Preface

In March 2014, four organisations, the Global School (Den Globala Skolan), the Swedish International Centre of Education for Sustainable Development (SWEDESD) at Uppsala University, the Swedish National Commission for UNESCO (Svenska Unescorådet) and WWF-Sweden commissioned Anders Jidesjö, senior lecturer and researcher at Linköping University, to undertake a study of the Swedish experience in the domain of Education for Sustainable Development (ESD) over the last 10 years by analysing relevant background documentation and reports as well as information gathered through interviews with key informants.

This report presents the result of this study. An earlier version served as background document for the “ESD – Call for Action” event on 3 June 2014 (see also below). The current version has benefited from incorporating factual information and insights presented during that event.

The report was commissioned in view of the UNESCO World Conference on Education for Sustainable Development, scheduled for 11-12 November in Aichi-Nagoya, Japan. This conference will mark the end of the UN Decade on Education for Sustainable Development, 2005-2014.

The four organisations considered that the official Swedish position at the Nagoya Conference would be strengthened if informed by the experiences and insights of Swedish preschools, schools, universities, municipalities and public, private and non-governmental organizations that over the last ten years and longer have engaged in education and learning for sustainable development. The official Swedish position would also be bolstered by having politicians, policy makers and experts reflect on these experiences and formulate recommendations for reinforced policy and accelerated and effective practice and research in the ESD domain.

To this effect, the four organizations organized the event “ESD – Call for Action”, on 3 June at Bläsenhus, Uppsala University. It brought together 120 representatives of Swedish ESD-related practitioners, researchers and policy makers who together formulated an extensive set of recommendations that are meant to support the Swedish delegation attending the Nagoya Conference.

The report and the 3 June recommendations will be made available to the participants of a second event “Making ESD Action Possible”, scheduled for 27 August, 2014 at Rosenbad Conference Centre, Stockholm. This event is expected to assemble 140 Swedish ESD-related politicians, policy makers, researchers and practitioners.

The combined recommendations formulated by the participants during the two events will be submitted to the official Swedish delegation to the Nagoya Conference.

August 2014

Den Globala Skolan (the Global School),
Svenska Unescorådet (Swedish National Commission for UNESCO),
Swedish International Centre of Education for Sustainable Development (SWEDESD) at Uppsala University,
WWF-Sweden
Table of contents

Introduction | 4
The study | 4

I. Success: What has been done? | 5
Discussion: An international commitment | 6
Give learners a chance to ask their questions | 7
Change in education – Change in society? | 8
Another example: SD and ESD | 8
Share the history with all people | 8
Discussion: Structural and operational | 9
Revisiting some background documentation | 9
The importance of involvement and the organization of education | 10

II. Shortcomings: What has not been done? | 11
Discussion: Societal change and education for a new vision | 11
What is education preparing for? | 12
An example | 12
In search for ways of treating complexity | 13
Formal and informal education | 13

III. Possibilities: What could be done? | 13
Discussion: Changes in perspectives for a new societal vision | 14
Relations between the ecological, economic, social and cultural dimensions | 15
Reorganize education for a new vision | 15

Summary, main observations and conclusions | 16
Suggestions for discussion and future work | 17
References | 18
Introduction

This document reports on the implementation of “Education for Sustainable Development (ESD)” in Sweden during the UN Decade for Sustainable Development (UNDESD) 2005-2014.

The purpose of this report is to give a broad picture of the situation with ESD in Sweden and to focus on possible and reasonable plans for action. It is based on a survey of key ESD-related informants in Sweden and a review of documentation related to the history of ESD as well as ESD-related research. The findings from the survey and the documentation review provide a framework for discussion and critical reflections. Together they form the basis for a set of observations and conclusions, which are presented at the end of this report. These constitute a basis for further discussion and possible recommendations.

The study

The survey was carried out in April and May 2014. Some key actors working with ESD in Sweden were invited to give their view on success and shortcomings with respect to the implementation of ESD in Sweden and possible future action. The actors were NGOs, researchers, stakeholders, public and local authorities and project teams. The sample was by no means comprehensive. The actors were invited to write down their views. In the case of NGOs and public authorities, the opinions were checked within the organization and responses were sent back with formal statements from the organization. This did not happen in the case of universities where individual researchers were interviewed. The list of informants included in the survey is presented in Table 1.

Table 1. List of organizations of informants.

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<th>Informant</th>
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<td>Agenda-21</td>
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<td>Energimyndigheten</td>
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<td>Global Action Plan</td>
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<td>Göteborgs universitet</td>
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<td>Ingenjörer utan gränser</td>
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<td>Karlstad universitet</td>
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<td>KNUT-projektet</td>
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<td>Kungliga Tekniska högskolan</td>
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<td>Kungliga vetenskapsakademien / NTA-programmet</td>
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<td>PUSH Sverige</td>
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<td>Science center</td>
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<td>Skolinspektionen</td>
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<td>Stockholm Resilience Centre</td>
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<td>Ulla Lindqvist / UNESCO research project</td>
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<td>Universitet och Högskolerådet / Den Globala Skolan, DGS</td>
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<td>Uppsala Universitet</td>
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<td>Världsnaturfonden, WWF</td>
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<td>Örebro universitet</td>
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The informants (also called “actors” in this report) sent back material including reports, links to homepages with ongoing projects and research, in most cases together with written documents including their opinions on successful work, shortcomings and important future prospects. Personal interviews were carried out with NGO representatives (4) and researchers (6).

The diverse material was analyzed for commonalities, prominent categories, themes or contrasts. The results are presented as findings in three different categories:

I. Success: What has been done?
II. Shortcomings: What has not been done?
III. Possibilities: What could be done?

The findings are presented below. Directly after each listing of findings they are discussed in greater detail. The report ends with a summary of the main observations and conclusions.

I. Success: What has been done?

- NGOs are important for the implementation of ESD in Sweden. There is no national action plan or formal actor. There is an infrastructure of voluntary organizations, working nationally but also internationally, such as “Den Globala Skolan”, “WWF”, “SIDA” and “Global Action Plan”.

- In 2006 sustainable development was included in The Higher Education Act (Högskolelagen) as one of the main objectives the universities have to comply with.

- The educational reforms in 2011 are described as positive; many actors were involved and could convey their perspectives. ESD became described as a common goal for compulsory education and it can be found as program objectives in upper secondary schools. In addition, students in teacher education as well as engineering should acquire knowledge about sustainable development (Högskoleförordningen, Bilaga 2).

- International agreements have been established, for example the Bonn-declaration, the UN-decade, and the European “Education and Training 2020”.

- There are several examples with an honorary and distinctive character together with teaching materials, projects and reports, i.e. “Skola för hållbar utveckling (Skolverket)”, “Grön flagg (HSR)”, “NTA-temat energi och hållbar utveckling”, “Göteborgspriset”, “Energifallet”, “Modellskola (Naturskyddsföreningen)”, “Skola på hållbar väg” and substantial ESD programs in Africa and Asia (WWF), “KNUT-projektet”, “Att lära in ute” and ”Skogen som klassrum” (the last two by Naturskyddsföreningen). “KNUT” as well as Naturskyddsföreningen are also pointed out as doing important work in informal learning settings.


- The university level is diversified. There is no common national picture. At some universities there is research in the perspective of ESD, for example at Göteborg, Uppsala, Lund, Karlstad, Örebro, Mälar-
dalen, Malmö, Linköping and KTH. The research is diverse. At some universities there are international master programs in the perspective of ESD. In this report, there are only two identified examples of strategic work with ESD at the university level, that is Göteborg (hållbarhetsmärkning av kurser) and Chalmers (a mandatory 7.5 hp course for all students). The results of a 2010 study by WWF, DGS and Lärhut showed that a number of teacher education institutions offered compulsory and non-compulsory ESD courses. But the situation has changed after the 2011 reforms. At Kristianstad University ESD has been implemented in 19 educational programs.

When looking at the broad picture of the subthemes in this category, one could say that much of what has been done with ESD implementation in Sweden is of a structural rather than operational nature. There have been and there are relevant researches, networks, conferences, projects and NGOs working with ESD implementation. These structures constitute a potential for further action. In addition there is an international trend, both in implementation work (for example the work done by WWF, Den Globala Skolan and Sida), research and networks. This is no doubt the reason that internationally Sweden is recognized as playing a leading role in implementing ESD.

“Structural nature” refers to the fact that almost all informants give an account of work they have carried out within their organizations or in collaboration with teachers. There are few actors talking about national successes in terms of student learning and the ways in which ESD could be implemented and measured as a full and constituent part of educational settings on a daily basis. Exceptions are WWF’s work with model schools and the “KNUT” project. To identify and describe the ways in which ESD could be implemented would be what I call here, ESD’s operational nature. In the responses of many of the informants the dichotomy, structural - operational, is highlighted as hard to understand but important.

The findings show little evidence about ways in which ESD is being implemented concretely: not as stand-alone projects and general networking but as initiatives creating systematic daily practice of teachers and their students supported by institutional processes.

Before presenting the next category, the two observations related to the international commitment and the structural and operational dichotomy will be further elaborated and framed by connecting them with some examples from the international background documents on ESD and ESD research.

Discussion: An international commitment

In giving the description of successful ways of working with ESD, several actors refer to the report “Att lära för hållbar utveckling” (SOU 2004:104) as being inspired by the perspectives described in it. This SOU report is an evaluation of the Swedish educational system. It also gives the reader the motive and purpose behind ESD in response to the need for remodeling educational systems using a transformative approach. Three distinctive elements should be covered if education was to be recognized as ESD: “ecological”, “economic” and “social” conditions and issues should be the starting point for educational content.

The report argues for the importance to begin with real life challenges and from that help students learn different fields of knowledge. A second distinctive feature of ESD was to treat the content from the double angle of the local and the global, while considering both historical conditions and future perspectives. A third characteristic of ESD was to establish a firm link between learning in the classroom and the surrounding reality. The meaning of this is to make education down to earth, founded on fact and based on real-life stories and concerns. The overall purpose of educational reform would be to organize education in close relation with nature and society in order
to prepare future citizens for involvement in genuine and authentic problems. Those three elements can also be found in the international reporting. In the Swedish translation, as many refer to the “SOU 2004:104”, they became described as the most important elements in directing educational systems towards ESD. Many informants refer to this as complex and complicated matter to deal with.

**Give learners a chance to ask their questions**

In some cases, when actors describe ways to go beyond ESD’s “complexity” they talk about success. Students find it interesting to learn when they know that they are given new roles of responsibility in educational settings, when they are placed in an “adult position” and when they find themselves treated with respect. If they get the chance to be involved, pupils do not hold back. They talk about themselves as problem solvers, innovators and entrepreneurs. It is the learners coming up with different ideas and proposing solutions to current problems. By this approach, the learning process is established in relation to student’s needs. Their experiences and expression of opinions are important requirements for meaningful learning. From that teachers can direct a continued learning process towards standards in the curriculum.

There are some domestic Swedish examples of this, such as the “KNUT-project”\(^1\) and the work carried out by “CEMUS”\(^2\). There is also the work in pre-schools (supported by OMEP/ Sweden\(^3\)) where children and their teachers have become more aware of issues linked to sustainability, and participated in empowering projects for ESD. But in most cases success is described as happening when implementing ESD in other countries. There seems to be a tendency among the informants to think or assume that in implementing ESD, Sweden has been more successful abroad than at home. On this basis, one could argue that Sweden could have an even stronger leading role in the setting of an international learning agenda. However, ironically, many teachers in Swedish schools do not even know there has been a UN decade, while they have been assigned to teach the formal curriculum. This observation leads to the suggestion that ESD should become a greater concern for national and local authorities.

These observations also lead to another reflection: Are learners and teachers in Sweden aware of the substantial work done by Swedish organizations internationally with implementing ESD? Could this work be used, shared and turned into success in the struggle with implementing ESD in the Swedish educational system? If Sweden is a leading agent with implementing ESD internationally I suggest this to be an important story, probably with many qualities to learn from, and to share within the country. This would be to link national challenges with global learning challenges, which are also in the heart of ESD.

In search for success I argue further for the importance of revisiting the international reporting and historical documents about ESD. Since the SOU 2004:104 report had an impact, there are some points to be made when comparing it with the international documentation. This is important because in the search for action, it can establish some standards and expectations against which Sweden’s ESD performance could or should be measured. The point is not going from plans to action, from structural to operational. Both dimensions are needed! The history of ESD and research results can provide some insights about the mechanisms behind giving ESD both a structural and more operational character. I will give some examples here.

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1 KNUT is a national school development program within energy, environmental, resource and sustainability.
2 CEMUS is a center for sustainable development based at Uppsala University.
3 OMEP is the world organization for early childhood education.
Change in education – Change in society?

Background documents indicate that educational systems and their functions are a necessary but not sufficient condition or instrument for development and change. In many aspects, the Rio Earth Summit in 1992 is often described as a turning point. Among other things it combined cooperation between governments, NGOs and the private sector. The work contributed to the UN Assembly’s “Millennium Summit” in 2000, when the declaration of the Millennium Development Goals was adopted. Respect for Nature, reducing poverty, ensuring environmental sustainability and integrating those principles into country policies was at the heart of the declaration. The Johannesburg Summit in 2002 summed up and decided on a Decade of, 2005-2014. The decade was supposed to promote sustainable skills and behaviors, by way of involving individuals into real life challenges and problems standing in the way of sustainable development. These are structural aspects. Four priority areas of action were formulated: Promote basic education, reorient and revise education programs, develop public understanding and awareness, and provide practical training.

The tension between differing national and international needs and perspectives has been well known and documented. As far as I can see, most of the “public understanding” as well as “cooperation between educators, business, working life and country policies” were lost in the SOU 2004:104 report. At least it is not expressed in the same way. And, in the findings presented here, there are few actors talking about the importance of educating the public and the collaboration between education and working life. Were there important structural aspects missed in the translation between the international background and strategic national documents? And could this be one contributing reason to why ESD implementation internationally seems to be more prominent than domestically?

Another example: SD and ESD

The history of ESD emerged from the history of sustainable development (SD), in which Sweden had an active role. The SD history is rooted in the development of environmental concern. In brief it means a growing awareness that modernization and industrialization involve unpleasant setbacks, both socially and ecologically. An early conference trying to connect development and economic growth with environment was held by UNESCO in 1968. This work promoted the first UN conference on the environment, held in Stockholm 1972. Further, the report “Our Common Future” from the World Commission on Environment and Development in 1987 had considerable importance. It introduced the expression “Sustainable Development” signifying that development policies should encompass environmental concerns.

The 1992 Rio Earth Summit pointed at important challenges like environment and development, climate change, biological diversity, desertification and fishing. The content dimension of ESD has been there from the beginning. Agenda 21 was created to implement SD in the 21st century and as a basis for measuring progress. Was the work not made operational enough? The Johannesburg Summit in 2002 pointed at the influence and importance of education and culture, previously neglected areas by development. Historically the process moved from the tension between development and environment to incorporating social and cultural dimensions. In Agenda 21, UNESCO was made responsible to implement chapter 35 (Science for Sustainable Development) and chapter 36 (Promoting Education, Public awareness and Training).

Share the history with all people

Revisiting the historical documents and their ambitions there are some more reflections to be made. Where did sustainable development come from? It grew out of environmental concern to cover social dimensions. When turning it into practice one key challenge was
to integrate education for sustainable development (ESD) in educational systems as well as in national policies. Hence, one kind of education should be implemented in another kind of education? This is not a good description of what is going on, but the concepts can be confusing if formulated that way. To investigate and clarify concepts is of course important but maybe more academic. Equally important is to share the purpose of sustainable development with all people. That would be to start giving ESD an operational character, to formulate a background story of societal development and inform people why aspects of sustainability become important. And then, to share and involve teachers with different backgrounds and their students in a narrative that makes ESD manageable in education. Through this approach the international history of ESD is connected with ESD’ domestic implementation, bringing it closer to learning; this is crucial in “going from project to process”.

Discussion: Structural and operational

So what about the learning aspect of ESD and going from project to process? I will again use some background documents and research to portray a short framework for further discussion and elaboration. The background documents clearly describe that several actors such as the private sector and the media should be involved and aware of the importance of the goals of ESD. Learning in schools is one aspect. Lifelong informal learning is another. As an aside, I wish to remind the reader that the findings presented in this report indicate the latter to be deficient in the national context. Revisiting some background documentation ESD is concerned with allowing learners to comprehend the dynamic and complex interaction between various sustainability dimensions and to understand their own place in relation to the manifold sustainability challenges. Social and economic development depends on the use of natural resources. Therefore, it is essential to consider who has access to those resources, who has control and who has ownership. To enlighten individuals about rights, responsibilities and relationships between people is equally important as a focus on the relationship between man and nature. The idea is to establish a capacity of educational systems to involve citizens in learning processes that will encourage sustainability: to create change in people’s behavior by way of knowledge and values. It is a question of empowering people about important cultural manifestations to be able to develop and hold an opinion of their own. The learning should be pluralistic, but what content should be taught in different subjects? That is a central question for a teacher. To say that what is going on locally has an effect on the way in which the world is organized and will develop is fine, but how could that be made educationally manageable?

In response to these questions, the UNESD’s 2006 international implementation scheme proposed seven central characteristics of ESD:

- Interdisciplinary and holistic: learning for sustainable development embedded in the whole curriculum, not as a separate subject.
- Values-driven: it is critical that the assumed norms – the shared values and principles underpinning sustainable development – are made explicit so that that can be examined, debated, tested and applied.
- Critical thinking and problem solving: leading to confidence in addressing the dilemmas and challenges of sustainable development.
- Multi-method: word, art, drama, debate, experience, … different pedagogies which model the processes. Teaching that is geared simply to passing on knowledge should be recast into an approach in which teachers and learners work together to acquire knowledge and play a role in shaping the environment of their educational
• Participatory decision-making: learners participate in decisions on how they are to learn;

• Applicability: the learning experiences offered are integrated in day to day personal and professional life.

• Locally relevant: addressing local as well as global issues, and using the language(s) which learners most commonly use. Concepts of sustainable development must be carefully expressed in other languages – languages and cultures say things differently, and each language has creative ways of expressing new concepts.

The UNESCO framework report also highlights the science and technology areas of knowledge as especially important since they can provide people with knowledge to understand the world and the role of humans in it. The framework report is more detailed. The socio-cultural perspectives are specified in seven content areas, the environmental perspectives in five and the economic perspectives in three.

It is regrettable to observe that none of the key informants is referring to this and other documents that try to make ESD operational and manageable. I can only speculate about why this is the case. But I believe that making this background story explicit is important. Before creating new action plans and strategies, it would be beneficial to review what is already there in ESD background documents as well as in relevant research.

The importance of involvement and the organization of education

Getting to the main point and ending the first part of this report: It is important to involve people in a genuine story of societal development and to begin with students’ needs for learning. Supplement education with students asking questions and direct the learning process towards curriculum goals. For this to happen there needs to be a shift in perspective of learning and teaching. A traditional view is to understand learning as a consequence of teaching, while it should rather be the opposite. The survey findings and readings support this observation. Some actors describe successful projects with ESD by starting with the children and their questions. But a whole lot more needs to be done in this aspect.

Today many people are informed by the media and will have important questions if they get a chance to ask them. Education does not need to construct relevance. If pupils are given opportunities to deal with real life challenges they will engage in meaningful learning with a strong sense of responsibility. Many pupils know that energy consumption and the use of resources are not only important to adults. Young people know that their actions have an influence on their future and they want to learn relevant content to be able to solve genuine problems. Limitations with implementing ESD in Sweden do not depend on the complexity of the concept, which makes it hard to learn for young people. They rather depend on how education is organized and content is treated.

It is a question of what learners are offered and of the ways they are met in a learning situation. To make ESD operationalized and manageable there is a need to involve teachers’ and their students in reflections about views of learning, knowledge construction and purpose of education. In this connection, teacher education as well as in service training have a central role in future work.
II. Shortcomings: What has not been done?

- There is no national action plan, no mandate to “Skolverket” to work with ESD and neither “Skolinspektionen” nor “Universitetsskanslersämbetet” has inspected the implementation of ESD in Sweden. Many actors point to the importance of such examples as a driving force.

- Teacher education has not been important in the work with implementing ESD in Sweden at the scale needed. There are no mandatory courses and no clear organizational platforms for ESD in teacher education. In schools, most of recent developmental work has been done with grading, assessment and national testing focusing on traditional school subjects.

- Many teachers, head teachers and local authorities do not know about the Decade, they do not understand ESD and for those reasons it has not been prioritized and shared with the learners. Even more important, ongoing work with implementation seems to have little impact on student learning according to some studies.

- Several actors experience reduced conditions to work with the implementation during the decade and experience a lack of resources and support. They highlight that official statements in connection with ESD have been deleted from the “Skollagen (SFS 2010:800)”.

- Several structural problems are raised, i.e. too many occasional and ad-hoc projects that do not lead to processes; ESD is hard to measure (value for money); it is hard to understand (many think of it as environmental teaching which means that it is not an affair for many teachers); there is a lack of understanding about how to approach different schools successfully, and there are too few connections with research in the implementation work.

In the informants’ responses they mention communication problems, the absence for meeting places between practitioners and researchers and the lack of shared understanding of what ESD is all about. There are suggestions that organizations such as “Skolverket” and “Skolinspektionen” should have a mandate to strengthen ESD in schools. Teacher education is almost portrayed as the “black sheep” in the ambition to assist in the work with implementing ESD in Sweden. The responses suggest that research seems to be often isolated from those working with implementation. There are few examples of the opposite, like the “KNUT-project” and WWF’s model schools.

ESD’s complexity, the difficulty of measuring its learning outcomes and lack of understanding of ESD’s basic tenets are important issues for many actors. In my interpretation these views have to do with making ESD operational and manageable. Therefore it is an important finding. If people working with ESD implementation experience and perceive ESD like this, it can indeed be hard to assist teachers and learners and be in ESD “avant-garde”. But is ESD really complex or how could it be made less so?

Discussion: Societal change and education for a new vision

Real life challenges are complex. In its tradition education is anchored in school subjects looking at different aspects of the world; some aspects are conspicuous, some are not. Today, some of those aspects not taught are important but fall in between traditional disciplinary knowledge areas. Complexity has always been there. Demarcation is a reflection of needs. Today there is a need for bringing in aspects that are not traditionally taught within disciplinary knowledge. Basic education should be about preparing people for taking part in society. Therefore, cultural matters need to be described, analyzed, reflected and discussed.
Not as a consequence of learning traditional facts, but as a starting point to motivate learners what facts, models, concepts, laws and theories are appropriate to understand something about cultural matters. Learners are not in school only to be assessed and sorted for future studies. Equally important is learning to be respectful to other humans, cultures and nature. One main challenge with ESD is to involve teachers and their learners, in different parts of the educational system, to understand this purpose of education.

What is education preparing for?
As I have argued before, pluralistic learning is at the heart of ESD. Societal matters and sustainability challenges are not self-evident. Therefore, education cannot be about imposing one particular or dogmatic outlook on learners. Coming generations should be introduced to quandaries, difficulties and original problems. They should be encouraged not to seek ultimate answers, but to understand something about differences of opinions with the right to make up their own lines of arguments. And where do sustainability issues and challenges come from, if not from society and politicians, business, the media, stakeholders, science and NGOs?

The survey findings strongly suggest to stimulate collaboration between education, working life and resource settings outside schools and to stimulate the media to augment a public understanding.

An example
Almost all actors involved in the survey point to the importance of teaching about energy consumption, environmental problems and health issues. Those three areas of knowledge are also highlighted in the background documents of ESD. In society, different actors have different opinions about what is important or crucial in terms of energy issues, environmental challenges and health problems and, therefore what kind of actions should be taken. Hultman (2010) shows that in Sweden there was a shift in perspective starting in the 1990s. Visions about future energy and the environment disappeared in public policy and debate. Earlier there was a vision that a better world could be established by transforming societies, going from an industrial era to an ecological. During the 1990s this was replaced by a belief that important challenges could be treated with economic means of control. This vision privileged continued economic growth and not small-scale, decentralized development and renewable energy sources. Today people learn from dominant groups in society that energy as well as environmental challenges can be solved in large-scale, centralized systems. A consequence of this idea is that it moves the focus from the use of resources to emissions. Media, as well as many politicians and important engineers hold the view that the question where energy comes from and the way it is converted is of secondary importance. In such a vision, to start discussions about sustainability could be described as a utopian thought.

This example indicates that it is not that easy to tell teachers with different backgrounds what it is in sustainability that should be taught in schools. A possible answer would be that there is a need for new ways of understanding the content dimension of education. It should be taught pluralistically and should prepare learners to be critical towards mainstream thought while empowering them to explore alternative ways of organizing societies.

I put this forward as an important observation. ESD as such is not complex; the world is and has always been complex. The problem is that traditional school subjects were not developed to deal with this complexity. But ESD is expressly developed to help learners to address complexity. Much of the content traditionally taught in schools is in response to questions raised in the past. Today new questions are added and complexity needs to be brought in. Teachers are unaccustomed to deal with complexity and to know how to introduce complexity into traditional subjects. Therefore teachers need to discuss with each other, setting up team work and local development
In-service training can play an important role in this respect.

In search for ways of treating complexity
This analysis can also be found in the SOU 2004:104 report. It has inspired many actors working with ESD implementation. There is a clear message that education is supposed to be the most effective driving force to bring about change. But what should be changed? The background documents and the survey findings show a variety of elements that can be and should be changed. They include teaching and learning methods, content, goals, purposes and assessment regimes. They also show the varying emphasis placed on each of these elements. Moreover, they often reveal the gaps in their interconnectedness. It seems likely that some shortcomings with ESD implementation have to do with the lack of a balanced and interconnected systems approach in dealing with these changed elements. This calls for a more developed and integrated focus on all the elements that can make ESD better understood, hence more operational.

Formal and informal education
Another aspect in the background documentation is the clear description about the importance of informal, lifelong learning. Changing the formal education system is one thing. It is another thing to introduce ESD in the media and in business, among industry actors and other stakeholders in order to promote public awareness and understanding of ESD and its practical implementation. The findings in the study indicate that this has almost been forgotten. One exception is the WWF’s campaign “Earth Hour” and “Earth Hour City Challenge” where 85,000 students, 83% of the Swedish municipalities, the corporate sector, politicians and about half of the Swedish population engage and learn.

Also “Folkhögskolorna” and “Studieförbunden” in Sweden constitute an existing infrastructure for learning for sustainable development. These kinds of organizations are not restricted by a curriculum in the same way as the formal educational system and they are in close contact with civil society; with great potential for development. In this respect, another important example is the about 100 nature schools (Naturskolorna). On a yearly basis there are roughly 225 000 students participating in their activities. Quite a large number considering that Sweden has a relatively small population.

Lifelong learning spaces are important and media reporting is probably one of the most important things to consider in this connection. Partly because it is the way most people are informed outside school. Today, teachers meet students with mediated experience having an influence on their learning. Mediated experience is a central pre-condition for students to learn in schools. Therefore, before more implementation work takes place, it is important to determine whether the capacity for change is there. What should be the essential components in plans of action to develop capacity and to meet teachers and schools who wish to make ESD an integral part of the education they provide? I will come back to this point in presenting the next category.

III. Possibilities: What could be done?

- Implementation work should be more structurally connected with relevant research. There is knowledge to share, but there needs to be a shift in perspective of teaching, learning and education. In the ambition to involve people in relevant and meaningful learning, the students or learners should be regarded as part of the solution instead of part of a problem.

- Several actors want to see a national strategy because it is important to work in the same direction. A plan of action and mode of actions are required for putting the strategy into practice.

- Stimulate strategic work for meeting the
needs of teachers at different levels in the educational system and with different competences (science, social science, language, esthetics). Build up insights and lessons about ESD implementation and initiate work that can be maintained after the project has been concluded. Initiate broad discussions about the purpose of education: make teachers to understand how their own subject or discipline relates to ESD. Stimulate co-operative organization and support leadership that starts from the perspectives and requirements of the learners.

- There are resource places outside school. Help teachers to engage with those, for instance through in-service training, and preferably together with their students.

- Make ESD plain and clear in teacher education. It is one of ESD’s most important institutional platforms.

- In Sweden, the present National Curriculum for the Swedish Preschool does not use ESD or sustainability / sustainable development (SD) as concepts even though the value of social and economic efforts to make the world a better place has informed Swedish early childhood education from the outset (Dahlbeck & Tallberg Broman, 2011). Although sustainability is not specifically mentioned, the important social, economic, environmental and political dimensions of sustainability are clearly present in the text and could be used for future work.

- Make sure that already made decisions and existing strategies are implemented and followed up, such as the UNECE strategy, the national environmental objectives, and the millennium development goals.

- Disseminate the results of Swedish ESD-related actions in and with other countries, in the perspective of mutual learning.

There are a number of important messages for future work. Most actors do not believe that the school curriculum is a big problem. The crucial issue seems to be the actual on-the-ground implementation. It is suggested that more research and sources of information are required for this, while involving teachers with different backgrounds and tasks and their students. The findings support the importance of establishing strong relations between education, working life and society. Also, many actors point at the areas of energy consumption, the use of natural resources, environmental effects and health issues as most important content areas to cover. Not only in education, but in society as whole. As much of these issues cross national borders, there is also a need for cultural adaptation, respect and shared understanding in the empowerment process.

Discussion: Changes in perspectives for a new societal vision

The relationships between man and nature are central to ESD. They are systemic. Humans are not independent from nature. They depend on it, and therefore they need to take care of it. In its deepest sense the relationships are ethical. Recent insights associated with the concepts of the “Anthropocene” and “planetary boundaries” and in the fields of ecological economy, environmental ethics and human capabilities challenge the commonly held view that economic growth is the prerequisite for both poverty alleviation and solving environmental degradation. In this view, education should help society to allocate its resources more rationally in order to achieve continuous growth. But what if the growth is based on continuously degrading and even exhausting the natural resources?

It appears that ESD is eminently placed for allowing learners to examine important questions about the dynamic interaction between the four central dimensions of sustainable development: the planet’s geological, biologi-
cal and ecological substrate, the human relationships that make up society, the economic structures and mechanisms that determine production and consumption patterns, and the cultural patterns that provide identity.

Theories about how this dynamic interaction helps to maintain, increase or lessen current social, political and economic dilemmas and inequities are being developed, also on the basis of actual actions and struggles on the ground. They will help in preparing a shift in perspective. In educational settings it implies dealing with uncertainty, complexity, risk and instability as knowledge fields to involve.

Relations between the ecological, economic, social and cultural dimensions
There is a substantial amount of research emphasizing the importance of the ecological dimension as a basis for the development of the economic, social and cultural dimensions. But often in discussions about creating new structures for business and authorities, the social, cultural and economic dimensions are understood as prerequisites for the ecological. Maybe the four perspectives, so fundamental within ESD, should be understood as hierarchical in different ways in various settings. Can teachers be expected to make this manageable in a school setting on their own? There is an apparent need for good meeting places between for example teachers and relevant research to discuss and reflect on those matters associated with the wish to develop specific teaching aids and plans of action.

ESD cannot happen by ignoring earlier knowledge structures. Some capacities are already there but new institutional forms need to be created where innovative activities can flourish and research can be brought into development. The point is to understand that there are things to be done outside the educational system to make ESD intelligible as a shared vision for society. The mission for education is to prepare citizens for taking part in such emerging institutions. In recent curriculum changes the important elements are there but traditional subject teaching is prioritized which means that essential parts of the curriculum is not being implemented. Adjusting development is about connecting people, asking the right questions so that scientific evidence becomes intertwined with policy and decision making.

It is interesting to note that when arguing for new institutions, real life challenges and a reorganization of the school system few authors propose concrete suggestions. Most of them speak about introducing new content, especially in the areas of energy, environmental concern, health issues and the spread of chemicals. To help teachers and educators implementing ESD the content aspect should be made clearer, more transparent and intellectually connected with a clear aim and purpose.

Reorganize education for a new vision
There is a need for new ways of organizing education. This does not mean that school subjects are unnecessary. On the contrary, sustainability is depending on ways they are treated. Societies are more global today but people still live and act in local settings. Technological literacy should be treated in connection with environmental literacy and not as specific school subjects. Technological progress is important to welfare but a continued societal development should not happen with an uneducated and uninvolved public. There are great risks with feelings of being an outsider. Instead, important issues and content should be popularized, accessible and reflected.
Summary, main observations and conclusions

Educational systems and traditional subject teaching were made for the industrial revolution and for building modernity. Today there are new challenges that need to be brought into the system. That is why educational systems are facing a transactional approach with pluralistic learning settings. To establish this is to reflect on the purpose of education, and change it to ESD, and from that reorganize and create an intellectual coherence with its goal, content and assessment dimensions. Working together, teachers, students, administrators, decision makers in the public and private sector, NGOs, media, business and many other stakeholders need to be involved to come up with solutions to fulfill the mission, i.e. the purpose.

There are a number of good examples of structural capacity for implementing ESD. But the operationalization of ESD throughout the system leaves to be desired. ESD should not be confined to ad-hoc projects. It should be a process. Such a process can for example “translate” theories, concepts and research results into practical measures and action. Direct teacher and student involvement will create a sense of ownership and therefore can start making a difference.

The desire to implement ESD and make it part of daily activities in the educational system is a question of school development. For that reason, there is a need for also taking educational research about for example school development into consideration and to look at previous successful work. This report has presented and discussed such research in order to identify vital qualities. The capacity to involve teachers and their students in a narrative that captures essential characteristics of daily life and societal development and challenges are proposed as main elements in making learning meaningful and education relevant. The research has helped to identify a number of central ESD aspects, presented in the list below.

One example identified in this report is to learn from Swedish international work with implementing ESD and to make that work and its insights part of the national educational system.

Out-of-school perspectives and experience can be more focused. It can help learners understand something about real life problems, genuine challenges, shared experience and working life. Thus they can serve to establish connections between what is going on in the classroom and the surrounding world.

The media in general and mediated experience is important as an element in out-of-school experiences as well as informal learning and the public understanding of ESD. It is distinctly expressed in the background documents as well as research but not in the survey findings. More work should be done on this.

On order to make ESD more operational for day-to-day teaching and learning practice, practitioners and education administrators alike should do well to reflect and decide on the following central ESD aspects:

- Complexity
- Measurability
- Coherence between purpose, goal, content and assessment
- Learning and teaching
- Man and nature: Focus more on the use of resources instead of its consequences
- Economy: Bring in its material and ethical dimensions
- Adapt the ecological, economic, social and cultural aspects to different contexts
- Work on a narrative that captures the motive for ESD
• The contribution to important contexts from different school subjects

• Relations between the national and international

• Production and consumption

Suggestions for discussion and future work

The suggestions presented here are based on the findings of the study as well as key literature about Sustainable Development (SD) and Education for Sustainable Development (ESD) discussed in relation with some relevant research results.

• Make ESD part of “skollagen”. Initiate a work to establish a wording in parity with the draft in “högskolelagen” to make the educational system described symmetric and intellectually coherent in this aspect.

• Relate entrepreneurship with “Skola för hållbar utveckling” and commission “Skolverket” to strengthen, deepen and enlarge such work to assure guarantee of quality.

• Commission “Skolverket” to make sure that already made commitments, like international agreements are being implement-ed, and ensure that Sweden takes active part in ongoing working groups.

• Commission “Skolinspektionen” and “Universitetskanslersämbetet” to propose ways in which ESD is put into practice, i.e. to create a national competence about implementation of the regulation in the curriculum.

• Sweden is one of the leading actors internationally: Commission Sida to strengthen and extend its ESD-related work.

• Follow up the conclusions and recom-mendations from the conferences held in Gothenburg between 2004 and 2008. Expand Nordic cooperation within the ESD domain by more active work in “Nordiska ministerrådet”.

• Encourage local authorities to prioritize and stimulate ESD in practice. Aim at conferring the distinction “skola för hållbar utveckling” upon all compulsory and upper secondary schools in Sweden.

• Integrate ESD in teacher education at all levels, including “rektorsutbildningen”, and use teacher education as an organizational platform for ESD.

• Stimulate research on ESD and demand implementation projects to be in collabora-tion with relevant research.

• Stimulate collaboration between education, working life and resource settings (the expanded classroom).

• Stimulate the media to report on ESD to augment the public understanding.

• Stimulate that staff training at all levels, in the business and the public sector, in governmental and non-governmental organiza-tions is directed towards content and methods characterized by SD and ESD.

• Initiate in-service training on ESD for teachers at all levels, including university teachers and especially teacher educators, based on relevant research to assure that it will become part of classroom practice.

• Learn from existing successful, transform-ative practices/initiatives and catalyze change in new contexts.
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The implementation of Education for Sustainable Development (ESD) in Sweden | 19


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