

EDUCATION FOR A SUSTAINABLE SOCIETY IN ISRAEL

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Re-Orienting Education Towards Sustainable Development: Education is critical for promoting sustainable development and improving the capacity of people to address environment and development issues. To be effective, it must deal with both the physical/biological and socio-economic environment and human development.

Agenda 21, Chapter 36

Introduction

The Earth Summit at Rio in 1992 presented sustainable development as the central challenge facing our generation. The State of Israel participated in drafting the principles expressed in Agenda 21, the commitment of the nations of the world to making the shift to sustainability.

Agenda 21 makes clear from the start that education must serve as a central vehicle for bringing about change in this direction. Only by raising awareness, allowing open access to information, and developing participatory democratic structures and capabilities for people of all ages and social groups, will we be able to forge the transformation necessary to meet the needs of this generation, while restoring and caring for the environment for coming generations.

Young people are our link to the future generations, and in Agenda 21 were recognized as being absolutely essential to the process of building sustainable communities:

By 1993, governments should take measures to establish procedures to allow for consultation and participation of youth of both genders in decision-making with regard to the environment, natural resources, housing and recreation, control of pollution in both rural and urban areas. (Agenda 21, Chapter 25)

The intention of Rio and all subsequent efforts was to point out the critical need to forge a new kind of education—an educational process that involves young people in gaining skills for the challenge and practice of sustainability.

This essay seeks to map how far Israel's formal educational system has come in implementing steps in this direction. It must be noted that, bluntly put, sustainability is as yet no household word in Israel. I will try to explain why this is so, and why the educational community in Israel has, until very recently, relegated the challenge posed by sustainable development to a marginal place, low on the list of national priorities.

There are some positive signs of change. Local efforts and educational responses to the environmental crisis abound at the grassroots level. Many of these offer compass points and models of good practice that can help form a coherent government policy, and a renewed commitment to education “as if the planet really mattered”—education for a sustainable society in Israel.

Israeli education: what has changed since Rio?

Any assessment of the degree to which education in Israel has taken to heart the principles and intentions of the Earth Summit in 1992, we must first look back at national educational policy over the last decade. Have the central educational system and various government bodies taken any steps toward implementing long-term programmatic and structural changes to reflect the commitment to sustainability Israel made at Rio? The answer is clear: almost none.

This is not to belittle, for a moment, the sudden growth of local initiatives, the work of NGOs and isolated efforts of teachers and concerned citizens. These, as I will try to show later, offer a ray of light that can signal a way forward. However, we must first consider the lack of attention to sustainability in Israeli educational policy and practice, and more specifically within environmental education.

Sustainability is still essentially an unfamiliar concept, rarely appearing in textbooks or curricula and almost never in “serious” educational discourse, formal programs or curricular projects sponsored by the Ministry of Education. The burgeoning awareness of both the global and the local environmental crises have in fact done little to change the relatively

marginal place relegated to environmental education in terms of priorities and resources allocated to the field.

The sobering general statement of the Environment Ministry's Executive Report on Sustainability provides an apt description of the official educational response to the challenge of sustainability in Israel: "Environmental issues have not yet been placed at the top of the political agenda." This adequately summarizes the state of education in Israel, still entrenched within a worldview that has not given much thought to sustainability, while existing programs "have not yet been successful in changing trends nor in steering the country toward a sustainable path".

The roots of neglect in Israeli education can be found, I believe, in the wider social context. Over the first half-century of statehood, the issues of security and the Arab-Israeli conflict have dominated public consciousness and preempted the treatment of social and environmental concerns in Israeli society. In a similar way, post-holocaust Israel has consistently rejected international restraint measures, such as banning nuclear arms, for example, which it sees as illegitimate in the wake of the struggle to survive. Tragically, it has seemed next to impossible to hold on to any political policy with a long-term view, in the face of the chronic uncertainty about the future that has characterized contemporary Israel.

A little less than a decade ago, many believed that Israel was on the path to unprecedented prosperity, being at the height of the peace process that promised the dawning of a "new Middle East" and the transformation of Israel's relations with both its neighbors and the world. It appeared that perhaps the stage had finally been set for dealing with the complex issues of a fractured multi-ethnic society and the rapidly degrading natural world.

Unfortunately, a decade later, Israel is ostensibly at war with the Palestinians, and as violence and terror abound, we have come as far away from any notion of a sustainable society than ever before. Successive governments have raced to keep pace with the increasing dominance of the global economy. Privatization, a growing mass throwaway consumption economy, and an influx of cheap labor from Third World countries, have all contributed to widening the gap between rich and poor. Israel ranks lower on almost all indices of social equality, environmental justice and health than it did a decade ago. Short-term economic and political interests often collude to gorge even more out the landscape and what remains of Israel's natural resources. The national water crisis, where mismanagement of the public interest and drought have brought Israel's water table to dangerous levels, is but one case in point. Ten years after making a commitment to

sustainable development, Israel is a far less egalitarian society, and we leave far less for future generations.

It therefore comes as no surprise that Israeli education has come to reflect the priorities of a public policy that has barely begun to place sustainability on the agenda. The Ministry of the Environment, formed just over a decade ago, has been largely uninfluential, primarily because it is perceived as having a minor ministerial role, with a small budget and little political clout. The educational initiatives sponsored by the Ministry of the Environment have been sporadic and have had minimal little lasting effect. Most of the projects listed in the Ministry report for Rio+10 were initiated by NGOs and charitable organizations. The existence of these initiatives gives the rather misleading impression that the formal educational system is taking full responsibility in this sphere. We must ask, instead, whether sustainability and the environment are being “outsourced” and so continue to be marginalized on the educational agenda. This being the case, veritably good initiatives in education have had little influence on resourcing and policy changes in the educational system, and thus exempt it from enacting widespread changes to meet the implications of building a truly sustainable society.

The Ministry of Education’s track record shows but scant concern for environmental education. The Ministry does not even have a listing of schools in Israel that teach environmental studies, and seems content to have the environment treated in an ad hoc fashion, with almost no budget for teaching hours, no inspectorate dedicated to environmental studies and no core curricular guidelines or recommendations for schools. The closest office is the “National Inspector of Environment and Agriculture” an anachronistic throwback to early state days when agricultural study was linked to the Zionist project of settling the land. Sadly, the environment is not a recognized subject of study—there are no formal in-service training programs and little pre-service teacher training worth noting. The growth of the environmental studies matriculation examination at the secondary level is a notable exception, although its emphasis has been for the most part science research-based.

What went wrong with Israeli environmental education?

Even if the amount of resources invested in environmental education by government ministries has actually risen over the last decade, the quality of these programs leaves much to be desired from the perspective of sustain-

ability. Both the content and process of existing environmental educational practice in schools fall short of the challenge posed by Agenda 21 for building a more just and sustainable society. For this reason, it is important to look critically at dominant modes of environmental educational practice in Israeli schools, and to examine both their roots and intentions, in order to assess where Israeli education can spring forward in this area.

Particularly useful is Eilon Schwartz's analysis of the three paradigms in Israeli environmental education (see Appendix I), which has been very influential in spurring a reflective re-assessment of practice in many circles. The study traces the evolution of Israeli environmental education from its early roots in the romantic Zionist relationship to "Nature", to the subsequent "environmental studies" paradigm, based on a scientific-technological problem-solving approach to the environmental crisis. Schwartz calls for the adoption of the new emerging paradigm of place-based environmentalism coupled with a re-envisioning of cultural values and the cultivation of environmental literacy to meet the challenge of sustainability.

A closer look at Israeli schools reveals that eclectic approaches predominate. Paradoxically, the lack of any required core environmental curriculum for schools has stimulated many sporadic initiatives by teachers, seeking to address environmental issues in some way. For the most part, however, these are seen as "extracurricular" programs and not part of the mainstream learning process. Elementary schools in Israel enjoy relative flexibility and freedom in adopting different curricular approaches and many of these initiatives are often more locally based and experiential.

When the environment does appear as a subject of study, it is generally linked to science study. "Inquiry" and "research skills" are leading buzzwords in educational jargon today, and the environment provides a platform for this within science study. Many Israeli science texts relate to the environment as part of the chapter on "energy" or "the water cycle", with only cursory references to the environmental crisis, if any. One recently published Israeli science textbook, for example, includes overpopulation as a topic of study but makes almost no reference to cultural values and dilemmas inherent to this topic.

In the past, Israeli young people were regularly exposed to the natural world through school trips that focused upon walking and hiking as a way of knowing "the land of Israel." This approach, rooted in the romantic Zionist notion of national rebirth and re-connection to the land, was part of the core curriculum of Israeli schools. The development of a more urbanized

consumer lifestyle in Israel and the current public anxiety about security, have made this a far more rare occurrence, although there are still remnants of this tradition in most schools.

As an Israeli pupil moves into junior high school, he or she will continue to encounter the “environment” within the science curriculum, and a small minority will enroll in environmental study towards the matriculation exam. Until now, these “ecotope” projects, have been almost purely science–research orientated, and have rarely sought to engage young people with the social and cultural dilemmas in which environmental problems are situated. Social studies, values education, and democratic education are deemed separate pursuits in schools, rarely connected to environmental justice and ethics. Young people as a whole are given few opportunities to train for meaningful democratic participation, or to engage in activism for change in their schools and communities.

Recent polls have indicated that the Israeli public is relatively well–versed on major environmental issues, and displays a high degree of awareness about pollution and global warming, in comparison with the general public in Western Europe and the United States. When questioned, however, about their willingness to act for change or as to their belief in the possibility of change, the Israeli public ranks far lower than counterparts in other countries.

Israeli schools reflect this dichotomy in relation to environmental education. Drawing on Eilon Schwartz’s taxonomy of educational approaches, it can be said that Israeli schools tend to be “stuck,” somewhere between the first and second paradigms, placing environmental education in the purview of nature study or within a narrow science–based framework. These may indeed lead to factual knowledge about the environment, but do not engage pupils as active protagonists for change. Few schools, it seems, have succeeded in adopting an integrated trans–curricular approach that links fields of study and the personal–affective experience of being a part of nature on the one hand with the cultivation of social responsibility and stewardship on the other. Failure to make this link between school and the issues young people face in the “real world,” remains a real obstacle to creating an education which will give young people the knowledge and skills necessary for working towards sustainability in Israel.

Changing tides: a shift in Israeli environmental education

In almost stark contrast to central government policy, Israeli grassroots initiatives give good cause for optimism. It is useful to look at some of the models these offer for expanding and strengthening education for sustainability in Israel.

In the past few years Israel has seen a growth spurt of NGOs and groups interested in environmental issues. A recent poll places their number at nearly 200 today across the country, but this is no doubt just the tip of the iceberg. There is no question that public awareness about the environment is of a different grade than a decade ago. Many groups and institutions have also begun to revise the environmental education component of their activities. A good example of this is the Society for the Protection of Nature (SPNI), which over the last decade has shifted its orientation from a Sierra Club-like organization devoted chiefly to nature preservation, to a focus on publicly based activist campaigns in urban centers. This move was accompanied by the development of an educational wing that emphasizes environmental justice, citizenship and community models linking schools to activism. Likewise, traditional institutional bodies such as Jewish National Fund and the National Parks Authority have refashioned their image as environmental organizations, and have all revamped their educational wings in this regard.

The formal educational sector, as I have pointed out, generally lags behind these trends, despite a few praiseworthy achievements such as the Year of the Environment, which the Ministry of Education declared in 1994, and which gave a boost to many programs and activities that year in schools. One can marvel, however, at the plethora of local initiatives taken by teachers, parents and community groups. A large number of schools and community centers in Israel now take on environmental projects, clean-ups, and adopt local sites of natural and historical interest. The decentralized character and relatively greater curricular flexibility enjoyed by elementary schools in Israel has served as a good substrate for place-based activity that arises from local needs, and allows environmental issues to enter into the school through the back door. Secondary schools, on the other hand, are far more constrained by the requirements of the baccalaureate (matriculation) examinations, and therefore allow much less flexibility for activist projects. The popularity and growth of the Environmental Studies matriculation examination, however, attests to a growing interest among pupils and staff to engage in this field of study.

Recent years have seen a steady growth of conferences and courses offered in environmental education. **The Second National Conference on Environmental Education** took place in Tel Aviv in December 2001, drawing over 300 educators from all over the country. This event, and other concurrent regional conferences and workshops, are meeting a growing demand for training environmental educators, and exchanging ideas and good practices from the field. We have seen a growth of in-service courses for teachers on environmental education, although these are still sporadic and largely based on local initiatives.

The Heschel Center for Environmental Learning and Leadership has grown to fill the gap in supporting the development of leaders from various sectors and forging a vision of sustainability for Israeli society. The Center hosts various courses for the public and private sectors, and has developed an interdisciplinary Environmental Fellowship program as means of catalyzing the development of a broadly-based environmental movement in Israel. The Heschel Center houses a resource center and produces independent research to provide the public and the media with information, as a local branch of the Worldwatch Institute. Its activities include the annual publication of *Vital Signs—Israel*, and sponsorship of translation and publication of other environmental literature and materials.

The Israeli Forum for Ecological Art has been active in promoting ecological art as a new creative field within environmental studies. Among other activities, the Forum has created a curriculum for ecological art, which can be adapted to various levels and implemented in art programs within schools, colleges and academies. In 2001–2002 a collaborative project was carried out with children in special education, involving the planning and creation of an ecological-art schoolyard. Other initiatives involve the collaboration of artists, industry and scientists in the rehabilitation of rivers and natural sites.

My own place of work, **The Green Network**, is yet another testament to shifting interests and desires for environmental education in schools. This project was founded three years ago by *Tochnit Karev* (Project Involvement) and the Heschel Center, through a grant from the Andrea and Charles Bronfman Philanthropies. Today the Network has grown to nearly 40 schools, trying to meet the growing demand for educational support and funding for environmental education in the schools. The Network supports individual schools with small grants for environmental initiatives, sponsors teacher training to empower teachers to place environmental education and community activism on the agenda at schools, promotes green auditing and

practice in schools, and encourages schools to create opportunities for young people to gain the knowledge, confidence and skills to promote a sustainable way of life in Israel.

The Green Network teamed with the SPNI to organize **the First Conference of Young Environmental Activists**, which hosted over 300 representatives from over 40 schools across the country in June 2001. In this way, the Network seeks to build coalitions and sponsor the growth of additional networks of teachers, educators and community groups practicing activist environmental education. It has been a chief concern of ours in the Green Network to develop networking platforms among all sectors in Israel, i.e. the Arab, Jewish, religious, and secular communities, for the exchange of ideas and mutual support in developing environmental education. We have thus initiated the flux of educational conferences mentioned above, and inaugurated the first teacher's journal of its kind in Israel, devoted to Environmental and Social Education (entitled ***Hakadur Beyadenu***: "The Ball [i.e. the globe/world] is in our Court"). This well-received publication is geared at disseminating good environmental practice, while furthering educational discourse on the environment and sustainability in Israel.

Education for sustainability in Israel: toward a policy shift

Because society is a part of nature, and the health of nature depends on the health of society, all of which has to do with how humans live—culturally, socially, politically, ecologically—is environmental education. A transformation toward a more sustainable society can be accomplished only through fundamental and sweeping changes in the educational experiences offered to young people, from pre-school through professional school. At the same time, young people must continually help their elders to re-envision a just and sustainable future toward which we can all strive. (Strauss, 1996)

As we have seen, sustainability has largely been a non-issue in Israeli educational discourse, and authorities are just beginning to make it part of the agenda for schools. If we are to take seriously the true educational implications of Agenda 21, this must change. **First, this will require that the Ministry of Education take the lead in implementing policy change that places sustainability as a strategic national pedagogic goal in the coming years.** Anything less, however, will amount to continuing the present state of affairs in which environmental destruction, social and economic disparities and the values of caring and responsibility for the public good continue to be relegated to a peripheral place in education. Because these issues are at the heart of Israel's current malaise, they cannot be postponed any longer.

Though enmeshed in conflict and violence, Israel can move forward toward a sustainable vision of society in the 21st century. This is not only a necessity and a renewal of Israel's global commitment at Rio, but perhaps also offers a wedge, that can help form a new perspective of the future, allowing Israeli society to forge a healthier relationship with both the social and natural world, than that in which we currently find ourselves. Though education cannot fulfil this task alone, it will play a very central role in this shifting paradigm. The traditional value placed on education in both Jewish and Palestinian society, and the relative strength of the Education Ministry makes education even a more central avenue to remolding social and cultural priorities towards a sustainable Israel. The educational system can take a leading role as a model of integrating sustainability into both the content and process of learning; in cant take the lead in "greening" the infrastructure of schools and the very large number of allied institutions that work within the framework of the educational system.

What then must be done to help support this shift? Surely this will take a bold reassessment of budgeting and priorities in the field of education. This goal calls for no less than a change in educational policy, and a refashioning of content and pedagogical approaches. The following recommendations are offered to educators and education policy-makers as ways to move forward toward the goal of forging an education for sustainability in Israel.

Changing the content and process of education

Facing the crisis within Israeli society and its relation to the environment requires that we adopt an integrated multidisciplinary approach. The problems and their solutions are not restricted to one discipline or to one branch of science. Nor can we hope to gain much today from a romantic approach to nature preservation "out there" in pristine reserves while most children grow up in urban sprawl. The challenge posed by adopting the "third paradigm" of a place-based environmental education is still new within the Israeli milieu. It will require a welding of science and ecology to community education, citizenship and activism. This "holistic," value-oriented approach looks at both the place of humanity in nature, as well as at the social and political implications of creating a sustainable society.

How will schools be different if they adopt an approach to education "as if the planet (and with it a sustainable Israel) really mattered?" Here, some well-accepted principles can serve as benchmarks for introducing **environmental literacy** into mainstream Israeli education:

- **The interdependence** of all life as central to all education: Young people must be given the opportunity to experience a “sense of wonder” and appreciation of the natural world, the sense that they are a part of the ecosystem. They must learn that they are part of an interconnected community, human and non-human, which forms a basis for moral and ethical restraints and responsibilities.
- **Living lightly on the planet:** The study of ecology, and with it the effects of the environmental crisis, can be integrated into all subjects. Schooling must deal with the “ethics of consumption,” globalization, poverty and justice issues, while offering young people the knowledge and skills to develop sustainable practices and lifestyles in their own home and community.
- **Democracy** requires a well-informed citizenship that participates in and influences decision-making. Young people must acquire tools for looking critically at current practices in their community and local environment, and they must gain confidence and skills through participation in seeking solutions. This means that schools must promote an ethos of involvement and activism, and that young people be informed about the issues and decisions that will affect their lives.
- **Hands-On Education:** Environmental education gleefully invites experiential learning that also gives young people a chance to make a difference—restoration projects, composting and recycling at school and in the community, redesigning and greening the school-yard, to name but a few projects that have gained popularity in many schools and can be expanded to include many more.
- **Greening schools** is both a goal and tool of this form of education. Green auditing includes a critical look at the environmental impact of the school community and sets indicators for change. In this way pupils and teachers can set goals to reduce and reuse paper, add water saving devices, shift to products that are environmentally friendly, influence local shopkeepers and suppliers to stock non-toxic green products, check energy use, etc. This can be expanded to influence the wider community by looking at how these practices might spread to families and the community at large. This form of activism invites interdisciplinary team approaches and which also enables young people to find sustainable solutions and influence the world they share with others.

Changing policy and structures

- **Modeling environmental practice:** The educational system in Israel can play a leading role in modeling environmental practice that can be emulated by other government bodies. The education system can implement the recycling of all its paper and supplies, conduct environmental audits of all its buildings and institutions, as well as apply socially and environmentally responsible criteria toward purchasing and use in the system. Enacting an environmentally friendly purchasing policy that promotes the use of non-toxic, recycled, and re-used products will surely give an economic boost to sustainable practices. No less, they will set the standard for the entire school system and other institutions across the country. One should not underestimate the symbolic public impact of such a move taken by the high-profile and culturally influential Ministry of Education.
- **Environmental planning for schools:** The education system in Israel can lead the way in democratizing the planning process of schools and playgrounds to include community members, school staff and young people. The goal of reducing the environmental impact of schools will require sustainable design solutions, guidelines about environmental friendly and non-toxic materials, monitoring energy and resource use, while creating spaces in which young people and the community can interact and thrive. This approach can be implemented in designing new schools and can gradually be integrated as both an educational and participatory process in older school buildings.
- **Support grassroot efforts and existing networks:** The recent rise of networks and innovative environmental programs are harbingers of change. They are valuable assets that offer experience and models of good practice that can be expanded into a comprehensive national environmental education policy. Government support should broaden the resource base and population reached by these networks, but must also beware of neutralizing or co-opting their effectiveness. It is essential that a participatory and vital environmental education reach peripheral areas and low-income populations in the interest of empowerment and social change.
- **A Task Force** headed by the Education Ministry, in conjunction with other government bodies and NGOs, must design and monitor strategies and implementation of education for sustainability. **It is essential that sustainability be adopted as a core strategic goal and a pedagogic**

priority of the education agenda in Israel. This task force will set up the mechanism for cross-disciplinary action research and the development of the necessary pedagogic approaches, linking existing nationwide programs and initiatives, and setting up in-service and pre-service training for teachers and educators. Recent trends within the Israeli educational system offer potential partners for embracing the educational values embedded in sustainability: Democracy Education, Citizenship Studies, Social Education, and “Values Education,” without neglecting the “greening” of traditional disciplines such as the sciences, mathematics, languages, etc.

Concluding thoughts

Education as if the planet really mattered is a serious leap in Israel. It challenges a widespread cultural myopia that has fostered the notion that our small country is somehow exempt from the limits and actions required if sustainability is to be taken seriously. The health of our society and of the Earth’s life-supporting systems cannot be deferred to some more comfortable and peaceful era. Israel’s long-term flourishing is intimately intertwined with the resolution of both its internal conflicts and an attainable vision of a sustainable way of life.

Education has a crucial role to play in Israel towards building a sustainable society. Environmental education heightens the perception that we have only one future—a common future—for the peoples of this region and for the planet. Above, I have outlined some of the steps necessary to craft such an education for Israel. This will, no doubt, require a re-appraisal of our educational priorities, the allocation of resources, budgets and curricular concerns. There is no technical fix or token gesture. The real challenge posed by forging an education “as if the planet really mattered” requires first, that we dare to dream. It requires that we engage both our own hearts and minds, and those of young people, in re-envisioning a future that will allow all life to flourish here. We are required to design an education that will give young people the knowledge, the skills, the caring and confidence to create that future.

Summary of key recommendations:

The environmental crisis in Israel and across the globe requires a paradigm shift in environmental education, which will articulate sustainability as a core value of the educational process. This includes a shift in **educational**

policy at both the local and national levels, and the transformation of **educational practice**, towards the goal of a just and sustainable future.

- The Ministry of Education must take a proactive role, and assume leadership in implementing policy change, moving environmental education from its current relatively marginal place on the educational agenda. Committed action can create an impact on many levels, as in the following spheres:

Changing priorities in educational budget allocation, teaching hours, in-service and pre-service teacher training, reflecting a commitment to sustainability.

Modeling environmental practice within the Ministry—enacting an environmental and socially responsible purchasing policy, promoting recycling in all institutions, conducting environmental audits in buildings and environmental design. These steps will have a strong symbolic impact and will lead the way for other government institutions.

Enacting an environmental and democratic planning process for all new school designs with all community members—staff, parents and children. An “environmental community audit” should be required for schools and green benchmark programs should be enacted while setting up indicators and linking schools to Local Agenda 21. Schools should be supported in implementing sustainable practices such as water conservation, and energy reduction.

- We recommend that the Ministry of Education, in partnership with the Ministry of the Environment and NGOs, set up a Task Force to formulate a strategy for implementing a transformation of both the **content and process** of education, while engaging the hearts and minds of young people, teachers and communities towards building a sustainable vision for Israeli society. Beyond the structural changes above, we recommend the following philosophical and practical guidelines to guide the work of the Task Force:

View environmental education as holistic in intention and practice: develop trans-curricular materials and **approaches** that involve diverse disciplines.

Knowledge about the environmental crisis (ecology, poverty, local problems and global issues) wedded with good science, ethics, and principles of design, is a key principle for all program development.

Living lightly and responsibly on this planet, and the ethics of consumption and creating alternatives to mass global culture are very much the purview of education for sustainability.

Learning by doing: Environmental education invites participation. Involve young people in hands-on projects for environmental restoration and stewardship. Transform school grounds to environmentally and socially inviting places as part of educational change.

Empowerment: Creating a sustainable Israel requires an informed and active citizenship. Empower teachers to lead change. Promote experiences for young people to learn about real life issues in their community and in the world, and help them acquire the confidence and skills to act for change.

Building coalitions for environmental education is essential. The Ministry of Education does not have to re-invent the wheel. Good initiatives by activist groups, NGOS and grassroots networks exist already. Education for a sustainable society can be linked to existing efforts promoted the Ministry of Education is currently promoting: citizenship, values education, parent and community involvement, Arab-Jewish rapprochement are a few examples of relevant initiatives for the necessary transformation at the local, regional, and national level.

References

Eilon Schwartz, *Three Paradigms of Environmental Education Israel* (unpublished report).

Benjamin H. Strauss, *The Class of 2000 Report: Environmental Education, Practices and Activism on Campus*, Natham Cummings Foundation, 1996.

Appendix I:

Three Paradigms of Environmental Education

Paradigm/ Characteristics	Nature Conservation	Environmental Sciences	Place-based Environmentalism

<i>Terminology</i>	Nature Conservation	Environmental Quality	Lifeways, Environmental Practices
<i>Focus of Action</i>	Nature Reserves	Public Health, Safety	Social-Environmental Quality
<i>Environmental Problems</i>	Biodiversity, Open Spaces, Indigenous Peoples	Air and Water Pollution, Dwindling Resources	Urban Life, Alienation, Loss of Quality of Life
<i>Human-Nature Relationship</i>	Nature as a spiritual source, apart from humans	Humans and Nature belong to the same system (lacks spiritual dimension)	Humans and Nature mutually interconnected (physically and spiritually)
<i>Moral Approach</i>	Biocentric	Anthropocentric	Cultural Anthropocentrism (Human culture rooted in nature)
<i>Academic Fields</i>	Ecology, Biology	Environmental Studies (Soil, Water, Policy)	Also: Architecture, Philosophy, History, Agriculture
<i>Basic Concepts</i>	Deep Ecology	Sustainable Development	Bio-Regionalism
<i>Educational Approach</i>	Sensory, Emotive, Experiential (Wonder), Nature Walks	Cognitive—Analytical; Environmental Literacy, Laboratory, Research, Policy	Relation to Place, Local Knowledge, Identity, Cultural Studies, Empowerment