Organisation de Coopération et de Développement Economiques Organisation for Economic Co-operation and Development OLIS : 22-Jun-1999 Dist. : 25-Jun-1999

Or. Eng.

PARIS

Unclassified

COM/ENV/CERI(99)64

ENVIRONMENT DIRECTORATE CENTRE FOR EDUCATIONAL RESEARCH AND INNOVATION

EDUCATION AND LEARNING FOR SUSTAINABLE CONSUMPTION

FOREWORD

This is the final report of the joint CERI/Environment Directorate Workshop on *Education and Learning for Sustainable Consumption*, held on 14-15th September 1998 in Paris. The main objective of the Workshop was to examine how education and learning can contribute to promoting more sustainable consumption patterns. The report presents the main contextual developments and policy aims that defined the background to the Workshop, and the important yet complex role for education and learning in pursuit of sustainability. It reports the main initiatives and issues that emerged from the detailed discussions, relating both to formal education and training and to non-formal and informal learning. The paper concludes with a presentation of those areas of Workshop consensus and more open-ended "emergent" issues that call for greater attention in the future. The list of participants is contained in an Annex.

In preparing this report, important contributions were made by the Workshop rapporteur, John Fien, Director, Centre for Innovation and Research in Environmental Education, Griffith University, Australia, as well as the working group rapporteurs, Prof. Peter Posch and Paul Watkinson. This report is published on the responsibility of the Secretary-General of the OECD.

COM/ENV/CERI(99)64

TABLE OF CONTENTS

1. INTRODUCTION	9
2. THE CONTEXT AND CHALLENGES	11
3. SUSTAINABILITY AND FORMAL EDUCATION	17
4. SUSTAINABLE CONSUMPTION, NON-FORMAL AND INFORMAL LEARNING	29
5. EMERGENT CONCLUSIONS AND ISSUES	35

COM/ENV/CERI(99)64

EXECUTIVE SUMMARY

The dramatic rise in the consumption of goods and services over this century has brought many social and economic benefits in OECD countries. It has also, however, brought escalating resource use and pollution. OECD countries are among the world's largest consumers of natural resources and their production and consumption patterns have major environmental, social and economic impacts.

Achieving sustainable consumption requires both business practices and government policies that broaden the range of choices open to consumers to make environmentally sound decisions. It also requires greater awareness and action by consumers to reduce the environmental impact of their consumption patterns. Education and learning initiatives can play a positive role in supporting and catalysing this process.

Experts from 18 Member countries and a range of other organisations and NGOs met at an OECD Workshop on "Education and Learning for Sustainable Consumption" (Paris, 14-15 September 1998) co-hosted by the OECD Environment Directorate and the OECD Centre for Educational Research and Innovation. Participants examined various education and learning initiatives at the compulsory school level, and within the formal and non-formal learning environment, and identified lessons and policy challenges for increasing the effectiveness of education and learning as a tool to help shape more environmentally sustainable consumption patterns in OECD countries. Participants agreed that schools and other learning environments could help build understanding and action to help redress "the deepest educative process at work in the 20th Century -- the informal process of learning to consume." Given its day-to-day relevance to each child and adult, sustainable

consumption could also have merits as a stepping stone into the wider subject of sustainable development.

The Workshop raised a number of critical questions concerning the role of education and learning for promoting sustainable consumption, including:

- How far should sustainability issues be seen as a separate educational agenda from the aims of nurturing active learning and responsible citizenship - long-standing educational goals in many countries - or instead do they give these goals new direction and urgency?
- How far does education as currently organised, in addition to being a positive or neutral influence, actually create impediments to sustainable consumption?
- How should the issues and questions be framed according to the different levels, settings, and age groups in view: children and adults; education or vocational training; in formal learning compared with community-based or individualised learning initiatives?

The important role of the formal education sector constituted a substantial part of Workshop discussions. Millions of young people, as well as older adults, spend long periods in education across OECD countries. Workshop participants addressed curriculum questions, including whether/how consumption could be added to already overcrowded timetables. A recurring theme throughout the discussion of curriculum issues was how environmental and sustainability concerns too

COM/ENV/CERI(99)64

often remain on the periphery of school life, rather than being its "main business". There is also a large, and still largely underdeveloped, agenda for work on integrating sustainability issues into higher and vocational education.

Participants also considered examples of "eco-schools" that conserve resources (energy, water) through the adoption of environmental management systems. These initiatives also show how "green" operating strategies can be integrated into the formal learning programmes of students and create effective synergies of learning and community support.

There are fewer examples of initiatives addressing sustainable consumption in the nonformal and informal learning sectors. formal learning takes place in community-based participatory learning, business training, and government information and awareness initiatives. Informal learning "is that process which is incidental and unacknowledged, but is where the most vigorous, pervasive and often subliminal form of education is promoted in terms of 'consumerism', such as through advertising campaigns." Accents importance of non-formal and informal education from the belief that sustainable consumption will come about as the result of informed choice by individuals, households, corporations and governments.

Particular attention given was government information and awareness programmes, which tend to be most successful in those countries with already high levels of environmental consciousness, and where complementary measures (regulation, economic instruments), have been put in place to encourage consumer decision-making. sustainable Information and awareness initiatives that are not accompanied by options and incentives to put the new information to use are relatively ineffective.

Participants agreed on the need for increased attention to sustainable consumption as a key strategy for engaging people in the transition to sustainable development through their daily lives as consumers and citizens. Formal school education requires special attention. Greater development and dissemination of good practice and effective learning initiatives across all sectors are also needed.

The OECD Environment Directorate and the OECD Centre for Educational Research and Innovation will continue to collaborate on this issue and to develop it in their respective programmes of work.

1. INTRODUCTION

Sustainability... a top priority

Worldwide, there is now recognition that many of our patterns of production and consumption are unsustainable. The Earth Summit in Rio in 1992 identified this situation as critical in the continuing deterioration of the global environment. This launched a range of important initiatives. For its part, the OECD established a multi-disciplinary work programme on sustainable production and consumption within its Environment Directorate in 1994, and a wide range of policy initiatives has been explored since then. Sustainable development is now of the highest priority within the Organisation's agenda.

While production and consumption are closely inter-related, the attainment of sustainable patterns of consumption requires very specific attention. Improved technology and increased efficiency have helped to lower the level of pollution and pressures on natural resources from production processes. However, growth in consumer demand has, in many cases, more than offset these benefits. If OECD countries are successfully to tackle major environmental problems, such as climate change, air pollution and the safeguarding of freshwater supplies, they must increasingly find ways to influence the decisions of individual consumers, and to expand the options open to them to consume sustainably. Current consumption patterns and trends also raise important questions of equity, both between developed and developing countries, and between rich and poor within societies.

Shifting consumption patterns in sustainable directions requires understanding the driving forces which shape consumption habits, including: economic and market forces, socio-psychological drivers, technology and infrastructure, and institutional and political structures. Across all of these influences cut even larger questions of information flow, value formation, and behaviour change. Formal and informal education and learning are critical elements of this.

It was in recognition of the importance of education and learning to sustainable consumption that the OECD organised a Workshop on *Education and Learning for Sustainable Consumption*. The Workshop was designed to address the many gaps in the international understanding of relevant relationships and options for making genuine change in this area. This work is seen as complementary to the advances made in other international programmes, notably those undertaken by UNESCO which is the task manager responsible for Chapter 36 "Promoting Education, Public Awareness, and Training" of Agenda 21.

COM/ENV/CERI(99)64

The Workshop was organised by two different sections of the OECD - the Environment Directorate and the Centre for Educational Research and Innovation (CERI) - joining forces operationally for the first time. That the Workshop was a "first" in joint operational work between the Organisation's Environment Directorate and CERI illustrates that the need for active dialogue between the stakeholders from the environment and education universes has not always been well met.

A joint dialogue with education and environment practitioners and policymakers

Some 60 experts, practitioners and policy makers from both the environment and the education sectors attended the Workshop. Participants came from 18 Member countries and a range of other organisations and NGOs. Its main objective was to examine how education and learning can contribute to promoting more sustainable consumption patterns by looking at: a) lessons from various education and learning initiatives at the compulsory school level and beyond; and b) policy challenges to be tackled nationally and internationally. This report presents the insights gained from the Workshop discussions about existing initiatives and seeks to clarify challenges for policy. It concludes by presenting areas of Workshop consensus, as well as "emergent issues" to be addressed in the future.

2. THE CONTEXT AND CHALLENGES

Sustainable consumption

Sustainable consumption was defined at the 1994 Oslo Symposium on Sustainable Consumption as:

"... the use of services and related products which respond to basic needs and bring a better quality of life while minimising the use of natural resources and toxic materials as well as emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardise the needs of future generations."

There are five central concepts in the Oslo Symposium definition:

- satisfying basic human needs (not the desire for 'wants' and luxuries);
- privileging quality of life concerns over material standards of living;
- minimising resource use, waste and pollution;
- taking a life-cycle approach; and
- acting with concern for future generations.

Consumption continues to rise dramatically and unequally

The scale of human consumption has risen dramatically and unequally over this century. The 1998 *Human Development Report* documents this: from \$1.5 trillion in 1900 to \$4 trillion in 1950, and then a trebling to \$12 trillion in the 25 years to 1975, followed by another doubling to \$24 trillion in 1998.² This growth, as well as the benefits that consumption has brought, have been very unevenly distributed. While the 20 per cent of the world's people in the highest-income countries account for 86 per cent of

Norwegian Ministry of the Environment (1994) Report of the Symposium on Sustainable Consumption, Oslo.

United Nations Development Programme (1998) *Human Development Report 1998*, Oxford University Press, New York.

KCTS Television (1998) Escape from Affluenza: Viewer's Guide. See <www.pbs.org/affluenza> See also, Schor, J. (1998) The Overspent American, Basic Books, New York; Inglehard, R. (1997) Modernization and Postmodernization: Cultural, Economic and Political Change in 43 Countries, Princeton University Press, Princeton, N.J.

consumption expenditure, the poorest 20 per cent has been left out of the consumption explosion and represent a mere 1.3 per cent.

In her Opening Remarks to the Workshop, OECD Environment Director Joke Waller-Hunter acknowledged the many social and economic benefits that can result from rising consumption but also the far-reaching attendant environmental problems. OECD countries are the world's largest consumers of natural resources and their production and consumption patterns have major environmental, social and economic impacts. The overconsumption of resources characterises lifestyles in the North.

Powerful social pressures to consume more

The interdependent and reinforcing nature of these problems pose major challenges not only to natural systems but also to human standards of living and quality of life. In addition to whether it is actually sustainable, it is possible that there is a growing dissatisfaction with the price of affluence in industrialised countries. The UNEP representative at the Workshop reported how the proportion of people in the US describing themselves as "happy" peaked in 1957 even though consumption rates have increased considerably since then. The US Index of Social Health has decreased by 52 per cent in the last two decades despite a rise in consumption of nearly 50 per cent.

Unsustainable aspects of consumption require action at many levels. They call for reconsideration of the options open to consumers and the decisions made by individuals and households. This requires action by both governments, to provide an appropriate policy framework, and by business, to provide environmentally sustainable goods and services.

Such efforts run straight into powerful countervailing forces. There is a "hidden curriculum" of unsustainability. Many of the messages of the mass media and advertising also confound

efforts to change the levels and nature of consumption of young people and the wider adult The community. Mexican Workshop experts described how the concept of the citizen, as a contributing member of civil society, has been eroded increasingly towards that of "a consumer interested in enjoying a certain quality of life". 3

I would argue that the deepest educative process at work in the twentieth century has been the informal process of 'learning to consume'.

Darlene Clover, Canada

Gonzalez-Guadiano, E. and Bolilla y Armando Sanchez, E. (1998) Approaches to a Complex Issue: Education and Sustainable Consumption - The Case of Mexico. Presentation to OECD Workshop on Education and Learning for Sustainable Consumption, Paris, 14-15 September.

Education's key role in sustainable consumption, Chapter 36, Agenda 21 The importance of education in promoting sustainable consumption was highlighted at the beginning of the Workshop by the Director of the UNESCO transdisciplinary programme in implementation of that Organisation's responsibility as task manager for Chapter 36 of Agenda 21. To this end, a major International Conference on Education and Society: Education and Public Awareness for Sustainability was organised in December, 1997 in Thessaloniki, Greece.

The Sixth Session of the Commission for Sustainable Development in 1998 called for increased efforts to "raise awareness of the implications of current patterns of consumption and production in particular in the developed countries", to make "better use" of education, and to develop and promote other policy instruments "through education and training ... to change consumption and production patterns". ⁴ In parallel, the OECD Environment Ministers agreed in 1998 to Shared Goals for Action for achieving sustainable development, one of which is to promote sustainable consumption patterns, especially through education and information. ⁵

Education can thus be seen as a critical complement to social and economic policies, as a means for engaging public and corporate understanding and for improving dissemination and implementation of new ideas and practices. More generally, education for sustainability is

"The achievement of a sustainable society is ultimately an educational enterprise."

John Fien, Workshop Rapporteur

concerned with the development of individual and collective competencies so that all citizens and institutions might play a role in the transition to a sustainable future. This embraces respect for individual and social rights and responsibilities, concern for natural and social well being, critical thinking and skills for civic participation.

One powerful argument for focusing on education, as outlined by one expert at the Workshop, is because the "hard" policy instruments based on enforcement may be approaching their limits of effectiveness: "[As] the relation between public administration and society is becoming more dialogue-based... communication and education are increasingly important policy tools. This tendency can be recognised in the philosophy of the present environmental education programme management where it

Commission for Sustainable Development (1997) *Programme for the Further Implementation of the Earth Summit+5*, CSD, UN/DESA, New York.

⁵ OECD Environment Ministers (1998) *Shared Goals for Action*, OECD, Paris.

focuses on the quality of educational processes rather than on the implementation of preset goals."

Despite widespread acknowledgement of the importance of education to the attainment of sustainability, there is a major effort needed to define more precisely what the different roles are, for whom, and how they will be implemented. Chapter 36 of Agenda 21 is stated very broadly, and refers to policies to support education in general as well as to promote sustainability *per se*. Subsequent work has further clarified aims and directions but still in relatively broad-brush terms. This Workshop is an OECD contribution towards a more detailed understanding.

Education and Learning

An important aspect of clarification is the addition of the term "learning" to "education" in the Workshop title. As CERI Director Tom Alexander recognised in his introduction, debate exists whether "education" or "learning" is the broader concept. For some, it is "learning" because it covers the non-formal and informal learning that takes place outside schools and colleges as well as organised education. Some see "education" as broader in relating to the whole person - as a citizen, as worker, as family member, as participant in a culture and society - rather than to particular learning activities.

Lifelong learning for sustainability Both broad concepts provided the basis for the Workshop discussion. Rather than get trapped into arguments over semantics there is need to clarify the full range of concepts and mechanisms relevant for sustainability. Such clarification should address the different settings (hence, the broad understanding of "learning") and the different aspects that make up the whole person, especially as a consumer and citizen (hence, the broad understanding of "education").

Broad terms and aims informed the OECD Ministers of Education meeting in 1996, when they agreed on the major goal of "lifelong learning for all" at the heart of their agendas for entering the 21st century. "Sustainability" provides a substantial clarification of what the learning should be for. The lifelong perspective, relating to formal, non-formal and informal learning, was integral to the framework for the Workshop programme.

Breadth of vision is not, however, to be confused with a generalised, "scattergun" approach. It calls instead for a more precise understanding of what are the appropriate issues, partners, and policies that arise in the different sectors and settings for

Pieters, M. (1998) *Codename Future*. Presentation to OECD Workshop on Education and Learning for Sustainable Consumption, Paris, 14-15 September.

education and learning. Some forms of consumer learning, for example, concern adult citizens far more centrally than children. At the same time, the framing of issues in relation to the years of compulsory schooling is very particular - when young people are obliged to attend school, for curricula and qualifications subject to close policy regulation - compared with learning undertaken voluntarily by adults, closely shaped by localised individual and community factors.

These are illustrative of the questions that call for close attention in delineating the dimensions embraced by the broad theme of the Workshop: "Education and Learning for Sustainable Consumption". Other examples that recurred throughout the discussion included:

Key questions:

- How far can a distinct educational agenda be identified in relation to sustainable *consumption*, or is the main reference that of *sustainable development* of which consumption is an integral part?
- Similarly, how far should sustainability issues be seen as defining a separate educational agenda from the basic aims of nurturing *active learning and responsible citizenship* longstanding educational goals in many countries or instead do they give these goals new direction and urgency?
- How far does education as currently organised, in addition to being a positive or neutral influence, actually *create impediments to sustainable consumption*? Do some education systems, for instance, undermine sustainability either through inhibiting curiosity and critical thinking or through fostering individualistic, potentially selfish values? Is then the challenge one of reducing harmful effects as well as optimising beneficial initiatives?
- How should the issues and questions be framed according to the *different levels*, *settings*, *and age groups* in view? What are the particular and what are the common questions relating to children and adults? In education or vocational training? In formal learning compared with community-based compared with individualised learning initiatives?
- How far should the main focus be on *promising examples of* "good practice" that necessarily only affect those few lucky enough to participate in them? Or instead should the main focus be on the *educational and learning experiences of the large majority* unaffected by these exemplary initiatives?
- As societies become more pluralistic, fragmented, and globalised, and the power of established authorities (including that of government departments and schools) increasingly

COM/ENV/CERI(99)64

qualified by a range of alternative sources of influence, what are the *mechanisms for realising desirable change* that take account of such complexity?

These questions are, of course, very broad in scope and expressed in general terms. It is inevitable that, as a new field, there is a substantial degree of further clarification needed even of the questions to be asked. This should be supported by a sustained effort of research, evaluation, and inter-disciplinary analysis. The following sections report the discussions and experiences offered at the Workshop in contribution to this ambitious agenda.

3. SUSTAINABILITY AND FORMAL EDUCATION

"How can we bring about sustainable consumption, despite education, through education? Which indicators will give us more meaningful results than those economic instruments used to induce or deter social behaviours, aware as we are of the difficulties experienced by almost every country in measuring qualitative progress, and above all progress in education? How can we control the participation of the media in a world where commercial globalisation has its own rules? What role can schools play if not only environmental, but also educational, programmes seem further and further removed from the reality of many girls and boys?"

Mexico Workshop paper, Introduction.

School learning is highly relevant for certain aspects of sustainable consumption

The role of the formal education sector in promoting sustainable consumption constituted a substantial part of the Workshop programme. With millions of young people, as well as older adults, spending very large periods of time in education across OECD countries, the role of schools and other sectors of formal learning have an obvious importance. Yet, the significant limits to what formal education, especially schools, can achieve should also be recognised. As the Mexican introduction describes, a great deal of learning, including that of particular relevance to consumption, takes place outside the education system; for some young people, classroom studies come well down among their main sources of influence. Age is another key factor, for while the foundations are laid during the school years much of the learning of direct relevance for sustainability is engaged in by adults who have long left their school years behind.

Awareness of the limits of formal education's influence is not to diminish the subject of the Workshop. It is instead to suggest the need for very close attention to what can best be achieved through formal education and what best be dealt with elsewhere. Most of this chapter is concerned with schools, in reflection of the balance of Workshop discussion. Greater attention needs to be given to the role of tertiary education and vocational training.

School Issues

The curriculum, active competence, and learning

Educational institutions, especially schools, have experienced an extended period of relentless change. Adding still another issue, such as sustainable consumption, to an already overcrowded curriculum may not be effective, if this means that it struggles to find a place in timetables where other subjects will often be viewed as of higher priority. There should also be sensitivity to the spectre of "indoctrination", which is always raised when political and social values become an explicit part of the school curriculum.

Workshop discussion addressed curriculum questions, sensitive to these concerns, in a number of ways. It looked at curriculum projects where environmental matters are embedded in broader learning projects, which span a number of subjects and disciplines (see Box). An interesting aspect of these curriculum examples is that many of them were drawn not from subject areas normally associated with environmental education, such as

Does Snow Smell of Consumers? Finland

In this teaching unit 5th and 6th grade students investigated acid rain and its effects on the quality of water in local snowfalls. The students used a problem-solving approach to make all major decisions. They first clarified the nature of the problem by testing the purity of local snow and researching the possible causes of the high acid readings they obtained. A combination of international circulation of air pollution and local fossil fuel consumption was identified as a likely cause. The students next identified the types of actions that people their age could take to reduce air emissions and fossil fuel use. After a visit to a supermarket, the students realised that many products are over-packaged and that they and their parents could change their consumption patterns in order to exert influence over producers and retailers.⁷

Codename Future, Netherlands

Following a similar initiative in Sweden, the National Council for Youth and Development works with schools and teachers to challenge students to design a product or process that contributes to a sustainable society. Students are offered a dossier containing themes for possible projects (e.g. a sustainable building, a local traffic plan, a sustainable tourism project, comparative lifestyle research with students from a country in the South, etc); and a guide for the preparation, execution and evaluation of a design project. The best twelve proposals are selected by a jury of young people and senior designers, and each is awarded approximately \$US5000 for the design team to spend on constructing the design or lobbying for its adoption by local authorities. The design work is done in school time with the support of teachers. Evaluations indicate that students are very enthusiastic; but also that this initiative has had limited impact on the rest of school teaching and learning. To address this problem, Codename Future is developing support materials and a consultancy service for schools in order to integrate the concepts of design and sustainability into regular education practice. (Pieters, M. (1998) op.cit.)

^{7.} Hynninen, P. and Ahlberg, M. (1998) High-Quality Learning in Consumer Education: New Theory and Practice, Presentation to the OECD Workshop on Education and Learning for Sustainable Consumption, Paris, 14-15 September, 1998.

geography or science, but from interdisciplinary programmes in media studies, design, home economics or economics and business.

Many of these examples, in their breadth and interdisciplinary character, cannot be neatly categorised as learning for "sustainable consumption" per se. They define approaches that are both broader and more diffuse than "environmental education" while being a part of it. The lack of neat curriculum boundaries around education relevant to sustainable consumption presents both strengths and potential problems: strengths because it can be developed through many aspects of a school's programmes rather than being squeezed into specific timetabled slots; problems because such diffuseness can make it hard to see whether any impact at all is being made on sustainability issues.

Environmental issues are too often on the periphery of regular "school business"

A recurring theme throughout the discussion of curriculum issues is how environmental and sustainability concerns too often remain on the periphery of school life, rather than being its "main business". The Dutch case in the above box refers to how even learning that has captured the imaginations of students may well have few spillovers into other aspects of teaching and school life. Some of the most effective examples where the marginality has been overcome are the "eco-schools" (discussed below). It is increasingly apparent in OECD countries that schools characterised by a specialisation that permeates throughout the curriculum and school organisation - such as a special focus on technology or the performing arts - often benefit from an impact on ethos that feeds through into overall quality. Ecology and an environmental focus is such a specialisation, and the impact this can have on general school quality could well provide a powerful additional argument for moving "eco-schools" in from the periphery of education systems.

Citizenship

further general curriculum issue to be explored is the extent to which sustainable consumption and wider sustainability issues can be integrated the widespread into in interest citizenship education across OECD countries. Issues

... Education for sustainable development is simply good education, and [] good education needs to make children aware of the growing interdependence of life on earth - interdependence among peoples and among natural systems in order to prepare them for the future.

UNESCO⁸

citizenship now arise acutely in many countries, with many educators and decision-makers concerned that young people are not well prepared for participation in social and civic institutions. Similar dilemmas exist for promoting citizenship: to what extent

UNESCO and Greece (1997) Educating for a Sustainable Future: A Transdisciplinary Vision 8. for Concerted Action, Paris, p. 26.

should citizenship define a distinct curriculum slot or rather be more fully integrated throughout school programmes? However this is resolved, there is substantial common ground with the aims of promoting sustainability through education.

Active learning, critical skills

An important theme of Workshop discussions concerned the alignment of the aims of education for sustainability with the desired outcomes of education in general. Among the most important learning that schooling provides of relevance to sustainability are in the attributes of critical thinking, self-reflection, media analysis, personal and group decision making and problem solving. These capacities and skills abound in countries' official definitions of educational aims, but are often far less in evidence in the actual teaching and learning that takes place. The successful acquisition of precisely these capacities, however, might represent a much more significant step towards an education for sustainability than relatively small-scale examples of curriculum innovation, no matter how valuable these are.

This is a question that extends well beyond the extent to which official learning aims are implemented. Some traditional aspects of educational organisation and practice can be characterised much more as socialisation in conformity and pursuit of established rules than in critical, independent thinking. Hence, it cannot be assumed that simply providing "more" education is necessarily supportive of sustainability if this means "more of the same" traditional learning. More education in that case may even be counter-productive. The question of the main skills and competences learned at school is a major one to address in reorienting initial education towards sustainability.

Not all education is supportive of sustainable consumption The current emphasis on outcomes-based learning in schools in many OECD countries might contribute to sustainable consumption through the development of the generic skills referred to above. On the other hand, certain pressures that schools are under - including in some countries a growing recourse to test results in conventional discipline-based fields - may actually be inimical to such active forms of learning and counteract such benefits. Nor is education for sustainability only a matter of student outcomes. It is about the nature of teaching and learning and whether students are equipped to engage in active learning as a result of their everyday school experiences, no matter what the subject matter. A focus on active learning methods thus complements one on active skills and competence - it is about process as well as results.

These are fields where new initiatives are underway in OECD to develop corresponding indicators. The PISA programme (OECD Programme for International Student Assessment) is working on measuring "cross-curricular competences" that are not defined in terms of subject disciplines. Another initiative is in the field of measuring "life skills".

Eco-Schools - An Integrative Strategy

From many corners of the world there are examples of sustainability being embedded in the operating procedures of educational institutions. They illustrate how initiatives can make a difference to the conservation and consumption of resources, such as energy, through the adoption of environmental management systems. More significantly, they show how institutional operating strategies can be integrated into the formal learning programmes of students and to create more effective synergies of learning and community support. Some of these initiatives have come together in an international network, ENSI, linked to the OECD/CERI (see Box).

The Eco-school Initiative, ENSI and Austria

As part of the Environment and School Initiative (ENSI) programme supported by OECD's CERI, schools from different countries have joined a network which supports initiatives to embed ecological principles into both their operating procedures and curriculum structures. Twenty-two primary and secondary schools in Austria are using the support of the network to develop (i) a school culture based upon mutual recognition and respect; (ii) ecologically sound measures to save resources, reduce waste, and design indoor and outdoor spaces in an aesthetic and ecologically viable way; and (iii) learning experiences that involve students in ecological ways of thinking and acting at school, in their families and communities. Also in Austria, an energy network was set up by schools in the Tyrol region to investigate ways of improving the energy consumption of schools and local homes. The network identified major potential savings and strategies for achieving them. This work has led to the establishment of an association for renewable energy and, within two years, 700 solar water-heating systems had been installed in the region. The network has now expanded, linking more schools and leading to the establishment of local community-based groups with broad participation and an emphasis on training local coordinators. ¹⁰

The community-action focus of the Austrian case is complemented by the focus on resource efficiency savings of the example from the Chicago School District (see Box below). The potential cost savings that improving the environmental performance of schools offers, represents a powerful political message to be exploited particularly in a time of acute expenditure constraints. Few government departments and communities, that might otherwise remain unpersuaded by sustainability arguments, are untouched today by the need to make financial savings.

1

OECD (1998b) Towards Sustainable Consumption Patterns: A Progress Report on Member Country Initiatives, OECD, Paris, p 25.

Chicago Public School System, USA

This is a system-wide initiative conducted by local educational authorities in partnership with the Centre for Neighbourhood Technology, a local NGO, to use energy efficiency as a curriculum theme, reduce the consumption of energy resources and pollution by schools, and generate extra revenue. The programme enables schools to sell some of their 'pollution credits' to local industries. This initiative builds upon the 1991 American Association of School Administrators 'Schoolhouse in the Red' study which projected that sustainable energy consumption programmes could reduce utility bills by 25 per cent - or approximately \$14 million a year in Chicago. ¹¹

Authorities can encourage the integration of concerns like energy efficiency in school development plans in a number of ways. These include establishing quality indicators and requirements for school evaluation and reporting, integrating sustainable consumption into school development plans, as well as less overt measures such as sponsoring environmental competitions between schools. Incentives are important; one way forward may be to allow schools to retain any funds saved from energy efficiency, waste management and recycling programmes. Professional development was also identified at the Workshop as an important area of action in order to improve the capacity of teachers to give leadership in school and community education towards sustainable consumption issues.

Putting environment at the core of school business The integration of sustainability into organisation and operation to become "eco-schools" represents one of the most fruitful avenues for further exploration in promoting sustainable consumption through education, with implications well beyond any manifest impact on resource conservation. By bringing sustainability into the heart of the school agenda, this takes it out of the struggle for a small gap in an already over-loaded curriculum. It can help win support from possibly sceptical students, teachers, parents, and communities. Far from being a competing addition to the "main business" of school education, it becomes instead an integrating theme giving meaning to the many other aspects of school life. Sustainability is then part of that "main business".

These can be described as "internal" dimensions of "greening schools". "External" dimensions include the opening of schools to community activity and at times in the evenings, weekends, and out-of-term times, in ways that represent good practice, ecologically and socially. Other aspects of schools' operations and timetabling also have far-reaching effects. The transportation of school students to and from school and to after-

President's Council on Sustainable Development (1997) *Public Linkage, Dialogue and Education: Task Force Report*, President's Council on Sustainable Development, Washington DC, p. 39.

school activities has a major impact on congestion, pollution and sustainability of lifestyles. It is one of the most obvious yet often unquestioned aspects of educational life that have an impact on the environment. This is an area where case study examples of innovative practice can usefully reveal alternative models.

"Best Practice" Cases

Exemplary and innovative cases, such as those referred to above, are important. They offer model examples of good practice. They help to make tangible alternative forms of education and learning initiatives that contribute to sustainability. They also provide a practical foundation for sharing experiences, identifying areas for cooperation and ideas for adaptation in other settings.

A lack of practical examples that directly address sustainable consumption Yet, few case studies of curriculum programmes or school practice were reported at the Workshop that explicitly address concepts, attitudes and skills for sustainable consumption. This may be a reflection of how recently sustainable consumption has emerged in policy debate, as has consumer studies as a field of academic interest. Or, the most relevant cases are examples of innovative citizenship education, revitalised school-community relationships, or new forms of active learning that embrace, while not being exclusively defined by, the promotion of sustainable consumption.

An initial compilation of country initiatives promoting sustainable consumption has been made with the 1998 OECD report, (Towards Sustainable Consumption Patterns: A Progress Report on Member Country Initiatives), and the Workbook prepared for the Kabelvaag Workshop on Consumption in a Sustainable World in Norway in 1998. Some of the most impressive examples relating to school-level education are those where sustainability has been incorporated into a whole-school, integrated policy as presented in the previous section.

Learning from best practice

The Workshop agreed that more detailed analyses and evaluations of "best practice" are needed, as well as collaborative action to disseminate case studies of good practice. There is an equally important need to clarify the criteria by which to recognise what is best practice and what is unexceptional, and to deepen understanding of the lessons they hold for the promotion of sustainable consumption. There is need also to address how the dissemination of such "best practice" cases can contribute to a broader strategy of change rather than represent isolated beacons of potential that shine no-where else. Simply producing case studies is not enough.

Miller, D. (1995) "Consumption as the vanguard of history", in Miller, D., (ed.), *Acknowledging Consumption: A Review of New Studies*, Routledge, London, Ch. 1.

Inter-relationships among Educational Influences on Sustainable Consumption

Frameworks for understanding complex relationships

To move beyond particular initiatives and "best practice" cases calls for more general frameworks of analysis of how education influences sustainability (including consumption), relating the different main factors and grasping the direction and strength of relationships among them. On this basis, a closer understanding can be developed of the policies that are likely to be most effective, targeted at particular points in the network of influences. To develop and refine such frameworks will be a continuous, long-term undertaking, bringing together research and experience from many different sources. However long term, such an exercise would substantially enhance the knowledge base for promoting sustainable consumption.

Various models were presented at the Workshop that contribute to the development of such an analytical framework. The Dutch report included the following three models: one related to *organisations* (combining technical, political, and cultural factors with those of strategy, organisation, and staff); one to *policy development* (combining levels of action - strategic, organisational, and operational - with phase of policy implementation (orientation, definition, design, operation, and incorporation); and one on the "quality cycle" in education. This "quality cycle" understands the factors in play as the looped inter-relationships of five main blocks of variables: i) *context* (e.g. values, contents, social processes); ii) *input* (e.g. student population, teachers' qualities, demographic factors) iii) *process* (e.g. class level, school level); iv) *output* (e.g. examination results, desired learning); v) *outcomes* (e.g. vision, mission).

In the course of the Workshop, a further framework emerged from the discussion which groups twelve sets of variables into three broad categories of facilitating conditions for sustainable consumption [See Box]:

- 1) *Enforcing sustainable consumption* ("Have to do" Conditions with regulations concerning sustainable consumption [SC]);
- 2) Enhancing propensities to consume sustainably ("Want to do" Conditions, which lead to a willingness or desire to engage in SC practices);
- 3) Removing barriers to sustainable consumption ("Am able to do" Conditions, which allow people to engage in SC practices).

Grid of Conditions and Examples for Promoting Sustainable Consumption: Working Group A¹³.

Enforcing sustainable consumption

- 1. **Avoiding negative consequences** (acting to avoid the risk that worse things could happen); *Example*: Cuts may be made in resources if they are not used in sustainable ways).
- 2. **Demands from outside** (regulations concerning initiatives for sustainable consumption); *Example*: Obligation to present school programmes with information on evaluated initiatives to stimulate SC activities.

Enforcing SC and Enhancing propensities combined

- 3. **Competition** (Through school comparisons); *Example*: Publication of each school's ecological programmes (e.g. on the Internet).
- 4. **Perceived problems** (Arising from disregard for sustainability factors); *Examples:* Health risks, harmful stress and time pressures, intolerable school facilities.

Enhancing propensities

- 5. **Benefits** (Advantages or privileges gained by involvement in SC school programmes); Examples: Gains in respect by others, status, job prospects, and "identity"; financial gains to school.
- 6. **Ethical responsibility** (values that sustain SC); *Examples*: Visions of a better world, altruism, concern for future generations.
- 7. **Self-efficacy** (influencing one's living conditions and community environment); *Examples*: Student-designed local traffic plan or school menu; school research for local SC knowledge.
- 8. **Experiences** (providing the experiential basis for SC); *Example*: Experiences with nature, practised sustainability in school; of living in a sustainable architectural context.

Enhancing propensities and Removing barriers combined

9. **Support** (for sustainability initiatives in education); *Examples*: Model case examples of school SC projects, good advice, timetabling to permit non-threatening reflection on behaviour patterns.

Removing barriers

10."What is" and "how to" knowledge (related to SC); *Examples*: Conceptual knowledge (carrying capacity, ecological footprint, etc.) and substantial knowledge of consumption impacts; analytic, critical, problem solving, and evaluation skills; context knowledge and action competencies.

- 11.**Knowledge of options**; *Example*: Information about and provision of experience with alternative consumption patterns.
- 12.**Communication networks** (within schools, between schools and external partners engaging in SC activities); *Example*: Local networks, national networks.

Prepared by the Working Group rapporteur, Peter Posch, adapting a framework developed by STRITTMATTER, A.: Bedingungen für die Aufnahme von Neuerungen an Schulen. Paper für den "International Workshop for School Transformation" vom 26.-28.2.98 in Berlin. Sursee: PALCH 1998, Ms.

Further work is needed to develop this kind of framework, but it is already indicative of the range of dimensions and variables in play. These can be further inter-related via, for instance, the Dutch models given above. The main point here to stress is that convincing frameworks are required that link contextual, operational and policy variables, elaborated on the basis of detailed analytical work.

Post-school Education and Training - The Role Of Tertiary Education

An undeveloped agenda

In the Workshop, the presentations and the wider discussion concentrated mainly on schools, on the one hand, and the non-formal and informal sectors, on the other, making only passing references to the formal post-school sector, in higher and vocational education. There is thus a large and still largely undeveloped agenda for work specifically in relation to these sectors of learning.

"Greening" tertiary institutions

The lack of detailed attention in the Workshop notwithstanding, three areas for further clarification from tertiary education specifically can be outlined here, where some examples were raised in the Workshop documentation. First, in parallel with the "eco-schools" discussed above, there is much to be done in relation to the "greening" of tertiary education institutions, integrating sustainability into both operating practices and learning programmes. An example of this is given in the box as illustration; much more evaluation and analysis is needed in this field. The large size and activities of tertiary institutions offer significant resource-saving possibilities. At the same time, curriculum and programme issues are not identical to those arising in primary and secondary school and may present greater problems of implementation.

Ecological Design, Oberlin College, USA

Many universities around the world are seeking to 'green' their operating procedures. Oberlin College is one of these, involving faculty and students in the design and construction of a 100 square metre zero emission Environmental Centre. This project is being developed by a class on Ecological Design in which students meet with leading experts in the field to design the building which will display the efficient use of recycled materials, renewable energy, ecological waste water treatment, and ecological landscaping. This final year project gives students an opportunity to apply the social, economic and environmental principles they have learnt earlier in their course in a practical real world project. Students in the Ecological Design course at Oberlin College and other institutions have also examined and redesigned systems for sustainable consumption at the level of the family home and a university's food chain.14

¹⁴

President's Council on Sustainable Development (1997) op. cit., p. 42; see also, Orr, D. (1992) Ecological Literacy, State University of New York Press, Albany.

Tertiary education as a supportive service

A second area where tertiary education can make a substantial contribution to this area is through the provision of an expert consultancy, support, and professional development service to other parts of the education system and other learning groups, including in the community. An example of this is also illustrated in the box below, where a university centre has developed the learning materials and strategy for use by schools and teachers.

A University prepares a Primary School Teaching Guide on Eco-Consumers, Australia

A university centre for environmental education, on contract to a provincial level office of consumer affairs, wrote the six-module *Eco-Consumers* programme. The aim of *Eco-Consumers* is to provide teachers with model lesson activities which can help 8-12 year old students become aware of the range of environmentally-friendly products which are available, to apply concepts such as life-cycle analysis and the "5 Rs" to regularly-purchased household and recreation items, to develop skills in media literacy, to keep a diary in which they record their developing understanding of eco-consumer issues, and to make informed decisions about present and future purchases. This programme uses a variety of innovative strategies, including a visit to a shopping centre, a role play, a class game, the analysis of television advertisements, and an action research project on improving the sustainable consumption performance of their school. Activities, handouts and OHT masters to support an inservice training workshop on teaching about eco-consumerism are included.¹⁵

Research

The third area where tertiary education has a clear contribution to make is that of research. The Workshop has shown that, while substantial bodies of research exist in the fields of education and learning, on one side, and on the environment and sustainability, on the other, much remains to be clarified about the inter-linkages. This itself is to define an ambitious research agenda.

These are not exhaustive but already point to major areas where the contribution of tertiary education could be critical. There is need for further exploration of the particular contributions to be made by this sector, and still more of vocational training issues and sustainability that were not treated in detail at the Workshop. These might well include issues relating to the training of those professional and occupational sectors - in engineering, design and architecture, marketing etc - that play an important role in relation to consumption.

Griffith University Centre for Innovation and Research in Environmental Education (forthcoming) *Eco-Consumers: A Primary School Teaching Guide*, Queensland Office of Consumer Affairs, Brisbane.

COM/ENV/CERI(99)64

4. SUSTAINABLE CONSUMPTION, NON-FORMAL AND INFORMAL LEARNING

Looking beyond Formal Education

The role of non-formal and informal education and learning were an important part of the Workshop programme. Relative to the formal education sector, this sector is less well understood, particularly in relation to promoting sustainable consumption. Education and learning are never limited to formal settings. Initial education is usually completed when young people reach their late teens or early twenties, and even during this period a great deal of learning taking place outside the classroom. Adults who have left formal education are often the main household decision-makers as regards consumption. Yet, their contact with the formal sector will be at best intermittent, the recent priority for lifelong learning in OECD countries notwithstanding. Their learning will mainly take place in other ways and settings.

Within the whole gamut of learning settings, non-formal and informal learning can be characterised as follows:

"Education is the collective response to the human capacity to learn... Nonformal learning takes place outside institutions but has a declared educational aim as with environmental groups, community study circles and workshops, government agencies and so on. Informal learning is that process which is incidental and unacknowledged but is where the most vigorous, pervasive and often subliminal form of education is promoted in terms of 'consumerism', such as through advertising campaigns." *Darlene Clover, Canada*

Learning for sustainable consumption in the family and community...

People have multiple identities and fulfil different functions - as family members, consumers, citizens, workers, and so forth. All these aspects are relevant to the learning undertaken by any one individual, and hence all relate to consumption and its sustainability. Much of this learning takes place in the family and in the community, though in ways that largely remain unknown and untapped. Yet much more might be done in these settings, through diverse initiatives that seek to build community social capital in environmentally positive ways. The boxes below contain

examples of initiatives that seek to build on these forms of learning in pursuit of greater sustainability.

Consuming Interests, United Kingdom

Consuming Interests is the first module in a home-study environmental education programme called *Greenprints for Action*, which was developed for employees in industry, government officers and members of trade unions in the United Kingdom. Written by university consultants, the programme is the result of a training partnership between the National Extension College and the National and Local Government Officers Association. The *Consuming Interests* module is conceptually rich and has a strong focus on understanding the 'treadmill of production and consumption', the benefits and costs of consumption, and the role of household and workplace changes in transforming the 'treadmill'. There is a strong focus on ideas for local action but no structured experiences are provided which actually help students learn skills for altering their consumption patterns.¹⁶

Learning for Environmental Action Programme (LEAP), Canada

LEAP is an initiative of the International Council for Adult Education. In Canada, LEAP members encourage local workshops based upon themes related to 'envisioning a sustainable community'. Inevitably, attention turns to issues of overconsumption and LEAP facilitators invite participants to see consumption not as only an individual problem but also as something bigger and more systemic, and have found that this helps people to avoid self-blame and recriminations and be more prepared to consider they that they can act, as a community, to address the problem. One key activity they use is called "The Zen of Consumerism". This involves small group analyses of shopping catalogues and visits to shopping centres to investigate a range of selected products under the headings of: Need, Want, Amount/Type/Necessity of Packaging, Lifespan, and Where does it Go? After debriefing, the participants list and evaluate a range of strategies for reducing the environmental impacts of their shopping.¹⁷

... and in the workplace

SI

In the workplace, formalised training tend largely to be geared towards job-related skills and competence development. On the other hand, there are a growing number of examples of workplaces promoting environmental awareness among their workforces, recognising workers as consumers and citizens as well. What might most now be needed is to bring these two sides together so that sustainability becomes a key aspect of job-related competence and operation. Again, this raises issues about bringing sustainability issues from the margins and into mainstream operations. The box below reports one initiative that seeks to do this.

Huckle, J. (1990) "Consuming interests", in *Greenprints for Action*, Module 1, National Extension College and National and Local Government Officers Association, London.

Clover, D. (1998) "Building an Educative Path: Environmental Adult Education in Canada." Presentation to OECD Workshop on Education and Learning for Sustainable Consumption, Paris, 14-15 September.

Educating future business leaders

"Although business has demonstrated its support for Sustainable Production and Consumption through a variety of voluntary initiatives and programs - as shown by the International Chamber of Commerces' broadly supported Business Charter for Sustainable Development - government and NGOs have until now largely shaped the debate... Students/youth come in as a powerful resource for change in sustainable lifestyles. Changing one group, which will become extremely powerful in the near and distant future, will eventually make the basis for fundamental change in societies."

Hans Christian Lillehagen, Foundation for Business and Sustainable Development at the Workshop

It is clear that sustainable consumption cannot simply be imposed but rather will come about as the result of informed choices in favour of sustainable goods and services by individuals, households, corporations and governments. ¹⁸ In line with this, the following characteristics are aspects of an action-oriented approach to adult education and learning that is likely to promote sustainable consumption.

An action oriented approach

- promoting community understanding of issues and active engagement in, and support for, appropriate public policy;
- promoting a personal consideration of ethical issues and local decision making;
- helping people to feel a sense of ownership and commitment to the actions they choose;
- encouraging long-term adherence to decisions, actions and policies; and
- equipping people to make appropriate changes in their actions as circumstances change.

These characteristics define a general approach to education and learning that extends beyond the promotion of sustainable consumption itself. Within a more focused regard to the knowledge and skills that such approaches seek to enhance that might directly affect sustainability, the following was identified in the Issues Paper for the Workshop:

- identifying the environmental strengths of one's own household and work environment, and areas in which change may be desirable and possible;
- envisioning alternative ways of living and working, and evaluating the consequences of those alternatives;
- learning how to negotiate and justify choices between alternatives; negotiating and making plans for achieving desired aims, and taking personal and community actions to bring such aims into effect.

Robins, N. and Roberts, S. (1998) *Making Consumption Sustainable: Accelerating International Action*. Workbook prepared for the Workshop on Consumption in a Sustainable World, Kabelvaag, Norway, 2-4 June, pp. 4-5.

These are among the specific capacities that various forms of learning programmes might seek to promote, as well as general capacities of critical reflection, and the values and attitudes of sustainability.

Information and Awareness Programmes

Awareness campaigns have a role...

Information and awareness programmes have been among the most common demand-side strategies implemented by governments to encourage sustainable lifestyles. Among the most favoured strategies used in this regard are ecolabelling schemes, information clearing houses, action alerts, and radio, television and media campaigns which present "the facts" on particular issues (e.g. high levels of water use) and exhort particular behavioural responses (e.g. turning off taps and fixing leaking washers). They may take the form of special events, like that featured in the box.

World Consumer Rights Day, 1997

National and international consumer organisations have been in the vanguard in advocating environmental concerns to be considered in consumer legislation, product testing and information, and guidelines for consumer protection. March 15 each year is Consumer Rights Day for Consumers International. As an example, in 1997 the world theme was "Consumer Action for People and the Environment". Consumers International, as the international co-ordinating body, provided national consumer groups with a range of ideas for local initiatives, e.g. public functions, media events, press releases, and strategies for lobbying government and industry. A questionnaire was also included for groups to use to seek accountability of their governments in relation to their post-Rio actions on Chapter 4 of *Agenda 21*. Consumers International published this information in booklets and on diskette as well as via its Internet site.¹⁹

Information and awareness campaigns have brought some results²⁰, especially when they focus not only on 'the problems' but also provide an analysis of their causes and suggest a range of alternative actions that people can take in order to address them. They tend to be most successful in those countries with already-high levels of environmental consciousness and whose governments have also legislated for a range of complementary measures - economic instruments and product policies, land-use planning and infrastructure development - for encouraging sustainable consumption.

... but also limitations

They can also suffer from significant limitations. The assumption that raising levels of awareness will automatically

Consumers International http://www.consumersinternational.org/rightsday97/index.html accessed 1 May 1998; Hurtado, M. (1996) Tipping the balance: How consumer groups are greening in the light of overconsumption, *Our Planet*, 7 (6), pp. 26-27.

OECD (1998b) op. cit., pp. 24-29; Robins and Roberts (1998) op. cit., pp. 16-18.

translate into behavioural change is questionable and over-simplified. They may result only in consumer ambivalence - the state that occurs when people know what is good for the environment, and believe that they ought to do something about it, but generally fail to change their lifestyles accordingly. A study by the Future in Our Hands organisation in Norway, for example, found that its information campaigns had successfully raised the level of member awareness of sustainability issues but had failed to bring about any significant changes in their lifestyles. There is little evidence that even successful behaviour change programmes in one field of environmental behaviour help people to continue such behaviours when the effects of the information "intervention" wears off or when people face decisions in a different area of consumption. What is needed is to foster intrinsic motivation for living sustainably.

For these reasons, information and awareness programmes have often failed to deliver their desired outcomes. As a result, some critics have regarded education and learning programmes as a low impact strategy for achieving lasting behavioural changes, especially when they are among the only strategies used.²¹ However, to view education purely as information provision is, as this report makes clear, to miss a large part of education's potential contribution to sustainable consumption.

Even within the limitations of information campaigns, there exist a variety of routes to explore to increase their effectiveness as suggested by one of the Workshop groups concerned primarily with community and adult learning initiatives. Given that considerable resources are devoted to marketing in the business sector, one question for the future is how even a fraction of that overall marketing effort might be re-directed to improve information and awareness programmes for sustainable consumption.

Language, audience, incentives

Language and starting points: Sustainable consumption is a complex concept which bridges ideas from economics, environmental science and consumer psychology. Careful attention should be paid to reducing the complexity of the language used in information and awareness programmes in order to explain ideas to the general public. One Workshop suggestion was to start simply by finding practical ways of involving people (e.g. by carrying out an energy audit in their homes) and only afterwards starting to discuss the concepts and asking people to reflect upon their lifestyles and values.

²¹ Robins and Roberts (1998) op. cit., p. 19; IUCN (1996) op. cit.

Audience: The different information needs of particular community sectors should be to the fore. For example, workers in their places of employment and families planning holidays are likely to hear different messages. This applies to different groups (e.g. migrant communities, 'early adopters' of environmental messages, etc.) and to different stages and passages in life (e.g. retirees, people learning to drive a car, parents with young families, etc.). It was suggested in the Workshop that among workers, three key areas could be targeted: consumption practices of the workplace, in travel to work, and in household and leisure consumption.

Incentives: It is important to provide people with incentives to learn more about sustainable consumption and to become involved. These might include: explaining the savings that could be made by using energy efficiently, providing workplace rewards for successful adoption of energy or water saving plans, and identifying sustainable consumption processes that increase rather than decrease employment.

To note that information campaigns often make a disappointing impact is not to overlook the key role of information itself in society nor its importance for realising sustainability. Access to good information is at the heart of the democratic process, and of making critical choices. Information about the environment, consumption patterns, the impacts of economic, technological and social change are all fundamental to the educational process as well, whether in schools, colleges, the community or the home. In this sense, information is itself a resource to be actively drawn on - repeatedly in different ways, by students and teachers - rather than necessarily as a direct medium of orchestrated change. As with the examples raised in relation to schooling in the previous section, the indirect approaches will often prove to be more effective than the direct.

5. EMERGENT CONCLUSIONS AND ISSUES

Areas of Workshop Consensus

A key role for governments in promoting sustainable consumption The promotion of sustainable consumption should be recognised as a high priority area for policy development both as a complement to sustainable production and as a key strategy for engaging people in the transition to sustainability through their daily lives as consumers and citizens. Governments - as well as the OECD and other international organisations - also have a key role to play in influencing the nature and patterns of consumption.

Developing a "whole government" approach

Education for sustainable consumption requires *a whole of government approach* with co-operation between ministries, departments and agencies in, for example, the areas of:

- education and youth, women's affairs, the aged and industry and commerce - to ensure that programmes are addressed to all social sectors;
- consumer affairs, welfare and social security to ensure access to consumer services and to protect consumer rights; and
- environment, energy, transport, agriculture, mining, forestry, water, etc - to ensure that environmental expertise from these areas informs policies in other areas and to ensure that policies in these areas integrate programmes of education and community learning as key strategies for promoting sustainable development.

More needs to be done in school, vocational and tertiary education Formal school education deserves special attention. This involves curriculum and policy provision relevant for citizenship, active learning, the environment, and consumer awareness at the system level. It involves approaches by schools, teachers and communities in the cross-disciplinary development of concepts, attitudes and skills relevant for sustainable consumption. It also suggests attention to formal curriculum programmes as well as in their resource management procedures, e.g. for energy and water conservation, recycling and waste management. The encouragement of similar attention and initiatives in vocational and tertiary education is also important.

The role of analysis Further analysis is needed of the consumption aspirations of people and the extent to which these are influenced by age, gender, class and culture. There is also a need to explore the motivations that drive people to consume, the barriers they perceive to being able to make sustainable consumption choices (and continue to make them) and the effectiveness of different strategies for facilitating action on such choices. Such analysis can guide the development of appropriately directed educational and learning programmes. There is need for analysis that deepens understanding not only of individual aspirations but of the broader economic, social and cultural factors that shape those aspirations.

Disseminating innovative practice

Case studies such as those presented in this report need to be researched and published in an extended form to help disseminate innovative practice. Critical analysis within each case and a comparative analysis across them would be useful to further identify and clarify principles for the effective use of educational strategies in changing consumption patterns.

Key role of responsible personnel

Professional development and training is needed for: (i) staff responsible for planning, implementing and evaluating programmes, including for teachers in the formal educational sector; (ii) for trainers and professors in industry, professional and vocational training, (iii) for staff in the public affairs, information and education offices of corporation and all levels of government, and (iv) for facilitators in adult and community education. This training and professional development can take many forms corresponding to the many agendas defined by the goal of promoting sustainable consumption.

Partnerships with business and industry

Partnerships, especially those that involve business and industry, need to be fostered in order to build synergies across all social and economic sectors and to integrate policies for sustainable consumption with those that promote sustainable production. Such partnerships can support learning programmes within educational institutions and community settings, as well as educational strategies for changes to more sustainable practices within business and industry.

The importance of evaluation

Evaluation is an important concern for environmental, education and consumer agencies for purposes of accountability, as a means for ensuring incremental and continuous quality improvements to programmes, and for identifying, disseminating and embedding best practice in policies and programmes. Increased attention to evaluation is a requirement for the development of education and learning for sustainable consumption. Evaluation is necessary at the level of individual programmes, companies, communities and institutions. At the national level, indicators of social and environmental change, and of learning related to these, may well

prove very valuable.

Emergent Questions and Issues

i) General issues

Conceptual clarification and analysis are needed

Given the urgency of action to realise sustainability goals, it can be tempting to focus predominantly on practical action and neglect analysis of the underlying factors. If this is done, recommendations for change are formulated on the assumption that the terms - "education", "learning" and "sustainable consumption" - are already understood so that the main task that remains is one of implementation.

A large measure of clarification, however, is needed of the concepts and relationships involved. This refers especially to the different influences on consumption, the forms of learning that relate most closely to these, and analysis of the educational change that promises to be most effective in promoting these forms of learning. Evaluation (see above) depends on clarity concerning the criteria by which action can be judged, which programmes should be evaluated and in which terms, and how the results of those evaluations can best be used. All these aspects need further work.

Which role for indicators?

The role of indicators continues to be controversial. Some hesitate about seeking quantitative measures of essentially complex human processes, fearing that indicator applications risk undermining the very educational practices they are intended to promote. But without some firm measures how can we know whether progress is being made? How can accountability to redress unsustainable practices be otherwise strengthened?

Further clarification is needed of indicator uses as well as the development of the educational and learning indicators themselves that are relevant to sustainability. What would such indicators be? Which are the most appropriate levels (local, regional, national, international) and settings (schools, tertiary, training, adult) for indicator development?

Implementation and operationalisation: realising change in a fragmented world

There is a range of implementation issues that arise in relation to realising broad desired change through learning "systems" that are highly fragmented and increasingly decentralised. Change is dependent on a myriad of varied local initiatives, raising the question of how to move beyond isolated examples of innovative local practices to enact more widespread change - how to "scale up" small-scale practice? At the same time, certain decisions lie increasingly outside the scope of national authorities within the global context of technological change and transnational

developments. Many partners other than governments are involved.

All agree that "partnership" is needed but whom and what this entails is often vague. Different sectors - business, education institutions, community action groups, government bodies operate in very different ways, which, while this can be a strength, can also frustrate progress. Different experiences of partnerships, both successes and failures, deserve further examination, clarifying such matters as, for example, the different perceptions and objectives held by stakeholders, accountability processes applicable to partnership arrangements, and resource use that makes for durable co-operative endeavours.

ii) Sector-specific learning issues

School issues

This report has identified a range of issues for further investigation, including: clarification of the skills and aptitudes that schools currently promote in different countries and their bearing on sustainable consumption; exploration of the links between education for sustainability and citizenship education; and the further compilation of cases of exemplary practices including "eco-schools". It will also be useful to clarify curriculum options, as, for example, between developing distinct programmes and initiatives on sustainability or instead concentrating on the more general, cross-curricular attitudes and competencies of students. The roles and attitudes of teachers, principals and education administrators will be particularly important to consider.

Post school tertiary education

Chapter 3 develops three main avenues for promoting sustainable consumption through tertiary education: the role of this sector as a provider of services and expertise to other parts of the education system; the "greening" of tertiary education institutions; and research. How should these three be best developed? What other priorities should be pursued? These questions were not discussed in depth at the Workshop but deserve detailed attention.

and other enterprise-based learning

Vocational training As the Workshop discussion underlined, enterprises are key players regarding sustainability. Yet, particularly in situations of intense economic competition, searching questions need to be asked about what this means in practice concerning education and learning agendas. How can sustainable consumption become an integral aim of enterprise-based vocational learning, especially in small firms? What would be better undertaken through other educational and community-based adult programmes? How far can fundamental questions be asked about the sustainability of business operations themselves in firms, and what learning issues

arise in posing such questions?

Community-based adult learning

The Workshop discussed the limitations of information and awareness programmes, but also ways of making them more effective. In so doing, the question arises of how far they become in their turn a form of marketing, concerned largely with information transmission rather than more process-oriented learning and the active engagement of those involved. Other forms of non-formal and informal learning need to be further explored.

The potential role of locally organised, collective initiatives is a very large one in relation to sustainable consumption but the extent of that potential has yet to be fully grasped. Questions of organisation and funding inevitably arise: community-based initiatives mostly rely on insufficient and unstable funding, raising the question of how and which innovative initiatives should be supported in pursuit of sustainability goals? How can local initiatives be encouraged on a sufficiently widespread basis to make an impact, without undermining their character as local and community based?

Conclusion

To conclude, it was generally agreed that education, learning and sustainable consumption defines a rich agenda of questions to be addressed nationally and internationally. The OECD should continue the dialogue and analysis of the Workshop, in particular in bringing together different sectors and partners together. The co-operation of the Environment Directorate and CERI in this field could be extended to include, for example, the further analysis, development, evaluation, and dissemination of best practice from the different priority areas discussed in this chapter. The OECD Environment Directorate will be further developing some of the themes raised in the Workshop in a series of case studies on policy instruments to promote sustainable consumption.

ANNEX LIST OF PARTICIPANTS

AUSTRALIA

John FIEN (Workshop Rapporteur)

Tel: 61 7 3875 7105

Page 61 7 3875 745

Director Fax: 61 7 3875 7459
Centre for Innovation and Research in Email: J.Fien@plato.ens.gu.edu.au

Environmental Education

Nathan Campus, Griffith University

Queensland 4111

AUSTRIA

Gerhard OMERSUTel: 43 1 515 22 1611
Federal Ministry for the Environment,
Fax: 43 1 515 22 7626

Youth and Family Affairs Email: gerhard.omersu@bmu.gv.at

Päs. Abt. 5 Vienna

 Günther PFAFFENWIMMER
 Tel: 43 1 531 20 2532

 Head of Subsection for
 Fax: 43 1 531 20 2599

Environmental Education Email: guenther.pfaffenwimmer

Ministry of Education and Cultural Affairs @bmuk.gv.at

Minoritenplatz 5 A-1014 Vienna

Peter POSCH (Working Group Rapporteur)Tel: 43 463 282541 orUniversität Klagenfurt43 463 2700 557/563Institute of EducationFax: 43 463 2700 562

Universitätsstrasse 65 Email: peter.posch@uni-klu.ac.at

A-9020 Klagenfurt

BELGIUM

Eric CRAENHALS Tel: 32 2 553 80 29

Nature and Environmental Education Co-ordinator

Fax: 32 2 553 80 55

AMINAL

Fax: 32 2 553 80 55

Email: eric.craenhals

Ministerie van de Vlaamse Gemeenschap @lin.vlaanderen.be

Afdeling Algemeen Milieu-en Natuurbeleid

NME & I-cel

Graaf de Ferrarisgebouw - lokaal 03P26

Emile Jacqmainlaan 156 bus 8

1000 Brussels

Eric VAN POELVOORDE

Responsable du Département Information/Sensibilisation Fax: 32 2 775 76 21 Institut Bruxellois pour la Gestion de l'Environnement Email: info@ibgebim.be

Tel: 32 2 775 75 75

(administration générale)

Gulledelle 100 B-1200 Bruxelles

CANADA

Darlene CLOVER Tel: 1 416 923 6641 (ext. 2367) International Coordinator Fax: 1 416 926 4749

Transformative Learning Centre Ontario Institute of Studies in Education Email: dclover@oise.utoronto.ca

Tel: 506 453 2326

Fax: 506 453 3325

Email: robertl@gov.nb.ca

Email: pekka.ym@kolumbus.fi

Tel: 33 1 45 24 99 96

Fax: 33 1 45 20 63 04

University of Toronto

252 Bloor Street West - Room 7-184

Toronto, Ontario M 55IV6

Robert LAURIE

Agent pédagogique en sciences de la nature

Ministère de l'Education

C.P. 6000

3^e étage, King's Place

Fredericton, Nouveau-Brunswick

Canada E3B 5H1

CZECH REPUBLIC

Marta CERNA Tel: 420 2 6712 2445 Head of Division Fax: 420 2 6731 0308 Email: cerna@env.cz

Ministry of the Environment of the Czech Republic Vrsovicka 65

100 10 Prague 10

Jiri SVOBODA

Permanent Delegation of Czech Republic

to the OECD

40, rue de Boulainvilliers

75016 Paris

FINLAND

Pekka HYNNINEN Tel: 358 15 5768610 Fax: 358 15 5768615 Director

Rantasalmi Institute of

Environmental Education (RIEE)

POB 41

58901 Rantasalmi

Virpi RIPATTI Tel: 358 9 7747 7811 Senior Advisor Fax: 358 9 7747 7069 Email: virpi.ripatti@oph.fi

National Board of Education Hakaniemenk 2

00530 Helsinki

Reijo LAUKKANEN

Counsellor Permament Delegation of Finland

to the OECD

6, rue de Franqueville

75116 Paris

Juha PYYKKO Email: juha.pyykko@formin.fi

Permanent Delegation of Finland

to the OECD

6, rue de Franqueville

75116 Paris

Tel: 33 1 42 19 18 09

Elina RAUTALAHTI-MIETTINEN

Tel: 358 9 19 91 94 46 Counsellor Fax: 358 9 19 91 94 53 Ministry of Environment Email: elina.rautalahti@vyh.fi

PL 399 00121 Helsinki

FRANCE

Geneviève VERBRUGGE Tel: 33 1 42 19 17 75 Fax: 33 1 42 19 17 72 Chargé de mission

Service des Affaires Internationales (DGAD) Email:

Ministère de l'Environnement geneviève.verbrugge 20 avenue de Ségur @environnement.gouv.fr

75302 Paris 07 SP

Jacqueline DENIS LEMPEREUR

Rapporteur Général Adjoint 33 1 42 19 17 91 de la Commission Française du Développement Durable Fax: 33 1 42 19 18 36 Ministère de l'Aménagement du Territoire 33 1 42 19 17 90

et de l'Environnement Email: cfdd@environnement.gouv.fr

20 avenue de Ségur 75302 Paris 07 SP

GERMANY

Dietrich OMEIS Tel: 49 30 8903 2033 49 30 8903 2906 Directeur du Département des Questions Fax: Socio-scientifiques de la Protection de l'Environnement Email: dietrich.omeis@uba.de

Agence Fédérale de l'Environnement

Bismarckplatz 1 Postfach 33 00 22 D-14191 Berlin

Norbert REICHEL Tel: 49 211 896 3398 Head of Section 49 211 896 3220 Fax:

Ministry of Education, Northrhine-Westphalia Email: lizard.princess@t-online.de

D-40190 Dusseldorf

Ute MINKE-KOENIG Tel: 01 44 17 16 06 Fax: 01 45 01 29 77 Counsellor

Permanent Delegation of Germany

to the OECD

5, rue Léonard de Vinci

75116 Paris

Martin ROTHFUCHS Tel: 01 44 17 16 12 Fax: 01 45 01 29 77 Attaché (Embassy)

Permanent Delegation of Germany

to the OECD

5, rue Léonard de Vinci

75116 Paris

HUNGARY

Ádám FERENCNÉTel:: 36 76 321 444

Körlánc Environmental Education Association Fax: 36 76 483 282 H-6000 Kecskemét Email: ketif@castor.huninet.hu

Kaszap utca 6-14

 Jozsef HARI
 Tel: 36 76 321 444

 Head of Department of Science
 Fax: 36 76 483 282

Körlánc Environmental Education Association Email: ketif@castor.huninet.hu

H-6000 Kecskemét Kaszap utca 6-14

 Anna FABIAN
 Tel:
 01 53 65 65 00

 First Secretary
 Fax:
 01 47 55 80 60

First Secretary Fax: 01 47 55 80 Permanent Delegation of Hungary

to the OECD

140, avenue Victor Hugo

<u>ITALY</u>

 Daniela VENERANDI
 Tel:
 33 1 44 39 21 50

 Promior Consoillor
 Fax:
 33 1 42 84 08 50

Premier Conseiller Fax: 33 1 42 84 08 59

Délégation Permanente de l'Italie auprès l'OCDE 50, rue de Varenne 75016 Paris

 Vittorio PINNAVAIA
 Tel:
 33 1 44 39 21 59

 Attaché
 Fax:
 33 1 42 84 08 59

Délégation Permanente de l'Italie auprès l'OCDE 50, rue de Varenne 75016 Paris

JAPAN

Eiichiro "Atom" HARAKOField Studies Institute for
Fax: 81 42 329 7668
Fax: 81 423297668/7669

Environmental Education Email: atom@fsifee.u-gakugei.ac.jp

Tel:

525 639 3180

Tokyo Gakugei University 4-1-1 Nukuikita-machi,

Koganei Tokyo 184-8501

MEXICO

Elisa BONILLA-RIUS

General Director Fax: 525 328 1000 x8988
Materials and Educational Methods Unity Email: dgmme1@sep.gob.mx
SEP (Ministry of Public Education)

Obrero Mundial 358, piso 1

Col. Narvarte 03020Mexico D.F.

Édgar GONZÁLEZ GAUDIANO

General Director

Education and Training Centre &

Sustainable Development

SEMARNAP

Pico Verapaz 435, PB

Col. Fraccionamiento Jardines en la Montana

14210 Mexico, D.F.

Oscar VILLARREAL

Education Affairs Permanent Delegation of Mexico

to OECD

4. rue Galliéra

75116 Paris

German GONZALEZ DAVILLA

Environmental Affairs and Fisheries

Permanent Delegation of Mexico to OECDEmail: germang@world-net.sct.fr

4, rue Galliéra

75116 Paris

NETHERLANDS

Maarten PIETERS

National Institute for Curriculum Development

P.O. Box 2041

NL 7500 CA Enschede

Jan KOSTER

National Institute of Curriculum Design

P.O. Box 2041

NL-7500 CA Enschede

Sylvi OFSTAD SAMSTAG

Deputy Director General Information/Education

Ministry of Environment

P.O. Box 8013 - Dep.

N-0030 Oslo

Astrid SANDAS (Working Group Chair)

Advisor for Environmental Education

Ministry of Education

P.B. 8119 - Dep.

0032 Oslo

SWEDEN

NORWAY

Jan SYDHOFF

Director of Education

S-10620 Stockholm

Jan HULTEN

Deputy Head of Information Department

Swedish Environmental Protection Agency

S-10648 Stockholm

Tel: 52 5 630 60 20

Fax: 52 5 630 60 16

Email: gaudiano@servidor.unam.mx

Tel: 01 53 67 86 09 Fax: 01 47 20 07 91

Email: oscarvil@worldnet.fr

Tel: 01 53 67 86 18

06 80 40 47 10

Fax: 01 47 20 07 91

Tel: 31 53 4840 631 Fax: 31 53 430 7692

Email: M.Pieters@slo.nl

Tel: 31 53 48 40 636

Fax: 31 53 436 07 692 Email: j.koster@slo.nl

Tel: 47 22 24 57 14 Fax: 47 22 24 27 72

Email: sylvi.ofstad@md.dep.no

Tel: 47 2 224 76 34

Fax: 47 2 224 27 15

Email: astrid.sandas@kuf.dep.no

Tel: 46 8 723 7970

46 8 723 3358 Fax:

Email: jan.sydhoff@aruf.stockholm.se

Tel: 46 8 698 1090 46 8 698 1485

Email: jan.hulten@environ.se

Ulla-Stina RYKINGTel:46 8 405 1771Senior Administrative OfficerFax:46 8 405 1909Ministry of Education and ScienceEmail: ulla- stina. ryking

S-103 33 Stockholm @education.ministry.se

SWITZERLAND

Thomas BUCHERTel:41 31 322 93 26Adjoint ScientifiqueFax:41 31 322 70 54Chef éducation à l'environnement et écoconseilsEmail: thomas.bucherOffice fédéral de l'environnement,@buwal.admin.ch

des forêts et du paysage

Buwal

CH-3003 Berne

UNITED KINGDOM

Robert HOGGTel:44 1382 224 155Scottish Office Education andFax:44 1382 201 767Industry DepartmentEmail:RB_Hogg

@hmis.scotoff.gov.uk

HMI Office Level 5 Wellgate House Wellgate Centre Dundee DD1 2DB

INTERNATIONAL ORGANISATIONS/ORGANISATIONS INTERNATIONALES

IUCN

Frits HESSELINK (Working Group Chair)

Chairman

Tel: 31 30 280 2444

Fax: 31 30 280 1345

IUCN Commission on Education and Communication

Email: hesselink@knoware.nl

SME MilieuAdviseurs P.O. Box 13030 3507 LA Utrecht

UN DESA

Hiroko MORITA-LOUTel:212 963 8813Sustainable Development OfficerFax:212 963 1267Division for Sustainable DevelopmentEmail:morita-lou@un.org

Department for Economic and Social Affairs

United Nations

2 UN Plaza, Room DC2-2250 New York, NY 10017

UN ECE

Mikhail G. KOKINE Tel: 41 22 917 2347 Environment and Human Settlements Division Fax: 41 22 907 0107

UN Economic Commission for Europe

Email: mikhail.kokine@unece.org

Palais des Nations, room 319

CH-1211 Geneva 10

UNEP

Garrette CLARK Tel: 33 1 44 37 14 20 Fax: 33 1 44 37 14 74 Sustainable Consumption Programme **UNEP IE** Email: garrette.clark@unep.fr

39-43 Quai André Citröen 75739 Paris Cedex

France

UNESCO

Gustavo LÓPEZ OSPINA 33 1 45 68 08 68 Tel:

Director Fax: 33 1 45 68 56 35 Transdisciplinary Project: Email: g.lopez@unesco.org

Educating for a Sustainable Future

UNESCO

7 place de Fontenoy 75352 Paris 07 SP

France

Jeanne DAMLAMIAN Tel: 01 45 68 05 69 Senior Programme Specialist Fax: 01 45 68 56 35

Transdisciplinary Project: Email: j.damlamian@unesco.org

Educating for a Sustainable Future **UNESCO**

7, place de Fontenoy 75352 Paris 07 SP

France

ENSCI - Les Ateliers

Licia BOTTURA Tel: 33 1 49 23 12 31 Fax: 33 1 49 23 12 03

Ecole Nationale Supérieure de Création Industrielle Responsable programmes européens Email: bottura@eusci.com

En charge du développement de la problématique environnementale dans la formation au design industriel 48, rue Saint Sabin

75011 Paris

INTERNATIONAL ASSOCIATION OF UNIVERSITIES (NGO)

Hilligje VAN'T LAND 01 45 68 26 30 Tel: Unesco House Fax: 01 47 34 76 05

1, rue Miollis Email: iau@unesco.org or 75732 Paris cedex 15 vantland.ian @unesco.org

France

WBCSD

Hans-Christian LILLEHAGEN

Tel: 41 22 839 31 00 (Geneva) Co-ordinator Tel: 47 67 58 18 00 (Oslo) Foundation for Business and Sustainable Fax: 47 67 58 18 75 Email: foundation@wbcsd.ch Development

P.O. Box 301, Strandveien 37

N-1324 Lysaker Norway

TUAC/ICFTU

Lucien ROYERTel:33 1.47.63.42.63Trade Union Advisory CommitteeFax:33 1.47.54.58.28to the OECD (TUAC) &Email: lroyer@compuserve.com

International Confederation of the Trade Union (ICFTU)

26 avenue de la Grande Armée

75017 Paris France

BIAC

Francois PITRONTel:33 1 40 60 26 58Senior Advisor on InternationalFax:33 1 40 60 29 89Environmental ProjectsEmail: fpitron@eur.ko.com

Coca-Cola Corporate & Greater Europe Group

11, rue Leblanc 75015 Paris France

OECD SECRETARIAT

ENVIRONMENT DIRECTORATE

15, boulevard Amiral Bruix, 75016 Paris

Fax: 33 1 45 24 78 76

Tel(OECD Switchboard): 33 1 45 24 82 00

Joke WALLER-HUNTER (Plenary Chair)DirectorMichel POTIERDeputy DirectorJeremy EPPELCounsellor

Jean CINQ-MARS Head, Pollution Prevention & Control

Elaine GEYER-ALLÉLY

Paul WATKINSON (Working Group Rapporteur)

Jan KEPPLER

Carlo PESSO

Carlo VANCINI

Marie-Line FONTAINE

Consultant

Secretary

CENTRE FOR EDUCATIONAL RESEARCH AND INNOVATION (CERI)

2, rue du Conseiller Collignon, 75016 Paris

Fax: 33 1 45 24 91 12

Tel(OECD Switchboard): 33 1 45 24 82 00

Tom ALEXANDER (Plenary Chair) Director
Jarl BENGTSSON Counsellor

David ISTANCE Principal Administrator

Motoyo KAMIYAAdministratorEdwyn JAMESConsultantHeloise WICKRAMANAYAKESecretary

PROGRAMME ON EDUCATIONAL BUILDING

2, Rue Andre Pascal, 75775 Paris, Cedex 16

Isabelle ETIENNE Consultant