Taking children seriously
– How the EU can invest in early childhood education for a sustainable future
most people want prosperity, safe, supportive and just communities in which to live and a life supporting environment to underpin it all. They want these at the same time. Which is what sustainable development is – progressing and achieving our economic, social and environmental goals together, as a mutually reinforcing system.
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At their Summit meeting in Gothenburg in June 2001, Europe’s heads of state and government reached agreement on a European strategy for sustainable development. The social and economic dimensions of the Lisbon strategy were complemented by an environmental dimension. Thus, the Gothenburg Summit represents a breakthrough for sustainable development in the European Union (EU).

The University of Gothenburg and Chalmers University of Technology made a commitment to serve, through the joint Centre for Environment and Sustainability (GMV), as a hub for research and scientific follow up of the EU sustainable development strategy. In order to fulfill this commitment, the two universities have established a European Panel for Sustainable Development (EPSD), together with Lund University. In addition, individual members from other universities and research institutes contribute to the work of the Panel. The Centre for Environment and Sustainability (GMV) in Gothenburg is the lead organization in the EPSD.

The first report produced by the Panel in 2004 was “From Here to Sustainability – Is the Lisbon/Gothenburg Agenda Delivering?” This was put forward as an independent contribution from academics to the mid-term review of the Lisbon strategy for growth, competitiveness and jobs. The second report “Make the Kok-report sustainable” was produced by the EPSD as a reflection on, and a response to, the mid-term review on the Lisbon strategy chaired by the former Prime Minister of the Netherlands, Wim Kok. The third report “Towards a Smart Growth Strategy for Sustainable Development” aimed to contribute to the re-launch of the EU sustainable development strategy. It contained a critical assessment of “A Platform for Action”, the proposal for an updated strategy put forward by the European Commission.

After a few years of silence the EPSD is now back with its fourth report. ”TAKING CHILDREN SERIOUSLY - How the EU can Invest in Early Childhood Education for a Sustainable Future.” The present report takes its point of departure from the fact that young children have a right and a shared responsibility in achieving a sustainable future. The report presents current research on children’s interest and ability to understand ques-
tions on the social, economic and environmental dimensions of sustainable development. It also maps early childhood education within EU and in the world regarding quantity and quality. Activities by EU, UNESCO, OMEP and other international organizations are presented. As a consequence a number of crisp recommendations for the future development of Early Childhood Education within EU are given. Also, a global sharing is on the sketch board.

The main author of the report was Prof. John Siraj Blatchford, University of Swansea, UK. A number of researchers and knowledgeable persons have constituted a reference group and further contributed to the report: Katarina Gårdfeldt, GMV, Gothenburg; Ilan Chabay, Ylva Hård af Segerstad and Magdalena Svanström, Chalmers University of Technology; Monica Haraldsson Sträng, and Ingrid Pramling Samuelsson, University of Gothenburg; Marie-Louise Jungnelius and Frans Lenglet, The Swedish International Centre of Education for Sustainable Development (SWEDESD), Gotland University; Annika Åkerblom, Lund University; Eva Ärlemalm-Hagser, Mälardalen University, Sten Ljungström and Kerstin Åkesson, Universeum, Gothenburg, Lori Adams Chabai, District of Columbia Public Schools, Washington DC. Jan Eliasson, Former President of the UN General Assembly and Minister for Foreign Affairs of Sweden, has been asked to contribute with his perspectives.

The report was edited by Maria Svane and Annelie Karlsson, GMV. It is endorsed by the EPSD.

Bo Samuelsson
Chairman of EPSD and of the reference group
Early childhood education – an investment in a sustainable future of nations

It is urgent to realize that the process towards sustainable development lies in the capability of our children but also in that we as adults recognize them and take them seriously. The UN convention on the rights of a child declares that children’s basic needs and opportunities to reach their full potential should be met. Despite this, very little attention has been paid by nations or institutions to meet this need and to provide accessibility of education for sustainable development in early childhood for all children. Also in international agreements, like The Millennium Development Goals and Education for All, the youngest age group is not sufficiently taken into consideration.

The authors of this report state that education for sustainable development (ESD) is all about the future. Young children have the greatest stake as citizens in the future. I agree with them.

What we need now is sustainable action. ESD in early childhood must be recognised as a children’s right and human rights issue.

This report highlights pathways towards a sustainable future drawing on the creativeness of children.

It is well-known that investments in programs targeted toward the youngest children within early childhood education will pay back at a much higher rate than investments in later schooling and job training. Despite this, very little attention has been paid by institutions to improve the accessibility and content of education for sustainable development in early childhood.

This report identifies the key priorities for development in terms of a combined initia-
tive involving early childhood education and care (ECEC) and education for sustainable development. The report highlights the need of a more balanced view on the impact of formal as well as informal education. For the purpose of sustainable development, it is important for all children to develop their mother tongue and to become able to communicate both in this and in foreign languages. Young children are capable of sophisticated thinking. In relation to environmental issues it is important to involve them and to encourage their enthusiasm and curiosity for their surrounding world and “big questions.” They will relate these issues to their level of understanding and experiences. All children should be given the right to communicate about questions they meet in their social and physical environment. ECEC may serve as a catalyst in developing a wider recognition of the need to consider education beyond its institutional contexts.

Jan Eliasson
Former President of the UN General Assembly
and Minister for Foreign Affairs of Sweden
The current initiative began in 2004 with an international conference on Education for Sustainable Development held in Gothenburg entitled Learning to Change our World. Subsequent conferences and workshops led to the publication of discussion papers in the period 2005-7 focusing on sustainable development in higher education, in schools and in preschools, in teacher education, and in public and informal learning. Specific recommendations associated with each of these areas of concern were officially tabled at the UNESCO World Conference on Education for Sustainable Development (ESD) in Bonn 2009.

In subsequent discussions of the reference group early childhood was identified as a priority for attention and five areas of policy were identified as of paramount importance. It is notable that each of these has subsequently been identified as key challenges in the joint progress report of the European Council and the Commission on the implementation of the Education and Training 2010 work programme (EC, 2010):

• The dissemination of best practice
• Curriculum Integration
• Community engagement
• Teacher education
• Supporting countries where the current lack of adequate provision of early childhood education is itself an issue of sustainability

The 2009 Gothenburg Recommendations related to early childhood education were grounded on notions that children are competent, active agents in their own lives and they recognised that children are affected by, and capable of engaging with complex environmental and social issues. In fact they are often required by circumstance to engage in complex environmental and social issues, and at times they are even the primary victims of such events. The Recommendations therefore steered away from romanticized notions of childhood as an arena of innocent play that positions all children as leading exclusively sheltered, safe and happy lives that remain untouched by events around them. Education for Sustainable Development should be considered to provide an overriding orientation or perspective through which a broad range of problem solving competencies may be
applied. In European contexts these competencies are defined by the Framework for European Cooperation in Education and Training 2010-2020. According to Adam Pokorny, Deputy Head of the European Commission Unit associated with the ‘Coordination of Lifelong Learning Policies’, a consensus has recently been reached regarding the rethinking that is required related to the nature of the Early Childhood Education and Care (ECEC)* services provided and of how children experience them:

"The general perspective of the Gothenburg Recommendations that you have sent to us reflects in many ways our concerns on ECEC by emphasising the importance of holistic quality education of the child in the early years as a basis for lifelong learning and to promote a sustainable society. We strongly believe that sustainable development must be the guiding light both in daily life in pre-schools, school, adult education universities and longer term planning. To have an interdisciplinary approach to ECEC issues, to promote quality by the professionalisation of staff and involving parents and the wider community into the field are in the focus of our forthcoming studies on competence requirements of ECEC staff and on parental support in early literacy acquisition. In the light of the above your work is important to us."

(Correspondence, 4 February 2010)

If Europe is to compete and prosper as a knowledge-based economy based on sustainable, high levels of employment and reinforced social cohesion — as envisaged in the Europe 2020 strategy (EC, 2010), the role of education and training in a lifelong learning perspective is crucial. Yet the 2010 joint progress report suggests that its implementation remains ‘a challenge’. A key problem that is identified has been the failure in many cases to adopt a holistic view of lifelong learning that encompasses the full life cycle. The lifelong learning strategies of many countries remain focused on particular sectors or target groups and more coherent and comprehensive approaches need to be adopted. A significant argument made in the following pages is that it may well be that developments in ESD in early childhood would provide a catalyst for this.

* Acronyms such as ECE, ECEC and ECCE are commonly used in official documents within the EU. These acronyms refer to early childhood education, early childhood education and care and early childhood care and education, respectively. ECEC will be used throughout this report.
“Education for Sustainable Development is a lifelong process from early childhood to higher and adult education and goes beyond formal education.”

UN Economic Commission for Europe
The economic, environmental, social and cultural challenges that Europe is facing are increasingly recognised. What may be less understood are the challenges to be met within Europe and within each member state and the need to develop an effective education for sustainable development at all levels. Education for sustainable development provides a vision of education that seeks to balance human and economic well-being with cultural traditions and respect for the environment.

Stakeholders must have the means to engage in discourse around issues that affect them and in this context it should be recognized that it is most significantly the lives and livelihoods of young children that are at stake. When these issues are complex and of vital importance, society must make every effort to prepare and equip its citizens to participate in making decisions at the level of public policy and in their personal practice. Yet misinformation, partial truths, and entirely bogus statements are encountered frequently in the discourses around complex and controversial issues. Scientific literacy is crucial and it is in the early years that fundamental understandings and positive attitudes towards the production of scientific knowledge are formed.

In many preschools children are already investigating issues related to energy conservation, waste disposal and changes in their local environment children can share their thoughts and findings, and record them by drawing, writing, recording on charts and using digital imaging. They find that repetition and discussion of underlying processes are part of the scientific inquiry.

Following the launch of the United Nations Decade of Education for Sustainable Development (2005-2014), the UN Economic Commission for Europe drew up a separate Education for Sustainable Development strategy in 2005, and recognised that:

“Education for Sustainable Development is a lifelong process from early childhood to higher and adult education and goes beyond formal education. As values, lifestyles and attitudes are established from an early age, the role of education is of particular importance for children. Since learning takes place as we take on different roles in our lives, Education for Sustainable Development has to be considered as a “life-wide” process. It should permeate learning programmes at all levels, including vocational education, training for educators, and continuing education for professionals and decision makers.”
Yet progress in early childhood education has been very slow so far. The DG Education and Culture (2010) ‘Inventory of innovative practices in education for sustainable development’ included only one project involving children under the age of 8 (of a total of 30 from 17 countries) as “a wide range of examples of innovative ways to deliver formal, informal and non-formal education for sustainable development”. The early childhood practice that was included was an Austrian national network (OKOLOG) for schools involving 6 to 25 year olds. A total of 212 in 33 countries stakeholders were apparently contacted and given the opportunity to nominate practices to this 2008 study.

In September 2010 UNESCO also published a draft version of a report directly focused upon ‘Education for Sustainable Development Good Practices in Early Childhood’ (UNESCO, 2010). This was in response to “numerous requests for case studies and descriptions of good practices in ESD”. The document provides details of 11 programmes promoting ESD in early childhood settings. But only 3 of the 11 practices included were European; including a project from an école maternelle in Paris involving three classroom groups of 4-6 year olds in the production of short animated films using webcams in association with the Playmobile toy company. Another European project (from Portugal) involved a class of 3 and 4 year olds where the children had collaborated in the development of lists of environmentally appropriate and inappropriate behaviors and ‘patrolled’ the pre-school (and local community) to ensure that they were adhered to. This led to the development of recycling activities, energy savings and the implementation of an organic garden. A EUR 28 million German project for 3 to 6 year olds was also included in the UNESCO report. The ‘Leuchtpol’ project is focused on “Energy and the Environment” and includes provisions at further and higher education level for teacher training with an aim to involve 4,000 pre-schools (about 10% of national provision) by the end of 2012.

The Organisation Mondiale Pour l’Éducation Préscolaire (OMEP)(World Association for Early Childhood Education) is now providing significant leadership in the area of Early Childhood ESD. ESD was the major theme in its 2010 World Assembly and congress in Gothenburg and the OMEP website carries guidance for practitioners and practical examples of activities to be carried out with young children: http://www.ece-sustainability.org/ A wide range of other stakeholder groups and associations are providing support to schools predominantly in the area of environmental education and have significant potential for extending their work into early childhood education.

The case for investing in education for sustainable development in early childhood can be made in terms of human rights, social justice and practical expedience. All children have the right to education, and research from longitudinal studies and from neuroscience has shown that it is in the early years (birth to age 8) that children have the greatest capacity to learn. It is also in early childhood that the foundations of many of our fundamental attitudes and values are first put into place. Of even more fundamental significance it
should be recognised that ESD is all about the future and it is young children who have the greatest stake as citizens in the future. ESD in early childhood must be recognised as a citizenship and human rights issue and early childhood must be recognised as the most appropriate and natural starting point for all policy and practical sustainable development throughout a system of lifelong learning.

If we are to respect our children and their human rights and citizenship we must recognize that they have a right and they also share a responsibility with us in achieving Sustainable Development.

Notions of equality of opportunity and individual freedom provide major principles of contemporary philosophical and political consensus. From the perspective of the social contract the role of the State in education and in the social services is therefore accepted as one that should provide a ‘level playing field’. However if we are to ensure children are in a position to take advantage of the level playing field that is demanded by the contract model of social justice, then we must at first achieve equalities of outcome in the pre-school period:

“Poverty should not be seen only as a lack of income, but also as a deprivation of human rights”…. “unless the problems of poverty are addressed, there can be no sustainable development”.  

(UN High Commissioner for Human Rights, 2002)

Investments in the foundation stage of early childhood also provide a higher rate of return than investments later in life. Research shows that a wide range of early childhood disadvantages (or risk factors) have the potential to lead either directly or indirectly to educational underachievement, whereas other ‘resilience’ factors provide a child with the resources to overcome these risks. Parents can pass on risks and resilience to their children and there is therefore a need to support families, not just children, and to combine and integrate.

**Capacity Development**

Perhaps the first question to be answered in the context of ESD in early childhood relates to the capabilities of young children. We know from a range of international studies that young children have a generally low level of factual knowledge and understanding of environmental issues. We also know that children develop an early awareness of cultural differences. But at present we know very little about children’s emergent understanding of the economy or economic behaviour. Research shows that the single most important influence in promoting environmental awareness and concern is identified as childhood experience in the ‘outside environment’. It also shows that:
• When environmental issues are included in the curriculum even quite young children are capable of sophisticated thinking in relation to the issues
• Some school focused educational interventions have been shown to effect change in students’ environmental knowledge and/or attitudes and (in a few cases) behaviour
• Studies of intergenerational influence suggest that students, after participating in environmental education activities, are capable of influencing the environmental attitudes and/or behaviours of their parents

The Policy Context

We know that high quality pre-school education can help to alleviate the effects of social disadvantage, and some countries have therefore made the expansion of early childhood programmes a national priority, especially for reaching disadvantaged groups. But research shows that those who would gain the most from early childhood care are often excluded. Low-income families and immigrants tend to have less access to good quality early childhood care.

At a global level the most significant priorities remain those of dealing with health and malnutrition. Improved access to free maternal and child health care is crucial for education as well as for public health. Through effective early childhood care and education (ECCE) children have a better chance of escaping poverty and breaking out of the vicious cycles of disadvantage. UNESCO data show that a child born to a mother who can read is 50% more likely to survive past the age of five, and yet international community is still not on track to deliver the promise of quality basic education for all by 2015. In fact, for many countries, the global food, fuel and financial crises are threatening to stall or even reverse the progress made over the past ten years. Yet despite the strength of the research evidence that shows the economic benefits of investment in the early years, only one of the five benchmarks adopted by the Council to be achieved in the strategic framework for European cooperation in education and training (‘ET 2020’) concerns early childhood education, and even then the youngest children (below 4 years of age) are not included:

“...at least 95% of children between 4 years old and the age for starting compulsory primary education should participate in early childhood education” (op cit)

Recent trends show that the EU average of participation in early learning has risen during the past 7 years (+ 6% relative change). But a number of countries remain far below established benchmarks. Different reasons contribute to this disparity: operational and financial constraints in increasing the supply of ECEC within the country, as well as cultural norms and pedagogical approaches.
The most effective early year’s educational provisions support parent partnerships in early education and seek to improve the home learning environment of young children recognising that the work involves both children and adults as learners. This in itself provides a justification for more joined up thinking in terms of life long learning and learning to learn.

A higher participation in early childhood education would reduce educational inequality, improve gender equality, foster economic growth and help improve the sustainability of the present-day welfare state, especially in the light of an ageing population. It would also support sustainability of social cohesion as new ethnic, language and religious groups join across the global spectrum. ECEC provides strong foundations for children in terms of its introduction to the language of the school, cultural awareness and social harmony.

Current EU policy thinking on ECEC emphasis strongly the importance of the integrating “excluded”, “marginal”, “poor” and “migrant” groups. This should be more widely recognised as a major objective for sustainable development.

In terms of education for sustainable development it is clear that ESD has been formally included in EU policy and in its rhetoric education for Sustainable Development is recognised as a lifelong process from early childhood to higher and adult education and involving both formal and informal education. Yet there is no evidence that in the European context the connection between ECE and ESD has been made.

Moreover, while the EC has a large number of EU programs facilitating the development of and exchange in different forms of education (secondary, higher, adult, life long learning), such as ERASMUS, COMENIUS, Leonardo da Vinci, Grundtvig, Jean Monnet, there is nothing in the field of ECEC.
ECEC needs to be recognised as a process that can never be restricted to formal (pre-school) settings. Provisions need to be made to support ECEC in the informal and non-formal (semi-structured) settings of family, mutual assistance groups, self-help groups, church groups, as well as the day care centres, and nurseries where it is institutionalised. It would be equally mistaken to consider ESD restricted to formal education. Non-formal and informal settings are equally (and often even more) important than what is happening or can happen in so-called educational institutions. This is one other reason why ECE and ESD may be seen to be quite ‘naturally’ associated.

The European framework for cooperation in education and training has been developed following international evaluation of the key competences required for a ‘successful life and for a well functioning society’. The ‘competence’, approach has been explicitly adopted in this context in order to achieve ‘a higher degree of integration between the capabilities and the broader social objectives that an individual has’. The relevance of ESD to achieving this is obvious.

Many areas identified in the joint progress report of the Council and the Commission on the implementation of the ‘Education and Training 2010 work programme’ as in need of development are highly relevant to ESD and ECEC (EC, 2010). These include the promotion of ‘inquiry-based learning’, ‘creativity and innovation’ and approaches that seek ‘to impart social and civic competencies, a sense of initiative and of entrepreneurship and cultural awareness’ that goes beyond simply imparting knowledge. Most significantly of all to the case for developing ESD in early childhood are the report’s calls to make education and training more relevant to students and to the outside world.
In our discussion of the competencies defined in the European framework for cooperation in education and training five key areas were identified as priorities for development in terms of a combined initiative involving ECEC and ESD:

1. **Communication in the mother tongue and in foreign languages**
   Early years education should ideally be conducted in each child’s mother tongue and research suggests that any short term disadvantages that children experience as a result of their minority language tend to be short term except where these disadvantages are confounded due to disadvantages such as family poverty. But it is especially important for migrant cultures and children to be able to express themselves in the dominant language community, and ESD topics can provide particularly motivating and meaningful contexts for communication between ECEC practitioners and children and their families both within and across member states. The diversity of knowledge and experience that may be provided by migrant communities should also be recognized as potentially rich resources for European sustainable development.

2. **Mathematical competence and basic competences in science and technology (including ICT)**
   ECEC provides an established platform for collaborative problem-focused, project-based and enquiry-based learning. Mathematics, science and technology are often been assumed to be too complicated for young children. Yet there are many documented examples that show this is not the case; much depends on the educator. The priority here must be to disseminate more widely the exemplary work that is already taking place.

3. **Learning to learn**
   Many of the current problems of EU policy in the area of life-long learning are associated with the different ways in which countries interpret the subject as relevant to different age groups. Any focus upon ECEC in this context would act as a catalyst for recognition of the needs of wider age groups in the process of supporting learning at any age. In a similar way many documents have referred to, and made separate provisions for “formal”, “informal” and “non-formal” education. There has been a perceived need to clarify more fully where ECEC fits in. In this way ECEC may have often ‘slipped through the cracks’ of policy making. But again ECEC may serve as a catalyst in developing a wider recognition of the need to consider education beyond its institutional contexts. Can boundaries/disconnections between different segments/sections of education be overcome by creating a more coherent holistic vision of lifelong learning within the EU?

4. **Interpersonal, intercultural and social competences, civic competence**
   These competences overlap entirely with the objectives for social and cultural educa-
tion for sustainable development. They address the common aim of equipping individuals to participate effectively in increasingly diverse social contexts, and to resolve conflict where necessary. Equally the civic competence that equips individuals to fully participate in civic life is required as much in sustainable development as in any other sphere of social activity, conflict or dialogue. From an ECEC perspective provisions for the development of greater competence in cultural awareness and expression are closely related as it is widely recognised that it is only on the basis of understanding of one’s own ethnicity and cultural expressions that one can begin to respect the wider diversity of cultures.

5. **Initiative and Entrepreneurship**

Young children possess an inherent ability for creativity, risk taking and innovation, and they do not rule out possibilities before they have been attempted. Also young children do not recognize, nor are they restricted in their thinking, by any distinction between the world of the home and community, and that of the school. ECEC could be a major driver for initiative and innovation for sustainability.
Recommendations
Recommendations

The European Panel on Sustainable Development proposes the following recommendations to be taken into account in the further development of Early Childhood Education within the EU:

1. The citizenship of children of all ages should be recognised as well as their rights and responsibilities as agents involved in many day-to-day practices that are considered significant to achieving sustainable development. This recognition includes an awareness of, and concern for:
   • the negative influences of commercial advertising upon children;
   • their direct economic influence as consumers;
   • their influence on wider patterns of family consumption; and
   • the need to create community ‘cultures of sustainability’, also around preschool settings)

2. ESD must be recognised as an integral part of ECEC. Also, ESD and ECEC should be integrated in pre-service and in-service teacher education at all levels. The 2010 joint progress report of the Council and the Commission on the implementation of the ‘Education and Training 2010 work programme’ suggests that, while there are indications that in some countries initial teacher education prepares teachers to use the key competencies approach, the majority of teachers are those already in service (EC, 2010). Therefore, in-service teacher training should receive greater emphasis, while embracing the key competencies approach. ESD should become part and parcel of both types of teacher training.

3. There is a need to develop a better and more holistic, understanding of lifelong learning. Young children have an influence on the adults around them. At the same time the world of government, industry, culture, business, commerce and voluntary associations is not separate from that of young children. Those employed and active in that world are not workers alone, many are the parents, grandparents, aunties and uncles of young children. Their networks and their efforts in terms of early childhood education may play a key role in the development of more sustainable futures.
4. The European Commission and its organs should enable greater collaboration and co-ordination with local, national and international efforts to provide professional development and curriculum support materials for ESD. This would serve to:
  • contribute towards intercultural understanding and a wider recognition of mutual interdependency; and
  • involve local level collaboration that can provide access to, and a greater visibility of, ethnic minority community contributions and cultural heritage.

5. More systematic research is required to identify, evaluate and promote existing good ESD practices in early childhood that integrate sustainable living practices, basic human rights and learning through experience and doing. More communication and exchange of experiments and innovative practice should be done: in countries, in regions, EU-wide and in the wider international context. The EU through its various organs, programs and mechanisms should be instrumental in encouraging this.

6. The EU should encourage innovation in terms of combining and integrating ESD within and in ECEC through framework programs and/or through a new EU-wide program, as instituted for other areas of education (e.g. Erasmus). Through such programs, actual practitioners, national organizations and international networks will receive encouragement and financial means to engage in innovation, to undertake research and evaluate results, and to share findings and evidence. Where appropriate the work should be participatory and action-centred, and carried out through transdisciplinary collaboration with professionals from all sectors and disciplines.

7. Fragmentation has been identified as a major barrier to effective implementation of practice in ECEC, ESD and lifelong learning. More coordinated approaches to funding are therefore required. As a first step towards this end provisions should be specifically made for early childhood education within all existing European Commission budgets dealing with ESD and lifelong learning developmental.
“It took Britain half the resources of the planet to achieve its prosperity; how many planets will a country like India require?”

(Mahatma Gandhi, in response to the question whether India would achieve the British standard of living after independence)

“As China and India continue their economic rise, western powers will increasingly realize that their remaining comparative advantages in tradable sectors – those in the so-called knowledge-based industries and services – cannot be sustained indefinitely. China’s and India’s wage advantages will not soon disappear, as they did in Japan and have begun to do in the tiger economies. China still has some half a billion people waiting in the rural areas to enter urban labour markets which will prevent wages rising fast in the urban economies. Soon many developed countries will be forced to recognize that remaining competitive is likely to require competing on price and quality, even in the knowledge economy sectors. This implies tough times for sustaining western living standards and, combined with strains over limited energy resources, major international tensions ahead. Global – and environmentally sustainable - solutions will require open international dialogue of the highest order”.

(Little and Green, 2009)
Sustainable Development

The future economic, environmental, social and cultural challenges that Europe is facing are increasingly recognised. What may be less understood are the challenges to be met within Europe and within each member state and the need to develop an effective education for sustainable development at all levels.

Sustainable development was first defined in 1987 by the Brundtland World Commission on Environment and Development (WCED), as:

“development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

(WCED, 1987)

Sustainable Action

An initiative to support parents and children acting together to live more sustainable lives may usefully adopt a minor adaptation of the Brundtland definition, so that Sustainable Actions may be defined as “actions that meet the needs of the present without compromising the ability to meet future needs or the ability of future generations to meet their own needs.” Adopting this modified approach would help avoiding any assumptions that the terms ‘development’ and ‘growth’ might in any simplistic way be synonymous. The document also hopes to move beyond the more biologically informed understandings of the term development that are focused on outcomes and evolution, and to encourage initiatives informed by the understandings of development commonly applied in the arts and in music where they are used to describe the processes applied in realising the possibilities of a particular action, object or theme.

As Little and Green (2009) point out, citing Pearce (2007), more recent and complete definitions drawn from the Brundtland Commission report (WCED 1987) contain two additional key concepts:

• The concept of ‘need’, in particular the essential
needs of the world’s poor, to which overriding priority should be given

- The idea of limitations imposed by the state of technology and social organisation on the environment’s ability to meet present and future needs.

**Equality**

Wilkinson and Pickett (2009) have shown that inequality is the root cause of many of society’s most serious problems. The authors show that levels of violent crime, mental illness, drug addiction, illiteracy, obesity etc. are almost always higher in more unequal societies and that even the most affluent are adversely affected by inequality. Their study of 30 years of statistical data suggests that in rich countries the smaller the gap between rich and poor the happier, healthier, and more successful the population is in terms of established indexes. The following graph shows that the US, the UK, Portugal, and New Zealand in the top right of this graph, are doing much worse than Japan, Sweden or Norway in the bottom left.

Wilkinson and Pickett draw extensively on UK data and have show that in a more equal UK the population would have a significantly better quality of life. For example, the data suggests that if inequality was cut by half: levels of trust would increase by 85%; rates of imprisonment and teenage births would fall by 80%; mental illness would decline by two thirds; and murder rates and obesity would halve. The analysis shows that rather than economic growth leading to a happier, healthier, or more successful population, there is no statistical relationship between income per head and social well-being in the rich countries of the world. It’s not just poor people who would do better in a more equal society either. The evidence suggests people at every level would benefit. The poorest would, however, gain the most and the analysis shows that these findings hold true across developed nations, or, for example, across the 50 states of the USA.
In this context it is interesting to note that the ‘Strengthening Climate Resilience (SCR)’ consortium has recently drawn attention to the need for a smarter, more integrated approach to DRM (Mitchell et al, 2010). A Climate Smart Disaster Risk Management (CSDRM) approach has therefore been developed to provide:

“an integrated social development and disaster risk management approach that aims simultaneously to tackle changing disaster risks, enhance adaptive capacity, address poverty, exposure, vulnerability and their structural causes and promote environmentally sustainable development in a changing climate”.  
(Mitchell et al, 2010)

Mitchell et al, (2010) argue that the voices of all members of the community including women, children and other marginalised groups’ must be empowered to influence decisions.

Agenda 21 which was adopted by most of the world’s governments at the Rio de Janeiro ‘Earth Summit’ (UNCED, 1992) referred to the need to consider ‘sustainable consumption’. Since Rio it has been widely accepted that people in rich countries need to change their consumption patterns if sustainable development is to be achieved. The work of Amartya Sen has also been influential in conceptualising the subject. Sen argued that the WCED (1987) ‘need’ centred view of development was “illuminating,” but “incomplete” (Sen, 2000). Individuals should be seen as “agents who can think and act” and not like “patients” whose needs had to be catered for (ibid). It is only by treating people as agents that they will ever be able to “think, assess, evaluate, resolve, inspire, agitate, and through these means, reshape the world” (ibid). Sen therefore redefined sustainable development as “development that promotes the capabilities of present people without compromising capabilities of future generations” (Sen, 2000). Sen’s ‘capability’ centered approach to sustainable development has the aim to integrate the idea of sustainability with the perspective of freedom, so that we see human beings not merely as creatures who have needs but primarily as people whose freedoms really matter.

This perspective resonates strongly with the position taken by Schumacher (1999) where he argued:

“Development does not start with goods; it starts with people and their education, organization, and discipline. Without these three, all resources remain latent, untapped, potential”
( ibid)

Education for Sustainable Development

Since the World Summit on Sustainable Development (WSSD) convened in Johannesburg in 2002 it has been widely recognised that education has a major role to play in the realisation of ‘vision
of sustainability that links economic well-being with respect for cultural diversity, the Earth and its resources’ (UNESCO 2007). There is also general agreement that education for sustainable development (ESD) has to be an integral part of quality Education for All (EFA) as defined in the Dakar Framework for Action (WEF, 2000).

Resolution 57/254 of the United Nations General Assembly declared the period 2005-2014 as the Decade for Education for Sustainable Development (DESD) with an overall goal to:

“…integrate values, activities and principles that are inherently linked to sustainable development into all forms of education and learning and help usher in a change in attitudes, behaviours and values to ensure a more sustainable future in social environmental and economic terms”

(UNESCO, 2007)

The UNESCO objectives of Education for Sustainable Development (ESD) are to (UNESCO, 2007):

• Facilitate networking, linkages, exchange and interaction among stakeholders in ESD
• Foster an increased quality of teaching and learning in education for sustainable development
• Help countries make progress towards and attain the Millennium Development Goals through ESD efforts
• Provide countries with new opportunities to incorporate ESD into education reform efforts

Education for sustainable development provides a vision of education that seeks to balance human and economic well-being with cultural traditions and respect for the environment. The United Nations 2005 World Summit Outcome Document refers to the “interdependent and mutually reinforcing pillars” of sustainable development as social development, economic development, and environmental protection. The challenge for educators is to develop educational systems, curriculum and pedagogic practices that are sustainable in terms of each of these pillars. It is also important to understand that for any development to be sustainable, it must be supported by the three pillars acting together. Any practices and policies developed without taking each into account are likely to fail. From the perspective of sustainable development the most efficient or effective environmental, economic or social strategy may not be the most sustainable. Sustainable developments often require compromise solutions and trade-offs.
The choices made in any one area may need to be moderated by the other two. To take a concrete example, in a water supply crisis the most environmentally sophisticated, ‘state of the art’ water treatment plant might not be practical especially if it requires costly or highly skilled regular maintenance. In this case the introduction of a more appropriate (even if less ‘green’ or even ‘effective’) technology capable of being supplied and/or maintained by the local community might be more sustainable and save more lives. A classic example of this may be provided by the introduction of cloth filters to reduce contamination in the water supplies of poor villages where disinfectants and fuel for boiling are difficult to obtain. In Bangladesh an old cotton sari is folded to make four or eight layers and then folded over a wide-mouthed container before collecting surface water.iii

ESD is concerned with the ‘three spheres’ of environment (including natural and man made resources and ecosystem services), society (including employment, human rights, gender equity, peace and human security) and economy (including poverty reduction, corporate responsibility and accountability). Issues such as HIV and AIDS, migration, climate change and urbanisation all involve two or more of these spheres. In practice, education for sustainable development has the potential to integrate and build upon a number of established areas of curriculum development including ‘futures education’; ‘citizenship’; ‘peace education’; ‘multicultural and gender education’; ‘health education’; ‘environmental education’; ‘design and technology education’ and; ‘media literacy’. It also provides a platform and rationale for the further development of more recent curriculum initiatives such as those concerned with developing children’s understanding of scientific concepts, citizenship, and economic principles such as sustainable credit and savings.

For many adults, the scientific questions that are of greatest concern are those first raised by the media: Is (e.g. British) beef safe to eat? Do genetically modified crops damage the environment? Should we inoculate our children against a particular disease? Public enquiries are also carried out to assess the siting and safety of local industrial, energy or waste facilities, and scientists are often reported as expert witnesses. Stakeholders must have the means to engage in these discourses around issues that affect them. When these issues are complex and of vital importance to all of humanity, as in the case of global climate change, society must make every effort to prepare and equip all its citizens to be able to participate in making decisions on the level of public policy and of personal practice. Yet misinformation, partial truths, and entirely bogus statements are en-

ii http://en.wikipedia.org/wiki/Cloth_filter

iii This effectively filters out most cholera bacteria and other pathogens as they are attached to particles and plankton.
countered frequently in the discourses around complex and controversial issues. Scientific literacy is crucial. The public understanding of science is also a major (if not the major) justification for emphasising the importance of lifelong learning as popular misunderstandings regarding the nature of science run deep and the subject continues to be mis-taught in the early years of education (Murcia and Schibeci, 1999, Akerson et al, 2010, Hanuscin et al, 2010). Yet it is in the early years that fundamental understandings and attitudes towards the production of scientific knowledge are formed and studies have shown that children can benefit from education about the nature of science (Akerson and Donnelly, 2010). If one is to make significant progress in dealing with the problem of the public understanding of science, then actions to correct these misunderstandings must be introduced from the earliest years of education. ESD in early childhood education can play a critical role in preparing all members of a society for learning, understanding, thinking critically, whatever their future career or occupation.

In fact, in the very best of our preschools children are already investigating issues related to energy conservation, waste disposal and changes in their local environment. They are also addressing questions such as “What do seeds need to sprout?” “What will happen to this object in water?” and “What other uses can be made for this material?” In the best practice, children can share their thoughts and findings, and record them by drawing, writing, recording on charts and using digital imaging. They find that trying something just once is often insufficient, and repeating and discussing processes is a part of scientific inquiry. While this kind of work is already being carried out in the very best of our preschools, it is in the context of sustainable development that popular misunderstandings of the nature of science are often revealed in their most extreme forms. The so called “ClimateGate” controversy provides a cause célèbre in this respect. Following the publication online of hundreds of leaked emails, claims were made by sceptics that the academics had massaged their statistics in providing evidence of climate change. The scientific community finally rallied around to clarify the fact that there was substantial and wide ranging evidence that showed that man-made global warming existed and would have catastrophic consequences if not tackled urgently. But arguably the major damage that was caused was to science itself as the controversy undermined the public’s confidence in the subject even further. The problem is that in every controversy of this sort, the public is being encouraged to question the legitimacy of science because scientists are shown to disagree with each other. This is especially ironic when we consider that it is precisely these critical peer-review and testing processes of science that give science its strength and authority.

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v Education for Sustainable Development may also be seen as a limit case in a crisis related to the public understanding of science and it is in the context of sustainable development that popular misunderstandings of the nature of science are often revealed in their most extreme forms. The so called “ClimateGate” controversy provides a cause célèbre in this respect. Following the publication online of hundreds of leaked emails, claims were made by sceptics that the academics had massaged their statistics in providing evidence of climate change. The scientific community finally rallied around to clarify the fact that there was substantial and wide ranging evidence that showed that man-made global warming existed and would have catastrophic consequences if not tackled urgently. But arguably the major damage that was caused was to science itself as the controversy undermined the public’s confidence in the subject even further. The problem is that in every controversy of this sort, the public is being encouraged to question the legitimacy of science because scientists are shown to disagree with each other. This is especially ironic when we consider that it is precisely these critical peer-review and testing processes of science that give science its strength and authority.
a minority of excellent early childhood settings it urgently needs to be documented further and promoted.

Following the launch of the United Nations decade of Education for Sustainable Development (2005-2014), the UN Economic Commission for Europe drew up a separate Education for Sustainable Development strategy in 2005\textsuperscript{vi}, and recognised that:

"Education for Sustainable Development is a lifelong process from early childhood to higher and adult education and goes beyond formal education. As values, lifestyles and attitudes are established from an early age, the role of education is of particular importance for children. Since learning takes place as we take on different roles in our lives, Education for Sustainable Development has to be considered as a “life-wide” process. It should permeate learning programmes at all levels, including vocational education, training for educators, and continuing education for professionals and decision makers.”

(UNECE, 2005)

Yet progress in early childhood education has been very slow so far. The DG Education and Culture 'Inventory of innovative practices in education for sustainable development'\textsuperscript{vii} included only one project involving children under the age of 8 (of a total of 30 from 17 countries) as “a wide range of examples of innovative ways to deliver formal, informal and non-formal education for sustainable development”. The early childhood practice that was included was an Austrian national network (OKOLOG) for schools involving 6 to 25 year olds. A total of 212 in 33 countries stakeholders were apparently contacted and given the opportunity to nominate practices to this 2008 study.

In September 2010 UNESCO (2010c) also published a draft version of a report directly focused upon ‘Education for Sustainable Development Good Practices in Early Childhood’\textsuperscript{viii}. This was published in response to “numerous requests for case studies and descriptions of good practices in ESD”. The document provides details of 11 programmes promoting ESD in early childhood settings. Three of the 11 practices included were European, and these included a project from an école maternelle in Paris involving three classroom groups of 4-6 year olds in the production of short animated films using webcams in association with the Playmobile toy company. Another European project (from Portugal) involved a class of 3 and 4 year olds. The children had collaborated in the development of lists of environmentally appropriate and inappropriate behaviours – and had ‘patrolled’ the preschool (and local community) to ensure that they were adhered to. This led to the development of recycling activities, energy savings and the implementation of an organic garden. A EUR 28 million German project for 3 to 6 year olds was also included. The ‘Leuchtpol’ project is focused on “Energy and the Environment” and includes provisions at further and higher education level for teacher training with an aim to involve 4,000 preschools (about 10% of national provision) by the end of 2012.

\textsuperscript{vi} Economic Commission For Europe Committee On Environmental Policy, High-level meeting of Environment and Education Ministries (Vilnius, 17-18 March 2005) (Agenda items 5 and 6) UNECE Strategy For Education For Sustainable Development, adopted at the High-level meeting

\textsuperscript{vii} a report prepared for the DG Education and culture by GHK in association with Danish Technology Institute and Technopolis Order 31 (14 October 2008)

\textsuperscript{viii} UNESCO Education for Sustainable Development in Action Good Practices N°4
The Organisation Mondiale Pour L’Éducation Préscolaire (OMEP) (World Association for Early Childhood Education) is now providing significant leadership in the area of Early Childhood ESD. ESD also provided a major theme in the OMEP 2010 World Assembly and congress in Gothenburg. The OMEP website carries guidance for practitioners and practical examples of activities to be carried out with young children: http://www.ecesustainability.org/. A wide range of other stakeholder groups and associations are providing support to schools predominantly in the area of environmental education and have significant potential for extending their work into early childhood education.
But Why Education for Sustainable Development in Early Childhood?

The case for investing in education for sustainable development in early childhood can be made in terms of human rights, social justice and practical expedience. All children have the right to education, and research from longitudinal studies and from neuroscience has shown that it is in the early years (birth to age 8) that children have the greatest capacity to learn. It is also in early childhood that the foundations of many of our fundamental attitudes and values are first put into place. Experience and research (Pramling Samuelsson and Kaga, 2008, Siraj-Blatchford and Björneloo, 2009, Siraj-Blatchford et al, 2010) show that even very young children are capable of sophisticated thinking in relation to socio-environmental issues and that the earlier they are introduced to sustainable development the more influential those influences become in their future lives. But of even more fundamental significance it should be recognised that ESD is all about the future and it is young children who have the greatest stake as citizens in the future. ESD in early childhood must be recognised as a citizenship and human rights issue and early childhood must be recognised as the most appropriate and natural starting point for all policy and practical sustainable development throughout a system of lifelong learning.

In 2009, the United Nations General Assembly (UNGA, 2009) devoted special attention to the right of children to be heard, reaffirming:

“that the general principle of participation forms part of the framework for the interpretation and implementation of all other rights incorporated in the Convention on the Rights of the Child”.

(UNGA, 2009)

The General Assembly called upon States to assure that children are given the opportunity to be heard on all matters affecting them, without discrimination on any grounds, and by adopting and/or continuing to implement regulations and arrangements that provide for, and encourage, as appropriate, children’s participation in all settings, including within the family, in school and in

<<< The case for investing in education for sustainable development in early childhood can be made in terms of human rights, social justice and practical expedience.

<<< ESD is all about the future and it is young children who have the greatest stake as citizens in the future.

ix This evidence is summarised in Siraj-Blatchford, I., and Woodhead, M. (Eds.) (2009) Effective Early Childhood Programmes, The Open University in association with the Bernard Van Leer Foundation
their communities. In order to respect children and their human rights and citizenship, the society must recognize that children have a right but also share a responsibility to achieve Sustainable Development.

Historically, the political philosophy of Social Justice has been progressively founded upon notions of ‘natural rights’, ‘welfare and mutual advantage’ and ‘contractual fairness’. Social justice from a modern ‘contract’ perspective is considered to be achieved through ‘fairness and impartiality’ and through a consensus where everyone agrees that working together improves chances of everyone achieving their individual goals in life. Inequalities according to this model are considered acceptable as long as they work out to everyone’s ultimate advantage and welfare priority is given to the interests of only the very worst-off. There are many problems that have been acknowledged with this model of social justice. Despite its potential difficulties the contract model may be considered to reflect the democratic consensus across the western world. As its major architect, Rawls has the unique distinction among contemporary political philosophers of being frequently cited by the courts of law in the United States and referred to by practicing politicians in the United States and United Kingdom¹ (Daniels, 1975).

Notions of equality of opportunity and individual freedom therefore provide major principles of contemporary philosophical and political consensus. From the perspective of the social contract the role of the State in education and in the social services is therefore accepted as one that should provide a ‘level playing field’ which is designed not so much to achieve equality of outcomes, but rather an equality of opportunity to successful. ‘Success’ whether it be considered in material, economic and/or other terms of self realisation is, according to this consensus view, seen as the inevitable result of the free choices that individuals make in their lives. In educational terms the most significant of these choices may be considered to be the deferred gratification that individuals accept in foregoing the short-term rewards of idle play or an early income to achieve long-term educational achievements.

¹ In emphasising the importance of ‘social goods’, it has been argued that the model ignores the “social processes and procedures that (re)produce inequality” (Sen, 1992). The model may also be considered to have been founded upon the fictional notion of an ‘impartial standpoint’ (Corson, 1995, 2000) and it should be recognized that in many societies social conflict is such that the level of stability and compliance assumed by the model is excluded in advance (Fisk, 1974).

Wikipedia reference: http://www.theyworkforyou.com/search/?s=%22john+rawls%22
But it is important to recognise that in their early years individual children are not yet in any position to make such a choice. Household poverty or other barriers in early childhood often act to exclude the very possibility of making such choices. The major issue to be addressed in this context is that if one is to ensure that children are in a position to take advantage of a level playing field provided in their subsequent schooling, then at first equality of outcome in the pre-school period must be achieved. In fact this was until recently the declared aim of the UK educational policy where the Every Child Matters outcomes framework set a target to halve child poverty by 2010 when compared with 1997, and eradicate it completely by 2020. The aim has been to provide success for all but the most disabled children in school with at least 90% developing well across all the areas of the Early Years Foundation Stage Profile by the age of five:

“The Early Years Foundation Stage will provide a level playing field so all children start school with an equal chance of doing well”

( Balls, Secretary of State for Children, Schools and Families, 2008)

Tony Blair identified some of the structural problems of social justice and exclusion clearly:

“...poverty is not just about poverty of income, but poverty of aspiration of opportunity, of prospects of advancement. We must not in any way let up on the action we take to deal directly with child poverty. But at the same time, we have to recognise that for some families, their problems are more multiple, more deep and more pervasive than simply low income. The barriers to opportunity are about their social and human capital as much as financial.”

(Blair, 2006)

The same arguments have also been regularly made at international levels for many years:

“It is now widely accepted that – on the one hand – poverty should not be seen only as a lack of income, but also as a deprivation of human rights: And - on the other hand - that unless the problems of poverty are addressed, there can be no sustainable development. It is equally accepted that sustainable development requires environmental protection and that environmental degradation leads directly and indirectly to violations of human rights.”

(UN High Commissioner for Human Rights, 2002)

A recent study of disadvantaged children in the UK has shown that many children are already up to a year behind their peers in terms of learning and development at age three. James Heckman (2006), a Nobel prize-winner in economics, and his colleague Flavio Cunha also show that investments in early childhood programs are justified by the returns provided to society as a whole. Investment in the foundation stage of early childhood provides a higher rate of return than investments later in life, as is shown in the graph below (op cit).

They found that a dollar invested in early childhood yields three times as much as for school-aged children and eight times as much for adult education. Heckman and his colleagues have based their

xii Centre for Longitudinal Studies, Institute of Education (2007)
economic analyses on small, but very rigorous, studies of early child development programs in the United States. Combined with the overwhelming evidence that shows that investments in social wellbeing are now more likely to follow from greater equality rather than from economic growth, the findings of this analysis may be applied directly to argue for a stronger focus upon ESD in early childhood. Using data from Sweden and Cuba, Mustard (2009) has also been able to show how high quality ECD programs that support language and literacy as well as maternal and child health goes a long way to creating safer and more stable societies.

Research shows that a wide range of early childhood disadvantages (or risk factors) have the potential to lead either directly or indirectly to educational underachievement, whereas other ‘resilience’ factors provide a child with the resources to overcome these risks. Parents can pass on risks and resilience to their children and there is therefore a need to support families, not just children, and for the integration of adult and child interventions (Siraj-Blatchford and Siraj-Blatchford, 2009).

The most robust research available shows that children’s risk of underachievement can be improved directly by services working with families in the early years:

- reducing foetal and post-natal injury
- reducing child neglect and abuse
- reducing disease and infection
- lowering the incidence of poor bonding and poor attachment, improving parent–child relationships and relationships with siblings and other children
- improving children’s self-regulation and self-esteem, and instilling in them positive behaviours
- improving the incidence of children experiencing a high-quality early home learning environment (HLE) (significant factors include frequency of being read to; going to the library;

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xiii The status inequalities created through inequalities of income and wealth directly drive consumption, and consumerism may be seen as one of the major threats to sustainability and to the development of low carbon futures.

xiv According to a recent review of a total of 288 documents well over half of which were research reports of large-scale longitudinal, mixed method, and quasi-experimental studies as well as randomised control trials (RCTs) (Siraj-Blatchford and Siraj-Blatchford, 2009).
painting and drawing; playing with letters and numbers; singing songs, and reciting poems and rhymes)

More indirect means of reducing the risk of underachievement include:

- improving maternal (or primary care-giver) education and qualifications, especially to degree level
- reducing maternal anxiety and depression, and providing support focused on the relationship between care-giver and child
- improving parental employment opportunities and reducing poverty
- increasing SES mixing for example of children and parents in early years setting

Children may also be supported in overcoming risks through:

- improving the quality of stimulation and early home learning environment, especially for boys
- promoting parents’ involvement and interest in education
- children attending higher quality pre-schools
- supporting and educating the parents of children with behaviour problems
- programmes that target two or more child/family outcomes (such as behaviour and literacy), as these may be particularly cost-effective
- home visiting, when well-focused, of appropriate intensity and quality, provides a useful tool to improve child outcomes – especially for younger children, or where parents do not seek support from centre-based provision.

(Siraj-Blatchford and Siraj-Blatchford, 2009)

xv Evidence from the UK suggests that parents currently tend to provide better early home learning environments for girls than for boys (Siraj-Blatchford and Siraj-Blatchford, 2009) http://eppe.ioe.ac.uk/eppe/eppepdfs/RB%20Findings%20from%20Early%20Primary.pdf
Increasing participation in the earliest years of the child’s education is the first step in the direction of making life long learning a reality, and should therefore be recognized as an integral part of life long learning strategies. Council of The European Union (2009) conclusions on the updated framework for European cooperation in education and training 2010-2020 underlines the equity dimension of ECEC. High participation and high quality provision can be effective ways to address educational disadvantage. But perhaps the most significant questions in the minds of many readers that has to be answered in this context relates to the ‘capacity’ of young children to understand sustainable development. How do we know that early childhood learning can make a difference to sustainable development?

To be positively disposed towards something is to be intrinsically motivated by it. As Katz and Raths (1985) suggest, dispositions should always be understood as ‘habits of mind’, rather than as ‘mindless habits’. Dweck (1999 has demonstrated that in early childhood ‘mastery’ and ‘helpless’ orientations to learning may be identified that are significantly related to school achievement. For Dweck, helpless children show a marked lack of persistence in the face of failure. When they experience difficulty these children tend to see the problem in terms of their own incapacity to perform the task rather than seeing it as a matter of effort. They also have low expectations of success in future tasks (Dweck, 1999). Young children are motivated when they wish to please the significant others in their lives, and when they make efforts to avoid their disapproval. Educators are significant people in young children’s lives and when they show an interest in, and value off ESD, this is bound to be influential. In an early years’ ESD therefore a great deal can be done to support children in developing positive dispositions towards the subject.

We know from a range of international studies that young children have a generally low level of factual knowledge and understanding of environmental issues. We also know that children develop an early awareness of cultural differences. But, so far, despite their active participation in family economy and its economic behaviour we know very little about children’s emergent understanding of economics.

Disaster Risk Reduction (DRR) projects provide valuable models for the engagement of young children and they also show what can be achieved with relatively modest resourcing. 168 governments have signed up to the Hyogo Framework for Action (HFA) which represents a major DRR
initiative. Although disasters can affect anybody at any time in most cases it is the poorest and most vulnerable people that are affected first and hit the hardest. It is for this reason that most DRR projects have so far been developed in the poorer communities. For example, ActionAid’s Disaster Risk Reduction through Schools (DRRS) project operates in Bangladesh, India, Nepal, Ghana, Malawi, Kenya, Haiti, the Democratic Republic of Congo and Zambia.

The DRRS project works with children, teachers, parents, school management, local authorities and other key actors to:

- Invest in school infrastructure to make buildings and surrounding areas safer
- Use schools as centres for community action, training and coordination on DRR
- Raise the awareness of children and their communities on climate change and disaster prevention and mitigation
- Tracking how climate change is affecting communities
- Helping vulnerable children and their communities to claim the rights that will allow them to live in safer conditions
- Campaigning for the implementation of the Hyogo Framework for Action by all signatory governments
- Persuade and supporting governments to integrate DRR into all areas of their work and to replicate successful DRR models
- Supporting civil society networks and experts at local, national and international levels
- Documenting and sharing experiences and learning with peers, governments, academics and donors

When ActionAid and UNISDR sponsored the 2007 World Social Forum in Nairobi, children from rural Malawi and Kenya were given a platform to explain the impact of disasters on their schools, communities and on their education. Back et al in 2009 have published a review of child-focused and child-led disaster risk reduction approaches and techniques, many of which involved children as young as five. The review argues that there are significant advantages in engaging children directly in the design and delivery of DRR activities and that more needs to be done to involve children in such work. The review draws attention to the fact that the costs of delivering DRR with children, is lower and the benefits stream much higher (using a lifetime analysis and taking into account
The review also found that most projects involved children in expanding and transferring knowledge and in giving children a voice. The report recommends that efforts should now shift; to focus more on supporting children engaged in action themselves to influence and to transform practices.

Tanner (2010) cites a wide range of research evidence to argue that children from the age of three onwards are able to develop capacities to reduce risk based not just on the physical aspects of risk, but also (and perhaps more significantly) upon the culturally constructed aspects of risk requiring behavioural change:

The focus of attention therefore needs to shift from one that considers children’s agency not only in terms of their ability to enact direct, autonomous risk management practices, to one that considers children as risk communicators to create behavioural change in other people in their communities. Such risk communication processes at household, school and community level remain poorly understood in different cultural contexts (Lindell and Perry, 2004). Adults commonly retain household and legislative governance, resources and higher levels of credibility in communities, and evidence suggests that successful child engagement must be conscious of wider issues of stakeholder inclusion and exclusion (Hill et al, 2004). As such, engagement of child-led efforts with adults and adult-led processes are central to their success. At the household level, the research results suggest that when parents are excluded from the process of awareness raising, action and empowerment, they may question the motivation or activities of their family members.

National and International legal action may provide additional ways forward. The United Nations Convention of the Rights of the Child (CRC) is the most widely ratified international human rights treaty ever produced. The World Future Council (2010) cite a 1993 case where the Philippine Supreme Court permitted a class action brought by Filipino children acting as representatives for themselves and future generations. The petitioners wanted to halt governmental licensed timber cutting within the remaining national forests. The plaintiffs alleged that present and continued logging violated their right to a healthy environment under the Philippine Constitution and would entail irreparable harm to them and future generations of the nation. The Court considered the issue of intergenerational responsibility and decided that the petitioners had locus standi, i.e., were qualified to sue, on behalf of present and future generations in the Philippines.

“The credit crunch is about borrowing from our children; the climate crunch is about stealing from them”

(David Pencheon, D. 2010)

**Early Environmental Education in practice**

Detailed investigations of children’s understanding of specific environmental phenomena (e.g. recycling of waste and global warming) also show that there are many scientific mis-
understandings. Despite this, surveys of young people in various countries report generally positive environmental attitudes. However, several studies find students to be less environmentally conscious when the issue is related to their own lives and material aspirations. Findings from several studies also show girls to be more pro-environmental than boys in their attitudes and behaviours (Zelezny et al, 2002).

Research shows that the single most important influence in promoting environmental awareness and concern is identified as childhood experience in the ‘outside environment’. A substantial review of literature on the effects of early-life experiences on an individual’s environmental beliefs was conducted by Ewert et al (2005). Five major variables regarding early-life outdoor experiences were identified. The most important appeared to be direct outdoor experiences (Bixler, 1997; Bixler et al., 2002; Corcoran, 1999; Palmer, 1993; Peterson and Hungerford, 1982; Sward, 1999; Tanner, 1980; van Liere and Noe, 1981). But other variables were also identified as playing a role in the development of environmental attitudes, such as formal education (Palmer, 1993; Tanner, 1980), the media (Corcoran, 1999), witnessing negative environmental events such as the destruction of a natural area through development (Sward, 1999; Tanner, 1980), and involvement with organizations that provide outdoor experiences (Palmer, 1993; Peterson and Hungerford, 1981). The research shows:

- Even quite young children are capable of sophisticated thinking in relation to environmental issues
- Some school-focused educational interventions, including residential field courses and school-based initiatives, can effect change in students’ environmental knowledge and/or attitudes and (in a few cases) behaviour. Effects, however, tend to be measured in the short term, and the evidence

The Philippine Supreme Court permitted a class action brought by Filipino children ... and decided that the petitioners had locus standi, i.e., were qualified to sue, on behalf of present and future generations in the Philippines.

Even quite young children are capable of sophisticated thinking in relation to environmental issues.
on their durability over time is not clear

• Studies of intergenerational influence suggest that students, after participating in environmental education activities, are capable of influencing the environmental attitudes and/or behaviours of their parents. However this is not an automatic process, and appears to happen where projects are enjoyable for students, and tasks involve parents and dealing with actual local problems

Early Social and Cultural Education in practice

“...cultural diversity is as necessary for humankind as biodiversity is for nature”
(The Universal Declaration on Cultural Diversity, UNESCO, 2001)

Social sustainability is concerned with all of those social, cultural and political issues that affect the quality and continuity of people’s lives, within and between nations. Sustainable societies are therefore considered as just and inclusive societies; they may be characterized by participation, emancipation, freedom, security and solidarity. To achieve social sustainability, equality and fairness are required between individuals and groups within and beyond national borders and between generations. Sustainable development requires, therefore, an ethos of compassion, respect for difference, equality and fairness.

The key concerns of social sustainability are to promote participation and dialogue, counter inequality, and secure peace. If peace and security are to be achieved and maintained throughout the world then social development and social justice are crucial. In fact it is widely recognised that social development and social justice cannot be achieved without peace and security, and it can’t be achieved in the absence of respect for human rights and fundamental freedoms either (United Nations, 1995).

As children get older they may identify a wide range of distinguishing cultural ‘markers’ but even at the age of three to four years children commonly exhibit curiosity about physical differences and they often show gender and ‘racialised’ friendship preferences. At this age the children develop their identity as family members and they can also absorb their families’ stereotypes and biases. It is also at this stage that they begin to classify people into groups and to develop theories about why people are different. In fact it is at this stage, when they are forming their first friendships that adults and educators can do the most to support them in learning to accept diversity and to feel comfortable with differences\textsuperscript{xvi}. Unfortunately, even many adults tend to essentialise the differences that they see

\textsuperscript{xvi} Biologists used to think that human beings could be split up into different groups or ‘races’ but the study of genetics has now shown that the differences between people in any one population are enormous in comparison to any differences that can be found between populations. We can therefore now say with confidence that ‘race’ has no biological significance for human beings. The differences that we see between groups really are only ‘skin deep’.
between themselves and ‘others’, and it is the differences between them that are often considered to define them. This is particularly problematic when the similarities between people are completely taken for granted. Children need to learn that skin colour is a totally arbitrary difference, and that all human cultures and populations, at home in Europe and throughout the world have much more in common than they have differencesxvii.

Cultural prejudice and racism is a worldwide phenomenon and most national governments have policies to counter the misinformation peddled to less educated minorities by manipulative extremists. Recent illustrations of the need for these educational provisions are diverse. They include the mistreatment of ethnic Albanians in Greece, attacks on Romanians in Northern Ireland (2009), and violence against African farm workers in Southern Italy (2010), In India, discrimination against the Dalits (so called ‘untouchables’) remains a significant problem and indigenous communities in many countries including the USA, Canada and Australia remain severely disadvantaged. In 2009/10 increased racist attacks against Indian’s were reported in Melbourne. In South Africa, the deep scars inflicted by apartheid will take a long time to heal and these processes of reconciliation continue to be frustrated by extremists on both sides. The atrocities in Rwanda in the 1990s and Kenya in 2007 undoubtedly had many causes but if the ethnic divisions had not been so great then it is clear that they could never have been exploited to promote genocide. It may be considered significant that many of the ethnic conflicts that trouble the African continent were strongly nurtured in earlier times through the colonial “divide-and-rule” policies of European states.

Most of the national and international policies currently developed to tackle intercultural and multicultural education, prejudice and bias operate within an ideological framework that emphasises ‘equality of opportunity’. Williams (1987) argued that this concept has been capable of uniting diverse political and educational campaigners precisely because of its vagueness.

xvii http://www.327matters.org/Paper.htm

<<< To achieve social sustainability, equality and fairness are required between individuals and groups within and beyond national borders and between generations.

... even at the age of three to four years children commonly exhibit curiosity about physical differences and they often show gender and ‘racialised’ friendship preferences.

Children need to learn that skin colour is a totally arbitrary difference, and that all human cultures and populations, at home in Europe and throughout the world have much more in common than they have differences.
Unfortunately, the sort of ‘unity’ that was gained by such means might have been less productive than it is often supposed. Jewson and Mason (1994) argue, for example, that the benefits of adopting such ill defined terms are often short lived, leading to disappointment and distrust in the long term. Historically, the prevailing discourse of equality of opportunity may have also actually limited popular understandings of ‘multiculturalism’. Until the mid-1980s, most educationalists (and researchers) assumed that ‘multicultural’ education was simply about, and for, black and ethnic minority children. The wider context of prejudice and racism in society outside of the school and the role of white ethnic majority people in the production and reproduction of it had been largely ignored.

The main thrust for ‘multicultural’ educational development has always come from urban multi-ethnic conurbations and as Jay (1992) found outside of these areas there has often been widespread complacency ‘- or worse’. When we approach social justice and intercultural education from the perspective of sustainable development these subjects may be considered of universal relevance.

Adults can contribute a great deal in supporting children in their development of positive perceptions of themselves and of others. A great deal of early years’ curriculum development along these lines has already been carried out around the world. For example, the Early Years Foundation Stage Guidance (2007) for England suggests:

At 8-20 months - Planning and Resourcing: “Work with staff, parents and children to promote an anti-discriminatory and anti-bias approach to care and education”.

At 16-26 months - Note: “Young children’s interest in similarities and differences, for example, their footwear, or patterns on their clothes and in physical appearance including hair texture and skin colour”. Note: “Young children’s questions about differences such as skin colour, hair and friends”. Effective Practice: “Talk with young children about valuing all skin colour differences”.

At 40-60+ months - Note: “How children express their attitudes such as about differences in skin colours”.

“I want to make some money to buy food, water and tents for everyone in Haiti.”

Young children like Charlie Simpson show the potential for developing social entrepreneurs from an early age.
Effective Practice: “Develop strategies to combat negative bias and, where necessary, support children and adults to unlearn discriminatory attitudes”.

Early education for economic sustainability in Practice

In his introduction to James Robertson’s seminal 1999 briefing for EU policy makers “The New Economics of Sustainable Development”, Jean-Claude Thebault argued that:

“It is because this new economic thought puts the citizen and the common good at the centre of its concerns that we believe that political decision-makers should give it their attention. The ‘new economics’ is based on a vision which could be a source of inspiration for politicians: the systematic development of individual responsibility, the effective preservation of resources and the environment, respect for qualitative and not just quantitative values, respect for feminine values, and the need to place ethics at the heart of economic life.”

(Robertson 2005)

Charlie

In the UK in 2010 the public attention was drawn to the actions of a seven year old boy from West London. After watching on TV the devastating effects of the recent earthquake in Haiti Charlie Simpson said: “I want to make some money to buy food, water and tents for everyone in Haiti.” Charlie decided that to do this he would cycle five miles (8km) around a park near his home to raise funds for UNICEF’s earthquake appeal. He expected to raise £500 but media attention soon resulted in him raising more
than £210,000 (Just Giving, 2010). Charlie’s story provides an example of what can be achieved in both individual and community terms through a greater emphasis being taken on education for sustainable development in early childhood.

The aims of environmentalism are already widely acknowledged and increasingly supported throughout the European early childhood sector, and there are also many intercultural initiatives and insights that may be drawn upon to support sustainable developments in social and cultural terms. The current level of awareness of sustainability economics is, by contrast, extremely weak and few practitioners currently working in the sector are aware of the multiple pillars (environmental, social, cultural and economic) that policy makers have come to accept as the major foundations of any adequate understanding of sustainable development. Young children like Charlie Simpson show the potential for developing social entrepreneurs from an early age.

It is for these reasons that this document strongly suggests the initiation of education for sustainable development programs in early childhood, within the specific context of European early childhood services. Such programs are required to provide learning experiences for teachers and parents as well as for the children. Within these programs, initiatives that encourage the search for answers to questions on how and why the issue of sustainable development affects every individual and community in a variety of ways, needs to be supported. In fact it is often argued that an education that promotes thrift (or frugality) simultaneously supports the development of positive environmental values and pro-environmental behaviour (Fujii, 2006).

For most early childhood practitioners, parents and children in Europe the day-to-day activities most significantly influencing sustainable development are at the level of consumption. Sustainable consumption is therefore the most appropriate area upon which to focus. Wade and Parker (2009) found that the Western tendency to consider some kind of separation between the human and the natural world has led to an unhelpful split between the development and the environmental agendas. Popular views that regard economic action as quite separate from environmental action should be considered an equally problematic obstacle to sustainable development.

As Robins and Roberts (1998) argue, all of our practices of sustainable consumption need to be grounded in a wider range of environmental, social equity and moral concerns and practices to support and encourage:

• reducing the direct environmental burden of producing, using and disposing goods and services
• meeting basic needs for key consumption goods and services, such as food, water,

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xix See: http://www.youtube.com/watch?v=PgTGW_LVxsY&feature=related
health, education and shelter

• maximising opportunities for sustainable livelihoods in the South

• consuming goods and services that contribute positively to the health and well-being of women and children

• increasing the development and adoption of energy and water efficient appliances, public transport and other demand-side measures

• the production and sale of new goods and services adapted to global environmental constraints

• lifestyles that place greater value on social cohesion, local traditions and non-material values

Interviews conducted by Susan Weinger on young children’s evaluations of wealth and ‘life chances’ (Weinger, 2000) have shown how low and middle-income children’s character associations regarding economic class and their corresponding friendship choices. Projective techniques employing photographs of houses representing different income level families were used to interview 48 United States children between the ages of five and 14 years, divided equally between low and middle income. When the students were asked to select the imagined child they would choose for a friend, their choices and rationales reflected a prevalent economic class consciousness. The middle-class children wanted another middle-class child who would be similar to themselves and did not find the poor attractive in any compelling way that would pull them away from their comfort zone of familiarity. These findings alert us to how early in life children internalise the divisions caused by intense income inequalities that undermine common bonds, familiar connections, and mutual understanding among people. Such societies may increasingly turn poor children against themselves and both poor and wealthier children against each other.

It is clear that even at early ages, both realistic assessments and popular prejudices about wealth and poverty were firmly fixed in their minds.

In this context it is important to recognise that children often have a strong influence of family expenditure, and that they themselves are consumers. Advertising and popular media have an influence on the choices that they make with respect to toys, clothes and activities. In fact it has been estimated that the average child in the UK watches an 10,000...
television commercials per year\textsuperscript{xx}. In Sweden all television advertising is banned during children’s prime time and commercials that feature characters that children are familiar with are prohibited until 9 p.m. during the week and 10 p.m. at weekends. The regulations in most other countries are mostly weak or non-existent.

Entrepreneurial education in practice
One example of a preschool classroom project provides an example that shows early entrepreneurial education in practice. It occurred in the early days of the commercial recycling of aluminium in the UK. A company approached the preschool and offered to pay by the kilo for all of the drinks cans that the school could collect. The staff used the opportunity to create a curriculum project that looked at recycling in general and on the material properties of aluminium as well. They decided that the children should decide themselves how the money should be spent on the school and a concerted effort should be made to engage the parents and their wider families in the project. The children created advertisements, posters and banners and were so enterprising in their strategies for the collection that a sizable sum was soon raised. Some of the income was spent on purchasing more recycling bins to support the continuing project. All aspects of the project were discussed with the children through focused classroom meetings.

\textsuperscript{xx} http://news.bbc.co.uk/1/hi/education/7134943.stm
As previously suggested, a substantial body of research evidence has shown that high quality preschool education can help to alleviate the effects of social disadvantage (e.g. Sylva et al, 2010). Some countries have made the expansion of early childhood programmes a national priority, especially for reaching disadvantaged groups. But those who would gain the most from early childhood care are often excluded. Low-income families and immigrants have less access to good quality early childhood care.

The Global Context

The context for developing policy in terms of Education for Sustainable Development must be seen in wider international agreements:

“We share the conviction that social development and social justice are indispensable for the achievement and maintenance of peace and security within and among our nations. In turn, social development and social justice cannot be attained in the absence of peace and security or in the absence of respect for all human rights and fundamental freedoms.”

(United Nations. 21 August 2000. World Summit)

The Education for All goals are to:

1. Expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children
2. Ensuring that by 2015 all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities, have access to and complete, free and compulsory primary education of good quality
3. Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills programmes
4. Achieving a 50% improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults
5. Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls’ full and equal access to and achievement in basic education of good quality
6. Improving all aspects of the quality of education and ensuring excellence of all
so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills

(Dakar Framework for Action, WEF, 2000)

The EFA Education for All Global Monitoring Report (UNESCO, 2010d), argues that the international community needs to identify the threat posed by the economic crisis and the rise in global food prices to minimize the impact on education. Chapter 1 of the report suggests that:

• The environment for pursuing the Education for All goals has deteriorated dramatically
• The economic slowdown has far-reaching consequences for financing of education in the poorest countries
• These countries urgently need an increase in aid to offset revenue losses, sustain social spending and help recovery
• The international response to the financial crisis has so far failed to address the most vital human development concerns
• Education for All financing gaps should be closed under an international human development recovery plan

It is recognized that action is required at many levels. Providing up-front, sustained and predictable aid to counteract revenue losses in 2008 and 2009 in order to help developing countries protect and strengthen public financing commitments are among the most urgent priorities stated in this report. Chapter 2 monitors progress on five of the six EFA goals and states three “key messages” for early childhood care and education (goal 1):

• Malnutrition, which affects around 178 million young children each year, is both a health and education emergency
• Improved access to free maternal and child health care is crucial for education as well as for public health. Eliminating user fees is an urgent priority
• Governments need to tackle inequalities in access to early childhood care, especially those based on income and parental education

ECEC – an investment in the wealth of nations

Effective early childhood care and education can give children a better chance of escaping poverty and overcoming disadvantage. Millions of children start school carrying the handicap that comes with the experience of malnutrition, ill-health and poverty. Inequitable access to pre-school programmes remains a burden in both rich and poor countries.

Education is one of the strongest antidotes to maternal and child health risks. Intergenerational lifelong learning policies that enable rapid progress in maternal health, child nutrition and survival exist, even in some of the world’s poorest countries. Linking the
health and education agendas is crucial. Other policies include scaling up maternal and child health services, aid-based health initiatives, free health care, putting nutrition at the centre of the poverty reduction agenda and large-scale social protection programmes that include child nutrition. To make such initiatives available, countries need to develop affordable and accessible health systems, allied to wider measures for targeting vulnerable groups.

ECEC programmes: While participation in pre-primary education has been steadily increasing since the Education for All goals were established in 1990, and reaffirmed in 2000, the statistics are not providing sufficient information regarding who the recipients currently are. Many governments have supported expansion of their private sector providers and this has increased the number of places for children in families that can afford it. But the gap between those most and least disadvantaged may in some cases have increased. Some 140 million children were enrolled in preschool programmes worldwide in 2007 (up from 113 million in 1999). The gross enrolment ratio (GER) climbed from 33% to 41% over the same period, with the most pronounced increases in sub-Saharan Africa, and South and West Asia. Seventeen states in sub-Saharan Africa have, however, GERs under 10%. Although GERs in developed countries are high, access and duration vary widely across and within countries. The Scandinavian countries have high rates of coverage for children under 3, while other OECD countries cover ages from 4 to 6.

A broad meeting of UN and development cooperation agencies, civil society organisations and experts met in Moscow in September 2010 to develop a framework for action and cooperation. ECEC was presented at the conference as an investment in the wealth of nations. The major challenges identified were the need to develop more holistic and integrated approaches, the need to provide more effectively for those millions of children who remain excluded through poverty, and to ‘take advantage of the knowledge base and good experiences that already exist, and to universalise these (Unpublished draft Moscow Framework, 2010).
**Early Childhood Education in Europe**

Recent trends show that the EU average of participation in early learning has risen during the past 7 years (+6% relative change). But a number of countries remain far below the benchmark. Different reasons contribute to this disparity: operational and financial constraints in increasing the supply of ECEC within the country, as well as cultural norms and pedagogical approaches.

A major barrier to further development in Europe remains associated with tendency to conflate two distinct, yet closely related ambitions;
1) to provide early education for all children
2) the desire to provide sufficient childcare facilities to maintain a high (female) attendance within the working force

Where the phrase “early childhood education” is used, this still often covers only “childcare” in its broadest sense, and rarely describes educational provisions for children below the age of 3.

Education and training have an important place in the Lisbon strategy for jobs and growth. As part of this overall strategy, the Council set out objectives for the education and training systems of the EU (e.g. the strategic framework for European cooperation in education and training (ET 2020) adopted by the Council in May 2009). Yet, of the five benchmarks adopted by the Council to be achieved by 2010, and the five to be achieved by for 2020, only one of the (CEU, 2020) benchmarks concerns early childhood education and even then the youngest children (below 4 years of age) are not included:

“...at least 95% of children between 4 years old and the age for starting compulsory primary education should participate in early childhood education”

(op cit)

Yet as Siraj-Blatchford and Woodhead (2009) have argued persuasively, even those ECEC programmes set up for vulnerable children at age 3 might be acting too late. It has been demonstrated that only a very high quality of preschool education for 3-6 year olds can compensate for children who are disadvantaged by a poor home learning environment. The implications are very clear, and research already shows that the most effective schools and preschools support parents in providing support for home learning (Sylva et al, 2010).

Studies that have looked more closely at the development of parent partnerships in early education have found that ‘at home’ learning involves both children and adults as learners. Where schemes run smoothly, this is almost always because the planning and delivery
is undertaken by professionals with a shared understanding of adult and child learning outcomes (Day et al, 2009). This provides a justification in itself for more joined up thinking in terms of lifelong learning and learning to learn.

Building on the Lisbon Council’s call for increased and improved investment in human resources, the Council Conclusions of March 2008 reiterate the need for “investing more and more effectively in human capital and creativity throughout people’s lives” as crucial conditions for Europe’s success in a globalised world (CEU 2008). Yet OECD research shows that current national investment in early childhood education is far too low, and some countries will need to double their investment in order to provide high quality services.

A higher participation in ECEC would reduce educational inequality, improve gender equality, foster economic growth and help improve the sustainability of the present-day welfare state, especially in the light of an ageing population. It would also support sustainability of social cohesion as new ethnic, language and religious groups join across the global spectrum. The Council Conclusions on migrant education (CEU, 2009a) state that comprehensive early childhood services help to integrate immigrant families improve children’s health and better prepare children for school. With one of its priorities to promote equity and active citizenship, the Communication on future cooperation in education and training for the period up to 2020 (CEU, 2009b) refers explicitly to addressing educational disadvantages through pre-primary education\textsuperscript{xii}. Following this, Member States agreed to develop co-operation at European level to promote quality and equity in this sector. ECEC provides strong foundations for children in terms of its introduction to the language of the school, cultural awareness and social harmony. Current EU policy thinking on ECEC emphasises strongly the importance of integrating “excluded”, “marginal”, “poor” and “migrant” groups. This should be more widely recognised as a major objective for sustainable development.

\textsuperscript{xii} See also “Cultural Inequalities through Early Childhood Education and Care in Europe” by the Education, Audiovisual and Culture Executive Agency (2009).
ECEC infrastructure variation

The quality of the ECEC that is offered depends upon the degree to which the educational provisions contribute to the social, emotional and cognitive development of the child. One serious problem is that there are currently no harmonised statistics relating to this. More indirect qualitative data indicate a large variation across Europe, (e.g. staff–child ratios). In most countries childcare services are subsidized, with large differences between Member States (the share that parents pay seems to vary from 8% in Sweden to as high as 80% in Poland). In most countries less affluent families obtain support for the costs of childcare.

Another important policy issue refers to the quality (in particular of staff) of childcare services. The Communication on ‘Improving competences for the 21st century: an agenda for European cooperation on schools’ (CEC, 2008) highlighted the benefits of quality provision for all, particularly for low-income and ethnic minority children in the early years. The high profile of childcare services within the European employment strategy also has an impact at the level of the Member States. Important policy concerns are raised regarding the qualification level of the childcare workforce, and quality control and maintenance. The low pay and low status of its (largely female) work force, in combination with rather low training requirements represents a key challenge regarding the ECEC infrastructure. The current situation varies considerably across Europe. In Slovakia, for example, it has been suggested that the qualifications of kindergarten teachers be raised to at least the first level of tertiary education by 2020. In Finland, the Advisory Board for the Early Childhood and Education Centres has expressed concern about the educational level of staff; currently only one in three has a bachelor’s or master’s degree. In Spain, the main policy regarding the enhancement of quality has been the inclusion of childcare services within the formal education system. In Liechtenstein the so-called Child Care Ordinance will provide a legal basis for ensuring the quality of care outside the home.

Control over the curriculum is one way for governments to influence the quality of ECEC. In England, national guidance is provided for their Early Years Foundation Stage (DfES, 2007) covering children aged 0-5 years and this are supported by assessment targets for children at age 5. In Ireland, Síolta has provided the national quality framework for ECEC. Some countries also have established formal quality inspection systems. Portugal has promoted an evaluation and monitoring organisational culture by publishing a reference manual on quality procedures. The indicators are related to working processes (leadership, planning and strategy; staff management; mobilisation of resources and partnerships; working procedures), and outcomes attained (satisfaction of customers and

Although a project is underway to attend to this and it will be interesting to see the degree to which this provides for ESD.
of personnel; impact on community/society; results of performance).

The Communication on equity and efficiency in European education and training systems (CEC, 2006) outlined the long-term benefits of investment in early childhood education, while underlining the importance of the quality of the provision. But more needs to be done before all governments recognize the potential efficiency and equity gains from investing in early childhood education and care. Public investment should be geared towards narrowing disparities, targeting marginalized groups and providing good quality services that are accessible to the poor.

“The values of society must be visible in the curriculum, but also other learning objectives that society believes the next generation should know or be skilled in. If we really believe that lifelong learning is something to strive for, there must be continuity throughout the school system regarding both curriculum objectives and pedagogic learning means”

(Doverborg and Pramling Samuelsson, 1999)

Education for Sustainable Development in Europe

According to the DG Education and Culture, education is a prerequisite for promoting the behavioural changes and providing all citizens with the key competences needed to achieve sustainable development:

“The European Strategy for Sustainable Development, adopted in 2006, recognised the important role education and training systems should play in order to achieve the objectives of sustainable development”

(DGEC, 2008)

According to this strategy success in revising unsustainable trends is seen to be, to a large extent, dependent on high-quality education for sustainable development. To fully realise the potential of education the UN Economic Commission for Europe drew up a separate Education for Sustainable Development strategy in 2005, recognising that:

<<< In most countries childcare services are subsidized, with large differences between Member States.

<<< Important policy concerns are raised regarding the qualification level of the childcare workforce, and quality control and maintenance.

<<< ... more needs to be done before all governments recognize the potential efficiency and equity gains from investing in early childhood education and care.

<<< ... education is a prerequisite for promoting the behavioural changes and providing all citizens with the key competences needed to achieve sustainable development.
Education for Sustainable Development is a lifelong process from early childhood to higher and adult education and goes beyond formal education.

... investment in human capital has been seen to be as important as investing in physical capital.

ECEC needs to be recognised as a process that can never be restricted to formal (preschool) settings.

Research shows that, in early childhood, the human brain and the biological pathways develop rapidly and set trajectories in health, learning and behaviours that last throughout life.

“Education for Sustainable Development is a lifelong process from early childhood to higher and adult education and goes beyond formal education. As values, lifestyles and attitudes are established from an early age, the role of education is of particular importance for children. Since learning takes place as we take on different roles in our lives, Education for Sustainable Development has to be considered as a “life-wide” process. It should permeate learning programmes at all levels, including vocational education, training for educators, and continuing education for professionals and decision makers.”

(UNECE, 2005)

Simultaneously, the United Nations launched the decade of Education for Sustainable Development (2005-2014), which triggered many other activities in this field. It is therefore clear that ESD has been formally included in EU policy. At least since the Austrian EU Presidency in 2004, every year (or even twice every year) an EU-wide event has been organized on ESD or Sustainable Development under the auspices of the EU Presidency. Key EU strategies and documents include:

• The EU Lisbon strategy, with heavy emphasis on education and knowledge development
• BRUSSELS DECLARATION ON EDUCATION FOR SUSTAINABLE DEVELOPMENT IN ACP STATES, Brussels, Belgium – 5 May 2006

ACP/83/012/06 Final Brussels, 5 May 2006, PAHD Dept.

• Education for Sustainable Development In the EU-Education Programmes COMENNUS; ERASMUS; LEONARDO DA VINCI & GRUNDTVIG Inventory Of the value placed on Education for Sustainable Development In the EU Education Programmes - Best-Practice-Projects for ESD In EU Supported Education Programmes (Busch 2007)
Since the publication of the EU White Paper on Education and Training in 1995, it has been clear that the major European objectives are to encourage the acquisition of new knowledge, to integrate schools more closely into industrial and civil society and to support the social integration of minority groups and achieve wider social cohesion (e.g. through language learning). Most significantly, it is clear that investment in human capital has been seen to be as important as investing in physical capital.

There is no evidence that the connection between ECEC and ESD has been made within the European context. Moreover, while there are currently a large number of EU programs facilitating the development of and exchange in different forms of education (secondary, higher, adult, lifelong learning), such as ERASMUS, COMENIUS, Leonardo da Vinci, Grundtvig, Jean Monnet, there is nothing in the field of ECEC.

Reform of the educational systems in line with the Lisbon agenda and sustainable development perspectives should not just focus on secondary education, higher education and professional education, but should include ECEC and primary education. Educational reform and innovation should start at the ground levels.

ECEC needs to be recognised as a process that can never be restricted to formal (pre-school) settings. The educational provisions for ECEC and for ESD should be recognised as intergenerational and extended beyond the formal education sector. Provisions need to be made to support ECEC in the informal and non-formal (semi-structured) settings of family, mutual assistance groups, self-help groups, church groups, as well as the day care centres, and nurseries where it is institutionalised. It would be equally mistaken to consider ESD restricted to formal education. Non-formal and informal settings are equally (and often even more) important than what is happening or can happen in so-called educational institutions. This is one other reason why ECEC and ESD may be seen to be quite ’naturally’ associated.

One effective way to bring about the cultural shift from consumerism to sustainability is to work with families and young children in their early years. Research shows that, in early...
childhood, the human brain and the biological pathways develop rapidly and set trajectories in health, learning and behaviours that last throughout life. As young children begin to construct their meanings and understandings, those around them should support the formation of attitudes, values, behaviours and habits that favour sustainable practices and develop abilities and skills that serve them to question consumerism and seek alternative lifestyles. This can be promoted through families as well as formal and non-formal early childhood education and community programmes.

Frank Vandenbroucke (1998) has observed that discussions about social democracy often fail to distinguish between the values of social democracy, the constraints confronting social democracy, and social democracy as a pragmatic political practice. Yet the interrelation between values, constraints and justified pragmatism is crucial for politics, and the three should be distinguished clearly.

The UN Decade of Education for Sustainable Development emphasises the need to develop public understanding and improve access to quality basic education. One potential way forward will be to establish more clearly the place of ESD in terms of Lifelong Learning. The eight competencies defined in the European framework for cooperation in education and training were developed following international evaluation of the key competences required for a ‘successful life and for a well functioning society’, (EU, 2010 Competence, in this context, refers to achieving ‘a higher degree of integration between the capabilities and the broader social objectives that an individual has’ (op cit). This approach demonstrates a wide recognition that educational needs can no longer be served through simply revising the body of knowledge content of the formal curriculum in modern knowledge-based economies. What is required is a much more general set of skills that prioritises the development of individuals understanding and applications of ICT, technological culture, foreign languages, entrepreneurship and social skills. It is therefore widely recognised that formal and informal educational institutions and associations should be working together in developing problem solving and learning skills of all of their students/pupils along with positive lifelong dispositions towards to learning. It is also widely recognised that ESD requires the same approach:

“...the best way to educate people about sustainable development is to help them discover what the term encompasses, what it means, and how it should affect the ways they live their lives ... By helping people to understand and engage with the concept... they will discover sustainable development for themselves and begin to apply it within their world, thus establishing a basis on which to describe it in their own words.”

(First Quadrangle, 1999)
The Five Key Areas Identified for Development

Many areas identified in the joint progress report of the Council and the Commission on the implementation of the ‘Education and Training (CE, 2010) work programme’ as in need of development are highly relevant to ESD and ECEC. These include the promotion of inquiry-based learning, creativity and innovation, and approaches that seek to impart social and civic competencies, a sense of initiative and of entrepreneurship and cultural awareness that goes beyond simply imparting knowledge. Most significantly of all to the case for developing ESD in early childhood are the report’s calls to make education and training more relevant to students and to the outside world.

From discussions of the competencies defined in the European framework for cooperation in education and training, this report identifies five key areas as priorities for development in terms of a combined initiative involving ECEC and ESD:

1. Communication in the mother tongue and in foreign languages
   Early years education should ideally be conducted in each child’s mother tongue and research suggests that any short term disadvantages that children experience as a result of their minority language tend to be short term except where these disadvantages are confounded due to disadvantages such as family poverty (Sylva et al, 2010). But it is especially important for migrant cultures and children to be able to express themselves in the dominant language community, and ESD topics can provide particularly motivating and meaningful contexts for communication between ECEC practitioners and children and their families both within and across member states. The diversity of knowledge and experience that may be provided by migrant communities should also be recognized as potentially rich resources for European sustainable development.

2. Mathematical competence and basic competences in science and technology (including ICT)
   ECEC provides a platform for problem-focused, collaborative project-based and enquiry-based learning. While mathematics, science and technology have often been assumed to be too complicated for young children, there are many documented examples that show that much depends on the educator. The priority here must be to disseminate more widely the exemplary work that is already taking place.
3. Learning to learn
Many of the current problems associated with EU policy in the area of lifelong learning are coupled with the different ways in which countries interpret the subject as relevant to different age groups. Any focus upon ECEC in this context would act as a catalyst for recognition of the needs of wider age groups in the process of supporting learning at any age. In a similar way many documents have referred to, and also made separate provisions for “formal”, “informal” and “non-formal” education. There has been a perceived need to clarify more fully where ECEC fits in. ECEC may have often ‘slipped through the cracks’ of policy making. But again ECEC may serve as a catalyst in developing a wider recognition of the need to consider education beyond its institutional contexts. Can boundaries/disconnections between different segments/sections of education be overcome by creating a more coherent holistic vision of lifelong learning within the EU?

4. Interpersonal, intercultural and social competences, civic competence
These competences overlap entirely with the objectives for social and cultural education for sustainable development. They address the common aim of equipping individuals to participate effectively in increasingly diverse social contexts, and to resolve conflict where necessary. Equally the civic competence that equips individuals to fully participate in civic life is required as much in sustainable development as in any other sphere of social activity, conflict or dialogue. From an ECEC perspective provisions for the development of greater cultural awareness and expression are closely related as it is widely recognised that it is only on the basis of understanding of one’s own ethnicity and cultural expressions that one can begin to respect the wider diversity of cultures.

5. Initiative and Entrepreneurship
Young children possess an (inherent) ability for creativity, risk taking and innovation, and they do not rule out possibilities before they have been attempted. Also young children do not recognize, nor are they restricted in their thinking, by any distinction between the world of the home and community, and that of the school. ECEC could be a driver for initiative and innovation for sustainability.
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Reference Group Members

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