD-based education, as well as supportive mechanisms such as online trainings and forums, toolkits, funds, peer-to-peer learning and support networks to engage underserved communities

c. Develop learner-centered strategies, culturally responsive pedagogies, high leverage teaching practices, and the development of a critical consciousness to support ESD, especially within underserved and underrepresented communities

d. Encourage the development of intercultural exchanges in a variety of contexts of ESD in order to foster multicultural understanding, ethics of peace, and global citizenship, with active inclusion of indigenous communities

PRIORITY 4: EMPOWERING AND MOBILIZING YOUTH

Multiply ESD actions among youth

1. Empower youth as important stakeholders and change agents of ESD and involve young people in the planning, implementation and assessment of ESD programs

a. Have governments, civil society organizations, youth councils, communities and businesses allocate financial, technical and human resources to engage youth as change agents and enable the implementation of ESD policies and the recommendations of the [UNESCO World Conference on ESD Youth Declaration

2. Encourage and support youth and educators to increase educational opportunities within their schools, institutions and communities

a. Experiment with innovative teaching and learning approaches, allowing for alternative technologies as well as creative and experiential methods to break through conventional mindsets and nurture varying learning styles

b. Partner with community organizations to develop volunteer and internship opportunities that advance ESD learning objectives and address real-world problems

3. Develop youth networks that facilitate collaboration, scale up efforts, leverage resources, and increase collective impact

a. Build regional networks at the K-12 and college/university levels to facilitate partnerships, research, mentoring, and articulation between institutions to advance ESD

b. Connect US youth-focused efforts with international youth organizations and networks that focus on sustainable development, building on existing frameworks, such as the Global RCE Youth Network19 , the International Youth Database20 and the Students Organizing for Sustainability Initiative21

c. Create international sustainability exchanges, such as study-abroad programs and virtual "pen pal" programs to encourage inter-cultural communication, literacy, and engagement

4. Develop and reinforce programs and supportive measures for underserved and vulnerable youth, including youth with special needs or disabilities, ensuring a sustainable future for all

PRIORITY 5: ACELLERATING SUSTAINABLE SOLUTIONS AT THE LOCAL LEVEL

At the community level, scale up ESD programmes and multi-stakeholder ESD networks

1. Facilitate partnerships across sectors with community groups that emphasize environmental, economic, and social sustainability to discover synergies, build relationships, and promote models that recognize and support collaboration and interdependence

a. Support the scaling up of multi-sector collaborative models, such as the Regional Centers of Expertise (RCE) on ESD, to facilitate community engagement and increase non-formal education opportunities22

b. Work with educational institutions, industries, civil society organizations, and governments to identify how ESD offers strong foundations for economic and social well-being within local communities, as well as protecting the environment

c. Create incentives and recognition opportunities for communities to implement more sustainable practices and highlight exemplary projects and individuals

2. Address issues of social equity and justice in local communities through social inclusion of marginalized groups in ESD efforts

a. Recognize changing political and demographic influences of different communities of color b. Connect ESD efforts with existing multi-cultural initiatives or partnerships, e.g., the Hispanic Association of Colleges and Universities' Latinos for a Sustainable Future and the Center for Diversity and the Environment

3. Work with community groups to advance nonformal education, training, and public awareness opportunities a. Increase resiliency, through disaster-

preparedness training b. Advance applied skillsets through volunteerism and civic engagement projects c. Support opportunities for community-based participatory research and citizen science, e.g., partner with STEM programs

4. Encourage the engagement and respect the voices of youth within their communities a. Advance an ethos of global citizenship and develop skillsets for civic engagement b. Create mechanisms that allow youth to be involved in the identification, design, and implementation of ESD-related community problems and solutions, including developing youth-led ESD initiatives in local communities c. Offer opportunities for youth to engage in applied learning, civic engagement, and real-life problem-solving, such as service-learning, transdisciplinary education and research, living laboratories, on-line education and learning centers

CONCLUSION

The 2030 Agenda for Sustainable Development and the Education 2030 Framework for Action provide aspirational visions and guidance to create: a plan of action for people, planet and prosperity. It also seeks to strengthen universal peace in larger freedom. The eradication of poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development... The 17 Sustainable Development Goals and 169 targets demonstrate the scale and ambition of this new universal Agenda… They are integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental.

The GAP's Priority Action Areas offer us a roadmap to achieve these goals through education for sustainable development. They are an opportunity to address core objectives, align initiatives, and share proven successful practices to help meet the needs of our regions, our country, and beyond. Stakeholders are invited to review the GAP, develop strategic plans, and establish indicators and metrics to evaluate their progress. Our urgent, shared sustainability challenges require partnerships, bold steps, resilience and persistence. Many current and future beings depend on our affirmation that a better world is possible. Thus, we must move forward, quickly.

Yet, none of us can do this alone. As Dr. Charles Hopkins, UNESCO Chair in Reorienting Teacher Education to Address Sustainability, at York University, in Toronto, Canada, recommends, we can achieve a new level of success by using collaborative processes such as the Strengths Model. This transformative model highlights several core assertions for how all stakeholders can contribute:

1. No one can do it all; no organization, institution, nor individual can do everything.
2. Everyone can do something.
3. We need innovative leaders to step forward to build interdisciplinary and interdependent approaches.
4. We need policy-makers, funders, and infrastructure to support the work (McKeown, 2002).

With this combination of shared support, a more sustainable world is possible. We just need to determine how. At this moment in history, new partnerships and

alternative strategies need to be established. The ESD community can grow to create a future where an aware and educated populace can co-exist together in a world that meets not only our own needs, but also the needs of other species and future generations. While the challenges we face are daunting, it is also an opportunity for innovation, hope, greater well-being and interdependence, and the development of skillsets and mindsets necessary to create a better world.

REFERENCES

Center for EcoLiteracy. 2015. *Cultivating 20 Years of EcoLiteracy*. Center for EcoLiteracy. Available at: http://www.ecoliteracy.org/cultivating-20-years-ecoliteracy [Accessed 6 December 2015].

Cloud, J. Logan, R., Bernier, A., and Frolich, L. 2015. (Eds). *2014: The State of the Field*. The Journal of Sustainability Education. Available at: http://www.jsedimensions.org/wordpress/spring-2014-the-state-of-the-field/ [Accessed 6 December 2015].

Dernbach, J. 2002. *Stumbling Towards Sustainability*. Environmental Law Institute: Washington, DC.

Dernbach, J. 2012. *Acting as if Tomorrow Matters: Accelerating the Transition to Sustainability*. Environmental Law Institute, Washington, DC.

McKeown, R. 2002. *ESD Toolkit*. Available at: http://www.esdtoolkit.org/ [Accessed 15 May 2015].

Rowe, D., Gentile, S., and Clevey, L. 2015. "The US Partnership for Education for Sustainable Development: Progress and Challenges Ahead." *Applied Environmental Education & Communication*, *14*(2), 112-120.

Smith, K., McKeown, R., Mueller, A. and Rowe, D. 2015. *US Report on ESD*. US Partnership for Education for Sustainable Development.

The Center for Green Schools. 2014. *National Action Plan for Educating for Sustainability*. Houghton Mifflin Harcourt: Boston, MA. http://www.centerforgreenschools.org/sites/default/files/resource-files/National-Action-Plan-Educating-Sustainability.pdf [Accessed 6 December 2015].

UNESCO. 2014. *UNESCO Roadmap for Implementing the Global Action Programme on Education for Sustainable Development*. United Nations Educational, Scientific and Cultural Organization. Available at: http://unesdoc.unesco.org/images/0023/002305/230514e.pdf [Accessed 20 February 2015].

UNESCO. 2014. *Shaping the Future We Want: UN Decade of Education for Sustainable Development (2005-2014) Final Report*. Available from: http://www.unesco.org/new/en/unesco-world-conference-on-esd-2014/esd-after-2014/desd-final-report/ [Accessed 20 February 2015]. **

Thompson, S., Hillman, K., & Wernet, N. (2011). Monitoring Australian Year 8 Student Achievement Internationally TIMSS2011. Retrieved from https://www.acer.edu.au/files/TIMSS-PIRLS_2011-MonitorinAustralian-Year-8-Student-Achievement.pdf.

UNESCO. (2005). Scientism: A weed well fertilized in the garden of science education? *Connect: UNESCO International Science, Technology and Environmental Education Newsletter, 30*(3-4), 2-5. http://unesdoc.unesco.org/images/0014/001422/142273e.pdf

AUTHORS:

Kim Smith is the Coordinator of the Regional Center of Expertise (RCE) on Education for Sustainable Development for Greater Portland and a Sociology Instructor at Portland Community College. Kim received her B.A. in Sociology from Whitman College, in 1990, and her Ph.D. in Sociology from Indiana University, in 2000. She is committed to promoting sustainability within the community and has worked closely with many non-profits, including the Northwest Earth Institute, the Community Energy Project, City Repair, and Hands on Greater Portland, where she served as a board member for six years. In 2012, she served as the higher education representative for North America, through the Association for the Advancement of Sustainability in Higher Education (AASHE), at the United Nations Rio+20 Earth Summit, in Rio de Janeiro. This led to her current position as Coordinator of the Greater Portland RCE.

Debra Rowe is the national co-coordinator of the Higher Education Associations Sustainability Consortium, founder of the Disciplinary Associations' Network for Sustainability and senior advisor to the Association for the Advancement of Sustainability in Higher Education. Dr. Rowe has been professor of energy management, renewable energy technology and psychology for over 28 years at Oakland Community College.

Peter Adriance serves as a Representative for Sustainable Development for the National Spiritual Assembly of the Baha'is of the U.S. He helped establish several major NGO networks for the UN-sponsored sustainability conferences of the '90s. He is a member of the Governing Board of the International Environment Forum, manages the Faith Communities pages of the US Partnership, and serves on the editorial board of *Sustainability: the Journal of Record* and the steering committee for Interfaith Moral Action on Climate.

Rosalyn McKeown is an Associate Professor in the Graduate School of Education at Portland State University. Rosalyn's current research focuses on creating a conceptual framework for education for a more sustainable future in both the formal and nonformal sectors of the education community. Rosalyn is the primary author of the Education for Sustainability Toolkit.

Victor Nolet is a professor in the Secondary Education Department in the Woodring College of Education at Western Washington University in Bellingham Washington. Victor earned his PhD from the University of Oregon in 1992 and his M.Ed. in 1981 and B.A. in 1977 from the University of Maine. Victor is involved in a variety of state and national research and policy initiatives focusing on the inclusion of Education for Sustainability in the professional development of teachers. He serves on the steering committee for the US Partnership for the UN Decade for Education for Sustainable Development and led the US Delegation to the UNESCO UNDESD Reorienting Teacher Education Symposium in Paris in May, 2010. Victor has published and presented extensively on topics related to education for sustainability in teacher education as well as on topics pertaining to standards-based assessment and classroom-based assessment strategies

Madison Vorva is a second year student at Pomona College studying environmental economics and policy. She has represented Vital Voices, a women's leadership organization, and Jane Goodall's Roots&Shoots, a youth leadership program, at events worldwide. She also represented the United States in Japan as a Youth Delegate to the UN's Education for Sustainable Development Summit.