

Thank you for the invitation to contribute to the deliberations of the Environmental Audit Committee in relation to “how the government is using both formal and informal learning avenues in the delivery of its sustainable development strategy”.

We write as members of the University of Bath’s Centre for Research in Education and the Environment [ [www.bath.ac.uk/cree](http://www.bath.ac.uk/cree) ], and as authors of two books on these issues which are about to be published:

Scott WAH & Gough SR (2003) *Sustainable Development and Learning: framing the issues*; London: RoutledgeFalmer

Scott WAH & Gough SR (Eds.) (2003) *Key Issues in Sustainable Development and Learning: a critical review*; London: RoutledgeFalmer

In this response we draw on these books and on recent research that we have done both in the UK and internationally. We have structured our contribution in relation to your four questions, making brief comments on each, and supporting these by reference to additional sources. Please note that Appendix 1 provides further detail and analysis in relation to Question 4.

**Question 1** *Is a lack of public engagement and understanding a real obstacle to the Government’s progress on its sustainable development agenda? Have there been any studies to show this? Please refer to practical examples where possible.*

Relevant research evidence exists relating to both British Government support for sustainable development through learning in developing countries, and the work of overseas governments and agencies themselves. In particular, in 2000 DFID commissioned research from the Field Studies Council, King’s College London and the University of Bath in order to provide advice and recommendations on the most appropriate ways by which DFID could mainstream ‘environmental education’ (the term preferred by DFID in this context) into programmes in developing countries and countries in transition. This report (Hindson *et al.*, 2001) is now available at: [http://www.dfid.gov.uk/AboutDFID/files/epd/epd\\_publications.htm](http://www.dfid.gov.uk/AboutDFID/files/epd/epd_publications.htm)

The work began from the premise that the pursuit of both educational and environmental goals can and must contribute to the wider objective of long-term social development, and the research reviewed the nature and significance of linkages between environmental education and poverty eradication. The project focused on examples from formal and non-formal education initiatives, looking at the extent, nature, effectiveness and impact of environmental education initiatives funded by donors and non-governmental (NGO) agencies throughout the world, and providing examples of how environmental education has achieved wider impacts and benefits for curriculum development and implementation. In analysing the literature, the research team identified the key institutional, legislative, policy and economic factors that might be critical to the sustainability of environmental education initiatives and some methods used to address wider opportunities and constraints. The report responded to five questions:

- What are the nature and significance of linkages between environmental education and poverty eradication in developing countries and countries in transition?
- How has environmental education achieved wider impacts and benefits upon curriculum development and implementation?
- What are the key institutional, legislative, policy and economic factors which are critical to the sustainability of environmental education initiatives?
- What lessons have been learned that are of relevance to mainstreaming environmental education in developing countries and countries in transition?
- What are the most appropriate ways by which DFID could mainstream environmental education?

We (with King's College) are currently engaged in reviewing and updating this report, and await feedback from DfID on work done so far.

**Question 2** Is there a need for a national strategy for education for sustainable development? Would additional infrastructure be required to deliver a coherent, national strategy?

We do not think that new infrastructure is necessarily needed; indeed, we think it may be counter-productive. Rather, better means of communication are needed so that learning across and between sectors will become more possible, manageable and effective. We believe that there is increasingly good educational work being done in relation to sustainable development, but that this is not strategically linked. Examples are: [i] the development of parallel unconnected life-long learning and sustainable development initiatives in some local authorities, [ii] lost opportunities due to uncertainty regarding funding mechanisms, [iii] the lack of integration between the school curriculum development and LA21 work, and [iv] the divorce of local biodiversity action planning (LBAP) processes from existing work in schools in relation to conservation and biodiversity, and from national initiatives, such as the DfES's *Growing Schools*. There is a need for integrated and integrative leadership, within and across sectors, which synthesises existing knowledge and best practice, and makes them available to ongoing initiatives. Such leadership would include the following among its priorities: commissioning research, particularly into the mainstreaming of sustainable development into learning and the actual and potential relationship between sustainable development and life-long learning; better use of existing research; long-term cross-sector strategic planning; development through education of transferable skills and flexibility; cross-sector monitoring and evaluation of educational progress in relation to sustainable development; networking of practitioners in order to examine effective practice; promotion of, and leadership contributions to international developments.

**Question 3** Are existing awareness raising Government campaigns such as 'Are you doing your bit' effective and well targeted? Have past campaigns been evaluated? How could they be improved in the future?

Whilst awareness-raising may well be useful, no one should pretend that it will be sufficient. It is tempting to suppose that all that is needed is an appropriate educational technology to contribute to the solution of environmental problems which are themselves either well understood or amenable to understanding through science. Approaches of this kind commonly depend upon a notion of environmentally responsible citizenship, so assuming, at the very least, that countries are actively run by their citizens, and that the role of 'citizen' is of more significance to people than other roles they may have (for example: 'employee', 'parent', or 'business-person') when they are making environmentally-significant choices. The 'citizen' is seen as the vector through which objective knowledge is turned into social action. In a recent paper Kollmuss and Aygeman (2002) review selected frameworks for analysing what they term 'pro-environmental behaviour'. Their findings make depressing reading. We quote here an extract at length:

"The oldest and simplest models of pro-environmental behavior were based on a linear progression of environmental knowledge leading to environmental awareness and concern (environmental attitudes), which in turn was thought to lead to pro-environmental behavior.

<i>Environmental knowledge</i> → <i>Environmental attitude</i> → <i>Pro-environmental behaviour</i>
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These rationalist models assumed that educating people about environmental issues would automatically result in more pro-environmental behavior, and have been termed (information) "deficit" models of public understanding and action by Burgess et al. (1998). These models from the early 70s were soon proven to be wrong. Research showed that in most cases, increases in knowledge and awareness did not lead to pro-environmental behavior. Yet today, most environmental NGOs still base their communication campaigns and strategies on the simplistic assumption that more

knowledge will lead to more enlightened behavior. Owens (2000) points out that even governments use this assumption, for example the UK government's 'Save it' energy conservation campaign in the mid-1970s, and the 'Are You Doing Your Bit?' campaign which was launched in 1998 to develop public understanding of sustainable development."

(Kollmuss and Aygeman, 2002, 241-248)

The reality is worse than even this would suggest (though not as bad as it could get). Firstly, it emerges plainly from Kollmuss and Aygeman's review that a clear, linear mechanism linking learning to change in a positive way remains elusive, and probably doesn't exist. Secondly, resistance to, (one might say denial of) this fact appears to be impervious to contrary evidence. So, for example, in the context of the LSDA's Learning to Last initiative, we find one highly distinguished contributor (Sir Bernard Crick) quoting another (Alison West) favourably as follows:

"In other words we should move from rhetoric to prescription and, in terms of lifelong learning, this would enable us to identify the issues that local communities will need information on and the skills they are likely to need."

(Crick, 2002, 38)

This is not to suggest that information is useless or its provision a waste of time, as both information provision and communication are important: but they are limited strategies which work only under certain circumstances. However, as Kollmuss and Aygeman's work confirms, these circumstances are not universally prevalent in relation to sustainable development. What makes the situation particularly strange is that while the view persists that something as complex as sustainable development would happen if *only* people knew enough facts about it, it is more than fifty years since *anyone* believed that the best way get a person to do something relatively simple, like buy a particular type of car, was to list its specifications. This last point, however, is also a pointer to how things could be even worse. There is a further view according to which environmental problems have scientific solutions and people should be instructed, or manipulated, into doing what is 'good' for 'them' (Ehrlich, 1968; Wilson, 1975; Goodland, 2002). In approaches of this sort there is no obvious place for education, other than that of developing skills in the elite and compliance in the mass which, in our view, would be neither sustainable, nor bring about development.

The same argument applies to approaches such as community-based social marketing which is an increasingly-cited mechanism to help people adopt particular sustainable behaviours. McKenzie-Mohr & Smith (1999, 15/83) argue that "The transition to a sustainable future will require that the vast majority of people be persuaded to adopt different lifestyles ... and that ... the cornerstone of sustainability is delivering programs that are effective in changing people's behavior". However, in social marketing people are not necessarily aware of the aims being pursued, and the range of behaviours that might be affected is narrow. This raises at least three questions: [i] How certain are we of what such different lifestyles need to be? [ii] Will changing people's behaviours in the relatively narrow ways envisaged be enough to contribute to sustainable development? [iii] What ethical issues exist around such techniques to persuade the public to live differently? Whilst there is evidence to suggest that social marketing can be effective – albeit in its self-limited scope and vision, and probably only over the short to medium term, as it stands it is essentially about doing a small number of things differently (ie, less of this; more of the other); it is *not* about doing radically different things in the way that Stephen Sterling (2001) has cogently argued. We ourselves argue that the challenge for learning in relation to sustainable development is to confront learners with competing accounts of human and environmental reality wherever complexity and uncertainty mean that it is possible for competing rationalities to yield competing versions of the truth. This, we suggest, radically revises our view of learning: from a process which acts on individuals' characteristics in order to change the world; to one which challenges individuals' views of the world as a means of influencing their characteristics and hence ways of thinking and living. It is consistent with an increasingly mainstream view. For example, in a plenary session of the US *National Council for Science and the Environment's* 3<sup>rd</sup> Annual Conference on Science, Policy and the Environment, held in Washington DC in January 2003, the Special Envoy of the Secretary General of the

United Nations on Sustainable Development, Jan Pronk, argued that education's main function should be to familiarise people with perspectives other than their own. This is a position we think that the Committee might encourage, as it is one which has usually been absent from sustainable development education approaches where authors and institutions have all too often tended to urge the acceptance of the views that they themselves advocate.

In relation to the last point raised in Question 4, there is a crucial difference between the foci of the government awareness campaigns that you mention (AIDS, drink driving, and smoking), and sustainable development. For each of the former, there is a large degree of scientific certainty that takes the issue essentially beyond dispute (for example, if you drink alcohol, your ability to drive will be impaired with the potential for serious personal and social consequences; this is not disputed; the arguments are about where to draw legal consumption limits, and how to target campaigns in relation to personal/social behaviour). With sustainable development, however, matters are often much more complex and no such absolute scientific certainty exists. Human knowledge, both of the natural environment and of human interactions with it, is imperfect and characterised by uncertainty and risk. In the face of this uncertainty and risk, people and organisations construct their interpretations of environmental reality in different ways. Thus, different groups quite legitimately (and properly) have different perspectives and take different positions *vis-à-vis* sustainable development, frequently supported by selected scientific evidence. The task for government cannot be about how to best communicate straightforward advice, and information about ways of seeking help; rather, it needs to be about how to help people find the best ways of understanding and valuing different perspectives on the issues and coming to their own views (ie learning) about what to do. This is, of course, just another way of putting Jan Pronk's point.

**Question 4** Are there existing education programmes relating to sustainable development which might be considered good practice? These might include in-house training schemes for ESD for employees and stakeholders within businesses, the civil service, and other organisations. Are there elements of successful, strategic communication programmes in other areas which could be applied to ESD? For example, from other Government awareness campaigns such as those for drink driving, AIDS and smoking.

Educational programmes that focus on sustainable development, and which might be considered 'good practice' do exist, though none is problem-free. We cite four here because they all: bring to bear the benefits of considerable but different experiences in relation to learning and sustainable development over many years, provide international coverage and focus on different constituencies of learners, and because their use is practicable:

- The UNESCO 'Teaching and learning for a sustainable future' multimedia teacher education programme; available both as a CD Rom and via the internet: [www.unesco.org/education/tlsf/](http://www.unesco.org/education/tlsf/)
- 'Biodiversity Basics', a part of the larger 'Windows on the Wild' project for conservation education developed in the United States by the World Wildlife Fund (WWF). See [www.worldwildlife.org](http://www.worldwildlife.org)
- 'Learning for sustainable development: a curriculum toolkit' produced by Forum for the Future. This focuses on higher education, and is linked to the Forum's 'Higher Education Partnership for Sustainability' (HEPS) initiative. See [www.forumforthefuture.org.uk](http://www.forumforthefuture.org.uk) and [www.heps.org.uk](http://www.heps.org.uk)
- The 'Education for Sustainable Development' (ESD) toolkit developed by Rosalyn McKeown at the University of Tennessee. This work uses the word 'education' in the wide sense, and has the international perspective envisaged by Chapter 36 of Agenda 21. The Toolkit is funded by the USA's Waste Management Research and Education Institution, and can be downloaded in its entirety from [www.esdtoolkit.org](http://www.esdtoolkit.org)

Appendix 1 provides more detail about, and a critical analysis of, each of these.

We noted earlier that none of these is perfect. The problem in all of them is that different ways of viewing the world are missing or, at least, insufficiently explicit, and none of them (in Pronk's words) set out "to familiarise people with perspectives other than their own". A glance at both the social ambitions and the pedagogies of the examples reveal that they are overwhelmingly inclined towards an egalitarian view, in which things make sense if they are fair and just. However, as Blaikie and Brookfield, (1987, 83) argue, "in all societies there will continue to be conflicts between private and collective interests, (and) between local and national priorities". A sustainable world will not only be a world of justice and collaboration because no such world is possible. For example, when the UNESCO multimedia programme says of 'sustainability' that "it will be shaped at the local level by the mosaic of cultures that surround the globe and which contribute to the decisions that each country, community, household and individual makes", it overlooks the fact that the very essence of many cultures has been formed in opposition to others, and that good decisions at the level of a country, for example, may be bad ones for particular households or individuals. Similarly, when Forum for the Future's eighth 'feature of a sustainable society' requires that: "The structures and institutions of society promote stewardship of natural resources and development of people", it is hard to see how this can be done without losers being created who are, whatever the curriculum tells them, unlikely to be pleased about it. Other than in our imagined utopias these are issues which cannot be wished, legislated, or educated away, no matter how much some might wish they could.

Of course, this is not to dismiss these examples. They make a real contribution to sustainable development through learning; but they are not complete. Whatever sustainable development ultimately looks like it will need to have room for human ingenuity and inventiveness in manipulating the environment, competition for environmental and economic assets, rule-making, rule-breaking, and the self-interest of individuals and groups. It will even need to accommodate a disillusioned (and one would hope one day small) minority who think sustainable development is a plot, a trick, or a bore; all alongside generosity, justice and equity. If we could remove complexity, uncertainty, risk and necessity from the picture, it might all be different, but we cannot. Such issues need to be raised in all educational programmes focused on/around sustainable development.

We hope that these points and the attached papers are useful; we should, of course, be pleased to discuss these points in greater detail if invited to do so.

Yours sincerely,

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## **1. Management of Learning: Issues in Curriculum Design: four examples**

Four contemporary examples of curriculum design in relation to sustainable development are now examined in the light of theoretical principles. These are:

- The UNESCO 'Teaching and learning for a sustainable future' multimedia teacher education programme
- 'Biodiversity Basics', a part of the larger 'Windows on the Wild' project for conservation education developed in the United States by the World Wildlife Fund
- 'Learning for sustainable development: a curriculum toolkit' produced by the UK-based NGO, Forum for the Future. This focuses on higher education, and is linked to the Forum's 'Higher Education Partnership for Sustainability' (HEPS) initiative
- The 'Education for Sustainable Development' (ESD) toolkit developed at the University of Tennessee. This work uses the word 'education' in the wide sense, and has the international perspective envisaged by Chapter 36 of Agenda 21.

These four examples have been chosen because they provide international coverage and focus on different constituencies of learners. All four bring to bear the benefits of considerable, but different, experiences in relation to learning and sustainable development over many years. All will be found useful by very many learners. It is not our intention in what follows to judge, or in some way rank, this work. Rather, we hope that through examining all four examples, in turn, within a similar framework it will be possible to draw useful conclusions: not about what might have been done instead, but about what might best be done next, or as well. In the following sections a brief description is provided of each example.

### **The UNESCO 'Teaching and learning for a sustainable future' multimedia teacher education programme**

The focus of this programme is teacher professional development. It is available from UNESCO free of charge, both as a CD Rom and also via the internet at [www.unesco.org/education/tlsf/](http://www.unesco.org/education/tlsf/)

The programme draws upon, and develops, previous work in this area in many countries around the world, particularly in the Asia-Pacific region and in South Africa. It takes as axiomatic that education is a potentially effective means through which society can confront its problems.

The programme is technologically and pedagogically sophisticated, and beautifully presented. It is organised into five main sections, these being: 'getting started'; 'curriculum rationale'; 'across the curriculum'; 'curriculum themes'; and, 'teaching and learning'. The belief of the authors in the power of education is quickly in evidence, since the problems which are to be confronted through education could hardly be more all-embracing. There is, we are told in 'getting started', a global crisis of a fundamentally cultural nature facing humanity as a whole. The most serious aspects of this crisis are subsequently identified as: demographic trends; poverty; pressures on the natural environment; problems of lack of democracy, human rights abuses, conflict and violence; and difficulties surrounding the very concept of development. The change mechanism which is to link education to the resolution of this suite of issues is that of influencing learners on a global scale to think in terms of, and commit themselves to, the 'common good' as they participate in society and make decisions. Education can cope with an issues of this scale because, it is noted, there are over sixty million teachers in the world.

The programme works with a 'four dimensional' model of sustainable development ( 'sustainability' is its preferred term as one might expect given the difficulties perceived with 'development'). These dimensions are the natural; the economic; the social; and the political. Each is linked to a corresponding 'value-principle', respectively: conservation; appropriate development; peace, equality and human rights; and democracy.

'Teaching and learning for a sustainable future' is explicitly self-aware of the potential limitations of multimedia-based learning, and makes good use of the available technologies of delivery in this mode. As the programme itself notes: it employs an interactive pedagogy; and it makes best use of opportunities for experiential learning, and for learning through reflection in the learner's own context. It is made clear from the outset that thinking about pedagogy and curriculum are seen to be conceptually of a piece with thinking about the human environment, and the programme holds itself strictly to the difficult challenge of maintaining within its own educative process the high standards of conduct it asks learners to adopt and promote.

Finally, the programme places emphasis on both formal and non-formal learning of an interdisciplinary nature. Eight 'interdisciplinary curriculum themes' are identified: culture and religion for a sustainable future; indigenous knowledge and sustainability; women and sustainable development; population and development; understanding world hunger; sustainable agriculture; sustainable tourism; and, sustainable communities. In each case information is provided (with detailed sources), ideas elaborated and activities for learning and teaching proposed. A range of pedagogic approaches are also presented in the 'teaching and learning strategies' section. No one could use this product without learning something, or by being impressed by its scholarship and presentation. Many teachers will use it, and their teaching will be the better for it.

### **Biodiversity Basics**

Biodiversity Basics is a segment of the World Wildlife Fund (WWF)'s 'Windows on the Wild' (WOW) education initiative which is funded by the Eastman Kodak Company. WOW aims to promote discussion, critical thinking and informed decision-making by people of all ages. It promotes partnership and interdisciplinary working, and draws on WWF's very considerable scientific expertise, as well as on its energetic and experienced education staff. Biodiversity Basics is concerned to promote both formal and non-formal learning experiences, but is principally targeted at school-age, particularly middle-school age, children. There is a 'Student Book' and an 'Educator's Guide'. These follow the same sequence, supporting each other through the introduction of a total of thirty-four activities organised around four main questions: what is biodiversity? why is biodiversity important?; what's the status of biodiversity?; and, how can we protect biodiversity? There is also a guide to help facilitate community action projects.

Like 'Teaching and learning for a sustainable future', Biodiversity Basics (and WOW as a whole), sees its approach to the environment and its approach to learning as part of a coherent whole. Guidance is provided to teachers on how to link activities into units of study which deliver both progressive and iterative learning. There is clear commentary on the ways in which the activities are designed to be accessible to learners with different learning styles, to promote questioning and problem-solving, to link to areas in the established curriculum, and to accommodate learners with different degrees of language proficiency. It is further made clear to teachers that the activities are underpinned by a range of experiential, reflective models of learning processes, and that there is an intention to encourage collaborative learning. The design of Biodiversity Basics draws on insights and experience from futures education and community-based learning. Finally, an explicit link is made to sustainable development, though, as before, it is the term sustainability which is used. On page 16 of the 'Educator's Guide' we read:

"Thinking in terms of sustainability – and finding ways to balance economic issues, social equity and ecological integrity – also requires thinking beyond our immediate needs and interests. The activities in this module encourage students to consider the

perspective of other individuals, communities and cultures, and to look forward to assess the way actions today will affect the lives of people and other species in the United States and around the globe in the future. These activities also challenge students' thinking about fairness, individual and community responsibility, and other concerns that are critical to our understanding of sustainability."

The care taken to ensure the quality of this product, both in presentation and content, is breathtaking. For example, no fewer than 81 expert reviewers were consulted and 29 educators involved in piloting.

An example of a Biodiversity Basics activity which illustrates the attempt to tackle an extremely complex curriculum issue in an innovative way is number 28, 'Dollars and Sense'. This begins by focusing on something close-at-hand, chewing gum, and asking why it costs what it does. The activity guides teachers, and provides materials for students, in exploring and understanding simple supply and demand issues (a very ambitious, but surely worthy curriculum goal in itself for this age group). The components of supply and demand are examined and, for older students, the notion of externalities is introduced in an accessible way. A link between chewing-gum production and biodiversity issues is made. Students are encouraged to establish and reflect on something small-scale and familiar (the dollar price of a pack of chewing gum) and something large-scale and remote (forest ecology). Not all the activities are this difficult, but they are all engaging, careful in the factual claims they make, and animated by equal concern for learners and for biodiversity. See [www.worldwildlife.org](http://www.worldwildlife.org)

#### **Learning for Sustainable Development: a curriculum toolkit**

As noted above, this toolkit is promoted by Forum for the Future in conjunction with its HEPS initiative. HEPS itself is a collaboration between the Forum and 18 UK Higher Education Institutions (HEIs). It receives financial support from the Higher Education Funding Councils in the UK, that is, from taxpayers.

A number of theoretical conceptualisations underpin this work. These include:

- The notion that HEIs should be thought of as having three different roles in relation to three aspects of sustainable development. Specifically, they operate as places of learning and research, as businesses, and as key community players, in each case in relation to the environment, to society, and to the economy
- A view that the 'triple bottom line' view of sustainable development as requiring simultaneous improvements in the environment, the economy and society, while useful up to a point, is over-simplistic. A more complex formulation expands these three aspects into five kinds of capital: natural; human; social; manufactured; and financial capital
- The identification of twelve criteria (linked to the five kinds of capital) which, it is claimed, would define a sustainable society. These relate to: non-renewable resource extraction; manufacture and use of artificial substances; the integrity of the ecological system; human health; learning and social skills; employment, creativity and recreation; governance and justice; positive values and social cohesion; positive (for both environment and people) institutional change; safe and supportive living and working environments; resource-use efficiency and the promotion of human innovation; and, accurate valuation of all forms of capital
- As with the preceding two examples, a concern is that to be compatible with the promotion of sustainable development, learning has to take place in a particular way. However, some of the characteristics of desirable approaches to learning identified in this case have a crisply instrumental flavour. Learning must, it is argued, be: learner-focused; 'holistic', drawing together economic, environmental and social strands; compatible both with the physical environment in which learning takes place and with



the socio-economic characteristics of learners; applicable at a range of degrees of complexity so that use can be made of a variety of teaching opportunities; and, focused on identified learning outcomes.

The toolkit itself has been developed from work done by the Forum with the University of Antofagasta in Chile. It provides a methodology which is extremely ambitious in its scope, since it is intended to contribute to the design of learning activities of all kinds, from short courses through to whole degrees. It is also recommended by the Forum for use by organisations outside the higher education sector such as businesses or government departments.

The approach using this toolkit is systematic, involving seven stages. First, a 'learner profile' is drawn up. The purpose of this is to map the world from the learner's perspective as a series of concentric circles. The 'learner' here might be characterised as a particular type of professional or graduate. Those people, and the organisations or environmental aspects or entities with which the learner interacts most strongly and/or frequently are placed near the centre. Those with which interaction is infrequent and/or weaker are placed further out. Secondly, prospective course content is identified by listing the knowledge and skills necessary to manage each identified relationship in a way that is consistent with sustainable development. The categories, 'ecological', 'social', and 'economic' are used to organise these lists, but it is stressed that the most interesting entries are likely to be those which span categories. Thirdly, the identified knowledge and skills are prioritised by awarding them quantitative scores in terms of their ability to contribute to the Forum's twelve criteria of a sustainable society. This enables, fourthly, the specification of desired learning outcomes and, fifthly, the design of delivery mechanisms. The sixth stage is a 'values audit', designed to check whether the course, as now designed, is compatible with the values of staff and students. Following this, a course guide can finally be prepared.

This approach combines and builds on both a range of academic studies and work conducted in-house by Forum for the Future. In particular, it promotes the importance of learning with a style likely to be found congenial by non-education and non-social science specialists. It recognises the significance of the contexts in which learning takes place. It is also a determined attempt to generate practical progress towards sustainable development, undaunted by difficulties of definition of terms or institutional inertia. See [www.forumforthefuture.org.uk](http://www.forumforthefuture.org.uk) and [www.heps.org.uk](http://www.heps.org.uk)

### **Education for Sustainable Development (ESD) Toolkit**

The ESD Toolkit aims to help educators operationalise the thinking on learning and sustainable development which has emerged since sustainable development was first endorsed at the UN General Assembly in 1987 and, most particularly, since the appearance of Chapter 36 of Agenda 21 following the 1992 Earth Summit in Rio de Janeiro. The author began work on the project following her participation at the 1998 Commission on Sustainable Development's review of Chapter 36. The influence of this UN policy-stream is evident throughout, most fundamentally in the identification of four 'priorities' for ESD which mirror those identified in Chapter 36. These are: improving basic education; reorienting existing education to address sustainable development; developing public understanding and awareness; and, training. Other acknowledged influences of this kind include the UN Global Conference on the Sustainable Development of Small Island Developing States (Barbados, 1993); the International Conference on Population and Development (Cairo, 1994); the World Summit for Social Development (Copenhagen, 1995); the Fourth World Conference on Women (Beijing, 1996); the Second UN Conference on Human Settlements (Istanbul, 1996); and, the World Food Summit (Rome, 1996). The Toolkit is funded by the USA's Waste Management Research and Education Institution, and can be downloaded in its entirety from [www.esdtoolkit.org](http://www.esdtoolkit.org)

Underpinning the ESD Toolkit is the notion of progress toward sustainable development through a mechanism in which community sustainable development goals on the one hand, and educational sustainable development practice on the other, develop simultaneously and interactively. That education is essential to the achievement of sustainable development is taken

to be axiomatic. Further, the concept of 'education' which informs this thinking is strongly influenced by the literature of the academic field of study which calls itself environmental education. This is significant because this field, in fact, has relatively little to say about literacy and numeracy education, training or public awareness. Conversely, it would appear likely that there are many practitioners in these fields who are working in ways which seem wholly or partly consistent with sustainable development but are unaware of the environmental education literature (see, for example, Wehrmeyer, 1996, and much of the output of Greenleaf Publishing, Sheffield). Also we should note that the notion of sustainable development itself is far from uncontroversial in the literature of environmental education (Jickling, 1992; Jickling and Spork, 1998; and Sauvé & Berryman, 2003). One aspect of the appeal to the literature of environmental education is the insistence that education should be for rather than about sustainable development, which has been a topic of interest in that field since the work of Lucas (1979). In justifying this view of education as an instrument of social policy the ESD Toolkit compares its own purposes to those of driver education or fire-safety education.

The ESD Toolkit conceptualises the relationship between sustainable development and learning in terms of subdivisions of each, set out in a grid. So, on one axis, to represent sustainable development, we find the familiar components of environment, economy and society. On the other axis, to represent learning, we have the categories of knowledge, issues, skills, perspectives, and values. A particular merit of the approach is that it is informative both for, say, a teacher who wants to focus on values education or skills training, and for an economist who wants to identify a focus for the provision of educational materials. The toolkit is also realistic enough to acknowledge that many barriers exist to the operationalisation of what it proposes, and these are classified under twelve headings, drawing on the very considerable experience of the author and her advisors over many years. The toolkit provides many practical exercises which might be used with learners in a variety of settings. These are overwhelmingly participatory in nature.

## 2. An analysis

Each of the examples makes available the fruits of hard work, experience and considerable thought in an accessible form. Each will be found valuable by practitioners. This is so even though they often use different conceptualisations of sustainable development and/or learning. We would like now to ask what can be learned from exploring themes which are common across some or all of them.

**Inter-institutional competition:** We might firstly ask, in each example, what institutions are involved. Both the UNESCO 'Teaching and learning for a sustainable future' programme, and the ESD Toolkit have a clear attachment to UN institutions and both the authority and claim to legitimacy these embody. This is particularly appropriate since both see their task as in some sense global. The UNESCO programme is globally accessible, while the ESD Toolkit appeals to a notion of 'global citizenship'. In many ways it is also true that these two curriculum innovations would tend to support each other in practice. Teachers trained through the UNESCO programme would be more likely to use the ESD Toolkit, and to use it well. However, it is important to note that the focus of the two projects is subtly different in relation to the UN institutional sponsor. The UNESCO work is a product of many years of innovative work with teachers which has set out deliberately to strongly influence institutional agenda in line with a particular literacy or group of literacies based in a particular academic tradition (See Fien, 1993). Its purpose is to shape the potential cultural institution (sustainable development) to which UNESCO is attached. The ESD Toolkit is more predominantly an attempt to promote that cultural institution in the form in which successive UN resolutions and declarations have embodied it.

The Learning for Sustainable Development/HEPS Toolkit is far more focused on UK institutions, principally Forum for the Future, HEIs, and official and semi-official bodies into whose policies the Forum would wish to embed its own preferred cultural institutions. This is, of course, in no sense a criticism. It is, after all, what institutions do.

Forum for the Future has developed the cultural institutions it seeks to promote through a different suite of literacies than those which underpin, for example, the UNESCO teacher education work. In particular, more emphasis has been given by the Forum to thinking originating in economics and in natural science: its approach to learning is more managerialist and less emancipatory (See Huckle, 1993; Kemmis and Fitzclarence, 1986; and Bowers, 1993; 1995; 2001). This is evident in:

- the different chosen target population for learning, i.e. graduates and professionals generally, rather than schoolchildren reached through schoolteachers
- the emphasis on measurable learning outcomes informed by the ‘twelve features of a sustainable society’ (a potential cultural institution), rather than a pedagogy of individual and collective self-discovery
- most fundamentally perhaps, a view of learning as instrumental to the achievement of sustainable development, rather than a view of learning as being, of itself, a vital and substantial aspect of any ongoing process of sustainable development. For the Forum, sustainable development is ultimately about what happens to five kinds of capital. For the UNESCO ‘Teaching and learning for a sustainable future’ programme it is ultimately “not so much about a destination as about the process of learning to make decisions that consider the long-term economy, ecology and equity of all communities”.

WWF is also an institution competing for resources and a hearing. It is also to some extent at least informed by literacies of education and economics. However, it is also very strongly influenced by other literacies, including those of advocacy, communication, and probably most importantly, that of conservation biology. It is not, as is UNESCO, fundamentally concerned with learning. It is not, as is Forum for the Future, fundamentally concerned with sustainable development. WWF is concerned with conservation. Whether it can work with particular educational institutions – either organisational institutions like UNESCO or cultural institutions like a curriculum – depends on how far WWF can influence these institutions to promote conservation. Further, the education section of WWF must, quite properly, account for its work on Biodiversity Basic to the sponsor, the Eastman Kodak Company. Finally, advocates of both education and sustainable development must compete for resources within WWF itself against those who advocate other, non-learning-related approaches to conservation.

It might be argued that, in relation to our over-arching topic of global sustainable development and learning these are small differences. However, the point to bear in mind is that debates about sustainable development and/or learning are not determined solely by the quality of ideas, but by the degree of success organisational institutions have in competing for resources of all kinds. One way they compete is by promoting particular ideas or ways of organising, if possible creating cultural institutions in the process; and in human affairs, as we all know, small differences between neighbours are typically far more contentious than big differences between people who have little or no point of contact with each other.

**Other institutions:** We should note here that many other institutions, both organisational and cultural, have a bearing on the success or failure of each of these initiatives. To illustrate each in turn:

- UNESCO is very dependent on the willingness of other organisations, particularly at the national level, to support it. Its influence is also a function of its relationship with the UN as a whole, and of its present relatively lowly and marginalised status within that organisation. Field (2000, 251), for example, has described it as, “a rather discredited body with a vague remit and a large and diffuse membership”. In terms of cultural institutions UNESCO promotes notions such as ‘global citizenship’ and the ‘Earth Charter’, which tend to appeal quite widely to constituencies of environmentalists and educationalists, but may cut little ice when competing for attention and resources against ‘economic growth’ and ‘national development’, to name but two other cultural institutions

- WWF is not only an internally complex institution, it fully recognises the complexity of its working context through, for example, its focus on ecoregions as a focus of conservation action. An example of an ecoregion – an ecologically coherent segment of the biosphere – is the Bering Sea. This ecoregion, like many others, spans more than one country, is home to multiple cultures, and experiences environmental impacts from itinerant industries (such as fishing and oil extraction) that are bent on resource exploitation, and driven by economic demand elsewhere
- HEIs have external responsibilities to business organisations and to Research Councils which are to a greater or lesser extent – but increasingly – mediated through market mechanisms. If a University's graduates cannot find work then new students will be less likely to come. If research grants are not won then the research effort will falter and funding for research will fall. Of course it is true that many businesses have some sort of policy relating to sustainable development, and may take account of it when recruiting staff. Similarly, research councils increasingly recognise environmental issues as a theme of research: but in both cases the relationship of sustainable development to learning may be poorly articulated, and at the margin other things are quite likely to be deemed more important. HEIs have no choice but to respond to this ordering of priorities. They must also respond to the interests of internal stakeholder organisations such as their governing councils, which may or may not place sustainable development high on their lists of priorities as far as the academic curriculum is concerned. However, the picture is more positive in relation to the management of HEIs' physical resources, where potential savings from sustainable resource procurement or energy saving measures are increasingly unlikely to be ignored, just as conforming to existing legislative frameworks in relation to pollutants will remain a priority. It is fair to say that the Learning for Sustainable Development curriculum toolkit recognises and seeks to address many of these difficulties. Note also however that well established cultural institutions such as 'academic freedom' are not necessarily helpful to the attempt to manage higher learning to the benefit of any particular policy initiative
- The ESD toolkit is dependent not only on UNESCO's developing role, but also on the willingness and ability of its host institution, the University of Tennessee, to maintain it, as well as on multiple curriculum decisions across the United States about what teachers can and should teach. To the extent that the Toolkit is intended as an international resource, this depends, for example, on the willingness and ability of teachers in other countries to work within participatory pedagogies. There is evidence (Hindson et al., 2001) to suggest that this is often not the case.

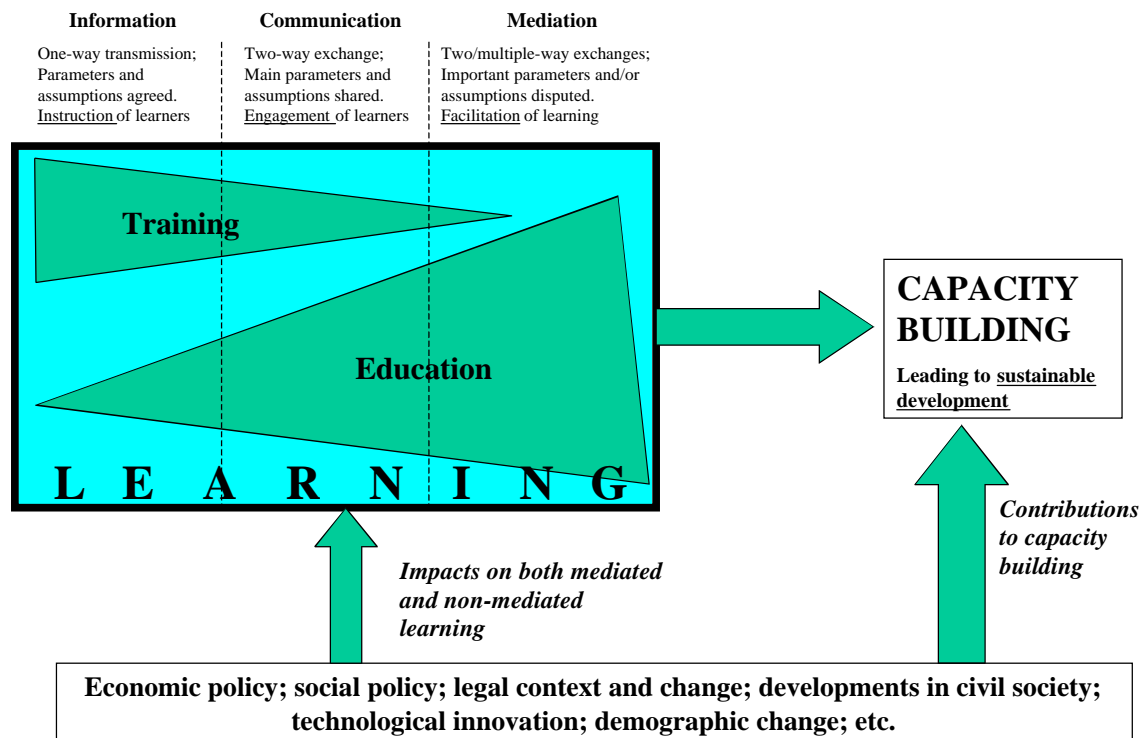
**Practices:** All these approaches to curriculum design seek to influence the practices of teachers, lecturers, and/or other professionals. We would simply wish to draw attention to the inertia which practices may have, and in particular the many factors which may bear upon both the espoused theories and the theories in action of teachers.

**Information, communication, mediation:** We argue that the question of an appropriate pedagogical approach to learning in the context of sustainable development can have no absolute answer. Rather, we suggest, an approach should be selected which matched the characteristics of the learning context.

- On the face of it, all four of our exemplar curriculum initiatives make a similar claim. The UNESCO 'Teaching and learning for a sustainable future' multimedia programme identifies the necessary role of multiple cultures in shaping sustainable development to locally-appropriate ends. Biodiversity Basics emphasises 'service learning' and 'community action'. The Forum for the Future 'Learning for Sustainable Development' curriculum toolkit begins by mapping the context of the learner, and includes a values audit to keep course development on track. The ESD Toolkit provides materials which offer choice and adaptability to teachers in different contexts. However, at least three important issues remain, which are reflected in Figure 1.

**Figure 1**

# INFORMATION, COMMUNICATION, MEDIATION: CONTRIBUTIONS TO CAPACITY BUILDING



NB. Information, communication and pedagogy do not contribute to learning or capacity building if they are false, useless to the recipient, domineering or exploitative. Some learning occurs without any deliberate third party intervention. Taken from Scott WAH & Gough SR (2003) Sustainable Development and Learning: framing the issues; London: RoutledgeFalmer

These are:

- We can ask whether elaborate (and expensive) pedagogies are always necessary. Where learners want to act sustainably, but cannot do so because they lack knowledge or skills, simple information provision will often suffice. (Note however that the converse holds equally well – simple information provision will often not suffice, since on other occasions learners may initially be indifferent, or actively disinclined towards sustainable behaviour)
- Learners do not usually learn what teachers teach. Any strategy for social change needs to take account of learning which happens incidentally and independently
- The notion of capacity building for sustainable development (Fig. 1) suggests that learners bring important knowledge, values and skills to the learning process, and that these are productively supplemented through external inputs. The question is, how far to privilege the prior knowledge of the learner, how far that of the external expert and/or educator? We note that all four of our examples set out a clear 'expert' element which is considered to be beyond the scope of negotiation. For example: the UNESCO multimedia programme sets out a number of 'global realities'; Biodiversity Basics sets out a case for the absolute importance of biodiversity, and evidence that it is being lost rapidly; the Learning for Sustainable Development curriculum toolkit ranks knowledge, and sets learning objectives, in relation to 'twelve features of a sustainable society'; and the ESD Toolkit points to '18 principles of sustainability'.

O'Riordan (1989) makes a distinction between two world views, the one conservative and nurturing, the other radical and manipulative. All four of our examples, and most others we could have chosen, exhibit predominantly the former. Cultural theory identifies four competing, but also mutually interdependent rationalities: the hierarchical; the egalitarian; the



individualistic and the fatalistic. A glance at both the social ambitions and the pedagogies of our examples reveal that they are overwhelmingly inclined towards an egalitarian view, in which things make sense if they are fair and just. In many ways this does great credit to everyone involved in their design.

However, the following passage, focusing on the environmental management of land degradation, illustrates some of the difficulties at a practical, rather than a purely conceptual level.

“A reader ideologically inclined to the left may put forward the notion that under ‘real’ socialism, even if that could be defined and agreed upon, the necessary co-operation between producers themselves, and between them and a democratic and representative state, would be easier to obtain. However, in all societies there will continue to be conflicts between private and collective interests, between local and national priorities in land use and management.”

(Blaikie and Brookfield, 1987, 83).

The problem in our examples (which we chose because they are the best available in the English language) is that other worldviews and rationalities are missing or, at least, insufficiently explicit. A sustainable world will not only be a world of justice and collaboration because no such world is possible. For example, when the UNESCO multimedia programme says of ‘sustainability’ that “it will be shaped at the local level by the mosaic of cultures that surround the globe and which contribute to the decisions that each country, community, household and individual makes”, it overlooks the fact that the very essence of many cultures has been formed in opposition to others, and that good decisions at the level of a country, for example, may be bad ones for particular households or individuals. Similarly, when Forum for the Future’s eighth ‘feature of a sustainable society’ requires that: “The structures and institutions of society promote stewardship of natural resources and development of people”, it is hard to see how this can be done without losers being created who are, whatever the curriculum tells them, unlikely to be pleased about it. Other than in our imagined Utopias (Berlin, 1990), these are issues which cannot be wished, legislated, or educated away, no matter how some might want to.

Of course, this is not to dismiss our examples. They make a real contribution to sustainable development through learning; but they are not complete. Whatever sustainable development ultimately looks like it will need to have room for human ingenuity and inventiveness in manipulating the environment, competition for environmental and economic assets, rule-making, rule-breaking, and the self-interest of individuals and groups. It will even need to accommodate a disillusioned (and one would hope one day small) minority who think sustainable development is a plot, a trick, or a bore; alongside generosity, justice and equity. If we could remove from the picture complexity, uncertainty, risk and necessity it might all be different, but we cannot. The greatest irony here is that even institutions which unequivocally advocate egalitarian values and collaborative practices have no choice but to compete among themselves and with others.

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