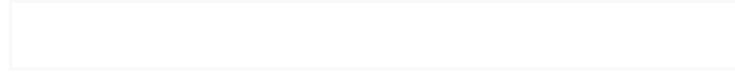


EDUCATING FOR A SUSTAINABLE FUTURE: COMMITMENTS AND PARTNERSHIPS





**Educating for a Sustainable Future:
Commitments and Partnerships**

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Published in 2004 by the
United Nations Educational,
Scientific and Cultural Organization
7, place de Fontenoy F-75352 Paris 07 SP
Typeset by Desk, F-53940 Saint-Berthevin
Printed by Policrom, Barcelona

ISBN 92-3-103935-0
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Printed in Spain

EDUCATING FOR A SUSTAINABLE FUTURE: COMMITMENTS AND PARTNERSHIPS

Proceedings of the High-Level International Conference
on Education for Sustainable Development at the
World Summit on Sustainable Development

2–3 September 2002
Johannesburg

Organized by
UNESCO and the South African Ministry of Education
in cooperation with the NGO-UNESCO Liaison Committee

Education on the more

UNESCO Publishing

PREFACE

Organized by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the South African Ministry of Education, in cooperation with the NGO-UNESCO Liaison Committee, the seminar on 'Education for a Sustainable Future: Action, Commitments and Partnerships' was a major official parallel event during the World Summit on Sustainable Development (WSSD) held in Johannesburg in 2002. The seminar focused on the lessons learnt since the World Conference on Environment and Development ten years earlier, in Rio de Janeiro in 1992. As a result, its main theme was the new paradigm of education that is emerging, its many different dimensions, and the issues we still need to work through.

The contributions to the seminar by many representatives from civil society, higher education institutions, non-governmental organizations (NGOs), private companies, other United Nations agencies, ministries of education, as well as Heads of State from several Latin American, African and Asian countries, means that these seminar proceedings will prove to be a key reference work on the nature, scope and purpose of education for sustainable development in the years to come.

Like the many thousands who attended the World Summit on Sustainable Development in Johannesburg, the 200 educationalists who attended the seminar agreed that achieving the goals of the Johannesburg Plan of Implementation requires commitment and collaboration. UNESCO is also strongly committed to collaboration with all who are

interested in educating for a sustainable future through its continuing role as Task Manager for Chapter 36 of Agenda 21 and the further responsibilities we face as we approach the United Nations Decade of Education for Sustainable Development (2005–2014).

Thus we welcome the will expressed by the participants at the seminar to work with UNESCO on new strategies and partnerships to achieve the vitally important goals of education for sustainable development. We particularly welcome the type 2 partnerships launched during the seminar; UNESCO is committed to maintaining the spirit of collaboration that underpins these initiatives.

In conclusion, UNESCO should like to thank the Minister of Education of South Africa, Kader Asmal, for co-hosting the seminar and for his contributions, which greatly enriched the debates. We would especially like to thank him and his colleagues for the enthusiasm and conviction that guide the marvellously innovative work in education for sustainable development in the Republic of South Africa.

OVERVIEW AND SUMMARY OF PROCEEDINGS

The seminar on 'Education for a Sustainable Future: Action, Commitments and Partnerships' was co-hosted by UNESCO and the Ministry of Education of the Republic of South Africa as the major educational forum at the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg. The significant political participation in the seminar drew political attention at the highest levels to the vital role of education in building a sustainable future, thus emphasizing the universal recognition that education at all levels and in all its forms is indispensable for achieving sustainable development.

The seminar also provided an opportunity for those at the summit who were interested in education to come together to pave the way for future action, including the WSSD Plan of Implementation, three type 2 partnership agreements, and the many plans and commitments to future action made by all who participated in the excitement of the Johannesburg Summit.

This overview and summary is not an exhaustive review of all the presentations and resultant issues and debates that featured at the seminar. Rather, it provides a synthesis of these in terms of, first, the political vision that emerged; second, the understandings of the roles of education for sustainable development (ESD) that were presented; and, third, the partnership initiatives that were launched.

THE POLITICAL VISION

The political vision of education for sustainable development was based upon the shared visions of the co-organizers of the seminar, the Director-General of UNESCO, Koichiro Matsuura, and the Minister of Education of South Africa, Kader Asmal. They were supported in this by the presence and substantive contributions of the heads of several international organizations, including: the Director-General of the Food and Agriculture Organization (FAO), Jacques Diouf; the Executive Director of the World Food Programme (WFP), James T. Morris; the Deputy Executive Director of the United Nations Children's Fund (UNICEF), Kul C. Gautum; and the President of the NGO-UNESCO Liaison Committee, Monique Fouilhoux. In addition, the political statements made at the seminar by the Heads of State of: Ecuador, President Noboa; Mongolia, President Bagabandi; and Venezuela and the Group of 77 countries, President Chávez, as well as by the Ministers of Education of Mexico, Scotland and Prince Edward Island in Canada, confirmed the nature, scope and direction of the new vision of education for sustainable development, which was the focus of the proceedings.

For example, the relevance of the role of education in promoting sustainability was underlined by the Director-General of UNESCO, Koichiro Matsuura, who said:

Education – in all its forms and at all levels – is not only an end in itself but is also one of the most powerful instruments we have for bringing about the changes required to achieve sustainable development.

The Director-General outlined the nature of the political vision of education when he said:

This vision of education emphasizes a holistic, interdisciplinary approach to developing the knowledge and skills needed for a sustainable future, as well as the necessary changes in values, behaviour and lifestyles. This vision requires us to reorient education systems, policies and practices in order to empower everyone – women and men, young and old – to make decisions and act in ways that are culturally appropriate and locally relevant in order to address the problems threatening our common future.

The Minister of Education of South Africa, Kader Asmal, emphasized that this new vision of education applies to both developing and

industrialized countries when he lamented the fact that, unfortunately, ‘Many national education systems that are presently deemed to be effective tend to produce individuals geared to individual enhancement and pecuniary wealth maximization.’ As a result, he warned that:

If we believe that education and learning throughout the world have neglected important areas of values and attitudes, then we must accept that education for sustainable development throws up significant challenges for developed as well as developing countries.

Minister Asmal made a plea for concerted action:

Bertolt Brecht and Karl Marx called for the unity of ‘head and hand’. Our global challenges enjoin us now to call for the unity of ‘heart, head and hand’. I believe that we need to thrust the discourse of education into a new paradigm ... But we must do this with a real and substantive engagement of the challenges, so that we can formulate concrete actions, commitments and partnerships. I say this in the full realization of the dangers of false euphoria; too often have our deliberations resulted in the addition of new terms to the existing lexicon of sustainable development. Constructing this new paradigm is not about coining new terms – seductive as they may be ... It is about action.

This call to action was echoed by President Noboa of Ecuador, who argued that international action should begin with foreign debt relief for developing countries:

It is inhuman that developing countries must spend about half their budgets on international financial obligations. The resources spent on financing the foreign debt should be made available for education and social programmes in order to ease the extreme poverty that is a major cause of environmental damage in developing countries.

The President also urged the international community ‘to abandon paternalistic visions of development’. ‘As the old Chinese proverb reminds us,’ said President Noboa, ‘instead of giving fish to those who have nothing to eat, we should teach them to fish. So despite the extremely difficult financial situation facing Latin America, education offers hope for a better future.’

President Bagabandi of Mongolia argued that:

Education at all levels – from primary school to university – is a prerequisite for sustainable development. Education is a decisive factor in building a world where people can discover and further develop their potential and lead meaningful lives. Therefore it is vital to provide free and high-quality primary education for all children.

He cited the use of distance education and access to the Internet as extremely important in Mongolia, a vast country with a considerable nomadic population:

In Mongolia, the advent of radio and television broadcasting marked a dramatic breakthrough in disseminating information to people in our vast and sparsely populated territory. Today, a similar breakthrough is occurring as we make great efforts to use satellite technologies and the Internet to meet the growing demand and need for public information. Many people in Mongolia and other developing countries would like the information and broadcasts emanating from the major developed countries to focus more on learning and education.

On behalf of the Group of 77 countries, and China, President Chávez of Venezuela said that there is no development without humanism:

Development must be human, the current model is inhuman; it disintegrates people. Development must be integral and must produce integration. We are going in the opposite sense to development.

Thus he argued that the question of dominant models of development must be reviewed. He asked:

Is the current model of development truly sustainable? If we pretend to assume this is true, we will have to make sustainable what is unsustainable. Let us not pretend to do what is impossible. Let us recognize the truth and let us react in consequence. If that model is at the origin of the world's disasters, then let us fight against it.

Unless education is harnessed to address such concerns, the President lamented the fact that:

We will pass over thirty more years without any advances. In forty years, our children will be here discussing the same topics, but the world will be sinking in poverty, collapsing in natural disasters and wars, because the world as it is going is not viable.

THE NATURE, SCOPE AND PURPOSES OF EDUCATION FOR SUSTAINABLE DEVELOPMENT

Many perspectives on the nature, scope and purposes of education for sustainable development were presented during the thematic sessions, which explored: (i) experiences, lessons and unresolved issues in education and sustainable development in the decade since the Rio Earth Summit; (ii) the importance of education for all (EFA) and sustainable rural development; (iii) the changing context for education for sustainable development; and (iv) expanding the range of actors, perspectives and pathways for education for sustainable development.

Altogether, twenty-one papers were presented on these themes. Each generated significant comment, questioning and discussion. Several common threads emerged from these presentations and discussions. This section of the seminar overview highlights these threads, as they help to establish paths for the future of education for sustainable development.

The encompassing nature of education for sustainable development

Chapter 36 of Agenda 21, on 'Education, Awareness and Training', states that:

Education, including formal education, public awareness and training, should be recognized as a process by which human beings and societies can reach their fullest potential. Education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues.

While basic education provides the underpinning for any environment and development education, the latter needs to be incorporated as an essential part of learning.

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 the 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.

This all-encompassing nature of education for sustainable development means that it needs to relate to four key audiences and purposes: (i) improving basic education; (ii) reorienting existing education provision; (iii) building understanding of, and skills for, sustainable living in the general community; and (iv) integrating sustainable development into professional and vocational education within government, business and industry. All four audiences and purposes were the focus of presentations at the seminar. Some addressed the importance of education for all and literacy, with particular emphasis on the needs of girls and women and of indigenous peoples, while others provided examples of initiatives and commitments in higher education and the world of work, and of the special contributions that the media industries can make.

Being relevant to all sectors of society and education – formal, non-formal and informal – education for sustainable development calls for the active collaboration and participation of all stakeholders. This theme is developed in one of the following sections on multi-stakeholder initiatives.

Basic education and poverty eradication

Access to basic education is a major requirement for poverty eradication. Indeed, poverty cannot be eradicated without education. Basic education addresses the four essential goals of education: learning to know, to do, to live together with others, and to be (i.e. to assume one's duties and responsibilities). It is, thus, not only the foundation for lifelong learning, but also the foundation for sustainable development.

Its goal for the pre-school and primary school-age population, whether enrolled in school or not, is to produce children who are happy with themselves and with others, who find learning exciting and develop inquiring minds, and who begin to build up a storehouse of knowledge about the world and, more importantly, an approach to seeking knowledge that they can use and develop throughout their lives. Basic education is also integral to lifelong learning, especially in increasing the level of adult literacy.

Nearly everywhere, higher levels of education – especially for girls and women – reduce the average size of families and contribute to improved family health, economic prospects, social well-being and the education of children. In addition, education helps in mobilizing minds and communities in the struggle for sustainable development.

Beyond conventional education

Education for sustainable development, whether it be in basic education, adult and community education, vocational training, colleges and universities or through the media, requires a major orientation of conventional educational goals and approaches. In place of short-term thinking, it encourages the capacity to think and plan for long-term strategic goals. In place of satisfying immediate needs, it emphasizes the ability to envision and evaluate alternative futures. In place of narrow vocationalism, it emphasizes education for active and responsible citizenship, a culture of peace, gender equality and respect for human rights. It emphasizes respect for one's body and health through population and health education, as well as respect for nature through environmental education to protect and carefully manage the natural resource base of economic and social development through conservation and sustainable consumption.

Two goals of education for sustainable development

Seen from the perspective of sustainable development, education can be understood to have two different dimensions. First, education is a fundamental human right that has its own intrinsic benefits for individuals. Second, education is a tool for introducing the values, skills and competencies needed to address the challenges of today's world. This means that education should focus on ways of resolving problems such as poverty, social and political conflicts, gender discrimination, violation of human rights, unsustainable patterns of consumption and production, environmental degradation and unsustainable use of natural resources, and the fight against HIV/AIDS and other infectious diseases, etc.

Those two goals are not mutually exclusive. It is possible to be committed to both the personal and social goals of education. Indeed, this is as it should be, and both goals should be understood as complementary and needing to be attended to simultaneously. This is the approach adopted in education for all and embedded within the six goals of the Dakar Framework for Action.

The cultural perspective

Education helps to transmit cultural values, behaviour and identities. The role of mother languages in the transmission of knowledge and in the

quality of learning is very important. This is especially so for indigenous peoples and for preserving the richness of indigenous knowledge and traditional environmental practices. Education for sustainable development thus needs to be culturally appropriate and locally relevant, with the forms it takes in different areas developing and changing to suit local and emerging priorities, issues and questions.

Education plays a second role in the cultural field, however. As well as safeguarding cultural traditions, education must also help prepare people to meet present-day challenges, and future ones, with hope and confidence. Thus to advance sustainable development, education also needs to develop the abilities necessary to determine what is best to conserve in one's cultural, economic and natural heritage, to nurture values and strategies for attaining sustainability, and to work collaboratively with others to make any changes needed to redress unsustainable patterns of living and working.

Multi-stakeholder initiatives

Thus education for sustainable development invites a review of the cultural values that are at the base of unsustainable patterns of social behaviours. It should be recognized that this is not just the responsibility of schools and teachers, but also the responsibility of all sectors of society. Thus the private sector, religious leaders, women's groups, indigenous peoples, the scientific community, non-governmental organizations (NGOs) and the media need to participate in introducing alternatives to unsustainable behaviours. All are key players in creating a culture of sustainability. To this end, multi-stakeholder initiatives are essential.

PARTNERSHIP INITIATIVES

Recognizing, therefore, that a partnership approach is necessary to achieve sustainable development, several special multi-stakeholder initiatives – including governments, international organizations, academic and scientific communities, teachers, NGOs and the media – were launched at the seminar. These included three official type 2 outcomes projects in the area of education for sustainable development:

- the International Marketing/Communications Initiative for Sustainable Development: Engaging the Advertising Industry to Help Communicate Sustainability Around the World (see Appendix I);

- the FAO/UNESCO EFA Flagship Programme on Education for Rural People (see Appendix II);
- the Global Higher Education for Sustainability Partnership (GHESP) initiative (see Appendix III).

All of these initiatives have a broad base of support and strong leadership. All three are also predicated upon specific outcomes and a time-frame, work plan and resources for achieving the outcomes.

The full text of the agreements for the three initiatives is presented in the appendices, which also include full contact details of the partners involved and ways of contacting them if readers would like further information, either to contribute in some way, or even to join one of the partnership teams.

FUTURE CHALLENGES

Despite the optimism displayed at the seminar, it was recognized that achieving sustainable development poses many difficult and complex challenges. Chief among these is achieving an understanding of the meaning of sustainable development appropriate for *educational* settings. Most significantly, sustainable development provides a framework for thinking about what sort of world we would like to live in and leave to our children's children, and what goals, values, concepts and skills are needed to build such a world.

While progress in developing ways through which education can contribute to this mission has been significant, it has been uneven. No one country displays all the possible dimensions of education for sustainable development, and no country has integrated education into all aspects of its sustainable development plan.

Thus it is necessary to find ways of:

- better integrating education for sustainable development into sustainable development policies, e.g. economic, environment and population policies, in a wider range of countries;
- better integrating education for sustainable development as a framework for education policies, especially national action plans related to EFA goals;

- developing and implementing policies, guidelines and strategic plans on education for sustainable development more widely;
- addressing issues of governance to improve coordination between ministries of education and ministries of environment, natural resources, agriculture, etc.;
- emphasizing education for sustainable development in non-formal as well as formal education;
- strengthening institutional capacity building and professional development processes for improved planning and implementation of education for sustainable development;
- increasing monitoring, evaluation and reporting of sustainable development education initiatives and their outcomes and impacts;
- increasing the attention given to the sustainability of initiatives so that policies, programmes and activities are embedded in long-term education plans and financial arrangements.

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INTRODUCTION

1. EDUCATION FOR SUSTAINABLE DEVELOPMENT: TAKING GLOBAL ACTION TO MEET GLOBAL CHALLENGES

Kader Asmal

MINISTER OF EDUCATION OF SOUTH AFRICA

It is a special privilege for me to make the opening remarks at this important event. It is also an honour for the South African Ministry of Education to co-host this seminar with UNESCO.

This planet, which we collectively inhabit, has entered a defining moment in its long history. The challenges that combine to define this moment are both complex and far-reaching. They are of a nature that demands responses that must go beyond anything that humankind has conceived in the full duration of its existence. The challenges require a marshalling of our total and collective ingenuity. And, above all, our response must rely on collective human agency if we are to cause this seemingly intractable and compelling threat to recede. This is not the time for rhetoric and self-edifying platitudes. It is a time for global action to meet global challenges!

It is extremely apt that we are gathered on the African continent, the cradle of humankind, to discuss these matters of grave concern to humankind. The site of the Sterkfontein Caves, situated just north-west of Johannesburg, is home to the oldest complete hominid skeleton, dubbed 'Littlefoot' and dated at 3.3 million years. Recently, the South African archaeologist, Chris Henshilwood, uncovered the oldest cultural artefacts yet found, dating back 70,000 years, at a seaside cave called Blombos, about two hours' drive from Cape Town. The genetic work by Allan Wilson in the 1980s also attested to the African genesis of humankind.

I am honoured therefore to welcome you – the diaspora of our common human race – back to the cradle of our common genesis. We are one. We must act as one. I say this not out of expediency, but because of one

simple truth: many of the challenges we face will be much easier to deal with if we perceive ourselves as one global race – humankind. The solutions we seek to urgent questions of poverty, inequality, economic development, ecological threats and climate change can be radically different if we perceive ourselves as one global race inhabiting one global country.

Agenda 21 and the Rio Declaration brought hope to many. Dubbed ‘the spirit of Rio’, we celebrated the linking of the environment with development into a new paradigm of sustainable development. We were all hopeful that this spirit would result in practical programmes and policies to deal with the environmental and development crises on the planet. But instead of witnessing the gains we had hoped for, we see that the threats to the environment have worsened in the decade since the Rio Summit. We also bear solemn witness to the fact that, despite growing prosperity in some countries, some 1 billion people continue to live in abject poverty. And the gap between rich and poor across countries and within countries is in fact widening.

It is profoundly sad that, while human development indices in the developed world continue to improve from an extremely high base, some 14,000 to 30,000 people die each day from water-borne diseases in developing countries. This is in addition to the multitudes that continue to succumb to other preventable diseases. The combined impact of poverty and disease has in fact dramatically reduced average life expectancy in Africa.

By asserting the integration of the economic, social and environment spheres in our understanding of sustainable development, we have indeed made a quantum leap forward. We have also reached agreement, starting with Agenda 21 and expanded in the World Summit on Sustainable Development (WSSD) process, that education is a key tool for the implementation of the sustainable development agenda. It is therefore imperative that we pose the question: Is education, particularly with regard to quality, coverage, pedagogy and its philosophical underpinnings in systems throughout the world, up to the task?

Numerous studies from across the world provide compelling evidence to attest to the contribution of education and training to economic development. No country or region has successfully developed without adequate levels of human capital. The evidence is incontrovertible. Education is therefore a key and necessary condition for alleviating both absolute and relative poverty within and between countries. However, a preoccupation with economic growth severely limits an appreciation of the full potential contribution of education to sustainable development.

Education for sustainable development is not restricted to the transmission of knowledge and skills. It should be about learning how to obtain and synthesize the knowledge that equips us, individually and collectively, to forge a sustainable coexistence with our social and ecological environments. It is about enhanced, active and purposeful human agency that is under-girded by values consistent with advancing the global public good. Bertolt Brecht and Karl Marx called for the unity of 'head and hand'. Our global challenges enjoin us now to call for the unity of 'heart, head and hand'.

I believe that we need to thrust the discourse of education into a new paradigm – an expanded paradigm. But we must do this with a real and substantive engagement of the challenges, so that we can formulate concrete actions, commitments and partnerships. I say this in the full realization of the dangers of false euphoria; too often have our deliberations resulted in the addition of new terms to the existing lexicon of sustainable development. Constructing this new paradigm is not about coining new terms – seductive as they may be. It is not about making broad normative statements. It is about giving concrete expression to the role of education in sustainable development. It is about action.

The eradication of poverty lies at the heart of sustainable development. It is therefore absolutely essential to acknowledge that underdevelopment, poverty and the shortcomings of education systems in developing countries and less developed countries (LDCs) represent a global threat.

In Africa, the severe shortcomings of our education systems place serious limits on our ability to achieve sustainable development. We must continue, unwaveringly, with our efforts to achieve the education for all targets contained in the Dakar Framework, while we build capacity in the further and higher education sectors. There is no reason for a reappraisal of these goals. However, in striving to attain them, we must ensure that we do so within the expanded paradigm of education.

The colonization of Africa has severed us from our history and our roots. Colonial education systems neglected indigenous cultures and knowledge systems in favour of a Western and colonial worldview. Not only does this alienate African learners and scholars, but it also impoverishes a curriculum that could otherwise be extremely rich. The enormous contribution of African indigenous knowledge systems will be lost to the world unless we succeed in reclaiming our history and heritage. The contributions of African philosophers, such as Ptah-hotep (c. 2400 B.C.), Zar'a Ya'aqob (seventeenth century), Anton Wilhelm Amo (eighteenth

century), Paulin Hountondji, V. Y. Mudimbe, Oyereonke Oyewumi, Kwame Anthony Appiah, Kwasi Wiredu, Lucius Outlaw and Lewis Gordon – to name but a few – to cultural universalism, cultural relativism, phenomenology and hermeneutics is not widely known or appreciated outside the continent. It is therefore in the interest of Africa and the world to ensure that we have credible and vibrant higher education institutions on the continent to facilitate knowledge production in context and to sustain the emergence and nurturing of a cadre of African intellectuals that would otherwise fail to reach critical mass.

The New Partnership for Africa's Development (NEPAD), developed by Africans for Africans and to be implemented by Africans, is an expression of our efforts to deal concretely with the challenges of the African continent. It is a programme of actions through which we will accelerate educational development on the continent and ensure its contribution to sustainable development.

An expanded education paradigm challenges us to resist the assumption that a discussion in an international seminar of this nature is only about educational development in developing countries and LDCs. We cannot deny or escape from the enormous challenges for educational development in these countries. Nor can we assume, however, that education in developed countries falls outside the scope of our discussion. Many national education systems that are presently deemed to be effective tend to produce individuals geared to individual enhancement and pecuniary wealth maximization. If we believe that education and learning throughout the world have neglected important areas of values and attitudes, then we have to accept that education for sustainable development throws up significant challenges for developed as well as developing countries.

It is clear that the future of the planet lies in its people. And improving the potential of our people relies on effective, formal, non-formal and informal education and training. I see this seminar as a platform for accelerating our efforts to promote education for sustainable development across the entire planet.

We have the solutions within our grasp. We must invoke our collective wisdom, our collective humanism. We will have to trawl the depths of our knowledge to forge the solutions that must be purposefully and urgently applied to save our global village. We need to face up to this defining moment with fortitude. We need to take concrete actions, uphold our commitments and forge a collective human agency through constructive and credible partnerships.

2. **WHY EDUCATION AND PUBLIC AWARENESS ARE INDISPENSABLE FOR A SUSTAINABLE FUTURE**

Koïchiro Matsuura

**DIRECTOR-GENERAL, UNITED NATIONS EDUCATIONAL,
SCIENTIFIC AND CULTURAL ORGANIZATION (UNESCO)**

An exciting international consensus has emerged since the 1992 Earth Summit in Rio de Janeiro: the international community now believes, very strongly, that education is central to achieving sustainable development. Achieving sustainable development is a process of learning. Just as past centuries of socialization taught us to live unsustainably – and thus created the social and environmental problems we are seeking to address at this World Summit – we now need to learn our way out, namely, to learn how to live sustainably. Sustainable development requires committed, active and knowledgeable citizens. It also requires caring and informed decision-makers who will make the right choices about the complex, interrelated issues facing human societies.

It is in this perspective that I hereby pay tribute to Minister Asmal for his initiative in proposing this parallel event and to the Government of South Africa for co-organizing it with UNESCO. In addition, I would like to applaud the many Heads of State and Heads of Government whose presence here testifies to the commitment, at the highest political level, to sustainable development and education's role within it. Your remarks will carry great weight in our debates and will serve as the starting point for our discussions. I would also like to thank the representatives of other UN agencies for coming here today, as well as the many civil society organizations who are key partners in efforts to promote education for sustainable development. In this regard, I would like to express my appreciation to the NGO-UNESCO Liaison Committee for its cooperation in the organizing of this symposium.

To achieve all our goals will require the broader process of social change known as *social learning*. This involves not only specific education and training programmes but also the use of policy and legislation as opportunities for teaching and encouraging new forms of personal, community and corporate behaviour. Social learning also involves reflection, often stimulated by religious leaders and the media, on the appropriateness of the mental models and assumptions that have traditionally guided our thinking and behaviour.

From such processes of social learning, over the decade since the Rio Earth Summit, we have learned four key lessons about sustainable development. First, we know that sustainable development is a catalytic vision for social change rather than a neatly defined, technical concept. Second, we know that sustainable development is a *moral precept* as well as a *scientific concept*. It is linked as much with notions of peace, human rights and fairness as it is with theories of ecology or global warming. Third, while sustainable development certainly involves the natural sciences, economics and policy-making, it is primarily a matter of culture: it is concerned with the values people cherish and the ways in which we perceive our relationship with others and with the natural world.

Finally, we have learnt that sustainable development requires us to acknowledge the interdependent relationship between human needs and the natural environment, which means that no single development or environmental objective should be pursued to the detriment of others. Thus the environment cannot be protected in ways that leave half of humanity in poverty. Similarly, there can be no long-term development on a depleted planet. The eradication of poverty and its attendant tragedies, and finding ways of leaving Planet Earth in a sustainable condition for our children and grandchildren, are the key goals of this summit.

Linking social, economic and environmental concerns in this way is the central tenet of sustainable development. Creating such links demands a deeper, more ambitious way of thinking about education than perhaps we are used to. It requires all those involved in education – teachers, teacher educators, curriculum developers, education policy-makers and authors of educational materials – to promote a system of ethics and values that is sensitive to cultural identity, multicultural dialogue, democratic decision-making and the appropriate use and management of natural resources.

Governments recognized the critical importance of education for promoting sustainable development a decade ago at the Rio Earth Summit

and in Agenda 21, the action plan agreed to by all governments at the Earth Summit. Chapter 36 of Agenda 21, on 'Education, Awareness and Training', states that: 'Education is 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.'

Following the Rio Earth Summit, UNESCO was designated as its Task Manager for Chapter 36. Since Rio, it has been the role of UNESCO to mobilize the various actors concerned with implementing Chapter 36, and to facilitate new initiatives and partnerships primarily through a wide-ranging work programme approved by the United Nations Commission on Sustainable Development.

Educating for a sustainable future is a formidable challenge. How can we better understand the complexity of the world around us? How are the problems of our world interconnected, and what does that imply for their solution? What kind of world do we want for the future, within the limits of our Earth's life-support systems? How can we reconcile the requirements of economy, society and the environment?

Such questions, of course, are not new and, in its capacity as the specialized agency for education within the United Nations system, UNESCO has addressed them over a period of many years. However, as Task Manager for Chapter 36 of Agenda 21, UNESCO has been grappling with these questions with renewed vigour.

The new vision of education for a sustainable future places education at the heart of the quest to solve the problems threatening our future. Education – in all its forms and at all levels – is not only an end in itself but is also one of the most powerful instruments we have for bringing about the changes required to achieve sustainable development.

In this new vision of education, it is the role of educators to help learners better understand the world in which they live and to help them know how to address the complex, interconnected problems that threaten our common future. This vision of education emphasizes a holistic, interdisciplinary approach to developing the knowledge and skills needed for a sustainable future, as well as the necessary changes in values, behaviour and lifestyles. This vision requires us to reorient education systems, policies and practices in order to empower everyone – women and men, young and old – to make decisions and act in ways that are culturally appropriate and locally relevant in order to address the problems threatening our common future.

In fulfilling its role as Task Manager for Chapter 36 of Agenda 21, UNESCO has been a catalyst for clarifying the key ideas and guiding principles associated with this new vision of education. We have facilitated the sharing of innovations between countries by convening international conferences and regional workshops, by developing demonstration projects and sample curriculum and training materials, and by utilizing our Associated Schools Network to promote the principles of peace, human rights, equity and conservation.

UNESCO is also the coordinator and catalyst of the international drive for education for all (EFA). The Framework for Action agreed at the World Education Forum in Dakar, Senegal, in April 2000 states that education is 'the key to sustainable development and peace and stability within and among countries'. The EFA agenda has many dimensions, including the preparation of national education plans linked to development strategies and anti-poverty programmes, capacity building in the areas of early childhood, primary and science education, and enhancing all aspects of the quality of basic education.

UNESCO has also developed partnerships with many UN agencies, as the following examples illustrate: with the United Nations Population Fund (UNFPA), the World Health Organization (WHO), the UN Environment Programme (UNEP) and the International Labour Organization (ILO) to promote population education; with WHO to develop new approaches to health education; with the Food and Agriculture Organization (FAO) to advance education in rural areas and to promote food security; with WHO and UNAIDS to combat the HIV/AIDS pandemic; and with UNEP for the creation of an international communication and information platform on sustainable consumption for youth.

The challenge of sustainable development is a difficult and complex one, requiring new partnerships – among governments, academic and scientific communities, teachers, non-governmental organizations (NGOs), local communities and the media. All are essential to the birth of a culture of sustainability.

Within governments, for example, education for sustainability is of direct concern not only to ministries of education but also to ministries of health, environment, natural resources, planning, agriculture, finance and others. New policies, programmes, resources and activities can be reported from almost every country.

The role and importance of major civil society groups have also increased significantly since Rio. The NGO-UNESCO Liaison Committee,

representing about 350 professional NGOs, notably in the field of education, set up a special commission to mobilize its members in support of the World Summit in Johannesburg.

The major regional and international associations of higher education, including the International Association of Universities, have joined with UNESCO to form a Global Higher Education for Sustainability Partnership. Several UNESCO Chairs have been established around the globe to devote themselves to issues of sustainable development within the UNITWIN-UNESCO Chairs Programme.

I am happy to report that we will be consolidating the fruits of many of these initiatives through new partnerships that will be launched at this symposium. With the Government of South Africa, we will be launching the South African version of *Teaching and Learning for a Sustainable Future*, UNESCO's new multimedia teacher education programme. This version, which has attracted interest from other countries in the region, is the first of many adaptations and translations of this innovative programme. With Education International, we will launch a Dissemination and Training Toolbox that will rapidly expand the adoption of the programme by members of the world's teachers unions.

We will also be launching three partnerships to promote education for a sustainable future. These are: a partnership with FAO to advance education for rural transformation and food security; a partnership with J. Walter Thompson Worldwide and the Government of Canada to utilize the skills and resources of the advertising industry to take the messages of sustainable development to the people of the world; and the Global Higher Education for Sustainability Partnership with the International Association of Universities, the European University Association (formerly CRE) and University Leaders for a Sustainable Future.

These are exciting new developments, which, in their different ways, converge around the same essential message: education and public awareness are indispensable for a sustainable future. UNESCO will continue to do all it can to promote this vital agenda.

PART I

**EDUCATION FOR SUSTAINABLE
DEVELOPMENT**

3.

THE SUSTAINABILITY OF EDUCATION: A PREREQUISITE FOR SUSTAINABLE HUMAN DEVELOPMENT

Paul Cappon

**DIRECTOR-GENERAL, COUNCIL OF MINISTERS OF EDUCATION, CANADA
CHAIRPERSON, STATE OF THE WORLD FORUM'S POLICY ACTION GROUP
ON LEARNING (PAGL)
COMMISSIONER OF THE PAGL COMMISSION ON GLOBALIZATION**

The World Summit for Sustainable Development has brought together experts from all walks of life and every corner of the planet. It is especially apt for UNESCO to play such a key role in highlighting that the stewardship of our biosphere and sustainable human development involves more than political, scientific and economic discourse. The very heart of UNESCO's mandate of building peace in the minds of humanity requires that we recognize the human challenges and opportunities of sustainable development and also recognize the degree of symbiosis or interconnection among all factors and elements.

'Action, Commitments and Partnerships' – I should like to explain what these three concepts mean to me within the context of education for sustainable development. I should also like to share some thoughts about the future of humanity's learning systems and the recognition that the promise of sustainable development may lie in the extent to which education and learning systems worldwide are in themselves shaped to be both relevant and sustainable. As UNESCO asserted in 1997, education is:

the means for ... bringing about desired changes in behaviours, values and lifestyles, and for promoting public support for the continuing and fundamental changes that will be required if humanity is to alter its course ... Education, in short, is humanity's best hope and most effective means in the quest to achieve sustainable human development.

I was invited to the seminar in two capacities; first, as the Director-General of the Council of Ministers of Education of Canada; and, second, as the Chairperson of the State of the World Forum's Policy Action Group on Learning. In both instances, my work involves coordinating and mobilizing action, commitments and partnerships. At the Council of Ministers, I assist Canada's thirteen ministers of education in doing so. The State of the World Forum's Commission on Globalization seeks to give meaning to the Forum's credo of 'transforming conversations that matter into actions that make a difference'.

The seminar is privileged to hear the views of a wide variety of world experts in the many interrelated aspects of education for sustainable development. There have been many successes, but also many setbacks. I am a physician by training and not a specialist in education for sustainable development. Nor shall I list all the numerous Canadian achievements in this field, although I should like to highlight the very special contribution of Charles Hopkins of Canada's York University, who holds the UNESCO Chair on Reorienting Teacher Education to Address Sustainability.

Education and public awareness are indispensable elements of a sustainable future. We cannot presume to foster true peace, and the sound stewardship of our biosphere through sustainable development, if we do not make every effort to ensure that all of humanity is afforded access to an education, and to learning throughout all life's stages, founded in the spirit of the four pillars set out in the Delors Report – learning to know, learning to do, learning to live together and learning to be. It is through learning grounded in these four principles that we can ensure that all citizens of our world recognize that 'learning to live together' also implies learning to respect and value the environment that sustains us each day of our lives. Yet the processes of formal and informal learning in themselves are confronted by innumerable new and continuing challenges, as well as by the broad overall challenge of fostering a sense of the centrality of sustainability itself.

Far too often we consider sustainability as only an environmental issue. In fact, sustainable human development is the interrelationship of the stewardship of our biosphere, the crafting of an economic paradigm that conserves the planet's resources, and systems of human well-being where harmony with nature and harmony with each other are paramount concerns. Necessarily, we must recognize that such conditions cannot come to pass in the absence of our ensuring their transmission through

all of our formal and informal learning and education systems. We are challenged to envision systems of learning and education that enable people to know what to aim for and to think through the consequences of their behaviours and actions.

When we speak of species at risk, we think of life whose continuation is placed at risk due to either natural or human-induced factors. When we speak of sustainable development, we envisage a paradigm wherein ethical human development is respectful of both humanity itself and the environment. I would ask us to reflect on whether we might wish to draw some loose parallels with our education systems worldwide.

Our education systems – formal and informal learning systems alike – in themselves must be sustained and nurtured if there is to be any hope for us to attain the goals set out at the Millennium Summit. Furthermore, we cannot seriously consider sustainable human development without reflecting on the hard realities that face learning in general in the new century, and on the sobering witness of the millions of people – young and old, in the North and in the South, men and women – who have no access to any education, let alone one grounded on the four pillars and promoting a humanistic sense of sustainability.

What this means for me is that a quality education is indeed a prerequisite for the achievement of sustainable human development. Therefore sustainable human development would be incomplete – in fact, unsustainable – in the absence of a quality education for all.

The themes of our dialogue – ‘Action, Commitments and Partnerships’ – are those that are crucial not only for the promotion of education for sustainable development, but also for the sustainability of our learning systems themselves. As we move more and more towards a knowledge society, the ways we learn and the ways we educate will necessarily change and will result in the need for new partnerships and new commitments. Old ways will be transformed. We will need to craft new ones and – in the spirit of the diversity of humanity – respectful and sensitive ways of mobilizing humanity’s resources to make the promise of education for all a reality.

In my home Canadian province of Quebec, for example, a new partnership bringing together civil society, business, labour, educational administrators, educators, parents and students has resulted in the establishment of a network of over 600 schools committed to shaping an education system guided by the principles of the Brundtland Report. These Brundtland Green Schools, which represent about a third of all of

Quebec's schools, constitute a unique new way of partnering and empowering of all. Such schools, and the partnerships they are fostering, represent a model for a holistic approach to education in the service of the totality of sustainable human development.

This holistic nature of sustainable development can also be emphasized in traditional educational environments. As indicated above, sustainability is the interplay among environmental stewardship, economic responsibility and respect for fundamental human values and rights. For example, Canada's four Atlantic provinces have joined to develop a comprehensive curriculum approach to those three cornerstones of sustainability that link diverse subjects – social studies, science education, mathematics and the arts at all levels of primary and secondary education. And the province of Alberta brings together social and human studies and science, including language education, with natural science in a similar manner.

However, the sustainability of our learning systems for the new century involves far more than questions of money, or even questions of curriculum. Primarily, ensuring that our systems of learning worldwide are robust, sensitive and responsive – in other words, sustainable – requires changing attitudes and highlighting the new conditions that will contribute to successfully ensuring education for all within the context of sustainable human development. Meetings such as this one, and the continuing work of UNESCO itself, provide some of the means to bring together the many actors and ideas that are needed to forge new partnerships and to expose new ways of thinking.

I am closely involved in a body that has as its prime goal the establishment of a global network of leaders, citizens and institutions committed to implementing principles, values and actions to guide humanity in search of solutions to critical global challenges. This organization is the State of the World Forum's Commission on Globalization. The State of the World Forum is a unique non-governmental body that brings together leaders from all walks of life – from governments, from business, from the arts and letters, from civil society – to address emerging issues of global concern from a holistic and humanistic perspective. The very word 'forum' may capture the essence of the organization itself. A forum is a place of meeting and encounter – a place of equality and respect. Yet it is more than that – a forum can also be a place of action and decision. The State of the World Forum's mission statement, 'Transforming Conversations that Matter into Actions that Make a Difference', speaks to this idea.

Two years ago, the State of the World Forum met in New York City, concurrently with the Millennium Summit. The leaders and decision-makers who came together at that time recognized that one of the many challenges now facing humanity was the multifaceted impact of globalization on people and their institutions, as well as on the biosphere. Accordingly, the Forum established a special Commission on Globalization charged with the specific task of building a partnership to raise awareness of the many facets of the impact of globalization and to mobilize a consensus of leaders drawn from all walks of life to implement concrete actions.

The Commission on Globalization, of which I am a Commissioner, is based on the partnership of dialogue combined with concrete actions. It is not merely dedicated to reflection and advocacy; it is action-oriented and targeted towards decision-makers from all walks of life. What unites the Commission is the recognition that globalization is having a dramatic effect on all aspects of the human community – for good and for ill – and that it is incumbent on world leaders to take action to ensure that the pace of globalization is made equitable for all. I think it is fair to say that the Commission on Globalization epitomizes ‘Action, Commitments and Partnerships’.

We all know that globalization is having and will continue to have tremendous impacts on how we learn, and on our systems of education – both formal and informal. We also know that the pace of globalization on learning in general may be creating new challenges and new opportunities, as well as new risks to peace and sustainable human development. Accordingly, in December 2001 the Commission on Globalization asked me to lead a special task force – the Policy Action Group on Learning – to examine the many issues surrounding the impact of globalization on learning.

In the action-oriented spirit of the State of the World Forum, our Policy Action Group is focused on crafting practical advice and realistic perspectives directed towards decision-makers. We are building a network of organizations, including UNESCO, to come together in our own agora – both an actual and a virtual one – to address a number of thematic areas. This network of partners brings organizations together that otherwise might never have encountered each other. For example, at our recent Steering Committee meeting, philanthropic organizations like Germany’s Breuninger Foundation came to forge new partnerships with grass-roots and community-based educational bodies such as Ecuador’s Foro Educativo.

Some of our areas of work (in no particular order) are the following:

- the impact of information and communication technologies on learning in the new century;
- the role of the private sector in forging new educational partnerships;
- the examination of the challenges and opportunities involved in cultural and linguistic preservation;
- the promotion of human rights and civic education as key elements for building peace;
- the examination of some of the issues surrounding education for sustainable development;
- the exploration of new ways of promoting lifelong learning through both formal and informal means;
- the examination of issues concerning the development of new learning material and teacher training.

From this list it will be apparent that we are grappling with many of the issues that are at the heart of education for sustainable human development. For example, we are examining issues surrounding how information and communication technologies can be used most effectively to break down barriers and to promote sensitive and responsive human development – not just how they can be used to amass and transmit information.

One might well ask why this group should choose to examine these matters when others with specific mandates and programming are doing so already. How can we presume to make a difference? I want to emphasize my belief that the State of the World Forum can, and does, make a difference because, unlike other bodies, it has no active programming of its own. Its very reason for being is to act as a means for dialogue and subsequently action. It is a means to an end, unencumbered by ‘turf’ or mandates. It seeks to play the role of a catalyst and trail-blazer.

We are trying to raise the awareness of decision-makers to humanistic perspectives concerning the challenges facing learning in the new century. We are trying to raise awareness of the conditions and factors that will be necessary to ensure that this learning is based on the four pillars of the Delors Report and will continue to promote sustainable human development. We are trying to forge new types of partnerships that will bring together actors who heretofore have not worked together, or who have not done so as effectively as would be desired.

I am extremely pleased that UNESCO is a member of the Steering Committee of our Policy Action Group. We see UNESCO's participation as the key to attaining our goals.

Over the coming months we will be presenting a series of issues papers and convening a global dialogue to address them. We are seeking not just the circulation of views and papers, but concrete advice that can be focused on decision-makers at all levels that will lead to action. It is our hope that we can present the 2004 State of the World Forum with a package of recommendations that will inspire world leaders to concentrate their attention on learning challenges.

In conclusion, I should like to re-emphasize my belief that the goals of sustainable human development cannot be achieved in the absence of robust, sensitive and responsive means of education and learning. We cannot and must not take this for granted. We need to adopt a holistic sense of the totality of sustainable human development and then move forward, together, to shape learning environments that serve the overall cause of peace.

4

THE ROLE OF NGOS IN ADVANCING SUSTAINABLE DEVELOPMENT

Monique Fouilhoux

PRESIDENT, NGO-UNESCO LIAISON COMMITTEE

I should like to start by giving a brief introduction to the NGO-UNESCO Liaison Committee. UNESCO maintains official relations with 350 international and regional NGOs working on issues within UNESCO's fields of competence. In addition to their bilateral relations with UNESCO, these NGOs together form a conference that meets every two years, elects a liaison committee and a president and on that occasion, through the adoption of resolutions, maps out a course of joint work and action for the following two years.

At our December 2001 conference, for example, the Liaison Committee was mandated to organize, *inter alia*, a collective reflection on the follow-up to the World Conference against Racism (Durban, 2001) and on the dialogue among cultures. It was also mandated to prepare proposals for the World Summit on Sustainable Development within the various commissions that we have set up and that are working, *inter alia*, on poverty eradication, human rights, follow-up to the Habitat II Conference and ethical issues in the field of science.

We have made proposals for this summit and for its follow-up in areas as diverse as education, the ethics of water, the preparation of an encyclopedia of local knowledge and skills and the cultural heritage as a vector of peace and sustainable development (enabling us to link this issue with our culture of peace activities). There are also what we call thematic collective consultations that focus on higher education issues and the follow-up to the World Education Forum. These are two mechanisms that should be reinforced and to which additional resources should be allocated.

If we wish to bequeath a viable planet to our children, it is time to declare a state of emergency and make up our minds that our collective environmental and human interests must override any individual interests or selfish national concerns. This political will must be expressed clearly and be backed up by concrete and immediate action.

Education has a key role to play in the promotion of equitable and sustainable development. Indeed, what is needed is a new concept of education going beyond that of Agenda 21. For that reason we wholeheartedly endorse the all-round approach prevailing at this summit. Education is the cornerstone of the struggle to eradicate poverty; it opens the door to information science and technologies; it is the gateway to other cultures, to mention just a few aspects.

I have mentioned the follow-up to the commitments entered into at the World Education Forum to achieve education for all by the year 2015 because, in our view, it is vital to link education for all in its broadest sense to education for sustainable development. We all want a society with peace, democracy, social justice, equity, tolerance, human rights, solidarity and sustainable development as the guiding principles. We also want the men and women of this third millennium to be sufficiently informed and educated to understand the society in which they live and to be able to make their way within it without difficulty, possessing the capacity to make fully informed judgements and choices. In short, we would like all individuals to have more control over their future, to be actors, creators and producers, so that they may contribute to the development of society in all its aspects – economic, political, social and cultural.

Yet how can people control their future when they have AIDS and there is no hope of receiving treatment? Speaking at this summit, Peter Piot, the Director-General of the Joint United Nations Programme on HIV/AIDS (UNAIDS), put it this way: if we continue to let AIDS destroy human resources at this pace, sustainable development will not be possible. As the President of the International AIDS Society remarked recently in Barcelona: you can find a chilled bottle of Coca Cola in the most remote corners of Africa – we should be able to do the same with medication.

Education for the prevention of HIV/AIDS is, for some regions, a key aspect of education for sustainable development. We are tired of hearing that tradition makes it impossible to discuss issues relating to sexuality. First of all, traditions are not engraved in stone and stored away in a museum for all time. And if tradition leads to the death of millions of young people for want of education and information, then it has failed to

play its role as protector and must be made to evolve. This is an area where NGOs are fighting to change behaviour, reform the school curriculum and ensure training for teachers and educators in the broadest sense of the term. It is appalling to think that we know how to avoid infection, but that nothing has really been done, particularly in terms of a prevention policy. We only have to take a look at the prevention efforts on the African continent carried out by Senegal and Uganda. When political will joins forces with large-scale well-targeted prevention campaigns and when there is wide-reaching dialogue with communities, the infection rate goes down.

In Durban two years ago, the figure given for the number of infected individuals was put at 30 million. In Barcelona a few weeks ago, it was up to 40 million, the majority of them adolescents, the majority of cases on the African continent. Let us stop repeating slogans and *act*.

NGOs are essential and invaluable partners in the effort to place the people at the heart of actions to make local communities the frontline protagonists of sustainable and equitable development. They want to be more closely involved and to have account taken of their proposals, since they reflect the concerns both of these populations and of the greatest number of people. NGOs can alert populations or organize advocacy campaigns by forming coalitions, as has been done for the Global Campaign for Education. Some NGOs represent vast networks for the dissemination of information and education and can, by capillary action, as it were, ensure that messages filter through to a very large number of people.

Though I am in the habit of saying that NGOs are unruly and often demanding partners, I am not naive – I know that some NGOs use violent forms of action that I cannot condone. Yet it cannot be denied that, for some of them, this is at times the only way of making themselves heard. So let us give NGOs the prominence they deserve, let us take account of their proposals, let us engage in genuine dialogue with them and they will no longer need to take to the streets and engage in violent action in order to be heard. Meanwhile I would ask why NGOs are required to possess the virtues that the international community is careful not to demand of certain states with less than commendable behaviour.

The representative of the New Partnership for Africa's Development (NEPAD) has emphasized that those responsible for this initiative wish to see the full involvement of civil society in all areas. We welcome this pledge and the Liaison Committee will be calling on those NGOs that maintain relations with UNESCO to support their national branches or African partners so that they may play their part to the full. Many

examples of partnerships with NGOs will be presented during this seminar, and I have no doubt that we will also engage in substantive debate, giving rise to discussions and exchanges of opposing viewpoints which will stimulate and enlighten us.

How do we go about building education for sustainable development? When I speak of education, I use the term broadly to mean both formal education (from basic to higher education) and non-formal education. The challenge, then, is to reach everyone, especially those who are currently left out of the traditional education system, notably the poorest populations and the most marginalized groups.

NGOs are getting things done, and I would like to pay tribute to the work accomplished in the field each day by millions of unsung volunteers who are helping, often through micro-projects, to bring relief and assistance to populations in great distress. We would be better off giving credit where it is due, drawing attention to successful experiences, than trying to reinvent the wheel all over again. NGOs are advocating a different kind of approach, calling for reflection on new forms of partnership and on more effective ways of disseminating information.

International appeals campaigns using televised images of starving children or child victims of armed conflict may be acceptable, even necessary; nevertheless, it is the root causes that must be tackled, and, in relation to education, I would like to raise the following two questions. First, after studying geography, do many pupils actually possess any precise knowledge about the geography of hunger or the sharing of fresh-water resources? And, second, after studying contemporary history, how many pupils understand all the contradictory implications of decolonization that, to some extent, govern today's world? These, too, are questions to be asked when discussing education for sustainable development, which we are determined to promote.

I should like to conclude by mentioning the future Decade of Education for Sustainable Development (2005–2014). Needless to say, we endorse this proposal unreservedly and hope that UNESCO, the specialized agency for education within the United Nations system, will be in a position, in cooperation with other partners, to coordinate mobilization for the Decade and to provide an impetus for reflection and action. I suggest, too, that we give consideration to a partnership charter for NGOs similar to the one that was drawn up for the UN International Year for the Culture of Peace and the International Decade for a Culture of Peace and Non-violence for the Children of the World.

5. THE INTERNATIONAL MARKETING/COMMUNICATIONS INITIATIVE FOR SUSTAINABLE DEVELOPMENT: ENGAGING THE ADVERTISING INDUSTRY TO HELP COMMUNICATE SUSTAINABILITY AROUND THE WORLD ¹

Tony Pigott

**PRESIDENT AND CHIEF EXECUTIVE OFFICER, J. WALTER THOMPSON ,
CANADA
GLOBAL DIRECTOR OF SOCIAL MARKETING, J. WALTER THOMPSON,
WORLDWIDE**

J. Walter Thompson – the company I represent globally – was the first advertising agency in the world: it was established more than 130 years ago and has since grown into a global company operating in more than 90 countries around the world. Our expertise lies in the ability, through various communication outlets, to influence people’s attitudes and behaviour. We are very good at channelling people’s needs and demands towards an array of products and services, brands and ideas, ranging from food to technology, cars, financial services, fashion, retail, fuel, electronics, beverages – and even social causes. Because of our tremendous influence on consumption patterns in the world, many people at this summit would think of us as a sizeable part of the problem this gathering is aiming to solve. So it is only right to ask why we are here. What is JWT’s motivation? What can advertising and marketing communications do to help advance the cause of sustainable development? In this paper, I should like to answer these questions and share an ambitious partnership initiative

1. See Appendix I.

that has the potential to help elevate the impact of everyone's efforts related to sustainable development.

First, why are we here with a team from J. Walter Thompson? I could say that I and my colleagues, as citizens of the planet, want to give something back to the planet. That is true. I could say that we are a company with a history of innovation – the first to use market research, the first to use TV commercials – and so we are drawn by the unique challenge. I could also say that many of our own clients have stepped forward to support sustainable development and that in time our knowledge and experience will be good for our business. This is all true. But the primary reason we are here is that there is a very significant missing piece in the advance of sustainable development and we are uniquely qualified to help put it in place.

So what is this missing piece? Let me begin with a quote from the Secretary-General of the United Nations, Kofi Annan: 'Our biggest challenge in this new century is to take an idea that seems abstract – sustainable development – and turn it into a daily reality for all the world's people.' This exciting mission calls for many challenges to be met. At the heart of them all is the need for people to understand the idea and its relevance to them. Some numbers will illustrate the situation. The approximate number of governments, companies, NGOs and other organizations around the world who are currently active and communicating on the subject of sustainable development is 8,260. The number of type 2 partnership initiatives announced here, a mere fraction of the summit's outcome of action and activity, is 220. And, finally, 1,030 is the number of different definitions for sustainable development we found in a recent survey.

No one should be surprised that this adds up to confusion in the minds of most people in the world. Surveys from Environics International and Gallup International have shown, on the one hand, a very low recognition and understanding of sustainable development. At the same time, upwards of 40% of some populations are expressing real concerns and frustrations along a broad front of issues. New data presented during this summit are very revealing. The survey was carried out among 24,000 people in 31 countries, representing 1 billion of the world's population. It showed surprising levels of support for action on poverty issues over and above environmental concerns, particularly related to water and health. It also showed a low level of trust among stakeholders for taking action, including business, government and, to a lesser extent, NGOs.

Faced with this situation, how will the world react to sustainable development actions? Thousands of people are here at this summit: educators, ministers of environment, industry and trade, UNESCO and other UN organizations, hundreds of NGOs and hundreds more from industry. How will the people of the world react to this prodigious effort? With indifference or involvement? Cynicism or apathy? Or will they understand how all of these efforts are part of a greater, interconnected whole?

In our view, the missing piece is an action-oriented communications strategy that addresses this fundamental communications problem. So much great work has been done over the past decade to organize, to find new cooperative models, programmes and ideas – as illustrated by this summit. But the knowledge and interest in sustainable development are not yet there among broad populations. There is little understanding, little sense of personal relevance, and no clarity on how to act.

In the face of this situation, people will not readily see the importance of initiatives, and the connection across the spectrum of activities that will emerge in the months and years ahead. In a sense, the demand side of the equation is not there. So it seems that the time is right to extend the strategy on advancing sustainable development and look to informal communication innovation to overcome these fundamental barriers to progress. We need to find ways to engage people more effectively so that they understand, become more receptive, become part of the solution and help drive change itself.

Some people might ask if this is necessary. Will this not happen more organically? I would answer by referring to the 1,030 definitions mentioned above. And also to several other relevant figures. For example, \$460 billion is the amount of money spent on advertising globally last year. Since the Rio Earth Summit in 1992, the total has been over \$4 trillion. It is therefore critical that a focused and highly innovative approach to engaging people is found.

Our partnership proposal is to apply the highest level of advertising and marketing expertise to a global collaboration of key stakeholders. Together, we can develop a set of strategies and solutions that accelerate public dialogue, public understanding, and personal initiatives on sustainable development. We believe that advertising expertise is essential to this undertaking. What we do is not just about communicating information. We bring our creative and strategic skills to the task of creating communications that are focused, cohesive and inspirational for all audiences.

Needless to say, we have looked at the difficulties presented by this project: the vast array of viewpoints; the tremendous disparities in the world and the raging debates that that creates; and the differences among stakeholders, between North and South, and within stakeholder groups as well. But we think the conditions for success exist. We believe that there is common ground among vast populations – common ground in the deep, untapped desire for a better world, for progress, for doing things differently. Not just for themselves, but for future generations. We see a growing urgency in individual concerns about sustainable development issues, a growing scepticism about leadership, a growing pessimism about progress. There is, in short, a pervasive and unmet desire for solutions.

There is also encouraging common ground here at this summit, in government offices and NGOs, and in corporate boardrooms around the world. So many stakeholders are open to new levels of cooperation, a willingness to collaborate based on common goals more than individual agendas. This is a fundamentally positive development and a prerequisite for success.

Then there is the idea itself. While I would be the last to minimize the complexity of sustainable development, and the intimidating task of creating coherence and clarity around it, the idea itself is transformative. It is an idea that is big enough for everyone, containing hope, inspiration and the call for individual enrolment.

The conditions for success exist. The right framework and a comprehensive partnership are also critical. Our proposal calls for an expanding working group, the core of which is already established. This group includes UNESCO, which will make the crucial contribution of its global expertise, rigour and depth of experience in education, science, culture and communication. The Government of Canada has supported the initiative to date, as well as providing its expertise in multi-stakeholder, public/private undertakings. The UNESCO Chair on Reorienting Teacher Education to Address Sustainability at York University in Canada has contributed learning on the teacher education and key networks. JWT will enlist its most talented people in the strategic, creative and planning functions. A complete range of marketing communications specialities from our parent company, WPP, will complement their expertise.

The next order of business is to enlist participation and support from key governments, NGOs, businesses and individuals and build a working coalition to help develop ideas and strategies. The coalition must be global, representative of all sectors, and above all credible. The

extremely positive response and interest shown by leaders in all sectors at this summit augurs well for the building of an extraordinary group. It will also be necessary to establish a separate council to act as watchdog and validator.

So what will be some of the deliverables of this initiative? We cannot prejudge the specifics – the idea is to engage and invent solutions together. But, broadly speaking, we would anticipate the following deliverables:

- an expression of sustainable development that is coherent, relevant and inspiring to a broad cross-section of people around the world – including stakeholders;
- programmes built around this that can enable and complement stakeholder efforts in all regions and sectors;
- further programmes that underscore the connectedness of sustainable activities so that all people gain a greater sense of progress and cohesion.

Rigorous goal-setting and measurements for success must guide this project. The project framework must be thorough, disciplined and global in scope.

I should like to end with a short quote from Nelson Mandela, who said recently in the context of South Africa: ‘Sustainable development is almost as important an idea as political freedom.’ Much of the world would agree. If only they understood.

I hope I have made a good case that making sustainable development a daily reality for people cannot be achieved without efforts to build coherent and inspirational communication for all the world’s people. With mutual commitment and collaboration it can be done.

6.
**THE SOUTH AFRICAN VERSION
OF THE MULTIMEDIA TEACHER EDUCATION
PROGRAMME, *TEACHING AND LEARNING
FOR A SUSTAINABLE FUTURE* (1)**

Koïchiro Matsuura

DIRECTOR-GENERAL, UNESCO

UNESCO strongly believes that we need to foster – through education – the values, behaviour, attitudes and lifestyles required for a sustainable future. Indeed, there is a growing international consensus on this matter. Sustainable development is not so much a destination as a process of learning how to think in terms of ‘for ever’. Sustainable development involves learning how to make decisions that consider the long-term future of the economy, ecology and well-being of all communities. Building the capacity for such future-oriented thinking is a key task of education.

Education for a sustainable future is a formidable challenge. It asks educators to address many important questions of a deeply practical kind. For example:

- What do people need to know and be able to do to help build a sustainable future?
- In the context of schooling, how can we help young people to better understand the complex and ever-changing nature of the world? What substantive themes do they need to understand? How can the principles of sustainable development be integrated into all school subjects?
- What teaching methods are best suited to developing the commitments, knowledge and skills for working with others to help bring about a better world?

Teaching and Learning for a Sustainable Future provides 100 hours of highly interactive training that helps teachers find the answers to questions like these.

Teachers are the key to successful education for sustainable development. There are over 60 million teachers in the world – and every one of them is an agent for bringing about the changes in values, attitudes, behaviour and lifestyles that we need. For this reason, innovative teacher education is an important part of educating for a sustainable future. Within its special work programme on education, the United Nations Commission on Sustainable Development invited UNESCO to help teachers worldwide not only to understand sustainable development concepts and issues but also to learn how to cope with interdisciplinary, value-laden subjects in established curricula.

Teaching and Learning for a Sustainable Future is one of UNESCO's responses to that challenge, and I am very happy to see it being adopted so enthusiastically. Its multimedia format means that it can be accessed and used in a great many ways by teachers, student teachers, teacher educators, curriculum developers, education policy-makers and authors of educational materials. By making the programme available as both a website and a CD-ROM, UNESCO hopes to reach as many teachers as possible across the world.

I should like to comment on two particular aspects of *Teaching and Learning for a Sustainable Future*. The first is the use of multimedia and information and communication technologies (ICTs) in education. The second is the design of *Teaching and Learning for a Sustainable Future* as a demonstration programme. Multimedia and the use of ICTs are becoming increasingly popular in education. They do have limitations, and certainly should not be seen as a panacea for all educational problems or as a substitute for face-to-face interaction. UNESCO is very aware of the 'digital divide' and its educational dimensions, and is working with many countries and partners on this problem. However, multimedia technology does have numerous advantages, especially in teacher education. For example, the information available on the Internet is unlimited and is continuously evolving. It is up-to-date, inexpensive to obtain, and searchable. It also reflects the views of a diverse range of authors and sources of information.

Multimedia professional education can also be highly interactive and engaging through the use of animation, audio and video files, games and on-line discussions. All these can be undertaken at any time and at any place and without the need for an outside workshop facilitator.

Teaching and Learning for a Sustainable Future incorporates these benefits of multimedia education. It also demonstrates the principles of effective teaching and learning that are a necessary part of reorienting education towards a sustainable future. Thus the types of professional development experience in *Teaching and Learning for a Sustainable Future* have been designed to ensure that the 'medium' for learning is a part of the 'message'.

My second, and perhaps most important, point is that UNESCO is aware that no single teacher education programme can suit the needs of all potential users. That is why *Teaching and Learning for a Sustainable Future* was developed as a demonstration project and has been specifically designed to enable translation into other languages, as well as adaptations in response to regional, national or local needs. UNESCO is ready to work with government ministries, regional organizations, teacher education institutions and others responsible for the professional development of teachers to help facilitate these changes.

The South African version of *Teaching and Learning for a Sustainable Future* has been launched at this seminar. Many more translations and adaptations are already foreseen. A dissemination plan has been developed and, with the support of Education International, a Dissemination and Training Toolbox has been prepared. I would especially like to congratulate Minister Asmal, the Ministry of Education of South Africa and its South African Development Community (SADC) partners for their vision and commitment in adopting *Teaching and Learning for a Sustainable Future* and for generating its first international adaptation. I commend this programme and encourage all ministries and organizations to contact UNESCO in order to discuss ways whereby we can develop partnerships to prepare adapted and translated versions of *Teaching and Learning for a Sustainable Future* that are suitable for all countries and their specific contexts.

7. THE SOUTH AFRICAN VERSION OF THE MULTIMEDIA TEACHER EDUCATION PROGRAMME, *TEACHING AND LEARNING FOR A SUSTAINABLE FUTURE* (2)

Kader Asmal

MINISTER OF EDUCATION OF SOUTH AFRICA

It is a great pleasure to mark the beginning of a partnership of significance with UNESCO, in the launch of the South African version of the multimedia teacher education programme, *Teaching and Learning for a Sustainable Future*. The purpose and scope of this partnership is to provide support for education, recognizing that education is critical to attain a global sustainable future. Hence the support cannot simply be to sustain the status quo. It is about a partnership to drive for fundamental change in the sustainable management of our environment, through supporting technological innovations in education.

Technology is important for the future of education. Globally, there is a clear recognition that technology can and will transform education. Innovations in this field have created some of the most provocative and stimulating ideas in the history of education. Research indicates, for example, that computer-based multimedia teaching helps students and teachers to make learning more meaningful and enables them to convert the information into practical applications. This is especially the case when the multimedia teaching is interactive and locally contextualized.

Teaching and Learning for a Sustainable Future represents the powerful addition of a technological education resource, adapted to the South African context, that will translate into an increase in environmental learning. Its value can only be realized, however, when it is disseminated and shared – and used by the intended audience, our teachers.

Of course, teachers are crucial agents for transformation and change in education. And, for teachers to lead the transformation efforts, they require expanded and enriched professional development experiences. I believe that professional development must serve the purpose of promoting teachers' continuous development to integrate innovations in environmental teaching and learning within the social contexts in which teaching takes place.

Unless we provide teachers with ongoing support and professional development, worthy initiatives will fail. And that would be a tragedy. That is why investment in teacher development programmes, such as *Teaching and Learning for a Sustainable Future*, that have the potential to empower the participants to manage the environment in a sustainable manner is to be celebrated.

Conversely, we are mindful of the challenges associated with the digital divide, within the context of globalization and polarization – this inevitably perpetuates the increasing disparities between rich and poor, among and within nations. Thus it would be naive to deny that we have a long way to go to for technology to achieve its full potential in education. At the heart of this effort must be equal access and participation. Until we bridge this digital divide, we will fail to realize the full potential of technological innovations.

Nonetheless, I believe that with the South African version of *Teaching and Learning for a Sustainable Future* we are addressing some of the challenging disparities. In fact, we are moving from a perspective in which there is a digital divide to one in which there is indeed digital opportunity, and I look forward to the progress of this initiative in the years to come.

PART II

**EDUCATION FOR ALL
AND SUSTAINABLE RURAL
DEVELOPMENT**

8. EDUCATION FOR ALL AND POVERTY ERADICATION FOR RURAL POPULATIONS

Jacques Diouf

DIRECTOR-GENERAL, FOOD AND AGRICULTURE ORGANIZATION (FAO)

I welcome this opportunity, on behalf of the Food and Agriculture Organization (FAO), to give a voice to the 800 million or more people who are food-insecure, the 180 million undernourished children, the 880 million illiterate youth and adults and the 130 million out-of-school children. The majority of these people live in rural areas and suffer from inequitable access to schools, health care, roads, technology, institutional support and markets. Addressing the educational needs of this 'neglected majority' that plays a critical role in sustainable development directly contributes to achieving the first two Millennium Development Goals – eradicating extreme poverty and hunger and achieving universal primary education.

THE MAIN CHALLENGE: EDUCATION FOR RURAL PEOPLE AND SUSTAINABLE DEVELOPMENT

Although education is linked to virtually all areas covered by the United Nations Conference on Environment and Development (UNCED, Rio, 1992), the new FAO/UNESCO Education for All (EFA) Flagship Programme on Education for Rural People calls for special efforts in a crucial challenge for sustainable development – educating large numbers of people in the rural areas.

The Education for All Declaration and Plan of Action led by UNESCO in Jomtien (Thailand) in 1990 and reconfirmed in Dakar (Senegal) in 2000, the World Food Summit (WFS) Declaration and Plan of Action of 1996, and the World Food Summit held in Rome in 2002 provide both the political framework and a set of concrete actions to achieve

the commitment made by Heads of State and Government to reduce the number of illiterate and undernourished people to half their present level no later than 2015, thus alleviating poverty worldwide. We believe that in order to meet these targets, it is crucial to focus on the basic educational needs of the rural poor with a multisectoral and multidisciplinary approach and to work together: this is what the FAO/UNESCO flagship is all about.

The flagship aims at reducing the education gap between rural and urban populations. Although education is universally acknowledged as a human right in itself and a prerequisite to build a food-secure world, educational opportunities are not equitably distributed:

- The gap between urban and rural illiteracy is widening, and in several countries, rural illiteracy is two or three times higher than urban illiteracy.
- Curricula and textbooks in primary and secondary schools are often urban-biased and irrelevant to the needs of rural people, and seldom focus on crucial skills for life in the rural areas.
- Ministries of education, agriculture, health, finance and others as well as universities and research institutions often lack awareness and coordination in targeting the needs of rural people.

To address these problems, the new FAO/UNESCO flagship will focus its efforts on:

- building awareness of the importance of education for rural people;
- encouraging countries to adopt specific plans of action that address the basic educational needs of rural people as part of the national plans for education for all;
- supporting exchange of good practices and knowledge on education for rural people;
- building on the comparative advantage of partner institutions to better address education for rural people.

Building partnerships is crucial for such an endeavour, and we are pleased to note that although the flagship is a new initiative, a significant number of partners have already confirmed their commitment to support education for rural people, thus forging an important network including governments, international organizations, UN agencies and civil society.

NEXT STEPS AS FOLLOW-UP TO THE WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT

As a follow-up to the World Summit on Sustainable Development (WSSD), the FAO/UNESCO flagship programme will reinvigorate its efforts to assist member countries and other partners, focusing on:

- developing common views about the importance of dealing with education for sustainable rural development as a crucial component of education for all strategies;
- supporting a common approach to bringing about needed changes to promote education for rural people;
- encouraging dialogue between education ministries or departments and other key rural stakeholders such as ministries of agriculture and natural resources, health, infrastructure and finance, as well as the private sector, NGOs and civil society;
- supporting countries in analysing their existing educational approaches in order to meet the needs of rural people and, as appropriate, formulating interventions that incorporate such processes within poverty reduction strategies (PRS).

As for FAO's specific commitment to the flagship, beyond our coordinating role, we will continue to provide technical assistance to member countries in their efforts to emphasize education for rural people within their national plans for education for all.

CONCLUSION

In conclusion, I wish to emphasize the main features of the education for rural people challenge. First, we must place the education of rural people at the core of national plans for education for all and strengthen the institutional capacity to do so. Efforts aimed at reducing poverty and hunger should therefore be accompanied by good education policies addressing the education of rural people as a crucial aspect of such plans. This can be achieved if the educational needs of rural communities are given due consideration at every level of governance, including planning and finance.

Second, we must expand access to, and increase attendance and completion at, schools in rural areas by promoting or supporting

initiatives that aim at improving children's nutrition and capacity to learn. These include: school canteens and gardens, information and communication technology, distance education, education of rural girls and women, lifelong education, and flexible school calendars to accommodate the needs of local agricultural production cycles.

Third, we must improve the relevance of education to the needs and interests of rural livelihoods. This can be achieved by supporting participatory curriculum development, teacher training, skills for life in a rural environment, nutrition education, and education for HIV/AIDS prevention and mitigation.

Fourth, forging partnerships is crucial to the success of the flagship initiative. It is our hope that the international community involved in supporting education systems in developing countries can turn the spotlight on this problem, work with national authorities that are committed to change, and begin the process of improving the lives of large numbers of rural men, women and children. FAO stands ready to help turn these and other opportunities into reality.

9. FOOD AID FOR RURAL EDUCATION AND WOMEN'S EMPOWERMENT

James T. Morris

EXECUTIVE DIRECTOR, WORLD FOOD PROGRAMME (WFP)

The World Food Programme (WFP) believes that nutrition and education are essential for breaking the vicious cycle of poverty and hunger. This is particularly true when education is used to empower women. One striking piece of research brings this point home forcefully. A February 2000 study by the International Food Policy Research Institute concluded that women's education and relative status have contributed 44% of the reduction in the prevalence of malnutrition in developing countries over the last quarter of a century.

WFP has responded to this research by further strengthening its commitment to supporting education for the hungry poor. Some people might think that WFP is only an emergency humanitarian organization – and this is clearly a vital part of our job. But we are also an organization that believes in developing human capacity through food aid. WFP knows that giving poor people the education and training they need to better their lives is 'sustainable development' at its best. The result is that, in 2001, there were over 17 million beneficiaries of WFP food aid in programmes that supported primary education and other training for the rural poor.

The largest WFP programme related to education is school feeding. Over the past forty years, WFP has become the largest provider of nutritious meals and take-home rations to schoolchildren in poor countries around the world. In 2001 WFP fed more than 15 million children in 57 countries. Providing nutritious food at school is a simple but effective way to improve literacy rates and help poor children break out of poverty. On a full stomach, a student's ability to concentrate and learn is dramatically improved. WFP also provides take-home food as an innovative tool

to encourage parents to send their daughters to school. Of the 100 million children who do not attend school today, 60 million are girls. School feeding can make it possible for these girls to attend school and take control of their lives.

A recent WFP study also reveals that school feeding programmes improve the overall educational environment. This builds parental and community involvement that in turn strengthens the schools that benefit from food aid. The value of school feeding, however, cannot be fully described by research, numbers and statistics. Some of the most powerful stories come from the beneficiaries themselves. Stories like that of Momaye, a young girl who attends primary school in a rural area of the United Republic of Tanzania and who can now read and write. Without school feeding, Momaye would have stayed at home or married. Now, with WFP school feeding assistance, Momaye believes she can finish primary school and would like to continue her studies. Although her family initially opposed her education, they are now thankful for the benefits it brings. Her grandmother sees Momaye as a hope for the 'better development of our household. She brings new ideas and things we did not know about before.'

WFP's education and training programmes, however, go well beyond school feeding. 'Food for training' programmes are a well-integrated part of WFP programmes in 47 countries, planned to reach over 2 million beneficiaries. Skills training for income-generating activities, life skills and literacy training, and especially initiatives for persons affected by HIV/AIDS, are all part of WFP's wide range of food for training programmes. These programmes put special emphasis on meeting the educational and skill-development needs of poor women. In fact, nearly two-thirds of the beneficiaries of the WFP food for training activities are women and girls.

A good example of WFP food for training programmes is found in Burkina Faso, one of the least developed countries in the world, where only 15% of the female population can read. Here, WFP's work focuses on rural socio-economic development through a basic education and literacy programme with approximately 122,000 beneficiaries a year. By helping the poorest of the poor in 11 provinces where literacy levels are the lowest, WFP food aid does not just help poor people to read. It also reduces the geographical disparities that exist between the rural and urban areas in the country. We also know that our work in Burkina Faso has additional positive side-effects, such as reducing student drop-out rates and opening doors for further basic education, for which literacy is a critical prerequisite.

The WFP country programme in Mozambique is yet another example of how WFP helps empower poor rural households through education. WFP trains the rural poor who are most affected by droughts and other natural disasters. The life-skills training provided includes: management of the water, sanitation and agricultural assets created by food aid; the use of appropriate seeds; the storage and use of food; and education about HIV/AIDS and health issues. In combination with other activities such as 'food for work', these skills-training activities have a direct impact on the everyday life and food security of the country's most vulnerable people.

WFP has shown that food aid can make a central contribution to advancing our common objective. As the FAO/UNESCO Flagship Programme on Education for Rural People takes flight, let us hope that it leads to new and strengthened partnerships that utilize what each of us can contribute and that it creates a comprehensive approach that meets the educational needs of the hungry poor. Our message to the world should be that investment in people is investment in a sustainable future.

10. THE FAO/UNESCO EFA FLAGSHIP PROGRAMME ON EDUCATION FOR RURAL PEOPLE ¹

Koïchiro Matsuura

DIRECTOR-GENERAL, UNESCO

Today more than ever before, education is the key to rural transformation and is essential for the economic, cultural and ecological vitality of rural areas and communities. Moreover, none of the agreed goals for education or development in the twenty-first century can be realized without giving special attention to the situation of rural people.

Let me place these statements in context. In spite of rapid urbanization, 3 billion people, or 60% of the population in developing countries, amounting to half of the people of the world, still live in rural areas. Three-quarters of the world's poor, those earning less than US\$1 a day, live in the countryside. One in five children in the South are not enrolled in primary school, and many countries report that low school attendance, early drop-out of students, adult illiteracy and gender inequality in education are disproportionately high in rural areas, as is poverty. Urban–rural disparities in educational investment and in the quality of teaching and learning are also widespread.

As a result, education to serve rural transformation is one of the main challenges facing the drive to achieve education for all (EFA). Basic education is one of the foundations of sustainable development because human resources are the core of sustainable development. This link between education for all, defined very broadly, and sustainable development is fundamental. It is why this new partnership, focusing on rural populations and spearheaded by the Food and Agriculture Organization (FAO), is so important. As we begin this Flagship Programme on Education for Rural People as a World Summit on Sustainable Development

1. See Appendix II.

(WSSD) type 2 partnership, I am very aware of what an unusual opportunity this is and how important it is to take advantage of it.

I wish to reflect on some of the critical aspects of this partnership:

- Education and sustainable rural development are both complex issues, and their achievement requires long-term processes, not quick fixes. By bringing together partners from two different areas, education and agriculture, with a common goal and common understandings of the challenges, we can build on the strengths and advantages of each.
- For too long, rural populations have been denied access to the knowledge, skills and competencies that would empower them to take advantage of progress in agriculture and other rural activities to improve their lives and to leave poverty behind. This partnership promises an emphasis on reaching these populations, combining the lessons we have learnt in both education and rural life.
- For too long, rural populations have been denied an education that builds on critical thinking, problem solving, creativity, and building individual and shared knowledge bases. This is the heart of educational transformation: to improve the quality of learning so that people can become learners for life and apply that learning to their changing contexts as actors and not merely as beneficiaries.
- For too long, rural populations have been asked to assimilate existing knowledge that is not relevant to their current environment and does not help them build sustainable futures. This partnership promises an emphasis on a quality education that focuses on knowledge, skills and competencies that can be used in daily rural life and in a new and possibly different future. It also promises an emphasis on a quality education that is imbued with the concept of a sustainable future for all.
- For too long, rural skills-training programmes have ignored the basic skills for learning throughout life and from the reality of living life in dignity. This partnership has the potential for skills training to build on basic education for the broader application and adaptation of these skills for lifelong livelihood support. It also has the potential to link vocational and entrepreneurial training to locally functioning businesses, industries and cooperatives in order to facilitate the much-needed linkages between education and the world of work.

Education for all is not just about primary or formal education. It is about fulfilling the right of all people to a quality basic education comprised of literacy, numeracy and skills for life as the basis for learning and changing, now and in the future. Quality education for all is about ensuring that our education systems promote the fundamentals of a sustainable future. These include peace, stewardship of our globe, economic and human well-being, ethics, and a commitment to include, in fair and just ways, those fellow travellers on this globe who have, so far, been excluded or have, at best, found themselves on the margins. That is why this flagship programme is so important. It reaches out to half the world's population with a commitment to sustainable futures, linking education to other key aspects of rural life.

PART III

**EDUCATION FOR SUSTAINABLE
DEVELOPMENT: RIO,
JOHANNESBURG AND BEYOND**

11.

A DECADE OF COMMITMENT: LESSONS LEARNED FROM RIO TO JOHANNESBURG ¹

John Fien
UNESCO

INTRODUCTION

Most people in the world today have an immediate and intuitive sense of the urgent need to build a sustainable future. They may not be able to provide a precise definition of 'sustainable development' or 'sustainability' – indeed, even experts debate that issue – but they clearly sense the danger and the need for informed action.

They smell the problem in the air; they taste it in their water; they see it in more congested living spaces and blemished landscapes; they read about it in the newspapers and hear about it on radio and television. ²

For thousands of years human societies have proved that living sustainably – as healthy and happy individuals, within caring and stable families and communities, and in harmony with the natural world – is possible. The long-term sustainability of indigenous economic and cultural systems is the result of indigenous systems of education, which established a human and natural ecology totally at one with each other. The Earth Summit in Rio de Janeiro in 1992 helped educators around the world realize that education must be reoriented to once again reflect such a

1. This paper was prepared by UNESCO in its role as Task Manager for Chapter 36 of Agenda 21 and the International Work Programme on Education, Public Awareness and Sustainability of the United Nations Commission on Sustainable Development (CSD).
2. UNESCO, *Environment and Society: Education and Public Awareness for Sustainability*, Background Paper prepared for UNESCO International Conference, Thessaloniki, 7, 1997.

vision of sustainability, one that links economic well-being with cultural traditions and respect for the Earth and its resources.

Almost universally, indigenous peoples respect and love the land as a mother, treating it as sacred, believing that people, plants, animals, water, the land and the sky are all part of the same ongoing cycles of life. These beliefs and the knowledge that flows from them have been passed down the generations through a wide range of cultural practices, including direct instruction, stories, dances, ceremonies and art, as well as networks of sacred places. All are part of indigenous approaches to education that link people to the land through culture – and to culture through the land. Unfortunately, indigenous knowledge and wisdom have been undermined by the experience of colonization, industrialization and globalization. By and large, indigenous priorities and systems of education have been supplanted by the somewhat narrow view that the environment and culture are valuable only in so far as they are economically productive. The consequent disregard for the land and culture has meant that knowledge, values and skills for living sustainably have been underplayed in contemporary education.

Certainly, knowledge about the Earth, its plants and animals, the functioning of ecosystems and the ways people use resources is taught in schools and colleges in Science, Geography and Social Studies. Nature documentaries are among the more popular programmes on television, while visits to museums, science centres, environmental reserves and other sites of non-formal education are expanding.

However, there is a widespread problem with the way that the environment and sustainable development are presented in such formal and non-formal programmes. Few attempts are made to link the health of people to the health and sustainability of ecosystems; and students and community members are rarely asked to reflect upon the impacts of their activities and those of their families and wider society on the functioning of ecosystems. In formal education, studies of society, the economy and the environment are usually within separate disciplines with little regard for developing practical skills for practising sustainability. For this reason, Agenda 21 called for a reorientation of education.

AGENDA 21 – A MANIFESTO FOR EDUCATION

Reorienting education towards sustainable development requires a new vision for education. Chapter 36 of Agenda 21, on ‘Education, Awareness and Training’, states:

Education, including formal education, public awareness and training, should be recognized as a process by which human beings and societies can reach their fullest potential. Education is 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. 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.

To achieve this vision, Chapter 36 called on governments, international agencies, businesses and civil society groups to:

- ensure that basic education and functional literacy for all is achieved;
- make environmental and development education available to people of all ages;
- integrate environmental and development concepts, including those of population, into all educational programmes, with analyses of the causes of the major problems;
- involve schoolchildren in local and regional studies on environmental health, including safe drinking water, sanitation, food and the environmental and economic impacts of resource use.

Following the Earth Summit, the Commission on Sustainable Development (CSD) appointed UNESCO to be its Task Manager for Chapter 36. UNESCO was to accelerate reforms of education and coordinate the activities of all stakeholders in education through a wide-ranging work programme. The seven objectives of the work programme were to:

- clarify and communicate the concept and key messages of education for sustainable development;
- review national education policies and reorient formal education systems;
- incorporate education into national strategic and action plans for sustainable development;

- educate to promote sustainable consumption and production patterns in all countries;
- promote investment in education;
- identify and share innovative practices;
- raise public awareness.

Several activities were listed for each objective, and those who might be responsible for each (e.g. governments, relevant United Nations bodies and/or NGOs) were nominated. UNESCO's role has been to provide professional and technical support for governments of Member States and to help disseminate the innovative policies, programmes and practices of education for sustainable development that were being developed by all stakeholders. UNESCO has had both internal and external roles to play in its responsibility as Task Manager.

The Organization as a whole has been mobilized to address education from the perspective of sustainability and, with the endorsement of the General Conference of UNESCO, has aligned its work according to the priorities laid down in the CSD Work Programme. Indeed, along with poverty eradication and the promotion and fair use of information and communication technologies (ICTs), sustainable development is now seen as a key theme across all UNESCO activities. UNESCO has also been a catalyst for clarifying key ideas, disseminating guiding principles and sharing experiences across countries by convening international conferences and regional workshops, developing demonstration projects and sample curriculum and training materials, and creating an international network of schools³ committed to the principles of peace, human rights, equity and conservation.

UNESCO is also facilitating the international education for all (EFA) programme that aims to develop and implement national education action plans, enable capacity development in early-childhood, primary and science education, and catalyse new approaches to family education as well as citizenship, peace, multicultural and environmental education. UNESCO has also developed partnerships with many UN agencies, including: the United Nations Population Fund (UNFPA), the World

3. The UNESCO Associated Schools Project is a network of schools operating in over fifty countries. Among its sustainable development education activities are programmes on the conservation of world heritage, the legacy of the transatlantic slave trade, and the conservation of the Baltic Sea.

Health Organization (WHO) and the International Labour Organization (ILO) to promote population education; WHO to develop new approaches to health education; the Food and Agriculture Organization (FAO) to advance education in rural areas and promote food security; WHO and UNAIDS to combat the HIV/AIDS pandemic; the United Nations Children's Fund (UNICEF), the United Nations High Commissioner for Refugees (UNHCR) and major NGOs to assist in the reconstruction of education in crisis and post-conflict situations, and many more.

The challenge of sustainable development is a difficult and complex one, requiring new partnerships – among governments, academic and scientific communities, teachers, NGOs, local communities and the media. All are essential to the birth of a culture of sustainability. Within governments, for example, education for sustainability is of direct concern not only to ministries of education, but also to ministries of health, environment, natural resources, planning, agriculture, finance and others. New policies, programmes, resources and activities can be reported from almost every country, a sure and encouraging sign that education is beginning to be seen as a significant aspect of national sustainable development policies.

The role and importance of major groups in implementing Chapter 36 have also increased significantly since Rio. The NGO-UNESCO Liaison Committee, representing about 350 professional NGOs in the field of education, has set up a special commission to mobilize its members in support of the World Summit on Sustainable Development in 2002. So, too, have major regional and international associations of higher education, including the International Association of Universities, which have joined with UNESCO to form a Global Higher Education for Sustainability Partnership. The Education and Youth Caucuses of the UN Commission on Sustainable Development (CSD) have sought to work with other CSD caucuses to build support for education for sustainable development. The contributions of all these major groups have done much to help clarify key lessons about the contribution of education to sustainable development over the decade since the Earth Summit.

UNESCO has prepared this paper on these key lessons in its role as Task Manager for Chapter 36 of Agenda 21, the action plan agreed to by all governments at the Earth Summit, and the International Work Programme on Education, Public Awareness and Sustainability of the inter-governmental Commission on Sustainable Development (CSD).

An exhaustive coverage of all the educational initiatives that have blossomed in the decade since the Earth Summit is not possible here. However, brief cases of innovative programmes and successful outcomes are included in the boxes throughout the following pages. These are used to illustrate some of the key lessons that have been learnt about education for sustainable development over this decade. The five key lessons explored below are:

1. Education for sustainable development is an emerging but dynamic concept that encompasses a new vision of education that seeks to empower people of all ages to assume responsibility for creating a sustainable future.
2. Basic education provides the foundation for all future education and is a contribution to sustainable development in its own right.
3. There is a need to refocus many existing education policies, programmes and practices so that they build the concepts, skills, motivation and commitment needed for sustainable development.
4. Education is the key to rural transformation and is essential for the economic, cultural and ecological vitality of rural areas and communities.
5. Lifelong learning, including adult and community education, appropriate technical and vocational education, higher education and teacher education, are all vital ingredients of capacity building for a sustainable future.

LESSON 1: A NEW VISION OF EDUCATION

Education for sustainable development is an emerging but dynamic concept that encompasses a new vision of education that seeks to empower people of all ages to assume responsibility for creating a sustainable future.

Education will shape the world of tomorrow – it is the most effective means that society possesses for confronting the challenges of the future. Progress increasingly depends upon educated minds: upon research, invention, innovation and adaptation. Educated minds and instincts are needed not only in laboratories and research institutes, but also in every walk of life. While education is not the whole answer to every problem,

in its broadest sense, education must be a vital part of all efforts to imagine and create new relations among people and to foster greater respect for the needs of the environment.⁴

Social learning for sustainable development

This lesson has been identified from the work of UNESCO, other international agencies, governments, education systems and many other organizations and actors in seeking to clarify and communicate the concept and key messages of education for sustainable development, one of the key objectives in the CSD's International Work Programme on Education, Public Awareness and Sustainability.

Since 1992 an international consensus has emerged that achieving sustainable development is essentially a process of learning. At major UN conferences of the 1990s, including those on human rights in Vienna (1993), population and development in Cairo (1994), small island developing states in Barbados (1994), social development in Copenhagen (1995), women in Beijing (1995), food security in Rome (1996) and human settlements in Istanbul (1996), the critical role of education was stressed. Just as we learnt to live unsustainably, we now need to learn our way out – to learn how to live sustainably.

Sustainable development requires active and knowledgeable citizens and caring and informed decision-makers capable of making the right choices about the complex and interrelated economic, social and environmental issues facing human society. To achieve this requires the broader process of social change known as *social learning*, or what the Organisation for Economic Co-operation and Development (OECD) calls 'enhancing societal capacity for the environment'. This involves not only specific education and training programmes but also the use of policy and legislation as opportunities for teaching and encouraging new forms of personal, community and corporate behaviour. Social learning also involves reflection – often stimulated by religious leaders and the media – on the appropriateness of the mental models and assumptions that have traditionally guided thinking and behaviour.

From such processes of social learning we have come to realize that sustainable development is a catalytic vision rather than a neatly defined, technical concept. Indeed, we have learnt that:

4. UNESCO, 1997, op. cit., p. 38.

- Sustainable development is perhaps more a *moral precept* than a *scientific concept*, linked as much with notions of peace, human rights and fairness as with theories of ecology or global warming.
- While sustainable development involves the natural sciences, policy and economics, it is primarily a matter of culture: it is concerned with the values people cherish and with the ways in which we perceive our relationship with others and with the natural world.
- Sustainable development requires us to acknowledge the interdependent relationship between people and the natural environment. This interdependence means that no single social, economic, political or environmental objective should be pursued to the detriment of others. The environment cannot be protected in a way that leaves half of humanity in poverty. Likewise there can be no long-term development on a depleted planet.

These principles remind us that sustainable development is grounded in four interdependent systems:

- biophysical systems that provide the life-support systems for all life, human and non-human;
- economic systems that provide a continuing means of livelihood (jobs and money) for people;
- social systems that provide ways for people to live together peacefully, equitably and with respect for human rights and dignity;
- political systems through which power is exercised fairly and democratically to make decisions about the way social and economic systems use the biophysical environment.

This holistic view supports four interrelated principles for sustainable living:

- *Conservation* to ensure that natural systems can continue to provide life-support systems for all living things, including the resources that sustain the economic system.
- *Peace and Equity* to encourage people to live cooperatively and in harmony with each other and have their basic needs satisfied in a fair and equitable way.
- *Appropriate Development* to ensure that people can support themselves in a long-term way. Inappropriate development ignores the links between the economy and the other systems in the environment.

- *Democracy* to ensure that people have a fair and equal say over how natural, social and economic systems should be managed.⁵

Linking social, economic, political and environmental concerns is a crucial aspect of sustainable development. Creating such links demands a deeper, more ambitious way of thinking about education, one that retains a commitment to critical analysis while fostering creativity and innovation. In short, it demands that education promote a system of ethics and values that is sensitive to cultural identity, multicultural dialogue, democratic decision-making and the appropriate use and management of natural resources.

All countries have sought to respond to the challenge of social learning, within the limits of their resources. Increased scientific understanding of the scale, severity and interlocking nature of sustainable development issues over the last two decades has led to heightened levels of environmental and social reporting in the mass media, public awareness of issues and public support for environmental campaigns. Governments and their citizens now expect that schools and other institutions of social learning will help prepare young people to respond positively to the opportunities offered by wide public understanding of, and support for, sustainable development.

The potential of education is enormous. Seen as social learning for sustainability, education can increase concern over unsustainable practices and increase our capacity to confront and master change. Education not only informs people, it can change them. As a means for personal enlightenment and for cultural renewal, education is not only central to sustainable development, it is humanity's best hope and most effective means in the quest to achieve sustainable development.

Educating for a sustainable future: clarifying the concept

Education is the primary agent of transformation towards sustainable development, increasing people's capacities to transform their visions for society into reality. Education not only provides scientific and technical skills; it also provides the motivation, justification and social support for pursuing and applying them. For this reason, society must be deeply

5. UNESCO, *Teaching and Learning for a Sustainable Future*, 2002.
See: <http://www.unesco.org/education/tlsf>.

concerned that much of current education falls far short of what is required. Improving the quality and coverage of education and reorienting its goals to recognize the importance of sustainable development must be among society's highest priorities.

Clarifying the concept of education for sustainable development has been a major challenge for educators over the last decade. The broad scope of Chapter 36 generated extensive debate over such issues as: the meaning of sustainable development in *educational* settings; the appropriate balance of peace, human rights, citizenship, social equity, ecological and development themes in already overcrowded curricula; and ways of integrating the humanities, the social sciences and the arts into what had hitherto been seen and practised as a branch of science education. Some argued that educating for sustainable development ran the risk of indoctrination while others wondered whether asking schools to take a lead in the transition to sustainable development was asking too much of teachers.

These debates were compounded by the desire of many, predominantly environmental, NGOs to contribute to educational planning without the requisite understanding of how education systems work, and how educational change and innovation take place, and of the relevant curriculum development, professional development and pedagogical principles. Not realizing that effective educational change takes time, others were critical of governments for not acting more quickly. The Commission on Sustainable Development assisted in overcoming the inertia of these debates by establishing priorities through a special Work Programme on Education in 1996 that was revised in 1998.

Consequently, many international, regional and national initiatives have contributed to an expanded and refined understanding of the meaning of education for sustainable development. For example, Education International, the major umbrella group of teachers' unions and associations throughout the world, has issued a declaration and action plan to promote sustainable development through education.⁶ Similarly, statements and guidelines in support of reorienting education towards sustainable development have been issued by regional councils of ministers of education and/or environment in the European Union, Asia-Pacific Economic Cooperation (APEC), the Organization of American States

6. Education International, The Second World Congress of Education International Meeting, Washington, D.C., 25–29 July 1998.

(OAS), the Southern African Development Community (SADC) and the South Pacific. Many regional strategic or action plans have been developed. A common call in all of these is the need for an integrated approach through which all government ministries (e.g. education, health, environment, finance, agriculture, industry and consumer affairs) collaborate in developing a shared understanding of and commitment to policies, strategies and programmes of education for sustainable development.

International conservation organizations such as the World Wildlife Fund (WWF) and the World Conservation Union (IUCN) are also actively promoting the integration of education into sustainable development at local community, national and eco-regional scales. In addition, many individual governments have established committees, panels, advisory councils and curriculum development projects to discuss education for sustainable development, to develop policy and appropriate support structures, programmes and resources, and to fund local initiatives.

Indeed, the roots of education for sustainable development are firmly planted in the environmental education efforts of such groups. Along with global education, development education, peace education, citizenship education, human rights education and multicultural and anti-racist education – all of which have been significant – environmental education has been particularly significant. In its brief thirty-year history, contemporary environmental education has steadily striven towards goals and outcomes similar and comparable to those inherent in the concept of sustainability.

In the early 1970s the emerging environmental education movement was given a powerful boost by the United Nations Conference on the Human Environment held in Stockholm in 1972, which recommended that environmental education be recognized and promoted in all countries. This recommendation led to the launching in 1975 by UNESCO and the UN Environment Programme (UNEP) of the International Environmental Education Programme (IEEP), which continued until 1995. The influence of the IEEP – and the national and international activities that it inspired – has been widely felt and is reflected in many of the educational innovations carried out in the last two decades. That work was inspired largely by the guiding principles of environmental education laid down by the Intergovernmental Conference on Environmental Education held in Tbilisi in 1977. The vision and objectives in the Tbilisi Declaration integrated a broad spectrum of environmental, social, ethical, economic and cultural outcomes of education – all of which are central to education

for sustainable development. Its basic principles were successfully translated into educational policies around the world and, with greater difficulty, into schoolroom practice in many countries.

A new vision for education

These many initiatives illustrate that the international community now strongly believes that we need to foster – through education – the values, behaviour and lifestyles required for a sustainable future. Education for sustainable development has come to be seen as a process of learning how to make decisions that consider the long-term future of the economy, ecology and social well-being of all communities. Building the capacity for such futures-oriented thinking is a key task of education.

This represents a new vision of education, a vision that helps students better understand the world in which they live, addressing the complexity and interconnectedness of problems and issues such as poverty, wasteful consumption, environmental degradation, urban decay, population growth, gender inequality, health, conflict and the violation of human rights that threaten our future. This vision of education emphasizes a holistic, interdisciplinary approach to developing the knowledge and skills needed for a sustainable future as well as changes in values, behaviour and lifestyles. This requires us to reorient education systems, policies and practices in order to empower everyone, young and old, to make decisions and act in culturally appropriate and locally relevant ways to redress the problems that threaten our common future. In this way, people of all ages can become empowered to develop and evaluate alternative visions of a sustainable future and to fulfil these visions through working creatively with others.

Seeking sustainable development through education requires educators to:

- place an ethic for living sustainably (based upon principles of social justice, democracy, peace and ecological integrity) at the centre of society's concerns;
- encourage a meeting of disciplines, a linking of knowledge and of expertise, to create understandings that are more integrated and contextualized;
- encourage lifelong learning, starting at the beginning of life and grounded in life – one based on a passion for a radical transformation of the moral character of society;

- develop to the maximum the potential of all human beings throughout their lives so that they can achieve self-fulfilment and full self-expression with the collective achievement of a viable future;
- value aesthetics, the creative use of the imagination, an openness to risk and flexibility, and a willingness to explore new options;
- encourage new alliances between the State and civil society in promoting citizens' emancipation and the practice of democratic principles;
- mobilize society in a concerted effort to eliminate poverty and all forms of violence and injustice;
- encourage a commitment to the values for peace in such a way as to promote the creation of new lifestyles and living patterns;
- identify and pursue new human projects in the context of local sustainability within a planetary consciousness and a personal and communal awareness of global responsibility;
- create realistic hope in which the possibility of change and the real desire for change are accompanied by a concerted, active participation in change, at the appropriate time, in favour of a sustainable future for all.

These responsibilities emphasize the key role of educators as agents of change. There are over 60 million teachers in the world – and each one is a key agent for bringing about the changes in lifestyles and systems that we need. But education is not confined to the classrooms of formal education. As an approach to social learning, education for sustainable development also encompasses the wide range of learning activities in basic and post-basic education, technical and vocational training, and tertiary education, and both non-formal and informal learning, by both young people and adults, within their families and workplaces and in the wider community. This means that all of us have important roles to play as both 'learners' and 'teachers' in advancing sustainable development.

Key lessons

Deciding how education should contribute to sustainable development is a major task. In reaching decisions about what approaches to education will be locally relevant and culturally appropriate, countries, educational institutions and their communities may take heed of the following key lessons learnt from the discussions and debates about education for sustainable development over the past decade:

- Education for sustainable development must explore the economic, political and social implications of sustainability by encouraging learners to reflect critically on their own areas of the world, to identify non-viable elements in their own lives and to explore the tensions among conflicting aims. Development strategies suited to the particular circumstances of various cultures in the pursuit of shared development goals will be crucial. Educational approaches must take into account the experiences of indigenous cultures and minorities, acknowledging and facilitating their original and important contributions to the process of sustainable development.
- The movement towards sustainable development depends more on the development of our moral sensitivities than on the growth of our scientific understanding – important as that is. Education for sustainable development cannot be concerned only with disciplines that improve our understanding of nature, despite their undoubted value. Success in the struggle for sustainable development requires an approach to education that strengthens our engagement in support of other values – especially justice and fairness – and the awareness that we share a common destiny with others.
- Ethical values are the principal factor in social cohesion and, at the same time, the most effective agent of change and transformation. Ultimately, sustainability will depend on changes in behaviour and lifestyles, changes that will need to be motivated by a shift in values and rooted in the cultural and moral precepts upon which behaviour is based. Without change of this kind, even the most enlightened legislation, the cleanest technology, the most sophisticated research will not succeed in steering society towards the long-term goal of sustainability.
- Changes in lifestyle will need to be accompanied by the development of an ethical awareness, whereby the inhabitants of rich countries discover within their cultures the source of a new and active solidarity, which will make it possible to eradicate the widespread poverty that now besets 80% of the world's population as well as the environmental degradation and other problems linked to it.
- Ethical values are shaped through education, in the broadest sense of the term. Education is also essential in enabling people to use their ethical values to make informed and ethical choices. Fundamental social changes, such as those required to move towards sustainability, come about either because people sense an ethical

- imperative to change or because leaders have the political will to lead in that direction and sense that the people will follow them.
- The effectiveness of education for sustainable development must ultimately be measured by the degree to which it changes the attitudes and behaviours of people, both in their individual roles, including those of producers and consumers, and in carrying out their collective responsibilities and duties as citizens.

LESSON 2: BASIC EDUCATION

Basic education provides the foundation for all future education and is a contribution to sustainable development in its own right.

If through education we can lift not just one child but 125 million children out of poverty and hopelessness, we will have achieved a momentous victory for the values ... and the cause of our common humanity.⁷

This lesson has been identified from the work of UNESCO, governments, other international agencies, education systems and many other organizations and actors in seeking to relate education to national strategies and action plans for sustainable development, to review national education policies, and to promote investment in education – three of the key objectives in the CSD's International Work Programme on Education, Public Awareness and Sustainability.

Basic education provides the foundation for all future education and learning. Its goal, as concerns those in the pre-school and primary school-age population, whether enrolled in school or not, is to produce children who are happy with themselves and with others, who find learning exciting and develop inquiring minds, and who begin to build up a storehouse of knowledge about the world and, more importantly, an approach to seeking knowledge that they can use and develop throughout their lives. Basic education is also integral to lifelong learning, especially in increasing the level of adult literacy.

Basic education is aimed at all the essential goals of education: learning to know, to do, to live together with others, and to be (i.e. to assume one's duties and responsibilities), as outlined in *Learning: The Treasure Within*, the report of the International Commission on Education

7. Gordon Brown, Chancellor of the Exchequer, United Kingdom, 22 April 2002.

for the Twenty-first Century.⁸ It is, thus, not only the foundation for life-long learning, but also the foundation for sustainable development.

Access to basic education is a major requirement for poverty eradication. Indeed, poverty cannot be eradicated without education. However, 110 million 6–11-year-olds still do not attend primary school. Millions more attend only briefly – often for a year or less – and then leave without the most essential elements of a basic education or the skills to make their way in an increasingly complex and knowledge-based world. These will join the nearly 900 million adults – the majority of whom are women – who cannot read.

Those denied an education are at an enormous social and economic disadvantage. They are among those with the poorest health, the lowest housing standards and the poorest employment prospects in the world. In fact, they have less of nearly everything in life, except children. In Peru, for example, women with ten or more years of education bear an average of 2.5 children, whereas women with no education have an average of 7.4 children. In other countries, the difference is less extreme, but still sizeable. Nearly everywhere, higher levels of education – especially for girls and women – reduce the average size of families while contributing to the health, well-being and education of children. However, this is not the only way in which education impacts upon sustainability. Education is essential for mobilizing minds and communities in the struggle for sustainable development. (See Box 1.)

Education for all (EFA)

The World Conference on Education for All (Jomtien, Thailand, 1990) marked a new start in the global quest to universalize basic education and eradicate illiteracy. The Jomtien Conference also marked the beginning of a broader vision of basic education to include, as well as literacy and numeracy, the general knowledge, skills, values and attitudes that people require to survive, develop their capacities, live and work in dignity, improve the quality of their lives, make informed decisions and continue learning.

8. Jacques Delors *et al.*, *Learning: The Treasure Within, Report of the International Commission on Education for the Twenty-first Century*, Paris, UNESCO Publishing, 1996.

Box 1**EDUCATING GIRLS AND WOMEN⁹**

Though everyone has an equal right to education, girls and women lag far behind boys and men. Two out of every three of the 110 million children in the world who do not attend school are girls – and there are 42 million fewer girls than boys in primary school. Even if girls start school, they are far less likely to complete their education. Girls who miss out on primary education grow up to become the women who make up two-thirds of the world's 875 million illiterate adults.

Yet education is not only their fundamental right, but also an effective way of achieving higher economic growth as well as social well-being. Educated girls marry later, have fewer children, and feed and look after themselves and their families better. Their survival rate is higher, and their daughters are themselves more likely to go to school. Studies have shown that women with some education are more productive, for example in agriculture, than those with none.

The Dakar Framework for Action set the goals of eliminating gender disparities in primary and secondary education by 2005, achieving gender equality in education by 2015, and ensuring that girls are not denied their right to education. To this end, the United Nations launched a thirteen-agency partnership in 2001 called the UN Girls' Education Initiative (UNGEI) that also includes bilateral agencies, civil societies, NGOs, the private sector and governments. Working in over seventy countries, UNGEI has already had some notable successes. For example:

- Egypt has made a commitment to close the gender gap in basic education, beginning with two pilot projects which include reaching out-of-school girls.
- In Nepal, where the girls' enrolment rate lags nearly 20% behind that of boys, a new initiative is promoting girls' education by focusing on community-owned schools, capacity building for female teachers, health education reform, and special activities for the daughters of bonded labourers.
- Actions to stem girls' drop-out rates, promote life skills, address HIV/AIDS and increase vocational education for girls are features of a new programme for girls' education in Malawi.

9. UNESCO, *Education for All Information Kit*, 2001.

The *Education for All (EFA) Year 2000 Assessment* was the end-of-decade review of the objectives agreed in Jomtien. This was the most in-depth evaluation of basic education ever undertaken. National assessments, sample surveys, case studies, a series of 14 thematic studies, and data on 18 statistical indicators quantified progress in more than 180 countries. The *Assessment* revealed that none of the EFA targets set at Jomtien had been met in its entirety – most notably, the fundamental goal of achieving ‘universal access to, and completion of, basic education by 2000’. However, many successes were noted:

- The number of children enrolled in school rose from an estimated 599 million in 1990 to 681 million in 1998, nearly twice the average increase during the preceding decade. Eastern Asia and the Pacific, as well as Latin America and the Caribbean, are now close to – and China and India have made substantial progress towards – achieving universal primary education. Developing countries as a whole have achieved a net-enrolment ratio in primary education in excess of 80%.
- The importance of early childhood education is now recognized, and the idea that education begins at birth has taken root in many societies. As a result, the number of children in pre-school education has risen by 5% in the past decade.
- More people are now entering secondary education and the rate of completion for upper-secondary education is rising steeply with each successive age group. Worldwide, secondary education enrolment has expanded tenfold over the past 50 years, from 40 million in 1950 to more than 400 million today. Over the same period, tertiary education enrolments increased nearly fourteenfold, from 6.5 million in 1950 to 88.2 million in 1997.
- The number of literate adults has grown significantly over the past decade, from an estimated 2.7 billion in 1990 to 3.3 billion in 1998. The overall global adult literacy rate now stands at 85% for men and 74% for women. More than 50% of the world’s adult population have now attended primary school. *However, an estimated 880 million adults cannot read or write, and in the least developed countries one out of every two individuals falls into this category. Two-thirds of illiterate adults are women – exactly the same proportion as ten years ago.*
- A few countries have made progress in reducing inequalities of educational opportunity as reflected by gender, disability, ethnicity, urban versus rural location, and working children. *Nevertheless,*

positive trends in primary education mask the disparity of access both between and within many countries, and disparities in educational quality can remain even when access rates are high. People in poor, rural and remote communities, ethnic minorities and indigenous populations have shown little or no progress over the past decade. And the gender gap persists.

Despite the concerns noted, these improvements represent a substantial contribution to building the capacity for sustainable development.

World Education Forum

In 2000, ten years after Jomtien, the World Education Forum (Dakar, Senegal) confirmed the World Declaration on Education for All and agreed to six new goals in the Dakar Framework for Action:

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

These goals make the links between basic education and sustainable development very clear. Indeed, the Dakar Framework for Action states:

‘Education is ... the key to sustainable development and peace and stability with and among countries, and [is] thus an indispensable means for effective participation in the societies and economies of the twenty-first century.’

UNESCO was nominated to orchestrate the global efforts to achieve EFA by 2015 and is building partnerships with governments, civil society groups, regional organizations and international agencies (e.g. the World Bank, the International Monetary Fund [IMF] and UNICEF). A key component is the International Decade for Literacy, which strongly links education to the crucial task of poverty alleviation.

Key lessons

The following principles learned from successful EFA activities over the past decade are being integrated into regional and national EFA action plans:

- EFA goals are attainable provided that the problems of educational access are addressed first and in an adequate manner.
- Redressing inequalities and disparities in access, quality and learning outcomes should be the cornerstone of national educational policy-making, planning and implementation.
- Increased attention should be given to curriculum planning and the provision of adequate and relevant learning materials for improved teaching and learning processes.
- The content of education, as well as the processes of teaching and learning, need to be more learner-centred and less controlled by syllabuses, textbooks and examination requirements. This makes the school curriculum relevant, and also helps students become self-motivators, self-learners and critical thinkers.
- School effectiveness and learning outcomes can be improved through developing a culture of maintenance, discipline, stewardship, care and self-esteem, democratic management, school–community partnerships, and a commitment to responsibility, professionalism and excellence.
- The home environment has a major impact on learning outcomes. Parental education and home learning support are vital to learners – providing health and nutrition, moral values and codes of conduct, positive attitudes to education, and support for the school’s requirements of learners.

- Systematic and continuous assessment, monitoring and evaluation schemes are needed to understand the dynamics of educational change and to help stakeholders develop appropriate responses.¹⁰

Education in emergency situations

A special audience for basic education is represented by the millions of young people and adults living in emergency and post-conflict situations where the education system has been destabilized, disorganized or destroyed due to human-induced crises such as civil strife and war, or natural disasters such as flood and drought.

The number of such people is not inconsiderable. At the end of 1999, UNHCR recognized that there were over 15 million refugees in the world;¹¹ other estimates placed the number of internally displaced persons at between 20 and 50 million.¹² These data mean that up to 1% of the world's population have been displaced by conflict or other disasters, have returned home under difficult circumstances, or are otherwise attempting to rebuild their lives and communities without access to services such as education. However, education is a vital way for students, their families and their communities to begin the trauma-healing process, and to learn the skills and values needed for a more peaceful future and better governance at local and national levels. At its most basic level, this is education for sustainable development.

UNHCR and its partners in the Interagency Network Group have identified key lessons for education in emergency situations for Education in Emergencies,¹³ including the following:

10. *Education for All – Monitoring Learning Achievement: EFA 2000 Assessment Surveys*, Report for the Strategy Session of the World Education Forum, p. 15, Paris, UNESCO, 2000. See also: R. Benjamin and S. Hanes, 'Transforming public education', in K. A. Wheeler and A. P. Bijur (eds.), *Education for a Sustainable Future: A Paradigm of Hope for the 21st Century*, New York; Kluwer Academic, 2001; and *Knowledge and Skills for Life: First Results from PISA 2000*, Paris, OECD.
11. This included 11.7 million in UNHCR statistics and 3.7 million Palestinian refugees under the aegis of the United Nations Relief and Works Agency for Palestine Refugees (UNRWA). See J. Crisp, C. Talbot and D. Cipollone (eds.), *Learning for a Future: Refugee Education in Developing Countries*, Geneva, UNHCR, 2002.
12. Crisp, Talbot and Cipollone (eds.), *op. cit.*
13. *Ibid.* See also <http://www.unesco.org/education/emergency/index.shtml> for a review of educational responses in crisis and post-conflict situations.

- A rapid response is vital to educational reconstruction.
- A community-based approach, e.g. through the involvement of local groups in conducting needs and skills assessments, can ensure high levels of participation in education.
- Existing capacity should be strengthened through providing resources and training for teachers, youth leaders and school management committees.
- Attention needs to be paid to the emotional and physical needs of learners as well as the cognitive ones, particularly focusing on the needs of special groups, such as the physically maimed or abused, the mentally traumatized, former child soldiers, etc.
- Durable educational solutions are most often related to the curriculum and language of study in the country of origin, and should provide physical and social protection skills, sustain study skills and develop survival and peace-building messages and skills.

LESSON 3: REORIENTING EDUCATION

There is a need to refocus many existing education policies, programmes and practices so that they build the concepts, skills, motivation and commitment needed for sustainable development.

To be an effective change agent, the fundamental purposes of education have to change – as indicated by Agenda 21.... The current challenge is not so much to reorient education, but to collectively learn to change our perceptions about the purpose and role of education towards a systems based and sustainability oriented paradigm. Without [such] a change in values, technical measures to promote education for sustainable development will have little effect.¹⁴

This lesson has been identified from the work of UNESCO, other international agencies, governments, education systems and many other organizations and actors in seeking to clarify and communicate the concept and key messages of education for sustainable development, to promote sustainable consumption and production patterns, and to identify

14. S. Sterling, *Inspiration! A Report and Commentary for the Commission on Sustainable Development*, Godalming (United Kingdom), WWF-UK, 1998.

and share innovative practices – three of the key objectives in the CSD's International Work Programme on Education, Public Awareness and Sustainability.

Ten years after Rio, there is substantial (but insufficient) progress towards the reorientation of education systems in terms of how to prepare people for life: for job security; for the demands of a rapidly changing society; for technological changes that now directly or indirectly affect every part of life; and, ultimately, for the quest for happiness, well-being and quality of life.

Globalization is proving to be a particular challenge to education. Its economic impacts have been uneven and its cultural impacts threaten local ways of viewing the world. However, globalization has brought an awareness of the scale of the shared burdens we face and of ways of cooperating with others to address them. Within many countries, formal education systems that were no longer considered adequate to meet the needs of society and the workplace have been rethought. For the most part, however, the limited achievements serve only to show the new direction in which curriculum reform needs to move.

Nevertheless, core themes and key lessons for reorienting education policies, programmes and practices towards sustainable development can be identified. These include: a balanced and holistic range of objectives; interdisciplinarity; student-centred learning; and an emphasis on: futures education; citizenship education; education for a culture of peace, gender equality and respect for human rights; population education; health education; education for protecting and managing the natural resource base of economic and social development; and education for sustainable consumption.

Objectives

While education reproduces certain aspects of current society, it also prepares students to transform society for the future. Education must help students to determine what is best conserved in their cultural, economic and natural heritage. It must also nurture values and strategies for attaining sustainability locally, nationally and globally. This requires a curriculum that enhances life skills as a foundation for basic education, as set out in the Dakar Framework for Action, and that balances knowledge, values and skills objectives. A sample set of such objectives is provided in Box 2.

Box 2

SAMPLE OBJECTIVES FOR A CURRICULUM REORIENTED TO SUSTAINABLE DEVELOPMENT¹⁵

Reorienting education for sustainable development encompasses a vision for society that is not only ecologically sustainable but also one that is socially, economically and politically sustainable as well. To achieve this vision, schools should plan learning experiences that enable students to achieve the following objectives:

SKILLS

The ability to engage in:

- critical and creative thinking;
- oral, written and graphic communication;
- collaboration and cooperation;
- conflict management;
- decision-making, problem solving, and planning;
- using appropriate technology, media and ICTs;
- civic participation and action;
- evaluation and reflection.

ATTITUDES AND VALUES

- respecting the Earth and life in all its diversity;
- caring for the community of life – both human and non-human – with understanding, compassion and love;
- building democratic societies that are just, sustainable, participatory and peaceful;
- securing the Earth's bounty and beauty for present and future generations.

15. Compiled from various sources, including: K. Wheeler, 'Introduction', in Wheeler and Bijur (eds.), op. cit.; J. Fien, 'Listening to the voices of youth: implications for educational reform', in D. Yencken, J. Fien and H. Sykes (eds.), *Environment, Education and Society in the Asia-Pacific: Local Traditions and Global Discourses*, London, Routledge, 2000; Earth Charter, <www.earthcharter.org>; Oxfam, *A Curriculum for Global Citizenship*, Oxfam UK, 2000; H. Collins et al., *Guidelines for Global and International Studies Education* (see www.globaled/guidelines/intro.html).

KNOWLEDGE

An understanding of, and ability to apply the concepts of:

- *Sustainable development*: a process by which the needs of present generations can be satisfied without compromising the ability of future generations to satisfy their own needs;
- *Interdependence*: the relationships of mutual dependence between all elements and life forms, including humans, within natural systems;
- *Basic human needs*: the needs and right of all people and societies for fair and equitable access to flows of energy and materials for survival and a satisfying quality of life within the limits of the Earth;
- *Human rights*: the fundamental freedoms of conscience and religion, expression, peaceful assembly and association, which ensure access to democratic participation and meeting basic human needs;
- *Democracy*: the right of all people to access channels for community decision-making;
- *Local–global links*: the recognition that the consumption of a product or service in one part of the world is dependent on flows of energy and materials in other parts of the world and that this creates potential opportunities and losses, economically, socially and environmentally, at all points in the local–global chain;
- *Biodiversity*: the diverse and interdependent composition of life forms in an ecosystem that is necessary for sustaining flows of energy and materials indefinitely;
- *Interspecies equity*: a consideration of the need for humans to treat creatures decently and to protect them from cruelty and avoidable suffering;
- *Ecological footprint*: the area of land and water needed to support the total flow of energy and materials consumed by a community or population indefinitely;
- *Precautionary principle*: the need to act judiciously and with an awareness of unintended consequences when we do not possess all the facts about a situation and/or when scientific advice on an issue is divided.

Interdisciplinarity

Reorienting education to sustainability requires us to work increasingly at the interface of disciplines in order to address the complex problems of today's world. What people will need to know in five, ten, twenty or fifty

years cannot be reliably predicted. It is predictable, however, that such developments will not fit neatly into the disciplinary boundaries that have been in place for more than a century. Hence understanding and solving complex problems is likely to require intensified cooperation among scientific fields as well as between the pure and mathematical sciences and the social sciences, the arts and the humanities. Reorienting education to sustainable development will, in short, require important, even dramatic changes in the way we think of knowledge.

Student-centred learning

Participation in the decisions that affect children's own lives is a key element in the Convention on the Rights of the Child. Learning how to participate requires that children and young people have opportunities, within the safety of a learning environment, to practise decision-making. This may be done through curriculum and assessment policies that encourage the development of self-esteem and personal responsibility and of skills for learning how to learn, for critical thinking and for active participation. Space needs to be left in the curriculum for students to plan their own learning goals and methods, as and when appropriate, and for self- and peer-assessment.

Resource-based teaching, inquiry and discovery learning, values clarification and analysis, problem-based learning, simulation games and role play, and learning through community problem solving are student-centred approaches to learning that need to be encouraged. Such approaches encourage authentic or 'deep learning' rather than the 'shallow learning' of rote recall and memorization for examinations. Authentic learning relates to everyday issues and future concerns. It proceeds at the pace at which individuals learn well rather than by imposed schedules and standards. Authentic education engages the 'whole person' – body, mind and spirit – in the learning process and creates enthusiasm, insight and reflection as well as compassion, energy and a commitment to working individually and with others to build a sustainable future.¹⁶

16. Adapted from D. Orr, 'Foreword', in S. Sterling, *Sustainable Education: Re-visioning Learning and Change*, Totnes (United Kingdom), Green Books, 2001 (Schumacher Briefing No. 6.).

Futures education

If it is true that all education is for the future, then the future needs to become a more explicit element in all levels of education. As education for sustainable development is education for a future that we cannot yet predict, it is important that education programmes seek to develop skills for understanding and anticipating change and for facing the future with courage and hope. This would involve coming to realize that the future is a human creation, made by our decisions, and that in a democratic society, people have the right – indeed an obligation – to contribute positively to a sustainable future. This would involve learning how to learn, how to analyse and solve complex problems, how to think creatively and critically about the future, how to anticipate and make our own histories. These contribute to the skill of foresight and are all aspects of a futures orientation in education.

Education for gender equality

Women have always been – and remain – the deciding influence on the quality of life and well-being of their families and communities. They are the primary care-givers and the managers of natural resources, including food, shelter and consumption of goods, in most cultures. In addition, women have jobs and careers. However, the general failure to provide equal opportunities for women to pursue education and economic self-sufficiency has meant that a disproportionate number are poor and marginalized. These social barriers – exclusion, low status and poverty – are also barriers to a sustainable future.

These facts make the education of girls and women a priority for sustainable development. It also means that all people, female and male, need to learn about the issues of gender and sustainable development and to learn within environments that are sensitive to the learning needs and styles of both females and males. Curriculum materials aimed at promoting such understanding are being produced in most countries. Education systems and schools are also developing policies that promote gender equality within educational processes, while teacher education programmes are drawing attention to the importance of including a gender perspective in all subject areas. UNESCO, national governments and many organizations are also seeking to advance the participation of girls in science, mathematics and information and communication technologies.

These are important beginnings in the process of promoting gender equality in and through education.

Education for citizenship and democratic societies

Informed and active citizenship is a primary objective of educating for a sustainable future. Around the world, efforts are being made to integrate citizenship objectives into the formal curriculum. This has involved the promotion of content themes as well as teaching, learning and assessment processes that emphasize values, ethical motivation and the ability to work with others to help build a sustainable future. The global spread of democracy has expanded electoral enfranchisement and meant that adult education for citizenship is also expanding

A key aspect of citizenship education within the context of sustainable development is international understanding. This helps bring an understanding of the links between local and global issues. It also means that young people can be given opportunities to examine their own cultural values and beliefs, to appreciate the similarities between peoples everywhere, to understand the global contexts of their lives, and to develop skills that will enable them to combat prejudice and discrimination. In these ways, students can use their knowledge, skills and commitments to plan an active role in the global community.¹⁷

Education for a culture of peace and respect for human rights

A key pillar of education is learning how to live together in peace and harmony. This involves, first, strengthening one's own identity, self-worth and self-confidence and, then, learning to appreciate the cultures of others, to respect others as individuals and groups, and to apply the same ethical principles to decisions about other people that one would apply within one's own culture. These are key learnings for life in the twenty-first century.

Yet schools are sometimes affected by deep-seated national stereotypes of others, overly nationalistic sentiments and views of history, and contemporary ethnic, religious and political tensions. Schools can even pass on partisan views inadvertently, for example through insensitively written or outdated textbooks. The UNESCO Associated Schools Project (ASP-NET) has been instrumental in developing strategies and resources

17. From *Global Perspectives in Education*, London, Development Education Association.

for promoting human rights and peace in the curriculum. As shown in Box 3, schools can also be used as channels for building peace at the societal level.

Box 3

COMBATING DISCRIMINATION IN CHILE: AN INTERVIEW WITH THE CHILEAN EDUCATION MINISTER, MARIANA AYLWIN¹⁸

Q. What are the special problems facing Chile's education system?

A. The country is in the throes of the 'massification' (general expansion) of education. Also, our education system continues to put content before the job of instilling social and emotional values. The relationship between teachers and pupils is still based on hierarchy, which leaves little room for pupil participation and initiative. Chilean society is also strongly biased against some sectors of the population and there is violence in our schools.

Q. Can schools help people live peacefully together?

A. Chilean educational reform has set this and citizenship as broad and fundamental goals in all aspects of school life. We want to include non-violent conflict resolution in our on-the-job training for teachers. Pilot projects are already under way in several parts of the country. We also have a programme where schools open their doors to pupils and parents on Saturdays and Sundays. As schools get more involved with the local community, they become cultural, sporting and social meeting places.

Q. Schools themselves may take part in discrimination instead of fighting it. How can this be avoided?

A. In Chile, we have a system of assessing teachers which takes into account their degree of tolerance, compassion and respect for diversity, and their efforts to combat discrimination. School textbooks have been very carefully written to avoid sexist or discriminatory content.

18. *Education Today*, No. 1, 2002.

Health education

A child's ability to attain her or his full potential is directly related to the synergistic effect of good health, good nutrition and appropriate education. Good health and good education are not only ends in themselves, but also means that provide individuals with the chance to lead productive and satisfying lives. School health is an investment in a country's future and in the capacity of its people to thrive economically and as a society. Thus good health and nutrition are both essential inputs and important outcomes of basic education. Children must be healthy and well-nourished in order to fully participate in education and gain its maximum benefits. Early childhood care programmes and primary schools that improve children's health and nutrition can enhance the learning and educational outcomes of schoolchildren, especially girls, and thus for the next generation of children as well. In addition, a healthy, safe and secure school environment can help protect children from health hazards, abuse and exclusion.

Improving the health and learning of schoolchildren through school-based health and nutrition programmes is not a new concept. Many countries have school health programmes, and many agencies have decades of experience. These common experiences suggest an opportunity for concerted action by a partnership of agencies to broaden the scope of school health programmes and make them more effective. Thus WHO, UNICEF, UNESCO and the World Bank have developed a core group of cost-effective strategies for making schools healthy for children and thus for contributing to the development of child-friendly schools. These agencies have launched a new approach to health education called FRESH (Focusing Resources on Effective School Health). The FRESH framework is a starting point for developing an effective school health component in broader efforts to achieve more child-friendly schools. The FRESH framework involves four components:

- Health-related school policies, including skills-based health education and the provision of some health services, can help promote the overall health, hygiene and nutrition of children.
- The provision of safe water and sanitation can ensure that all schools have access to clean water and sanitation. By providing these facilities, schools can reinforce the health and hygiene messages, and act as an example to both students and the wider community.

- Skills-based health education focuses upon the development of knowledge, attitudes, values and life skills needed to make, and act on, the most appropriate and positive health-related decisions.
- School-based health and sanitation services can deliver vital health and nutritional services if they are simple, safe and familiar, and address problems that are prevalent and recognized as important within the community.¹⁹

A healthy population and safe environments are important preconditions for a sustainable future. However, at the beginning of the twenty-first century, the education of many children and young people around the world is compromised by conditions and behaviours that undermine their physical and emotional well-being. Hunger, malnutrition, malaria, polio and intestinal infections, drug and alcohol abuse, violence and injury, unplanned pregnancies, HIV/AIDS and other sexually transmitted diseases are some of the health problems faced. As a result, schools must be not only centres for academic learning, but also supportive venues for the provision of essential health education and services.

HIV/AIDS is a major concern for teachers and education systems. The impacts on people's lives – and on the opportunities for economic activities – mean that the epidemic is a major threat to plans for a sustainable future. The experience of UNESCO, UNICEF, WHO and others indicates several key lessons for effective school-based preventive education programmes, including:

- HIV-related issues need to be integrated into broader education about reproductive health, life skills, substance abuse and other health issues.
- Prevention and health programmes should not only teach young people the biomedical aspects of reproductive health, but also how to cope with the complex demands of relationships.
- Programmes that adopt a life-skills approach are the most successful; these help young people take greater control of their lives by making healthy life choices, gaining greater resistance to negative pressures and minimizing harmful behaviours.

19. Adapted from *Improving Learning Outcomes by Improving Health and Nutrition: Incorporating the FRESH Approach in National Action Plans for Achieving Education for All*, Paris, UNESCO, 2001.

- Prevention and health programmes should begin at the earliest possible age and certainly before the start of sexual activity.
- Prevention and health programmes should extend to the whole educational setting, including the school system, students, teachers and other school personnel, parents, and the community around the school.

UNESCO is currently investigating how education systems need to adapt to the new contexts that are resulting from the HIV/AIDS pandemic as a way of illustrating that the quality of education that students receive is vital to their personal and social futures.

Population education

Education plays a vital role in the quest to ensure that the basic needs and well-being of all the world's people are met. This is also the ultimate goal of population policies. Sustainable development, above all else, requires new ways of thinking and acting. Within this context, the relationship between education and population needs to be seen in the broader context of the struggle to overcome poverty, promote justice and equity, and ensure respect of the environment and for the right of future generations to live healthy and fulfilling lives.

Population education is aimed at enabling learners to better understand the nature, causes and effects of population dynamics and the manner in which they affect – and, in turn, are affected by – the actions of individuals, families, communities and nations. If properly conducted, population education is liberating and empowering, not indoctrination or propaganda. It does not seek to impose particular attitudes or behaviours upon learners, but rather to enable them to make informed decisions that serve their own best interests.

The key lessons learnt about population education over the last decade include the following:

- Education can be consciously used to achieve population and health objectives. Increasing general levels of education is, over time, a highly effective means of dealing with population issues. Specific programmes, however, are needed to focus on urgent problems, such as HIV/AIDS, or vulnerable groups, such as poor women in developing countries.

- Population education must deal with values and views. Clarifying and classifying these is especially important in the emotionally charged issues of sex and reproduction confronted by young adults, particularly young women. The goal is to teach people to think and reason for themselves, to develop self-respect as well as respect for others, to think ahead and plan their future, and to carefully consider the implications as well as the consequences of their behaviour on themselves and others.
- A considerable number of population education programmes have been addressed specifically to girls and young women. They also, where necessary, provide referrals to health services. Many studies show that girls and women suffer from lower self-esteem and expectations than do boys or men in similar situations. Population education programmes, when well conceived and executed, can lead a school's response to these problems.
- It is now recognized that women cannot adequately protect their sexual and reproductive health in the context of power imbalances with their male partners. Thus many population initiatives are also beginning to provide boys with caring, informed and responsible images of what it means to be 'male'. This has given rise to a range of programmes to collect information on and support the preparation of boys for effective fatherhood, responsible masculinity, more equal participation in decision-making about contraception and fertility, and fuller participation in caring for children.
- Probably no single factor is as important to the success of population education as the training and motivation of teachers. Teacher training colleges are a strategic entry point for introducing needed population education information and, more importantly, for providing training in the communication skills, attitudes and approaches required by a subject dealing with intimate behaviours.
- The prevailing attitudes and practices within schools are also important in either strengthening or undermining the messages of population education. Discussion of gender equality, for example, is pointless where the school itself limits the opportunities available to girls to participate equally in all fields of study and activities.

In summary, successful population education programmes share a number of common characteristics. They appear to be well adapted to their socio-economic conditions and institutional structures; they provide

coherent, easy-to-understand and convincing messages; they make use of well-trained teachers; and they enjoy the unequivocal support of the education system and its leaders.

Education for the world of work

Parents around the world are rightly keen that their children should do well at school and then get a job. However, job opportunities are increasingly difficult to find, especially in rapidly changing economies. Most students will make their living at home, in villages, on farms, working with their families using the resources of their local environment or in the informal or 'popular' economies of cities. Those who continue to higher levels of schooling may find employment in the formal sector, but they will still need knowledge and skills in order to help their communities make informed decisions.

Core concepts and skills in language, maths, science and social science are important, but practical skills for earning a living are also vital. Lack of appropriate preparation for work in local villages and communities has contributed to rural–urban drift and, in the long run, to high rates of unemployment, poverty and crime in cities in many countries. Meeting the needs of sustainable livelihoods, not just of the formal economy and workplace, calls for an approach to education that would equip young people with basic skills to take control of their own lives, to improve their standard of living and to make decisions about the type of development that is appropriate to their own communities, both urban and rural. The new syllabus is being introduced into the core curriculum in Papua New Guinea to integrate these important life and vocational skills into basic education. The course is called 'Making a Living' (Box 4).

Education for protecting and managing natural resources

Education in all its forms is making a major contribution to protecting ecosystems and integrating natural resource management and energy conservation, through promoting awareness, knowledge, skills, values and action objectives. Biodiversity education is well served by the many NGOs concerned with local and global ecosystems. Educators in botanic gardens, museums and other non-formal learning centres have made especially important contributions, as have television documentaries and the media in general. However, a minority of these remain restricted to a narrow,

Box 4**PAPUA NEW GUINEA – MAKING A LIVING****Syllabus rationale**

The Making a Living course is being introduced into the core curriculum for Grades 6–8 throughout Papua New Guinea. Teachers of the course are encouraged to use an integrated approach, and select the content (knowledge and skills) from other subjects that relate to the project, and to teach that content not in isolation, but in relation to the chosen project(s). In this way, students are exposed in an integrated way to a body of knowledge that is related to real life.

Aims

The Making a Living course aims to provide relevant learning experiences through which all students will develop skills, knowledge and attitudes that will enable them to:

- understand a wide range of concepts and principles on food production, using and managing resources, as well as business skills;
- use local resources sustainably to improve their quality of life, both individually and as community members;
- acquire vocational skills and competencies to create self-employment;
- plan, organize, implement and evaluate a project relevant to the needs of the local community;
- develop self-confidence, self-reliance and interpersonal skills;
- develop positive attitudes to work, accept responsibility for their actions and respect others;
- accept their rights and responsibilities within the context of their community's spiritual and social values;
- investigate opportunities and apply knowledge and skills through group participation in practical applications to health, safety, agriculture, home improvement and community improvement;
- develop a sense of caring for their environment;
- know how and where to access information and to critically evaluate that information to assist personal and community self-reliance;
- develop critical thinking and apply the best solutions to improve their lives.

Content strands

The course content is organized into four main strands:

Skills for Living: This strand contains the core skills that students learn and apply in the other strands. They learn the skills of investigation, planning and designing, making or producing, marketing and evaluating.

Better Living: In this strand, students learn practical ways to meet their basic needs and improve their quality of life. They use appropriate resources and a range of techniques and equipment to produce a product to meet a basic need or to solve a problem.

Managing Resources: In this strand, students learn how to use their resources sustainably and productively. They acquire skills for improved food production and ways to care for their environment.

Community Development: In this strand, students learn the skills needed to participate in activities in their community and build collaborative working relationships.

nature-based environmental education approach. Many energy producers have developed energy education programmes that integrate social and environmental issues into broader lessons about the physics of electricity, alternative and renewable energy sources, and the importance of energy conservation.

Of all natural resources, water is the most precious, and hence water must be a significant theme in education for sustainable development. Governments, water authorities, conservation NGOs and community organizations have all played prominent roles in establishing action-oriented water quality monitoring projects that link schools with their local communities and environment. Programmes with names such as Global Rivers Environmental Education Network (GREEN), Waterwatch, Streamwatch, Ribbons of Blue, the Schools Water Action Project (SWAP), Springs Project, etc., as well as coastal and maritime programmes such as Coastwatch, Coastcare, Adopt-A-Beach, Baltic Seas Project, etc., have successfully generated concern and action for a sustainable future. (See Box 5.)

Indeed, among the most successful programmes are those that avoid the belief that awareness leads to understanding, understanding leads to concern, and concern motivates the development of skills and action. Instead, the key ingredient of success is to start from the questions, issues and problems that concern young people themselves, and to help them develop 'action competence' through community-based learning.

Box 5

WATER KITS – GIVING AWAY THE TOOLS OF SCIENCE²⁰

Share-Net, a collective that produces low-cost educational materials in South Africa, develops water quality monitoring materials for schools. Adapting the process to local conditions meant that the equipment had to be cheaper and simpler than the apparatus used in the United States. Jam tins and small cardboard boxes, packed with simple tools to test for coliform (sewage) contamination, turbidity (soil erosion), nitrates (fertilizer levels), pH and so on, were distributed. A booklet with instructions for using the kit to monitor water catchment quality was included in the box. It used the acronym ACTION to guide learners through the processes of: Asking (local residents about the changing quality of their river or stream); Checking (various visible features of the catchment); Testing (using the apparatus provided); Informing (residents and authorities of the findings); Outlining (a catchment conservation plan); and Networking (involving others in catchment action).

The water testing kits proved very popular with teachers and pupils alike, with sales of between 2,000 and 2,500 kits each year since 1993. They were inexpensive and flexible enough to stimulate the imagination of both students working on 'gold medallist' science projects and farm school pupils wanting to test the quality of the drinking water in their rain tank. Soon a network of water quality monitoring projects around the country developed, with the contents of the water kits and associated lesson plans adapted to local conditions and need, supported by local workshops and networking around the materials.

However, Share-Net warns that water testing kits and related technologies are not ends in themselves. The kits need to be used to support better educational processes, within the larger role of schools to promote conceptual, emotional and citizenship learning, which, in their turn, can bring the capacity for social and environmental change.

20. J. Taylor and E. Janse van Rensburg, 'Share-Net: environmental education resource networking in a risk society', in D. Tilbury, R. Stevenson, J. Fien and D. Schreuder (eds.), *Education and Sustainable Development: Responding to the Global Challenge*, Gland, IUCN Commission on Education and Communication, 2002.

Action competence brings the capacity to envision alternatives, clarify the values and interests that underlie different visions, and make choices between visions. This includes developing the skills to plan, take action and evaluate that are needed by active and informed citizens. Action competence brings knowledge, not just of the problem and its symptoms, but also of its root causes – how it impacts on people’s lives, ways of addressing it, and how different interests are served by different sorts of solutions.

Education for sustainable consumption

Consumption lies at the heart of the debate about sustainable development, as it covers people’s right to live and work in a clean environment with good health and social conditions. However, what counts as sustainable consumption and a sustainable lifestyle depends on context and culture. In the North, for example, major changes are needed to reduce the impacts of consumption, whereas in the South, consumption levels may need to rise in the interests of global equality – otherwise, the basic human needs for food, water, housing, education, health and transport for the 4.4 billion people who live in the South may not be met. One of the tasks of education for sustainable development, especially in Northern countries, is to explain why these differences exist and the many ways in which the social and environmental impacts of one’s consumption patterns may be reduced with very little, if any, decline in one’s quality of life.

Education programmes need to integrate sustainable consumption issues so that young people can determine an appropriate balance between their rights as consumers and their responsibilities as citizens. Such programmes must not only change attitudes and values but also develop action competence, the ability to act in democratic and thoughtful ways to bring about change. Such programmes need to be based on at least three key principles:

- Programmes that provide information on environmental facts and the need to change, or try to tell people how to behave, are generally ineffective.
- Programmes should provide an understanding of *why* particular changes are important, and help people explore a range of alternatives in order to find ones that make sense in their own lives.
- Programmes should provide opportunities for people to develop and practise skills such as problem solving and decision-making.

Box 6

IS THE FUTURE YOURS? YOUTHXCHANGE: TOWARDS SUSTAINABLE LIFESTYLES²¹

The world's young people are partners with UNESCO and UNEP in the development of a new resource for sustainable development. A project called Youth and Sustainable Consumption surveyed 10,000 18–25-year-olds in 24 countries to ask what they are interested in, how they consume and how they intend to shape their future. A training kit, or toolbox, entitled *YouthXchange: Towards Sustainable Lifestyles*, was then produced to assist youth groups, NGOs and teachers to raise awareness on sustainable consumption and empower young people to make more sustainable purchasing decisions. The publication provides reliable and clear information on the meaning and challenges of sustainable consumption, in particular among young people. The toolbox has two components:

- **A guide** (printed and web-based) representing a road map to the issues involved, such as: the links between production and consumption, sustainable shopping (eco-labels, consumer choice, etc.), mobility and waste (packaging, reuse, recycling, etc.), energy saving, water use and health (food safety, personal lifestyles, etc.), labour conditions (child labour, toxic processes, etc.) and media literacy (understanding advertising, films, music, etc.).

- **A website** with the following content:

Trainer's room: A site map to facilitate the best use of the website. Along with the brochure, it is a basic tool for teachers, young leaders, NGOs, etc., to implement and develop contents and practical demonstrations on sustainable consumption.

Facts & figures atlas: This interactive atlas visualizes key statistics on consumption patterns throughout the world, demonstrates the imbalances in consumption and demand patterns across the globe and also deals with issues related to under-consumption.

Best practices: An analysis of a limited number of case studies of companies, institutions and NGOs to help students and trainers select the most

21. *YouthXchange: Towards Sustainable Lifestyles – Training Kit on Responsible Consumption*, Paris, UNESCO/UNEP, 2001.

effective approaches towards sustainable consumption. The end result of this section is a set of concise and practical guidelines. This is one of the toolbox's main features.

Test & game: Interactive tests to aid the promotion of awareness on broader issues such as energy saving, recycling, nutritional basics, media literacy, etc. This section is intended to deal with sustainable consumption in a more entertaining way, such as a series of quizzes, which test the user's growing knowledge and awareness on the issues linked to sustainable consumption.

Job opportunities: This showcases successful youth-led projects, showing young people that their actions can make a difference. This section provides information to guide users on employment, travel and voluntary work worldwide.

The 10 basics: Ten basic principles that enable the trainer or any user to address issues directly through young people's interests. It also sets out clearly what is meant by working towards a sustainable community.

FAQs: A list of frequently asked questions on sustainable consumption and young consumers' rights provides concise descriptions of key environmental/social issues as: LCA (life cycle assessment), waste management, green design, energy saving, child labour, etc.

Links: A list of interesting websites grouped by specific issues, each with a concise description.

This kind of orientation requires, *inter alia*, increased attention to the humanities and social sciences in the curriculum. The traditional primacy of science as a foundation for nature study, and the often apolitical contexts in which it is taught, need to be balanced with the study of political economy, social sciences and the humanities. Learning about the interactions of ecological processes would then be associated with local lifestyles, family and community concerns and needs, cultural values, market forces, equitable decision-making, government action and the environmental impacts of human activities in a holistic, interdependent manner. Such a curriculum places the notion of citizenship among its primary objectives. This may require a revision of many existing curricula and the development of objectives and content themes, and of teaching, learning and assessment processes, that emphasize moral virtues, ethical motivation and the ability to work with others to help build a sustainable future.

LESSON 4: EDUCATION FOR RURAL DEVELOPMENT

Education is the key to rural transformation and is essential for the economic, cultural and ecological vitality of rural areas and communities.

The problems of poverty and deprivation in rural areas and their spill-over into urban areas cannot be solved by preventing urbanization and keeping rural people confined to rural areas – which would be impossible in any event.... The challenge of education to serve rural transformation must become one of the main themes of the education for all effort. Not taking up this challenge is to imperil the total education for all effort.²²

This lesson has been identified from the work of UNESCO, other international agencies, governments, education systems and many other organizations and actors in seeking to clarify and communicate the concept and key messages of education for sustainable development, to relate education to national strategies and action plans for sustainable development, to review national education policies, to promote investment in education and to promote public awareness, five of the key objectives in the CSD's International Work Programme on Education, Public Awareness and Sustainability.

Many, if not all, of the goals for education and development in the twenty-first century cannot be realized without giving special attention to the situation of rural populations. In spite of rapid urbanization, 3 billion or 60% of the people in developing countries, and half of the people of the world, still live in rural areas. Three-quarters of the world's poor, those earning less than US\$1 a day, live in rural areas. One in five children in the South still does not attend primary school and, while rural–urban statistics on education are scarce, many countries report that non-attendance in school, early drop-out of students, adult illiteracy and gender inequality in education are disproportionately high in rural areas, as is poverty. Urban–rural disparities in educational investment and in the quality of teaching and learning are also widespread.

Rural people and rural areas are not homogeneous, and so for education to be relevant, it needs to respond to the diversity of rural situations. Educational activities have to be linked to the specific needs of the

22. UNESCO, *Education for Rural Transformation: A Conceptual Framework Discussion Document*, pp. xi–xii, Baoding, UNESCO International Research and Training Center for Rural Education (INRULED), 2002.

rural community for skills and capacities to seize economic opportunities, improve livelihoods and enhance the quality of life. A multisectoral educational approach involving all ages and formal, non-formal and informal education is necessary. These concerns are being taken up in the FAO/UNESCO EFA Flagship Programme on Education for Rural People.

Early childhood care and education

Early childhood education complements and strengthens family-based learning. It provides the child's first formal learning opportunities and prepares children for primary schooling. In the rural context, early childhood education can compensate, at least partially, for the disadvantages of poverty in the home and family environment. While delivery mechanisms will differ from context to context, essentially any early childhood programme designed for rural communities must encompass:

- the provision of specially trained care and education providers who are child-friendly and child-sensitive and, as far as possible, belong to the community or village in which the programme is based;
- a learning environment, teaching methods and classroom materials that are stimulating and invigorating, to attract the child as well as to hold his or her attention;
- health and nutrition components that monitor both physical and mental growth, as well as curative inputs and meal supplements to help improve nutrition levels of children;
- counselling and information dissemination for parents on child rearing, nutrition, health and education.

Relevant school programmes

To achieve social and economic development in rural areas, rural education needs to be planned as an integrated package of traditional ways of knowing, academic knowledge and practical skills. Box 7 provides an example of one way in which schools in rural areas can do this and thus contribute to community development.

It is also important that school curricula support the development of practical skills for earning a living in the rural economy. Thus the curriculum needs to focus upon such topics and themes as:

- farm planning and management, rational decision-making, record keeping, cost and revenue computations, and the use of credit;
- application of improved farm practices;
- storage, processing and food preservation;
- supplementary skills for farm maintenance and improvement, as well as sideline jobs for extra income;
- knowledge of government services, policies, programmes, etc.;
- knowledge and skills for family improvement (e.g. health, nutrition, home economics, child care, family planning) and civic skills (e.g. knowledge of how cooperatives, local government and national government function);
- new and improved technical skills applicable to particular goods and services;
- management skills (business planning; record keeping and cost accounting; procurement and inventory control; market analysis and sales methods; customer and employee relations; knowledge of government services, regulations, taxes; use of credit);
- leadership skills for generating community enthusiasm and collective action, staff team work and support from higher echelons.²³

Box 7

SCHOOLS AND RURAL TRANSFORMATION – A CASE STUDY FROM BHORLETAR, NEPAL²⁴

Bhorletar is a rapidly growing settlement of some 150 houses run by an elected Village Development Committee (VDC). The village centre is growing fast, with 35 new houses built in the last year – 20 of them by newcomers to the area. Without any town planning, the results are beginning to show in terms of pollution of the village canal, uncollected garbage and poor sanitation. In many respects it is a typical Nepalese village. Land is scarce, yet most of the villagers depend on farming. Roughly half the village land is cultivable but there is less than 0.5 hectare for each of the 3,000 people living there.

23. Adapted from J. Rowley, 'Bhorletar: the sustainable village', *People and the Planet*, Vol. 2, No. 4, 1993, pp. 14–19.

24. Ibid.

The task of drawing up environmental plans for Bhorletar began in 1990. A system of 'participatory rural appraisal' was used to collect information about every aspect of village farming and life. This included drawing up detailed land-use maps. A local teacher was trained to carry out these activities, working with the local steering committee and the community as a whole. Secondary-school geography students, under teacher guidance, carried out land-use mapping and surveying.

The teacher took the lead in writing up the village profile, which went through various revisions. The profile included the number of springs, forest patches, tree species, landslides, cropping patterns and hazard-prone areas, and highlighted a number of problems: rapid depletion of the forest due to increasing population and the need for farmland and firewood; a lack of latrines now made essential because of population growth; flooding and erosion in the river valley; domestic animal diseases; a lack of clean drinking water; and increasing numbers of landless immigrants.

Finally, an environmental plan based on this profile was refined by the villagers themselves and approved at meetings with the local district council and representatives from the various line agencies of central government. The village selected its own activities for priority action and drew up a series of recommended solutions. These included: community forest conservation; improved fuel wood stoves; new latrines; protective dams and afforestation to stop flooding; the raising of ducks to control snails; improved roads, vegetable gardens and marketing; and a new health post.

The top priority for immediate action was given to clean drinking water, to be provided by a system of gravity-fed pipes and taps alongside a system of long-term community maintenance, watershed protection, toilet building, fruit tree planting and vegetable growing to take advantage of the convenient supplies of water. All the villagers helped in building and laying the pipeline, which feeds twenty-two taps. This included one extra tap for the primary school for which the parents provided all the materials. Rules have been agreed for using the various taps (some being kept only for drinking water).

Rural vocational training

While every aspect of lifelong learning is important, perhaps none is more so than the area of creating additional income-generation opportunities. In community learning centres, ongoing programmes are needed to

upgrade and refine existing skills and teach fresh skills that help the rural community to link with new, evolving markets in surrounding urban areas. To design a programme to meet the community's needs, surveys must first assess existing levels and categories of skills and also the demands of local and neighbouring markets. Then, school learning centres need trained instructors who impart hands-on instruction of sufficient duration and levels of sophistication. Simultaneously, sufficient quantities of raw materials and sets of machinery and tools have to be provided. Finally, the programmes should not remain static but evolve so as to cater for emerging requirements.

Vocational and skill-development programmes are most effective when they are linked to locally functioning small industries or cooperatives or to nearby units that can provide much-needed expertise and then use the skills that are taught by employing the people they have helped to train. Some countries have gone even further and have located at district level centrally funded institutions that have the financial and technical resources to facilitate and assist skill-development programmes run by community learning centres.

Lifelong learning

Lifelong learning lies at the heart of the transformation of the rural community, and must ideally develop and enrich the minds of community members. This is only possible if people have access to attractive and user-friendly reading rooms and library facilities. Managers of continuing education projects need to ensure that reading rooms and libraries are conveniently located, accessible to all members of the community, and well stocked with books and periodicals that balance the requirements for knowledge or information on the one hand and pure entertainment on the other. If cyber kiosks can rapidly dot the urban landscape, there is no reason why rural communities cannot have their libraries/information centres equipped with television and Internet facilities.

A very important aspect of lifelong learning is adult literacy. Literacy is an essential skill for coping with the economic and social changes that are rapidly affecting traditional rural ways of living. Literacy and continuing education projects are needed to help rural people understand the 'what' and 'how' of production and the marketing of goods and services. They can develop and upgrade the skills needed to improve land productivity and to assist members of rural society to relate to new technologies

and to respond creatively to new income and earning opportunities. Above all, adult education must help rural people suffering from poverty to develop positive attitudes and values that enhance their self-esteem and self-confidence.

Box 8

BEYOND LITERACY WITH ANTEP²⁵

In the Philippines, in 1996, an NGO called the Association for Non-Traditional Education in the Philippines (ANTEP), committed to exploring different ways of providing education for both young people and adults, began a non-formal education programme in partnership with the Philippines–Canada Development Fund. Under this programme, ANTEP developed a new curriculum that was, in many ways, a reversal of traditional curricula. Instead of starting with concrete subjects such as health and technical skills and moving on to more abstract conceptual learning related to society and to individual development, this curriculum started with helping the student participants to come to their own understanding of the major issues of life and society, with religious values and philosophical issues – the kinds of questions that many adults, both literate and non-literate, constantly ask themselves. The curriculum then looked at social concerns such as living in harmony with people who are different, and communication. It was only at a later stage that the technical skills needed to earn a living were introduced. Literacy skills were developed throughout the programme but more specifically in the later stages, the earlier stages laying more emphasis on oral teaching activities.

In December 1998 ANTEP conducted an end-of-programme assessment of the pilot implementation. Some of the lessons that ANTEP drew were the following:

- Functional literacy is a vital ingredient in any community development programme. It allows greater participation and ownership, and can be an effective tool for raising awareness on socially relevant issues like child abuse, gender and the environment.

25. UNESCO, 2002, *op. cit.*

- Increased sensitivity and the development of skills to use appropriate materials in local situations help learners relate to the class discussions, thus facilitating meaningful learning.
- Involving local government and other stakeholders is crucial for the sustainability of the programme.
- It is important to identify community-based facilitators at the start of the programme. The potential community-based facilitator has to grow with the programme by hands-on training.
- Built-in monitoring, evaluation and feedback systems allow for the revision/modification of the learning processes used and ensure better quality.
- Involving the families of the learners during social preparation reduces the incidence of drop-out and sustains the motivation of the learners to continue with the sessions.

In summary, sustainable development can be advanced by policies and programmes of education for rural transformation that:

- close the resource gap in education, especially in rural areas;
- reflect rural concerns in education for all strategies;
- provide educational statistics and educational management information systems that better reflect the rural realities;
- facilitate the transfer, adaptation, dissemination and use of appropriate technologies from rich to poor countries and to rural people;
- bring the benefits of information and communication technology to rural people;
- act to build the learning community in rural areas and create international and regional partnerships to articulate, build the constituencies of support for, plan and guide follow-up activities to promote education for rural transformation.

LESSON 5: LIFELONG LEARNING

Lifelong learning, including adult and community education, appropriate technical and vocational education, higher education and teacher education, are all vital ingredients of capacity building for a sustainable future.

Lifelong learning will hold the key to ensuring that, with the further development of information and communication technology, we avoid the

'haves' and the 'have-nots' of the past. At the same time, we must ensure that we use the talent of all, to fulfil the potential of individuals and to ensure our economic survival as a nation. Lifelong learning is also essential to sustaining a civilized and cohesive society, in which people can develop as active citizens, where creativity is fostered and communities can be given practical support to overcome generations of disadvantage.²⁶

This lesson has been identified from the work of UNESCO, other international agencies, governments, education systems and many other organizations and actors in seeking to clarify and communicate the concept and key messages of education for sustainable development, to relate education to national strategies and action plans for sustainable development, to review national education policies, and to promote public awareness – four of the key objectives in the CSD's International Work Programme on Education, Public Awareness and Sustainability.

The concept of education throughout the full span of life is the most important innovation to appear in recent educational theory. Sustainable development requires that education not only continue throughout life, but be as broad as life itself; in other words, it is an approach to education that serves all people, draws upon all domains of knowledge and seeks to integrate learning into all of life's major activities.

The time when education was the activity of childhood, and work the pursuit of adults is long over. Education, at all levels, is a continual process in which instruction is offered to people at every stage of life – formally and informally by different systems. The foundation of lifelong learning is basic education, which extends beyond pre-school, primary and junior secondary schooling, to include basic literacy education for adults who may have missed important educational opportunities earlier in life. Only by taking this view will we successfully include the excluded, and reach those who otherwise could not be reached.

The rapid growth of knowledge has rendered the notion of schooling as a 'once and for all' preparation for life utterly obsolete. Knowledge is advancing exponentially, yet not nearly as fast as the need for understanding and solutions. The G8 Summit held in Cologne in 1999 issued a charter for lifelong learning. The charter argues that the

26. United Kingdom Department for Education and Skills (DfES), *The Learning Age*, London, DfES, 1999.

challenge of globalization is for every country to become a learning society and to ensure that its citizens are equipped with the knowledge, skills and qualifications they need, not just for improved living standards but also an improved quality of life. Economies and societies are increasingly becoming knowledge based; therefore education and skills are indispensable to economic success, social cohesion and civic responsibility.

Lifelong learning can include aspects of basic education, but also adult and community education, appropriate technical and vocational education, higher education and teacher education, all vital ingredients of capacity building for a sustainable future.

Adult and community education

Action towards sustainable development ultimately depends on public awareness, understanding and support. In democratic societies, public policy responds to the will of the people. It is here that public awareness and understanding of the need for sustainable development best expresses itself through support for laws, regulations and policies favourable to the environment.

People express their preferences as they decide how to spend their money, as well as through the ballot. Public action, through voting or otherwise, is contingent on more than 'public awareness'. What is needed is an understanding of the issues, and of the likely consequences of a given purchasing or electoral decision. Public understanding is the foundation for people to fulfil their roles as responsible citizens, consumers and public-spirited individuals.

Public awareness and understanding are, at one and the same time, consequences of education and influences on the educational process. A public that is well informed of the need for sustainable development will insist that public educational institutions include in their curricula the scientific and other subject matters needed to enable people to participate effectively in activities directed towards achieving sustainable development. The students that emerge from such courses will, for their part, be alert to the need for public authorities to make adequate provision for the protection of the environment in all development plans. (See Box 9.)

Box 9**COMMUNITY EDUCATION AT CHILIKA LAKE, INDIA²⁷**

World Wetlands Day (WWD) was commemorated at Chilika Lake on 2 February 2002 to encourage people to use wetlands and their resources wisely. Chilika Lake has been damaged by siltation, choking of the inlet and outer channels, weed infestation, a decrease of water area, and a low fish catch due to reduced migration from the sea, and was highly prone to inland flooding, etc.

Pallishree, an NGO, and the Chilika Development Authority organized a programme of events in cooperation with local stakeholders, communities and schoolchildren. Over 5,000 people attended the events. The main activity was a boat rally at Barkul. Other activities included observing Irrawaddy dolphins (an endangered species found only in Chilika), bird watching, a wetland drama, a children's programme and an interactive programme for stakeholders.

Pallishree has also established five Centres for Environmental Awareness and Education. Their activities have brought about significant changes in people's attitudes and behaviour and have increased awareness concerning the wise use of the lake's resources. These centres conduct educational programmes to improve public awareness as well as income-generating activities, and publicize lake conservation activities in their respective localities.

The Chilika Development Authority and Pallishree confidently assert that World Wetlands Day will continue to be commemorated at Chilika Lake, in order to build local people's trust and confidence in the sustainable utilization of the lake's resources, and demonstrate the Authority's commitment to the wise use of wetlands and their resources.

Two key lessons of adult and community education are very relevant to education for sustainable development. First, women are usually the first to notice sustainable development problems. They see them, for example, in their local communities, in the quality of drinking water, in declining soil productivity and in their children's health. The actions of women are also often the most vital in addressing these problems. This

27. See <http://www.chilika.com/home.htm>.

essential relationship between gender and sustainable development means that the education of girls and women must lie at the core of education for a sustainable future.

Second, and usually following the first, is the realization that people are not unaware of the social and environmental problems they face. In fact, more often than not, people have learnt a substantial amount about them – from the media, social movements, scientists, governments and, most importantly, their daily experience. Consequently, there is a need to move beyond awareness raising, and to engage people critically and creatively in their own communities, planning and engaging in action for socially just and ecologically sound development at the local level.²⁸

The precautionary principle tells us that a major reason for focusing on adult education for sustainable development is that it would be unwise to wait for the present generation of school and college students to grow up and begin applying what they are learning. Indeed, it is today's adults who are the primary voters, consumers, workers, teachers, scientists and parents. At the Conference on Adult Education (CONFINTEA V), meeting in Hamburg in 1997, members of the International Council for Adult Education's Learning for Environmental Action programme stressed that today's adults 'must have the opportunity to develop their critical thinking skills, and to use their ideas, knowledge, power and imaginations to begin to make change rather than simply maintaining the ecological status quo'.²⁹ Thus they defined education for sustainability as a key process and outcome of adult and community education.

Technical and vocational education

Technical and vocational education (TVE) is vital to two of the most urgent human resource problems facing global society: the need to develop appropriate skills for sustainable development, and the high levels of unemployment and under-employment in many countries. TVE trains technicians, who are the interface of nature, technology, economy and society and have a key role to play in helping society resolve environmental and development issues. Challenges such as: reorienting technology and managing risks, meeting essential needs such as food, water and sanitation while at the same time conserving natural resources, reducing

28. Adapted from D. Clover, S. Follen and B. Hall, *The Nature of Transformation: Environmental Adult Education*, 2nd ed., Toronto, University of Toronto Press, 2000.

29. *Ibid.*, p. 3.

energy and resource consumption, and many more will have to be tackled by them. Technicians who are aware of, and have acquired, practical skills for sustainable development can ultimately apply more sustainable practices, as they are the ones who are involved in production.

Recognizing the crucial role of TVE graduates in devising and implementing practical solutions to problems such as environmental degradation, the UNESCO International Congress on Technical and Vocational Education stressed that TVE systems should not only focus on economic dimensions but should also incorporate emerging issues such as the use of environmentally sound technology.

Formal programmes of TVE are important in countries of both the North and the South. However, non-formal TVE is also important as a strategy for empowering out-of-school youth, the homeless, street children and other marginalized youth. Current education systems are sometimes not serving the best interests of such young people. Programmes are needed to develop practical and entrepreneurial skills in areas such as recycling, alternative energy technologies, and handicrafts that can stimulate and support young people to apply their creativity, skills and solidarity in income-generating activities, especially in the so-called informal or 'popular' economy.

The popular economy has become the main vector for productive activity for the majority of the world's poor, especially those living in the world's rapidly expanding cities. The popular economy represents the last resort against extreme poverty, youth unemployment and social exclusion, and is made up of a multitude of small businesses, often family-run, but also of individual activities run by women and youth. Jobs vary greatly, and include: recycling discarded household equipment, repairing machines, sewing, selling and transporting water, making craft goods, and market stalls. To contribute effectively to sustainable development, TVE also needs to address training needs for these jobs. (See Box 10.) The case study in Box 4 is an example of this within the framework of basic education.

Successful training initiatives for participation by marginalized youth in the popular economy have at least three principles in common:

- They reflect the dynamism and flexibility of the neighbourhoods, the young people and the organizations that support them. This requires flexibility on the part of the authorities that regulate the economy to develop policies that encourage, rather than hinder, small-scale local entrepreneurial activities.

Box 10**ENDA GRAF IN GRAND YOFF – AN INFORMAL-SECTOR POLYTECHNIC³⁰**

The Enda Graf premises in Grand Yoff, Senegal, reflect the spirit of Enda, a non-formal education organization that began in Dakar and is now present in twelve countries in Africa, Latin America and Asia. Enda has concentrated its activities in cities, convinced that one of the keys to sustainable development will be found in the rapidly expanding cities of the South. One of Enda's priorities is work with young people, who represent the future of towns and cities and make up, in some cases, more than half their population.

Visitors to Enda Graf enter a wide patio planted with trees for shade and an area to sit and chat. The patio leads to the meeting hall and offices. Local craftspeople gather here in groups to discuss matters with staff from local savings and loan associations. The cooperative brings together more than 100 artisans from many different areas of work and has taken on almost 280 apprentices, between 35 and 60 a year.

According to Morwouly Ndiaye, the President of the Grand Yoff artisans' cooperative, 'The education system trains young people without developing their abilities to face real life. And when they fail at school, their parents "throw" them into a workshop.' The Grand Yoff cooperative aims to do the exact opposite. After an initial training period, in which both parents and apprentices discuss and agree on the value of manual labour, a seven-year training period begins. Morwouly Ndiaye explains that it takes this long because the apprentices go through several workshops, learning every trade: carpentry, metalwork, masonry, etc. 'The result is that they really know how to get on in life when they leave. If one job doesn't work out, they can fall back on the other skills they have acquired.'

In addition to technical training, the apprentices see how small businesses function. They sell their products themselves and learn how to save so that they can have a certain amount of capital and credit when they leave. These 'informal-sector polytechnic' students do not receive diplomas, but, compared with other young people who leave state training establishments with experience in only one field, they are well protected for the future.

30. Adapted from A. Ravignan, *Working and Inventing on the Streets of Africa: Education to Fight Exclusion*, Paris, UNESCO, 1998.

- Programmes seek to develop the ‘whole person’ rather than just their knowledge and skills or their potential to earn a living. They also provide activities and support structures that encourage self-esteem, basic life skills (saving, credit, etc.), self-protection strategies (from violence, sexual abuse and HIV/AIDS) and electoral enfranchisement.
- Partnerships are needed, especially with local schools and other educational institutions, to provide out-of-hours literacy and basic education classes and flexible examination systems to enable young people to find alternative pathways back into formal education.

Higher education

Higher education has a crucial role to play in sustainable development. In the decade since the Earth Summit, many higher education institutions worldwide have made significant efforts to incorporate sustainable development into academic programmes, research, community outreach and their own management operations.

It is, for example, increasingly important to include materials on sustainable development in courses for journalists, engineers, managers, doctors, lawyers, scientists, economists, administrators and numerous other professions. As students arrive at the university from secondary schools with experience in and a taste for interdisciplinary work, universities in many countries are slowly adapting to meet their needs and demands. Major research projects, such as that on climate change, work across disciplines. However, the frontiers between academic disciplines remain staunchly defended by professional bodies, career structures and criteria for promotion and advancement. Some progress has been made but much more remains to be done to break down disciplinary barriers and develop student – and staff – expertise in working collaboratively on real world problems in real world settings.

Universities can also provide a valuable service by integrating components of sustainable development into their outreach programmes for teachers, senior managers and local leaders such as mayors, parliamentarians and others in leadership positions. They can also play a key role in international cooperation and, perhaps, could do so more effectively if they gave fuller consideration to North–South research partnerships to conduct interdisciplinary inquiries into environment and development issues.

National partnering and networking has proved to be successful in sharing examples and lessons of good practice and encouraging their adoption by others. Of significance is the formation of a Global Higher Education for Sustainability Partnership (GHESP) by CRE-COPERNICUS, University Leaders for a Sustainable Future, the International Association of Universities and UNESCO.³¹ The objectives of GHESP include:

- to promote better understanding, and more effective implementation, of strategies for the incorporation of sustainability in universities and other higher education institutions, beginning with signatories to the charters and declarations sponsored by the partner organizations;
- to undertake a global review and assessment of progress in making sustainability central to curriculum, research, outreach and operations in institutions of higher education and, in so doing, assist UNESCO in its role within the UN system in contributing to the preparation of Rio + 10, as well as contribute to the follow-up of the World Conference on Higher Education;
- to identify and share effective strategies, models and best practices for promoting higher education for sustainability; and analyse experience thus far, with a view to making recommendations based on these studies in consultation with key stakeholders from both North and South, including business, governments, other UN bodies such as the United Nations University (UNU), as well as other relevant NGOs.

Key lessons for success in implementing innovative policies and practices that achieve sustainable outcomes in universities include:

- a demonstration of commitment from senior executives: full, visible and tangible support from senior university executives is critical to success in implementing sustainability strategies. A clear signal can be sent to the university community by becoming a signatory to one of the key declarations on sustainability in higher education (e.g. Talloires, CRE-COPERNICUS, Kyoto);
- a 'triple-bottom line' perspective: sustainable universities focus not only on efforts to 'green' the curriculum and their management

31. See <http://www.unesco.org/iau/ghesp>.

practices but also on measures to promote social and economic sustainability;

- a sustainability strategy: universities that are successful tend to have a comprehensive strategy for sustainability that has been negotiated and agreed through the university's decision-making structures;
- implementation and cultural change: the likelihood of sustainability strategies leading to real outcomes depends on successful cultural change across a university, and developing appropriate attitudes and skills among students and administrative and academic staff;
- monitoring and evaluation: a process for regular monitoring and evaluation and reporting is vital to ensuring continuous and effective implementation.

Sustainability science

Universities are major drivers of research and development in all fields of endeavour, including sustainable development. The international acceptance of the Millennium Development Goals means that a vision of providing every child, woman and man with an opportunity for a productive and healthy life is now within reach. Achieving the vision will not be easy, however. Much will depend on political will, international partnerships and social mobilization. Much also will depend on national and international cooperation in science to provide the technological developments and applications that will be required.

The Budapest Declaration on Science agreed by nearly 2,000 scientists at the World Conference on Science in 1999 focuses on this need, arguing that 'Science and technology should be resolutely directed towards prospects for better employment, improving competitiveness and social justice.' Convened by UNESCO and the International Council for Science (ICSU), the conference called for sustainability to be both the goal of scientific endeavour and a guide to processes for new approaches to scientific research.

Termed 'sustainability science', this approach is rapidly gaining support. It begins not with theoretical questions – important as these are – but with the pressing questions, issues and problems facing people at local, ecosystem and global scales. As a result, sustainability science is responsive and seeks to provide tools that bridge the gaps between the research community, those who need its advice, and the processes of

policy-making, planning and decision-making. Sustainability science is interdisciplinary and participatory. It accepts the validity of traditional ways of knowing, values the knowledge and research efforts of local communities and seeks to build partnerships with communities and decision-makers that strengthen the capacities of people to solve their own problems.

In seeking to harness science to meet basic human needs, sustainability science is emerging as an important challenge to the 'publish or perish' and 'patent and profit' cultures that have tended to draw the efforts of scientists and scholars away from the major issues facing humankind.

Teacher education

There are over 60 million teachers in the world, and every one is potentially a key agent for bringing about the changes in values and lifestyles needed for sustainable development. Consequently, innovative teacher education is needed to tap this potential. Indeed, this was a key priority within Chapter 36 of Agenda 21 and associated work programmes developed for education.

The administrations and faculties of institutions of teacher education have the potential to bring about tremendous change, because they create the teacher education curriculum, train new teachers, provide professional development for practising teachers, consult with local schools, and often provide expert opinion to regional and national ministries of education.

Key initiatives around the world to promote teacher education for sustainability over the past decade include:

- a *Toolbox* in-service education project conducted by the National Consortium for Environmental Education and Training in the United States;
- diverse initiatives in the United Kingdom sponsored by WWF, Forum for the Future and the UK Panel on Sustainable Development and several local education authorities;
- the Environmental Education Initiative in Teacher Education in Europe;
- the UNESCO Learning for a Sustainable Environment: Innovation in Teacher Education project in Asia and the Pacific;
- a professional development programme for over seventy teacher education colleges in the province of Karnataka in India;

- a network of teacher education and resource centres in China sponsored by WWF;
- a national teacher education programme in New Zealand that has trained over forty people to provide in-service training for teachers in their local regions;
- a national teacher education programme in South Africa that has appointed a coordinator in each province, and established a range of curriculum and resource development projects and is developing a national structure for the accreditation of teachers who complete the courses;
- an international network of some fifty teacher education institutions, each of which is conducting a project to reorient all or part of its pre-service curriculum towards sustainability, facilitated by a UNESCO Chair on Reorienting Teacher Education to Address Sustainability at York University (Canada);
- the on-line and CD-ROM-based multimedia teacher education programme, *Teaching and Learning for a Sustainable Future*, developed by UNESCO as a demonstration project for adaptation and translation to suit local educational and cultural contexts (see Box 11).

Box 11

TEACHING AND LEARNING FOR A SUSTAINABLE FUTURE: A MULTIMEDIA TEACHER EDUCATION PROGRAMME³²

Teaching and Learning for a Sustainable Future is a multimedia teacher education programme produced by UNESCO. It contains 100 hours (divided into 25 modules) of professional development for use in pre-service teacher courses as well as the in-service education of teachers, curriculum developers, education policy-makers, and authors of educational materials. The programme, which is available in two multimedia formats – a CD-ROM and an Internet programme available at URL: <http://www.unesco.org/education/tlsf/index.html> – enables educators to plan learning experiences that empower their students to develop and evaluate alternative visions of a sustainable future and to work creatively with others to help bring their visions of a better world into effect.

32. See <http://www.unesco.org/education/tlsf>.

CONTENT

The programme contains twenty-five modules, divided into four thematic sections:

Curriculum Rationale: Exploring global realities; Understanding sustainable development; A futures perspective in the curriculum; Reorienting education for a sustainable future; Accepting the challenge.

Teaching about Sustainability Across the Curriculum: Sustainable futures across the curriculum; Citizenship education; Health education; Consumer education.

Interdisciplinary Curriculum Themes: 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; Sustainable communities.

Teaching and Learning Strategies: Experiential learning; Story-telling; Values education; Enquiry learning; Appropriate assessment; Future problem solving; Learning outside the classroom; Community problem solving.

EVALUATION

The development of the programme involved an international reference group, advice from over fifty programme specialists in UNESCO, consultations across the UN system and extensive international evaluation by several hundred teachers and educators, sustainable development experts and multimedia specialists. The evaluation comments include:

'In my country, more and more people are paying much attention to sustainable development, but there is a need for more materials and resources. So this programme will be very helpful, especially in pre-service teacher training.' (China)

'I have been grappling with these issues for many years. It was wonderful to see that it has all been pulled together in such a broad, systematic, inspiring and practical way.' (South Africa)

'Very timely. It is highly informative and richly referenced. It is also user-friendly and the instructions are clear. Hence there was no difficulty in using and learning from the package. It combines graphics, sound and text with web connections. A good learning experience.' (India)

'Most enlightening and well researched. Sources and references are excellent. I want to involve some of my colleagues and integrate it into our courses.' (United States)

'As schoolteachers, we can say that this programme is very valuable and complete. We discovered a lot of innovations, new teaching methods and new methods of presentation of information that were not known to us before.' (Uzbekistan)

'The depth and interdisciplinary design of the programme, as well as the possibilities for widespread dissemination, will place it as a landmark work toward focus, learning and internationalization of the values required for sustainable living.' (Earth Charter Secretariat, Costa Rica)

ADAPTATION AND TRANSLATION

UNESCO is aware that no single teacher education programme can suit the needs of all potential users. Thus *Teaching and Learning for a Sustainable Future* has been designed and developed so as to facilitate translation into other languages as well as adaptations to respond to regional, national or local needs. UNESCO is ready to work with government ministries, regional organizations, teacher education institutions and others responsible for the professional development of teachers to help facilitate these changes.

A partnership of UNESCO, the Government of South Africa, the SADC Regional Environmental Education Centre, several universities and the Wildlife and Environment Society of South Africa undertook a thorough revision of the original programme to publish a southern African version.

ISSUES, CHALLENGES AND POSSIBLE WAYS FORWARD

You have issued us the challenge. We will not disappoint you.
(Wangarai Mattai, of the Kenya Self-Employed Women's Association, or SEWA)

The challenge of sustainable development is difficult and complex and poses particular challenges for education planners, institutions and teachers. Chief among these is achieving an understanding of the meaning of sustainable development that is appropriate for educational settings. However, this problem is not really that difficult – at its heart is the simple

idea of ensuring a better quality of life for everyone, now and for generations to come: this is the purpose of education in a nutshell.

Sustainable development simply provides a framework for thinking about what sort of world this could be, and what is needed to build such a world, that is, what goals, values, concepts and skills will be needed. Analysis of lessons learnt over the past decade of educational innovation illustrates that education systems and institutions are coming to understand the importance of education for sustainable development, the new vision of education it encompasses, and the contributions it can make to basic education, secondary, technical and vocational and higher education, in teacher education and in adult and community education.

Issues and challenges

Issues and challenges remain, however. While progress has been significant, it has been uneven. No one country displays all the possible dimensions of education for sustainable development and no country has integrated education into all aspects of its sustainable development plan. No one education system or country has been able to implement all the dimensions of the reorientation process described in these pages. Among the significant remaining issues and challenges are the following:

- better integrating education for sustainable development into sustainable development policies (e.g. economic, environment and population policies) in a wider range of countries;
- better integrating education for sustainable development as a framework for education policies, especially national action plans related to EFA goals;
- developing and implementing policies, guidelines and strategic plans on education for sustainable development more widely;
- addressing issues of governance to improve coordination between ministries of education and ministries of environment, natural resources, agriculture, etc.;
- emphasizing education for sustainable development in non-formal as well as formal education;
- strengthening institutional capacity building and professional development processes for improved planning and implementation of education for sustainable development;

- increasing monitoring, evaluation and reporting of sustainable development education initiatives and their outcomes and impacts;
- increasing attention to the sustainability of initiatives so that policies, programmes and activities are embedded in long-term education plans and financial arrangements.

Possible ways forward

In summary, what are the most effective ways of moving forward? First, there is the need to make education more inclusive, to enrol all children in schools or alternative programmes and to provide adolescents and adults with opportunities for initial and continuing learning. Such strategies should emphasize the inclusion of women and girls, who are so often excluded, because educating girls and women has major benefits, not only in terms of reducing the numbers of children and improving their health and well-being, but also because women make up half the world's workforce and their deep concern with quality-of-life issues makes gender a prime sustainable development issue.

Second, there is a need to increase the relevance of education to achieve maximum impact. Improving the orientation and quality of existing programmes is a prime need. An existing secondary curriculum, for example, can be oriented towards sustainability by rethinking the ends it serves and adjusting its content and approach to suit the new objectives being pursued. Such reforms, whether to secondary education or higher education, can yield significant results without requiring huge efforts or imposing enormous expenditures. Population education, health education, education for sustainable consumption, appropriate vocational education – all need to be integrated into core learning for people of all ages.

Third, capacity building is a major need. Teachers are the key to learning and the quality of education. The UNESCO-UNEP International Environmental Education Programme once described the preparation of teachers as 'the priority of priorities'. Increased efforts to reorient teacher education courses and programmes towards sustainability can empower teachers to maximize student and community participation in negotiating what and how students learn and for what purposes. All student teachers should have opportunities to develop familiarity with: (i) the concepts and processes of sustainability; and (ii) the professional roles and skills needed to teach for a sustainable future. To this end, regular opportunities should be provided for continuing in-service professional development

for teachers to reflect upon and develop their commitments and practices in teaching for a sustainable future.

Fourth, strategies for promoting education for sustainable development must not relegate ecological concerns to one sphere and put development concerns in another; nor must they see decisions concerning economics or ecology as being science-based and value-free. The aim of education for sustainable development is to put the pieces of life back together again in order that we may see development not as an economic puzzle or an ecological danger, but as a set of rational and moral choices guided by a vision of the future to which we aspire.

Reorienting education for sustainability does not require large additional sums of money; it does, however, require political will, from governments willing to model an interdepartmental, cooperative approach to sustainable development. Schools, other educational institutions and the community at large could then take up that lead with whole-of-school, community-inclusive approaches that aim to engage each individual, adult and child, in the process of seeking sustainable lifestyles. Sustainability is the goal; it is a goal that cannot be reached by technological 'fixes', by scientific research or by government edict. It is a goal that requires commitment from across the community, a commitment that can only be developed through education.

12.

EMERGING ISSUES IN EDUCATION FOR SUSTAINABLE DEVELOPMENT

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WORLD CONSERVATION UNION (IUCN) COMMISSION ON EDUCATION
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Education is ... the key to sustainable development and peace and stability within and among countries, and thus an indispensable means for effective participation in the societies and economies of the twenty-first century.¹

Since Agenda 21, education has been increasingly recognized as critical to the attainment of sustainable development globally. United Nations agreements and resolutions, of major conferences held since 1992, acknowledge that education is the key to a sustainable future and have attested to its importance as a tool to initiate and sustain social change processes towards sustainable development.

Education is seen as vital to enable public engagement in sustainability issues as it enhances people's abilities to find solutions to unsustainable practices and to envision sustainable futures. It is also critical to strengthening governance and global partnerships, which build institutional support, allocate rights and enforce responsibilities towards sustainable development.²

Intergovernmental meetings, such as the World Education Forum, recognize that there is a need for substantial reorientation of formal curriculum structures and increased support for lifelong learning for sustainability. Growing recognition of the need to prioritize actions in this

1. UNESCO, *The Dakar Framework of Action. Education for All: Meeting our Collective Commitments*, Paris, UNESCO, 2000.
2. D. Tilbury, D. Hamu and W. Goldstein, *Learning for Sustainable Development Earth-Year Report*, Gland, IUCN, 2002.

area has led many to call for education to be identified as a major group within the Commission on Sustainable Development and for a UN Decade of Education for Sustainable Development. In the lead-up to the World Summit on Sustainable Development, the IUCN Commission on Education and Communication reviewed progress in education since Rio.³ This review documented progress towards advancing the role of education in sustainable development, although this has not been as substantial as many had hoped for.

Only recently has momentum in education for sustainable development increased. Several of the Conventions agreed at the Earth Summit are now addressing articles on education and public awareness. For example, the parties to the Convention on Biological Diversity approved a Work Programme on Communication, Education and Public Awareness (CEPA) in April 2002. The secretariat of the Convention on Climate Change is currently discussing the development of a Work Programme on Article 6 on 'Education, Awareness and Training', while the secretariat of the Desertification Convention has embarked on a 'bottom-up approach' to involve people in seeking solutions. At another level, there are examples of how formal and higher education institutions and a limited number of government agencies, social groups and individuals have embraced education for sustainable development as a tool for change.

However, as the process of implementing Chapter 36 of Agenda 21 begins, a number of key issues are emerging. The following section contains brief reflections that provide a preliminary assessment of progress and help to identify key areas in need of attention.

FORMAL EDUCATION

Since Rio, basic and formal education (including higher education) has attracted much of the attention, with teacher education receiving great support in education for sustainable development. This is, perhaps, to be expected, given that teacher education was once identified as the 'priority of priorities'.⁴ Major initiatives in this area include: the production of international guidelines to reorient teacher education; the establishment

3. D. Tilbury and IUCN CEC, *Education for Sustainable Development*, Submission to the UNESCO-NGO Liaison Task Force, UNESCO, 2001.

4. 'The priority of priorities', *Connect*, Vol. 15, No. 1.

of an international network of teacher education; and the development of resources such as UNESCO's multimedia teacher education programme, *Teaching and Learning for a Sustainable Future* (see Chapters 6 and 7), and *Learning to Live Together*.⁵ In addition, the Global Higher Education for Sustainability Partnership (see Appendix III) is advancing the importance of educating for sustainable human development, with many universities moving to become sustainably managed institutions.

While recognizing that basic education is critical to sustainable development, concerns arise when education for sustainable development is interpreted solely as basic education. To reach the Millennium Development Goals, much recent effort in education for sustainable development has focused on improving literacy in Southern countries. There is a need for parallel action to address unsustainable consumption and lifestyle patterns in Northern nations. This would promote the consideration of the strategies necessary for assisting people to make changes in their lifestyles that would advance the transition towards sustainable development.

Targeting key multipliers is a strategic and effective approach to improving provision and access to education for sustainable development. Unfortunately, few programmes are targeted at key multipliers such as government or corporate organizations, indigenous peoples or the scientific and technological communities.⁶ Instead key multipliers in formal education have been the focus of much attention; the result is that many people see education for sustainable development as solely a curriculum process rather than a social change process.

PROGRESS AT THE POLICY LEVEL

Much of the progress in education for sustainable development has occurred at the policy level, with many countries (including Australia, Canada, China, England, Hungary, Jamaica, the Netherlands, El Salvador, Scotland, Spain, Norway and Poland) developing national strategies in education for sustainable development and providing financial

5. UNESCO PROAP, *Learning to Live Together in Peace and Harmony: A UNESCO-APNIEVE Sourcebook for Teacher Education and Tertiary Level Education*, Bangkok, UNESCO PROAP, 1998.
6. IUCN Commission on Education and Communication, 'Education for Sustainable Development: A Needs Assessment', unpublished paper, Gland, IUCN, 2001.

mechanisms to encourage implementation both in and out of formal schooling. These developments have been recent and demonstrate national recognition of the critical role that education plays in the attainment of sustainable development. However, most countries are still in the early stages of implementing the goals identified by these strategies and have only just begun to establish frameworks that support changes at the practical level.

Avoiding rigid maps

At present no country is sustainable or even close ... Nobody knows how to meet these new demands. There is no proven recipe for success. In fact, no one has a clear sense of what success would be. Making progress towards ways of living that are desirable, equitable and sustainable is like going to a country we have never been to before with a sense of geography and the principles of navigation but without a map or compass. We do not know what the destination will be like, we cannot tell how to get there, we are not even sure which direction to take.⁷

A key question is: How can we educate for a concept that is difficult to conceptualize and define? The pathway to sustainable development is not clear – and this has implications for how we educate for sustainable development. The quest for sustainability demands new approaches to involve people in futures thinking and stakeholder dialogue rather than in conveying a body of knowledge or a conceptual map of how to achieve sustainable development. Education for sustainable development should provide opportunities for people to engage in reflecting upon preferred futures and defining their vision for sustainable development.⁸ This process of envisioning is critical for individuals and groups to determine their own relevant and realistic pathway to sustainable development. However, sharing these visions, experiencing other visions and constructing dialogues on sustainable development are also critical to this process.

Educators could interpret the ambiguity associated with sustainable development as a strength – a context that permits an inclusive and active approach to engaging stakeholders in conceptualizing sustainable development. However, there seems to be a preoccupation with defining

7. R. Prescott-Allen, *Wellbeing of Nations*, New York, Island Press, 2002.

8. D. Tilbury, 'Environmental education for sustainability: defining the new focus of environmental education', *Environmental Education Research*, Vol. 1, No. 2, 1995, pp. 195–212.

‘sustainable development’ as well as arriving at a concrete definition of ‘education for sustainable development’. This can lead to ‘paralysis by analysis’ and detract from the goal of achieving sustainable development in practice.⁹ It could also be argued that an agreed universal definition of sustainable development contradicts the key premise that will make it work. It is the fuzziness associated with this term that has proven useful in arriving at a consensus that sustainable development is important and relevant to all.¹⁰

EDUCATING ABOUT AND FOR THE FUTURE

Visioning means imaging, at first generally and then with increasing specificity, what you really want. That is, what you really want, not what someone has taught you to want, and not what you have learned to be willing to settle for. Visioning means taking off all the constraints, assumed ‘feasibility’ of disbelief and past disappointments, and letting your mind dwell upon its most noble, uplifting, treasured dreams.¹¹

Despite the futures orientation of education for sustainable development, much current practice tends to try to problem-solve our way out of unsustainable development rather than to create alternative futures. Educating *about* and *for* the future is critical to education for sustainable development. This can be achieved through ‘envisioning’, a powerful futures education tool that can help drive changes towards a better world. It assists people in defining where they want to be and thinking through how to get there. Using approaches such as futures scenario planning helps to motivate and empower people to make changes as they begin to appreciate the relevance and importance of the ill-defined concept of sustainable development. It also helps people focus on the positive, as images of the future can offer hope and direction.

Vision offers direction and energy because it harnesses deep aspirations. The test of any vision, it is argued, is whether ‘it speaks to people’s

9. J. Fien and D. Tilbury, ‘The global challenge of sustainability’, in D. Tilbury, R. Stevenson, J. Fien and D. Schreuder (eds), *Education and Sustainability: Responding to the Global Challenge*, Gland, IUCN, 2002.
10. D. Meadows and J. Randers, *Beyond the Limits: Global Collapse or Sustainable Future*, London, Earthscan Publications, 1993.
11. D. Hicks and C. Holden, *Visions of the Future: Why We Need to Teach for Tomorrow*, p. 138, Stoke-on-Trent, 1995.

hearts, to their sense of compassion and justice, for both people and planet'. This process enhances participation in decision-making and helps people to deal with change more effectively. For these reasons, it is critical that education for sustainable development programmes and resources begin to address the futures dimension within their contents and approaches.

POVERTY ALLEVIATION – NOT JUST BIODIVERSITY

Education for sustainability involves not only learning to prevent the destruction of ecosystems, biodiversity threats, loss of forests and fisheries, and air and water pollution but also how to address issues of intellectual property rights, over-consumption, increasing poverty and inequality, exclusion and alienation, social conflicts and violence, HIV/AIDS, health, trade and aid as well as cultural erosion. In order to improve our quality of life we need to reflect not only upon human–nature relationships but also on human–human relationships.

At the Earth Summit, there was a realization that issues of biological diversity could not be separated from issues of sustainable use and equitable benefit sharing. The Convention on Biological Diversity enshrines this logic and commits its signatories to take steps to link conservation with sustainable development. However, the reality at Rio was that poverty was overshadowed by the attention given to the conservation and protection of natural resources.

This failing has been addressed in many discussions at the World Summit on Sustainable Development. World leaders and NGOs have emphasized the need to alleviate poverty in order for progress to be made towards sustainable development. Education is a key poverty-reduction strategy, as many national and local community programmes for sustainable development illustrate. Poverty-reduction strategies that promote women's equal access to resources and full participation in decision-making at all levels require education to play a key role in attaining these goals.

CULTURALLY CRITICAL EDUCATION

Much education for sustainable development is based upon a socially critical approach that integrates reflection and action through critical praxis. This provides opportunities for people to critically reflect upon the basis

of their sociocultural values and assumptions; to identify how they are conditioned and confined by the sociocultural structures within which they operate; and, more significantly, to build their capacity as agents of change. It is the process of reflective action that empowers citizens to embrace the possibilities of action and work towards a more sustainable world.¹²

Some people, however, have concerns about how socially critical education can be practised. For example, models of critical rationality may neglect cultural complexities. Thus, as Saul says, we need to teach learners that often conflicts are not only about rational arguments but also about the clash of cultural values and perspectives. Thus we need critical reflective models that help learners not only think critically but also culturally.¹³ Values clarification is a process that can help learners uncover the layers of assumptions and deconstruct socialized views. It can help them engage in a critical review of their own environmental and political values as well as help them comprehend that other complex cultural perceptions exist. Values clarification resists the reduction of complex situations into simplified binary oppositions that often develops when controversy arises. It can develop learners who are aware and critical of the cultural perceptions and processes that lead us to unsustainable development.

THE NEXT DECADE

Ten years after Rio, few nations have made significant advances towards sustainable development.¹⁴ It is within this context that world leaders have gathered in Johannesburg for the World Summit on Sustainable Development. However, will there be anything to report at the next summit? When and how will progress occur? Education is the key to meeting the commitments made in Johannesburg and, thus, to answering such questions.

The proposed UN Decade of Education for Sustainable Development (2005–2014) could provide the impetus for addressing these

12. J. Huckle, 'Towards a critical school geography', in D. Tilbury and M. Williams (eds.), *Teaching and Learning Geography*, London, Routledge, 1997.
13. D. Saul, 'Expanding environmental education: thinking critically, thinking culturally', *Journal of Environmental Education*, Vol. 31, No. 2, 2000, p. 8.
14. Prescott-Allen, op cit.

emerging issues in education for sustainable development. Ideally, the Decade would bring together those working in education for sustainable development and consolidate partnerships to implement international commitments in education. The next three years will be critical, as plans for the UN Decade are drawn up. They hold the answers to the question: 'Will there be anything to report at the next summit?'

Acknowledgement: The author would like to acknowledge the input of Wendy Goldstein, Head of Education and Communication, IUCN. Her contribution helped consolidate a number of the ideas presented in this paper.

13.

ENVIRONMENTAL EDUCATION IN SOUTHERN AFRICA: AN OVERVIEW OF PROCESSES, ISSUES AND CHALLENGES

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THE CONTEXT OF ENVIRONMENTAL EDUCATION IN SOUTHERN AFRICA

The Southern African Development Community (SADC) includes fourteen member states (see Fig. 1). Through the SADC Treaty, countries in the southern African region have identified environmental education as a key process of enabling sustainable development. The 1996 *SADC Policy and Strategy for Environment and Sustainable Development: toward equity-led growth and sustainable development* provides the basis for implementing Agenda 21 in the southern African context. Within the overarching concepts of equity, environment and development, the document identified environmental education as a strategic activity for the region's environment and sustainable development programme.¹

In southern Africa, environmental education refers to the diverse range of educational processes that are aimed at ensuring sustainable livelihoods, sustainable consumption and production patterns, and sustainable living practices. Environmental education in the region has always been concerned with environment and development issues, and there has been no need to create oppositional constructs to clarify orientations to practice, as has been the norm in other countries, where terminology such as 'education for sustainability' and 'education for sustainable

1. SADC REEP, *SADC Regional Environmental Education Programme. Programme Document 2002*, Howick, SADC REEP, 2002.

development' are seen as 'oppositional to' or 'more encompassing' than environmental education.

Environmental education has therefore been an active contributor to processes of sustainable development in the region for a considerable number of years. The Environmental Education Association of Southern Africa (EEASA) was established in 1982, and has always had an active membership of practitioners who have made numerous professional and practical contributions to a growing field. Key among the activities of EEASA have been the publication of the *Southern African Journal of Environmental Education* and their Annual Conference and Workshops, which have provided regular forums for lively debate around the defining and clarification of environmental education processes, and their role in enabling sustainable developments in local contexts.

Southern Africa is endowed with enormous environmental assets. The wealth of natural resources and the diversity of cultures create many opportunities for enabling sustainable living in healthy environments. Southern Africa, however, is also prey to a number of serious socio-ecological issues and risks that threaten to destroy many social and biophysical facets of the environment, and dramatically reduce the sustainable livelihood options available to southern African communities. These issues are, of course, not limited to southern Africa, and different perspectives on the global environmental crisis are well documented

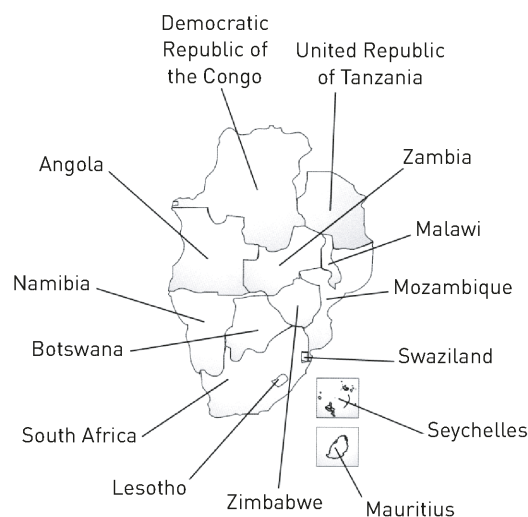


Figure 1. Member states of the Southern African Development Community.

internationally. Of particular significance to sustainable development in southern Africa is the relationship between global, regional and national issues and risks. Olembo summarized this issue clearly when he noted that:

the growth required to fulfil the basic needs [let alone those associated with high levels of consumption] of the world's population will put a tremendous burden on this planet's life-support systems. Thus the rich and poor countries alike face unparalleled problems. Neither can the problems be separated from one another, nor the solutions devised in isolation from one another.²

Poverty is undoubtedly one of the major issues facing southern Africa. It is often (and perhaps too easily) cited as one of the major causes of environmental problems. Manifestations of poverty include household food insecurity, poor health and sanitation, and low educational attainment (among others). The immediate, and more apparent, causes of poverty are low incomes and lack of employment. The underlying, or more deep-seated, causes of poverty are, however, linked to long-term social processes that have reshaped the social and economic fabric of African societies. Key among these underlying causes are the impacts of colonial impositions in the region; and trends towards globalization that tend to support neo-liberal economic models and Western capitalist ideologies of progress.

Further 'underlying causes' of poverty are the contemporary dominant global economic and development models that create distinctions between those that appear to be 'developed' and those that are 'underdeveloped'. The discourse that shapes these distinctions is heavily influenced by economic models and development ideologies that are based on modernist models of global capitalism and the expansion of the free market economy. These, in turn, are shaped by an ideology of progress that views Western economic development as the only (or at least the preferred) model for development.

Contemporary global economic and development models are entrenched by institutional structures such as the International Monetary Fund (IMF) and the World Bank, many of whose activities have led to the

2. R. Olembo, Keynote address to Regional Workshop on Environmental Education in Eastern and Southern Africa, Nairobi (Kenya), 3 November 1997.

growth and consolidation of the current debt crisis, and which have implemented inequitable structural adjustment policies affecting health, welfare and education services in many southern African countries. These policies have reduced social (and in-country) development spending and have increased emphasis on debt repayment and the promotion of exports, further crippling local economies. This has led to wide-scale environmental degradation linked to poverty, as people in the region fail to find viable alternatives to the use and overuse of natural resources for sustaining livelihoods. These problems are a direct result of global inequalities, which increase by the day. The impacts of poverty are inextricably linked to patterns of over-consumption, and, as Sachs notes, 'poverty alleviation will involve wealth alleviation', if sustainable development goals are to be achieved.³

Other related sustainability issues facing the region include, for example: land degradation, population growth and urbanization, HIV/AIDS, armed conflict and dictatorships, climate change, water scarcity and pollution, poor sanitation and biodiversity loss. These and other issues have been discussed in depth in a number of publications such as the 1994 SADC *State of the Environment* report, and country-specific State of Environment reporting processes.⁴

ENVIRONMENTAL EDUCATION AS A RESPONSE

In line with international developments in the field of environmental education/education for sustainability, a wide range of educational responses have emerged in the southern African region in the past few years, as educators have applied innovative educational concepts, ideas, tools and methods to involve people in creating sustainable living options in healthy environments. These initiatives involve people from all walks of life in seeking solutions at local, national, regional and global levels. Such initiatives include: professional development programmes, formal education curriculum developments, development of learning support materials, mobilizing of indigenous knowledge, policy development, industry environmental training, and fostering of participatory orientations in community-based natural resource management settings.

3. W. Sachs (ed.), *The Jo'Burg Memo. Fairness in a Fragile World*, Berlin, Heinrich Boll Foundation, 2002.

4. SARDC, IUCN and SADC, *State of the Environment in Southern Africa*, Harare, 1994.

Earlier approaches to environmental education in the region were often based on educational interventions aimed at creating awareness and changing behaviour through linear, rationalist models of change. In addition, these narrow approaches to education were often focused on the ecological impacts of human activities, or the preservation or conservation of natural resources. With an increased emphasis on the relationship between the biophysical, social, economic and political dimensions of environment came a broadening of educational practices.

Notable in the region has been the successive liberation of countries from colonial rule and the associated negative consequences. With this liberation came a growing concern for democratic orientations to education and social change, and a foregrounding of indigenous knowledge and sustainable environmental management.⁵ Through environmental education deliberations in the region, the role of environmental education in fostering social transformation and change was foregrounded by numerous practitioners, as they started responding to limitations in change models which favour technicist-rationalist approaches and are based on linear assumptions of behaviour change.

For example, Janse van Rensburg, a former President of EEASA and the first incumbent of the Murray & Roberts Chair of Environmental Education (Africa's only chair of environmental education), articulated the need for clarity surrounding orientations to change in environmental education.⁶ Following the earlier deliberations on linear, rationalist models of change, she recommended a 'reflexive perspective' on orientation to change, which emphasizes process rather than product, which is not concerned with a linear model of change and which does not rely on doctrines, 'tools' or 'methods' to bring about change. She sees environmental education as a 'responsive process of change', and sees reflexivity in environmental education as a tentative engagement with change processes through 'collaboratively developing capabilities (tools, resources, action competencies) to deal with and encourage change in local contexts'.⁷ This has become a key focus of numerous programmes in the region as educators attempt to respond to the complex environmental issues and risks facing them in diverse contexts.

5. SADC REEP, *op. cit.*

6. E. Janse van Rensburg, 'Environmental Education and Research in Southern Africa: A Landscape of Shifting Priorities', unpublished Ph.D. thesis, Grahamstown, Rhodes University, 1995.

7. *Ibid.*, p. 168.

Socially critical orientations to environmental education⁸ have also become popular in the SADC region among environmental educators, as ideals of democracy and participation become the focus of the search for alternative educational and social practices. Unlike many other parts of the world where educators have retained a hold on the creation and dissemination of knowledge, in southern Africa a search has emerged for participatory engagements, and a break from rigid categories of education and rigid pedagogical practices. A notable shift in curriculum development discourse has been the foregrounding of curriculum deliberation and co-construction of learning opportunities in which learners/community members have significant roles in deciding what is relevant and what has practical application and value in the context of everyday life.⁹ These orientations recognize the social construction of meaning, and the need for recognition of *different knowledges* and *inter-epistemological discourse* in reorienting education in Africa.¹⁰

INNOVATION AND ISSUES IN DIVERSE SECTORS

As noted above, there is a wide range of environmental education programmes that have emerged in the SADC region over the past twenty or more years. These are taking place in diverse contexts and involve a diverse range of learners. More importantly, they are also responding to a diversity of sustainability issues in the region. To shed some light on these developments, a few of the processes, issues and contexts are discussed below, as reflected in wide-ranging research and programme development in the region.

In *formal education* there is general consensus that 'environment' is an important focus for learning and can be integrated into all subject

8. See: J. Huckle, 'Education for sustainability: assessing pathways to the future', *Australian Journal of Environmental Education*, Vol. 7, 1991, pp. 43–62; and J. Fien, *Education for the Environment: Critical Curriculum Theorising in Environmental Education*, Geelong, Deakin University Press, 1993.
9. See, for example: H. Lotz (ed.), *Developing Curriculum Frameworks: A Sourcebook on Environmental Education amongst Adult Learners*, Howick, SADC Regional Environmental Education Centre, 1999; and SADC REEP, *op. cit.*
10. C. Odora Hoppers, 'Higher Education, Sustainable Development, and the Imperative of Social Responsiveness', unpublished paper presented at the Environmental Management for Sustainable Universities Conference (EMSU), Rhodes University, 11–13 September 2002.

areas, or articulated as an integral dimension of specific subjects. However, in spite of the recognition that environment should be an integral part of primary and secondary education, most school curricula feature rather limited and fragmented environmental education activities, as education departments and teachers struggle to shift the yoke of colonial education systems. Many reform initiatives are impeded by socio-historical factors such as rigid disciplinary frameworks for curricula, outdated examination systems, lack of access to resources, the complex nature of enabling educational transformation at a systemic level, and under-qualified educators, often leading to 'change with little difference'.

A number of donor-funded interventions supporting formal education are prominent in the region and are attempting to enable systemic changes that will ensure the integration of environmental education in formal education curricula and practice; but these are often handicapped by the particular political economy generated by donor funding more broadly. The inevitably short-term nature of the donor-funded interventions paradoxically militates against longer-term institutionalization of donor-funded environmental education initiatives in the system, as these initiatives are sometimes (unfortunately) viewed as an 'add-on', of 'short-term duration' and thus of little long-term consequence.

A further problem encountered in enabling educational transformation in formal education towards sustainable living includes the prevailing or dominant pedagogical models in formal education, and a lack of access to professional development for educators. A number of innovative pedagogical approaches have, however, been developed in the context of formal education, and these are now beginning to create new possibilities for learners and learning. Challenges associated with fostering such innovative practice include the enormous scale of operations (which in many southern African countries involve millions of learners across vast areas with often very poor infrastructure) and the multifaceted nature of the changes required in formal education.

Professional development initiatives have expanded in the region over the past few years through a range of courses offered in different settings and in different delivery modes. EEASA supported the first Gold Fields participatory course in 1992, which has since expanded to a range of countries including the United Republic of Tanzania, Swaziland, Malawi, Namibia, Zambia, Angola and Zimbabwe. The courses have also been adapted for different contexts such as conservation, industry and formal education. In recent years many of these initiatives have been

supported by the SADC Regional Environmental Education Programme (REEP), in partnership with institutions such as Rhodes University, the Namibian Polytechnic, WWF Zambia, the National University of Lesotho and others. These developments have led to the establishment of a course developers' network in the region. This network aims to support course developers to reorient pedagogy and practice towards sustainability in local contexts. Within the SADC REEP, a reflexive orientation has emerged that involves responsive, participatory and praxeological course processes. Assessment is viewed as a critical, evaluative and reflexive process; and courses developed in partnership with the SADC REEP are normally framed in ways that are flexible and allow for diverse learning needs and professional interests.¹¹

A key issue currently being confronted is that of accrediting innovative, responsive professional development programmes, as most accreditation systems are still framed within the structural functionalist colonial legacies of institutionalized education. An innovative development in this arena, for example, has been the design of the Participatory Ecological Land Use Management (PELUM) courses in Zambia and Zimbabwe, which are offered in a 'college without walls' through partnerships between NGO groups and more formalized learning institutions.

Industry environmental education and training has become a new focus for environmental education practitioners in the past few years. A number of programmes in the region have started working educationally with industry practitioners, in attempts to reduce the environmental impacts of industrial development in the region. Challenges faced by environmental practitioners in industry include the problems associated with poor, or poorly enforced, environmental legislation in developing countries, which 'opens the door' to dirty industries, many of which would not be able to operate under the more stringent policy frameworks of the North. This, together with the pressure to create employment through industrial development (often at a high cost, including environmental and health-related costs), makes this a difficult arena within which to enable social change processes. Coupled with this are problems associated with the historically established culture of industry training, which is firmly embedded in a culture of linear, rationalist models of change.

11. See note 9.

A further problem is the tendency of industry to adopt sustainability rhetoric, which is often not reflected in practice. This process varies between being more, or less, conscious, as industries often do not have the time or inclination to probe the root causes of environmental issues and risks in depth, and industry environmental education and training discourse is often limited to 'bottom line' issues.

In the arena of *indigenous knowledge* work in environmental education, a number of initiatives have arisen in different countries, as educators and other researchers aim to document local knowledge of environmental management practices. However, some of the problems experienced by educators working in this field include a romanticizing of indigenous knowledge, simplistic oppositions between indigenous and scientific knowledge, or inappropriate appropriations of indigenous knowledge, which becomes objectified and disembodied from context. A further complex issue lies in the embedded, situated nature of indigenous knowledge, which is often difficult to distinguish from habit. Concepts such as *social habitus*¹² and *appropriation and reappropriation*¹³ are being explored as appropriate conceptual lenses through which environmental education practitioners may gain a more in-depth view of indigenous knowledge in/as environmental education processes.¹⁴ Environmental educators in the region are also considering the significance of processes of mobilizing indigenous knowledge in curriculum contexts.¹⁵ This has emerged as a significant arena for educational research, as previously subjugated environmental knowledges that have become buried under the

12. P. Bourdieu and J. Passeron, *Reproduction in Education, Society and Culture*, London, Sage, 1997.
13. A. Giddens, *Modernity and Self-Identity: Self and Society in the Late Modern Age*, Stanford, Stanford University Press, 1991.
14. See, for example: L. Masuku, 'The Role of Indigenous Knowledge in/for Environmental Education: The Case of an Nguni Story in the Schools Water Action Project', unpublished Master of Education thesis, Rhodes University, 1999; and R. O'Donoghue and E. Janse van Rensburg, 'Indigenous myth, story and knowledge in/as environmental education processes', in *Indigenous Knowledge in/as Environmental Education Processes*, Howick, Environmental Education Association of Southern Africa, 1999. (EEASA Monograph No. 3).
15. See, for example, R. O'Donoghue and E. Neluvhalani, 'Indigenous knowledge and the school curriculum: a review of developing methods and methodological perspectives', in E. Janse van Rensburg, J. Hattingh, H. Lotz-Sisitka and R. O'Donoghue (eds.), *EEASA Monograph: Environmental Education, Ethics and Action in Southern Africa*, pp. 121–34, Pretoria, EEASA/HSRC, 2002.

yoke of formal systematization for a number of years are brought into the public arena through education and research.¹⁶

Further innovations are taking place in the arena of learning support materials. These include the establishment of Share-Net, a collaborative support network involving many people, and organizations producing a wide range of copyright-free learning support materials for use in different countries and contexts. A key issue that is being considered in this area at the moment is the tendency identified among environmental educators in the region to focus on the development and selection of learning support materials, and less on the way in which these materials foster environmental learning.¹⁷ This reflects a tendency to view learning support materials as objects that are disembodied from the context in which they are used.

A further issue faced by environmental educators concerned with the provision of learning support materials is the international trend towards the privatization and institutionalization of knowledge through copyright laws and pricing structures, which often place materials beyond the reach of lower-income societies. For example, the books on poverty and development issues produced by the United Nations Environment Programme (UNEP) and other international organizations (most of these were on sale at the World Summit on Sustainable Development [WSSD]) are currently prohibitively expensive in many southern African countries affected by low currency values in relation to the dollar, the euro and sterling. This places these materials firmly in the 'realm of the rich' and perpetuates further knowledge/power dilemmas in environmental education and development-related work.

Other areas of practice in environmental education in the region involve working with out-of-school youth (a high percentage of whom are at risk from HIV/AIDS) and community groups in community-based natural resource management initiatives. As in the above contexts, a range of complex socio-historical, contextual, economic, socio-economic, political and socio-ecological factors affects environmental education processes in these situations.

16. C. Odora, 'Scenarios for the future of education in Africa: factors, rationales and starting points for intervention', in N. Alexander (ed.), *Educational Innovation in Post-Colonial Africa. Selected Papers from the Pan-African Colloquium*, Cape Town, PRAESA, 2000.
17. SADC REEP, op. cit.

SUPPORT NETWORKS FOR ENVIRONMENTAL EDUCATION PRACTITIONERS

As noted above, environmental education work in southern Africa has as its main concern the establishment of sustainable livelihoods and more sustainable living patterns. This involves engagement with socio-ecological issues and risks in diverse settings and educational interactions among diverse learner groups. Issues such as language and levels of literacy, resourcing of programmes, engaging with the legacies of colonial imposition, and constantly changing political economies influenced by development aid and political changes characterize work in all of these contexts in southern Africa.

Environmental education has a long history in the region, and over time a number of regionally focused support networks have been established to provide support for practitioners. Two of the key networks include the SADC Regional Environmental Education Programme (REEP) and the Environmental Education Association of Southern Africa (EEASA). The SADC REEP is an arm of the SADC Environmental and Land Management Sector and is supported by Danish and Swedish donor funding. This programme provides support for policy development in environmental education, professional development, learning support materials development, and networking. The Regional Environmental Education Centre (REEC) has established and supported the development of numerous materials, courses, policies and networks in the region since its establishment in 1997.

The Environmental Education Association of Southern Africa is a membership-based organization that operated on membership fees for a number of years. In recent years, with the expansion of the membership to more countries, and with increased travel and printing costs, the association has become more dependent on donor funding to support its activities. Recently, EEASA members developed the Gaborone Declaration at their twentieth annual conference in Botswana, which provides orientation to environmental education practice in a number of areas, including media-related work, industry environmental education and training, curriculum development, indigenous knowledge, and learning support materials.¹⁸ A

18. EEASA, *Gaborone Declaration: Environmental Education Processes for Sustainable Development*, A working document prepared by the 20th Annual International Conference of the Environmental Education Association of Southern Africa (EEASA), Gaborone (Botswana), 19–21 August 2002.

key challenge facing the region at the moment is the future sustainability of these networks, given their increased dependency on external donor funding.

CONCLUSION: THE CHALLENGES AHEAD

Following the WSSD, where issues associated with the alleviation of poverty were closely linked with environmental and development issues, environmental educators in southern Africa will no doubt continue to apply their considerable capacity and commitment to enabling the development of sustainable livelihoods and an improved quality of life for all in healthy environments. Over the years, the significance of reflexive learning processes and participatory approaches to change has become evident in the region. These reflexive learning processes, in which learning processes remain open-ended and responsive to changes in context, where learners are at the core of co-constructing learning experiences in context, are likely to continue to characterize environmental education work in southern Africa.

A key focus for ongoing critical work in environmental education will no doubt be associated with the way in which educators in the region are able to critically evaluate the manner in which the overemphasis on poverty discourse in conceptualizing sustainable development is tending to obscure the impacts of globalization. The (often inappropriate or narrow) adoption of sustainable development discourse and poverty discourse 'hides' the root causes of these problems, which are closely associated with globalization, inappropriate models of development, neo-liberal economic models and the Western, industrial ideology of progress.

A further challenge for environmental educators is likely to be found in the need to establish sustainable networks and longer-term, more sustainable funding partnerships, which can alleviate the stresses caused by the political economies of short-term donor interventions. In addition, funding partnerships which are established on principles of equity and redress, which lie at the heart of achieving sustainable development, are needed, if we are to address the broader context of global inequality.

The most significant conceptual challenge for environmental educators in the region appears to lie in the need for more intellectual and practice-based attention to the challenges of inter-epistemological discourse, and the recognition of different knowledges and processes of

knowing, particularly since these have tended to become subjugated in the socio-historical contexts of colonialism and its aftermath. Another key issue for environmental educators to consider is likely to be the ethical appropriation of indigenous knowledge in the interests of sustainable living patterns. Pedagogically, the main challenges appear to lie in the realm of creating appropriate models of process to support engaged action-taking in context. Principles developed in the context of the SADC REEP and guidelines for practice outlined in the Gaborone Declaration are likely to provide useful points for ongoing deliberations in environmental education in the southern African region, post-WSSD.¹⁹

19. Ibid.

PART IV

**THE CONTEXT OF EDUCATION
FOR SUSTAINABLE DEVELOPMENT**

14.

EDUCATION, AIDS AND SUSTAINABILITY

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The ideas expressed here are basically supported by the Brazilian experience in the field of HIV/AIDS prevention through education. In order to frame my approach, I shall provide a few glimpses into the Brazilian reality:

- Brazil is a very large country, with approximately 170 million inhabitants. Our society is marked by profound cultural and ethnic diversity and also very deep social disparities, generated and enforced throughout our country's history.
- More than 222,000 AIDS cases have been reported to the Ministry of Health since the beginning of the epidemic, with approximately 105,000 cumulative deaths.

Figure 1 shows the evolution of notification of AIDS cases, by age, since 1980. As can be seen, the current trend of AIDS in Brazil is declining sharply. At this moment, there are 600,000 HIV-carriers in the country. Although this is a large number, it represents half the number of people we would have expected to be infected, considering the tendencies shown by the epidemic until a very few years ago. We also have to consider that HIV-carriers are living much longer as a result of free access to antiretroviral drugs and medical attention.

Together with programmes focused on social mobilization, early diagnosis and medical treatment, education has played – and continues to play – an essential role in this orchestrated effort to face the epidemic. Of course, meaningful education on HIV/AIDS cannot be the same everywhere because it cannot be dealt with consistently within a non-culturally framed educational approach. HIV/AIDS transmission trends are

associated with personal and cultural patterns of sexual behaviors and relate to means of understanding and living love, gender and other social relations. In the Brazilian case, all the activities related to HIV/AIDS prevention implemented nationally by the federal government are based on the premise that HIV/AIDS issues have to be dealt with in the context of health promotion and the exercise of healthy sexuality.

The average age of first sexual intercourse in Brazil is around 15 years old. The spread of HIV among adolescents and young people aged between 10 and 24 has occurred particularly through sexual transmission. Increasing safer sexual behaviour has been a main target of actions at the National Brazilian Program.

One of the lessons we have learnt with the development of health education programmes is that, in order to contribute to sustainability through education, we need to overcome proposals centred on the modelling of others according to our own ideas and behaviours, or even centred on the prescription of healthy lifestyles as something to be conceived by some people (perhaps the specialists) and operated by others (the ordinary people). It makes no sense to expect people to adopt

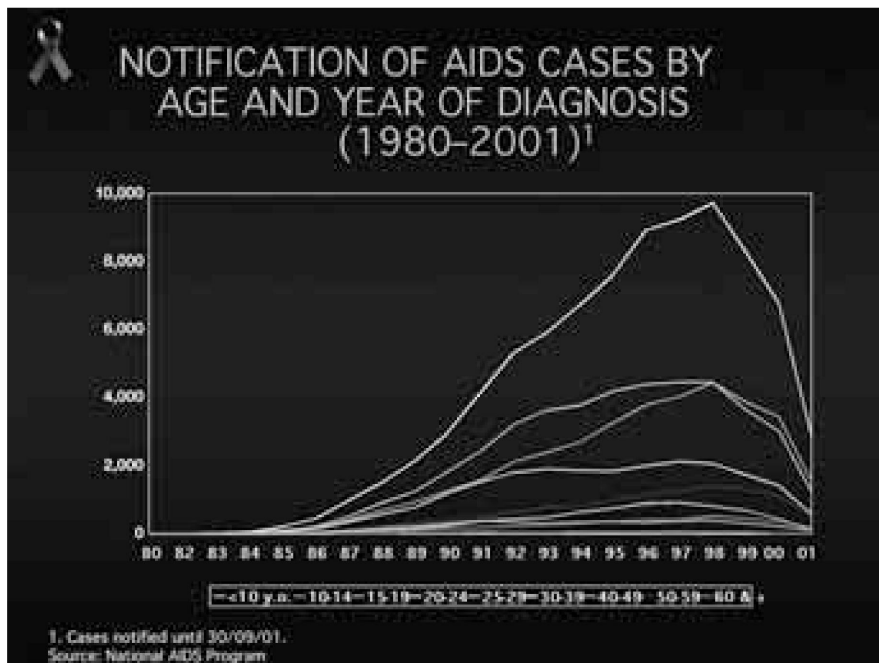


Figure 1

protective behaviours consistently, on the basis of scientific information or the prescription of habits.

Solidarity, a central issue in HIV/AIDS prevention, is essentially multicultural, by its very nature. Working in this field has shown us the urgent need to understand diversity as something to be valued instead of just accepted. Sustainability largely depends, not on the unification of cultural patterns but on our capacity to educate for dialogue between them on the common ground of human rights.

People involved in educational projects developed in Brazil are also learning about the need to amplify the risk concept into a vulnerability approach.¹ We are so used to saying 'No' that it is very difficult for us to be positive and proactive. Our early preventive messages, for instance, were predominantly focused on inculcating fear. But it became clear that we were only encouraging more discrimination and prejudice, precisely the most important factors to be fought against. The knowledge that a particular risk exists is not automatically translated into prevention resources and behaviours. Fear may make people afraid of AIDS, but it does not help them to develop effective conditions for the construction of practical, caring knowledge. Betinho, an important militant of the Brazilian National Campaign against hunger and an HIV-carrier for more than twenty years, said, 'It is not the perspective of death that brings sense to our existence, but the perspective of life in itself.' We now know that people learn better from positive feelings than from fear. In order to change our educational practices, we need to keep in mind the viewpoint of health promotion: the best form of prevention is to build a path towards better and easier alternatives.

Enrolment in the formal education system is also considered crucial for long-term, continuous and sustainable health promotion projects. In the case of Brazil, a network of nearly 215,000 elementary and secondary schools reaches about 52 million students. In this scenario, several measures were taken in order to include sex education and HIV/AIDS prevention in the everyday school experience. Together with environment, health and other relevant issues in our reality, sex education became a transversal component of the National Curricula Guidelines, approved in

1. On the vulnerability approach, see: José Ricardo de Carvalho Mesquita Ayres, 'Within sight yet far from reach: lessons learnt and challenges in the prevention of AIDS', in *AIDS: The Epidemic in the Megacities: Networking the Response*, São Paulo (Brazil), HIV/AIDS Megacities Network/UNAIDS/STD/AIDS Coordination of the São Paulo City Health Department, 2002.

1996 by the Ministry of Education. The suggested contents include topics such as self-care and mutual care, respect for diversity and gender relations. As a complementary action, several strategies for in-service education were developed with teachers, including distance learning.

A nationwide research project, conducted in 2001 by the Brazilian Ministry of Health in partnership with UNESCO, showed that 70% of all schools in Brazil have developed activities related to HIV/AIDS prevention. Moreover, nearly 30% of schools have their teachers demonstrate the use of condoms and 40% distribute them in their prevention activities. Contrary to a widespread belief, 84% of the parents who took part in prevention activities implemented in their children's schools are in favour of condom distribution. The same research revealed that the majority of the parents were very much in favour of these educative initiatives and considered them part of the responsibilities of the formal education system. In fact, the students' sources of information about STD, AIDS and drugs reported in the inquiry were: teachers = 60%; mothers = 40%; friends = 40%; fathers = 30%; other sources = 25%. Moreover, 90% of those students with an active sex life claimed to have changed their behaviour after being exposed to educational activities. As can be seen in Figure 2, research undertaken in 1999 revealed a dramatic increase in the proportion of condom use in the first sexual encounter. From 4% in 1986, at the beginning of the epidemic, the figure rose to 48% in 1999.

Finally, when talking about education, we have to take account of the fact that there is a widespread belief that the lack of education is responsible for all the problems in the world – as if education could act as a substitute for all the social, political and economic changes necessary to improve people's quality of life. Certainly, as mentioned previously, we agree that education plays an important role in the building of a sustainable future. But to be effective, it has to be articulated with many other actions and public policies.

In the mass media campaigns in Brazil, clear, direct and honest messages were used in order to encourage safer sexual behaviour, right now. Immediate protection is required in order to live and learn through long-term educational processes. The Brazilian experience is constantly bringing us new challenges, but it has shown us that concerted action produces relevant impacts, in very short periods of time. The importance of the epidemic among young people still reminds us, every day, that HIV/AIDS education is not only an essential component of education for a sustainable future, but also an essential component of education for a sustainable present.



Figure 2

15.

LITERACY AND LANGUAGE IN SUSTAINABLE DEVELOPMENT ¹

Tove Skutnabb-Kangas

TERRALINGUA

LITERACY

The most important *pedagogical* reason for ‘illiteracy’ is an incorrect medium of teaching. Indigenous and minority children and children from dominated groups are in most cases taught subtractively, when they should and could be taught additively. In *subtractive* teaching, children are taught through the medium of a dominant language, which replaces their mother tongue. They learn the dominant language at the cost of the mother tongue. In *additive* teaching, children are taught through the medium of the mother tongue, with good teaching of the dominant language as a second language. This makes them high-level bilingual or multilingual. They learn both their own language and other languages well.

Subtractive teaching prevents profound literacy. It prevents students from gaining the knowledge and skills that correspond to their innate capacities and are needed for socio-economic mobility and democratic participation. It is genocidal, according to the UN Genocide Convention’s definitions of genocide (see below). It replaces mother tongues and kills languages. It wastes resources and it prevents (sustainable) development.

Figures for literacy in South Africa (Asmal, 2000) claim that 12 million people are ‘illiterate’, and 20 million others (mostly schoolchildren) are not fluent readers in *any* language. Figures about the extent to which

1. The issues presented in this short paper have been discussed in greater detail in Tove Skutnabb-Kangas, *Linguistic Genocide in Education – or Worldwide Diversity and Human Rights?*, New Jersey/London, Mahwah/Lawrence Erlbaum Associates, 2000.

government officials in South Africa are understood (PANSALB, 2000) assert that about 50% of non-English-speaking South Africans (in other words, mostly black South Africans) do not understand statements or speeches made in English by government officials.

If we want to achieve not only literacy but education for all, we must ask how many years of formal education it takes to make people literate.

- A. The technical skill needed to decode text takes a minimum of one to two years, depending on the language, script, and level of teacher training and schools in general.
- B. Lasting 'technical' literacy seems to take at least four to six years of formal education – with less, the technical skill is forgotten as soon as the child leaves school.
- C. Using basic literacy for further education and as a member of civil society seems to take at least eight to nine years.
- D. Using literacy (including computer literacy) for full participation in the labour market and society at large often seems to be a matter of some twelve years of formal schooling.

But all of this is true only if the education is in the student's mother tongue. If the student is taught through the medium of a foreign (often dominant/majority/high-status) language, another two years must be added to A, and four to seven years to B, C and D.

Since most of the world's indigenous and minority children are taught subtractively, through the medium of a dominant language that is not their mother tongue, most of them do not stay in school long enough to become fully literate.

WHAT IS HAPPENING TO THE WORLD'S LANGUAGES?

Most of the world's languages are very small. The median number of speakers of a language is 5,000 to 6,000. Some 5,000 of the world's approximately 7,000 spoken languages and 99% of the sign languages have fewer than 100,000 users. What is happening today to the world's languages? Are they being maintained? The answer is 'No'. Optimistic estimates of what is happening suggest that at least 50% of today's spoken languages may be extinct or very seriously endangered ('dead' or 'moribund') around

the year 2100. Pessimistic but completely realistic estimates claim that as many as 90–95% of them may be extinct or very seriously endangered in less than 100 years' time. We may have only 300 to 600 oral languages left as unthreatened languages, transmitted by the parent generation to children.

Languages are today being killed faster than ever before in human history, with English as the world's most important killer language. When any 'big' languages are learned subtractively (at the cost of the mother tongue) rather than additively (in addition to the mother tongue), they become killer languages. These killer languages pose serious threats to the linguistic diversity of the world.

WHY DO LANGUAGES DIE?

In studying the causes of the disappearance of languages, we find two explanatory paradigms. One assumes that languages just die naturally, like everything in nature – they arise, blossom and disappear. This is the '(natural) death' paradigm. The other paradigm asserts that languages do *not* just disappear naturally. Languages do *not* 'commit suicide'. In most cases, speakers do *not* leave them voluntarily, for instrumental reasons, and for their own good. Languages are 'murdered'. Most disappearing languages are victims of linguistic genocide. Education systems and the mass media are the most important direct agents in linguistic and cultural genocide. Behind them are the world's economic, techno-military and political systems.

GENOCIDE?

Is the term genocide not too strong?, many people ask. They are only thinking of the physical destruction of groups. The United Nations Convention on the Prevention and Punishment of the Crime of Genocide (E793, 1948) has six definitions of genocide. Two of them fit most of today's indigenous and minority education:

Article II(e): *forcibly transferring children of the group to another group;*

Article II(b): *causing serious bodily or mental harm to members of the group* [emphasis added].

A few examples follow. In Sweden, Pirjo Janulf (1998) undertook a longitudinal study, with 971 children in lower secondary school and several hundred controls. She went back to many of them after fifteen years. Of those Finnish immigrant minority members in Sweden who had had a Swedish-medium education, not one spoke any Finnish to their own children. Even if they themselves might not have forgotten their Finnish completely, their children had certainly been forcibly transferred to the majority group, at least linguistically. Assimilationist education is genocidal.

Edward Williams's (1995) study in Zambia and Malawi had 1,500 students in Grades 1–7. Williams states that large numbers of Zambian pupils (who had had all their education in English) 'have very weak or zero reading competence in two languages'. On the other hand, the Malawian children (who were taught in local languages, mostly their mother tongues, during the first four years, while studying English as a subject; English became the medium only in Grade 5) had slightly better test results in the English language than the Zambian students. In addition, they knew how to read and write in their own languages. Williams's conclusion is that 'there is a clear risk that the policy of using English as a vehicular language may contribute to stunting, rather than promoting, academic and cognitive growth'. This fits the UN Genocide Convention's definition of 'causing serious mental harm'.

In his article, 'Educational Malpractice and the Miseducation of Language Minority Students', John Baugh (2000) from Stanford University draws a parallel between how physicians may maltreat patients and how minority students (including students who do not have mainstream American English as their first language, for instance speakers of Ebonics/Black English) are often treated in education in the United States. The harm caused to them by this maltreatment and miseducation also fits the UN definition of 'causing serious bodily *or mental* harm to members of the group'.

Many Canadian studies report similar results. Katherine Zozula's and Simon Ford's (1985) report, 'Keewatin Perspective on Bilingual Education', tells of Canadian Inuit 'students who are neither fluent nor literate in either language' and presents statistics showing that the students 'end up at only Grade 4 level of achievement after nine years of schooling'.

For all of this to be genocidal, the outcome has to be intentional. Of course, official school policies do not say that the goal is genocidal. But it

was already summed up by UNESCO some fifty years ago, in the seminal book, *The Use of the Vernacular Languages in Education* (1953). This showed, on the basis of research, that the mother tongue was axiomatically the best medium of teaching, and this is still true for minorities and indigenous peoples. If, despite study after study showing this, minority education is still organized against all scientific evidence, the results can be said to be intentional. Most indigenous and minority education in the world thus participates in committing linguistic and cultural genocide, according to the genocide definitions in the UN Genocide Convention.

BUT SURELY WE CANNOT AFFORD EDUCATION THROUGH THE MEDIUM OF HUNDREDS OF LANGUAGES?

Many people might agree that this is a good cause, but argue that we must be realistic. Sustainable education that leads to profound literacy, creativity and high levels of multilingualism for the student, and maintenance of the world's languages, is undoubtedly wonderful – but also completely impossible and economically non-viable. Let me give one counter-example: Papua New Guinea, with a population of around 5 million, is the country with the highest number of languages in the world (over 850). According to a study by David Klaus, from the World Bank (2003), 380 languages were used as the mediums of education in pre-school and the first two grades, and another 90 languages were to be added in 2002, making 470 languages altogether. Some of the results are as follows:

- Children become literate more quickly and easily.
- They learn English more quickly and easily than their siblings did under the old English-medium system.
- Children, including girls, stay at school.
- Grade 6 exams in the three provinces that started mother-tongue-medium teaching in 1993 were much higher than in provinces that still teach through the medium of English from the first day of school.

It is perfectly possible to organize education so that it does not participate in committing linguistic genocide.

WHY SHOULD THE WORLD'S LINGUISTIC DIVERSITY BE MAINTAINED?

But are there reasons for maintaining the world's linguistic diversity, other than avoiding linguistic genocide? I shall mention three other reasons for maintaining all the world's languages.

Reason 1: English is not enough.

The Financial Times (3 December 2001) has a report about a survey undertaken for the Community of European Management Schools, an alliance of academia and multinational corporations. It concludes that a company's inability to speak a client's language can lead to failure to win business because it indicates lack of effort. The British newspaper *The Independent* (31 May 2001) reports that graduates with foreign language skills earn more than those who know only English. The *Nuffield Languages Enquiry* (2000) concludes: 'English is not enough. We are fortunate to speak a global language but, in a smart and competitive world, exclusive reliance on English leaves the UK vulnerable and dependent on the linguistic competence and the goodwill of others.... Young people from the UK are at a growing disadvantage in the recruitment market.' Professor Tariq Rahman (2002), from Pakistan, states: 'English-medium schools tend to produce snobs completely alienated from their culture and languages.... We are mentally colonialized and alienated from our cultures if all we know is in English.'

'Good' English will be like literacy yesterday or computer skills today: employers see it as self-evident and necessary but not sufficient for good jobs. Supply and demand theories predict that when many people possess what earlier was a scarce commodity (near-native English), the price goes down. The value of 'perfect' English skills as a financial incentive decreases substantially when a high proportion of a country's or a region's or the world's population know English well (François Grin, 2000).

Reason 2: Creativity and new ideas are the main assets (cultural capital) in a knowledge society and a prerequisite for humankind to adapt to change and to find solutions to the catastrophes of our own making. Multilingualism enhances creativity; monolingualism and homogenization kill it.

In industrial societies, the main products are/were commodities. Those (individuals and countries) who control access to raw materials and own

the other prerequisites and means of production do well in an industrial society. In a knowledge or information society, on the other hand, the main products are knowledge and ideas. In these societies, those individuals (and countries) who have access to *diverse* knowledges, *diverse* information, *diverse* ideas and *diverse* creativity do well. A degree of uniformity might have promoted some aspects of industrialization. In post-industrial knowledge societies, uniformity will be a definite handicap. We can look at the relationships between creativity, innovation and investment – they are the likely results of additive teaching and multilingualism. Creativity precedes innovation, also in commodity production. Investment follows creativity. Multilingualism enhances creativity. High-level multilinguals as a group do better than corresponding monolinguals on tests measuring several aspects of ‘intelligence’, creativity, divergent thinking, cognitive flexibility, etc. And additive teaching leads to high-level multilingualism – therefore the linguistically rich societies/countries that teach all children additively are likely to develop most linguistic and cultural capital of a kind that can be converted into other types of capital in information/knowledge societies.

Reason 3: Linguistic diversity and biodiversity are correlationally and causally related.

Today, linguistic diversity is disappearing much faster than biodiversity. A comparison of the estimates for ‘dead’/‘moribund’ biological species and languages around the year 2100 is as follows: according to optimistic estimates, 2% of all biological species but 50% of all languages will have disappeared or be very seriously endangered. According to more pessimistic but still realistic estimates, the figures are 20% for biological species but 90–95% for languages. Knowledge about how to maintain biodiversity is encoded in the world’s small languages. Through killing them we kill the prerequisites for maintaining biodiversity.

What do we know about the correlation between the various kinds of diversity? Where there are many higher vertebrates (mammals, birds, reptiles and amphibians), there are also often many languages: a high correlation. When comparing the lists of the top twenty-five countries with the highest numbers of endemic (= existing in one country only) languages and the highest numbers of higher vertebrates, we can see that sixteen of the twenty-five countries are on both lists (David Harmon, 2002). We find the same type of correlation between languages and flowering

plants: a region often has many of both, or few of both. Languages and butterflies also show a high correlation, as do languages and birds (see www.terralingua.org for the relationships).

To sum up:

Ecological diversity is essential for long-term planetary survival. Diversity contains the potential for adaptation. Uniformity can endanger a species by providing inflexibility and unadaptability. As languages and cultures die, the testimony of human intellectual achievement is lessened. In the language of ecology, the strongest ecosystems are those that are the most diverse.

Diversity is directly related to stability; variety is important for long-term survival. Our success on this planet has been due to an ability to adapt to different kinds of environment over thousands of years. Such ability is born out of diversity. Thus language and cultural diversity maximizes chances of human success and adaptability [from Colin Baker's (2001, p. 281) review of Skutnabb-Kangas, 2000].

This means that biocultural diversity (= biodiversity + linguistic diversity + cultural diversity) is essential for long-term planetary survival because it enhances creativity and adaptability and thus stability. Today we are killing biocultural diversity faster than ever before in human history.

THE ROLE OF INDIGENOUS PEOPLES

Most of the world's mega-biodiversity is in areas under the management or guardianship of indigenous peoples. Most of the world's linguistic diversity resides in the small languages of indigenous peoples. Much of the detailed knowledge of how to maintain biodiversity is encoded in the languages of indigenous peoples. Thus indigenous peoples are/have the key to our planetary survival. Indigenous self-determination is a necessary prerequisite for the survival of the planet. Every one of us should be asking what we are doing to enable indigenous peoples, their languages, cultures and knowledges to survive, on their own lands, under their own control.

I would like to conclude with the words of Pierre Bourdieu (2001), that globalization is 'a pseudo-concept that ... incarnates the most accomplished form of *the imperialism of the universal*, which consists of one

society universalizing its own particularity covertly as a universal model'.

My first question to the governments and elites of the world is: Is there a risk that some of you, in your World Summit on Sustainable Development policies, are devising a pattern of relationships which permit you to maintain a position of disparity?

16.

SCIENCE IN RELATION TO EDUCATION FOR SUSTAINABLE DEVELOPMENT

Thomas Rosswall

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I have been asked, on behalf of the scientific and technological community, to examine how science and education should be linked and how they can collaborate more closely. I will start by briefly describing what is happening in the scientific world and then address education. We are convinced that it is absolutely essential that these two are brought much closer together. During the preparatory process for the World Summit on Sustainable Development, we submitted two reports on the successes and failures since the Rio Summit and the challenges ahead. We have underlined three major messages during this process:

1. We need more policy-relevant science.
2. We need more broad-based parties and many approaches to science.
3. We need to convince young people that science and technology are exciting.

Our challenge during the summit is to convince all governments that good governance needs good science. But we ourselves must change and ensure that the science and technology developed for us is policy-relevant. By 'policy-relevant', I mean not only at the national and international levels, but also at the level of local authorities. That is the only way to involve stakeholders in both setting up the local agenda and having ownership of the results derived from the scientific process. We must integrate the three pillars of sustainable development. We have focused on the environmental side during the past ten years. Now we must look at the economic and social sides. This is where relevance will emerge from science.

Second, we need more broad-based parties and many approaches to science. Science must come down from its ivory tower and interact with the many major stakeholders. We must address the major areas of the United Nations Secretary-General Kofi Annan's initiative – Water, Energy, Health, Agriculture and Biodiversity (WEHAB) – but bearing in mind a broader-approach of science and education when dealing with them. It is clear that scientific and technological development is one of the driving forces of industrial societal development, but that knowledge is mixed with traditional knowledge, which is absolutely essential for rural development. We are not talking only about biotechnology setting up new companies, we are also talking about interacting with farmers and with women to make better use of their natural resources base.

When thinking of science, there are many aspects to consider and that need to be addressed carefully. For example:

- We need to promote gender equality in the sciences. We have not had much success so far in most countries and we need to do better.
- We need to adapt science to cultural diversity. We organized a side event in Ubuntu Village, called the Forum on Science and Technology Innovation for Sustainable Development. One of the sessions on traditional knowledge addressed key questions such as linguistic diversity. This is an important point because knowledge is based in language and when we lose languages, we lose knowledge.

Lastly, we need to convince young people that science and technology are exciting; we need to attract them into those careers. We are entering a knowledge society and we have to understand that knowledge is power. That is true for all parts of society.

There is much talk about the digital divide, which certainly does exist. This topic is particularly relevant when thinking about globalization. Information is becoming more and more available globally, but not to everybody. We believe that the digital divide is too simplistic. Information is not knowledge. It is only through education and development of skills and a knowledge base that information can be put to use. If we look at the more developed countries, we find that they spend more on research and development than the sixty-one poorest countries in the world. That is the true knowledge divide and that is what we have to address. It cannot be addressed through any other means than education.

We must invest in the new generation if we want to succeed in sustainable development: their development is vitally important. Simultaneously we need to think of the sustainability of universities if we want to attract young people to science. The science capacity in sub-Saharan Africa is declining. Nigeria used to be a very large producer of scientific results; now it is sluggish. That is why we need education for all. We need participation, we need interaction and we need to work together.

In the specific area of education and its links to science, the International Council for Science (ICSU) and its partners are working very closely to promote science education. We are trying to develop new methodologies, using problem-based learning and encouraging young people to become interested in science and technology. A major conduit for this will be the teacher. We need to reach teachers and get them involved. Many scientists claim that to 'bring the teachers to the universities' would be useful. We also need to look at the curricula if we are concerned about a holistic approach in education. How can teachers teach geography, biology and mathematics with a transdisciplinary approach if those disciplines have been studied independently for centuries? Isolated subjects are not the way to address sustainability. We need to change the curricula to take on a much more holistic approach. We need to break it down at all levels.

With this perspective, we need to approach the universities. We need to think about how to link natural sciences to social sciences and the humanities, in truly holistic programmes, based in the local environment. If we can do that in the scientific world, together with the educators, we can bring new knowledge to bear on education. That would be the key contribution of our work in the area of education for sustainable development.

The type 2 outcomes are certainly the most important result of this summit. We have established a large number of links between the science community and educators, indigenous peoples and local authorities – we can build on these links by taking to heart the messages from the summit. This does not mean the political message, but the power of these dialogues, of discussions like the ones at the summit and the multitude of activities that result.

UNESCO and ICSU have been working together very closely. One criticism of UNESCO and of my own organization is that we have been working with sectoral approaches: Science is one sector, Education is another, and rarely do they meet. If we do not bring them together, in

ICSU, at UNESCO and in governments, we will not be able to develop sustainable societies.

My last recommendation concerns part of the title of the seminar – while ‘Action, Commitments and Partnerships’ are laudable sentiments, the words are in the wrong order. We cannot start with actions; we have to start with partnerships. We are here to build up partnerships – on the basis of partnerships we can make commitments, and then action will happen. Let us all ensure that it does.

17. BUILDING A CITY OF SUSTAINABLE DEVELOPMENT

Mayor Hagiwara

OKAYAMA CITY, JAPAN

As human beings we face many environmental problems that are clearly brought on by ourselves. However, only people can resolve these growing problems. The Earth will not recover from environmental decline without everyone's effort, no matter how small that effort may be. The city of Okayama has several environmental projects with which its citizens are deeply involved.

Okayama, a city with a population of 630,000, is situated midway between Tokyo and Shanghai. Located on the Setouchi Inland Sea, Okayama enjoys a temperate climate with an average yearly temperature of 16 °C and an average annual rainfall of 1,300 mm, one of the regions with the lowest precipitation in Japan. Social and economic exchange between Okayama and the neighbouring countries China and the Republic of Korea has flourished since ancient times, leaving a significant historical legacy in the city. Compared with other Japanese cities of a similar size, the areas available for land-uses, such as agricultural farming, are relatively large. In recent years, progress in the development of rapid transit infrastructure has also been made. In addition, Okayama's business community has made distinct advances in industries such as textiles, chemical manufacturing and electronics. Expansion in the fields of publishing, welfare and medicine has also taken place.

Although Okayama has been blessed with a rich environment that could easily be taken for granted, environmental projects are already under way through the initiative taken by many of its enthusiastic citizens. The city, which deals more directly with citizens than with the national government, is now taking steps to make an active contribution to the wider global environmental efforts. Chapter 36 of Agenda 21 of the

1992 Earth Summit Agreements, for example, clearly states that international organizations, national governments and all local authorities are expected to promote education, public awareness and training for sustainable development. With the aim of encouraging its citizens' awareness of environmental conservation issues and promoting voluntary environmental conservation activities, the city has implemented the Environmental Partnership Project as of April 2001.

ENVIRONMENTAL PARTNERSHIP PROJECT

This project includes a broad range of environmental preservation activities in which citizens participate voluntarily. The city accepts applications from organizations and individuals, registers these activities and officially recommends them. Through this process, the city encourages these organizations to integrate into a larger partnership. The organizations and the city thus share information, undertake exchange, discuss implementation of various activities and finally provide resources.

The applicable activities of the Environmental Partnership Project include voluntary environmental development activities of citizens in their communities (Eco-volunteer Activities) and activities that reduce the environmental burden stemming from corporate actions (Green Company Activities). As of 2 August 2002, there were 202 participating bodies, comprising 12,129 individuals, which accounts for 2% of the city's population. The city expects it to reach 5% in only a few years. Some of these projects include the following:

Environmental Partnership Project (202 organizations, 12,129 individuals)

- Eco-volunteer Activities

Adopt a Programme Category (100 groups, 5,338 individuals)

- Organizations such as NGOs and corporations conduct the clean-up, greening, and environmental protection of specified areas, and participate in voluntary environmental development activities.

Global Citizenship Category (62 organizations, 2,119 individuals)

- Voluntary environmental development activities from a citywide and global viewpoint, undertaken by NGOs.

Green Company Activities (40 organizations, 1,909 individuals)

- Environmental Activity Evaluation Programme Category (11 organizations, 2,763 individuals). Activities that encourage companies to join the national environmental activity evaluation programme and to reduce the environmental load generated by their own activities.

Step-up Category (29 groups, 1,909 individuals)

- Groups or companies set up their own environmental implementation plans and put them into action.

EXAMPLES OF THE ECO-VOLUNTEER ACTIVITIES ADOPTION CATEGORY

The following are some examples of volunteer activities in which citizens participate. The city recognizes that the most important part of the project is that the participants enjoy the activities.

Daiku Rotary Beautification Society

The society was set up in 1962, when the municipal society beautified the city as part of its welcome to people who converged on the city for a national athletic meeting. Forty years on, approximately two hours every Sunday morning is set aside to clean the central road reservations and pedestrian walkways in the surrounding areas of the city hall.

We have been doing this clean-up for so long that it has become quite enjoyable. So much so that the prospect of it being cancelled due to rain is quite a disappointment. This activity also keeps us in good health.

First Saidaji Group, Okayama Scout Council

This group began its activities over fifty years ago and was developed by students, ranging from elementary school to university, and their scout leaders. Three to four times a month, the group undertakes activities that contribute to the community. As part of this principle, the group conducts the clean-up of community roads.

There's a lot of trash, and on top of that it was raining. But even though we're tired, it was lots of fun.

Nagaokacho Community Group's 'One Good Deed a Day Society'

This group conducts the clean-up of Nagaokacho's streets, parks and temple grounds once a month. In order to derive the maximum benefit, the group continues each activity for thirty minutes. They also put up posters in advance to encourage even more participation.

Instead of getting upset at those who litter, we focus our energy on picking up the litter as long as it's there. We get so much energy out of cleaning up that I almost want to thank the garbage!

Hirata-Higashicho Society

This group is responsible for the clean-up, weeding and foresting of Hirata-Higashi Park. The organization divides the district's 640 families into different groups, and once every two weeks one group participates in a designated activity. Since joining the city's partnership project, they have designated the fourth Wednesday of every month as Environmental Beautification Day and are also creating further opportunities for information exchange on a regular basis.

Since this park is a result of our determination and effort, it has become a very important place for many people to gather, a place that everyone in the area has played a part in making.

Society for the Beautification of Ichinomiya

In 1994 unused agricultural land was transformed into fields of grass, flower beds and mini-parks. Since then, this group has carried out maintenance of these areas and has assisted in the organization of the Iris Festival.

After a hard day's work you gulp down a can of juice with a smiling face, which will make us carry on to the next century.

Takashima-Kyokuryu Firefly Habitat Forum

Ten years ago the firefly population was declining with the onset of urbanization in its habitat areas. In the hope of re-establishing this population, the group has been working on breeding more fireflies and maintaining

the waterways where the fireflies thrive. In addition, the Firefly Festival has become an event where the entire community takes part and citizens from all over the district come to enjoy this wonderful early summer event.

Instead of thinking that somebody else will take care of things, thinking that you can do something yourself and initiating something will have a widespread effect on the environment.

Forty-two Elementary Schools' Firefly Census

A census of Genji fireflies and Heike fireflies has been conducted for eighteen years through the support of the city's elementary students and their guardians. As a result, the census is used to test the health of the city riverbanks. The group also provides materials on environmental considerations in the area, when development of any kind is proposed.

I want this to become an environment where next year, the year after next, and even when I grow up, there will always be fireflies.

ECO-VOLUNTEER ACTIVITIES GLOBAL CITIZENSHIP CATEGORY: PARTICIPATING BODIES

Okayama-Higashi Corporation Association

Since 1995 the society has supported the prefecture's Children's Eco-club through its hosting of prefectural gatherings and the creation of relevant resource materials. Similar programmes run by individual companies can be found throughout the country; however, it is rare for companies to participate in such activities through an association with other private corporations.

Through the children participating in the Eco-club Programme, we believe that our environmental beliefs will permeate through to the attitudes of the adults as well.

Korakuan City Junior High School

In order to prevent the extinction of the Okayama strain of the Nippon Baratanago fish, which has been deemed critically endangered by the

Ministry of the Environment, it is necessary to breed the fish in alternative locations. In cooperation with the Okayama Freshwater Fish Research Association, the group has therefore taken part in breeding the fish and hopes to contribute to the successful proliferation of the species for future generations.

We think animals and people should be able to live in harmony, however difficult that may seem.

Society for the Study of Okayama's Future Energy Sources

As of 2002, the group has collected funds donated by private citizens and has installed a solar-powered heating system and water heater in a city-run nursery school. With support from the city, they hope to expand their natural energy projects. Currently, the group collects donations from citizens for the Sunshine Fund, as well as installing the equipment.

Let's make clean energy with our own hands.

Okayama UNESCO Association

In order to protect the global and community environment, the UNESCO Association holds lectures such as UNESCO's Global Environment Lecture, which is geared towards those who want to gain specialized knowledge and experience in the field. The association also holds the International Environmental Network Forum, which links the outside world with the community. In addition, the association has created the Environmental Support Centre Plan, which promotes and supports environmental education on an international level.

CORPORATIONS INVOLVED IN GREEN COMPANY ACTIVITIES

Matsushima Corporation's AVC Okayama Factory

Through developments from within the company (which manufactures home video equipment), this corporation has transformed surplus production plastics, packing materials and company cafeteria waste into energy sources, and as a result achieved a zero emission rate in 2000. It is

also using unleaded alloys. In addition, employees and their families are participating in various environmental protection programmes. These include employees involved in clean-up activities in their communities, and families organizing drives to reduce environmental damage.

We believe that the accumulated effect of the little things we do is what really counts.

Okayama Takashimaya Department Store

With regard to electricity, gas, water use, gift-wrapping and shopping bags, Takashimaya have made clear goals for themselves. While decreasing the use of these items, they are also expanding the number of environmentally friendly products they have in store, and are always looking for additional environmentally friendly ways to do their retail business.

We hope to work with our customers to contribute to environmental conservation as a responsible corporate citizen.

Aisawa Construction Company

The company has set a recycle rate for waste emitted from its construction sites such as debris and soot. In addition to reducing the amount of waste produced, the company is looking to decrease electricity and fuel consumption, and has also worked on energy conservation construction designs.

We aim to become the 'ideal company for society' and so we are finding ways to limit the effect we have on the environment.

Environmental Assessment Centre (consulting company)

Environmental protection activities that take place within the office are often viewed as drab and annoying. This organization has made signs that are visually easy to understand, using characters and picture cards, which make the entire office lively and bright.

Along with our conservation mascot, we are united in making reusing and recycling more enjoyable.

SUMMARY

Since starting a year ago, the environmental projects described above have achieved a high degree of public participation that has exceeded initial expectations. However, general voluntary environmental activities by citizens and businesses have declined since the initial stages. Therefore we think that one of the city's primary roles will be to sustain the interest of current participants while attracting more interest and participation in these projects. To this end, we have implemented the following strategies:

- publishing a newsletter that, through the presentation of the activities of participating groups, will establish an exchange of ideas between groups while informing a wide range of citizens about current programmes;
- holding lectures about the knowledge and skills necessary to progress in areas such as the Green Company Activities;
- holding exchange forums where participating groups have an opportunity to explain their activities while exchanging ideas and information with other participants, and where plans for a more advanced phase in the project can be drafted;
- issuing official recognition to participating organizations like the Green Companies that make achievements in environmental protection;
- ensuring that companies endorsed by the Green Company standard are given preference in the city's contracts.

We recognize that the many environmental problems we face today, starting with global environmental problems, cannot be dealt with solely at the national level. We therefore have a responsibility to protect each one of our communities and to help them flourish. We understand that environmental protection in the community starts with small, voluntary and proactive efforts. Our city's Partnership Project is based on these concepts and we hope to take this opportunity to further encourage new activities, while still focusing on the activities of original participants who have been joining up to now. Okayama aims to be a healthy place to live, where more and more people choose to voluntarily and actively improve their own environment.

Finally, in order to attain our goal of environmental protection and to protect and nourish the immediate community, the city of Okayama is

proposing a new programme entitled 'Save the Earth Citizens Registration Rally'. In this new programme, which is directed at the UNESCO headquarters, different cities across the world are encouraged to compete for the largest number of registrations of child, teenage and adult participants. The city suggests that the UNESCO headquarters encourage the use of this programme throughout the world and hopes that 5% of the total world population, approximately 310 million people, will participate.

PART V

**NEW PERSPECTIVES,
NEW ACTORS, NEW PATHWAYS**

18. THE GLOBAL HIGHER EDUCATION FOR SUSTAINABILITY PARTNERSHIP (GHESP) INITIATIVE – REORIENTING HIGHER EDUCATION TOWARD SUSTAINABILITY ¹

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PRESIDENT, INTERNATIONAL ASSOCIATION OF UNIVERSITIES (IAU)

Universities are always demanding academic freedom and university autonomy, but at the same time public money. It is my conviction that autonomy is not something that just comes for free. It can only come when the university also serves the broader and longer-term interests of the people who provide the taxes that pay for most of the universities. University autonomy and academic freedom have to be earned day by day by the operations of the universities, showing that they are useful, that they generate useful knowledge and also that they prepare new generations who can really contribute to society. Although the people in the universities themselves may not realize this basic fact all the time, it is important to keep this aspect in mind.

The World Summit on Sustainable Development (WSSD) is a framework within which education in general, and universities in particular, can show how they will contribute towards making this world a better place for future generations. It is unbelievable that, ten years after the Rio Earth Summit, education is not yet a major stakeholder in the WSSD process. It is right to have young people, trade unions and business on board, but why not education? By education, I mean the men and women in the classroom. Their participation in the whole process is minimal, despite their influence on future developments, in particular by

1. See Appendix III.

their translation of what is going on here at the international level into school programmes and teacher training.

It is now imperative that we put words into action. Perhaps one of the reasons why education is not as present as it should be, is that there is a long-standing tradition that everyone goes his or her own way. There are many excellent experiments and projects but there is not enough common ground and cooperation to ensure that the overall body of education has a greater presence. When we consider the number of people around the world who are engaged in teaching, it is incredible that they are not more visible in this type of process. We must mobilize all those people who will teach 90 or 95% of each age cohort; we should not focus too much on a few exemplary projects that only reach relatively small numbers of people and do not have a wider impact. One way or another, we have to come together.

In fact, universities started doing this in the preparations for Rio. In 1988 European universities set up the Copernicus Programme, which focused on environmental education within the framework of regular university education and research. At the time, this programme was very important because the political changes in Europe had generated a complex situation. When one compares the introduction of environmental law in Western Europe, within the European Union, with the situation in the former socialist countries before the fall of the Berlin Wall, it is clear that the process was completely different in the two main parts of Europe. In the socialist bloc, the means of production were owned by the State. Thus when the State – as the authority that had to demand compliance and penalize those who did not comply – had to take action against somebody, that implied that it should condemn itself. This was clearly unworkable.

After the political change, the whole system of environmental law had to change too. The same pattern was true for economics and some other areas. Thus the universities had to play a significant role in this process of transformation. Copernicus was founded within that context in Europe. At the same time in North America there was a strong environmental movement from the universities, which, through the Talloires Declaration, eventually led to a very active organization, University Leaders for a Sustainable Future (ULSF).

During this process UNESCO was appointed to be the Task Manager for Education. Over time, UNESCO has been successful in bringing different groups together in a positive role: the European Copernicus

Programme, ULSF and also the International Association of Universities (IAU), since the Kyoto Declaration of 1992.

The decisive step was taken in 1998, when UNESCO organized the World Conference on Higher Education. At that conference, the United Nations University (UNU) was invited by UNESCO to organize a thematic debate on 'Higher Education and Sustainable Human Development'. Since this debate had to be organized by a group of NGOs, the UNU brought fourteen NGOs together, in particular Copernicus, ULSF, IAU and also including teachers' organizations, in order to discuss this issue. Several activities emerged from the debates, among them the setting up of a database of universities interested in working together on this issue.

Perhaps the most important goal achieved was the general acceptance of the necessity that the North American group, the European group, IAU and UNESCO should come together to find common ground for developing education for sustainable development in higher education. In order to do this, they established the Global Higher Education for Sustainability Partnership (GHESP). This will be officially launched as a WSSD type 2 partnership with a credible record of past activity and ambitious plans for the future.

Many people think that it is enough just to provide special courses on sustainable development. The problem, however, is to decide at what age and what level to teach sustainable development and for how long. It is difficult to decide what kind of 'package' is needed and there is strong competition for teaching time in all schools. It is clear that sustainable development is not a subject like the others that can just be added or placed in parallel to something else. When one really looks at what sustainable development is, and at its guiding principles, it is obvious that it must be present in education from early childhood: in the kindergarten and in primary school up to post-secondary level, even at the highest levels of university education.

It is not enough to limit sustainable development to one or more specialized topics, or to train a specialist in the field: our aim is to mobilize the whole of society. Rather than focusing on a small group of specialists, we should aim at entire generations. This means that sustainable development should not be taught separately, but rather included within existing subjects where relevant. When teaching economics, for example, it is very important to include the problems of market access, what it means both for the environment and for development, and the wrong estimations that have been made by not taking all factors into account.

The Global Higher Education for Sustainability Partnership was formed in 2000 by three non-governmental organizations: ULSF, COPERNICUS-CAMPUS and IAU; it brings together more than 1,000 universities throughout the world. This partnership is far from perfect as Latin American, African and Asian universities are not sufficiently represented, but a start has been made on bringing them in, particularly because all the regional organizations are also part of IAU.

In October 2001 the Conference on 'Higher Education and Sustainability: Towards the World Summit on Sustainable Development, 2002' was held in Lüneburg, Germany. The above-mentioned organizations came together and drafted the Lüneburg Declaration on Higher Education for Sustainable Development, which stated the importance of creating a global learning space that allows new partners to commit themselves to specific activities for the further implementation of Agenda 21 after Johannesburg, taking into account the outcomes of the WSSD itself.

The global learning space should be based on cooperation and the exchange of knowledge between universities. But the Lüneburg Declaration was only the first step. It is necessary to involve other institutions too – polytechnics, primary and secondary schools – in which teachers have to adopt new approaches and apply new curricula. This wider range of institutions should be included in our partnership.

When one tries to create and to strengthen the global learning space by networking and having regional centres of excellence linked to each other – centres that are not just universities but a cluster of institutions including primary schools and secondary schools – then one can start to make a longitudinal type of curriculum development and create toolkits and other materials to help institutions perform better with regard to education for sustainable development.

We are now launching the Global Higher Education for Sustainability Partnership, which allows us to create a sense of common responsibility, a joint responsibility, not just for university education, but from the first stages of primary education. This follows the spirit of the Ubuntu Declaration, which brought together eleven major organizations in science and education on the initiative of the United Nations University-Institute of Advanced Studies (UNU-IAS). The GHESP can be summarized as follows:

- Promote better understanding and more effective implementation of strategies for the incorporation of sustainable development in

universities and other higher education institutions. Emphasis is put on the need for interdisciplinary approaches to teaching and research.

- Undertake a global review and assessment of progress in making sustainability central to curricula, research, outreach and operations in institutions of higher education. In so doing, assist UNESCO in its role within the UN system with respect to education for sustainable development.
- Identify, share and disseminate widely, via Internet, in print, through seminars and other venues, effective strategies, models and good practices for promoting higher education for sustainable development (HESD).
- Make recommendations on HESD based on the partnership's research and review and in consultation with key stakeholders from North and South, including business, governments, other UN bodies such as the United Nations University, as well as other relevant NGOs.
- Demonstrate that it is possible to form a partnership of NGOs working closely with the UN system to develop and implement a joint action plan addressed to achieve common goals, and analyse and evaluate this experience as an international demonstration project.

19.

REORIENTING HIGHER EDUCATION IN THE SOUTHERN AFRICAN DEVELOPMENT COMMUNITY (SADC) REGION

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The Linked University Consortium for Environment and Development is a Danish Agency for Development Assistance (DANIDA)-funded partnership of four university consortia with nineteen participating universities in Botswana, Denmark, Malaysia, South Africa and Thailand. Thematically, we cover the fields of industry and urban areas. We recognize that complex environmental problems in industry and urban areas are global, interdisciplinary and multifaceted, and that environmentally trained and educated professionals with needs-based, up-to-date knowledge are essential to the development process.

The four consortia of universities operate more or less independently, with outreach to other universities and to external stakeholders. The consortia cooperate through a partnership aiming to enhance teaching and research capacity in environmental management. This is linked with environmental management practices in administrative units, organizations and the private sector in the participating countries. The main cooperating activities focus on human resource development through exchange of students, researchers and teachers, curriculum development, improved teaching methods, research networking, continued education, and joint research and courses.

It is well known that at the Rio Summit, in Chapter 36 of Agenda 21, the role of universities was not specifically mentioned. But in the Plan of Implementation to be adopted in Johannesburg, education remains a less than major theme; it is just a means of facilitating the implementation of particular initiatives. During the past ten years and in the context of the World Summit on Sustainable Development (WSSD), we have been moving from the policy level towards implementation, and that is the focus of debate in this paper.

There are three groupings that should be mentioned as a reference when looking at the role of universities in implementation. First, the SADC Protocol for Education and Training is a vital framework for universities when considering what contribution they can make. The Principles of the SADC Protocol for Education must guide our efforts regarding:

- mutual benefits in regional cooperation;
- maximizing the use of existing regional expertise and institutions;
- reducing and eliminating unnecessary duplication;
- looking at the relative advantage enjoyed by particular groups in the region through the establishment of centres of specialization and excellence.

The SADC Protocol has objectives that are familiar to all when discussing regional cooperation: pooling resources; developing a system for the regular collection and reporting of information; developing policies, strategies and contributions by the private sector, NGOs, governments and other stakeholders; and, finally, looking at how we can coordinate science, technology and research activities. This is the real way in which they contribute to sustainable development initiatives.

As the SADC Protocol specifically deals with areas of cooperation, there are articles that should be mentioned briefly, especially articles 7, 8, 9 and 10. They include several objectives to be achieved in higher education.

Article 7, on 'Cooperation in Higher Education': Reinforce the idea of student and staff mobility and the mounting of robust postgraduate programmes and the creation of centres of specialization that can make cooperation between particular parts of the region feasible.

Article 8, on 'Cooperation in Research and Development': Research in the universities is frequently of little interest to us. If we are concerned about issues around development, we should be concerned about issues like poverty alleviation and environmental concerns. That is why the idea

of having basic and applied research at centres of excellence as the vehicle for creating greater indigenous capacity is critical.

Article 9, on 'Cooperation in Lifelong Learning and Training': Universal literacy and numeracy is a point that has been considered by the Plan of Implementation. Universities should contribute to this goal through short courses, seminars and workshops, professional (in-service) development and adult education programmes.

Article 10, on 'Cooperation in Publishing and Library Resources': In the South, there is a severe shortage of resources for publishing and libraries and other ways in which we can make information available to people. These aspects are vital in underpinning regional sustainable development.

The second grouping is placed in the context of the African Union. There are particular groupings within the African region that will be critical for looking at new governance, as well as new ways in which we can contribute to the question of addressing poverty and sustainable livelihoods for our people. This is also applicable to regions such as Latin America and Asia.

These are the contexts in which we have made efforts to strengthen university cooperation.

The Linked University Consortium for Environment and Development started up in 1996 with the following approach:

- We cooperate on research. We have six different research networks and we cooperate on joint educational programmes and continued education through educational partnering.
- We are trying to enhance the role of universities as knowledge centres in society through partnerships.
- We implement innovative teaching methodologies in courses and curricula (group work, intercultural understanding, interdisciplinarity, project work).
- We apply ICTs in all learning processes.
- We consider research as the most critical factor when we develop a new educational programme. This is the basis of developing innovative science and technologies.
- We apply an approach to all the above-mentioned activities that is highly demand-driven, specifically from the existing needs in society.
- We would claim that without universities, one cannot create learning societies.

Concerning knowledge societies, we would like to strengthen the idea that universities need to reorient their activities and move from knowledge creation that is discipline-based, i.e. where people learn in isolated boxes of disciplines, to one where knowledge is created in an interdisciplinary way, based upon problems that the universities help to solve. Developing new ways to teach students is critical for this process. But this is also a partner-based rather than just a university-based activity. That is why we started looking at collective knowledge creation and why we see universities being placed for outreach and for developing partnerships. (See Fig. 1.)

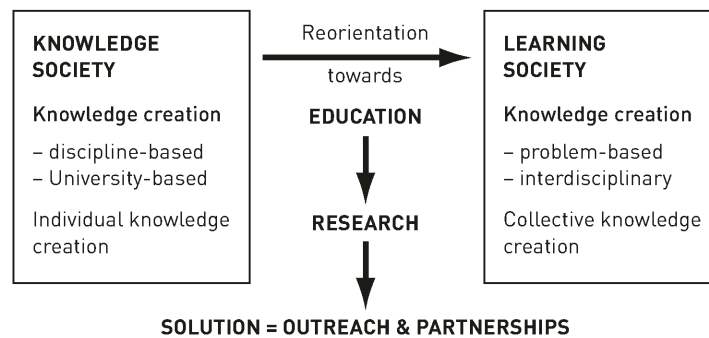


Figure 1. From Knowledge Societies to Learning Societies.

In conclusion, the partnership of the Linked University Consortium for Environment and Development – Industry and Urban Areas (LUCED-I&UA) reaches out to external stakeholders, who thereby constitute an additional component in the partnership. Through active cooperation and dialogue with society, the LUCED-I&UA partnership constitutes an important element in the development of learning societies, in which all parts of society can play a role.

20.

BUILDING THE CAPACITY FOR SUSTAINABLE DEVELOPMENT: MAXIMIZING INTERNATIONAL OPPORTUNITIES

Bedrich Moldan

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CZECH REPUBLIC¹
FORMER CHAIR, UN COMMISSION ON SUSTAINABLE DEVELOPMENT**

I should like to begin with some remarks on what I think should be the content of education for sustainable development. We all know that the meaning of sustainable development can be interpreted in many different ways. It should be recognized, however, that it is not an easy concept to define.

Since we are here at the World Summit, we must bear in mind the global perspective, without losing the importance of cultural diversity and diversity at the local and national level. This global perspective is of vital importance because it allows us to unify the global commitment of the international community. We, as the global community, must have some unified concept. Such a concept of education for sustainable development can be seen as a sort of global minimum. In other words, we should set a certain minimum content in our education for sustainable development.

This summit is a very good starting point when it strengthens the connections between the three pillars of sustainable development by focusing on reducing poverty while sustaining environmental quality and all the other components that sustainability implies. As a former Chairman of the Commission on Sustainable Development, I am happy to recall that, when the World Programme on Education was launched some years ago, it was mainly thanks to UNESCO. It was, in fact, a UNESCO initiative.

1. In March 2004 Charles University Environmental Centre organized a small conference in Prague on the environment and sustainability of education at universities.

Education has its own chapter (Chapter 36) in Agenda 21, but in spite of education being mentioned hundreds of times, it was called the 'forgotten priority' because not much action was taken. The World Programme was an attempt to change this situation. Even though this was not successful and there were no substantial breakthroughs, it was a good beginning. That is extremely important because we are now building upon its base, thanks to which we can think in specific terms such as networking. We cannot work in isolation when so many initiatives and events are occurring around the world. We need to create networks, keeping in mind the global perspective, or what I term this global minimum. We should unify content and bring together all the knowledge, the experience and also all the enthusiasm from all parts of the world.

A global perspective implies talking about integration. We must recognize that this integration is not only among disciplines and among people, but also that it lies at the heart of the notion of sustainable development. From this point of view, and looking at education for sustainable development, integration must be reinforced. It would be a very great mistake simply to add one more subject called sustainable development to all the existing disciplines, whether science or the humanities. What needs to be done is to put the elements of sustainability among and through all the subjects of the different disciplines that we are teaching. It is in this sense that we should understand the word 'integration'.

Thus teacher education emerges as a key aspect of education for sustainable development. In the Czech Republic, teacher education is at a relatively high level. There are no teachers without a university education; all teachers must have a Master's degree, even for primary-school teaching.

The pressure of the contemporary world to educate people (including teachers) very quickly, so that they can compete in the marketplace, has caused a tendency to lower the level of education. That would be another big mistake. Having teacher education at the very highest level is not enough, however. The reorienting of teacher education is essential if we are to achieve the aims of sustainability through education. If there were just one priority in my envisaged network of educators for sustainable development, it would be the reorienting of teacher education. We must look at all disciplines, at all parts and at all levels of the education system, whether formal, non-formal or informal education, and try to include elements of sustainability wherever it is appropriate and possible.

21.

**THE IMPERATIVE OF GIRLS' EDUCATION:
GENDER ISSUES IN EDUCATION
FOR SUSTAINABLE DEVELOPMENT**

Kul C. Gautum

**DEPUTY EXECUTIVE DIRECTOR, UNITED NATIONS CHILDREN'S FUND
(UNICEF)**

Most of my fellow panellists have spoken about new perspectives, new actors and new pathways as they relate to higher education. Although these are obviously very important, I should like to focus on an age-old problem that continues to dog us stubbornly: the unequal and inadequate access to basic education for girls, which is undoubtedly a major impediment to sustainable development.

If poverty eradication is the paramount challenge of sustainable development, basic education, particularly for girls, is unquestionably the surest and fastest way to reach that objective. An educated girl tends to marry later, is more likely to space her pregnancies, will seek medical care for her child and herself, will give better child care and nutrition, and will ensure that her children attend primary school. These are all important factors in preventing the intergenerational transmission of poverty. Basic education also enhances a woman's income-generating capacity and emboldens her to claim her rights and those of her children. It gives a young woman a sense of personal empowerment and self-confidence to make decisions that affect her life. Society as a whole benefits from girls' education.

Because of these multiple benefits, it is widely recognized that investing in quality basic education for girls is among the best investments that any nation can make in sustainable development. This was recognized some years ago, when the World Conference on Education for All (Jomtien, 1990) identified improving access to quality basic education for

girls and women as ‘the most urgent priority’. The World Education Forum (Dakar, 2000) reaffirmed this commitment. And in May 2002, world leaders meeting at the UN General Assembly’s Special Session on Children reaffirmed the Millennium Development Goal of eliminating gender disparities in primary and secondary education by 2005.

At the Millennium Summit, the Secretary-General of the United Nations reminded us all emphatically that there can be no significant or sustainable transformation in societies – and no substantial or lasting reduction in global poverty – until girls receive the quality basic education they deserve and take their rightful place as equal partners in development. In pursuit of this objective, the Secretary-General launched a UN Girls’ Education Initiative (UNGEI) in which thirteen UN entities, led by UNICEF, have agreed to work together to help governments meet their commitments to ensure a quality education for all girls everywhere.

The emphasis on girls’ education does not imply that boys are being ignored or that there is some kind of preference for girls over boys. It is simply a response to the realities of our world. In fact, an emphasis on girls’ education has been shown to be very good for boys, as an increase in facilities to expand access and improvement in teaching quality and learning experiences benefits all students. The benefits of girls’ education ripple through extended families, communities and nations as well as across sectors.

A strategic focus on girls’ education enables us to work more intensively on the links between education and sustainable development. As we focus on the barriers that prevent girls from enrolling and completing basic education of good quality, we increasingly encounter critical problems of sustainable development at the household and community levels. It is easy to predict that a disproportionate number of girls will be out of school in a household or a community that has the following characteristics:

- The household or community without access to clean water, which means that girls are trapped in the routine of fetching water for long periods every day and so cannot go to school.
- Schools without separate sanitary facilities for boys and girls – this puts girls in a difficult and embarrassing situation, prompting them to drop out of school.
- The village that does not have any community-based early childhood care provision, which means that girls have to stay at home to look after their younger siblings instead of going to school.

- Communities with scarcity of food resources, in which girls usually have a poor share of available food and so cannot benefit from what schools have to offer even if they attend.
- Households and communities heavily impacted by HIV/AIDS, in which children, especially girls, have to stay at home to care for sick relatives instead of attending school.
- Communities and households where the need for the child's labour for income-generating activities or for helping with domestic chores is in competition with the need for the child to attend school.

A focus on girls' education will lead us to such households and communities and set us on a fast track to education for all children, to poverty reduction and to sustainable human development.

Deliberate efforts are needed to eliminate all forms of gender bias and discrimination in education systems and schools, in curricula and learning materials, in teaching and in learning processes. Just as children must be helped to be ready for school, we must make sure that schools are made ready for children. Making schools child-friendly, and especially gender-sensitive, is an essential reform measure for promoting girls' education.

The World Summit on Sustainable Development has provided us with another opportunity to reaffirm our commitments to the children of the world to achieve the goal of education for all. And of all areas of education that have been the subject of panel discussions in this parallel event, girls' education merits the highest priority as the key building block for creating a world fit for children – the ultimate objective of sustainable development.

22.

WOMEN'S EDUCATION: A KEY ELEMENT IN EDUCATION FOR SUSTAINABLE DEVELOPMENT

Griselda Kenyon

**VICE-PRESIDENT, INTERNATIONAL FEDERATION OF UNIVERSITY WOMEN
(IFUW)**

Education is a key factor in sustainable development. We have all been told more times than we can remember that the education of women is an essential element. As UNICEF has pointed out, education provides people with the knowledge and skills to contribute to and benefit from development efforts, especially in the areas of health, nutrition, water, sanitation and the environment. Efforts in these areas are more likely to be successful if women understand the new concepts and their potential benefits, possess the skills needed to implement new ideas and are willing to test these concepts with their families and communities.

If there is one key point emphasized by all the world conferences of the 1990s, it is the education of women so that they may participate. The Programme of Action of the International Conference on Population and Development stresses that the education of women and girls contributes to women's empowerment, the postponement of marriage and reductions in family size. The World Summit for Social Development emphasizes the promotion of full access of women to literacy education and training and a people-centred approach to sustainable development. The Beijing Platform for Action, of course, has a whole chapter on women and the environment. Many of us remember the stalwart efforts of Bella Abzug in rallying us all before the Rio Earth Summit in 1992, when she insisted on the importance of women in environment and development.

One important element in sustainable development is that people grow up with a mindset for sustainability, a mindset focused on the

avoidance of the waste and extravagance that cause pollution and damage that cannot be repaired. I grew up in a wartime and post-war rationed United Kingdom and with a frugality that has remained with me to the present day. However, to inculcate this mindset, women have to be educated into the ways of sustainability, development and good housekeeping in order to teach their young. It is somewhat of a 'chicken and egg' situation, but even though education may take time to produce results and may even appear naive and idealistic, there is no means but education to bring about fundamental protection and discipline and to pass this on to future generations.

THE ROLE OF NGOS

The International Federation of University Women (IFUW) is a global organization of educated women representing some 180,000 graduates. We work and are active in all kinds of fields, but we share one belief: that our knowledge and skills should not be wasted or used in ways that lead the disadvantaged in society to become more disadvantaged. Environmental education is an essential part of these activities, especially since degradation of the environment affects everyone.

How do NGOs assist in women's education for development? Many of us run projects, mostly small local-level projects. The interesting thing is how the projects take on a life of their own and develop in ways that were not part of the original brief. We set up income-generating projects like weaving or chicken raising and egg production, for example, but women bring their children with them since there is no childcare. This leads to education in looking after their children, health education, literacy, marketing skills, money management and an improvement in self-confidence. Women who have been part of our projects learned enough and were confident enough to become part of and to run village councils – previously all-male affairs, with the limitations of vision that that implies. The ability to read can be taught, but it needs maintenance. The local mobile library established in one area was a lady who rode her bicycle from village to village with a box of books that could be borrowed. The books were donated, but funds had to be raised to buy and maintain the bicycle!

IFUW has a fundraising arm, which gives grants to women's projects, especially in educational and environmental areas. A US\$3,500 grant was

given to Escuelas Ciencias Biológicas in San José, Costa Rica, for partial funding of an extension programme to help women in rural communities organize and work together towards the solution of environmental problems such as water contamination and land degradation. The project director advised that books and periodicals dealing with the environment should be purchased and given to school libraries. Successful workshops were held for both women and children on ecology and resource management, including recycling. Another activity was the planting and taking care of trees: 300 different species were donated to the project. A symposium was held at the Universidad Nacional.

In Kavali, India, a grant was made to the Society for Integrated Tribal Development for the establishment of a bee-keeping cooperative that would give impoverished tribal women access to productive resources in a way that would minimize pressure on forest resources. The society trained thirty-six tribal women (primarily widows) in book-keeping and skills related to establishing and operating an environmentally friendly apiary cooperative. The women participated in a six-day conference with a series of workshops on production, resource management and conservation practices for the protection of the environment. Specialists from the Indian Forestry Department and from two environmentally concerned NGOs presented the workshops to the thirty women and fifty conference participants. A second conference extending over twelve days utilized resource persons from the Integrated Tribal Development Agency and a tribal development NGO. Workshop topics included exploitation and oppression of tribes, exploitation of women, thrift and credit societies, productive skill development, access to and control over productive resources, women's role in environmental conservation, women's health, government facilities and welfare programmes, nutrition, cooperative principles, cooperative management, apiary management and cooperative marketing.

IFUW also works with other NGOs who have similar interests in a particular area. Many of these projects have been helped by money from UNESCO. Since 1983, Project Five-O has developed twenty-three projects in eighteen countries. An example is an agricultural centre in Thailand that experiments with new plants, distributes seedlings to villagers and trains farmers and resource persons in association with government agencies.

One essential piece of training for every potential project is how to apply for funds. When I ran a project group I received very interesting

letters from women who, for example, wanted to plant trees to prevent further desertification in their area. I wrote back and said that it sounded splendid but I did need to know how many trees, how many women, how long would it take, how much money, etc., and I heard no more. Knowledge of how to apply for funding is essential.

However, environmental and development education is not only for the grass roots. As the Beijing document made clear, women remain largely absent at all levels of policy formulation and decision-making in natural resource and environmental management. They are rarely trained as managers and even if they are they are often under-represented in policy-making.

IFUW gives postgraduate grants to female research students who wish to go on after their Ph.D. to management positions. Among the present group of grantees are women who are researching: reductions in smoke emissions from improved biomass cooking stoves (recent newspaper articles about brown clouds over Asia suggest that this is an immediately necessary piece of research); educational planning in rural areas; soil fertility maintenance; monkeys as seed dispersers in fragmented forests; the ability of species to respond to environmental change; and health promotion in public health.

Many of these research projects are in scientific subjects. However, science is an area where many women have problems entering and pursuing careers. In their role as food producers women should be involved in scientific research and development, and as healthcare users and caretakers women's need for scientific knowledge is universal. The number of women engineers is increasing. My niece, a graduate engineer, is working on developing water systems in the Andes. A new relationship between science and society is needed with the inclusion of women to cope with pressing global development problems.

This brings us to IT, computers and information for all. Here there is enormous potential for education, for change, for telling people and especially women what they need to know. The potential for splitting the world into the information-rich and the information-poor is also enormous. The meetings that are starting now on this subject and that will continue into the future are important and need to take into account the different ways women and men need to access and disseminate information.

We call upon governments and major players in society to reaffirm their commitment to education, especially for women; but we are also

looking for real improvements on the ground in the real world with real people, where individuals are encouraged to develop a sense of individual and collective responsibility so that they may be involved in the kind of change that we are all looking for.

CONCLUSION

CONCLUSION

Koïchiro Matsuura

DIRECTOR-GENERAL, UNESCO

Our greatest thanks to all of you who have contributed to this two-day meeting. I should like to share some information from our perspective. First of all, we want to note how important it was to have the early orientation, provided by the political commitment from Head of States and Governments and other key Heads of Agencies and Heads of NGOs. It has given a political commitment to sustainable development and to education for sustainable development that perhaps did not exist in the same way before.

I should like to extend very special thanks to Minister Asmal and the Government of South Africa for co-hosting this symposium with UNESCO, and certainly for being here and for doing much of the work on the ground.

I should also like to thank the NGO-UNESCO Liaison Committee for its cooperation as well as for its useful contribution to the debate and also those from civil society, and organizations not affiliated with the NGO Committee. We really appreciate your being here – you have been the major part of the contributions and we anticipate that you will continue and strengthen this cooperation.

I believe that over the last two days we have laid the foundation for continuing the important work of reorienting education towards sustainable development. This is what we began in Rio ten years ago, but it certainly has a long way to go.

I should like to note the five key lessons that have emerged from these ten years of experience and that we have discussed here:

1. We realize that education is central to all efforts to achieve sustainable human development. Indeed, it is the foundation.
2. We know that, in order to achieve sustainable human development, we need a new vision for education – an expanded vision, a vision

that seeks to empower people of all ages and to assume responsibility for creating a different and better sustainable future.

3. We might identify a number of ways in which education needs to be focused, so that the policies, programmes and practices build the concepts, skills, motivations, commitments and actions needed for sustainable human development.
4. We recognize the importance of education as the key to rural transformation, acknowledging that this is where much of poverty still lies and that this has probably been the most difficult part of the poverty agenda.
5. We emphasize that education for sustainable development (ESD) is not just about schools or formal education. It is about lifelong learning and being able to learn for life throughout life.

Unfortunately, many other challenges lie ahead, but I believe that together we can address them, and we can address them well. We certainly need a better integration of ESD into development policies in a wider range of countries. We need a better presentation of ESD as a framework for education policies, especially national action plans in relation to education for all.

There is a need for the wider development and implementation of policies, guidelines and strategic plans on ESD. We need practical assistance, ways of making sure that what is known on the ground in place C can be shared on the ground in place B, and vice versa. It is not about something coming from the top, but about sharing information.

We know we need to address issues of governance to improve coordination among ministries of education, environment, natural resources, human resources, agriculture, arts, finance, etc.

We should also like to emphasize that ESD is also about non-formal education and informal education. We have not spoken much about informal education, but that in many ways is the learning we do at home, the integration learning. ESD has to begin in the early years.

We have talked about (and we still need to continue strengthening) institutional capacity and professional development processes.

We need to focus more on monitoring, evaluating and reporting on ESD. This is an area in which we have not done so well over the last decade. We need to be held accountable.

What, then, are some of the most effective ways of moving forward?

1. Clearly, we need to make education more inclusive, to enrol all children in school or in other kind of programmes, whether non-formal, skills training or vocational training, in order to provide adolescents and adults with opportunities for initial learning and continuing learning. Such strategies should involve the inclusion of those who have been excluded, those on the margins, those who speak minority languages, those who come from a minority religion, those such as girls and women, in short, those who are excluded.
2. One clear area where those concerned with education can make a big difference is in relation to teachers. We talk a great deal about teachers and their role in regard to learning and the quality of education. And it is not just about reorienting teachers' education. (We talk a great deal about that too.) It is also about acknowledging teachers, respecting them, paying them. Teachers have a very difficult job and we all have opinions on what they should be doing. What we need to understand is that we are all, in one way or another, teachers. But those who are given the title of 'teacher' are often underpaid and under-appreciated.
3. We need to improve the quality of education to achieve the maximum impact. We know that if we focus on the quality of education, we can produce significant results without requiring huge effort or enormous expenditures. I should like to touch briefly on the quality of education, in ways we have discussed but not really brought together at this summit. We have to recognize that education is a right. It is there, in the United Nations Agreements and Conventions on human rights. And it is also about human development. This concerns rights – not just the right to education, but the fact that rights are interlinked and we cannot establish priorities among them.

Thus we need to understand that education is a highly political topic. As soon as we talk about education being a right, we are talking about something that is political. We are aware of this, and it has become even more apparent during the course of the conference.

Education – that is, the quality of education – must take into account the context in which it is set. That means that the language, the culture and new technologies are all involved. We need to look at the quality of education, taking all these factors into account. It is about learning to learn. It is about constructing knowledge and about decisions.

Finally, I should like to say a few words about the proposed World Decade of Education for Sustainable Development (2005–2014). We welcome this idea. UNESCO is ready to participate in this and to serve, the best it can, the new mandate that is being given to us. We will play a strategic role, to the best of our ability, through educational, scientific, cultural and communications programmes, projects and activities world-wide.

We understand our duty and we are willing to rise to the challenge to help put all these elements together. I have used the word 'help': that is because I know that each and every one of you will be a partner with us and we look forward to the possibility of working together in the Decade.

APPENDICES

APPENDIX I

The International Marketing/Communications Initiative for Sustainable Development: Engaging the Advertising Industry to Help Communicate Sustainability Around the World

PARTNERSHIP INITIATIVES INFORMATION SHEET

Name of the partnership/initiative:

Engaging the Advertising Industry to Help Communicate Sustainability Around the World.

Date of initiation:

The project began in May 2002, and the official project launch took place at the WSSD in Johannesburg. To date, the partnership has engaged organizations on multiple continents to test the validity of the initiative's concept and implementation. Overwhelmingly, representatives from all sectors have expressed enthusiasm for its objectives and approach.

Expected date of completion:

The strategy and implementation will be finished by December 2004, but this project will deliver educational and knowledge transfer tools that will endure for many years.

Partners involved:

The initial partnership for the design and launch phases of this project includes the following partners:

Business and industry:

J. Walter Thompson Company Limited will assume lead role on the project, offering critical access to a global network of companies through its parent, the WPP Group plc. J. Walter Thompson is the world's oldest advertising company, with offices in 89 countries. WPP is the world's leading communications and marketing services company, with offices in

103 countries. Because of this global range and a disciplinary expertise which includes market research, advertising, and public affairs disciplines, these companies will ensure that programme content and strategy reflect realities in developed and developing nations alike.

Government:

Canadian federal departments of Industry and Environment.

Intergovernmental organizations:

UNESCO. The project covers the whole breadth of UNESCO's mandate in education, science, culture and communication.

The current partners are the founders of this project, but all intend to move it forward by engaging partners in government, industry, academia, NGOs and intergovernmental sectors that come from all regions. These global partners will be involved at all phases of development, including the immersion into sustainability issues, the creation of strategy, and its ultimate dissemination across multiple countries.

Leading partner:

J. Walter Thompson Canada.

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Main objectives of the partnership/initiative:

The overall objectives of the initiative are:

1. To compellingly communicate the essence of sustainable development with unprecedented power and clarity so that people on all continents comprehend its basic meaning; to encourage sustainable decision-making across all sectors; and to facilitate an ongoing dialogue that sustains long-term public engagement with sustainability issues:

- utilize the skills of the international marketing/communications industry to develop a global campaign that expresses sustainability as something highly relevant to the personal and work lives of people in every region of the world;
- uniquely enable the outreach channels of governmental, inter-governmental and non-governmental organizations as a means of disseminating messages of sustainable development;
- ensure that the diversity of interpretations and applications of sustainable development in different contexts is respected and taken into account.

2. To influence business and industry worldwide, in particular the communications/marketing/advertising industry, to understand and internalize the messages of sustainable development:

- provide mechanisms to distribute lessons and messages to interested organizations undertaking future work on sustainable development messages, whatever their geographical location.

Expected results:

This initiative will:

- innovate informal means of education (as compared with formal education) to help global audiences understand and respond to the value of sustainable development in the same way that they respond to the ideas, messages and symbols of the most prominent global organizations;
- empower and enable various publics in advanced and developing nations to make well-informed choices, and to positively affect how local and multinational business leaders make decisions;
- focus the power of marketing/communications to gain insight into how consumers and citizens respond to messages about sustainability in diverse markets;

- set an example of how the communications industry can use its ability to innovate and its global networks to advance messages related to sustainability and lead social change.

To achieve and measure these results, the partnership will undertake the appropriate market testing in all major regions of the world to determine what aspects of attitude and behaviour can change. It will set realistic measurable targets and create appropriate metrics for evaluation.

Specific targets of the partnership/initiative and time-frame for their achievement:

Target phases for this project will move it from conception and launch to implementation and evaluation.

Phase 1: Create the project concept and plan; launch the type 2 partnership in Johannesburg; engage prospective new global partners critical to project success [August–October 2002].

Phase 2: Build a working partnership with representation in multiple countries; identify further funding sources; commence workshops and research to assess markets and issues to be explored for the communications initiative [November–December 2002].

Phase 3: Develop the communications ideas and dissemination strategy and secure long-term funding from international sources [January–December 2003].

Phase 4: Launch the communications programme worldwide and begin evaluating effectiveness [January–December 2004].

Coordination and implementation mechanism:

As new partners join from various sectors and geographies, the initiating partners will coordinate and implement the project as follows:

J. Walter Thompson is responsible for facilitating strategic and creative development. It will engage industry partners, develop a work plan, process design and logistics, project research, facilitate the Johannesburg events and prepare a blueprint, action plan and final report on outcomes. Drawing upon its offices on all continents, it will build a team of top

marketing professionals to develop strategy and carry out global communications initiatives. It will secure partners from its WPP network operating in 103 countries, as determined by the project's strategy.

UNESCO will be responsible for bringing to bear expertise/understanding in the fields of education, science (both natural and social sciences), culture and communication. The initiative will address all of UNESCO's fields of competence and draw upon its extensive international, regional and national networks. UNESCO will ensure that the campaign's content is sensitive to geographical, cultural, political and social differences. It will also ensure that all content is scientifically sound and reflects the most up-to-date knowledge.

UNESCO will also attempt to engage its non-governmental affiliates in the initiative. The Government of Canada will provide context and advice through participation in regular meetings with project partners. It will facilitate contact with other governments and international organizations and NGOs, as well as access to networks to enhance the partnership. It will also lead the reporting on results of the project in the post-WSSD context. The initiative will draw on expertise in the social and communications fields.

Funding arrangements:

The Government of Canada has provided the initial funding for the creation of the project concept and plan, and the launch at Johannesburg. Additional funds will be identified and secured progressively, as the project and funding needs evolve.

Arrangements for capacity building and technology transfer:

This project's objectives are to build the capacities and means for technology transfer, as it will create messages and provide information that empower groups working on sustainability in all sectors and regions. The knowledge gathered and tools developed can be transferred throughout UN organizations, the networks of concerned industry and NGOs, the relevant government agencies and academia. The enormous potential for web-based knowledge transfer will be captured.

Links of the partnership/initiative with ongoing sustainable development activities at the international and/or regional level:

This partnership clearly demonstrates the advertising industry's leadership and commitment to the recommendations of UNCED, WSSD and the UN/CSD. It affirms the report published by UNEP in 2002 concerning the tremendous contribution the advertising industry can make towards achieving the objectives of sustainable development.

Monitoring arrangements:

The partnership will set targets for measurement, and benchmark and monitor these targets against the progress actually made with populations targeted for the campaign. Drawing upon the expertise of companies within its international WPP network, the partnership will request participation from global market research and public affairs leaders, Millward Brown, BPRI, Mindshare and Hill & Knowlton.

Other relevant information:

Announcement of the partnership took place at selected events in Johannesburg, in particular on 2 September 2002 during the UNESCO/Government of South Africa parallel event, 'Education for a Sustainable Future: Action, Commitments and Partnerships'.

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APPENDIX II

The FAO/UNESCO EFA Flagship Programme on Education for Rural People

PARTNERSHIP INITIATIVES INFORMATION SHEET

Name of the partnership/initiative: Flagship Programme on Education for Rural People (ERP).

Date of initiation: 2002.

Expected date of completion: 2015.

Partners involved:

International organizations:

FAO – Food and Agriculture Organization of the United Nations.

UNESCO – United Nations Educational, Scientific and Cultural Organization.

ICRAF – World Agroforestry Centre of the CGIAR.

IPGRI – International Plant Genetic Resources Institute.

WFP – World Food Programme.

CIAT – Centro International Agricultura Tropical.

Governments:

The Government of Egypt.

The Government of San Marino.

NGOs, foundations, etc.:

Terre des Hommes, Italy.

CELIM – Centro Laici Italiani per le Missioni, Italy.

ACRA – Associazione di Cooperazione Rurale in Africa e America Latina, Italy.

UCSEI – Ufficio Centrale Studenti Esteri in Italia, Italy.

CISP – Comitato Internazionale per lo Sviluppo dei Popoli, Italy.

OPAM – Opera di Promozione dell'Alfabetizzazione nel Mondo, Italy.

ISCOS – Istituto Sindacale per la Cooperazione con i Paesi in Via di Sviluppo, Italy.

AIFO – Associazione Italiana Amici di Raoul Follereau, Italy.

FOCSIV – Federazione Organismi Cristiani Servizio Internazionale Volontario, Italy.

CTM – Controinformazione Terzo Mondo, Italy.

C.V.C.S. – Centro Volontari Cooperazione allo Sviluppo, Italy.

CIDE – Centro de Investigación y Desarrollo de la Educación, Chile.

EDC – Education Development Center, United States and Europe.

Universidad Nacional de Salta, Argentina.

Social Development Forum 2000, Pakistan.

FOCA – Fundação Oásis Cidade Aberta, Brazil: president@foca.org.br.

Commonwealth Secretariat, United Kingdom.

Association SAHEL DEFIS, Bamako, Mali.

Others:

Farmers, women, children, youth and local authorities.

Leading partner: FAO.

Contact persons:

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Main objectives of the partnership/initiative:

The flagship is a call for a collaborative initiative to increase the coordination of efforts and resources targeting the educational needs of rural people.

The initiative seeks to address rural/urban disparities, which are of serious concern to governments and the international community as a whole. About 70% of the poor live in rural areas. Despite the fact that education is a basic right in itself and an essential prerequisite for reducing poverty, improving the living conditions of rural people and building a food-secure world, children's access to education in rural areas is still much lower than in urban areas, adult illiteracy is much higher and the quality of education is poorer.

In this regard, FAO and UNESCO are joining efforts in the establishment of a new flagship within the education for all (EFA) initiative with a focus on education for rural people. The partnership is open to members committed to working separately and together to promote and facilitate quality basic education for rural people.

The main objective of the partnership is to raise the specific political will needed to use the existing means to ensure universal access to adequate food and quality basic education, as well as to provide adequate resources and specific sustained action in rural areas.

The main beneficiaries of the initiative will be rural people, farmers and national and local authorities. The partners of the flagship, international organizations and NGOs will benefit from better coordination and the exchange of experiences and capacity building.

The partnership/initiative and the objectives of Agenda 21:

The initiative will assist the implementation of the following Chapters of Agenda 21:

Chapter 3: *Combating poverty in rural areas* is one of the pillars of the flagship and will be reflected across the objectives and activities of this proposal.

Chapter 8: *Influencing policy-making for sustainable development.*

Chapter 10: *An integrated approach to land-resource use.*

Chapter 14: *Meeting agricultural needs without destroying the land.*

The partnership will promote an integrated approach in policy-making processes for solving problems related to rural sustainable development, such as poverty alleviation, access to education and health, food security, sustainable agriculture patterns, protection of natural resources and sustainable use of the land.

Chapter 36: *Education and public awareness.*

The flagship is focused on:

- reorienting education towards sustainable development for people in rural areas;
- increasing public awareness of the need to reduce the existing rural–urban educational gap;
- training teachers and persons involved in decision-making processes related to the development of the rural world and overcoming obstacles for achieving sustainability.

Chapter 37: The flagship counts on an action-oriented component which attempts to:

- develop a region/country's human, scientific, organizational, institutional and resource capabilities for sustainable development;
- strengthen the use of existing human resources within partner institutions.

The partnership/initiative and the UN Millennium Development Goals:

Hunger and illiteracy are the most direct cause and consequence of poverty and are heavily concentrated in rural areas. Ending hunger and illiteracy are Goals 1 and 2 of the Millennium Declaration, which are directly pursued by this initiative. Additionally, the promotion of gender equality and the empowerment of women, Goal 3, is a specific objective foreseen within this initiative and corresponding to the Dakar goals for education for all.

Expected results:

This is a key partnership that links the EFA movement with that of sustainable development in closing the education gaps among rural and urban population as follows:

1. Political commitments will be adopted around the use of the existing means for ensuring universal access to adequate food and quality basic education.
2. Increasing access to basic education for children and youth living in rural areas through the development of educational programmes will reduce the urban–rural education gap.

3. Specific plans of action addressed to the basic educational needs of rural people will be adopted by countries, as part of the national plans on EFA, with the technical support of the partners.

Specific targets of the partnership/initiative and time-frame for their achievement:

Specific targets:

1. Build awareness of the importance of education for rural people as a crucial step in eradicating extreme poverty and hunger and achieving universal primary education through:

- advocacy and mobilization of partnerships for education of rural people concentrating on strategic global, regional and international events, and encouraging the same within countries;
- identifying the capacity for different substantive components on education for rural people within partner institutions;
- supporting the exchange of good practices and knowledge on education for rural people.

2. Overcome the urban–rural education gap by increasing access to basic education for rural people and improving the quality of basic education in rural areas, through the implementation of the national plans of education for all.

3. Foster the national capacity to plan and implement basic education plans to address the learning needs of rural people.

Time-frame:

Phase 1: Launch meetings

The new FAO/UNESCO flagship was launched at a side event during the World Summit for Sustainable Development (WSSD) in Johannesburg on 3 September 2002. All partners were welcome to participate in this ceremony. Collaborators were mentioned during the WSSD side event as well as on every other occasion where the flagship was presented. UNESCO's Director-General, Koichiro Matsuura, and FAO's Director-General, Jacques Diouf, were both present, indicating the importance of the flagship and the high regard for this partnership.

Phase 2: Design

The flagship was also presented during subsequent meetings:

1. A regional workshop on 'Education for Rural Development' organized in partnership with FAO, UNESCO and UNESCO/IIEP (Bangkok, 5–7 November 2002).
2. An Aid Agencies workshop on 'Education for Rural People' organized by FAO, with the technical collaboration of UNESCO and UNESCO/IIEP (Rome, 12–13 December 2002).
3. Youth Employment Summit 2002 (Alexandria, 7–11 September 2002).
4. International Symposium on Rural Education organized by the UNESCO Office in Beijing together with the International Research and Training Center for Rural Education (INRULED, China), the Chinese Ministry of Education and the Chinese National Commission for UNESCO (20–23 January 2003).

Draft terms of reference of partners, definitions of competencies and specific commitments as well as outcomes will be defined during this phase.

Phase 3: Implementation

To optimize the use of resources and promote the exchange of experiences between the lead organizations and their partners, a complementary time-frame and targets to be accomplished during the annual EFA meetings will be proposed, as previously agreed upon by the participants.

Coordination and implementation mechanism:

FAO's Research, Extension and Training Division (SDR) and the Extension, Education and Communication Service (SDRE) is coordinating the programme, in partnership with UNESCO's Chief of Section for Literacy and Non-Formal Education.

Funding arrangements:

Financial support, contributions/commitments of human resources are being developed through relevant links to regular programme activities with FAO, UNESCO (and other interested UN agencies) and with the institutions and NGOs signing this initiative.

Arrangements for capacity building and technology transfer:

It is planned to strengthen institutional capacity in planning and managing education for rural development by supporting new partnerships at national level among government agencies (ministries of agriculture, education, health, etc.), private and public organizations, universities, civil society and the mass media. Similarly, at the international level, among agencies or departments specializing in rural development, such as FAO, ICRAF, IPGRI, Terre des Hommes, CELIM, ACRA, UCSEI, CISP, OPAM, AIFO, FOCSIV, CTM, C.V.C.S. and with agencies and departments specializing in education, such as UNESCO.

Addressing education for rural development systemically and overcoming the 'spare projects' approach, which targets isolated parts of traditional agricultural education, will be the most important contribution in building capacity at the local level. Basic education, secondary, vocational, higher education, literacy and skill training all need to be seen as contributors to the development of human capacity for rural development. Assistance to some or all of them should therefore be approached in a systemic way. This is the core of this synergetic initiative.

Links of the partnership/initiative with ongoing sustainable development activities at the international and/or regional level:

The partnership is linked to ongoing international and regional activities of intergovernmental organizations (such as FAO and UNESCO), national governments and institutions and NGOs to implement policies and activities to achieve the proposed objectives of reducing the rural–urban gap. This initiative is a follow-up of the strategy for implementing the goals of education for all by 2015 (Dakar Framework for Action) among the international community.

The initiative will focus on expanding access to education and improving school attendance in rural areas, and also on improving the quality of education to make it relevant to rural livelihoods, needs and interests. Thus programmes related to supporting curriculum development on sustainable development, teacher training, environmental education, nutrition, population and health education, and education for preventing HIV/AIDS have been developed over the past several years. In this regard, quality education should be seen as a cornerstone for the building of sustainable development, especially in rural areas.

Monitoring arrangements:

Progress reports were prepared in 2003 on the current status of the design of the flagship.

Progress in the implementation of this partnership was reported in the independent, international *EFA Global Monitoring Report 2003/4*, an authoritative annual report that holds the global community accountable for commitments made at the World Education Forum. It will chart progress against the six Dakar goals and targets, including the Millennium Development Goals for education, highlight effective policies, alert the global community to emerging challenges and promote international action and cooperation to achieve education for all.

<i>Audience</i>	An annual reference point for individuals, governments, policy-makers, civil society, international and non-governmental organizations and the media. An indispensable advocacy and technical tool for those who work for education for all.
<i>Independence</i>	Prepared by an international team based at UNESCO in Paris and the UNESCO Institute for Statistics (UIS) in Montreal, the Report is a collective endeavour funded jointly by UNESCO and multilateral and bilateral agencies. It also benefits from the advice of an international editorial board, which meets twice a year. The Director of the Report Team takes full responsibility for the analysis and opinions expressed in the Report.
<i>Contents</i>	The Report tracks progress, maps trends, identifies effective reforms and policies, assesses political commitment, raises awareness of challenges and constraints, and promotes specific international strategies and cooperation. From 2003, each edition will chronicle progress on one major theme relevant to EFA, such as gender equality, human rights, literacy, and skills for livelihoods.
<i>Data</i>	Each Report includes the latest available statistics collected and analysed by UIS.

<i>Expertise</i>	The Report draws on scholarship and expertise from a wide range of stakeholders – governments, non-governmental organizations, bilateral and multilateral agencies, UNESCO Institutes and research institutions. It combines the best analytical rigour and scholarship with clarity of presentation and argument.
<i>Publication date</i>	The Report is issued annually, prior to the meeting of the EFA High-Level Group in November.
<i>Communication</i>	The Report builds on strong communication and consultation strategy designed to share, disseminate and interpret its findings worldwide.

Other relevant information:

For further information, the following websites can be consulted:

1. Education for rural people: Targeting the poor
<http://www.unesco.org/education/efa/index.shtml>

2. Food for thought: Education for rural people – Knowledge as a tool to fight hunger and poverty
<http://www.fao.org/english/newsroom/news/2002/12280-en.html>

French: De la nourriture pour penser: Promouvoir l'éducation en milieu rural – Partenariat FAO-UNESCO, éducation pour tous
<http://www.fao.org/french/newsroom/news/2002/12280-fr.html>

Spanish: Educación para los habitantes de las zonas rurales – La educación como instrumento para la lucha contra el hambre y la pobreza
<http://www.fao.org/spanish/newsroom/news/2002/12280-es.html>

3. Audio online – Food for thought: Education for rural people
<http://www.fao.org/english/newsroom/audio/index.html>

French: Audio en ligne – Nourrir l'esprit: L'éducation pour les populations rurales
<http://www.fao.org/french/newsroom/audio/index.html>

Spanish: Audio en línea – Educación para la población rural
<http://www.fao.org/spanish/newsroom/audio/index.html>

4. Education for rural people: FAO and UNESCO are making a joint call for education for rural people

<http://www.fao.org/ruralityouth/education.html>

French: Education pour les populations rurales: La FAO et l'UNESCO lancent un appel conjoint en faveur de l'éducation pour les populations rurales

http://www.fao.org/ruralityouth/education_fr.html

Spanish: Educación para la población rural: La FAO y la UNESCO hacen un llamado conjunto en pro de la educación para las poblaciones rurales

http://www.fao.org/ruralityouth/education_sp.html

5. FAO and UNESCO are making a joint call for education for rural people

http://www.rdfs.net/news/events/0212ev/0212ev_education_en.htm

French: La FAO et l'UNESCO lancent un appel conjoint en faveur de l'éducation pour les populations rurales

http://www.rdfs.net/news/events/0212ev/0212ev_education_fr.htm

Spanish: La FAO y la UNESCO hacen un llamado conjunto en pro de la educación para las poblaciones rurales

http://www.rdfs.net/news/events/0212ev/0212ev_education_es.htm

Arabic: http://www.rdfs.net/news/events/0212ev/0212ev_education_ar.htm

6. The Aid Agencies workshop on 'Education for rural people: Targeting the poor', Rome, 12–13 December 2002

http://www.fao.org/sd/2002/KN1202_en.htm

French: http://www.fao.org/sd/2002/KN1202_fr.htm

Spanish: http://www.fao.org/sd/2002/KN1202_es.htm

7. Workshop on 'Education for rural development in Asia: Experiences and policy lessons', Bangkok, Thailand, 5–7 November 2002

http://www.fao.org/sd/2002/KN1201_en.htm

8. The Dakar Framework for Action – Education for all: Meeting our collective commitments by focusing on education for rural people

http://www.fao.org/sd/2002/KN1201a_en.htm

9. Education for rural people: Towards new policy responses (November 2002)

http://www.fao.org/sd/2002/KN1101a_en.htm

10. Compendium of experiences of Italian NGOs in education for rural people (October 2002)

http://www.fao.org/sd/2002/KN1002_en.htm

French: Recueil d'expériences des ONG italiennes en matière d'éducation pour les populations rurales – (abstract)

http://www.fao.org/sd/2002/KN1002_fr.htm

Spanish: Compendio de experiencias de ONG italianas en educación para la población rural (octubre 2002)

http://www.fao.org/sd/2002/KN1002_es.htm

11. Director-General's speech at the launch of the new FAO/UNESCO Flagship Programme on Education for Rural People (September 2002)

http://www.fao.org/sd/2002/kn0904_en.htm

French: Discours du Directeur-Général de la FAO sur le lancement du nouveau programme-pilote FAO/UNESCO sur l'éducation pour les populations rurales (abstract)

http://www.fao.org/sd/2002/kn0904_fr.htm

Spanish: Discurso del Director General en el lanzamiento de la nueva iniciativa del Programa FAO/UNESCO sobre educación para la población rural (septiembre 2002)

http://www.fao.org/sd/2002/KN0904a_es.htm

Spanish: Discurso del Director General en el lanzamiento de la nueva iniciativa del Programa FAO/UNESCO sobre educación para la población rural: Oficina regional de la FAO

<http://www.rlc.fao.org/prior/desrural/educacion/dg.htm>

12. Launching a new flagship on education for rural people

http://www.fao.org/sd/2002/KN0801_en.htm

French: Lancement d'une nouvelle initiative pour l'éducation de la population rurale

http://www.fao.org/sd/2002/KN0801_fr.htm

Spanish: Presentación de una nueva iniciativa de escolarización de la población rural

http://www.fao.org/sd/2002/KN0801_es.htm

13. New FAO-UNESCO education for rural people flagship

<http://www.fao.org/ruralyouth/news.html>

French: Le nouveau programme-phare FAO-UNESCO d'éducation pour les populations rurales

http://www.fao.org/ruralyouth/news_fr.html

Spanish: Nuevo programa de educación para la población rural de la FAO-UNESCO

http://www.fao.org/ruralyouth/news_sp.html

14. *Spanish:* Educación y alimentos para todos: Un nuevo lema para la iniciativa 'Educación para todos' (Oficina Regional para América Latina y el Caribe, FAO)

<http://www.rlc.fao.org/prior/desrural/educacion/educa.htm>

15. Launching a new flagship on education for rural people (UNESCO)

http://www.unesco.org/education/efa/know_sharing/flagship_initiatives/rural_people.shtml

16. Launching a new flagship on education for rural people (World Bank)

<http://lnweb18.worldbank.org/ESSD/essdext.nsf/11ByDocName/Partnerships>

17. FAO and UNESCO propose a joint partnership to promote education in the rural world (UN System Network on Rural development and Food Security, October 2002)

http://www.rdfs.net/news/news/0210ne/0210ne_FAOUNESCO_en.htm

French: La FAO et l'UNESCO proposent de s'associer pour promouvoir l'éducation dans le monde rural (Réseau du Système des Nations Unies sur le développement rural et la sécurité alimentaire, Octobre 2002)

http://www.rdfs.net/news/news/0210ne/0210ne_FAOUNESCO_fr.htm

Spanish: FAO y UNESCO proponen un partenariado conjunto para promover la educación en el mundo rural (Red del sistema de las Naciones

Unidas sobre desarrollo rural y seguridad alimentaria, Novedades, Octubre 2002)

http://www.rdfs.net/news/news/0210ne/0210ne_FAOUNESCO_es.htm

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APPENDIX III

The Global Higher Education for Sustainability Partnership (GHESP) initiative – Reorienting higher education toward sustainability

PARTNERSHIP INITIATIVES INFORMATION SHEET

Name of the partnership/initiative: Global Higher Education for Sustainability Partnership (GHESP).

Date of initiation: September 2002.

Expected date of completion: 31 December 2007.

Partners involved:

Intergovernmental organizations:

UNESCO.

Major groups:

Association of University Leaders for a Sustainable Future (ULSF).

COPERNICUS-CAMPUS.

International Association of Universities (IAU).

Others:

It is intended to engage other stakeholders and partners (such as the United Nations University), with a particular attempt to involve universities from the South.

Leading partner:

The leading partner rotates as the GHESP Chair moves from major group to major group. From September 2002 to September 2003 it was the International Association of Universities. COPERNICUS-Campus took over in Sept. 2003.

Contact person: GHESP Chair (2003–2004)

Dr. Hans-Peter Winkelmann

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Main objectives of the partnership/initiative:

In 2000 three non-governmental organizations active in the field of higher education (ULSF, IAU, COPERNICUS-CAMPUS) and UNESCO agreed to join forces and signed a first Memorandum of Understanding, to collaborate and undertake joint actions in the area of higher education and sustainable development. As a result of the Work Programme of the Commission on Sustainable Development, as a follow-up to the World Conference on Higher Education, and in anticipation of the World Summit on Sustainable Development (WSSD), the Global Higher Education for Sustainability Partnership (GHESP) was formed. In October 2001 a conference on 'Higher Education and Sustainability: Towards the World Summit on Sustainable Development 2002' was held in Lüneburg, Germany; it resulted in the Lüneburg Declaration on Higher Education for Sustainable Development (www.unesco.org/iau/ghesp/LuneburgDeclarationFinal.html)

in which the partners committed themselves to specific activities for the further implementation of Agenda 21 after Johannesburg.

GHESP is a global initiative, and its primary emphasis as a type 2 partnership is capacity building in the global South. In September 2002 the partnership was renewed for a five-year-period in order to implement this type 2 partnership initiative and achieve the following general objectives:

1. Promote better understanding and more effective implementation of strategies for the incorporation of sustainable development in universities and other higher education institutions, beginning with the over 1,000 signatories to the charters and declarations sponsored by the partner organizations. Emphasis is put on the need for interdisciplinary approaches to teaching and research.
2. Undertake a global review and assessment of progress in making sustainability central to curriculum, research, outreach and operations in institutions of higher education. In so doing, assist UNESCO in its role within the UN system with respect to education for sustainable development.
3. Identify, share and disseminate widely, via Internet, in print, through seminars and other venues, effective strategies, models and good practices for promoting higher education for sustainable development (HESD).
4. Make recommendations on HESD based on the partnership's research and review and in consultation with key stakeholders from North and South, including business, governments, other UN bodies such as the UNU, as well as other relevant non-governmental organizations.
5. Demonstrate that it is possible to form a partnership of non-governmental organizations working closely with the UN system to develop and implement a joint action plan addressed to achieve common goals; and analyse and evaluate this experience as an international demonstration project.

The partnership/initiative and the objectives of Agenda 21:

The GHESP objectives outlined above strongly support the three priorities identified in Chapter 36 of Agenda 21, namely the need to:

- reorient education towards sustainable development;
- increase public awareness;
- promote training.

The partnership/initiative and the UN Millennium Development Goals:

The objectives are also in line with the fundamental values highlighted in the 2000 United Nations Millennium Declaration, especially I.6, 'Respect for Nature', and paragraph IV, 'Protecting our Common Environment'. GHESP adheres to the principal objective that 'prudence must be shown in the management of all living species and natural resources, in accordance with the precepts of sustainable development. Only in this way can the immeasurable riches provided to us by nature be preserved and passed on to our descendants.' GHESP believes that higher education can contribute to changing 'the current unsustainable patterns of production and consumption [...] in the interest of our future welfare and that of our descendants'.

In reaching out to so many universities around the world, GHESP helps to put sustainable development on the agenda of heads of higher education institutions and urges them to adopt a new ethic of conservation and stewardship. (See Chapter 107 – B, C and D of the Draft Plan of Implementation for the World Summit on Sustainable Development.)

Results and expected results:

- Joint publication by IAU and ULSF of Vol. 15, No. 2, of the journal *Higher Education Policy* and Vol. 3, Issue 3, of the *International Journal of Sustainability in Higher Education*, on 'Sustainability and higher education: initiatives and agendas'. Guest-edited by ULSF and completed in June/July 2002, the publications were distributed in August 2002 at the WSSD, in Johannesburg (see: <http://www.unesco.org/iau/hep-contents.html#June2002>).
- In conjunction with IAU's Administrative Board Meeting and an International Conference on Globalization (see: www.ulaval.ca/BI/Globalisation-Universities/), IAU held a GHESP special partners meeting, as a direct follow-up to Johannesburg, in Quebec City, Canada, on 21 September 2002. A new Action Plan, taking WSSD-adopted resolutions into account, has been defined.
- IAU solicits the interest of a number of higher education institutions in developing countries that are interested and able to play an active role within the region in furthering GHESP goals. IAU uses its own World Higher Education Database and internal networks, but also takes into consideration the active UNITWIN/UNESCO

Chairs in Sustainable Development as well as contacts with sectoral experts in UNESCO to find partners in developing country universities working on issues of sustainable development.

- IAU established a Working Group, Chaired by Goolam Mohamedbhai, Vice-Chancellor of the University of Mauritius, IAU Board Member, to assist it in the implementation of its own activities and contribution to GHESP.
- COPERNICUS-CAMPUS hosted the Lüneburg Conference that led to the publication of *The Lüneburg Declaration – Stepping stone for universities and development in the context of globalization* (see: www.ulsf.org/publications_declarations_index.html).
- IAU organized an international Conference on *Education for a Sustainable Future*, in Prague, in September 2003 (see: <http://www.unesco.org/iau/conference/prague/index.html#themes>). This was the first international higher education Consultation on Sustainable Development since the WSSD which gathered participants from over 40 countries around the world.
- IAU's 12th General Conference, to be held in São Paulo, Brazil, in July 2004 on 'The Wealth of Diversity. The Role of Universities in Promoting Dialogue and Development' (www.unesco.org/iau) will focus on 'The Role of Higher Education in Promoting Development' in the Second Plenary Session. A series of six Workshops will offer a real space for debate.
- Together with GHESP partners, ULSF produces an action-oriented Toolkit for universities, managers, administrators, faculty and students to assist in moving from commitment to concrete action. The Toolkit is to include an implementation strategy for signatories of the charters and declarations sponsored by the partner organizations. ULSF and the GHESP partners will continue to build an online resources database (see: www.ulsf.org/toolkit/) and the Toolkit is to be officially launched for the UN Decade of Education for Sustainable Development, in 2005.
- Together with IAU, ULSF develops an on-line sustainability assessment tool (based on ULSF's Sustainability Assessment Questionnaire and GRI), primarily for use by the signatory institutions represented by GHESP partners (see 'Links of Partnership/Initiative' section below).
- ULSF will develop and disseminate a college-level curriculum on 'Earth Ethics and Sustainable Development', based on the Earth

Charter, expanding on ULSF's work with UNESCO and the National University of Costa Rica's use of the Earth Charter.

- GHESP ensured that initiatives of higher education institutions to promote sustainable development will be visible in the World Conference on Higher Education + 5, which took place in June 2003.
- GHESP will actively participate in the planning process for the International Decade on Education for Sustainable Development proposed to the General Assembly in the WSSD Plan of Implementation.
- IAU, COPERNICUS-CAMPUS and ULSF will each draw on its own experience and ongoing work to help advance the goals of the partnership. The role of UNESCO is primarily to act as facilitator for the collaborative work of the partners; provide further international context and input; and make use of and promote the outputs of the group to further innovation and international cooperation in this field, as put forward in the WSSD Plan of Implementation.

Specific targets of the partnership/initiative and time-frame for their achievement:

On the basis of paragraph 7 of the Lüneburg Declaration, the four organizations involved in GHESP commit to achieve the following targets within the next five years:

1. Promote expanded endorsement and full implementation of the Talloires, Kyoto and Copernicus declarations: over 1,000 universities (approximately 50% from the global South) have committed to pursuing sustainable development using these three interrelated declarations as their guides (see 'Links of partnership/initiative' section below). The three secretariats (IAU, ULSF and COPERNICUS) are developing endorsement and implementation protocols, which will assist these institutions in realizing the principles in these declarations.
2. Produce an action-oriented Toolkit for universities, managers, administrators, faculty and students designed to move from commitment to concrete action. The Toolkit includes: implementation strategies for colleges and universities in teaching, research, operations and outreach; an inventory of available resources; and an inventory of best practices with a compilation of case studies (see: www.ulsf.org/toolkit/).

3. Enhance the development of regional centres of excellence in both developed and developing countries, and effective networking among them. The major thrust of this partnership is to identify and strengthen universities in the global South and CIS and East European countries that have made a significant commitment to sustainable development (e.g. University of the South Pacific, Suva, Fiji; University of Costa Rica; St Petersburg State University, Russian Federation; and Miriam College, Quezon City, Philippines). We shall strengthen and support these regional centres.

Coordination and implementation mechanism:

A steering committee composed of leaders from the three university associations and UNESCO provides overall direction to the partnership. The Chair rotates among the three associations of universities, normally after twelve months. Communications are conducted regularly through e-mail, and events organized by partners often serve to hold GHESP planning meetings. Websites of each partner include a section announcing events and initiatives undertaken within the framework of GHESP. More jointly sponsored activities and publications are envisaged in the future.

Funding arrangements:

Each of the three non-governmental organizations is committing significant financial resources to accomplishing the three target goals, especially capacity building in the global South. However, future fund-raising both by the individual partners and by GHESP will be pursued:

- IAU's contribution to GHESP falls within the work the association carries out on its own thematic priority (higher education and sustainable development) as approved by its Board. Approximately one third of a person-year at a professional staff level and related support staff time is allocated to the subject. Fund-raising and project-specific financing is sought for initiatives such as seminars and meetings to which IAU wishes to bring developing country partners.
- COPERNICUS-CAMPUS seeks to generate project-related funding, especially from the European Commission or from national donors in Europe.

- ULSF continues to contribute approximately one person-year of professional and support staff time to GHESP activities. In addition to the staff time, ULSF currently raises some \$30,000 a year for international education and plans to expand its fundraising efforts in this regard.
- UNESCO will continue to play a facilitating and information-gathering role and will facilitate fundraising.
- GHESP identifies specific projects to be undertaken by the partners collectively and will fund-raise to ensure adequate support. The Chair of GHESP at the time of submission will act as lead if one is needed.

Arrangements for capacity building and technology transfer:

GHESP-organized seminars and expert meetings will serve as prime catalysts to capacity building for sustainability within institutions of higher education and technology transfer since all will aim to include representatives from all regions, including least developed nations. GHESP is committed to mutual learning and thus also aims to document and disseminate HESD initiatives and innovations developed by its Southern members.

Mainly through continuing website development, GHESP partners provide a growing resources database, sustainability assessment instruments (such as the Sustainability Assessment Questionnaire on the ULSF website), and case studies on all aspects of the incorporation of sustainable development principles at higher education institutions.

Links of the partnership/initiative with ongoing sustainable development activities at the international and/or regional level:

The founding partners continue to expand and facilitate implementation of the different existing university charters and declarations they developed:

- COPERNICUS-CAMPUS is responsible for the University Charter for Sustainable Development, signed to date by 305 university heads in 37 European countries.
- ULSF serves as the Secretariat of over 280 signatories of the Talloires Declaration in over 40 countries, and promotes education for sustainability based on the Earth Charter.

- IAU serves more than 650 member universities and institutions of higher education, which have formally adopted the Kyoto Declaration on Sustainable Development.

GHESP is a global partnership. Its work aims to increase mutual sharing of expertise and cooperation with a two-way flow of ideas and experience. The networking made possible through GHESP aims at creating opportunities for more focused bilateral or multilateral partnerships between different universities around the world. Resources will need to be found by the interested parties from existing programmes for financing inter-university cooperation. The development of centres of excellence at leading institutions in various Southern regions will focus in part on local sustainable development initiatives. Also, as noted in the 'Specific targets' section above, GHESP partners will focus specifically on promoting regional and multilateral networking between higher education institutions in EU member states and South Asia, South-East Asia and China in the area of sustainable development.

Monitoring arrangements:

GHESP provides regular information about its activities through its various publications and newsletters. It will be monitored by the internal supervisory mechanisms of each of the partners, and it will contribute to reporting to the CSD and other post-WSSD mechanisms.

A report of activities is provided by the Chair-holder every time the Chair rotates to a new leading partner. This provides a record of progress to date and helps the new leading partner prepare for the work to come.

Other relevant information:

For further information, the following websites can be consulted:

- University Leaders for a Sustainable Future home page: www.ulsf.org Link to the *International Journal for Sustainability in Higher Education* and the ULSF biannual report, *The Declaration*: www.ulsf.org/publications.html
- International Association of Universities home page: www.unesco.org/iau/tfsd_first.html; Link to the IAU Newsletter: www.unesco.org/iau/newsletter.html

- COPERNICUS-CAMPUS home page: www.copernicus-campus.org; Link to the Newsletter is to be found on the home page.
- UNESCO's Sustainable Development Portal at: www.unesco.org
- GHESP home page: www.unesco.org/iau/ghesp/index.html

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