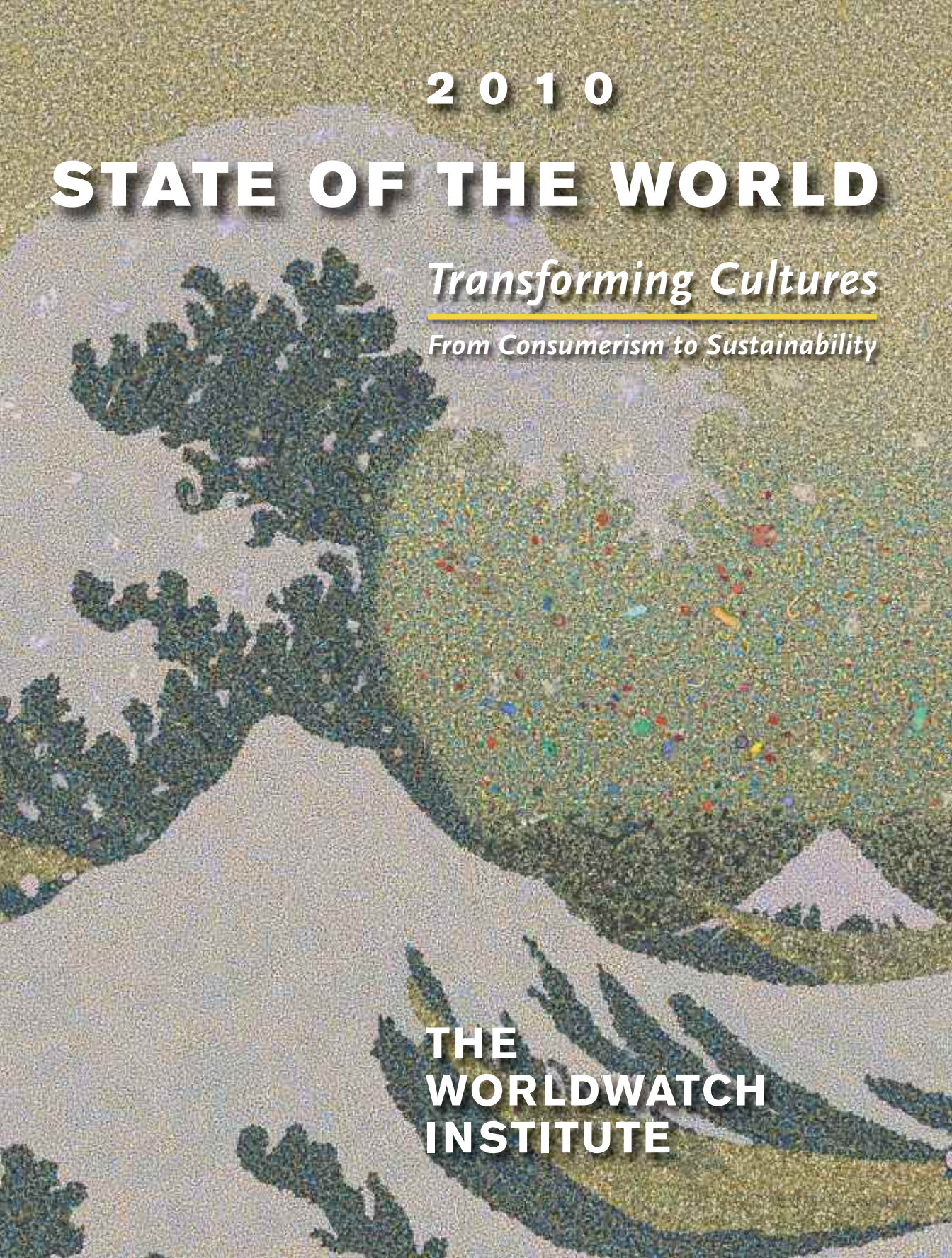

2010

STATE OF THE WORLD

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THE WORLDWATCH INSTITUTE

2010
STATE OF THE WORLD
Transforming Cultures
From Consumerism to Sustainability

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Early Childhood Education to Transform Cultures for Sustainability

Ingrid Pramling Samuelsson and Yoshie Kaga

In view of the unprecedented challenges presented by continuing population growth, environmental destruction, and ever-shrinking resource availability, education at all levels should be reviewed to give a stronger focus on its role of promoting values, attitudes, practices, habits, and lifestyles that promote sustainability. As part of this effort, the education of children in their youngest years deserves special attention.

Research shows that the human brain and biological pathways develop rapidly and that children's experiences before they start primary school shape their attitudes, values, behaviors, habits, skills, and identity throughout life. Thus the first years of life provide a window of opportunity for nurturing children's love of nature and the habits, practices, and lifestyles that favor sustainability. (See Box 6.) Basic life skills such as communication, cooperation, autonomy, creativity, problem-solving, and persistence are acquired in these early years, and the motivation to learn is put in place.[1]

This is an ideal time to look at how to connect early childhood education programs to a sustainability agenda because these programs have increased dramatically in recent years, in part due to changing family structures and the increased number of women in the workforce. About a third of young children in western industrial countries are now being looked after outside the home from the age of one or younger, and most children are in early childhood programs for at least two years before they start primary schooling. Between 1999 and 2006, the global pre-primary percentage of children aged one to five who were enrolled in a kindergarten or the equivalent grew from 33 to 40 percent. The share of children in such educational settings varies widely around the world, however. By 2006 the figures were 14 percent in sub-Saharan Africa, 18 percent in the Arab states, 45 percent in East Asia and the Pacific, 65 percent in Latin America and the Caribbean, and 81 percent in North America and Western Europe.[2]

Early Childhood Education Can Help Make the Shift

Early childhood education can help build a culture of sustainability if it is framed in terms of sustainable development, if curriculum and pedagogical guidelines are oriented toward

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Box 6. Sustainability and the Human-Nature Relationship

Humans depend on the natural world to meet all their basic needs, including air, water, food, energy, and shelter. Studies suggest that contact with natural environments, living creatures, and ecological systems is also critical for healthy human development, particularly the development of a healthy self-concept. Psychologists have observed that children as well as adults benefit from "ecological development" in which they create or move toward an understanding of themselves in relation to the non-human world.

Yet many people are increasingly isolated from nature. According to the *2008 Outdoor Recreation Participation Report*, participation in outdoor activities among U.S. youngsters aged 6 to 17 declined 11.6 percent between 2006 and 2007, with the sharpest drops among 6- to 12-year-olds. The time that young people spend indoors is associated with increasing levels of computer, video, and technology use and decreasing levels of physical activity. The negative health effects of this trend, from depression to obesity and diabetes, are well documented.

Research indicates that repeated, regular, and sustained positive experiences in natural environments are influential for attaining sustainable behaviors and lifestyles. Journalist Richard Louv, in his 2005 book *Last Child in the Woods*, points to the psychological and physical benefits of greater interaction with nature. Children in particular can benefit from opportunities for unstructured play in semi-natural environments close to home. Such informal outdoor experiences may be more powerful than the formal, classroom-based environmental education that has gained ground in many countries in the last 30 or so years.

In the United States, Louv's book inspired the drafting in 2007 of the No Child Left Inside Act, designed to guarantee every American child (in particular, impoverished inner-city youth) effective and educationally significant access to outdoor nature. Although this legislation has not yet been adopted, it signals rising concern in the world's largest consumer culture about the next generation's experience in and with natural environments—the outdoors.

Outdoor and environmental education have a long-standing tradition in countries such as Germany, Norway, the United Kingdom, Australia, and New Zealand. Their formal educational efforts are often complemented by a strong outdoor recreation and wilderness tradition. Examples include the *Wandervogel* and youth hostelling movement in Germany, *friluftsliv* in Norway (open air life/life in nature), and the scouting and outdoor education tradition in the United Kingdom, Australia, and New Zealand. Summer camps in the United States and Canada, along with Canada's cottage culture, promote active interaction with natural environments. What unites all these activities is the intent to develop a relationship in which the effects of human behavior on nature and "self" become felt, experienced, and valued.

For many people, especially those in the westernized world, the most direct relationship they have with nature (apart from the air they breathe) is through the food and water they consume. Efforts to live more sustainably though food choices are thus a critical and integral element in the systemic shift to a culture of sustainability. Trends such as the bioregional movement, the rise in community and market gardens, increasing interest in local and organic food, and the embrace of vegetarianism all suggest an attempt to restore a more direct, immediate, and enriching human-nature relationship.

—Almut Beringer
Director of Sustainability,
University of Wisconsin

education for sustainability, if staff training in this field is reinforced, and if parents and communities are involved in the process.

In May 2007 an international workshop on the role of early childhood education in a sustainable society brought early childhood professionals and experts from 16 countries to Gothenburg, Sweden. Participants recognized that there was a great deal in the traditions of early childhood pedagogies that aligns with education for sustainability, such as the interdisciplinary approach, the use of the outdoors for learning, learning through concrete experiences and real-life projects, and the involvement of parents and communities. A subsequent conference in Gothenburg in November 2008 recommended that early childhood education should be conceived as a first step in learning to live sustainably, should be given more priority in policy development, should receive more resources, and should involve cross-sectoral support and collaboration.[3]

It is important that the goals and content of early childhood curriculum be aligned with education for sustainability. In this exercise, environmental education is not the only component. In addition to fostering love for and respect toward nature and promoting an awareness of problems due to unsustainable lifestyles, early childhood education must encourage the outlook and basic skills that enable children to take informed actions responsibly. Instead of the 3Rs of reading, writing, and arithmetic, early childhood education can follow the 7Rs—reduce, reuse, recycle, respect, reflect, repair, and responsibility:

- *Reduce* is about reducing the consumption of food, materials, and resources, which may involve working with parents on the problem of children's exposure to advertisements promoting endless consumption.
- *Reuse* is about showing children that materials can be used many times for different purposes in preschool and at home.
- *Recycle* can be encouraged by asking children to bring recyclable materials to school and integrating them into a range of activities.
- *Respect* is about nurturing understanding of and respect for nature and natural processes and reducing the extent to which they are violated.
- *Reflect* is a habit and skill everybody will benefit from in working for sustainability.
- *Repair* involves taking care of broken toys and other objects and repairing them.
- *Responsibility* is about trusting children to take care of something or do something they can feel proud about.[4]

There is much in the world that is unknown to children. Working toward making the unknown visible to them means creating opportunities to discover the unknown in what they do and work with. This puts demands on early childhood teachers to be aware of what a child's learning should be directed toward.[5]

At the same time, there are also unknown phenomena for the teachers, particularly concerning the future. From a pedagogical perspective, this is a difficult challenge. One way to deal with this might be to try to identify what all children may benefit from having in the future. Eva Johansson suggests that courage, integrity, critical thinking, and responsibility are necessary personal attributes in order to be prepared for an unknown future. Also, it is important to nurture the ability to recognize injustice, as well as to be skilled and creative in solving complex questions. If children are given ample opportunities to be challenged, to make mistakes, and to enjoy seeking possible answers, they will be better equipped to confront the complex questions raised by sustainable development.[6]

At the heart of teaching and working with young children should be the notion of the rich and competent child and active citizen, being in an equal position as his or her teacher, constructing understanding and meanings with others. The "project approach" is a teaching strategy that addresses children's intellec-

tual dispositions, allowing children to examine the basis of their own opinions, ideas, and assumptions. This strategy will help them examine the behaviors of their own cultures and others in terms of implications for sustainable development.[7]

Courtesy Earth Sangha

Young students plant a vegetable garden at their elementary school in Washington, D.C.

It is not necessary to invent entirely new pedagogies in order to "do" education for sustainability in the early years; it is possible to build on pedagogical traditions instead. Arjen Wals points to the qualities in the pedagogical tradition of early childhood education that are particularly useful for education for sustainability—qualities that other levels of education may lack: "So let us return to kindergarten and explore why kindergartens offer more for moving towards a more sustainable world than many of our universities. Kindergarten ideally is or can be places where young children live and learn, explore boundaries, in a safe and transparent world without hidden agendas….There are no dumb questions in kindergarten and there's always time for questions and questioning."[8]

Research shows that the traditional subject-based teaching of knowledge that is common in schools does not give the best results in learning about issues related to sustainable development, which are interdisciplinary in nature. Furthermore, modeling behavior is found to be more effective than direct teaching or preaching in helping young children internalize values and develop desirable attitudes and leanings. Children should have role models who can make these values and characteristics visible and "lived" in daily settings, including early childhood centers, schools, and families, as well as through various public media.[9]

Families, indeed, are the child's first educators. They have the greatest influence in shaping young children's attitudes, values, behaviors, habits, and skills. So they have a central role to play in educating their children for sustainable development. And grandparents often have age-old wisdom about ways of life that favor living together, the preservation of nature throughout generations, and cohabitation with different species—wisdom that should be tapped. Thus where formal early education programs are not available, non-formal education can be set up—as an integral component of community programs or otherwise—to provide parents and grandparents with opportunities to discuss what could be done differently in daily life in order to encourage or enable sustainable development. Where an early childhood education program does exist, the participation of parents can strengthen the link between what takes place in the education setting and at home.[10]

Case Studies on Young Children and Sustainability

The May 2007 workshop in Sweden highlighted numerous examples of how to get young children involved with questions about sustainable development. In one case in Aus-

tralia, for example, children have numerous opportunities to act as agents of change for sustainability. They work on such mini-projects as litter-less lunches, responsible cleaning, reusing and recycling things, a vegetable garden, a register of native plants, environmental aesthetics, efficient use of natural resources, and construction of a frog pond. They also worked on lifestyle questions such as waste management as well as the "eco-friendliness" of their outdoor environment. The teacher skillfully designs the activities based on the children's interests. They work collaboratively and ensure that informed, reflective practice infuses interactions and deliberations.[11]

Another example is a case study from Japan, where the project approach was practiced in a preschool in relation to the cycle of the silkworm, a fascinating insect. Silk and silkworms have a long use and cultural meaning in traditional clothes in Japan, yet the mulberry trees—which provide the natural food of silkworms—are disappearing in the school's neighborhood. Children learned the whole ecological cycle surrounding silkworms by experiencing, hands on, the growth of cocoons into caterpillars in less than 25 days, observing how caterpillars eat and when silk fibers are produced. While the project was mainly focusing on nature, culture and economy were included as well when the teachers discussed silk clothing and the silk industry in Japanese society.[12]

The last example is from Sweden. The Swedish national curriculum for early childhood education and care clearly spells out that teachers are responsible for promoting respect for the intrinsic values of each person as well as for the shared environment. It also very specifically focuses on children acquiring a caring attitude to nature and the environment as well as an understanding that they are part of nature's regeneration process. The curriculum asks teachers to address ethical dilemmas, and it regards gender equality as a precondition for a sustainable society.[13]

Current Challenges in Early Childhood Education

Although an individual's capacity to learn is most receptive during the first years of life, these are the years that traditionally receive the least support in the education world. Policymakers must pay more attention to this area, given the crucial importance of quality early childhood education, staffed by competent educators, for nurturing active and responsible members of society.[14]

Other areas and levels of education can learn a great deal from the pedagogical strengths of early childhood education, such as the hands-on approach, use of the outdoors as a teaching tool, interdisciplinarity, the whole-project approach, encouraging children's initiatives and interests, and connecting with parents and communities.

With the growing concern about producing a competitive workforce in a globalized knowledge economy, early childhood institutions are increasingly pressed to place school readiness and the acquisition of formal skills at the heart of their goal. But these schools and other preschool bodies need to resist pressures to become packed with hurried and scheduled curricula with predefined goals that are implemented through second-hand learning. These years are the ideal time for children to develop a love of the environment and to learn the basic 7Rs of caring for it.[15]

Box 11. *continued*

foundations, and so on. It must mobilize appropriate stakeholders to participate in the discussion and help accelerate needed changes in cultural practices and institutional structures. Indeed, the task of assembling such support is at the core of the overall challenge and will determine whether the infant MAHB (see mahb.stanford.edu) survives to tackle its global task.

The MAHB envisions establishing an "observatory" on humankind's collective behavior. It would gather evidence on dimensions of cultural change from existing documents and databases as well as from a variety of global stakeholders. The observatory would explore the role of values in well-being to determine what institutional and cultural barriers stand between declared values and actual practices. It would examine the factors that drive human happiness and fulfillment across cultures and their implications for ecological sustainability. It will use modern communications systems to assess how diverse societies measure success and happiness, to depict the links between global environmental risks and lifestyle choices, to explore cultural differences in attitudes toward the environment and sustainability, and to embed the human narrative in a deeper understanding of humankind's relationship to nature. The behavioral observatory would include an interactive portal sharing up-to-date information about particular environmental problems, human factors relating to these problems, and frameworks to deal with them.

Once established, the MAHB could be a powerful new tool to mobilize people who have devoted their careers to studying behavioral change to help solve the largest threat humanity has ever faced: unsustainable practices undermining the very systems people depend on. Natural scientists have already shown the way toward a sustainable future by elucidating the problems and outlining many solutions. Now it is time to figure out how to frame these in ways that will motivate people to respond—a job well-suited to the MAHB, whose public outreach and debate functions could play a major role in generating the changes needed.

—Paul R. Ehrlich and Anne H. Ehrlich

Source: See endnote 13.

important to them personally and to the larger human prospect. There are many challenges to actually making this a reality, not the least of which is the very real possibility of growing despair and nihilism among young people in the face of what will likely be a time of increasingly dire news and seemingly unsolvable social and economic problems.

The scientific evidence suggests that the years ahead will test coming generations in extraordinary ways. Educators are obliged to tell the truth about such things but then to convert the anxiety that often accompanies increased awareness of danger to positive energy that can generate constructive changes. Environmental education must be an exercise in applied hope that equips young people with the skills, aptitudes, analytic wherewithal, creativity, and stamina to dream, act, and lead heroically. To be effective on a significant scale, however, the creative energies of the rising generation must be joined with strong and bold institutional leadership to catalyze a future better than the one in prospect.

24. For an overview of this project, see "Jordan Valley Permaculture Project," The Permaculture Research Institute of Australia, at permaculture.org.au/project_profiles/middle_east/jordan_valley_permaculture_project.htm.

25. Credits for sequestering carbon are discussed in Lehmann and Joseph, op. cit. note 11.

Education's New Assignment: Sustainability

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Early Childhood Education to Transform Cultures for Sustainability

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Commercialism in Children's Lives

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