

Formal Education for Sustainable Development

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Abstract

Over the next 50 years, humans will make the choice as to whether or not they would like to mitigate or exacerbate global warming. Seeing as now is a crucial time in which to enact change, why is it that the issues inherent in sustainable development are not currently a compulsory part of primary and secondary school education within the developed Western world? If our children stand to inherit our environmental, social, and economic problems, it is our responsibility to supply them with the tools to survive through such adversity. This paper examines the history of the concept of sustainable development and its relation to education. It highlights why the majority of the countries that have the resources to implement formal education for sustainable development have been reluctant to do so. Finally, it emphasizes what is needed to implement sustainable development in formal education curricula in the near future.

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Preface

On April 1, 2008 I officially changed my ISP topic from “Intercultural Dialogue: Top-Down and Bottom-Up Artistic Approaches” to “Formal Education for Sustainable Development.” While it may appear that I could not have selected more unrelated topics, I actually see the two having a vital intrinsic commonality. Both the arts and the environment are universal and thus allow us to see one another for what we all are: human beings. Unfortunately, a sufficient number of experts within the arts were not available for personal contact within Geneva. Therefore, I had to be pragmatic and change my topic so that I could truly profit from local resources.

I chose to write about Formal Education for Sustainable Development (with a focus on the primary and secondary education of this sort in the Western developed world) because of a frightening epiphany I had during the last review and discussion session of the semester. I was working with a small group, trying to create a short presentation about climate change and sustainable development, when I realized that even though formal education for sustainable development is absolutely necessary, it has not yet been mainstreamed. I thought back to elementary school, middle school, and high school; I had never learned about sustainable development. I am sure that perhaps there were bits and pieces of it in the lesson plans, but it was not until I took a class titled “Environmental Concerns in Perspective” during my sophomore year of College that my eyes were opened to the big picture of sustainable development. Even this class, however, was not compulsory. Many of my friends from high school and from my college have never learned about sustainable development, even though this complex concept affects our everyday lives. Thus, I wanted to know why it was that we were never taught about sustainable development from a young age. For, if we do not know what sustainable

development is, we cannot be proactive about implementing it into our daily lives. This paper will attempt to give some answers as to why formal education for sustainable development is not taught from the start in developed Western countries. Although it yields more questions than answers, I hope this work will at least inspire some introspection of the self, society, and the world.

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Introduction

In the present-day developed world, unsustainable living has become the norm. Although the citizens of developed countries comprise only 18 percent of the global population, they manage to use 88 percent of the world's resources and waste 75 percent of these resources.¹ The irony of this scenario has become apparent within the past decade, as the adverse effects of these actions on climate change have been widely recognized. However, despite this acknowledgement the majority of the developed world's population continues to live in the same unsustainable manner as it has in the past. It is a quandary as to why this occurs when we know that humanity has less than five decades left to reconcile its relationship with the environment. Contrary to being an alarmist perspective, this is simply a realist assesment based upon scientific findings.

Quite paradoxically, it is the citizens of developed countries who are fortunate enough to attend some of the best educational institutions in the world. Yet their education is often viewed as a privilege instead of as a responsibility; but it does carry with it a responsibility. That is, a responsibility to protect;² to protect current generations and future generations within the developed and developing world, to protect our planet, and to protect all other forms of life. All sectors of society that inhabit the developed regions of the world are accountable for the success of inter-generational equity, gender equality, poverty alleviation, the promotion of human health, environmental protection and conservation, peace and human security, cultural diversity, and sustainable

¹ Miller, Tyler. Sustaining the Earth: An Integrated Approach. California: Thomson, 2007.

² Gareth Evans/Mohamed Sahnoun, The Responsibility to Protect, Foreign Affairs, December, 2002.

consumption.³ It is only ethical that where there are the means to provide formal education for sustainable development, there must be the will.

The importance of formal education for sustainable development (ESD) has been summarized in the following passage:

To make progress towards more sustainable societies requires a population that is aware of the goals of sustainability and has the knowledge and the skills to contribute towards those goals. A knowledgeable citizenry supports a more sustainable society in several ways. First, citizens through their daily behaviours support government policy related to resource management and civic conduct. Second, citizens can support measures related to sustainable development and politicians who introduce and support enlightened legislation. Third, citizens can become knowledgeable consumers who purchase goods with low lifecycle impacts and who use their purchasing power to support corporate social and environmental responsibility and sustainable business practices. An informed citizenry can help communities and governments enact sustainability measures and move towards more sustainable societies.⁴

If it is the citizenry of democracies who ultimately have the power over what happens within society, it is likewise their obligation to be adequately informed (and to inform their children) about the most pressing issues of the present-day.

This paper is predicated upon the following beliefs: 1) It is only formal education institutions that can guarantee the conveyance of information about sustainable development to everyone, regardless of their social, economic, political, and/or religious background; 2) Children are a crucial component in ensuring a sustainable future; 3) Individual actions collectively have a great impact upon what occurs within society; 4) Where the resources for education for sustainable development are available, they should be utilized. With these principles as a foundational base, this work will examine an

³ UNESCO. United Nations Decade of Education for Sustainable Development: International Implementation Scheme. France: UNESCO Education Sector, 2005.

⁴ UNESCO. United Nations Decade of Education for Sustainable Development: International Implementation Scheme. France: UNESCO Education Sector, 2005.

enigma that has become more evident over the last couple of years: Why is it that primary and secondary formal education for sustainable development has not yet been mainstreamed in the developed Western world? Furthermore, why is it currently moving at a snail's pace when we are aware of "the fierce urgency of now."⁵

This paper will first clarify the difference between environmental education and education for sustainable development. It will then discuss the history of the *term* sustainable development and the history of the *idea* of sustainable development and its relevance to education. Next, some thoughts will be presented as to why there has been such a slow response to the need for formal ESD. The paper will then examine the responses to formal ESD that are taking place at the international, regional, national, and sub-national levels. Lastly, some ideas about what is needed for the future success of formal ESD will be presented.

Environmental Education versus Education for Sustainable Development

As a quick clarification, environmental education is not the same thing as education for sustainable development. Whereas environmental education is concerned mainly with the natural sciences, education for sustainable development adds the human constructs of economics and social politics to environmental issues. Thus, humankind is seen as a part of nature rather than apart from it. In this manner, education for sustainable development combines "matters of environmental quality and human development."⁶

⁵ February 7, 2008 – Lecture by Dr. Colin Murphy on UN Interventions in Conflicts.

⁶ Tilbury, Daniella. Education and Sustainability: Responding to the Global Challenge. Switzerland: IUCN 2002.

A Brief History of the *Term Sustainable Development*

The term sustainable development was first introduced by the World Conservation Strategy (WCS) in 1980. At that time the members of the WCS included The World Conservation Union (IUCN), The United Nations Environment Program (UNEP), and the World Wildlife Foundation (WWF). In 1987, the term sustainable development was reinforced by a report created by the World Commission on Environment and Development (WCED). This report was titled *Our Common Future*. Also known as the Brundtland Report, this work was the first to define sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” The Brundtland Report further contended that teachers in the formal education system play a crucial role in the promotion of the social changes necessary for sustainable development.

The three main objectives of the Brundtland Report were as follows:

- 1) To re-examine critical environmental and development issues and formulate realistic proposals for dealing with them;
- 2) To propose new forms of international cooperation on these issues that will influence policies and events in the direction of needed changes and;
- 3) To raise levels of understanding and commitment to action of individuals, voluntary organizations, businesses, institutes, and governments.⁷

This document emphasized that there would be no economic development without environmental sustainability. Furthermore, it recognized what we know today as the three pillars of sustainable development: social equity, environmental protection, and economic growth. Unfortunately, it would not be until the 1990s that sustainable development would become a term associated with education.

⁷ Schleicher, Klaus. “Beyond Environmental Education: The Need for Ecological Awareness.” International Review of Education Vol. 35, No. 3, 1989: 257-281.

The next major movement towards education for sustainable development occurred in 1992 at the United Nations Conference on Environment and Development. This symposium, also known as the Earth Summit, was held in Rio de Janeiro, Brazil. Aside from the four treaties created at this Summit (on climate change, biological diversity, desertification, and high-seas fishing), one of the most significant outcomes of the Earth Summit was a work called *Agenda 21*. Comprised of 40 chapters, it was the 36th chapter of *Agenda 21* that “recommended that education be reoriented to include environment and development education.”⁸ Chapter 36 also promoted “public awareness and training” in addition to education.⁹ *Agenda 21* was the first agreement in which “countries committed themselves to promoting sustainability through a great variety of means, including education.”¹⁰ This was one of the only parts of the conference in which there was no debate amongst the states involved. All of the state representatives agreed upon the importance of education for sustainable development.

Following the Rio Earth Summit came a truly monumental breakthrough in the role of education in the process of sustainable development. UNESCO explains the significance of this 1997 Conference which took place in Thessaloniki, Greece:

The Conference took place against the backdrop of a new vision of the role of education and public awareness in achieving sustainability, which had emerged during recent years. Education was no longer seen as an objective in and of itself, but as a means to bring about changes in behavior and lifestyles, to disseminate knowledge and develop skills, and

⁸ Hesselink, Frits. ESDebate. Switzerland: IUCN, 2000.

⁹ UNESCO. United Nations Decade of Education for Sustainable Development: International Implementation Scheme. France: UNESCO Education Sector, 2005.

¹⁰ Tilbury, Daniella. Education and Sustainability: Responding to the Global Challenge. Switzerland: IUCN 2002.

to prepare public support for changes towards sustainability emanating from other sectors of society.¹¹

Thus, the Thessaloniki Conference was the first meeting of international actors that explicitly acknowledged the importance of education for sustainable development (ESD) as a means through which to elicit positive and more sustainable changes in people's thoughts, attitudes, behaviors, and lifestyles.

The Thessaloniki Conference was followed by the 2002 Johannesburg World Summit on Sustainable Development (WSSD) three years later. This Summit reaffirmed the ideas of the Rio Earth Summit and it attempted to "deepen the commitments towards sustainable development at all levels, from the local to the global."¹² In addition to this, the Summit was the first to propose a Decade of Education for Sustainable Development (DESD). With this proposition, the Johannesburg World Summit indicated that education and learning were a crucial component to promoting sustainable development.

A Brief History of the *Idea* of Sustainable Development

It is important to note that even before the World Conservation Strategy of 1980 and the Brundtland Report of 1987, the *idea* of sustainable development and the importance of education's role in supporting sustainable thinking and behavior was recognized. In the mid-1970s UNESCO was the first organization to argue that environmental education should entail "not only the bio-physical natural environment,

¹¹ UNESCO. Education for Sustainable Development. 1 April 2008.
<http://portal.unesco.org/education/en/ev.php-URL_ID=37610&URL_DO=DO_TOPIC&URL_SECTION=201.html>.

¹² UNESCO. United Nations Decade of Education for Sustainable Development: International Implementation Scheme. France: UNESCO Education Sector, 2005.

but also the man-made physical environment as well as the political, economic, cultural, technological, social and aesthetic environment.”¹³ Two years after UNESCO’s assertion, a conference for “environmental education” was held in Stockholm. This was the first intergovernmental gathering to discuss and recommend a program for “interdisciplinary environmental education.”¹⁴ Thus, representatives at this meeting recognized the interrelatedness of the environment with the social and economic domains of society. These same ideas were discussed nearly twenty years later at the Rio Earth Summit.

In the year 1975, the Belgrade Conference, similar to the Johannesburg Summit (only 27 years earlier), stated that “environmental education demands global thinking and local action, and should focus on ‘the relationship between man and the biosphere.’”¹⁵ Following the 1975 Belgrade Conference was a conference in Munich which also emphasized the importance of an interdisciplinary approach to environmental education. It stated that only including the natural sciences in environmental education was inadequate. Thus, the interdisciplinary essence of sustainable development and the reorientation inherent within its formal teaching was recognized again even though ‘sustainable development’ had not yet been identified in and of itself.

The 1977 Tbilisi Declaration reinforced the arguments of the Munich Conference, stating that “ethical, cultural and economic dimensions somehow determine the concepts

¹³ Schleicher, Klaus. “Beyond Environmental Education: The Need for Ecological Awareness.” International Review of Education Vol. 35, No. 3, 1989: 257-281.

¹⁴ Schleicher, Klaus. “Beyond Environmental Education: The Need for Ecological Awareness.” International Review of Education Vol. 35, No. 3, 1989: 257-281.

¹⁵ Schleicher, Klaus. “Beyond Environmental Education: The Need for Ecological Awareness.” International Review of Education Vol. 35, No. 3, 1989: 257-281.

for environmental interpretation and the attitudes towards environmental use.”¹⁶ The

Tbilisi Declaration set out the following guidelines, synthesizing the conclusions of the aforementioned meetings:

1. Environmental education should consider the environment in its totality—natural and built, technological and social (economic, political, technological, cultural-historical, moral, aesthetic).
2. It should be interdisciplinary in its approach and cover local as well as international issues.
3. It should enable the learner to have a role in planning their learning experiences and provide an opportunity for making decisions and accepting their consequences.¹⁷

These same thoughts and approaches would be marked as innovative and new from 1987 onward.

Legitimate Terminological Controversy or Just an Excuse? Reasons Behind a Slow

Response to ESD

With the above historical background, it is clear that the *idea* of sustainable development, and its relevance to education, has been in existence for quite a while. Consequently, it seems only natural to ask oneself why it is that a formal primary and secondary education curriculum for sustainable development has not been mainstreamed after nearly four decades. Some argue that the concept and definition of sustainable development, as defined by the Brundtland Report, is too vague. In his book, ESDebate, Mr. Hesselink references people who “oppose the idea of expert and pre-determined universal norms and values of sustainability since no one knows what the ethically and

¹⁶ Schleicher, Klaus. “Beyond Environmental Education: The Need for Ecological Awareness.” International Review of Education Vol. 35, No. 3, 1989: 257-281.

¹⁷ Schleicher, Klaus. “Beyond Environmental Education: The Need for Ecological Awareness.” International Review of Education Vol. 35, No. 3, 1989: 257-281.

morally right sustainable values of behaviours are for oneself let alone others.”¹⁸

Countering such an argument, Dana Tilbury of the IUCN argues that “the existence of different interpretations of sustainability can result in “paralysis by analysis” and in delays in key changes essential for a more sustainable society.”¹⁹

In many of the interviews I conducted, I posed the question of why there has been so much controversy over the concept of sustainable development. Quite appropriately, the answers that I received reflected the different ways of thinking about sustainable development. One interviewee, from a non-governmental organization called Earth Focus, said that the controversy over the definition of sustainable development “is just an excuse. The real issue is when you touch upon teacher politics.”²⁰ According to another informant, from the United Nations Environmental Program:

The question should not be what sustainable development is. There is too much unnecessary controversy over this question and many opinions about how to go about it. The real question that everyone can answer quite simply is exactly the reverse. What is unsustainable development? Why is this not good for the future and how can we change it?²¹

Mr. Asnake added that asking oneself such questions would help to put the issue of sustainable development into perspective and aid people in beginning to think about the implications of their actions. Of course there is still much ground to be covered with regards to research on sustainable development; however, at the moment, we have

¹⁸ Hesselink, Frits. ESDebate. Switzerland: IUCN, 2000.

¹⁹ Tilbury, Daniella. Engaging People in Sustainability. Switzerland: IUCN, 2004.

²⁰ April 9, 2008 – Interview with Nicola Spafford Furey of Earth Focus.

²¹ April 8, 2008 – Interview with Wondwosen Asnake of UNEP.

sufficient fundamental knowledge to allow us to change our ways of thinking and acting so that they are more sustainable.

Colin Archer of the International Peace Bureau alluded to the legitimacy of the controversy over the term sustainable development:

No wonder there's a debate about what we mean by sustainable development. On the one hand there's a more free market approach while on the other hand you have a more left of center welfare state approach. There are some people who believe it's all in the hands of God and therefore it's a religious matter and has to do with moral values. There are other people who want to form a revolutionary transformation of society. All of these people are talking about [the same thing], sustainable development.²²

Thus, Mr. Archer's statement agreed with the position Mr. Asnake took; the problem is not necessarily that people do not understand what is unsustainable. The real issue is that "all interpretations of sustainability are value-laden. All definitions—whatever their source—serve particular social and economic interests and need to be critically assessed."

²³ It is these interests, detailed in the next section, that illustrate the substance of what really lies beneath the controversy surrounding formal education for sustainable development. Tilbury states, however, that "polarized points of view about sustainability miss at least one essential point: the concept of sustainable development requires change and compromise from entrenched positions."²⁴

²² April 15, 2008 – Interview with Colin Archer of the IPB.

²³ Tilbury, Daniella. Education and Sustainability: Responding to the Global Challenge. Switzerland: IUCN 2002.

²⁴ Tilbury, Daniella. Education and Sustainability: Responding to the Global Challenge. Switzerland: IUCN 2002.

Unsustainable Economies

The first motive behind the resistance to sustainable development education has to do with the free market economies of developed countries. Here, it is important to distinguish between those who view sustainable economic growth as the priority of sustainable development and others who see sustainable human development as the main objective of sustainable development. Tilbury explains the difference between these two views:

[The former group] does not support the transformation of current social or economic systems...great emphasis is placed on the role of technological and economic tools in shifting individual, group and industry activities towards a more sustainable path of economic growth. By contrast, the sustainable human development view demands radical departures from the current system. Sustainable human development provokes a fundamental challenge to established interests, primarily because it focuses upon issues of social equity and ecological limits, and, thereby, questions world views and development models that are predicated on assumptions of unlimited economic growth.

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The economies of Western developed states fit into the category that views sustainable development in terms of sustainable economic growth. Miller refers to this as *affluenza*: “The unsustainable addiction to over-consumption and materialism exhibited in the lifestyles of affluent consumers in the United States and other developed countries. It is based on the assumption that buying more and more things will bring happiness.”²⁶

Hesselink, taking the view of sustainable human development as the main goal of sustainable development, adds:

The major driver of a sustainable future is a change in socio-economic structures, which (currently)...breed inequity and over-consumption. Without such structural change...the well organized and globally institutionalized drive to consume will be far greater than the

²⁵ Tilbury, Daniella. Education and Sustainability: Responding to the Global Challenge. Switzerland: IUCN 2002.

²⁶ Miller, Tyler. Sustaining the Earth: An Integrated Approach. California: Thomson, 2007.

newly emerging drive to sustain. Education is considered by most...to be one of the driving forces to bring about such structural change and a core sustainable world.²⁷

Since our economies are based on over-consumption and the idea of exponential growth, it does not come as a surprise that the proposal to change the socio-economic structure of our societies would meet a substantial amount of resistance. In the words of one informant from the IUCN:

Sustainable development is a simple idea, but to put it into practice becomes more complex. It's a term that will be challenged seriously in the coming years since behind it is the idea that development is growth and growth is consumption and at some point that idea might need to be challenged.²⁸

Inasmuch as formal education is an effective method of challenging this conventional view of growth, it is not surprising that ESD has not played a more prominent role in the past and in the present-day.

Lack of Visibility

Since the lifespan of humans is but the blink of an eye in the Earth's geological cycle, it is difficult for many people to change the way in which they think and live without seeing immediate results. Mario Lague remarks that this is "asking a lot for intergenerational solidarity." Christophe Grand, of the WWF, argues that this is exactly why education is so important:

People must be educated in order to understand and accept that they will not see the results of a change in their actions for a long time...Look at the oil crisis which is occurring now. Are people adequately informed about this? Now one talks of cheap flights like Easy Jet, but in ten years this airline will be out of business. I think that people do not see things closely enough...especially those living in developed countries where many people perceive such problems as far away from them. But we must take action. Without oil how are we going to eat and dress ourselves?²⁹

²⁷ Hesselink, Frits. ESDebate. Switzerland: IUCN, 2000.

²⁸ April 8, 2008 – Interview with Mario Lague of IUCN.

²⁹ April 11, 2008 – Interview with Christophe Grand of WWF.

The everyday lives of people in the developed world are not being affected nearly enough for them to be willing to change their lifestyles. Part of the problem here is that markets do not reflect the environmental realities and issues of the present-day. People can literally afford not to care. Mario Lague, of the IUCN, cited fisheries as an example of this: “[This is] a disaster which we know is about to happen, but as consumers we’re not aware of this since we can go to Migros and buy farmed salmon which isn’t that expensive.” Mr. Lague also noted that there are no pollution-related prices to the consumer for buying food which has traveled a long distance to be in one’s local grocery store.

Although the depletion of fisheries is only one of today’s environmentally pressing issues, Mr. Lague indicated that the ability to turn a blind eye towards such serious matters may not continue for much longer:

This is already happening in Spain. Now fishermen from Western Africa [where the fisheries have been completely depleted] are using their boats to bring people to the Canary Islands and to Europe. These people are starting to emigrate just to live. And this is just the tip of the iceberg of the big population movements to come. As people see this, that it is actually happening in their daily life, they will not be able to deny the reality of environmental issues and the need for sustainable development.³⁰

Hopefully this will be the case, but it is likely that this will be too little too late.

Unfortunately, it is not the perpetrators of such unsustainable actions and mentalities who bear the brunt of the effects of these actions on the climate; it is the citizens of developing countries who are forced to deal with these consequences in their everyday lives. Therefore, the mindset and commitment to sustainable development within developing countries may be much different from that of developed states. Mr. Lague explains these differences:

(Citizens of the developing world) make adjustments since they know that their lives will depend upon this. This is unlike the developed world whereby a person associates

³⁰ April 8, 2008 – Interview with Mario Lague of IUCN.

sustainable living with buying a smaller television to save energy; in developing countries, the logic is more like: how do I save water so that I can still be hydrated during the dry spell? ³¹

An informant from the World Wildlife Foundation added that sustainable living is about decreasing, not increasing one's consumption. It would be better not to buy a television at all than to buy one which will use up less energy than another one. This kind of thinking, however, has not been mainstreamed since it is not the lives of the people in developed countries who are currently in the greatest danger.

Wavering Willpower

To add to the long list of reasons for inaction is also the reluctance of society as a whole to making the commitment to a constant, life-long learning process of sustainable development. Nicola Furey, an informant from Earth Focus elaborates:

As such [a life-long learning process], ESD must be a constant in the lives of young ones. The problem in the developed Western world, however, is that parents are so busy working that they generally don't have the time to reinforce such teachings, nor to lead by example. ³²

In order for ESD to be effective, it must not be a static process, but instead a constant learning experience. One crucial component to the perpetuation of the ideas of sustainable development involves the people whom children see every day: their families. Thus, education for sustainable development demands a great investment of parents' time and effort. Parents must also change their unsustainable living habits if they are to adequately supply their children with the tools they need in order to deal with environmental, social, and economic issues in the future. Such a commitment is a lot to

³¹ April 8, 2008 – Interview with Mario Lague of IUCN.

³² April 9, 2008 – Interview with Nicola Spafford Furey of Earth Focus.

ask, but this is the only way in which the true learning process for sustainable development may be reinforced.

National Politics

Nicola Furey, of Earth Focus states:

Part of the reason why Earth Focus works with schools is because the government is not taking responsibility in implementing sustainable development education in the formal education systems. Thus, raising awareness about such issues becomes the responsibilities of NGOs.³³

Below are some observations touching upon the reasons why national governments themselves have not been quicker to take the initiative in creating and implementing education for sustainable development.

There are several reasons for politicians' lack of action towards integrating a sustainable development curriculum into formal primary and secondary education systems. First, not all politicians understand sustainable development themselves and therefore only see this problem one dimensionally, not understanding the big picture. Schleicher points out that the environmental priorities of politicians "are much more concerned with physical aspects and the biosphere (i.e., with acid rain or desertification) and with technical repair strategies than with human behavior and social norms as the main causes of pollution."³⁴ It comes as little surprise then that education reflects these same priorities and ways of thinking. One cannot separate education and the socio-political system inasmuch as "politics decides on educational structures and goals."³⁵

³³ April 9, 2008 – Interview with Nicola Spafford Furey of Earth Focus.

³⁴ Schleicher, Klaus. "Beyond Environmental Education: The Need for Ecological Awareness." International Review of Education Vol. 35, No. 3, 1989: 257-281.

³⁵ Schleicher, Klaus. "Beyond Environmental Education: The Need for Ecological Awareness." International Review of Education Vol. 35, No. 3, 1989: 257-281.

Another explanation for inadequate action towards formal ESD implementation has not to do with a lack of understanding, but rather with a lack of caring. Unfortunately, “environmental policy and decisions are finally based on values which transcend scientific reasoning.”³⁶ The fact that most developed countries and their governments function on consumerism and the exploitation of resources makes the reasoning for the concentration only on the natural sciences facet of sustainable development completely unambiguous. Inasmuch as a reorientation of education for sustainable development would mean a significant reorganization of how our present-day society functions, it comes as no surprise that policy makers at the national level are reluctant to do this.

Furthermore, the expense of restructuring the national curricula and re-training teachers so that they may reorient their own lesson plans is another roadblock to the implementation of this idea. On the topic of expenditures, Mr. Archer cited that on April 15th, 2008, the U.S. had just announced a donation of 800 million dollars towards food aid in order to “balance the severe effects of rapidly rising food costs. But 800 million is just a couple of hours in arms spending...there’s a lot more that could be done.”³⁷ The prioritization of national spending is currently focused more on means of defense and conflict mitigation (with weapons) than on conflict prevention (in which education plays a significant role).

The last reason for minimal action is due to the public and their influence on politicians. Mr. Lague explained that the biggest challenge in promoting education for sustainable development is that doing so must be made politically viable:

³⁶ Schleicher, Klaus. “Beyond Environmental Education: The Need for Ecological Awareness.” International Review of Education Vol. 35, No. 3, 1989: 257-281.

³⁷ April 15, 2008 – Interview with Colin Archer of the IPB.

Today people complain about the high price of gasoline in the United States which is half of what the gas price is here [in Switzerland]. But if a politician in the United States talks about raising the price of gas, this would be a deadly move to their campaign. Now people say I'm for anything about minimizing the effects of climate change as long as there's no cost and no need for me to change my behavior and lifestyle.³⁸

It is this kind of thinking that feeds into the slow progress with ESD at the national level.

As was mentioned earlier, a genuine education for sustainable development program would inherently affect every realm of society as it is to be something taught not only in schools, but in daily life for everyone.

The Formal Education System and its Actors

According to one informant from the United Nations Environment House, “the ministry of education has its own curricula and any desire to change this is generally viewed as a threat.”³⁹ Motivating inter-ministerial cooperation is yet another challenge facing the implementation of ESD. While there are some developed countries that have managed to engage their environment and education ministries in a dialogue over education for sustainable development, this is still not adequate. The participation of other ministries which have a stake in ESD should be encouraged as well.

Despite the fact that no research has been performed on the views of teachers towards implementing ESD into their lesson plans, it is possible to conjecture what the potential problems of this would be. Presently, the majority of curricula revolve around the content of important exams which students will have to take during their academic careers. Promoting education for sustainable development would be yet another subject for teachers to cram into curricula that are already too full as it is. In order to really integrate ESD into the curricula, the whole education system would have to be reoriented.

³⁸ April 8, 2008 – Interview with Mario Lague of IUCN.

³⁹ April 8, 2008 – Interview with Wondwosen Asnake of UNEP.

Implicit within this would be the necessary re-training of current teachers. Also, for a truly trans-disciplinary approach to ESD the teachers of different subjects would have to be in constant communication with one another about their plans. This along with retraining takes a lot of time and effort on the part of the educators. As Patricia Defauw said, speaking from experience, “Some teachers are more motivated than others.”⁴⁰ Unfortunately, motivation is not something which can be taught. Thus, the two main challenges are time and motivation.

Present-Day Action for Formal ESD

International Action

In December of 2002, the United Nations General Assembly created resolution 57/254 to initiate the United Nations Decade of Education for Sustainable Development (DESD). UNESCO was chosen to lead this decade which spans from 2005 until 2014. The United Nations International Implementation Scheme for the DESD states that its general goal for the decade is “to integrate the principles, values, and practices of sustainable development into all aspects of education and learning.”⁴¹ The Scheme lists some of the values which are implicit in the concept of sustainable development: “Intergenerational equity, gender equity, social tolerance, poverty alleviation, environmental preservation and restoration, natural resource conservation, and just and peaceable societies.”⁴² By promoting these values the Decade of Education for

⁴⁰ April 22, 2008 – Interview with Patricia Defauw of “I Love My Planet”

⁴¹ UNESCO. United Nations Decade of Education for Sustainable Development: International Implementation Scheme. France: UNESCO Education Sector, 2005.

Sustainable Development hopes to encourage sustainable attitudes and behaviors so that everyone can “live a full life without being deprived of basics.”⁴³

The themes for the Decade of Education for Sustainable Development include gender equality, health promotion, the environment, rural development, cultural diversity, peace and human security, sustainable urbanization, and sustainable consumption. The United Nations General Assembly will attempt to achieve the goals of the Decade of Education for Sustainable Development by encouraging governments “to implement the Decade in their respective education systems and strategies.”⁴⁴ In order for nations to be successful, the International Implementation Scheme states that all sectors of society must be involved. It also highlights informal and non-formal ESD as necessary counterparts for the overall success of formal education for sustainable development.

A question that inevitably emerges when studying an international program of this sort relates to its potential efficacy: Will it really make a difference? Although it provides a framework for moving ahead, the International Implementation Scheme is still quite vague. Colin Archer further illustrates the shortcomings of the Decade for Sustainable Development:

There is a general problem with the United Nations programs of this kind and there are dozens, hundreds of them in different areas...the year of the mountain, the year of the disabled, the year of the family...in that they cannot really compel governments to implement what is recommended. They are largely recommendations and the sovereign power remains within the state. On the other hand, where there is a treaty obligation (in the human rights field with the convention on the rights of the child for example), there states are required to produce reports and then those reports are scrutinized by experts and they have

⁴² UNESCO. United Nations Decade of Education for Sustainable Development: International Implementation Scheme. France: UNESCO Education Sector, 2005.

⁴³ UNESCO. Education for Sustainable Development. 1 April 2008. <http://portal.unesco.org/education/en/ev.php-URL_ID=37610&URL_DO=DO_TOPIC&URL_SECTION=201.html>.

⁴⁴ UNESCO. United Nations Decade of Education for Sustainable Development: International Implementation Scheme. France: UNESCO Education Sector, 2005.

to come up with answers to the questions. So there is pressure. But, it doesn't apply in all of these cases [including this case].⁴⁵

DESD will be dependent upon the commitment of its constituents. As the United Nations states in its International Implementation Scheme, all it can do is encourage governments to adopt the DESD. It cannot force them to do so. Therefore, the success of the Decade of Education for Sustainable Development will ultimately be determined by the commitment of its constituents—individual states.

Although it is alarming to consider that there will be no international source of power to ensure the perpetuation of life by promoting sustainable development, recently there have been signs of hope. The fact that the Nobel Peace Prize was awarded to Wangari Maathi in 2004 and to Al Gore and the International Panel on Climate Change in 2007, provides a message to all global actors that environmental issues are becoming more and more significant. With this kind of global dissemination about environmental issues, it is possible that the governments of the Western developed world will be impelled to take an effective role in the Decade of Education for Sustainable Development. Mr. Archer noted the significance of this kind of soft power in that it “is a contribution [which has to do with giving these issues] visibility and volume.” In addition to this, Mr. Archer remarked, “The fact that it [DESD] is a whole decade [also] means that there's a lot of time to develop it. It's not just a flash in the pan.”

⁴⁵ April 15, 2008 – Interview with Colin Archer of the IPB.

Regional Action – The ESD Strategy of the United Nations Economic Commission of Europe (UNECE)

After the initiation of the Decade of Education for Sustainable Development, the United Nations Economic Commission for Europe created a regional strategy to serve as a “framework for a draft implementation scheme for the UN’s DESD.”⁴⁶ This strategy was created for national governments in order to “[motivate and advise] them on how to develop policies and practices that incorporate sustainable development into education and learning with the involvement of educators and other stakeholders.”⁴⁷ The UNECE strategy was created by educational institutions, international organizations, non-governmental organizations, governments, and other relevant stakeholders. According to the United Nations International Implementation Scheme, these regions are to consult with one another on priorities for DESD, “...share [their] policies, practices, knowledge and progress, identify common challenges, learn from diverse strategies, forge consensus on regional challenges and action, and organize cross-national training and capacity building.”⁴⁸

The UNECE Strategy declares its main objectives to be the following:

- (a) Ensure that policy, regulatory and operational frameworks support ESD;
- (b) Promote SD through formal, non-formal and informal learning;
- (c) Equip educators with the competence to include SD in their teaching;
- (d) Ensure that adequate tools and materials for ESD are accessible;
- (e) Promote research on and development of ESD;

⁴⁶ UNECE. UNECE Strategy for Education for Sustainable Development. Europe: UN Economic and Social Council, 2005.

⁴⁷ UNECE. UNECE Strategy for Education for Sustainable Development. Europe: UN Economic and Social Council, 2005.

⁴⁸ UNECE. UNECE Strategy for Education for Sustainable Development. Europe: UN Economic and Social Council, 2005.

(f) Strengthen cooperation on ESD at all levels within the UNECE region.⁴⁹

The Strategy emphasizes that it is to provide a flexible framework for the countries that use it. It also notes that just as it is the responsibility of each country to implement its own strategy, it is likewise the government that is accountable for the costs of such implementation. The UNECE Strategy stresses that governments should see education for sustainable development “as an investment that will pay off in the long term.”⁵⁰ Indeed, it is just this kind of forward thinking which, as mentioned earlier, is often times quite challenging for citizens and governments to adhere to since the results of their investments may not be seen for a long time. Therefore, it will be interesting to see how much each government puts into its own implementation strategy. For the developed countries that have the resources to create ESD, the degree of financial commitment will provide an indication of how seriously they take the issue of sustainable development.

In order to assess the effectiveness and the success of the strategy, the UNECE has designed a series of evaluation phases. Implicit in the creation of these stages is the acknowledgement that “introducing SD aspects into all forms and levels of education is a long process and the outcome can, therefore, be measured only over a long period of time.”⁵¹ The first phase, which was to be completed by the year 2007, suggested that each country “should identify what it is already doing that would fit within the remit of

⁴⁹ UNECE. UNECE Strategy for Education for Sustainable Development. Europe: UN Economic and Social Council, 2005.

⁵⁰ UNECE. UNECE Strategy for Education for Sustainable Development. Europe: UN Economic and Social Council, 2005.

⁵¹ UNECE. UNECE Strategy for Education for Sustainable Development. Europe: UN Economic and Social Council, 2005.

the Strategy...and [should also identify] any obstacles or gaps.”⁵² With this information, each country was then expected to evaluate its own implementation schemes and to make any adjustments which would expedite its success. Following this, countries were expected to attend the Environment for Europe Conference so that their ministers could speak to one another about their successes, progress, concerns and issues with regards to their respective implementation attempts.

The second phase, which is to be completed by 2010, states that “the implementation of the Strategy’s provisions...should be well under way...countries should review progress made in the implementation of their respective State strategies and revise them, if necessary.”⁵³ The third phase, spanning from 2015 and beyond, declares that “countries should have made considerable progress in implementing ESD.”⁵⁴ As is evident from the portrayal of these phases, there remains much haziness. Mr. Archer of the International Peace Bureau observes that “it’s always a different thing being able to analyze programs that are already currently working [than those which have] to do with the future [which] are always more speculative.”⁵⁵ As such, only time can tell how effective the guidelines outlined in these phases will be. The UNECE’s ESD Strategy provides a good example of a present-day response to a lingering series of issues. The question is, however, whether this response will be enacted quickly enough.

⁵² UNECE. UNECE Strategy for Education for Sustainable Development. Europe: UN Economic and Social Council, 2005.

⁵³ UNECE. UNECE Strategy for Education for Sustainable Development. Europe: UN Economic and Social Council, 2005.

⁵⁴ UNECE. UNECE Strategy for Education for Sustainable Development. Europe: UN Economic and Social Council, 2005.

⁵⁵ April 15, 2008 – Interview with Colin Archer of the IPB.

Nationally and Sub-Nationally – Switzerland

In Switzerland's national law there is an allusion to the importance of education's role in promoting sustainable development. According to Sandra Brazzini-Mourier the law "says that schools should implement sustainable development into their programs, but it is not clear about how this might be done...The problem is that no one wants to take the lead in this education."⁵⁶ Thus, as the government has not taken a leading role in implementing sustainable development into formal education curricula, such an initiative has been left to teachers and civil society. This is problematic for several reasons. It cannot be expected that teachers will create curricula for ESD since they are already very busy and most teachers do not even have a fundamental knowledge of sustainable development.

Another problem with teachers and civil society being the architects of ESD is that they will not be successful in their attempts without financial assistance. While such aid can come from partners, such as businesses, it should come from the government itself. Without government support, it is ludicrous to presume that a wide-spread reorientation of the formal education system towards ESD would be possible throughout the country. So why does Switzerland mention the importance of ESD in its law? Mrs. Brazzini-Mourier says this is because the Swiss government knows that ESD "is so important now that they cannot ignore it. To implement it with concrete actions, however, is so difficult that they prefer to be vague."⁵⁷

⁵⁶ April 23, 2008 – Interview with Sandra Brazzini-Mourier of SBM Conseil.

⁵⁷ April 23, 2008 – Interview with Sandra Brazzini-Mourier of SBM Conseil.

While there have not been attempts made by the Swiss government to incorporate ESD into the formal education systems at the primary and secondary levels, there have been some grassroots efforts to do so. One woman that I interviewed, Patricia Defauw, created her very own project to incorporate the concepts of sustainable development into her children's primary school in Lancy. This, however, was no easy task. It took eight months of preparation before Mrs. Defauw could launch her project. When she presented her project, her ideas were met with great hesitation by the majority of teachers and the principal of the school. In the end, however, her power of persuasion convinced the teachers and the principal to try her program. Mrs. Defauw commented that the teachers who were more reluctant to participate in the project at its commencement have now become very interested in the topic of sustainable development. They have learned more about it and seen the different creative ways in which they can implement various concepts of sustainable development into their lesson plans. These same teachers then noted that the school itself was not functioning in a manner that was as sustainable as it should have been. They understood that they could not teach their students about sustainable development while the school itself acted unsustainably. Thus, these teachers led the school to change from basic white paper to recycled paper. While this may not sound like a lot, it is truly a challenge to persuade school systems to change their ways.

Mrs. Defauw crafted a project called "I Love My Planet" with one of the teachers from Institute Internationale de Lancy who was interested in raising awareness about sustainable development. The two worked to create a year long curriculum with different themes of sustainable development including: respect, ecological footprints, waste, climate change, energy use, endangered species, paper, and forest preservation. Mrs. Defauw contacted local organizations and businesses such as the World Wildlife Fund,

Le Respect, SIG (an electricity company), Terrawatt, and Defi D’Avenir in order to have outside aid and input into her project. Experts from these different sectors came into the school to talk to the children about the themes that related to the speaker’s area of work. Mrs. Defauw mentioned that having outsiders contribute to the project was of great help “since not all of the teachers were ready to discuss sustainable development with their students.”⁵⁸

In order to inform the current teachers in the primary school about sustainable development, Mrs. Defauw was fortunate enough to have an expert from the WWF offer his services for free. Mrs. Defauw notes that it was very kind of this man to train the school teachers without asking for anything. She mentioned, however, that as more schools become acquainted with her project it will not be possible to have such widespread free training from a nonprofit organization like the WWF. Currently the school is not even helping to fund “I Love My Planet.” Interestingly enough, it is the parents, not the government or the school, who contribute money to support the project. Of course, since this is not enough, Mrs. Defauw has to come up with much of the money herself. Thus, Mrs. Defauw remains a volunteer who is unpaid for all of the work she has done. She noted that while she was okay with this, having such a low budget made it difficult for her to elicit more help to develop and disseminate the project throughout the primary schools in Swiss Romande.

After seeing the effectiveness of Mrs. Defauw’s project in the primary school, the principal of the secondary school in Lancy asked Mrs. Defauw if she could create such a plan for his teachers and students. Unfortunately, Mrs. Defauw did not have the time to do this. The fact, however, that it was a principal of a school who demonstrated the desire

⁵⁸ April 22, 2008 – Interview with Patricia Defauw of “I Love My Planet.”

to implement such an ESD project shows the importance and the great influence of the work that Mrs. Defauw has initiated.

What is needed for the future success of ESD

A Change of Mindset

Sustainable development is not just about changing one's behaviors so as to live more compatibly with nature, wildlife, and other human beings; it is also about changing the way one thinks. In order to live in a more sustainable world, it is necessary that humans see themselves as part of nature rather than separate from their natural environments. The environment can no longer be seen as an accumulation of life forms whose sole reason for existence is for human use. Education will help solidify these views as people learn about the logic behind the functions of different ecosystems and the necessity of biodiversity. According to Mario Lague:

You protect what you value and you value what you know. At the beginning of the whole thing is knowledge. With biodiversity...we always go with the iconic species, gorillas, panda bears, but there are some bugs that aren't great in pictures, like European eel, of course you don't want to pet an eel. Eels are not poster children for biodiversity, but they are very important! Pharmaceutical companies know a lot about biodiversity. But if you chop down forests to plant palm oil, you're not only losing stuff you do know, but all of the stuff that's there that you don't know about. Education is fundamental to understanding different components and in changing habits. Are we going to be smart enough to do it quickly enough? ⁵⁹

If we are to maintain the goals which the Decade of Education for Sustainable Development has outlined, we must change our value systems and our "social constructs of reality." ⁶⁰

⁵⁹ April 8, 2008 – Interview with Mario Lague of IUCN.

⁶⁰ Schleicher, Klaus. "Beyond Environmental Education: The Need for Ecological Awareness." International Review of Education Vol. 35, No. 3, 1989: 257-281.

However, changing the whole of society's mentality for sustainable development is not as simple to put into action as it seems on paper. Christophe Grand, of the WWF commented:

Now we are seeing the effects of climate change [and] this causes people to have fear. The problem is that the economic domain uses this fear when they say that they are for sustainable development. It's like the car show in Geneva. Economic businesses say they're green because it helps them to sell more. In fact, however, this kind of thinking is not sustainable development. Sustainable is to decrease, not increase. It's good to say: "I will use my car less," but it's better to not use it at all. In schools, there is recycling, but this is not sustainable development. This is the real problem for education and for society. Simply, people do not understand what their ecological footprints are. They must understand that the ways of living in developed countries are not sustainable. If other countries which are developing live the same as us, what are we to do? We only have one planet.⁶¹

The above input addresses a very important issue. Mr. Grand distinguished between two different views of what types of actions are sustainable. When he mentioned recycling, for instance, Mr. Grand meant that this action does not reflect the right kind of thinking for sustainable development as it is a response to a problem rather than a solution to it. Thus, recycling is an act of mitigation, but not prevention. While mitigation is important, since climate change is here whether we like it or not, it is prevention that is crucial. It would be better for school systems to encourage children to bring reusable water bottles instead of recycling the plastic ones that they bring to school each day. Ideally, there would not be such widespread production of bottled water, though it is not likely that this will occur in the near future because of all of the stakeholders who profit from this unsustainable production. Schleicher believes that "an ecologically oriented value system has to replace that which is economically oriented."⁶²

⁶¹ April 11, 2008 – Interview with Christophe Grand of WWF.

⁶² Schleicher, Klaus. "Beyond Environmental Education: The Need for Ecological Awareness." International Review of Education Vol. 35, No. 3, 1989: 257-281.

It is the pragmatism of this, however, that is the real question. Even Mr. Grand admitted that he was not 100 percent green. He has a car that he uses regularly for commuting and for travel. This is understandable if the infrastructure of our society (as is the case in much of the United States) encourages urban and suburban sprawl and thus the increased use of vehicles for each individual. If this is the case how can we really expect people to live in a sustainable manner? If there is scarce access to public transportation, it is not fair to expect that people will opt to ride a bike to work instead of taking their own cars. Even public transportation, in itself, is not necessarily sustainable thinking. A real solution, as has been implemented in some parts of the world (as in Curitiba, Brazil), would be to create eco-cities where everything that one might need is within walking distance, food is produced locally, and the natural habitats surrounding the eco-city are preserved.⁶³ The education of emerging generations in the developed world is the only way in which such large scale and symbolic structural changes will be able to take place. The main uncertainty, however, is whether this will be recognized and enacted upon quickly enough to make a significant difference.

Training and Partnerships

A necessary component for the success of education for sustainable development is training. Training on ESD should be administered to teaching professionals at all levels of the education system. Teachers must not only learn the content of sustainable development, but also effective methodologies for teaching this material. Diana Tilbury states that “while the effort can begin with the current cadre of teaching professionals, it

⁶³ Miller, Tyler. Sustaining the Earth: An Integrated Approach. California: Thomson, 2007.

is clear that institutions of teacher education need to reorient pre-service teacher education to address education for sustainable development.”⁶⁴

Angela Sochirca, of the United Nations Economic Commission for Europe, added that by training new professionals, not only will the achievement of sustainable development occur more quickly; it will also be less costly.⁶⁵ Taking current teachers out of the classroom to learn about ESD requires much more financial investment from school systems than would requiring this same training for new teachers before they enter school systems. In addition to training teachers, it is also necessary to educate politicians about the issues of sustainable development. By doing this, they may then be able to implement policies for ESD more effectively.

In addition to training is the need for partnerships of formal educational systems with non-formal (i.e., nature centers and non-governmental organizations) and informal education sectors (all channels of the media). The international implementation scheme for the United Nations Decade of Education for Sustainable Development states that this partnership is necessary “because ESD is a life-long process (and therefore) touches the lives of citizens at different ages.”⁶⁶ To further this argument, such diverse partnerships are necessary for the formal education system because they provide more options for different methodologies of teaching and because they contribute to the success of ESD on a continuum throughout society. As such, students will not only hear about the

⁶⁴ Tilbury, Daniella. Education and Sustainability: Responding to the Global Challenge. Switzerland: IUCN 2002.

⁶⁵ April 18, 2008 – Interview with Angela Sochirca of UNECE.

⁶⁶ UNESCO. United Nations Decade of Education for Sustainable Development: International Implementation Scheme. France: UNESCO Education Sector, 2005.

importance of sustainable development within school; they will also receive this message from other facets of society. This kind of reinforcement will allow not only students, but all societal actors, to think deeply about the issue of sustainable development.

Research and Development

Due to the nature of its content, education for sustainable development will be a field that is constantly evolving. An important determinant in continuing its evolution will be the amount of research put into developing ESD. Research and development can help to disseminate the tools needed to teach ESD in a faster, more effective, and more cohesive manner. The tools needed to achieve this objective include research on “effective learning methods, formation of attitudes and values, school/institutional development, and evaluation tools.”⁶⁷ Once the results of research and development efforts are obtained, this information should be made part of a local, regional, and global dialogue of ESD. This dialogue should occur in forums which assemble all “members of the education community, such as civil servants, educators and researchers”⁶⁸ so that they may share successes, challenges, and evaluations.

Reorientation of Curricula and Teaching Styles

Although some critics have argued that formal teaching of sustainable development is not necessary, it is not formal education in itself which presents a problem, but its approach (or more appropriately the lack thereof). It is necessary that current curricula and approaches to teaching be reevaluated and consequently reoriented so as to make the implementation of ESD more plausible and successful. Just as in any

⁶⁷ UNECE. UNECE Strategy for Education for Sustainable Development. Europe: UN Economic and Social Council, 2005.

⁶⁸ UNECE. UNECE Strategy for Education for Sustainable Development. Europe: UN Economic and Social Council, 2005.

other subject, it is not necessarily the amount of classroom time that is important, but the quality of the instruction. The developed Western world is a testament to this. It has some of the best educational institutions in the world, yet it is these same countries that are the instigators of the problems that have caused the need for education in sustainable development in the first place.

Since sustainable development is a complex topic, as it relates to many different disciplines, it must be approached in an interdisciplinary manner. Roth states that “the sciences, social sciences and humanities must be included in like measure for purposes of developing cognitive understanding, changing beliefs and attitudes, and providing motivation for behavioral change.”⁶⁹ The United Nations International Implementation Scheme for the Decade of Education for Sustainable Development argues that such an interdisciplinary approach should be “carried out by individual nations in a locally relevant and culturally appropriate manner.”⁷⁰ It must be understood that there is no single universal approach to education for sustainable development. The content of the curricula for sustainable development in formal educational systems must be decided by local concerns. Roth suggests that “each region and school system should evolve environmental education curricula appropriate to the local ecological setting and the needs, interests and abilities of the children.”⁷¹ This is what both the DESD’s International Implementation Scheme and the UNECE’s Strategy emphasize as the reason for the flexibility of their frameworks.

⁶⁹ Roth, Robert. “Environmental Management Education: Where From Here?” Theory into Practice Vol. 9, No. 3, 1970: 187-190.

⁷⁰ UNESCO. United Nations Decade of Education for Sustainable Development: International Implementation Scheme. France: UNESCO Education Sector, 2005.

⁷¹ Roth, Robert. “Environmental Management Education: Where From Here?” Theory into Practice Vol. 9, No. 3, 1970: 187-190.

In order to achieve an interdisciplinary ESD curriculum that will have a great impact on the learner, it is necessary that primary and secondary school teachers be trained in order to develop and integrate a more “child-related and experience based”⁷² technique into their teaching practices. Where there is environmental education within primary and secondary school systems of the present day, greater emphasis is placed upon information about the environment than upon human behavior towards the environment. Teachers must be trained so that they can guide and encourage their students to “transcend the traditional water, air and soil analyses by considering the implications of scientific paradigms and cultural values.”⁷³ Once this is accomplished more research may be carried out to observe the different levels of awareness and concern that exist within children of different ages regarding sustainable development issues. This will then supply teachers with the knowledge of what is working and what is not in their approaches.

Aside from a holistic and interactive approach, it is vital that formal education for sustainable development be viewed as part of a continuous learning process. Formal education cannot be the only means of encouraging students to learn about sustainable development. Roth states that “the learning environment is seen as a continuum from man-made to natural settings, from indoors to outdoors and from school to home.”⁷⁴ If the teachings of ESD are not reinforced via informal and non-formal means then formal ESD would be completely useless. Children will not learn to think and live in a

⁷² Schleicher, Klaus. “Beyond Environmental Education: The Need for Ecological Awareness.” International Review of Education Vol. 35, No. 3, 1989: 257-281.

⁷³ Schleicher, Klaus. “Beyond Environmental Education: The Need for Ecological Awareness.” International Review of Education Vol. 35, No. 3, 1989: 257-281.

⁷⁴ Roth, Robert. “Environmental Management Education: Where From Here?” Theory into Practice Vol. 9, No. 3, 1970: 187-190.

sustainable manner if the society around them (i.e. family, neighbors, friends, sports coaches, etc.) does not lead by example.

Conclusion

In 2005, the Millennium Ecosystem Assessment concluded “that action taken to date [for sustainable development] is insufficient at best.”⁷⁵ Nevertheless, the idea of sustainable development and its interrelatedness to education has been recognized for nearly four decades. As was indicated earlier, one of the issues is a lack of visibility. If citizens developed countries actually saw the premature deaths of 19,200 people in the developing world each day⁷⁶ they would not be so quick to waste food or to use drinking water in their toilets.

A common theme that has emerged from the topics above is that action must be taken on the national and sub-national levels. Since there are no international or regional bodies with the power to coerce countries into implementing ESD into formal national curricula, it is up to the states themselves to do this. Although one would think that a state would be grateful for the retention of so much of its sovereignty and thus want to comply with the suggested reforms, we have seen that this is generally not the case. As such, the role of non-governmental organizations and determined individuals has become invaluable to materializing the idea of formal ESD.

In Geneva, it is nonprofit organizations such as Earth Focus and the World Wildlife Foundation that are creating an ESD dialogue among the several actors in local education institutions. Unfortunately, this has resulted in a slower pace than if the

⁷⁵ UNESCO. United Nations Decade of Education for Sustainable Development: International Implementation Scheme. France: UNESCO Education Sector, 2005.

⁷⁶ Miller, Tyler. Sustaining the Earth: An Integrated Approach. California: Thomson, 2007.

government stepped in to help with curriculum reforms. Christophe Grand elaborates

upon the WWF's process of promoting ESD:

We start small, maybe with one interested person and then if they like [our program] they will pass on the word about our organization. This is truly a work that takes a lot of time. Like seeds, you plant one and wait for the others to sprout. It takes a very long time for this kind of information to spread, but you have to be smart not to go about it too quickly and go step by step and build your projects. When your project exists and is successful, then things will continue.⁷⁷

The question is, however, whether we have the time to go about these projects in a non-urgent manner.

It is interesting to ask oneself why the majority of the governments in the West have not done more to promote primary and secondary formal education for sustainable development. Rousseau once said that it is “the law giver [who] invents the machine; the prince merely operates it.”⁷⁸ But, once several generations of princes have gone by and seen the power of the machine it seems only natural that they would not want to merely operate the machine, but control it. With governments of the West so intricately linked to unsustainable economies, it is clear that there are barriers to implementing formal ESD. Instructing the populations of Western nations in sustainable development would be a jolt to the structure of Western society as we know it. As Nicola Spafford Furey said, “What governments do not like is that it is difficult to govern people who think.”⁷⁹

Although in a democracy it is the citizens who have a voice, is it not the government that has the power to determine the types of voices its citizens will have (as it controls the formal education system)? Is the current comfort and quality of living which

⁷⁷ April 11, 2008 – Interview with Christophe Grand of WWF.

⁷⁸ April 17, 2008 – Lecture by Dr. J. Kirk Boyd at the Earth Focus Conference: The Future of Human Rights and the Environment.

⁷⁹ April 9, 2008 – Interview with Nicola Spafford Furey of Earth Focus.

exists within the Western developed world a result of actual democracy or is it merely an illusion to keep citizens content so that they will not dissent? If formal education for sustainable development continues to remain in the hands of grassroots actors without the full support and accountability of their national governments, it is safe to say that in several decades the world itself will be an even more troubled place than it is today.

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