

## RCE ON ESD

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# An Early Look at Building a Social Learning for Sustainability Community of Practice

## RCE Grand Rapids' Flagship Project

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### Abstract

Grand Rapids is the first United Nations University (UNU) Regional Centre of Expertise (RCE) on education for sustainable development (ESD) in the United States. It builds on the region's long history and deep foundation in research, planning and problem solving to build a sustainable future. This article explores the concept of RCEs as social learning for sustainability communities of practice in the context of experiences with creating our first flagship project, the City High/Middle Centre for Economicology. This model is used to broach the question of evaluation, indirectly, by suggesting the importance of identifying early indicators of likely success. It closes with six 'meditations' that were used to guide the flagship project and which may have wider relevance to the global RCE community.

**Keywords:** UNU RCE, social learning, communities of practice, ecocultural sustainability, K-12 education, evaluation

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## THE CHALLENGES AHEAD: AN AUSPICIOUS HEADSTART

Informed Americans are all too familiar with the list of grim problems facing this nation today—violent crime, racial conflict, neglected children, unemployment, inadequate health care, environmental degradation, the federal deficit, a troubled education system, political corruption, international crises and so on....The problems are frightening but in themselves are not as perplexing as the questions they raise concerning our capacity to gather our forces and act. The prevailing mood is cynicism....How can we regain the motivation, the will, the vitality to deal with the challenges ahead?

John Gardner (1995a: 5)

These words of John Gardner, former US Secretary of Health, Education and Welfare and ‘engineer’ of the ‘Great Society’, ring true as loudly today as when they were penned almost a half century ago. Grand Rapids, a city in western Michigan, United States, on the shore of Lake Michigan, has a long history of mobilising the community to address sustainable development challenges in creative ways with tremendous spirit and energy. In 1969, under the direction of businessman and philanthropist, Peter M. Wege, the Center for Environmental Study (CES) was created as a private, nonprofit organisation composed of citizens from academia, government, business, industry, schools and the lay public. In many respects, this was an effort to respond to Gardner’s groundbreaking report, *A Strategy for a Livable Planet* (1967). Its purpose was to preserve, protect and improve the quality of the environment for all living things through public information, research and service (Wege 1972).

Recognising that our activities ‘in the areas of health, politics, economics, society, and technology affect and are affected by the environment’, the Center adopted a variety of novel strategies—including systems modelling, dynamic simulation of cultural change, community surveys, environmental quality analysis, emissions inventories, environmental education and citizens’ task forces—to explore the interrelated causes and effects of environmental problems (CES 1973: 19–20). It applied these techniques to address regional air and water pollution, solid waste, land-use management and noise pollution along with addressing the broader social aspects of environmental degradation. The Center’s visionary, anticipatory approach is, perhaps, best summarised by the following statement of its objective: ‘[T]o help citizens of Grand Rapids and other communities become better informed and better equipped to plan for change, rather than have to correct changes after they’re made’ (CES 1973: 3).

The early work of the Center was characterised by a farsighted, three-pronged approach to research, planning and problem solving: *(i)* increase awareness of the environment among all citizens; *(ii)* define and understand the problems and their interrelationships; and *(iii)* work positively and collaboratively towards solving them (CES 1973).

To the best of my knowledge, it was the first such ‘think-do tank’ organisation of its kind in the United States, predating both Earth Day in 1970 and the groundbreaking *Limits to Growth* study, which used systems dynamics to simulate long-term global trends in population, industrialisation, pollution, food production and resource depletion (Meadows et al. 1972). In the 1980s and 1990s, the Center shifted from

its systems-based policy, think-do tank orientation to an environmental education/teacher training focus and later, to public education and media productions for the environment. While the Center maintains its nonprofit status, it is currently dormant (Steketee 2008).

The story of the Center's stages predates, in many ways, the evolution of expert knowledge regarding how to approach sustainable development challenges from a regional perspective. Other ideas—such as the necessity for cultivating lifelong, life-wide learners; the importance of moving fluidly from local to global concerns and vice versa; and the significance of creating a global learning space for sharing knowledge among RCE communities around the world—have been promoted independently by UNU Rector Emeritus, Hans van Ginkel, the father of the RCE concept. These ideas are discussed in an interview on the vision, history and status of the RCE process published earlier in this journal (Glasser 2008).

### **RCE GRAND RAPIDS: HISTORY, CONTEXT AND EVOLUTION**

In an effort to build on the region's long history of research, collaboration and action to facilitate sustainable development, an application for RCE status was submitted to UNU in December of 2006, through the office of Grand Rapids Mayor, George Heartwell, and under the auspices of the City's Community Sustainability Partnership (CSP).<sup>1</sup> Official RCE designation was awarded by UNU in January of 2007. The CSP's large-scale awareness-raising and capacity-building for sustainable development has helped lay the foundation for the success of RCE Grand Rapids. In an effort to fill remaining gaps, to champion transformational change and to secure a nonpartisan home, core RCE Grand Rapids participants began exploring the creation of an independent identity. Drawing on the community's history and the expertise, interests and commitments of a lean group of core participants, RCE Grand Rapids began building a social learning for sustainability community of practice<sup>2</sup> (Glasser 2007a; Lotz-Sisitka and Wilmot 2007; Wenger et al. 2002).

Our initial forays brought us a foundation-shaking insight. The significant, but modest success of both our own community's long-standing efforts to promote sustainable development and the almost 40 years of dedication and persistence of the United Nations to raise awareness on these matters in both the environmental/sustainability and environmental education/sustainable development arenas have simply not led to the desired scale of policy and behaviour changes. Improvements in overall quality of life and the state of global ecosystems services have been uneven. With respect to many critical indicators, 'the gap' between our values and our actions has only grown (Glasser 2007a: 39–42; Millennium Ecosystem Assessment 2005; United Nations 2007).

Internalising the magnitude and character of 'the gap' sobered us and caused us to step back and sharpen our goals, ambitions and approach. Conversely, we were inspired by the potential of identifying gap-bridging strategies. Matching peoples' seemingly universal desire for positive change with meaningful opportunities to channel their energies to create this change seemed to be the key.

The missing link, as we have come to see it from our present vantage point, involves a three-fold conjunction. Our RCE must: (i) tap into Grand Rapids' sustainability champions' leadership skills, civic pride and commitment to community reinvestment; (ii) rekindle the values, broad vision, hope, responsibility and can-do spirit of the original CES; and (iii) incorporate the latest research and knowledge about successfully linking deeply held values and concerns to meaningful behavioural change.

The vision of our RCE is illustrated by the term 'ecocultural sustainability' (Glasser 2004), which is:

...both a state of dynamic equilibrium and a social process that is desirable and ecologically sound. Ecocultural sustainability requires that a society can, at a minimum, continually renew itself and its members by supporting: (1) the flourishing of rich cultural and biological diversity; (2) forms of governance that are just, egalitarian, transparent and participatory; (3) economies that are sufficient, equitable, accountable and bioregionally sound; and (4) production and consumption that promote universalisable lifestyles and keeps its ecocultural wake in-check by both learning from and working with nature and limiting its total lifecycle costs (social, environmental and financial). (Glasser 2007a: 36)

Successful implementation of the ecocultural sustainability paradigm rests on creating the conditions, processes and institutions that are necessary to make high levels of active social learning<sup>3</sup> ubiquitous throughout society (Glasser 2007a: 51–52). This, in turn, necessitates 'both cultivating a form of rationality that integrates reason and emotion *and* inculcating a balance between the needs of individuals and the imperative of the common good (human and nonhuman)'. It challenges us to create 'educational processes and systems that nurture open minds and engaged citizens by encouraging wonder, creativity, tolerance, cooperation, and collaboration'. By inculcating the 'skills to regularly monitor and evaluate the activities of individuals and organisations—to learn from their mistakes and celebrate their successes—it promotes vigorous self-reflection, combats rigidity and apathy, and fosters anticipatory decision-making and adaptive learning'. And by modelling nimbleness at distinguishing 'between needs and wants, meaningful innovation and sheer novelty, the sacred and the profane, and maintaining a balance between specialization and generalization, such societies prepare their individuals, organizations and institutions to counteract maladaptive forces and respond to unforeseen challenges and changes that are beyond their control with hope, joy, imagination, and unruffledness' (Glasser 2007a: 36–37).

RCE Grand Rapids is in its infancy. Much will change as we build our social learning for ecocultural sustainability community of practice and begin to sort out the challenges before us. For the time being, however, we are dedicated to building on our fertile heritage. Our strategy is guided by the 'disjointed incrementalism' model of Charles Lindblom (1965: 144–48), focusing on immediate problems and feasible alternatives with important, transformational consequences. To this end, we are narrowing our sights by targeting activities that satisfy multiple components of the four thrusts of education for sustainable development (ESD), as defined by Chapter 36 of *Local Agenda 21* (United Nations Conference on Environment and Development [UNCED] 1992):

- Improve access to quality basic education.
- Increase public awareness of both the causes of unsustainability and the solutions that support a transition to a more sustainable world.
- Reorient education towards sustainable development.
- Provide sustainable development training programs for all sectors of private and civil society so as to strengthen our capacities for facilitating the transition to a more sustainable world.

This approach allows us to grow the RCE in a sustainable manner, project-by-successful-project through organic accretion. Taking a lesson from Gandhi, we intend to model—with tangible, visible, meaningful projects and an open, nurturing, self-reflective process—the transformational learning we want to see. We aspire to be around for the long haul and like the famed race between the hare and the tortoise, we believe slow and steady—over time—will carry the day.

### FLAGSHIP PROJECT: CITY HIGH/MIDDLE CENTER OF ECONOMICOLGY

If civilization is to survive,...[w]e must understand the inter-dependency of the human race and the life-support system we call Earth....The key to our survival as a species is to start now by teaching our young what they must be taught to save the world. We must relearn how to live together with spirituality, love, and compassion so that we can pass these values on to our children. We must restore the generosity of the human spirit. (Wege 2006: 3)

Peter M. Wege coined the term *economicology*, a synergistic fusion of economics and ecology, in the 1990s (Wege 2006). This blending, in turn, has its roots in three ancient Greek words: *oikos* (household), *nomia* (management/law) and *logos* (which has a range of connotations that encompass word, knowledge, meaning, reason and thought integrated with action). Heraclitus (536–470 BC) first used the term *logos* to refer to the reason or order that underlies a universe in constant flux. In its most distilled form, economicology can be described as reasoned, respectful, engaged stewardship of the earth household in service of both people and the planet.

The core insight of economicology is that healthy economies can only be built on healthy, self-renewing, ecologically and culturally diverse communities. Mr Wege views learning how to live within nature's limits, respectfully, accountably and joyfully as central to this process. He inspires us to learn how to be good 'guests' on planet Earth. This is a non-negotiable responsibility for the current generation, the ultimate goal of economicology and the central challenge before humanity. While the challenge is clear, how to meet it is anything but. Mr Wege offers some rough guidelines with his 'Six Es' of economicology: ecology, economics, empathy, environment, ethics and education (Wege 2006). Education is the thread that binds the other five Es together.

I have elaborated how the 'Six Es' might be reflected in a 'gap-bridging' curriculum—with my 'Twelve-Step Program for Revitalizing Formal Education: A guide to

education *for* ecocultural sustainability' (Glasser 2007b). The central notion is that becoming good 'guests' on planet Earth requires that we learn how to model the change we seek in all of our educational activities from content to pedagogy and operations to outreach. Central ideas of this strategy for revitalising formal education include: nurturing a sense of wonder through direct contact with nature; making the upstream and downstream—often spatially and temporally separated—consequences of students' every day actions more real and visceral by exploring them through research, systems modelling and simulation; preparing all members of the school community to engage in high levels of active social learning; and supporting real-world problem solving for people and the planet by using the campus as a living, learning laboratory (Glasser 2007b).

Education for ecocultural sustainability integrates a sophisticated understanding of the current state and causes of ecocultural unsustainability with key elements of experiential learning, systems dynamics/systems thinking, action research and moral education. It calls for creating a 'gap-bridging', inquiry- and place-based curriculum and pedagogy of meaning, responsibility and critical engagement. This, in turn, rests on empowering students, teachers, administrators, consultants and other citizens to participate in the planning, implementation and evaluation of efforts to resolve issues that they have identified (Stapp et al. 1996). The ultimate goal is to prepare students to lead ecoculturally sustainable lives while building a culture of sustainability.

In an effort to transition these concepts from theory to practice, four core RCE participants initiated our first flagship project: City High/Middle Center for Economicology. This broad mobilisation effort was made possible through intense collaboration among Grand Rapids Public School administrators, City High/Middle administrators, students, parents, teachers and staff, community members, university faculty and the Wege Foundation. The collaboration includes complete vertical integration throughout the formal education sector, along with an expanding variety of links to the nonformal education sector. In the future, we also hope to engage global RCE partners to participate in the collaboration, especially through efforts to connect young people to share their experiences and engage in collaborative, cross-cultural action research projects. Modelling the change we want to see is requiring a full-school culture shift, which necessitates passionate, intimate, transparent and regular face-to-face contact. This direct interaction is supplemented by frequent email and phone correspondence.

Upon completion, the project will bring fully infused education for ecocultural sustainability, international studies and the humanities to over 800 6th–12th grade students (the main, 9.3 hectare campus serves 7th–12th grades; the 6th grade program includes three off-site feeders). The City Hybrid Model, in addition to the education for ecocultural sustainability foundation (both content and pedagogy) and action research/real-world problem-solving practicums (referred to as EPICSS, Economicology Project Inquiry Classes), is integrated with a Middle Years International Baccalaureate Programme.<sup>4</sup> Implementation began with 6th and 7th grades during the 2008–09 academic year. Full implementation will be realised in 2014, after a six-year scaffolding process. Our eventual goal is to create an exemplary transformational, ESD learning platform that is integrated horizontally throughout Grand Rapids Public Schools and beyond.

## LESSONS LEARNED: SIX MEDITATIONS FOR GUIDING THE DEVELOPMENT OF FLAGSHIP PROJECTS

Combining insights from the CES story with first-hand knowledge of the development and implementation of the RCE concept from UNU Rector Emeritus, Hans van Ginkel, with scholarship and learning from our global RCE colleagues, and by reflecting on our own experiences to date, six ‘meditations’ have emerged. These meditations, which have helped guide the development of RCE Grand Rapids’ first flagship project, and will continue to guide our work, are being shared with the global RCE community.

1. Responding to sustainable development challenges in substantive, meaningful and enduring ways can benefit from systems thinking. However, it also requires more than compelling information and sophisticated analytical tools for information processing (Meadows 2005). It necessitates going beyond instrumental rationality and scientific knowledge to take into account the social process of knowledge formation, that is, understanding how people come to have the ways of thinking, valuing and acting that they do (Glasser 2007a; Healey 1997; Wenger et al. 2002).
2. While the future can neither be foreseen exactly nor controlled perfectly, it can be envisioned and brought into being with love, care and respect (Meadows 2005). Effective responses to our collective sustainable development challenges call for opening our minds and engaging each other in the process of collaboratively constructing richer, more complete pictures of reality and our situations, which reflect both the concerns of diverse actors in the full community and the tightly coupled, multidimensional character of the challenges we face (Fadeeva 2007; Glasser 2007a, 2008; O’Donoghue et al. 2007).
3. Values, good intentions, basic knowledge and sincere commitments in support of sustainable development goals, although likely prerequisites for constructive action, do not, in themselves, lead to meaningful behavioural change towards sustainable development (Glasser 2007a; Yencken et al. 2000). Successful integration of values and concerns with ‘gap-bridging’ behaviour calls for combining reason and emotion and multiscale approaches. This integrative effort benefits from creating opportunities that inspire our hearts, hands and minds to work in concert (Glasser 2007b; Meadows 2005; Yencken 2000).
4. Addressing the ‘prevailing mood of cynicism’, creating the ‘motivation, will and vitality’ to effectively target the challenges before us, requires providing *all* individuals with accessible, flexible, participatory platforms for both engaging and mobilising their creative energies towards positive change (Gardner 1995b; Glasser 2008; Reason and Bradbury 2006, 2008; CES 1973). The genius of the RCE concept is its potential for matching robust, global-scale problematisations of sustainable development issues with clear pathways for inviting meaningful local action.

5. Knowledge can be used to 'enslave as well as liberate' (Gardner 1995b: 64). Many great institutions and civilisations have rotted from the inside as a result of denial, self-deception, hubris, complacency, greed or overreaching. Decay and collapse, however, are not inevitable. When working to create robust and resilient lifelong, life-wide learning communities, cultivating joyful, well-prepared, open-minded, engaged and self-reflective individuals and societies may be the only viable counterforce to maladaptation (Gardner 1995b; Glasser 2007a; Jacobs 2004: 176; Lotz-Sisitka and Wilmot 2007).
6. Creating continuous improvements in quality of life for all, tapping into the self-renewing potential of individuals and societies to create *cultures of sustainability*, requires building our social learning for ecocultural sustainability infrastructure (especially creating vibrant communities of practice). This, in turn, requires modelling the changes we want to see. Special attention should be given to high-leverage actions such as addressing systemic cultural failures in teaching and learning, particularly in the context of primary and secondary education (Gardner 1995b; Glasser 2007a; Jacobs 2004: 158; Stone and Barlow 2005).

## CONCLUSIONS: SYSTEMS ANALYSIS TO SOCIAL LEARNING FOR SUSTAINABILITY

Living successfully in a world of systems requires more of us than our ability to calculate. It requires our full humanity—our rationality, our ability to sort out truth from falsehood, our intuition, our compassion, our vision, and our morality.

Donella Meadows (2005: 195)

The brilliance of the RCE concept is its ability to engage our 'full humanity' by inviting constructive action at a level where ordinary citizens, self-organising and working together, have the power to make a difference. By giving substance to the phrase, 'think globally, act locally', it creates a compelling antidote to the cynicism and sense of paralysis (or denial) that many feel when they are introduced to the scale and character of 'the gap'. Building systems thinking into a robust social learning model provides a rich and powerful framework for creating resilient, transformative learning for ecocultural sustainability communities of practice. And when these local, bottom-up efforts to cultivate the knowledge, skills, attitudes and habits of mind—which are the instruments of continuous positive change—are accelerated and then multiplied through global information sharing, we may be on the way towards generating substantive, self-renewing global-scale change.

Zinaida Fadeeva, Associate Fellow in the EfSD program at UNU-Institute of Advanced Studies, asks some provocative and critically important questions about assessing the success of individual RCEs: 'Does the RCE deliver identifiable improvements in the social, economic and environmental areas? Does it contribute to the creation of a new learning system for sustainable development at the regional and global levels?' (Fadeeva 2007: 259). As Fadeeva points out, these are the questions that critics, analysts and the RCE community alike all want answered. I concur.

The short answer to these questions, however, is: 'time will tell'. While we eagerly anticipate the collective wisdom on these matters, our personal experience with the RCE process has engendered patience. Transformational change requires trust building, and trust building takes time. We have also come to appreciate the importance of moving beyond hackneyed approaches to assessment that are grounded in narrow instrumental reason and technical rationality; we now try to reframe the questions. Fadeeva's questions, in many ways, represent ultimate measures for evaluating the success of individual RCEs—and, of the success of the RCE program—but they seem ill-suited to yielding meaningful answers in a short timeframe. This detail, however, in no way diminishes the significance of raising the questions. We applaud Fadeeva for initiating a public conversation on assessment (and on documentation and reporting). I see these as the next, most crucial hurdles before the global RCE community.

The questions Fadeeva raises, in my view, demand surrogate measures. From the vantage point of our nascent, emergent RCE, we have found it instructive to view RCEs as communities of practice—groups characterised by their voluntary, self-organising nature (Wenger et al. 2002). What makes such communities of practice successful, argue Wenger and his colleagues, is that they generate a critical mass of excitement, relevance and added value that can capture, and hold, the attention and engagement of their members (Wenger et al. 2002: 50–51). Wenger and his colleagues have coined the term 'aliveness' to serve as both an overarching guide for designing and cultivating successful communities of practice and a surrogate for evaluating their presumptive success.

They have identified seven, largely qualitative indicators for 'measuring' aliveness, which they also refer to as 'Principles for Cultivating Communities of Practice' (Wenger et al. 2002: 51). While I don't necessarily embrace Wenger et al.'s particular indicators, their notion of 'aliveness', by focusing on palpable and visceral characteristics of successful communities of practice, resonates with our RCE. I believe that efforts to characterise 'aliveness' represent a fertile start for exploring the future success of our RCE as a social learning for ecocultural sustainability community of practice. I look forward to reporting on our experiences with developing these indicators in the future. That said, I recognise that the issue of assessment is worthy of extended future discussion among, and research by, UNU and the global RCE community.

The 'six meditations' (stated earlier) were meant as a tentative, very personal effort to identify a core set of philosophical guidelines or principles for designing RCEs and mobilising partners. I am not suggesting the existence of fundamental, universal indicators, which transcend the diverse cultures represented by the global RCE community, but this is a topic certainly worthy of continued discussion. If even one such principle exists, it could afford us a powerful lever for cultivating the success of the global RCE community.

The challenges of the present are like no other—they are both local and global. They are in many ways more a result of our 'successes' as a species than any particular failure (Orr 2004: 148–49), such as lack of information or a dearth of efforts to stimulate mobilisation (Glasser 2007a). They involve the intersection of ethics, science, politics, psychology, economics, ecology, neurobiology and many other fields. The success of

RCE Grand Rapids, and the entire RCE process, is not likely to be reflected in short-term measures of expediency. It can, however, be reflected in our collective capacity to honour the abundance of important and innovative local ESD/sustainable development efforts and initiatives that have come before ours. It can be reflected by building on both the efforts of our predecessors and the emerging work of our RCE colleagues. And, it can be reflected in fresh ways of thinking, learning and acting. Perhaps, most importantly, it can be reflected in meaningful strategies for integrating the three. We look forward to joining with UNU and our RCE colleagues—near and far—in modelling new, transformative learning approaches as we engage in these most consequential challenges ahead.

## Notes

- 1 The CSP has subsequently been reorganised and the future relationship between the RCE and the CSP is currently being explored anew.
- 2 Communities of practice, following Wenger (2002), are voluntary associations among a group of people that share a common interest and come together for the express purpose of learning from each other. I use the term, social learning for sustainability community of practice, to refer to a particular type of community of practice that embraces social learning for sustainability principles and gathers for the express purpose of planning or creating education for sustainability projects (Glasser 2007a).
- 3 *Active social learning* involves conscious interaction and communication between at least two living beings and is inherently dialogical. It can be parsed into three rough categories that reflect the skills and values of the individuals in the collective and the power relationships that characterise it (hierarchical, nonhierarchical and colearning). I refer to the richest and most robust forms of active social learning as *colearning*, which is based on egalitarianism, trust, collaboration, full participation and shared exploration.
- 4 The International Baccalaureate (IB) Programme was founded in Geneva, Switzerland, in 1968. What began as the IB Diploma Programme for internationally mobile, university-bound students, aged 16–19, now encompasses three programs for students aged 3–19. The Primary Years Programme covers students aged 3–12 and the Middle Years Programme covers students aged 11–16. The IB's overall aim is to cultivate active, compassionate, inquiring, knowledgeable and tolerant young people who will become lifelong learners dedicated to help create a more peaceful world. The IB currently works with 2,737 schools in 138 countries and reaches just over three-quarters of a million students globally. For more details, see <http://www.ibo.org/>

## References

- CES (Center for Environmental Study). 1973. *The Center for Environmental Study Report*. Grand Rapids, Michigan: CES.
- Fadeeva, Zinaida. 2007. From Centre of Excellence to Centre of Expertise: Regional Centres of Expertise on Education for Sustainable Development, in A.E.J. Wals (ed.) *Social Learning: Toward a More Sustainable World*. Wageningen, The Netherlands: Wageningen Academic Publishers.
- Gardner, John W. 1995a. *National Renewal*. Washington, DC: Independent Sector and National Civic League.
- . 1995b. *Self-Renewal: The Individual and the Innovative Society*, (reprint 1963). New York: W.W. Norton.

- Gardner, John W. and The Task Force on Environmental Health and Related Problems (1967). *A Strategy for a Livable Planet*. Washington, DC: US Government Printing Office.
- Glasser, Harold. 2004. Learning Our Way to a Sustainable and Desirable World: Ideas inspired by Arne Naess and Deep Ecology, in A.E.J. Wals and P.B. Corcoran (eds) *Higher Education and the Challenge of Sustainability: Problematics, Promise and Practice*. Dordrecht: Kluwer.
- . 2007a. Minding the Gap: The Role of Social Learning in Linking Our Stated Desire for a more Sustainable World to Our Everyday Actions and Policies, in A.E.J. Wals (ed.) *Social Learning: Toward a More Sustainable World*. Wageningen, The Netherlands: Wageningen Academic Publishers.
- . 2007b. Education for Ecocultural Sustainability, Keynote Address to the National Association of Independent Schools Summer Sustainability Institute, Lawrenceville School, Lawrenceville, NJ, 8 July.
- . 2008. An Interview with Hans van Ginkel on the Vision, History, and Status of the Regional Centres of Expertise in ESD Programme, *Journal of Education for Sustainable Development*, 2(2): 109-17.
- Healey, Patsy. 1997. *Collaborative Planning: Shaping Places in Fragmented Societies*. Houndmills, England: Macmillan.
- Jacobs, Jane. 2004. *Dark Age Ahead*. New York: Vintage.
- Lindblom, Charles. 1965. *The Intelligence of Democracy*. New York: Free Press.
- Lotz-Sisitka, Heila and Di Wilmot. 2007. The Makana Regional Centre of Expertise: An Emerging Community of Practice?, Makana RCE Occasional Paper No. 1, Rhodes University, South Africa.
- Meadows, Donella. 2005. Dancing with Systems, in M.K. Stone and Z. Barlow (eds) *Ecological Literacy: Educating Our Children for a Sustainable World*. San Francisco: Sierra Club Books.
- Meadows, Donella, Dennis L. Meadows, Jørgen Randers and William W. Behrens III. 1972. *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind*. New York: New American Library.
- Millennium Ecosystem Assessment. 2005. *Ecosystems and Human Well-Being: Synthesis*. Washington, DC: Island Press.
- O'Donoghue, Rob, Heila Lotz-Sisitka, Robert Asafo-Adjei, Lutho Kota and Nosipho Hanisi. 2007. Exploring Learning Interactions Arising in School-in-Community Contexts of Socio-Ecological Risk, in A.E.J. Wals (ed.) *Social Learning: Toward a More Sustainable World*. Wageningen, The Netherlands: Wageningen Academic Publishers.
- Orr, David. 2004. *Last Refuge: Corruption of Patriotism in the Age of Terror*. Washington, DC: Island Press.
- Reason, Peter and Hilary Bradbury (eds). 2006. *Handbook of Action Research: Concise Paperback Edition*. Thousand Oaks, CA: Sage.
- . 2008. *The SAGE Handbook of Action Research: Participative Inquiry and Practice*. Thousand Oaks, CA: Sage.
- Stapp, William B., Arjen E.J. Wals and Sheri L. Stankorb. 1996. *Environmental Education for Empowerment: Action Research and Community Problem Solving*. Dubuque, Iowa: Kendall/Hunt Publishing.
- Steketee, Deborah. 2008. (Personal Communication), Executive Director, Center for Sustainability, Aquinas College, Grand Rapids, MI, and a former employee of the CES. She provided a history and overview of the CES.
- Stone, Michael K. and Zenobia Barlow (eds). 2005. *Ecological Literacy: Educating Our Children for a Sustainable World*. San Francisco: Sierra Club Books.

- UNCED (United Nations Conference on Environment and Development). 1992. *Agenda 21: Chapter 36*. New York: United Nations. Available at [http://portal.unesco.org/education/en/files/17992/10522982421Chapter\\_36.pdf/Chapter+36.pdf](http://portal.unesco.org/education/en/files/17992/10522982421Chapter_36.pdf/Chapter+36.pdf) (accessed 20 November 2009).
- United Nations. 2007. *Millennium Development Goals Report: 2007*. New York: United Nations. Available at: [http://mdgs.un.org/unsd/mdg/Resources/Static/Products/Progress 2007/UNSD\\_MDG\\_Report\\_2007e.pdf](http://mdgs.un.org/unsd/mdg/Resources/Static/Products/Progress%2007/UNSD_MDG_Report_2007e.pdf) (accessed 20 November 2009).
- Wege, Peter M. 1972. Speech given by Mr. Wege to the Institute on Environmental Information Programs, Western Michigan University, Kalamazoo, 10 May.
- . 2006 [1998]. *Economicology: The Eleventh Commandment*, Grand Rapids, MI: Economicology Press.
- Wenger, Etienne, Richard McDermott and William M. Snyder. 2002. *Cultivating Communities of Practice*. Boston: Harvard Business School Press.
- Yencken, David. 2000. Young People and the Environment: The Implications for Environmentalism, in D. Yencken, J. Fien and H. Sykes (eds) *Environment, Education and Society in the Asia Pacific: Local Traditions and Global Discourses*. London: Routledge.
- Yencken, David, John Fien and Helen Sykes (eds). 2000. *Environment, Education and Society in the Asia Pacific: Local Traditions and Global Discourses*. London: Routledge.

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