

Nicola Ansell

Children, education and sustainable development in Lesotho

7.1 Introduction

Given that the concept of sustainable development is rooted in the idea of intergenerational equity, it is unsurprising that the international community has emphasised the role of children and youth in relation to achieving sustainability. Agenda 21, the programme of action which emerged from the Rio Earth Summit in 1992, contains a chapter on 'Children and youth in sustainable development' (Chapter 25). This recognises that 'children in both developing and industrialized countries are highly vulnerable to the effects of environmental degradation. They are also highly aware supporters of environmental thinking' (United Nations, 1992: paragraph 12). The chapter therefore calls for children's concerns to be incorporated into all policies for environment and development at local, regional and national levels and, in particular, for the involvement of children and youth in decision-making processes.

The education sector is generally seen as the most appropriate forum for involving children and youth in sustainable development, and initiatives to this end have been adopted in many countries. This chapter begins by examining the relationship between children and their environments, and the relevance of 'sustainable development' to children's lives. It goes on to explore the roots of Environmental Education (EE) and its transformation, in response to Agenda 21, into Education for Sustainable Development (ESD). The chapter then proceeds to an examination of the implementation of education for sustainable development into the curriculum in Lesotho, beginning with the adoption of "development studies" as a curriculum subject and moving on to explore how sustainability is being "mainstreamed" across the curriculum today.

7.2 Context

7.2.1 Children and environment

Environmental degradation has both physical and social consequences for children that differ from the effects on adults. Children have been described as 'canaries in the mines' because their bodies are more sensitive than those of adults to deteriorating environmental conditions (Stephens, 1994: 4). While it is important not to subscribe to the romanticised notion that children are closer to nature than adults (Jenks, 1996), children are both physiologically more sensitive to environmental change and also interact with their environments in ways that can put them at greater risk. Young children, for instance, explore their environments by putting things in their mouths, and older children often venture into areas that adults would choose not to frequent (Stephens, 1994). Children may thus not be protected by environmental guidelines and legislation based on the assumed 'normality' of adult experience and behaviour.

For many children in the Third World local environments are deteriorating, a situation linked to global processes of uneven development (Stephens, 1994). It is the immediate impacts on children's health that are the most prominent concerns for international agencies. Numerous diseases are spread through contaminants, to which children may be exposed due to factors over which their families have no control. Globally 1.7 billion people lack safe water and 3.3 billion lack access to

adequate sanitation (Mehrotra *et al.*, 2000). Some households are located in areas affected by domestic or industrial contamination or exposed to animal waste. It is often the poor who are compelled to live in the least healthy environments. Each year, 1.8 million children under the age of five die from diarrhoeal diseases (Bryce *et al.* 2005), most of which are acquired from contaminated food or water. The incidence of diarrhoea is, however, reduced where, as among more affluent households in northern Pakistan, there is sufficient income to afford less crowded living space, separate rooms for food preparation, houses with cement floors and screened windows, separate accommodation for animals and, in some cases, flush toilets (Halvorson, 2003). Standing water also contributes to the spread of malaria, another major childhood killer disease (Bryce *et al.* 2005).

Contaminants in food and water actually kill fewer children annually than contaminants in the air. More than two million children under five die each year from acute respiratory infections such as pneumonia (Bryce *et al.* 2005). Exposure to indoor air pollution (through the burning of coal, wood, dung or fibre residues for cooking and heating) combined with poor ventilation is particularly hazardous, but outdoor pollution also poses a very significant threat. In Sao Paulo, Brazil, strong air pollution control programmes for fixed sources of particulate matter and sulphur dioxide, and emission controls on cars, have been partly neutralised by an almost trebling of the number of cars on the roads (Ribeiro and Cardoso, 2003). There remains a correlation between levels of pollution due to sulphur dioxide and particulates and respiratory symptoms in 11-13 year old children (Ribeiro and Cardoso, 2003). In Mexico City schools are closed during January because the pollution levels at that time of year are sufficient to cause children to faint in the playgrounds at break times (Stephens, 1994).

Environmental changes affect not only children's health but also other aspects of their everyday lives. Although 'there is a sense among some researchers that it is almost a luxury to worry about the sorts of "subjective" children/environment issues foregrounded in the North' (Stephens, 1994: 7), and an inclination to focus instead on serious environmental risks to health, '[c]hildren in the South also, of course, experience more personal and subjective aspects of environmental change' (Stephens, 1994: 7). Conventional psychological models conceive of children's interactions with their physical environments as crucial to their development. While this approach neglects both the importance of children's social environments and other (non-developmental) aspects of children's environmental experiences, it exemplifies how the environment is, in many respects, central to young people's lives. Children's play, for instance, often puts them in particular and close relationships with their environments (Stephens, 1994). Satterthwaite *et al.* (1996) suggest that four aspects of children's environmental context are particularly significant: the indoor environment; immediate outdoor environment; infrastructure and service provision in the residential area; and controls over air, water, food, soil and noise pollution. It is important for children's social identities that they have adequate access to space within and outside the home, and also that such areas are as free as possible from environmental hazards (Bartlett *et al.*, 1999). Environmental conditions impact not only on children's immediate welfare, but also their future lives. Cindi Katz (1993; 1994; 1998) suggests that the level of spatial autonomy young people have traditionally exercised in rural Sudan has allowed them to develop particularly sophisticated environmental knowledges. Increasingly, however, the

environment is being commodified through the encroachment of agricultural development projects. Intensively farmed land is deteriorating in quality and young people's time is occupied in travelling longer distances to procure fuelwood and water, for sale or domestic use, as well as engaging in labour on household farms. There are few prospects of young people being able to employ their environmental knowledges in adulthood, as the environment deteriorates further, particularly given the slim likelihood of obtaining land of their own.

7.2.2 Children and sustainable development

Agenda 21 recognises not only young people's particular needs with respect to the environment, but also considers them well equipped to contribute to sustainable development. Children's vulnerability is exacerbated by the fact that, in general, they have less power than adults to argue for improvements to the environmental conditions that affect them. However, through participation in environmental projects and decision-making, young people may not only contribute to improving the immediate conditions of their lives but also acquire a long-term interest in the environment. An example is the Growing Up in Cities project (GUIC). Funded by UNESCO, GUIC was first undertaken in the 1970s and revived in the 1990s. Ten to fifteen-year-olds in poor urban neighbourhoods around the world engage in research, action and dissemination of their ideas. GUIC has five objectives: 'Gaining an understanding of children's environmental interests and needs through participatory research; applying this information to the design of programmes and activities to improve life quality for children and their communities; pressing for effective urban policies for children; organizing public events to draw attention to urban children's rights and needs; and increasing the capacity for participatory research and action among academic researchers and the staff of community-based organizations' (Griesel *et al.*, 2002: 84). Through the use of a range of children-centred methods, including drawings, stickers on maps to show good and bad places, and transect walks to identify problems (Swart Kruger and Chawla, 2002), children have demonstrated their capabilities as commentators on their environments, the ways they use them and the ways they are affected by them.

The ideas about children and sustainable development contained in Agenda 21 have been taken on board in the wider international policy environment. The WHO has recently launched a 'Healthy Environments for Children Alliance' that has identified thirteen environmental risk factors for children. It hopes to reduce disease by focusing on six priority issues: household water security, hygiene and sanitation, air pollution, disease vectors, chemical hazards, and injuries and accidents (WHO, 2002). The United Nations Conference on Human Settlements (Habitat II) in Istanbul in 1996, launched 'Child Rights and Habitat' (UNHCS/Habitat, 1996) which, alongside UNICEF's 'Child-friendly Cities' initiative, confirms the need to recognise children's particular needs in urban development and planning, as well as the contributions they might make towards human settlement development. The United Nations' 'World Programme of Action for Youth to the Year 2000 and Beyond' also incorporates environment as one of its fifteen priority areas (United Nations, 1996).

While the involvement of children and their needs in sustainable development has been taken on board in many sectors, it is generally the education sector that is seen as the most appropriate forum for involving children and youth.

7.2.3 Environmental Education (EE)

Environmental education has a long history, with its roots in Europe in the nineteenth century. It was in the 1970s that EE caught the imagination at an international level. The IUCN International Conference on Environmental Education in 1970 was followed by the UNESCO initiated UN Environmental Education Programme in 1975. Most influential, however, was the 1977 UNESCO/UNEP Inter-governmental Conference on Environmental Education. The outcome of this conference, the Tblisi Declaration (UNESCO/UNEP, 1977), enshrines twelve guiding principles which have informed most subsequent EE initiatives. The Declaration states that environmental education should:

1. consider the environment in its totality;
2. be a continuous life-long process;
3. be interdisciplinary;
4. examine major environmental issues at scales from the local to the international;
5. focus on current and potential environmental situations;
6. promote the value of local, national and international cooperation in preventing and solving environmental problems;
7. explicitly consider environmental aspects in plans for development and growth;
8. enable learners to have a role in planning their learning experiences and provide an opportunity for making decisions and accepting their consequences;
9. focus particularly on learners' own communities in early years;
10. help learners discover the symptoms and real causes of environmental problems;
11. emphasise the complexity of environmental problems and thus the need to develop critical thinking and problem-solving skills;
12. utilise diverse environments and a broad array of educational approaches to teaching, and learning about and from the environment with due stress on practical activities and first-hand experience.

Comment [W1]: are all of these points relevant to the chapter? Could they be cut down? I think it's worth keeping the entire set

The Tblisi Declaration thus breaks with conventional educational traditions in its emphasis on holistic, interdisciplinary understandings of the environment; real world relevance; diversity of modes of learning, including through participatory learning processes; an emphasis on values, attitudes, decision-making skills; and on action as the intended outcome (Gough, 2002; UNESCO/UNEP, 1977).

Historically, the 'aims of environmental education were often concerned with stimulating a sense of individual responsibility for the physical and aesthetic quality of the total environment' (Gough, 2002: 1201). The idea was that this could be achieved by providing accurate scientific information which would inevitably prompt change in values, attitudes and behaviour (Gough, 2002). Although most school-based environmental education still adopts this approach, many scholars now argue that emotional responses to the environment guide actions and opinions more than detached scientific knowledge can. Hence, one outcome of the Tblisi Declaration's emphasis on attitudes, values and actions is the view that rather than focusing exclusively on scientific or cognitive knowledges, environmental education should assist children to develop forms of environmental knowledge rooted in the affective domain (i.e. involving emotion and sensation).

Encouraging the development of affective knowledges is far from straightforward. Affective knowledge is not generally associated with formal environmental education, and is arguably more likely to develop from persistent contact with a relatively pristine environment alone or with a few others from an early age than from formal planned engagement (Hsu and Roth in Gurevitz, 2000). Furthermore, assumptions are made about the types of experience and forms of emotional attachment that arise out of engagement with environments (Gurevitz, 2000). Gurevitz suggests that these assumptions may be rooted in nostalgia. Adults concerned about the environment today often recall childhood experiences in natural environments and attribute much greater formative significance to these than to knowledge imparted through formal education. Their retrospective views may depend, however, on romanticised recollections of an idealised childhood, made to conform to the associations of children and nature that prevail in Western culture (Gurevitz, 2000). Little research has been undertaken to see how today's children value and experience environments (Gurevitz, 2000).

7.2.4. Agenda 21 and Education for Sustainable Development (ESD)

It was the 1992 United Nations Conference on Environment and Development that took existing ideas about environmental education, modified them and promoted them to a new audience. Chapter 36 of Agenda 21 declares:

'Education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues ... Both formal and non-formal education are indispensable to changing people's attitudes so that they have the capacity to assess and address their sustainable development concerns. It is also critical for achieving environmental and ethical awareness, values and attitudes, skills and behaviour consistent with sustainable development and for effective public participation in decision-making. To be effective, environment and development education should deal with the dynamics of both the physical/biological and socio-economic environment and human (which may include spiritual) development should be integrated in all disciplines, and should employ formal and non-formal methods and effective means of communication' (United Nations, 1992: paragraph 36.3)

While upholding the principles of the Tblisi conference, Agenda 21 sets out proposals to 'reorientate' educational systems of signatory states towards Education for Sustainable Development. The key distinctions between ESD and earlier environmental education are the emphasis on the needs and rights of human beings, and the global perspective (Sauve, 1996). ESD emphasises that environmental problems are fundamentally social, and related to deep-seated values, social systems and practices. Understanding of the social, economic and political character of environmental issues, is thus deemed necessary in relation to identifying appropriate action for the environment (LEESP¹, 2000; Summers and Kruger, 2003).

Agenda 21 makes clear its recommendations as to how ESD should be delivered. Environment and development concepts are expected to be integrated into all educational programmes, focusing particularly on major issues in local contexts and

¹ Lesotho Environmental Education Support Project.

'drawing on the best available scientific evidence and other appropriate sources of knowledge' (para 36.4 d). It should be integrated as a cross-cutting issue, taking a multidisciplinary approach examining socio-cultural aspects and giving respect to 'community-defined needs and diverse knowledge systems, including science, cultural and social sensitivities' (para 36.5 b). ESD, as envisaged by Agenda 21, is also participatory: 'Relevant authorities should ensure that every school is assisted in designing environmental activity work plans, with the participation of students and staff' (para 36.5 e). Moreover, it is expected that innovative teaching methods should be developed, while recognising 'appropriate traditional education systems in local communities' (para 36.5 f).

ESD is now an established part of the curriculum in most European and many Third World countries (Bonnett, 2003). In reorientating their education systems, these countries have inevitably faced a number of issues. Some of these are at a rather abstract or definitional level. Since sustainable development is itself a contested concept, so too is education for sustainable development (Summers and Kruger, 2003). Paradoxically, however, the fact that sustainable development can be understood in such diverse ways has not only enabled it to speak to many constituencies, but it also fuels 'critical reflection, discussion, contestation and evolution' (Sauve, 1996: 29). Hence rather than seeking universal consensus, the concept is employed to promote debate (Sauve, 1996). Echoing earlier debates about Environmental Education, Bonnett (2003: 680) asks: 'just what *kind* of knowledge will best illuminate, and equip us to deal with, issues of sustainability?' He calls for a critical approach: 'If we are to enable pupils to address the issues raised by sustainable development rather than to preoccupy them with what are essentially symptoms masquerading as causes ... we must engage them in those kinds of enquiry that reveal the underlying dominant motives that are in play in society' (Bonnett, 2003: 690). Effective education for sustainability is said to require education *about* the environment (information); education *in* the environment (time spent out of doors); and education *for* the environment (learning how to act effectively on issues of concern) (Chawla, 2002).

While there has been plenty of polemical writing on ESD, there has been less analysis of its implementation (Summers and Kruger, 2003). A few studies have examined the implementation of ESD in UK schools where it was introduced into the revised National Curriculum in 1999. Here, the fact that ESD has not been made to conform to the 'attainment target' driven structure of conventional subjects, combined with absence (until recently) of guidelines and limited preparation of teachers, have seriously hampered progress (Chatzifotiou, 2002; Summers and Kruger, 2003).

In a follow-up report on Agenda 21 coinciding with the Durban World Summit for Sustainable Development (WSSD) in 2002, the UN Secretary-General reiterated the importance of ESD but declared: 'Few successful working models of education programmes for sustainable development currently exist' (cited in Ministry of Education and Science, 2004: 9). The realisation that education systems have not been 'reoriented' to deliver ESD has inspired renewed attention. An international conference in Sweden in 2004 identified the obstacles to ESD as (principally) the organisation of knowledge into closely maintained disciplines; but also lack of leadership, lack of economic resources, attitudes, culture, institutions and the short-

term focus of decision-makers (Ministry of Education and Science, 2004: 57). Building on the WSSD, the United Nations proclaimed 2005-2014 the UN Decade of Education for Sustainable Development, with UNESCO as the lead agency (UNESCO, 2003). Once again, a holistic, interdisciplinary approach is called for, developing 'knowledge and skills needed for a sustainable future as well as changes in values, behaviour, and lifestyles' (UNESCO, 2003: 4). There is an emphasis on cultural appropriateness and local relevance, critical thinking, communication, collaboration, conflict management, problem solving and practical citizenship. Key themes are identified which emphasise the social, economic and political above the purely biophysical: overcoming poverty, gender equality, health promotion, environmental conservation and protection, rural transformation, human rights, intercultural understanding and peace, sustainable production and consumption, cultural diversity, and information and communication technologies (UNESCO, 2003).

7.3 Lesotho case study

The remainder of this chapter examines the implementation of ESD in Lesotho. Lesotho is a small country, about the size of Belgium, entirely surrounded by South Africa. About a third of its 2 million inhabitants dwell in the mountainous three quarters of the country, the remaining two thirds in the foothills and lowlands (see map 7.1). Since long before the notion of sustainable development gained currency, concern has been expressed about environmental degradation in Lesotho and the declining capacity of the land to sustain its population.

7.3.1 Environmental degradation and sustainable livelihoods

Soil erosion, in the form of widespread sheet and gully erosion, is commonly identified as the country's most significant environmental problem (Gay *et al.*, 1995; LEESP, 2000). It is generally attributed to removal of vegetation (deforestation); continuous single cropping; overgrazing; lack of maintenance; poorly designed roads and tracks and poor tillage practices (Schmitz and Rooyani, 1987). About a quarter of the cultivated land is said to be so eroded that it should not be cultivated; up to 0.25% of the cultivated land is lost to erosion each year, and an average of 40 tonnes of topsoil is removed annually from each hectare of farmland, amounting to a depth of 25cm over 100 years (Schmitz and Rooyani, 1987). This is a problem for both cultivation (only 9% of the country's land is arable (LEESP, 2000)) and grazing, as the biodiversity and quality of rangeland is in decline. Food production in Lesotho has been falling for 30 years (LEESP, 2000). Furthermore, Lesotho's climate inhibits successful farming: rainfall tends to be inadequate and droughts are frequent, although rainfall can be so intense that more than a tenth of the year's rain falls in one hour. Hail, too, destroys crops, and while intense heat is not uncommon in summer, frost can occur at any time of year (Gay *et al.*, 1995).

The impact of environmental degradation is felt today, as well as carrying problematic implications for future generations. In 1993 women spent an average of 90 minutes a day collecting fuel (wood, dung and crop residues) (Gill, 1994). In the mountains, where the land is less productive, the average was 3 hours. It is not only women who collect fuel, however, but also children, for both domestic and school use (Gill, 1994). As population grows, land itself becomes scarce, and few households are now allocated the traditional three fields that are deemed appropriate for household sustenance. Children are not only affected by

environmental degradation, they also play a role in its maintenance. Roughly 10% of primary school-aged boys are full-time herdboys. If the quality of the rangeland diminishes they have to move further afield to graze their livestock. They also play a crucial role in monitoring environmental quality and abiding by, or disregarding, measures taken to restrict grazing of vulnerable land.

Environmental degradation needs to be seen in a wider historico-political-economic context. Environmental decline began when the Basotho first ventured into the fragile Maluti Mountains in the nineteenth century, as colonial settlers encroached on their land to the West (Gay *et al.*, 1995). Since the late nineteenth century Lesotho has served as a labour reserve, dependent economically on the remittances of labour migrants working in South Africa's mines. It was not in South Africa's (or wider colonial) interests that Lesotho should be self-sustaining, hence it has been a net importer of foodstuffs for 70 years (LEESP, 2000). Furthermore, access to alternative livelihoods through mine employment has meant that people have felt little need to invest in conservation, as they have not been very dependent on scarce natural resources (Turner, 2001).

This points to the importance of focusing on livelihoods and their sustainability, rather than the maintenance of objective biophysical qualities. Although livelihoods in Lesotho depend less directly on the natural environment than in some countries, the land remains important for the poor. Moreover, the environment provides other livelihood resources including energy supplies, building materials, water and medicines (Turner, 2001). These assets are accessed through systems of common property ownership and management (Turner, 2001). Land tenure is particularly significant. Customary tenure (allocation to families by a village chief or land allocation committee) is frequently criticised for being insecure and hence inhibiting conservation practices such as tree planting or fencing of land, although it is quite effective in securing the livelihoods of the rural poor (Gill, 1994).

Another practice that is subject to frequent criticism is the loss of arable land to housing. However, most peri-urban areas are intensively cultivated, and are more productive than rural land. Urban dwellers grow vegetables and fruit, keep chickens and livestock, and cultivate the land around their homes in a way that makes the land less vulnerable to erosion (Gay *et al.*, 1995). Even deforestation is exaggerated. While few indigenous trees remain, through a range of tree-planting initiatives of varying success, Lesotho probably has more trees now than a century ago (Gill, 1994).

Other environmental problems receive less attention. Only forty-five percent of rural people have access to safe drinking water, and smoke from cooking fires causes respiratory diseases and eye complaints (LEESP, 2000). In urban areas aerial pollution arises from vehicles and domestic fires (LEESP, 2000). In some rapidly expanding suburbs sanitation and refuse disposal are inadequate. Furthermore, although many men still work as miners, Lesotho's largest employment sector is now an export-oriented garment industry. This brings environmental problems, notably watercourse pollution.

A number of other environmental resources play significant economic roles. Water is now exported to South Africa through the Lesotho Highlands Water Project, a

major engineering venture. Lesotho has also attempted to mine diamonds, although this proved uneconomical due to the low-yield and logistical difficulties (Gay *et al.*, 1995).

7.3.2 Environmental policies in Lesotho

Lesotho's 1993 constitution expresses a commitment to the environment: 'Lesotho shall adopt policies designed to protect and enhance the natural and cultural environment of Lesotho for the benefit of both present and future generations and shall endeavour to assure to all citizens a sound and safe environment adequate for their health and well-being' (Kingdom of Lesotho, 1993: section 36). This commitment has been addressed through a decade of initiatives. In 1994 a National Environment Secretariat was established under the Prime Minister's office, charged with coordinating a National Action Plan to implement Agenda 21. In 1996 a National Environmental Policy was introduced, with a goal 'to achieve sustainable livelihoods and development for Lesotho' (Government of Lesotho, 1996: section 2.1).

The Environment Act of 2001 has similar goals but carries considerably greater legal force, guaranteeing individuals the right to a clean and healthy environment; imposing on all citizens a duty to protect, maintain and enhance the environment and giving citizens the right to take legal action against anyone damaging the environment (Sekhamane, 2002). It also replaces the National Environment Secretariat with the semi-autonomous Lesotho Environment Authority, vested with the responsibility to implement and administer the Environment Act (Sekhamane, 2002). Most recently, the government reaffirmed its commitment to a healthy environment in a national vision statement: Vision 2020. Most of these environment-focused initiatives have envisaged a role for education.

7.3.3 Lesotho's education system

Lesotho's education system was established under British colonial influence in the late nineteenth century and, it is argued, subsequent reforms have been 'characterised more by continuities rather than discontinuities' (Muzvidziwa and Seotsanyana, 2002: unpagged; see also Ansell, 2002). The majority of schools are owned by churches: the Basotho represent their education system as a 'three-legged stool' wherein control is shared between government, churches and communities. In practice, the role of the churches is declining, the influence of communities remains slight, and many aspects of the education system are highly centralised. School curricula at primary and junior secondary levels are determined by the National Curriculum Development Centre (NCDC), although the Examinations Council of Lesotho (ECOL) assesses a narrower area of the curriculum, in practice determining what is taught in schools. The whole system remains closely constrained by the demands of High School examinations, which are still developed and administered in the UK (Ansell, 2002b). These examinations skew the content and ethos of schooling such that, beyond the basic level, it does little to address the needs of the majority of the population, especially in rural areas, and among girls in particular (Ansell, 2000; Ansell, 2002b; Ansell, 2004).

Lesotho's education system is currently undergoing review to take into account international concerns, notably Education for All, the UN Convention on the Rights of the Child, and the Millennium Development Goals, as well as Lesotho's

constitutional commitment to free and compulsory education and Vision 2020 which aims to eradicate poverty through provision of basic education for all (Ministry of Education and Training, 2004). A Free Primary Education programme, introduced in 2000, is being phased in one year at a time. This has reversed declining primary attendance such that eighty-five percent of 6-12 year-olds attend school² (Ministry of Education and Training, 2004). Drop out and repetition rates remain high, however, and only seventy percent of students completing primary education progress to secondary.

The Education Sector Strategic Plan (Ministry of Education, 2002), beyond increasing access to education, proposes changes to content and assessment. Three key 'emerging issues' are identified: mitigating the impact of HIV and AIDS (currently a major challenge for the sector), developing a 'gender responsive curriculum', and environmental education for sustainable development (Ministry of Education and Training, 2004: 8). This reflects the commitment of the National Environmental Policy: 'To impart knowledge and skills, both indigenous and non-indigenous, of how to manage environment in sustainable ways [and to] increase public awareness and understanding of the imperative of sustainable economic growth through sustained environmental protection, conservation and management': goals which were to be achieved by, among other things, 'Develop[ing] a national plan of action for carrying out environmental awareness through formal and non-formal education programmes' (Government of Lesotho, 1996: section 4.26). Further, the Education Sector Strategic Plan included provision of specialist training to teachers on EE by 2003 and a longer term intention to roll out an information campaign to school communities on environmental education (Ministry of Education, 2002). It is noteworthy that the focus of these proposals is on skills, awareness and understanding, rather than attitudes, values and action. Furthermore, the goals are future-oriented, and say little about the role of young people today. Indeed, the National Environmental Policy conceptualises children as a vulnerable group, rather than as actors in the environment, and even the 1994 National Plan of Action for Children, which includes a section on prevention of degradation of the environment, says little about children's roles as participants (Ministry of Education, 2002).

Comment [WW2]: More on indigenous knowledge below

An emphasis on development is not new to education in Lesotho. Development studies entered the secondary curriculum in the 1980s, although it is not taught in all schools, and it is perceived as an alternative to history or geography. Development studies is interesting to examine as a forerunner of ESD as, in many ways, it echoes the approach to ESC promulgated in Agenda 21. Based partly on the ideas of Patrick van Rensburg (who established the Foundation for Education with Production in 1980), the development studies syllabus stresses combining academic and practical work: 'They should not only learn about development but also participate in development' (Examinations Council Of Lesotho, 1996: unpagged). Proposed activities include school maintenance and improvement (repairs, building, tree-planting), food production (vegetable growing, pig or poultry projects) and community development work (in areas such as conservation, public health and literacy). Practical projects are intended 'to foster a spirit of self-reliance, to make students more productive, to

² The fact that many children begin school late is responsible for many of the 'missing' fifteen percent.

develop problem-solving and decision-making skills, and to illustrate social and economic concepts' (Examinations Council Of Lesotho, 1996: unpagged).

Development studies has achieved a high profile, arguably because it was introduced as a fully-fledged curriculum subject, with examinations and specialist teachers. By fitting the subject to the conventional model, however, concern with problem-solving and integrating the academic and practical is diminished. I once observed a development studies lesson in which problem-solving skills were practised in relation to the environment. Students were asked to work in groups to decide how they would deal with overgrazing, grass burning and tree felling (all common local causes of soil erosion) and to report back in the next lesson. It was emphasised that their own opinions were required. For once they were asked to engage in knowledge production. Most development studies lessons, however, involve rote learning of facts.

7.3.4 Lesotho Environmental Education Support Project (LEESP)

The Lesotho Environmental Education Support Project began as a three-year project running from August 2001-July 2004. It was set up in relation to the National Environmental Policy with a remit 'to strengthen and support the introduction and development of Environmental Education within the formal school system in Lesotho' (LEESP, 2000: 5). Focusing on curriculum development, teacher development and material development (LEESP, 2000), there were four elements to the project:

- capacity development of those involved in curriculum development, and support to issuing immediate amendments to current curriculum to enhance its EE content
- capacity development at institutional level for training teachers to implement EE
- capacity development in curriculum performance monitoring, specifically monitoring EE as a cross-cutting theme
- establishment of Model Schools to create a resource of practising and experienced teachers for diffusion of EE to other schools

LEESP was initiated and funded by the Danish Cooperation for Environment and Development (DANCED) to the tune of 13 million DKK (R10 million, further funding was provided by the Government of Lesotho). Its rationale was that 'Lesotho lacks sufficient human and material resources to design and implement Environmental Education based on a comprehensive and complete anthropocentric approach' (LEESP, 2000: 12), and no significant assistance was available from elsewhere. In particular, in existing curricula, the 'elements of environmental education are mainly based on isolated considerations of environmental degradation' (LEESP, 2000: 13) and could usefully include more social, economic and political aspects. Drawing on Denmark's experience of integrating EE into curricula, seven Danish consultants would be employed to work with subject specialists at the National Curriculum Development Centre (LEESP, 2000). There was concern, however, that the project would not simply seek to impose a Danish approach. 'Lesotho is keen to arrive at a design of Environmental Education that will be relevant, appropriate and effective for the local circumstances rather than simply taken over in complete form programmes developed for other environments' (LEESP, 2000: 13). Thus the National Environment Secretariat was given a

monitoring, guiding and advisory function, while the day-to-day implementation of LEESP was allocated to the Ministry of Education.

Despite the project's name, LEESP is inspired by the view of ESD enshrined in Agenda 21, particularly in its long-term perspective. 'The central problem focuses on increase of environmental awareness in order to improve the population's environmental behaviour and encourage local initiatives for protecting the environment. The project as such is, therefore, not directed towards solving any of Lesotho's immediate environmental problems, but the effect on the environment will be seen in the long term' (LEESP, 2000: 12). The emphasis is on finding appropriate strategies for the context and 'incorporating initiatives close to school level which usually constitute the major bottleneck for success of environmental education projects' (LEESP, 2000: 12). The project's pedagogical aim is to ensure that each learner develops the necessary 'action competencies' to manage environmental issues and support sustainable development. 'Action competency aims at building up a sustainable citizenship in each learner. Action is associated with behaviour, activities, traditions, life skills, etc. An action must be conscious, reflective and aimed. Competency is associated with a capability and willingness to a [sic] responsible participation in society, its necessary decision making and problem solving' (Rohde, 2002: 7).

In practical terms, the project included capacity building with NCDC personnel, which took the form of short courses combined with long-term on-the-job coaching (LEESP, 2000). Workshops were held for District Resource Teachers (DRTs – advisory teachers working in Lesotho's ten districts) and for staff at the Model Schools. The project adopted a whole school approach through Model Schools, rather than the more usual cascade model (training one teacher to pass training on to other teachers in the school). At the twenty Model Schools (a primary and a secondary in each district), teachers were trained in action reflection/research in order to achieve self-learning competence (LEESP, 2000). The project also involved the development of teachers' guides (LEESP, 2003) and support for the development of learners' textbooks. The Examinations Council of Lesotho (ECOL) was to be trained in ways to monitor and evaluate EE outcomes (LEESP, 2000) and, in 2004, the project was extended to cover teacher education institutions. A policy document was also released (LEESP, 2004) requiring, among other things, that all schools develop their own EE policies. Finally, regional cooperation with similar initiatives in South Africa and Namibia is being promoted through the Southern Africa Development Community regional environmental education programme (SADC-REEP, 2005).

Comment [W3]: Locations? Rural? Urban? Or rural-urban mix? This is nowhere specified – but urban/rural is not the most significant geographical distinction in Lesotho

7.3.5 Problems encountered in implementing LEESP

LEESP has not yet been fully implemented in Lesotho schools, but the initial stages are complete: NCDC officials have received training, workshops have been held with District Resource Teachers and ten staff development workshops have been conducted at each Model School. Built into the project was a research and monitoring exercise undertaken by a team of four researchers: two from the university, one from the teacher training college and one from NCDC. Members of this team attended a number of the DRT and school-based workshops. The analysis that follows draws largely on their report (Mokuku *et al.*, 2004).

One of the key challenges in the implementation of environmental education in Lesotho schools is the fact that EE, as conceived in the Tblisi Declaration and in Agenda 21, does not fit the educational paradigm that currently exists in Lesotho (Mokuku *et al.*, 2004). The role of the staff development workshops was thus not simply to introduce new material, but to effect a paradigm shift in the way in which teachers think about their role. At one level is the challenge of interdisciplinarity. In line with Tblisi, LEESP intended that EE should not be taught as an isolated subject. A distinction was, however, made between *integration* and *infusion* into the curriculum. Teachers were presented with the idea that EE could be infused into non-biophysical subjects such as languages and maths, but integrated into carrier subjects. At primary level carrier subjects would be agriculture, health and physical education, home economics, science and social studies; at secondary level, agriculture, health and physical education, home economics, sciences (physical and biological) and social sciences (geography, development studies) (LEESP, 2000). This was complicated by the fact that non-biophysical aspects such as the concept of 'democracy' would be infused into the biophysical carrier subject. Mokuku *et al.* (2004) argue that this distinction is problematic because it draws an unhelpful dualistic distinction between biophysical and non-biophysical aspects of sustainable development. Disciplinary boundaries posed considerable difficulties for teachers in secondary schools, where these are closely guarded. 'Embarking on cross-curricular or thematic teaching and learning, where subjects are used to analyse issues and provide multi-faceted understanding, requires a drastic change of the teachers' mind set' (Mokuku *et al.*, 2004: 51). EE requires teachers to work together to construct complex ideas that transcend disciplinary boundaries – one history resource teacher, for instance, had difficulty imagining how to incorporate the concept of 'biodiversity' into her subject. At primary level, where multidisciplinary teaching is more common, these difficulties were much less pronounced (Mokuku *et al.*, 2004).

A second epistemological difficulty relates to the fact that Lesotho's education system has historically focused on the transfer of imported (Western) knowledges, teachers serving as conduits and students as passive recipients (Ansell, 2002a; Ansell, 2002b; Mokuku *et al.*, 2004; Muzvidziwa and Seotsanyana, 2002). The Tblisi Declaration, and LEESP, envisage roles for both teachers and students as producers of new knowledge (LEESP, 2000). Lesotho's government has stressed the importance of indigenous knowledges in relation to the environment, and LEESP recommends that attention be given (particularly in the Sesotho curriculum) to proverbs, idioms, songs, stories, games, riddles and totems that transmit beliefs and values concerning the environment, as well as taboos and customary laws that contribute to the conservation of resources and of biodiversity (LEESP, 2003). Storytelling and oral traditions are also viewed as ways of encouraging free expression of thoughts (Mokuku *et al.*, 2004), for instance through 'storylines' that emulate traditional bed-time story-telling, and the collection of oral histories from community members (LEESP, 2003).

Both the workshops and teachers' handbooks were somewhat contradictory in the extent to which they encourage creativity. The handbooks (LEESP, 2003) repeatedly stress the role of teachers in deciding exactly what to teach and how to teach it, but the largest of three sections is devoted 'Environmental concepts and issues in the curriculum'. This presents environmental issues in a rather didactic way, which, while emphasising that they often reflect conflicting interests, does not acknowledge that

environmental knowledges are themselves contested, without unequivocally 'correct' answers. The school workshops were intended to be an empowering process, enabling teachers to create knowledge. Some teachers, however, were uncomfortable that they were not 'given information on what EE really is' (Mokuku *et al.*, 2004: 17). By contrast, other teachers felt that the workshop organisers started with fixed views of what they wanted the teachers to arrive at, and that the creative role of the participants was illusory. Beyond transforming the way teachers think about knowledge production, collaboration involving teachers is essential 'to avoid creating new alienating orthodoxies' (Mokuku *et al.*, 2004: 31).

A related difficulty lies in the way EE conceptualises children. The workshops introduced to teachers the idea that there are four levels of knowledge – action knowledge, judgement knowledge, explanation knowledge, and data knowledge. The emphasis of environmental education, they were told, was on students developing action knowledge (Mokuku *et al.*, 2004). The teachers initially found it difficult to recognise the different epistemologies underlying different teaching methods, but they began to recognise that different types of questions called for different types of knowledge, and, on this basis, became critical of examinations which failed to go beyond 'explanation knowledge' to value 'judgement knowledge' or 'action knowledge' (Mokuku *et al.*, 2004). Nonetheless, 'the teachers struggled to perceive and define learners' roles as planners but [instead saw them] as implementers of pre-determined knowledge (e.g. plans and policies)' (Mokuku *et al.*, 2004: 39). It is common practice for teachers to instruct learners to clean up their surroundings, by removing litter. For some teachers, this was an appropriate example of teaching about, in and for the environment. By contrast, at one primary school, teachers reported having consulted students to revise school's environmental education policy (Mokuku *et al.*, 2004).

A further problematic area was the conceptualisation of EE. On the whole, the workshops with District Resource Teachers were successful in getting them to engage with 'a broad view of environmental issues as concerned with competing interests, and not as merely biophysical phenomena' (Mokuku *et al.*, 2004: 22), although some retained reductionist views, or an understanding that it was simply about 'keeping the environment clean' (Mokuku *et al.*, 2004: 23). Although the notion of 'sustainable development' is highly prominent as the key concept underlying EE in all LEESP documents, in the school-based workshops, it was only introduced in the last session. Only then was emphasis placed on the interaction of biophysical, social, political and economic phenomena, and of "conflicting interests' between people as the underlying causes of environmental problems' (Mokuku *et al.*, 2004: 67)

Another problem identified by the monitoring and research team was over-optimism about EE. One resource teacher described it as 'the messiah who has come to save' (Mokuku *et al.*, 2004: 16), suggesting undue emphasis on what it can achieve. There remains a need to recognise the 'complex socio-political and structurally rooted nature of many EE problems, whose solutions lie beyond the realms of the school contexts' (Mokuku *et al.*, 2004: 17). In some workshops the potential role of EE in relation to poverty was addressed, poverty being viewed as both cause and outcome of many environmental problems in Lesotho. Participants 'grappled with what it meant to treat 'poverty' in the context of classroom teaching, and contested the possibilities and limits of learners' 'action competence' to address environmental

issues' (Mokuku *et al.*, 2004: 52). If expectations are unattainable, the result might be apathy rather than 'action competence'.

Beyond the difficulty of achieving a school level paradigm shift, LEESP has been beset by other problems. It was designed in 1997, but administrative delays and civil unrest intervened in 1998. When the project eventually began in 2001, the educational context had changed. Implementation of new primary and secondary curricula was well underway. The new curricula included elements of environmental education, and 'it was decided that initiating a new curriculum reform supported by the project, in order to fully integrate environmental education, would disturb the current curriculum implementation and waste considerable work already done on school level' (LEESP, 2000: 1).

Change is also seriously constrained by current assessment practices. Some teachers refused to put some of the ideas into practice, because they feared they would not finish their examination syllabuses (Mokuku *et al.*, 2004).³ Although the Education Sector Strategic Plan suggests a reconsideration of assessment methods, the new report books for the Free Primary Programme were introduced with quarterly test columns, conveying the assumption that schools will test their students in every subject on a quarterly basis (Mokuku *et al.*, 2004). Continuous assessment is considered more appropriate to the objectives of ESD, but ECOL is resisting its implementation in schools⁴ (Mokuku *et al.*, 2004).

In part, the education system continues to be examination-driven because of the perception of teachers that change should be initiated from above. Teachers dislike the current assessment practices and can see good reasons for change, but they view this as requiring change at the centre rather than local resistance. 'The present centralised education system is a driving force in the implementation of curriculum initiatives and tends to undermine school-based curriculum initiatives and associated school visions' (Mokuku *et al.*, 2004: 63). By contrast, there have been problems in disseminating from the Model Schools where neighbouring schools refuse to participate, even though they were aware that LEESP is a government initiative. The difficulty is sometimes rooted in conflicts between the churches that own schools (Mokuku *et al.*, 2004).

7.4 Conclusions

Across the world, young people grow up in very varied environments: from dry deserts to lush forests; high mountains to coastal plains; high rise urban estates to refugee camps. They interact with their environments at a range of scales, and through different activities: at home, in the local neighbourhood, at school and (for many) at work. The proposals for ESD set out in Agenda 21 recognise that learners are actors in their environments and it expects them to play a participatory role. Implementation of these proposals in formal education systems has been fraught with difficulties, not least due to the poor fit between conceptions of education set

³ Negotiations are taking place with ECOL to developing examination protocols that ensure that the Model Schools are not disadvantaged relative to others in relation to the impacts on learning in other subjects (LEESP, 2000).

⁴ Development Studies teachers have, in the past, sought unsuccessfully to have this assessed as a practical subject (Mokuku *et al.*, 2004).

out in Agenda 21 and the nature of currently existing education systems. One consequence of these difficulties is a tendency to focus on ESD as education for the (long term) *future* needs of society. The notion of inter-generational equity that underpins sustainable development should, however, be interpreted to incorporate concern for the immediate needs of children. If children are affected by environmental degradation today, this will have long-term consequences – and children have the longest future of any group in society (Chawla, 2002).

Education for sustainable development is geared not only to achieving a positive long-term impact on the biophysical environment; it also envisages significant changes to education itself. LEESP (2000: 29) argues that 'environmental education is an excellent carrier of efforts to achieve improved learning practice in developing countries as it cuts across all traditional subjects and hence provides the fuel for integrating more holistic and systems thinking in the curriculum.' If successful, it could have implications far beyond what is conventionally understood to be the arena of environmental concern, contributing also to social and economic justice as envisaged in the concept of sustainable development.

References

- Ansell N 2000 'Sustainability: life chances and education in southern Africa' in Redclift M (ed) *Sustainability: life chances and livelihoods* Routledge, London pp 144-157
- Ansell N 2002a 'Of course we must be equal, but ...': imagining gendered futures in two rural southern African secondary schools' *Geoforum* 33, 179-194
- Ansell N 2002b 'Secondary education reform in Lesotho and Zimbabwe and the needs of rural girls: pronouncements, policy and practice' *Comparative Education* 38(1), 91-112
- Ansell N 2004 'Secondary schooling and rural youth transitions in Lesotho and Zimbabwe' *Youth and Society* 36(2), 186-202
- Bartlett S, Hart R, Satterthwaite D, de la Barra X and Missair A 1999 *Cities for children: children's rights, poverty and urban management* Earthscan, London
- Bonnett M 2003 'Education for sustainable development: sustainability as a frame of mind' *Journal of Philosophy of Education* 37(4), 675-690
- Bryce J, Boschi-Pinto C, Shibuya K, Black RE 2005 'WHO estimates of the causes of death in children' *The Lancet* 365, 1147-52
- Chatzifotiou A 2002 'An imperfect match? The structure of the National Curriculum and education for sustainable development' *The Curriculum Journal* 13(3), 289-301
- Chawla L 2002 'Insight, creativity and thoughts on the environment': integrating children and youth into human settlement development' *Environment and Urbanization* 14(2), 11-21
- Examinations Council Of Lesotho 1996 *Regulations and syllabuses for the Junior Certificate Examination*. ECOL, Maseru, Lesotho
- Gay J, Gill D and Hall D 1995 *Lesotho's long journey: hard choices at the crossroads: a comprehensive overview of Lesotho's historical, social, economic and political development with a view to the future*. Sechaba Consultants, Maseru, Lesotho
- Gill D (ed), 1994 *The situation of children and women in Lesotho*. Sechaba Consultants for the Ministry of Planning, Economics and Manpower Development, financed by UNICEF, Maseru, Lesotho

- Ansell N (2006) 'Education and sustainable development' in Hill J, Terry A and Woodland W (eds) *Sustainable Development: National Aspirations, Local Implementation* Ashgate, Aldershot pp 115-135
- Gough A 2002 'Mutualism: a different agenda for environmental education' *International Journal of Science Education* 24(11), 1201-1215
- Government of Lesotho 1996 'Lesotho National Environmental Policy', accessed 30/01/05, http://www.ecs.co.sz/env_leg_lesothoenvpolicy.htm
- Griesel R D, Swart-Kruger J and Chawla L 2002 'Children in South Africa can make a difference': an assessment of 'Growing Up in Cities' in Johannesburg' *Childhood* 9(1), 83-100
- Gurevitz R 2000 'Affective approaches to environmental education: going beyond the imagined worlds of childhood?' *Ethics, Place and Environment* 3(3), 253-268
- Halvorson S J 2003 'A geography of children's vulnerability: gender, household resources, and water-related disease hazard in northern Pakistan' *The Professional Geographer* 55(2), 120-133
- Jenks C 1996 *Childhood* Routledge, London
- Katz C 1993 'Growing girls/closing circles: limits on the spaces of knowing in rural Sudan and United States cities' in Katz C and Monk J (eds) *Full circles: geographies of women over the life course* Routledge, London pp 88-106
- Katz C 1994 'Textures of global changes: eroding ecologies of childhood in New York and Sudan' *Childhood* 2, 103-110
- Katz C 1998 'Disintegrating developments: global economic restructuring and the eroding of ecologies of youth' in Skelton T and Valentine G (eds) *Cool places: geographies of youth cultures* Routledge, London pp 130-144
- Kingdom of Lesotho 1993 'The constitution of Lesotho' *Lesotho Government Gazette Extraordinary* 38(43) <http://www.lesotho.gov.ls/constitute/gconstitute.htm>, accessed 8th July 2005
- LEESP 2000 *Lesotho Environmental Education Support Project* LEESP, Maseru www.lea.org.ls/pdfdocs/LEES/lees.PDF accessed 8th July 2005
- LEESP 2003 *Environmental Education: a teacher's handbook for primary and secondary schools in Lesotho* Lesotho Environmental Education Support Project, Morija, Lesotho
- LEESP 2004 'Reference note or policy document for environmental education in Lesotho' resulting from a workshop held 22nd March 2004, Maseru
- Mehrotra S, Vandemoortele J and Delamonica E 2000 *Basic services for all?* UNICEF Innocenti Research Centre, Florence
- Ministry of Education 2002 *Education Sector Strategic Plan* MOET, Maseru, Lesotho
- Ministry of Education and Training 2004 'National report on the development of education: Kingdom of Lesotho' *International Conference on Education*, Geneva
- Mokuku T, Jobo M E, Raselimo M and Mathafeng T 2004 *Lesotho Environmental Education Support Project: research and monitoring report*, Maseru, Lesotho
- Muzvidziwa V N and Seotsanyana M 2002 'Continuity, change and growth: Lesotho's education system' *Radical Pedagogy* 4(2) <http://radicalpedagogy.icaap.org/> accessed 8th July 2005
- QCA D a 1999 *The National Curriculum DfEE/QCA*, London
- Ribeiro H and Cardoso M R A 2003 'Air pollution and children's health in Sao Paulo (1986-1998)' *Social Science and Medicine* 57(11) 2013-22
- Rohde K 2002 'Lesotho Environmental Education Support Project' *Our Environment* 2, 6-7
- Satterthwaite D et al. 1996 *The environment for children: understanding and acting on the environmental hazards that threaten children and their parents* Earthscan, London
- Sauve L 1996 'Environmental education and sustainable development: a further appraisal' *Canadian Journal of Environmental Education* 1, 7-35

Ansell N (2006) 'Education and sustainable development' in Hill J, Terry A and Woodland W (eds) *Sustainable Development: National Aspirations, Local Implementation* Ashgate, Aldershot pp 115-135

Schmitz G and Rooyani F 1987 *Lesotho: geology, geomorphology, soils* National University of Lesotho, Roma

Sekhamane L 2002 'Environment law: a dream come true' *Our Environment* 2, 1-4

Stephens S 1994 'Children and environment: local worlds and global connections' *Childhood* 2, 1-21

Summers M and Kruger C 2003 'Teaching sustainable development in primary schools: theory into practice' *The Curriculum Journal* 14(2), 157-180

Swart Kruger J and Chawla L 2002 'We know something someone doesn't know': children speak out on local conditions in Johannesburg' *Environment and Urbanization* 14(2), 85-96

Turner S 2001 *Livelihoods in Lesotho* CARE, Maseru, Lesotho

UNESCO 2003 *United Nations Decade of Education for Sustainable Development (January 2005 - December 2014): framework for a draft international implementation scheme* UNESCO July 2003

UNESCO/UNEP 1977 'Tbilisi Declaration', <http://www.gdrc.org/uem/ee/tbilisi.html> accessed 8th July 2005

UNHCS/Habitat 1996 *Children's rights and habitat: working towards child-friendly cities*, UNHCS/Habitat, New York

United Nations 1992 *Agenda 21, Rio Declaration and Statement of Forest Principles* United Nations, New York

United Nations 1996 *Resolution adopted by the General Assembly: World Programme of Action for Youth to the Year 2000 and Beyond* United Nations General Assembly, New York

WHO 2002 *Strategic directions for improving the health and development of children and adolescents* WHO/FCH/CAH/02.21 Department of Child and Adolescent Health and Development, World Health Organization, Geneva