Commission on Education and Communication

IUCN - The World Conservation Union
Rue Mauverney, 28
CH-1196 Gland
Switzerland

Tel.: +41 22 999 0283
Fax: +41 22 999 0025
E-mail: cec@iucn.org

IUCN Publications Services Unit

219c Huntingdon Road
Cambridge CB3 0DL, UK

Tel.: +44 1223 277 894
Fax: +44 1223 277 175
Email: info@books.iucn.org

IUCN
The World Conservation Union

engaging people in sustainability

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Commission on Education and Communication

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Daniella Tilbury
David Wortman

IUCN
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IUCN – The World Conservation Union

Founded in 1948, The World Conservation Union, brings together States, government agencies and a diverse range of non-governmental organisations in a unique world partnership: over 1000 members in all, spread across 140 countries.

As a Union, IUCN seeks to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.

The World Conservation Union builds on the strength of its members, networks and partners to enhance their capacity and to support global alliances to safeguard natural resources at local, regional and global levels.

IUCN Commission on Education and Communication – CEC

The Commission on Education and Communication, CEC, is one of the six Commissions on which IUCN draws expertise to fulfil its mission. CEC is a global network of experts in environmental communication and education, who work in government, international organisations, NGOs, mass media, business and academic institutions.

CEC brings to IUCN the know how on planning and implementing effective communication and education strategies, as well as managing knowledge and learning processes.

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engaging people in sustainability

Daniella Tilbury
David Wortman

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Contributors: Stephen Sterling: Principal Author of Chapter 6

Kate Henderson: Contributor to Chapter 1 and Chapter 2

Wendy Goldstein, Kristina Cooke: Contributors and Reviewers

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foreword

The World Summit on Sustainable Development 2002 provided an opportunity for thousands of people from all walks of life to gather, confirm commitments and continue to work towards sustainable development. The Johannesburg Plan of Implementation points to the social actions required to achieve sustainable development and to the role of education, capacity building and communication. The UN Decade in Education for Sustainable Development which was officially adopted by the UN General Assembly through resolution 57/254 in December 2002, (and called for in the Johannesburg Plan) will further opportunities for educators and conservationist to action sustainable development.

It is to support this work and the forthcoming Decade on Education for Sustainable Development (2005-2014) that the Commission on Education and Communication (CEC) has produced this book. The ideas and experiences are to assist practitioners to reflect on what sustainable development education means and to help them engage people in action.

The book is based on the exchange of professional experiences which featured in an IUCN CEC workshop at the IUCN Environment Centre during the World Summit on Sustainable Development on the 29th and 30th August 2002. Practitioners from around the world shared their models of good practice and explored the challenges involved in engaging people in sustainability. The difficulties facing practitioners vary between country and context but some challenges are universal:

- A lack of clarity in communicating what is meant by sustainable development;
- An ambition to educate everyone to bring about a global citizenship;
- Social, organisational or institutional factors constrain change to sustainable development, yet there is an emphasis on formal education, and community educators do not receive the same support;

- A lack of balance in addressing the integration of environmental, social and economic dimensions leading to an interpretation that ESD is mainly about environment and conservation issues;
- New learning (rather than teaching) approaches are called for to promote more debate in society. Yet, few are trained or experienced in these new approaches. Practitioners need support to explore new ways of promoting learning.

The IUCN CEC has been championing Environmental Education since the 1970s and Education for Sustainable Development since the 1990s. In 2001, The CEC established a working group on Education for Sustainable Development to spearhead its work in this area. Some of the work that CEC has been involved in on Education for Sustainable Development includes:

Critical reflection

- CEC engages debate and reflection on what is meant by reorienting environmental education to sustainable development by way of publications and internet debate. These products are on the CEC website www.iucn.org/cec and in the publication '*ESDebate*' (Hesselink et al. 2000). This publication '*Engaging People in Sustainability*' is also a contribution to this important reflection process.
- In a similar way, IUCN CEC explored the dimensions of biodiversity education and public awareness in an internet debate on biodiversity education and public awareness called BEPA;
- CEC shares thinking and approaches in education for sustainability in publications such as *Education and Sustainability – Responding to the Global Challenge* (Tilbury et al. 2002); *Communicating Protected Areas* (Hamú et al. 2004); *Achieving Environmental Objectives* (Martin-Meher et al. 2004)

Professional Exchanges

- CEC members and IUCN staff present ideas on ESD at workshops and conferences, such as the International Symposium on the UN Decade of Education for Sustainable Development organised by the Japan Council on the UN Decade of Education for Sustainable Development - ESD-J, October 27, 2003; and other international meetings in Portugal, South Africa, Spain, Italy and North America.

Promoting change

- Since Rio, CEC has held regional governmental and NGO sessions in Europe, Asia and Latin America to stimulate a reorientation to ESD, national strategies for ESD and more strategic planning of communication. In southern Africa CEC was a partner in stimulating the development of environmental education policy.
- CEC played a role in stimulating the work programme under the Commission on Sustainable Development, which the Johannesburg Plan of Implementation recommends be implemented.
- CEC played a role in the development of the work programmes on communication, education and public awareness (CEPA) under the Conventions on Biological Diversity, Ramsar-wetlands and Climate Change.

Advocacy for ESD

IUCN, through the Commission on Education and Communication, has been an advocate of ESD and prepared a statement on the importance of the Decade of Education for Sustainable Development 2005-2014. The IUCN Council in May 2003, 'welcomed the UN Decade of Education for Sustainable Development 2005-2014 as an initiative that supports IUCN's mission and raises the profile of this work.'

IUCN plans for the decade

The CEC has pledged its support for the ESD Decade and plans to contribute in the following ways through its mandate given by IUCN Members:

1. Leadership in sustainable development: Develop the World Conservation Learning Network to stimulate professional education in conservation and sustainable development in partnership with universities and the development and conservation communities.
2. Advocacy: CEC will be a source of knowledge and motivation to support a programme of communication, education and public awareness (CEPA), linking the major environmental conventions with regional agreements and the Decade of Education for Sustainable Development –by reviewing, monitoring and evaluating work and progress;
3. Empowerment: IUCN Global and Regional Programmes will be supported to develop capacity in environmental and sustainable development education and communication in order to promote learning and to empower stakeholders to participate in achieving IUCN's mission.

I hope you will find this an inspiration to your work and an invitation to join us in engaging society in sustainable development.

Denise Hamú,
Chair of the Commission on Education and Communication, IUCN

preface

The UN Decade of Education for Sustainable Development (UNDESD) could have far-reaching implications, which potentially touch on every aspect of life. The basic **vision** of the Decade is a world where everyone has the opportunity to benefit from education for societal transformation. This translates into five objectives for the Decade, to:

1. Give an enhanced profile to the central role of education and learning in the common pursuit of sustainable development;
2. Facilitate links and networking, exchange and interaction among stakeholders in ESD;
3. Provide a space and opportunity for refining and promoting the vision of, and transition to sustainable development – through all forms of learning and public awareness;
4. Foster increased quality of teaching and learning in education for sustainable development;
5. Develop strategies at every level to strengthen capacity in ESD.

The **concept of sustainable development** continues to evolve. In pursuing education for sustainable development, therefore, there must be some clarity in what sustainable development means and what it is aiming at. The Draft Implementation Scheme presents **three key areas** of sustainable development – society, environment and economy with culture as an underlying dimension.

- Society: an understanding of social institutions and their role in change and development, as well as the democratic and participatory systems which give opportunity for the expression of opinion, the selection of governments, the forging of consensus and the resolution of differences.
- Environment: an awareness of the resources and fragility of the physical environment and the affects on it of human activity and decisions, with a commitment to factoring environmental concerns into social and economic policy development.
- Economy: a sensitivity to the limits and potential of economic growth and their impact on society and on the environment, with a commitment to assess personal and societal levels of consumption out of concern for the environment and for social justice.

Key roles for education in sustainable development are:

- Education is the primary agent of transformation towards sustainable development, increasing people's capacities to transform their visions for society into reality.
- Education fosters the values, behaviour and lifestyles required for a sustainable future.
- Education for sustainable development is a process of learning how to make decisions that consider the long-term future of the equity, economy and ecology of all communities.
- Education builds the capacity for such futures-oriented thinking.

The values, diversity, knowledge, languages and worldviews associated with culture predetermine the way issues of education for sustainable development are dealt with in specific national contexts. In this sense, culture is just not a collection of particular manifestations (song, dance, dress, …), but a way of being, relating, behaving, believing and acting which people live out in their lives and which is in a constant process of change and exchange with other cultures.

Education enables us to understand ourselves and others and our links with the wider natural and social environment, and this understanding serves as a durable basis for building respect. Along with a sense of justice, responsibility, exploration and dialogue, ESD aims to move us to adopting behaviours and practices which enable all to live a full life without being deprived of basics.

Yet, the quest for sustainable development is multi-faceted – it cannot depend on education alone. Many other social parameters affect sustainable development, such as governance, gender relations, forms of economic organisation and of citizen participation. Indeed, it may be preferable to speak of *learning* for sustainable development, since learning is not restricted to education as such.

Learning includes what happens in education systems, but extends into daily life – important learning takes place in the home, in social settings, in community institutions and in the workplace. Although labelled as a Decade of *Education* for Sustainable Development, it must encompass and promote all forms of learning.

ESD will be shaped by a range of **perspectives** from all fields of human development and including all the acute challenges which the world faces. ESD cannot afford to ignore their implications for a more just and more sustainable process of change.

It is true to say that everyone is a **stakeholder** in education for sustainable development. All of us will feel the impact of its relative success or failure, and all of us affect the impact of ESD by our behaviour which, may be supportive or undermining.

Seven interlinked **strategies** are proposed for the Decade: advocacy and vision building; consultation and ownership; partnership and networks; capacity building and training; research and innovation; information and communication technologies; monitoring and evaluation. Together they form a coherent approach to the incremental increase over the Decade of the promotion and implementation of ESD. They will ensure that change in public attitudes and educational approaches keep pace with the evolving challenges of sustainable development.

The **outcomes** of the Decade will be seen in the lives of thousands of communities and millions of individuals as new attitudes and values inspire decisions and actions making sustainable development a more attainable ideal. For the Decade process as such, eleven expected outcomes are derived from the Decade objectives and relate to changes in public awareness, in the education system and in the integration of ESD into all development planning. These outcomes form the basis for indicators used in **monitoring and evaluation**; however, stakeholder groups at each level will decide specific indicators and the kinds of data needed to verify them. Qualitative indicators must figure equally with quantitative indicators to capture the multiple connections and societal depth of ESD and its impact.

Extracts from *United Nations Decade of Education for Sustainable Development 2005-2014, Draft International Implementation Scheme October 2004, UNESCO*

Sheldon Shaeffer
Director UNESCO Bangkok – Asia and Pacific Regional Bureau for Education

contents

01 introduction

Imagine a world in which people from all backgrounds and levels of expertise are engaged in a process of learning for improving quality of life for all within their community… as well as beyond, allowing for future generations…

A world in which people recognise what is of value to sustain and maintain and what needs to change through reflecting… understanding… asking… making choices and participating in change for a better world…

A world in which people share in the stories of inspiration and lessons learnt for all to benefit from… Imagine a world in which such stories of journeys towards more sustainable futures become commonplace…

Engaging in change

This book celebrates the efforts of people around the world who are actively working in education to facilitate change towards sustainability. The stories shared in these pages illustrate how education for sustainability[1] is being imaginatively undertaken in schools, communities and companies. The examples are a testament to the ever increasing momentum and worldwide recognition of the critical role education plays in realising our aspirations for a better future.

'Education for Sustainability Workshop'
Workshop participants, Sydney Catchment Authority, Australia [3]

The stories are presented in a framework of good practice in education for sustainability[2] to support and inspire others grappling with what this process looks like in practice. We have chosen a framework which has five themes: *imagining a better future*, *critical thinking and reflection*, *participation in decision-making*, *partnerships* and *systemic thinking*.

Our motivation for presenting this book is to provide a stepping stone to leaders everywhere to engage people in the 'United Nations Decade of Education for Sustainable Development 2005-2014', and to support the 'Johannesburg Implementation Plan' from the World Summit on Sustainable Development (WSSD) 2002[4]. By the end of the Decade it will be important to assess how far we have come in creating a transformation in the way we run our organisations, do our business and move our personal and collective lives towards sustainability[5]. It is our hope that the framework presented here assists with this task.

Education is alive and well at the WSSD

This publication was inspired by the successful IUCN Commission on Education and Communication (IUCN CEC) workshop 'Engaging People in Sustainability' at the Johannesburg WSSD in 2002[6]. This two-day participatory workshop, sponsored by the Japan Environmental Education Forum and GreenCom USAID, attracted more than 200 participants from all around the world. This WSSD side event, held at the IUCN Environment Centre, was a magnet for environmentalists throughout the Summit, a place where participants gathered to capacity in a tent to share their education for sustainability stories and achievements. It was part of a series of events[7] staged by different organisations to raise the profile of education and to advocate for the inclusion of education for sustainability in the follow up plan from the WSSD – the 'Johannesburg Implementation Plan'. These activities re-invigorated the recognition of education for sustainability, which had been floundering politically and was absent from initial drafts of the 'Implementation Plan'[8].

The passion, commitment, results and exchange of experiences in education for sustainability by practitioners and officials from across the world proved the vitality of the movement and the importance of investing in education for sustainability as an instrument to move towards sustainable development.

Human Nature

IUCN-CEC/GreenCOM/JEEF Workshop

"Engaging People in Sustainability" Draws a Crowd

Along with other sessions, the IUCN CEC session served as an inspiration for changes in the 'Implementation Plan,' as discussions generated at the tables, during breaks and down the hallways moved into the negotiations.

The stories shared at the session and in this book demonstrate the relevance of education for sustainability to all sectors of society, including business, industry, governments, women and indigenous groups, formal education sectors, NGOs and community groups.

Education for sustainability from centre stage…

Chapter 36 of 'Agenda 21'[9], the action blueprint from the Rio Earth Summit in 1992, advocated the pivotal role of education in the achievement of sustainable development[10]. The frequency of the use of the terms 'education', 'public awareness' and 'training' within Agenda 21 positioned education and the related tools of capacity building and public awareness at centre stage in building a public constituency for sustainable development and for engaging people in building a sustainable future. Chapter 36, on education, training and public awareness gave suggestions to society, and clearly implementation of this chapter is fundamental to achieving progress for all other chapters of Agenda 21.

Agenda 21 called on formal education to reorient itself to sustainable development and for areas of learning (such as Environmental Education) to reorient themselves to address the socio-economic as well as the environmental dimensions of development[11]. The Rio agenda recognised that education for sustainability cannot be solely concerned with improving our understanding of nature[12].

'Engaging People in Sustainability' Workshop, Johannesburg 29th-30th August 2002

Since Rio, a number of documents have clearly valued the role of education as a process that initiates, motivates and sustains changes towards sustainable development[13]. Other international meetings and declarations have also attested to its importance as a tool for social change towards sustainable development[14]. Some have suggested that work in and attention to education for sustainability was primarily limited to the formal education sector and in particular towards teacher education initiatives and resources.[15]

> "These initiatives demonstrate that the education community is becoming increasingly organised and vocal and are attracting more support."
>
> Mary Paden (2002)
> *'Engaging People in Sustainability Draws a Crowd,'* p. 2[16]

By the time of 'Rio plus 5' in 1997, UNESCO reported that education seemed to be 'the forgotten priority of Rio' since there had been little national reporting of action nor global funding dedicated to the work programme that had been developed under the Commission on Sustainable Development.

By the time the first preparatory meetings for the WSSD began, the agenda had shifted further and education seemed to have lost its centre stage in sustainable development. 'Education' was absent from the initial drafts of the 'Implementation Plan,' triggering a great deal of lobbying and advocacy, which resulted in its ultimate inclusion.

… to the international stage

It was clear that practitioners needed a voice and space on the international stage to demonstrate the relevance and applicability of education as a key tool for sustainability. The idea of a two-day workshop on 'Engaging People in Sustainability' was developed by networking with people coming to the WSSD, and attracting some others to come to share their work and inspire others. The success of this

workshop, based on generating activities and engaging them with participants rather than relying on 'presentations' created a buzz both inside and outside the tent. This publication rekindles that spirit and celebrates and shares education for sustainability stories, showing the application of this form of education for all sectors (not only the formal education sector) including business, industry, government, community groups and NGOs (see the table of presenters on page 12).

United Nations Decade in Education for Sustainable Development (UNDESD) 2005-2014

Two years after WSSD, we are in a very exciting and significant time for education for sustainability globally. The momentum stimulated from the Rio Earth Summit in 1992 and Agenda 21 and revitalised at the WSSD in 2002 has culminated in the United Nations declaring the Decade, which will be celebrated from 2005-2014. This Decade reflects an opportunity to celebrate and move forward education for sustainability across the globe at the international level.

Left to right: Presenter Rob O'Donoghue and Participants at the workshop, 'Engaging People in Sustainability'

The Decade offers an opportunity for practitioners and education policy-makers who are often isolated from each other to join in partnerships and to contribute to a collective and international imperative. The Decade provides an opportunity to give attention to education and provide a platform to celebrate achievements. International agencies are documenting lessons learnt and seeking ways to support the social movement towards a better future. This book is one of those efforts to support and inform the Decade, and to provide practitioners with tools to motivate and meaningfully engage stakeholders and communities in sustainability.

> "Like other important concepts such as equity and justice, sustainability can be thought of as both a destination (something worth aiming for) and a journey (that has no pre-ordained route)."

New Zealand Parliamentary Commissioner for the Environment (2004)
'See Change: Learning and education for sustainability' p. 14 [17]

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

UNESCO (1997)
'Environment and Society: Education and public awareness for sustainability' p. 7 [18]

> "In fact, sustainable development calls for additional and different processes than those traditionally thought of in education. The quest for sustainability demands new approaches to involve people, rather than convey just a body of knowledge."

Daniella Tilbury, Denise Hamú and Wendy Goldstein (2002)
'EarthYear Report' p.12 [19]

What is sustainability?

Sustainable development was first conceptualised by the 1980 'World Conservation Strategy'[20], and later articulated to a wider audience by the 'Brundtland Report'[21]. Since then, there has been much discussion on what sustainable development and sustainability really mean. It has the notions of intergenerational equity, ecological sustainability and fair distribution of wealth and access to resources. There is a strong premise that both society and the economy are dependent on a healthy environment to provide ecosystem services.

In an attempt to assess progress towards sustainability, 'The Wellbeing of Nations 2002'[22] reported that:

> '*… at present no country is sustainable or even closer… Nobody knows how to meet these new demands. There is no proven recipe for success. In fact, no one has a clear sense of what success would be. Making progress towards ways of living that are desirable, equitable and sustainable is like going to a country we have never been to before with a sense of geography and the principles of navigation but without a map or compass. We do not know what the destination will be like, we cannot tell how to get there, we are not even sure which direction to take…*' [23]

The question is, therefore, how do we educate for a concept that is difficult to conceptualise and define? The conceptual pathway to sustainable development is not clear, and this has implications for how we educate for sustainable development. The quest for sustainability demands new approaches, rather than being focused solely on conveying a body of knowledge[24]. Education for sustainability should provide opportunities for people to engage in reflecting upon preferred futures defining their vision for sustainable development.

From this process of envisioning, individuals and groups can then determine their own relevant and realistic pathway to sustainable development. Sharing these visions and pathways, and learning of other ideas and solutions are also important parts of this process.

Sustainable development is about seeking a better quality of life. However, quality of life is interpreted differently by different people and cultural groups, and underpinned by a number of core principles and values. Hence understandings of and visions for sustainability will be different for each of us, requiring that we work together to negotiate the process of achieving sustainability.

A new form of education?

Education for sustainability provides a tool to assist and engage us in negotiating this future and deciding the consequences of our decisions. This means that education is more than the traditional practice of Environmental Education, which focuses on teaching and learning about, in and 'for' the environment. Instead, education for sustainability seeks a transformative role for education, in which people are engaged in a new way of seeing, thinking, learning and working. People are not only able to explore the relationships between their lives, the environment, social systems and institutions, but also to become active participants and decision-makers in the change process.

Educators require a new set of skills, such as envisioning, critical thinking and reflection, dialogue and negotiation, collaboration and building of partnerships.

Action and innovation

The IUCN CEC workshop at the WSSD highlighted that all too often practitioners are provided with resources which present only the theory of education for sustainability. Few people see examples of what this process can look like in practice and the tools needed to facilitate it. The principles and tools of education for sustainability are given life in this book, by showcasing the successes and achievements as well as the challenges and lessons learnt.

The first meeting of Environmental Education Professional Associations from around the world, which took place at the WSSD, August 2002

Moving beyond perfection…

There is no one case study featured in this book which reflects best practice in education for sustainability, nor does this publication critique programs, or assert that there is only one 'way' to engage people in sustainability. Rather, this book looks beyond perfection to promote a myriad of achievements in education for sustainability to inspire others to document their work.

Where to from here?

The case studies in the following chapters are interspersed amongst education for sustainability principles and tools, and are evidence of our continuing learning journey towards sustainability. Importantly, we must reward and promote a culture in which practitioners, people and programs are willing to reflect upon, evaluate and document their experiences. We hope that this book inspires others to contribute to the discussion of how to engage society in sustainable development and to document their own education for sustainability journey.

> "You are the experts in your own lives, work and context, so use this framework as a source for inspiration, reflection and further reading. Draw upon this, the experiences and lessons of others grappling with similar issues and invest in the wealth of local knowledge and experience in your own context in order to work towards change for a better future."
>
> Kate Henderson (2004)[25]

The education for sustainability framework

The framework used in this book unwraps the core components of education for sustainability in the following chapters:

- Chapter 2: Imagining a better future
- Chapter 3: Critical thinking and reflection
- Chapter 4: Participation in decision-making
- Chapter 5: Partnerships
- Chapter 6: Systemic thinking

These themes are recognised throughout the literature as key elements of education for sustainability practice.[26]

IUCN-CEC. 'Engaging People in Sustainability' discussions and case studies showcased at the workshop

Thursday August 29-Friday August 30
10.00-17.00
IUCN Environment Centre, 135 Riviona Rd, Stanton

A future and action oriented discussion on Education for Sustainable Development

Opening Address, **Denise Hamú**, Chair, IUCN-CEC

'Education for Sustainable Development: What is this all about?' **Daniella Tilbury**, IUCN CEC Chair in Education for Sustainable Development and Director, Australian Research Institute in Education for Sustainability, Macquarie University, Sydney, Australia

'ESD in Tanzania,' **Mary Shuma**, Tanzanian Environmental Education Program

'The Earth Charter and Education for Sustainability,' **Brendan Mackey**, Earth Charter Education Program

'Asian EE Status and Challenges,' **Shigeyuki Okajima**, Japan Environmental Education Forum

'Education for Sustainability in China', **Yunhua Liu**, EE Unit, WWF China

'A Future and Action-oriented Discussion on Education for Sustainable Development in Higher Education,' **Peter Blaze Corcoran** and **Rick Clugston**, University Leaders for a Sustainable Future

'Integrating Indigenous Knowledge in Educational Programmes,' Rob O'Donoghue, Ministry of Education, **Sanele Cele** and **Edgar Neuvhalani**, SADC Regional Environmental Education Centre

'Women's Actions Towards Responsible Consumerism: Guadalajara's Experience,' **Karin Balzaretti Heym**, Institute for the Environment and Human Communities, University of Guadalajara

'Bringing Power as an Entrée to Sustainability Education in Indonesian Communities' **Osamu Abe**, Institute for Global Environmental Strategies, Japan Environmental Education Forum

'GreenCom Work in Different Countries' **Mary Paden** and **Irma Allen**, GreenCom/USAID

'Exploding the Myths of Education,' **Jamie Cloud**, The Sustainability Education Center, Inc.

'ENSI and Education for Sustainability' **Eva Csobod**, OECD Environment and Schools Initiative (ENSI)

'Education for Sustainable Development of Mexico,' **Tiahoga Ruge Scheffer**, Mexico Ministry for the Environment

'The Future of Business Education for Sustainability,' **Peter Castellas**, Global Knowledge Ventures

'UNESCO's New Vision for Education for Sustainable Development,' **Vinayagum Chinapah**

* Session Chairs: **Wazha Tema** (Botswana), **Deborah Baranga** (Uganda), **Moussa Batchilly** (Mali) and **Wendy Goldstein** (IUCN CEC)

02 imagining
a better future…

Put on your blindfold and clear your mind… let all the thoughts and worries of your day drift away… IMAGINE… what would a sustainable world look like to you?… take a few minutes to move through it, in your own time, to explore it… on a large sheet of paper, draw your vision… think of five key words that you associate with it… take time to reflect…what has influenced and informed your vision?… What elements would need to be present to create this vision?… What implications does this vision have for what you or your community does now?… How does your neighbour's vision differ from yours, and how might the two visions interact?

> The future…is an act of the imagination.
>
> Warren Ziegler (1987)
> *'Designing and Facilitating Projects and Workshops in Futures-Invention'* [1]

From schools and communities to organisations around the world, the exercise of 'imagining a better future' is helping people to answer these very questions. As a pivotal component of education for sustainability, futures thinking is a process that is transforming the way people relate to their future, helping to clarify their values, cultivate dreams, inspire hope and, above all, lead to action plans for change for towards a more sustainable future.[2]

Facilitating envisioning

Facilitation points should draw out the core components of the participants' vision, and begin to ask questions of the vision, such as:

- *Why are these components important to you?*
- *What assumptions underpin this vision?*
- *What influences have informed your vision?*
- *What are the implications of this vision for your life, work and future action?*

case study

It's a Living Thing Education for Sustainability Professional Development Program

Australia

Using futures thinking as an exercise, the 'It's a Living Thing (ILT)' Education for Sustainability Professional Development Program aimed to improve the practice of education for sustainability across a range of sectors in Australia's state of New South Wales. Following the envisioning exercise, participants paired up to engage in dialogue, discovering just how widely their visions varied. The sharing of visions also created opportunity for participants to reflect on their life experiences and values, and to critically think about how these factors have shaped their vision and expectations of the future.

Delivered through a partnership between Macquarie University's Graduate School of the Environment, the Australian Association for Environmental Education, New South Wales and the Nature Conservation Council of New South Wales, the program is just one example of the way in which envisioning is helping to build hope and inspire action for a more sustainable future. After reaching out to over 125 participants, program evaluations documented not only a change in participants' understanding, but also increased skills, tools and initiative for promoting and implementing education for sustainability.[3]

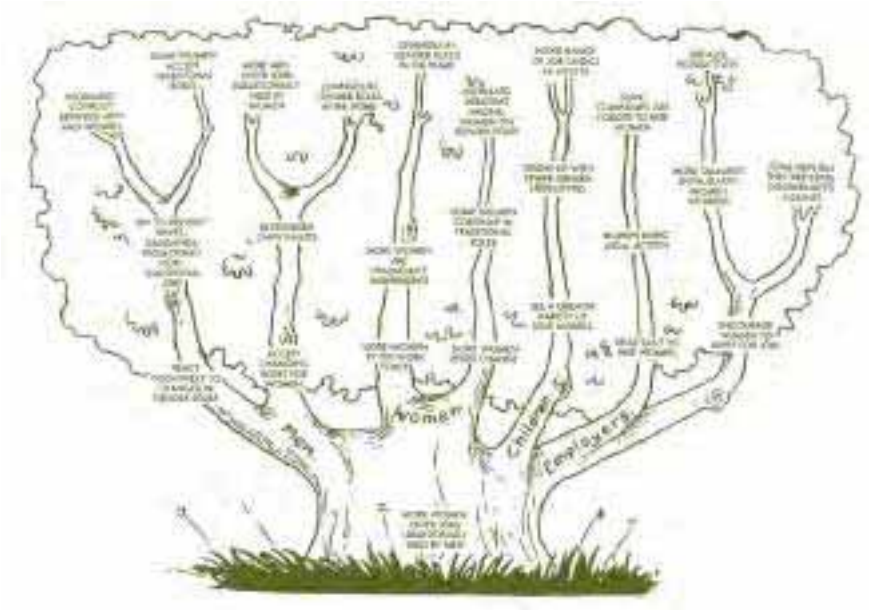
Building a vision…

Imagining a better future is a process that engages people in conceiving and capturing a vision of their ideal future. Envisioning, also known as 'futures thinking,' helps people to discover their possible or preferred futures, and to **uncover beliefs and assumptions** that underlie their visions and choices.

The process of envisioning provides a space for people to engage in a meaningful **interpretation** of sustainability, linking and channelling this information into a shared common vision for the future. Most importantly, envisioning offers **direction and energy**, and provides impetus for action by harnessing deep aspirations to **motivate** what people choose to do in the present. Envisioning also enables people to look at situations, problems and obstacles, and to consider better ways of observing them.[4]

The envisioning process can help people not only highlight their dreams of 'where to next', but also how their actions today contribute to or detract from their vision. This realisation is vital in helping people to take **ownership** of and **responsibility** for working towards a better future.

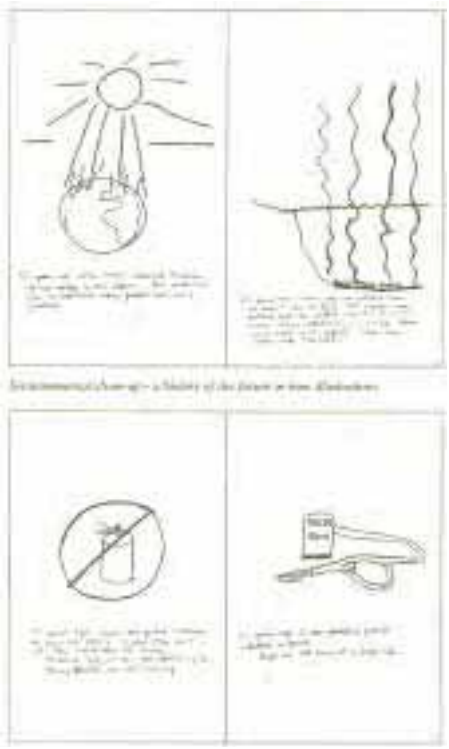
> "We cannot build a future we cannot imagine. A first requirement, then, is to create for ourselves a realistic, compelling and engaging vision of the future that can simply be told."
>
> David Elgin (1991)
> *'Creating a Sustainable Future' p. 77* [5]



Other tools for envisioning

Envisioning supports active and collaborative learning strategies using several methods such as:

- *Futures Trees*, which allow people to consider in depth possible future impacts of a particular change. The change is drawn as a tree trunk, the impacted groups as the main branches and the linked consequences of that change as successively smaller branches.
- *A history of the future*, which challenges learners to imagine themselves living in a more sustainable world 50 years in the future, then to construct a visual history of how this change came to be.
- *Timelines*, with which people construct a personal, community or even national timeline of important past events up to the present, then build alternative scenarios of the future based on probable versus ideal futures.



Other envisioning methods include:

- Steps to change
- Change cards
- Alternative futures cartoons
- Future wheels
- Delphi survey method
- Trend analysis
- Scenario construction

For more information, see Susan Fountain (1995) *'Education for Development: A teacher's resource for global learning'* [6]

All too often, people today feel disempowered by the familiar negative images and doomsday projections about the future. Today's media is dominated by stories of poverty, human rights violations, environmental degradation, species extinction, corruption and terrorism. While such issues require urgent attention, basic knowledge about them does not lead us to a clear path of action, nor does it motivate participation in their solution. Rather, such all-encompassing negativity often leads to feelings of powerlessness, apathy, guilt and disillusionment, clouding the path toward real solutions. Many current educational practices are focused on trying to problem-solve our way out of unsustainable development rather than on creating alternative futures.[7]

"We must imaginatively develop and apply the vision of a sustainable way of life locally, nationally, regionally and globally."

Earth Charter Commission (2000) *'The Earth Charter' p.6* [8]

case study

Enviroschools

New Zealand

'Enviroschools is about children creating meaning from and of their world.'

Educator, *Enviroschools Program 'Scrapbook'* [9]

In New Zealand, the successful Enviroschools program is changing the way that students learn for the environment and their future. Envisioning forms a key part of the Enviroschools program, prompting students to think critically about several questions. How do we want our school to be in the future? What are our priorities? What difference will our decisions make? Students are asked to create a 'whole school vision,' producing an aerial-view vision map with input from classes throughout the school. Posted prominently and accompanied by a storyboard and set of guiding principles, the map is used to prioritise class projects, raise awareness of shared goals and values, assist in student reflection and monitor progress.

The program also incorporates indigenous Maori learning styles through sharing of traditional stories and songs. Initiated as a pilot project in 1993 by the Hamilton City Council, management of the program became national in 2001, and has spread to over 80 schools around the country.

Enviroschools Foundation (2004) *'Enviroschools: How it Works'* [10]

> Futures thinking…tries to help people in becoming more active in envisioning a preferred future. And we do it by giving them a greater range of images, by helping them to choose the way they want the future to be so they can move in the right direction.

Jim Dator (1996)
'From future workshops to envisioning alternative futures' [11]

A focus on aspirations and opportunities…

Envisioning is about **hope** and **possibility**. It is an opportunity for people to dream of a better world, to share their vision, to **dialogue** with others and to take action in charting a shared positive course to the future. A futures perspective is important to improving the quality of life and addressing sustainability issues because it provides:

Time to imagine a better future and seek goals of social change, peace, justice, participative decision-making and sustainable development.

Alternatives in a process that leads to identifying possible, probable and preferred individual and shared futures.

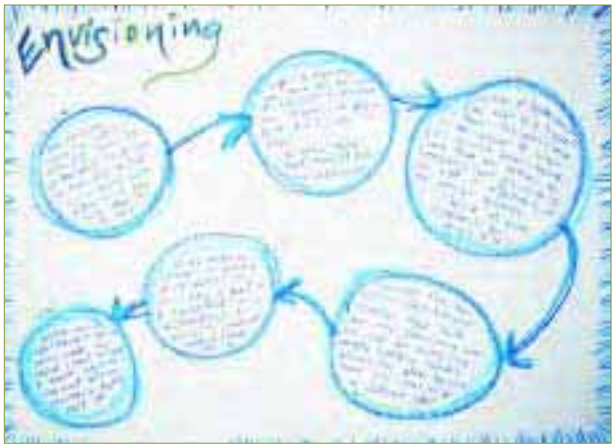
Holism by providing a space for interpretation of sustainability, and the opportunity to link these elements into a common direction.

Motivation and plans for action to participate in achieving these visions for a sustainable world.

Choice to help people in becoming more active in envisioning a preferred future by giving them a greater range of images, and by helping them choose the way they want the future to be so that they can move in the right direction.[12]

Personal reflections: a journey through envisioning

'Of everything I heard in class, futures thinking was of immediate appeal due to its power to inspire, motivate and empower… Since when have people felt truly empowered to change their lives?…



Futures thinking is a means to engage individuals in the debate surrounding education for sustainability. By asking them to envision, they immediately become actively involved in imagining a sustainable future. It empowers them to realise the stake they hold in the future with a positive framework that motivates them toward taking action on those visions…

If we are to fully participate in building a sustainable future we have to discover what [sustainable development] means for each of us through an envisioning process. Not only that but we have to question those visions, what influenced them, what they mean for our community as a whole, how sustainable they really are, how socially equitable they are, how environmentally sound they are.

… By asking people to reflect on what has influenced their visions they can begin to clarify their values…

We can begin to understand how to peel layers of the onion, dig deep into complex questions and think critically.

People do need a direction- they need a vision they can aim for. I know from my own understanding that you can't have a personal goal without starting with a dream.'

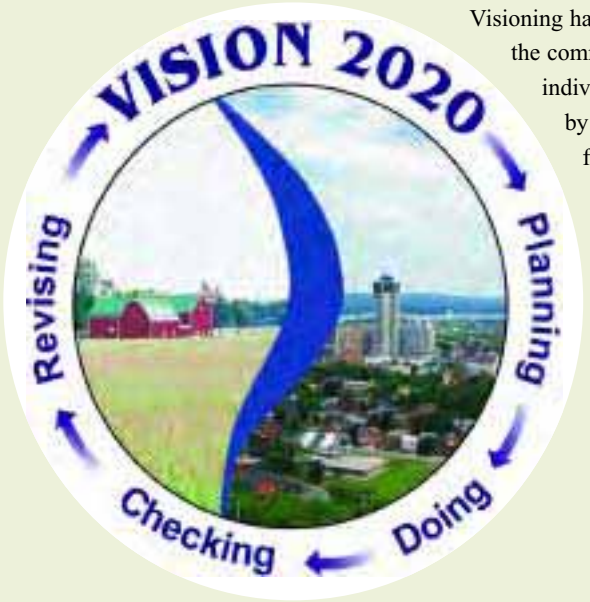
Excerpts from the personal reflective journal of Amanda Keogh
on education for sustainablity [13]

case study

Vision 2020 Sustainable Community Project

Hamilton, Canada

Under the umbrella of sustainable development and Agenda 21, envisioning was an integral tool in the Regional Municipality of Hamilton's efforts to address growth and support regional planning efforts, underpinning a range of actions that are changing the very nature of people's lives and the community. Over three years, more than 1,000 residents participated in envisioning workshops, developing more than 400 recommendations for preserving natural areas, protecting water and air and encouraging a compact urban form.



Visioning has also helped form partnerships among the community, businesses, government and individuals, and focus measuring of progress by the community toward their shared future. After 10 years, the vision continues to bring people together who are committed to make this region of great diversity, and one that contains an internationally significant biosphere reserve, move toward a more sustainable future.

UNESCO (2003)

'Creating a Sustainable Community: Hamilton-Wentworth's VISION 2020 Canada'.[14]

Ensuring relevance and valuing non-expert knowledge…

In education for sustainability, all people need to share knowledge and participate in working towards a sustainable future. For such participation to effectively take place, people need both the time and freedom to articulate their ideals and dreams, and to share them in a learning space that sees each of them as equally valid and meaningful. Such process values *every* person's vision of what a better future might look like, regardless of their background, knowledge or expertise. The process of envisioning facilitates an understanding of what sustainability is in their context and how it relates directly to *their* lives. Visioning is also a process that is inclusive to all cultures, and one that begins a dialogue which **strengthens intercultural understanding**.[15] It can act as a bridge to incorporate intercultural and indigenous perspectives and knowledge. Every individual's vision can have direct or indirect implications for future action and provokes further questions. In some cases, strategic partnerships can help people to address questions, obstacles and opportunities for action.

What do we value… and why?

Uncovering and understanding values are also essential steps in education for sustainability. People need to not only articulate what their vision for what a sustainable future looks like, but also to **critically reflect** on and **articulate** why it is important to them, what has informed their vision and what values make up their vision. Envisioning provides the opportunity for both participants and practitioners to explore relationships between their desired future and their personal values. Uncovering values also begins a journey during which people explore the links between their assumptions, their biases, their culture and family and subsequent decision-making and action. Participants begin to engage in and reflect on critical questions. What do I value, and why? What do other people value, and why? What has informed and influenced my values, and the values of others? Is my vision negotiable? What information, steps, skills and knowledge are needed to proceed towards this vision? Who needs to be involved in reaching this vision? Who is making the decisions?

Creating ownership and motivation…

Envisioning is not a stand alone event. Rather, it marks the beginning of a journey in education for sustainability in which people begin to feel engaged, empowered and responsible to act in ways to reach their vision. A core component of education for sustainability, visioning needs to be addressed in the design and planning of

programs, linking it to an exploration of the process of change and an understanding of how change occurs. Such a process moves from being an individual enquiry through negotiation and collaboration to a shared vision. Through this process, education for sustainability empowers people with the ability to participate in achieving their visions for the future.

The practice of 'imagining a better future'…

Using tools such as facilitated workshops, drawings, mapping, reflection and dialogue, envisioning is a process that asks people to imagine a sustainable future.[16] The tool of envisioning can be focused at a variety of scales, from the very local context up to a global scale. A small neighbourhood group might be asked to capture their vision for what a future 'sustainable' street might look like, while other multi-stakeholder groups might be asked to share a vision for a more sustainable city or region. In either case, the process starts as an individual task and moves through a number of stages towards developing a shared vision. Tasks might include asking participants to reflect and capture their visions through maps, drawings or other visual tools.

Participants then share these visions with others (in pairs or small groups) and discuss values, influences, challenges, opportunities and pathways to achieve desired future. This sharing, reflecting and questioning with others begins a critical dialogue and a means for values clarification.

A whole group discussion can then explore the experiences and outcomes of participants in first articulating their vision, and then sharing it with others. Futures envisioning must also be linked to an exploration of the process of change and an understanding of how change occurs.

> "Futures thinking… 'encourages us to take responsibility for actions and decisions, to think ahead and to participate in processes of social innovation, recovery and renewal."
>
> Steven Slaughter (1991)
> *'Futures Concepts and Powerful Ideas'* [17]

case study

Sustainability for real: Brecon Beacons National Park's initiative for environmental education

Wales

Envisioning played a key role in the planning for the future of Brecon Beacons National Park, located in southern Wales. In 1993, the Park Authority established a Sustainability Working Group and embarked on 'Planning for Real,' a program to involve local people in planning for the Park. During community meetings, a large-scale map and a model were laid out on a table in the centre of the community hall, and posters hung used around the room. Residents were asked to tick boxes on the posters and attach coloured flags, pins and model houses to the map indicate their visions for various issues like housing, traffic and tourism. The exercise resulted in a better understanding of local feelings towards development. Based on its success, the Park Authority launched a companion program called 'Sustainability for Real' in local schools, empowering children through envisioning to think about the future of their local area, its problems and its potential.

Envisioning has helped to balance the needs of communities, tourism and the environment. It has also addressed past development conflicts between residents and the National Park Authority, which had created feelings of mistrust and exclusion.

Brecon Beacons National Park Committee (1993)
'National Park Plan, 3rd Edition' [18]

Challenges of envisioning

Recognising the personal journey…

Visioning a better future starts as a very personal exercise. It can be a delicate and sensitive process for practitioners to facilitate, and potentially confronting for participants not accustomed to expressing and sharing their personal visions. The design of envisioning activities must be conscious of this sensitivity by creating a non-threatening space and building a collaborative environment. Outcomes of the exercise can be shared in pairs or small groups to alleviate potential concerns about sharing such personal experiences with a larger group. The overall essence and outcomes of the activity can then be discussed and facilitated in a whole group, where participants can volunteer information as so desired.

Personal reflections: a journey through envisioning

'Facts, figures, proof, forward projections: they can all be brought together to show that our planet is heading for disaster… Doom scenarios make us despair, or panic. We give up, thinking that it's too hard to deal with…

Envisioning is positive. We envision the change that we want…what does it look like? The vision becomes compelling – something we really want to bring about. A compelling vision triggers thoughts about what would need to be in place for that vision to be real. Dialogue is possible. We can start to think about how to build this vision…'

I come from London. I cannot imagine a life in which big cities do not feature. I cannot picture myself leading a life without water, gas, electricity, cars, computers, supermarkets… People from different countries had different views. Those from poorer countries see [sustainable development] in terms of poverty alleviation. Those from wealthier countries think more of environmental issues. In general, we are all quite optimistic.'

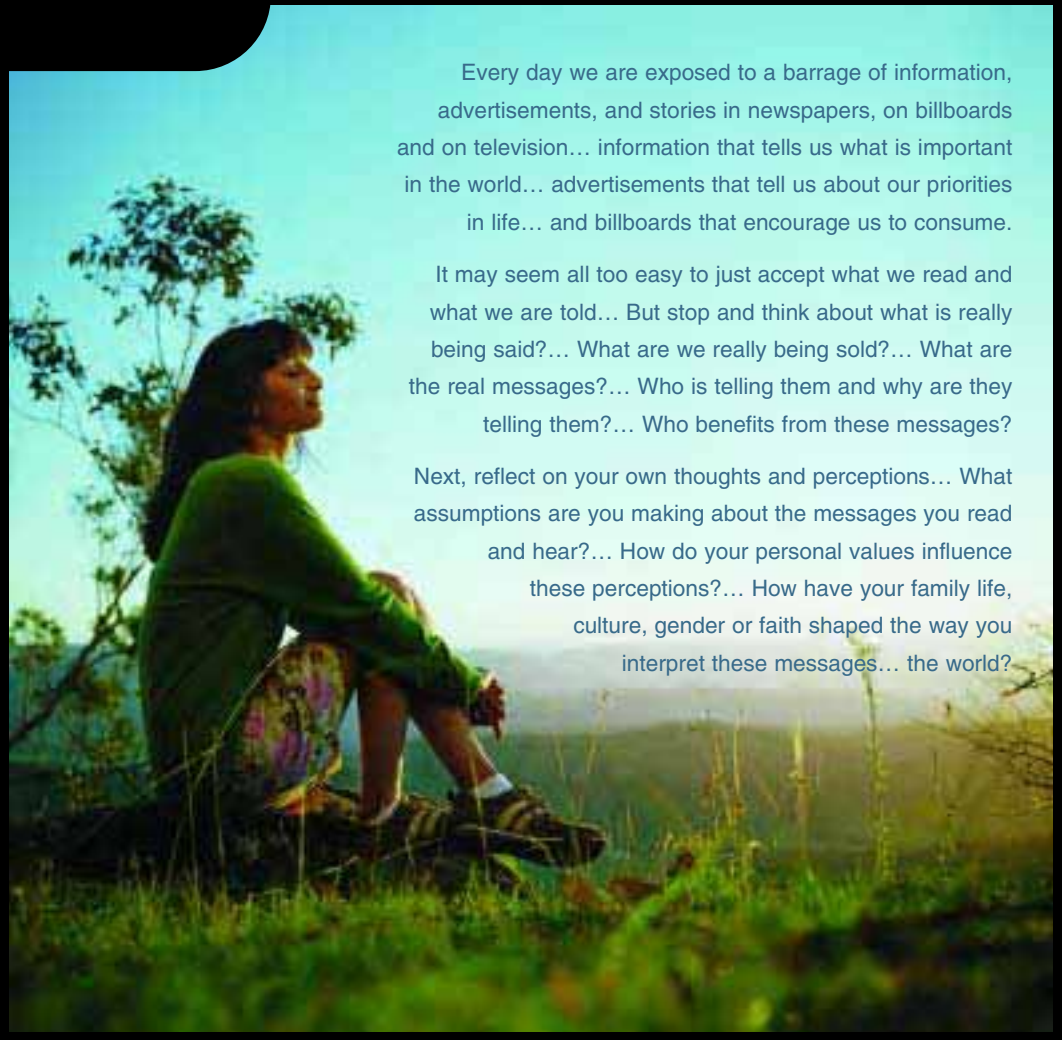
Excerpts from the personal reflective journal of Helen Sloan *on education for sustainability* [19]

Summary: opportunities offered by envisioning

Envisioning…

- Provides a non-threatening learning space conducive for discussion
- Creates the ability to identify and critically question what participants want for a sustainable future
- Assists in ensuring relevance to people's own lives and social/cultural context
- Incorporates and is inclusive of indigenous and intercultural perspectives as well as non-expert knowledge
- Uncovers and deconstructs what we value and why we value, as well as what other people value
- Provides an opportunity to consider conflicts, contradictions and similarities with other peoples' visions
- Helps participants see the process of change as a series of steps, and helps them to reflect on factors/choices that bring about different types of change
- Emphasises that participants are the owners of their vision, process and outcomes. This action paves the way forward for collaboration, solutions and action

03 critical thinking and reflection



Every day we are exposed to a barrage of information, advertisements, and stories in newspapers, on billboards and on television… information that tells us what is important in the world… advertisements that tell us about our priorities in life… and billboards that encourage us to consume.

It may seem all too easy to just accept what we read and what we are told… But stop and think about what is really being said?… What are we really being sold?… What are the real messages?… Who is telling them and why are they telling them?… Who benefits from these messages?

Next, reflect on your own thoughts and perceptions… What assumptions are you making about the messages you read and hear?… How do your personal values influence these perceptions?… How have your family life, culture, gender or faith shaped the way you interpret these messages… the world?

Exploring such questions, their answers and the actions they provoke, capture the essence of a process called 'critical thinking,' an essential part of education for sustainability that challenges us to examine the way we interpret the world and how our knowledge and opinions are shaped by those around us. Critical thinking leads us to a deeper understanding of the interests behind power and politics in our communities, and of the influences of media and advertising in our lives, and it helps us to take action to work towards sustainability.

Along with a process called values clarification, critical thinking helps us to uncover how our culture shapes our deepest held personal values and beliefs so that we can grasp both the personal and cultural dimensions of the many complex problems of sustainability[1]. In doing so, critical thinking provides new inspiration for contributing to change for sustainability in genuinely autonomous and authentic ways.

Reflections on critical thinking

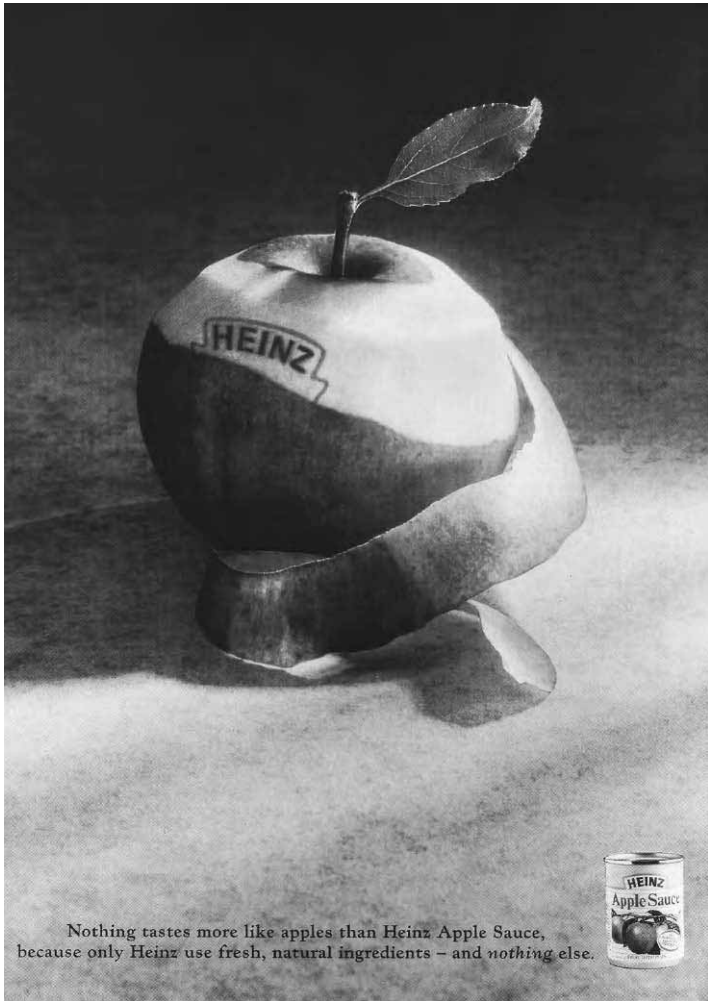
'One issue that really became clear to me throughout this process is how rarely we (as individuals) are encouraged to critically question—whether it is information in the media, whether it is our choices in consumerism, whether it is what we are taught at school. Engaging in a process of learning about [education for sustainability] has demonstrated to me that critical thinking is an essential and fundamental component to take [education for sustainability] beyond environmental education, to put the environment in a wider social, political and economic context and to look for holistic solutions to sustainable futures.'

Excerpts from the personal reflective journal of Brooke Hutchinson*, education for sustainability* [2]

Critically thinking about consumerism

Critical thinking about advertising can help us to reflect on how the products we consume impact the physical and human environment. We can examine the linkages between our daily lives and sustainability, and examine power systems that exploit the physical and human environment. We can also examine the power of our consumption choices and how they can lead to action and change. The next time you see an advert, consider:

- *What qualities is it seeking to attribute to the product?*
- *What social, cultural or natural images is it using?*
- *Is it seeking to exploit nature or a cultural or social issue?*
- *What is really being sold?*
- *How might the advert affect the way we think about culture, nature, or social issues?*
- *What are the key sustainable development issues associated with the advert?* [3]



Being critical, or thinking critically?

So what exactly is critical thinking? People sometimes mistake critical thinking with simply 'being a critic' of something. But in education for sustainability, critical thinking is a much more profound process, one involving a deep examination of power, consumption and the root causes of our sustainability challenges, whether they are linked to economic, ecological, social or cultural issues. It engages us in recognising bias in the world around us, and in reflecting on the assumptions underlying our knowledge, perspectives and opinions.

Critical thinking involves asking deeper questions about the world we live in, and answering them in ways that reveal how our social, political and economic structures and processes might be changed to move towards sustainability. In education for sustainability, such questioning might take place through dialogue in workshops, through role playing games or by using exercises such as constructing visual maps. But all such exercises share in common the objective of helping us to challenge our assumed knowledge and question our current thinking.

Education for sustainability develops critical reflective knowledge regarding…

- Social organisation
- Media and its bias
- Our personal involvement in sustainability
- Our ability to participate in decision making for sustainability
- Links between our lifestyles, daily events and sustainability
- Our consumption of resources

Why think critically?

So why do we need to think critically? In our daily lives, we constantly absorb information by reading newspapers, listening to radio, watching television and browsing the Internet. We frequently interact through conversation with family, friends, social groups, work colleagues and school peers. And we're constantly targeted by companies seeking to sell us their products. All of these sources influence how we perceive the world, and what we consider to be priorities in our lives.

None of these sources, however, is free from bias. Media interests shape the news that we read based on their own agendas and opinions. Our politicians and community leaders are often driven by their own agendas of power and politics. Through advertising, companies encourage us to consume by tying their products to our feelings of self-worth, or to social, cultural and environmental issues that are of importance to us. Our interactions with friends, family and co-workers can lead us to 'group think,' where we simply adopt the viewpoints and opinions of those around us. Many of us are often not consciously aware of these interactions, and instead only passively receive such information without questioning its source or purpose.

> "Education for sustainable development must explore the economic, political and social implications of sustainability by encouraging learners to reflect critically on their own areas of the world, to identify non-viable elements in their own lives and to explore the tensions among conflicting aims."
>
> UNESCO (2002) *'Education for Sustainability, from Rio to Johannesburg: Lessons learnt from a decade of commitment' p.12* [4]

Questioning assumptions and recognising bias…

Critical thinking is a key component of education for sustainability because it challenges us to become actively conscious of all of these factors, and to critically **question assumptions** and **recognise bias** and interests behind institutions, governments, media, companies and the people around us. It develops our ability to understand how background, culture and values interact to shape our knowledge and perceptions, and the knowledge and perceptions of others. Through critical thinking, we can begin to **deconstruct our socialised** views of

> "There are always competing interests in debates about sustainability and it is important to build tolerance around different interests and perspectives. However, it is also important to keep questioning and scrutinising what it is that people and institutions are actually seeking to sustain."

New Zealand Parliamentary Commissioner for the Environment (2000)
'See Change: learning and education for sustainability' [5] *p.44*

the world, review our own assumptions and bias and comprehend that others around us see the world in similarly complex ways. Uncovering layers of assumptions that inform our actions, much like peeling back the layers of an onion, is an essential step in education for sustainability and a key component in learning for change towards a more sustainable future. Critical thinking allows us to re-construct a deeper understanding of how new political, social and economic structures and processes can better lead us to toward sustainability.

Some environmental educators have challenged the intentions of education for sustainability, viewing it as a process of persuasion or coercion which promotes a particular environmental outcome[6]. Some educators suggest that education for sustainability is nothing more than a process

of 'brainwashing' learners into embracing sustainability as a defined concept. On the contrary, through critical thinking, education for sustainability helps us to recognise when we are being coerced and manipulated by those around us and to come to genuinely autonomous conclusions about what sustainability means for each of us in our own lives, and whether or not we wish to seek an improved quality of life.

Critical, not rational thinking…

The rise of intellectual reasoning and scientific inquiry in the world has substantially altered what many of us perceive as knowledge. We're often told that knowledge consists of 'facts' constructed through rational questioning and scientific study. Those who advocate such 'rational' and scientific approaches to building knowledge attempt to do so in a 'value-free' environment, without personal bias or influences from the world around them.

Critical thinking allows us to recognise that even the most rigorous scientific studies are influenced by the perceptions of investigators, and that what is considered 'rational' is, in fact, interpreted differently by each of us. Educator John Huckle, one of the strongest proponents of critical thinking in education for sustainability, notes that among its central elements is that the world cannot be changed rationally unless it is interpreted adequately[7]. Critical thinking involves personal reflection on the appropriateness of mental models that have traditionally guided our thinking and action[8]. By understanding the presence of bias and assumptions in structures, ideologies and processes in the world, we can be empowered to think and act in *genuinely* rational and autonomous ways[9].

Exploring power relationships…

Critical thinking also helps us to question and **explore power relationships** in our communities, schools, workplaces and the wider world. We can begin to question the motivations behind hierarchies and leadership, and to understand the decisions that affect our lives. Who makes such decisions?[10] Why are they made? According to what criteria? Whose interests do they serve? What are the long-term consequences of those decisions? By asking such questions, we can better understand how others operate so that we can begin to break down relationships that provide barriers and build new partnerships for sustainability.

case study

Engaging people in critical thinking for sustainability

WWF China

Teaching the practice of critical reflective thinking forms a key component of WWF China's successful Environmental Educators Initiative (EEI), a project launched in 1997 to institutionalise education for sustainability in formal education across the country. Through workshops, EEI has engaged teacher educators and key master teachers from universities across China in critical thinking to challenge curriculum structures, encourage cross-curricular planning and promote participatory and interactive approaches to teaching and learning. The workshops also enhanced the capacities of teacher-educators to facilitate their own workshops with other teacher educators, education authorities and school administrators throughout China's school system.

By helping to re-orient China's environmental and nature studies toward education for sustainability, the EEI has prompted reflection on concepts, values, practices and effective ways to learn and build capacity in the education system. The EEI also contributed to the subsequent development of the China Ministry of the Environment's National Environment Education Guidelines, which demonstrate China's commitment to ensuring that children learn about the environment and a sustainable future. The Guidelines affect close to 200 million primary and middle school students across China.

WWF China (Undated)
'Engaging people in sustainability: WWF China Education Programme' [11]

> "To be empowered is not only to speak with one's own voice and to tell one's own story, but to apply the understanding arrived at to action in accord with one's own interests."

Elliot Mishler (1986)
'Research Interviewing: context and narrative' p. 119 [12]

Understanding root causes…

Many of today's problems in sustainability are highly complex, deeply embedded in the structure and function of our social and economic institutions. Without critical questioning, many people mistakenly attempt to address symptoms rather than causes of sustainability issues. Critical thinking helps to instead **identify root causes** of problems. Along with systemic thinking[13], it resists reducing sustainability issues to simple problems and solutions by constantly challenging us to link such symptoms with deeper underlying causes[14]. It is only through reaching the roots of such problems that we can then develop authentic ways of addressing them, and understand how different interests are served and people's lives affected by alternative solutions.

Clarifying cultural values and perspectives…

Critical thinking is closely linked with another process called **values clarification**, which helps us to explore the influence of our culture in shaping our values. Values are certain beliefs, attitudes or convictions that are reflected in our personal behaviour. Our values are passed to us through cultural processes that span both geography and age groups[15]. They are influenced by a variety of factors such as ideology, religion, gender, class and culture, all of which help to form our perceptions of the world.

Beyond discussions of politics, knowledge and technology, working towards sustainability is primarily a matter of culture[16]. Our culture and values are powerful forces that influence how we define problems, and what we consider moral or ethical. Conflicts regarding issues of sustainability are as much about differing cultures and the values we cherish as about 'rational' knowledge[17]. Values clarification can help us to understand the highly personal and complex ways that we build knowledge through interactions of various cultural factors[18]. Genuinely engaging in change towards suitability requires that we come to understand how our own culture shapes our view of the world and how we build knowledge about the world.

Self-reflection and questioning can help us to clarify our own values. What do I value and why? What are the various consequences of my different value positions? How have my religion, socio-economic background, gender and class affected my values? Using such questioning, we can consider how new information compares with our values and then determine how our values coincide or conflict with the values of others. From such reflection stems a greater personal relevance in and connection to change for sustainability. Values clarification engages us to reflect on what sustainability means to us in our own lives, given our own values and cultural context[19]. Once we are aware of these cultural processes, we can more effectively build our capacity as agents of change in working towards sustainability[20].

> "To achieve sustainable development we need critical reflective models which will help learners not only think critically but also culturally."

Darin Saul (2000)
'Expanding Environmental Education: Thinking critically, thinking culturally' p. 8 [21]

case study

What we consume

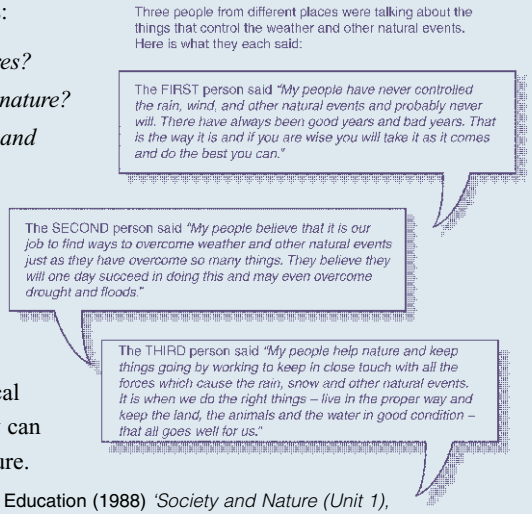
WWF United Kingdom

One of the first education for sustainability programs to explicitly promote critical thinking following IUCN's 'World Conservation Strategy' in 1980 and 'Our Common Future' in 1987 was WWF UK's 'What We Consume,' a curriculum framework that explores issues of environment and development. Eight units and over 80 learning activities engage students in active processes of analysis, questioning, discussion and decision making, posing key questions that address economic issues, power and decision making, social issues and culture and ideology.

One of the learning activities in What We Consume is 'Nature and Culture,' an activity that encourages students to critically think about how different cultures view their relationships to nature. This group of activities uses a variety of techniques such as examining print adverts, using an attitude scale and sharing of stories and fables. Students reflect on the differing views and beliefs about nature in various cultures. Students also explore how factors such as religion and education affect perceptions of nature, and how conflicting views are often expressed in the world. Students are posed with questions such as:

- *What views are dominant in each of the cultures?*
- *How are we taught particular attitudes toward nature?*
- *What roles do religion, education, technology and infrastructure play in this?*
- *What happens to beliefs and values about nature when two cultures come into contact?*
- *Which view of nature might be dominant in many societies around the world?*

Stories and fables about nature and culture from indigenous cultures also engage students in critical thinking about differing perspectives so that they can reflect on their own beliefs and values about nature.



WWF United Kingdom and Bedford College of Higher Education (1988) *'Society and Nature (Unit 1), p14-17. What We Consume: Ten curriculum units dealing with issues of environment and development'* [22]

case study

Women's actions toward responsible consumerism: Guadalajara's experience

Mexico

'The learning process in the certificate studies program and in the workshops implies that we ask ourselves some questions, and that we analyze ideas and concepts in order to reflect upon and experience the reality in today's consumption patterns.'

Karin Balzaretti-Heym (2002) *'Women's Actions Towards Responsible Consumerism: Guadalajara's experience' p. 3*[23]

Using critical thinking and reflection, the University of Guadalajara's environmental education program is helping women to question and clarify their relationships to consumerism, food choices, health and the environment. The program is directed by Karin Balzaretti-Heym of the University's Institute for the Environment and Human Communities. Through highly participatory workshops, courses and certificate programs, the women examine links between consumerism and pollution, biodiversity loss, poverty, resource waste and consumption patterns. Dynamic exercises, games and dialogue are used to prompt the participants to consider questions such as:

- What are the relationships between daily consumption patterns, the economy, well being and personal self esteem?
- How do personal values and culture relate to present consumption patterns?
- What role does consumption play in society?
- What is the relationship between consumption and human health and the environment?
- Where does consumerism begin, and where does it end (from the making to disposing of a good)?
- What individual measures are required to achieve responsible consumerism?
- What actions can be taken towards change in the community?

The program is empowering Guadalajara's women, who are often the targets of advertising campaigns. Through food choices, many of the women also have an active role in increasingly homogenising daily diets and customs relating to food, resulting in loss of cultural and natural heritage.

Karin Balzaretti-Heym (2002)
'Women's Actions Towards Responsible Consumerism: Guadalajara's experience[24]

> People are not unaware of the social and environmental problems they face, and more often than not, they have learned quite a lot about them from the media, scientists, governments and daily experience. Consequently, there is a need to move beyond awareness to engage people critically and creatively in their own communities, planning and engaging for action.

UNESCO (2002) *Education for Sustainability, from Rio to Johannesburg: Lessons learnt from a decade of commitment' p. 38*[25]

Participating in action for change...

Ultimately, critical thinking and values clarification help us to act in genuinely autonomous ways on a path towards sustainability. Critical thinking gives us the ability to understand complex problems, to make choices, to **participate in change**, both individually and collectively, in such things as social and community movements and to develop a sense of our own power to shape our own lives[26]. It gives us a 'new lens' through which we can see things that might not otherwise be readily apparent, to identify obstacles to and opportunities for change[27]. And, beyond helping to unravel dominant thinking in our communities, critical thinking is also constructive in exploring alternatives to such thinking[28].

Change towards sustainability will ultimately depend on changes in choices and lifestyles, motivated by clarification of, and shifts in, our values so that change can be rooted in the cultural and moral foundations upon which our behaviour is based. Change will also require new political structures that increase our opportunities for participation in decision making. Without such change, even the most enlightened legislation, cleanest technology or most sophisticated research will not succeed in steering our society towards the long-term goal of sustainability[29].

case study

Business and entrepreneurship: the Sustainability Center's education for the 21st century

United States

In New York City, the Sustainability Education Center, a local NGO, is using critical thinking and reflection to shape the ways that youth conceptualise business and entrepreneurship. Business and Entrepreneurship Education for the 21st Century, a full-year course developed for the New York City Department of Education, builds student skills for business ventures that are in harmony with prosperity and the long-term health of their society and the planet.

The course integrates multiple rounds of critical thinking about the role of business in the world, and the relationships in business between ethics, personal values and beliefs. Students are prompted with critical questions asked within the context of society and the planet so that they can reflect on how business ventures interact with larger social issues and the environment. What are my values and beliefs? What problems need to be addressed in the world? What is the relationship between business activity, a healthy society and a healthy ecosystem?

The course engages students in thinking, envisioning and planning in way that reflects their values and goals. As an outcome of the course, students learn how to develop a business plan, guided from envisioning all the way through to reflecting on the completed Plan.

Sustainability Education Center and the Center for the Study of Expertise in Teaching and Learning (2003)
'Business and Entrepreneurship Education for the 21st Century' [30]

Challenges of critical thinking…

Critical thinking requires that people ask profound and sometimes complex questions about the world, confronting conventional notions and assumptions along with deeply rooted personal values. Such a process can be challenging for people, and can often take time for questioning and reflection on their journey to a deeper knowledge about the world. Educators can support this process by prompting people with strategically open ended questions, which help them to uncover assumptions and values in the process.

"My capacity to think critically is so rusty! I know so little… I can get quite frustrated with the process of critical thinking… If I am going to question everything, how can I ever achieve a constructive conclusion?… I feel like the ground is shifting under all my preconceptions… Critical thinking is a skill that needs to be developed in all if [sustainability] is to become a reality… Critical thinking encourages us to question the decisions and statements that come from the "top"…We must learn to detect bias, to challenge thinking, to recognise when we are being manipulated, to understand the motivation of those who would control our thinking… I have never thought like this in my life!… Never questioned enough… I am amazed at how my thoughts and feelings are developing…"

Excerpts from the personal reflective journal of Amanda Keogh, *education for sustainability* [31]

case study

Critical thinking for sustainability in the business studies curriculum

New Zealand

Two New Zealand Business Educators have incorporated critical thinking into their teaching of postgraduate students in management. The key to their teaching is their use of action methods to encourage critical thinking, values clarification and reflexivity.

One successful tool used by directors Dr. Delyse Springett and Dr. Kate Kearins throughout some of their courses is the 'continuum'. This involves the students assessing their own current level of awareness of issues of sustainability by taking a position on a line in the room which symbolises a wide range of perspectives. This is then discussed with fellow students. Students set their own goals for learning and increasing awareness over the year, and then reassess their goals several times during the course.

At the end of some courses, students also construct and discuss 'mind-maps' to reflect on their own learning and to evaluate the course. The critical framing of the course content encourages students to push internal contradictions and gaps in thought systems so that they can begin to see where possibilities for change might lie and where one might take action. Reflections on their personal journeys are recorded with flow charts, diagrams and pictures. The action methods employed encourage their confidence to express changing ideas.

At a time when sustainable development calls for radical change, the courses are helping students to see the potential of critical thinking in changing the lens through which they have traditionally viewed business, its responsibilities and its ways of operating. The course directors point out that critical business education for sustainability involves students thinking through ways in which personal and societal values and ethics impact management decisions. Students are helped to understand their roles and choices as potential agents of change for business and societal shifts toward sustainability.

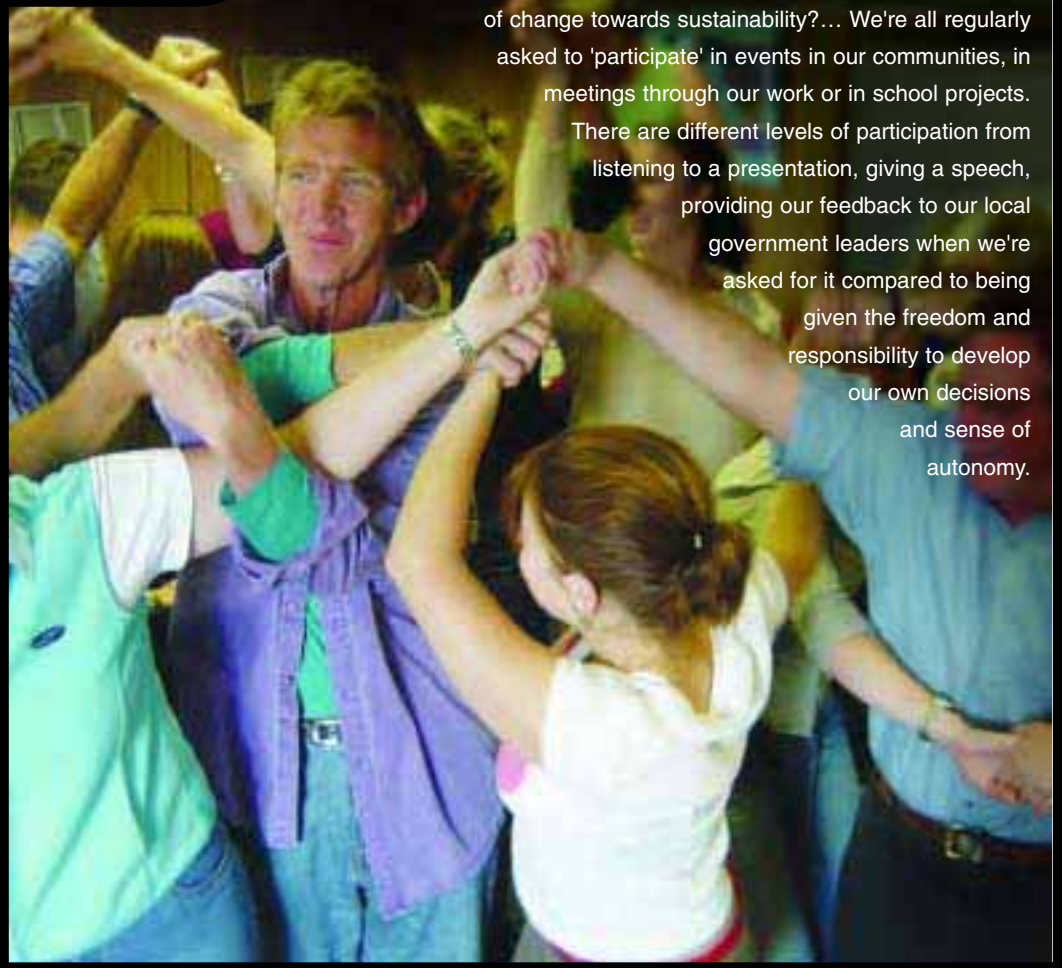
Kate Kearins and Delyse Springett (2003)
'Educating for Sustainability: Developing Critical Skills' [32]

Summary: opportunities offered by critical thinking

Critical thinking…

- Challenges us to critically question assumptions and recognise bias and power behind institutions, governments, media, companies and the people around us
- Deconstructs our socialised views of the world to comprehend that others around us see the world in similarly complex ways
- Explores power relationships in our communities, schools, workplaces and wider world and questions the motivations, interests and powers behind hierarchies and leadership
- Helps to identify root causes of problems, instead of just their symptoms
- Together with values clarification helps us to explore the influence of our culture in shaping our views of the world
- Gives us the ability to participate in change, both individually and collectively, and to develop a sense of our own power to shape our own lives

04 participation in decision making



What does it mean to meaningfully participate in a process of change towards sustainability?… We're all regularly asked to 'participate' in events in our communities, in meetings through our work or in school projects. There are different levels of participation from listening to a presentation, giving a speech, providing our feedback to our local government leaders when we're asked for it compared to being given the freedom and responsibility to develop our own decisions and sense of autonomy.

> If we understand 'participation' in the simplest of its meanings – taking part, sharing, acting together – people's participation is nothing less than the basic texture of social life.

Grazia Borrini-Feyerabend (1997) *'Beyond Fences: Seeking social sustainability in conservation. Volume 2: A resource book'* p. 26 [1]

What is participation?

Simply stated, to participate is to take part, to share and act together. Participation is an integral part of the process in our efforts to move towards sustainability, as well as being a key part of the content of education for sustainability programs.

Agenda 21[2], following the Rio Earth Summit in 1992, clearly recognised the role of broad participation as a key component of sustainability. Throughout its many chapters, Agenda 21 highlights the importance of participation in integrating decision-making; in involving different sectors and stakeholders to build capacity and ownership of solutions; in recognising the role of indigenous communities; and in empowering the poor and women in the management of natural resources[3].

Participants at the 'Engaging People in Sustainability' Workshop, Johannesburg, 29-30th August 2002

The 'Implementation Plan' for the 2002 World Summit on Sustainable Development (WSSD) again endorses participation and the creation of good governance that allows all members of society to participate in sustainable development, including access for women and youth to decision making, and greater rural community participation[4].

The word 'participation' is often linked to various activities…

Manipulation: Others define problems and solutions, and people have no direct access to participate.

Passive: Outsiders tell people what has already been decided.

Consultation: Others define problems and solutions, people are just 'consulted' or asked questions.

Material Incentives: People provide labour for cash or food, but are not involved in learning or decisions.

'Truer' forms of participation involve…

Interaction: People participate with outsiders in joint analysis, action planning and control of local decisions.

Self-Mobilisation: Self-initiated and directed, with full control of process, decisions and outcomes.

Adapted from Stephen Bass, Barry Dalal-Clayton, and Jules Petty (1995) *'Participation in Strategies for Sustainable Development'* [5]

Not all participation is the same…

While the term 'participation' is now common in the language of sustainability, it is a term that also has very different meanings to different people. At one extreme, some view participation as simply a process where people have some level of involvement but no power to provide input or make decisions. In such cases, 'participation' may be little more than announcements telling people what's already been decided, providing no opportunity for dialogue or decision making. This form of involvement is not strongly aligned with participation for sustainability as defined by Agenda 21 and the 'Implementation Plan.'

Participation can take many other forms that increasingly involve stakeholders, ranging from consultation and consensus building to decision making, risk sharing and partnerships[6]. Some authors[7] describe these different levels

of participation on a continuum ranging from manipulation or passive participation, to an increasingly shared process, and finally to full stakeholder engagement in and ownership of decisions and outcomes.

Participation for sustainability is also important in recognising the value and relevance of local knowledge. If properly undertaken means that local knowledge is part of the decision making process, and weighed up with knowledge from other sources. Solutions are developed relevant to that community, rather than being imposed by external experts. Successful participation for sustainability involves a wide range of stakeholders including government, community groups, industry, individuals and donors[8].

Participation in education for sustainability

Education for sustainability seeks to develop learner's skills, abilities and motivation to contribute to sustainability. Through participation **learners are at the centre** of the active participatory experience with learning, facilitation and decision making in the hands of the learners themselves. In education for sustainability, the community leader, group facilitator or educator is not considered the 'expert' but instead is a listener and facilitator dedicated to helping learners develop solutions and actions[9]. Building skills for participation through education for sustainability gives 'non-specialists' the opportunity to actively participate, build knowledge and develop leadership skills that contribute to action.

case study

Won Smolbag

Vanuatu

In Vanuatu, a local drama group, Wan Smolbag, is showing how the difficulties of disseminating information can be overcome in a locally relevant way by engaging people to participate in drama workshops and the novel experience of watching live theatre.

Literacy and education levels in Vanuatu are low, and many of its villages are unable to access information through media channels. Following plays put on by participants, workshops allow participants to share their concerns and knowledge about a range of social, environmental and health issues in both an entertaining and engaging way.

Won Smolbag is helping villages not only to build knowledge, but also to take action by connecting them with government and NGOs to deal with important and often controversial issues like marine exploitation through the aquarium trade. In this way, this innovative program is helping to build their capacity for participation in change toward sustainability[10].

Participation by actively involving learners in **building knowledge through dialogue** about issues, questions or problems in small groups provides opportunities for all learners to contribute and reflect on the contributions of other participants. Dialogue can be stimulated by group discussion, community theatre or participatory mapping. By interacting with others and reflecting on their views and perspectives, it is possible to develop a clearer understanding of one's own beliefs, ideas and arguments for sustainability. A participant's understandings of their own perceptions, values and concerns becomes the starting point for change[11].

Through participation confidence increases so that the participant can meaningfully engage in working towards sustainability. It gives participants the confidence to share knowledge, negotiate with others, develop persuasion skills, think through problems and practice leadership. Participation can help to breakdown decision making hierarchies in communities, and empower groups, such as women or minorities who might be marginalised in less inclusive approaches.

Participation in education for sustainability helps learners to **self-organise**, become more **self-reliant**, and develop a stronger sense of **community identity**[12]. Rather than relying on outside specialists or managers, participation can engage more stakeholders in becoming a part of the process of self-governance and decision-making. As described in the envisioning chapter 2, participation provides opportunities to build a shared vision, a greater sense of unified purpose and community identity.

Active participation in education for sustainability:

- Encourages learners to share understandings
- Draws out meaning on which learners can build
- Encourages greater confidence in one's own abilities
- Contributes to collective understanding of issues and solutions
- Encourages ownership of solutions

Eureta Janse van Rensburg and Heila Lotz Sisitka (2000)
'Learning for Sustainability: An environmental education professional development case study informing education policy and practice' p. 21 [13]

case study

Learning for sustainability

South Africa

South Africa's 'Learning for Sustainability' project introduced a new highly participatory teacher and learner-centred way of developing education to South Africa's post-apartheid school system. It did so by introducing a learner-centred approach not only to the teaching of students, but also to the development of teacher skills.

A pilot project in teacher professional development conducted between 1997 and 2000 in two provincial education departments, Mpumalanga and Gauteng, engaged teachers to construct their own knowledge about sustainability, and to develop their own curricula centred on the needs of and relevance to individual students.

Throughout the pilot project, participatory group meetings, group problem solving exercises and study tours encouraged teachers to work through ideas for designing their own learning programmes, to engage in inquiry and to reflect on their actions. This learner-centred participation and reflection allowed for examination of issues in continually greater depth and sophistication. Teachers were continually engaged in reflecting and building knowledge about new classroom methodologies, questioning assumptions underpinning methodologies and developing learning programmes.

The outcomes of the project are being incorporated into formulating a National Environmental Education Policy in the country.

Eureta Janse van Rensburg and Heila Lotz Sisitka (2000)
'Learning for Sustainability: An environmental education professional development case study informing education policy in practice'.[14]

> One of the fundamental prerequisites for the achievement of sustainable development is broad public participation in decision-making.

United Nations Commission on Environment and Development (1992)
'Agenda 21' Section 23.2 [15]

Promoting action: participation for change…

Most importantly, genuine participation in education for sustainability is essential to building people's abilities and empowering learners to take **action for change toward sustainability**. Through participation, learners build skills to take control of both the decision making process and responsibility for its outcomes. This greater control leads to greater motivation to participate in actions, whether they are community projects, political action, democratic decision making or community leadership roles.

Education for sustainability goes beyond a means of initiating learners to take a single action, such as planting a tree. Rather, it makes **long-term participation** a goal in itself by building the capacity of learners to lead, and to make their own decisions towards change[16]. By becoming competent in making choices, decisions and critical reflection, learners build lifelong skills to both facilitate and participate in the process of working toward sustainability. And with such skills, they are more likely to take action with greater confidence in their own capacities.

case study

Sydney Water participatory action research

Australia

Sustainability is increasingly recognised as relevant to business and industry, and it is within this context that the Environment and Sustainability Group of the Sydney Water Corporation engaged Macquarie University to facilitate an evaluation of the Corporation's education for sustainability training programme.

Rather than relying on outside consultants, university facilitators engaged employees in a Participatory Action Research (PAR) process, involving them as evaluators to reflect on the value and importance of the education for sustainability training programme. Through a cycle of planning, acting, observing and reflecting, participants developed their own inquiry questions and action plans, and collected data relevant to their own workplace situation.

This PAR programme allowed for validity of data, accuracy and understanding among participants of individual change as they went through the training. Participants also developed deeper insights into what they learned and why in a way that informed further development of the training program. Finally, having internal staff evaluate the organisation's program led to a better understanding and an improved version of the programme.

Daniela Tilbury and Dimity Podger (2004)
'Sydney Water Participatory Action Research Evaluation: ESD Awareness Package' [17]

Participatory Mapping[18] is one tool that focuses on group participation and does not depend on literacy. The group walks their territory and participates in a group map-making exercise to illustrate potential problems and alternative solutions. It is non-confrontational and collective, and can encourage more marginalised groups to participate.

> "Participatory methodologies that equip and empower communities are new to many… practitioners. NGO and community leaders, both women and men, need training in the range of skills necessary to make these methodologies work."

GreenCom (1996) *'People and Their Environment: Environmental Education and Communication in Five African Countries' p.31* [19]

case study

Leadership for Environment and Development (LEAD)

Worldwide

Participation and action is a fundamental component of LEAD, an innovative leadership program that is bringing together professionals committed to sustainability from around the world.

During a period of 12 months, new LEAD members come together for courses and field trips to understand the theory and practice of leadership. Working with colleagues whose history, politics and world view differ from their own, participants share knowledge and reflect on their own values and viewpoints. Learning is highly participatory and includes interactive presentations, group discussions, case studies, problem solving initiatives, simulations and role plays. Site visits by fellows to projects in communities around the world allow for interaction with community members, building the fellows' abilities to facilitate participation and change for sustainability.

The are now 1,400 LEAD members from over 80 countries, including company directors, government ministers, heads of NGOs, teachers, scientists and journalists.

LEAD International, (2002) *'Annual Review 2002'* [20]

Action for sustainability may include:

- **Negotiation** to reach agreement over an issue, policy or practice through discussion.
- **Persuasion** to modify another's viewpoints through debate, speech making, letter writing or media campaigns.
- **Political action** through lobbying, voting or supporting candidates.
- **Legal action** to contribute to the enforcement of a law or constrain activities by legal means.
- **Physical action** (e.g., field work projects) to contribute to sustainability issue.
- **Education** to explore our own personal and professional contribution to sustainability.

Challenges of participation…

Participation as a process for sustainability is not without its challenges, which should be carefully considered in scoping for and management of participation in projects. Meaningful participation is a time consuming process, requiring patience, continued commitment throughout the project and the willingness to put decisions about outcomes in the hands of participants. Shifts to full participation require conflict management skills, and an awareness of existing power relationships and gender and cultural issues within and between participating groups. Some groups, such as youth, women and the elderly, may not have equal access to participation in communities, and changing these power relations can induce potent consequences.

Participation as a process in education for sustainability also must occur in an environment of support, understanding and patience. Participation challenges power relationships and hierarchies by putting decision making and leadership in the hands of learners. This can create anxiety for learners used to 'top down' learning approaches and unaccustomed to its empowering messages. Facilitation can support positive group dynamics, and help learners to build confidence and celebrate successes. While change tends to be slower and more difficult, it is also deeper and more permanent[21].

Summary: benefits of participation…

The process of participation in education for sustainability

- Is broadly inclusive, involving all learners throughout the process
- Increases the confidence of learners to participate, particularly in groups that may be marginalised in a community
- Actively builds knowledge among learners through dialogue
- Builds the capacity of learners for self-reliance and self-organisation, and increases community identity
- Engages learners with the skills, motivation and confidence to participate in political, legal and physical actions for change
- Embeds in learners the capacity for ongoing, long-term participation in change towards sustainability

The content of participation in education for sustainability…

- Helps recognise the rights of all groups to participate, particularly minorities, women and youth
- Helps design and facilitate processes which engage people in sustainability
- Helps work towards develop locally relevant solutions
- Helps put decision making and responsibility for outcomes in the hands of participants

05 partnerships

What do partnerships for sustainability look like? What are their essential components, who is involved, and what are their roles and responsibilities? How can we form effective partnerships, and what value can each partner bring to a partnership? How do we establish a long-term culture of partnerships?

Creating partnerships

The challenges of sustainability are daunting ones, but partnerships are proving that we don't have to face them alone. As voluntary, multi-stakeholder initiatives, partnerships between government, NGOs and business are flourishing throughout the world, demonstrating that they are a motivating force for change towards sustainability. They are helping participants to create synergy in their work, combine resources and talents, break hierarchies, build shared visions and motivate action for the future.

Partnerships for sustainability are often referred to as 'Type I' and 'Type II,'- a new classification emerging from the Johannesburg WSSD. Here are the differences:

Type I are formal government partnerships which aim to fulfil agreed commitments.

Type II are voluntary and self organising partnerships which can be initiated by governments, international organisations or major groups. They complement Type I partnerships to translate political commitments into action. Ownership is shared between all partners.

Jan Kara and Diane Quarless (Undated) 'Further guidance for partnerships/initiatives' [1]

Partnerships have played a prominent role in discussions of sustainability ever since Agenda 21, when they were identified as a critical component for its implementation[2]. Since that time, there has been an increasing recognition that the move towards sustainability will take a commitment to structural change involving society's stakeholders to work collaboratively, including industry, government, business, community organisations and the public[3].

Partnerships which share learning experiences can accelerate the process of change towards sustainable development. The 2002 World Summit on Sustainable Development (WSSD) reinforced this view, ending with a call for more global partnerships for sustainability. Today, over 290 'Type II' partnerships between

> "…implementation should involve all relevant actors through partnerships, especially between Governments of the North and South…and between Governments and major groups…to achieve the widely shared goals of sustainable development… such partnerships are key to pursuing sustainable development in a globalising world."

United Nations Division for Sustainable Development (2003) *'Plan of Implementation of the World Summit on Sustainable Development' p. 1* [4]

government, NGOs and the private sector have registered with the United Nations[5]. These partnerships cut across several themes relevant to sustainability, from health to consumption and poverty alleviation. Many focus on the benefit of capacity building or technology transfer, while others seek to affect change in institutional frameworks[6]. Even multinational companies have promised new partnerships to help developing countries support new markets and work more closely with communities.

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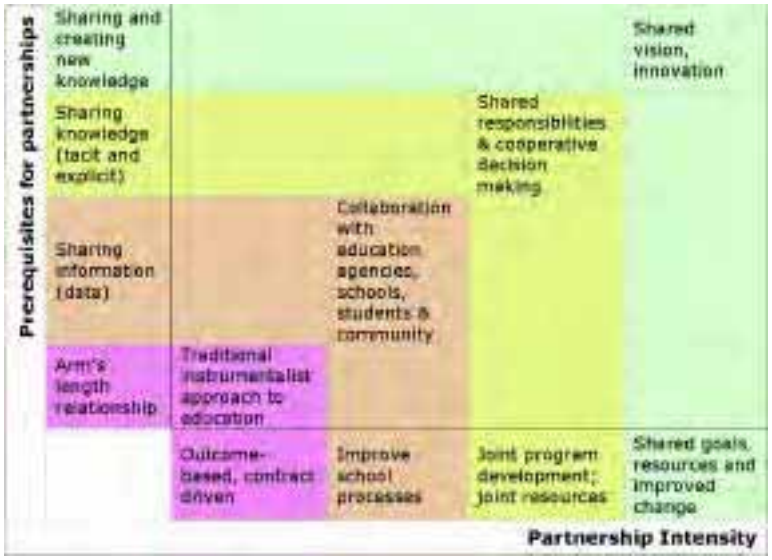
Basket works in China

Partnerships are also at the core of the implementation plan for the UN Decade on Education for Sustainable Development[7]. They are key components in education for sustainability programs across the spectrum, from formal education to community-based projects, and from international networks to regions within one country. In education for sustainability, planners and managers can increase the

effectiveness of their programs by including a range of stakeholders in their design and management. Partners should include not only those with a diverse range of interests and perspectives on sustainability, but also those from various levels, from local to regional, national and even global levels.

Daniella Tilbury, Victoria Coleman and Dan Garlic (2004) 'Formal Education' p.26[8]



> Since 1992 an international consensus has emerged that achieving sustainable development is essentially a process of learning.

UNESCO (2002) 'Education for Sustainability, From Rio to Johannesburg: Lessons learnt from a decade of commitment' p.5[9]

case study

Educating for sustainable living: the Earth Charter

Worldwide

The Earth Charter Initiative is using the power of partnerships to educate and train local leaders and communities about the fundamental principles of sustainable development. Linking with the education programs of four governments and 19 regional and global organisations, the Initiative's 'Educating for Sustainable Living' partnership is using the Earth Charter as a framework to develop new curricula and educational materials for understanding and promoting sustainability. The Initiative is also working with its partners to train community development leaders to use the Earth Charter as an educational tool for working toward a more just, sustainable and peaceful world.

The Earth Charter sets forth a global ethic involving fundamental values and principles governing sustainable ways of living. It builds upon and extends the ethical vision in the Rio declarations and Agenda 21, and includes the fundamental values and principles articulated in the United Nations Millennium Declaration.

Earth Charter Initiative (Undated)
Partnerships Initiative Information Sheet: Educating for Sustainable Living with the Earth Charter' [10]

> Partnerships enable all stakeholders to make a concrete contribution to the outcomes of the WSSD and other international agreements aimed at furthering sustainable development.

United Nations Division for Sustainable Development (2004) 'Frequently asked questions about partnerships' p. 1 [11]

Partnerships can be of all types, from contract driven and distant, to ones that cultivate shared visions, knowledge and action[12]. They can vary in what they look like, why they are important and how they are formalised. And while partnerships are important at the higher program level, they also offer several benefits for the many community-based projects at the local level working towards sustainability.

Creating synergy….

Many organisations working in education for sustainability are pioneering new ideas and approaches to address problems in their communities, schools or business. For those working in education for sustainability, long-term relationships between partners encourage mutual benefit and development by **creating synergy** among partners, recognising that often the whole is greater than the sum of its parts[13]. By bringing together different groups with diverse knowledge and skills, partnerships can help to build collective knowledge through dialogue. Partnerships can also encourage each partner to reflect on their values, visions and missions, and they can create a space to develop new ideas and strategies. Out of this diversity, they also create the opportunity for partners to build a **shared vision**, inspiring motivation to work together towards sustainability.

Combining resources…

Working towards sustainability often requires a holistic and long-term approach to problems, incorporating different perspectives and stakeholders. Individual partners, however, may be specialised in one area, and they may lack the staffing or financial abilities to commit to long-term change for sustainability. Partnerships in education for sustainability help groups to **combine their resources** and financial assets, and to pool their technical skills to develop the broad and long-term ideas and strategies necessary for change. Partnerships also build expertise and capacity which can help to secure **financial and technical support** from funding sources.

In education for sustainability, multi-sectoral partnerships can play a pivotal role in assisting sustainability approaches to be…

- **Relevant** to stakeholders and community needs.
- **Resourced** with expertise and finances.
- **Responsive** by maintaining links to current models of theory and examples of best practice.
- **Reflective** by evaluating and making changes accordingly.
- **Reformative** in change according to new ways of thinking and practice.

Kate Henderson and Daniella Tilbury (2004) *'Whole School Approaches to Sustainability: An international review of sustainable school programs' p. 45* [14]

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Mt. Kilum, Cameroon community planning

case study

OECD environment and school initiatives (ENSI)

Europe/Worldwide

The ENSI program has built an extensive partnership across Europe and parts of the Asia-Pacific region, bringing together environmental education practitioners, teacher educators and students, pilot schools, school authorities, research institutions and government staff members in several countries[15]. The partnership sponsors workshops, shares research and case studies, connects educators to one another and provides professional development through the international exchange of teachers[16].

The ENSI program's networks links practice in schools with academic research and institutional decision making. The partnership is helping member countries to develop strategies for introducing environmental education, and its 'Learnscape' and 'Eco-school' programs have established international networks to develop best practices and exchange ideas through workshops, such as the 2001 'Learnscapes Across the Globe' workshop. The 2002 OECD 'SEED' Initiative, funded by the European Union, also highlights the importance being given to supporting such international partnerships.

What makes ENSI so particularly effective is that it has formed partnerships across different levels of education in a way that has not been done before. By linking up education practitioners, education authorities, higher education institutions and government agencies, ENSI's partnerships are helping to address conflicting interests, and embed change towards Environmental Education and Sustainability in all levels of the education system.

ENSI has supported educational developments that promote environmental understanding, active approaches to learning and teaching and citizenship education since 1986. It also fosters the democratic participation of students as active citizens in shaping environmental conditions and promotes sustainable development in educational systems. Assuring quality and learning for international best practice underpins the success of the program.

Michaela Mayer (Undated) *'ENSI- Environment and School Initiatives research and school development for sustainability, An OECD/CERI decentralised network'* [17]

> "Obviously various participatory processes will be better suited to certain situations… intent, commitment and effort are also important. Don't think you have to do it all by yourself."
>
> *Excerpts from the personal reflective journal of Stacy Tyack, education for sustainability* [18]

Breaking hierarchies and power structures…

Partnerships can also be effective in breaking hierarchies and challenging traditional power structures. Working towards sustainability will require transformations in education, community and corporate institutional structures to allow for change to occur. Partnerships that bring together individuals and groups with different perspectives and from different levels- local, regional, national and global- help to **challenge old world views**. When learning together shifts in perspectives and more long-term change is likely. Because they are largely non-hierarchical, partnerships can be a strong innovative force in transforming institutions such as formal education and reorienting them towards sustainable development[19]. Cross-sectoral partnerships among local, regional and national groups can **add value to local initiatives** by helping to change larger institutional frameworks while maintaining local relevance.

Motivating action for change…

Partnerships also provide a strong **motivation for action** to work for change towards sustainability. They can provide a forum for mutual support and encouragement, where successes can be celebrated.

case study

WWF Tanzania Environmental Education Programme

Tanzania

The Tanzania Environmental Education Programme (TEEP) has built a broad base of partners to support its conservation efforts. The programme was planned in partnership from the very beginning with a wide range of institutions and organisations in education including the education ministry, education institutes, wildlife agencies and clubs and various media interests. Its strategic partnerships target key decision-making authorities at the national regional, district and village level; key multiplier organisations in higher and formal education; and grassroots groups with an impact at the local community level.

Through workshops, book series and trainings, TEEP has reached out to a wide range of teachers and principles, school staff, faith groups and environmental journalists. TEEP's partnerships with government authorities have influenced government environmental policy, including a new Education and Training Policy, and led to workshops for key education and conservation decision-makers. Teacher training has also led to widespread implementation of 'Greening' initiatives in schools and communities across the country, and the development of a 'Greening Manual,' of which over 17,000 have been distributed.

Through their Integrated Conservation and Development Projects, TEEP has also created partners for field projects to act as multipliers for sustainable resource use. These partners include nursery workers, forest guards, district fisheries officers, health education officers, community leaders, village government leaders, women and faith groups, small businesses and teachers.

TEEP started in 1991 and is coordinated by WWF Tanzania. It aims to reduce poverty, hunger and disease through increasing understanding, skills and participation in sustainable management of natural resources. It is building the capacity of formal systems, such as primary schools, and grassroots groups, to deliver environmental education. It is regarded as widely effective in influencing environmental policy at national level, and in improving local capacity to use environmental education as a tool for conservation.

Mary Shuma (Undated) *'The WWF Tanzania Environmental Education Programme'* [20]

> "Nurturing effective education for sustainable development will frequently require cross-departmental, cross-sectoral or cross-organisational engagement."

Sustainable Development Education Panel (2003) *'Learning to Last: The government's sustainable education strategy for England' p. 4* [21]

Challenges to partnerships…

Creating lasting partnerships for sustainability requires time and persistence, as well as predictable and sustained resources for implementation[22]. Partnerships may initially be threatened by a lack of trust among partners- transparency in decision making and dialogue can help to build such trust. Other issues may include ensuring complete representation of stakeholders, and maintaining the commitment and motivation of partners over time.

WWF Tanzania

case study

University Leaders for a Sustainable Future (ULSF)

Worldwide

The ULSF has encouraged partnerships to make sustainability a major focus of teaching, research, campus management and outreach at colleges and universities around the world. The ULSF, in collaboration with the International Association of Universities, COPERNICUS-Campus and UNESCO has formed the Global Higher Education Network for Sustainability Partnership (GHESP). One initiative of this partnership is the GHESP Resource Project, a multi-year project to provide regionally relevant resources, tools and change strategies to individuals and institutions around the world. To strengthen partnerships, ULSF hosts workshops and consultations on a range of timely issues including sustainability assessment, faculty development for environmental sustainability and using the Earth Charter as a tool for teaching about sustainable development.

The ULSF serves as a secretariat to the 280 universities in 40 countries worldwide that have signed the Tallories Declaration of commitment to education for sustainability in teaching and practice[23]. It pursues its mission through advocacy, education, research, assessment, membership support and international partnerships to advance education for sustainability. It is working to help universities accept moral responsibility and leadership for responsible education, and to make sustainability a unifying principle across campuses around the world.

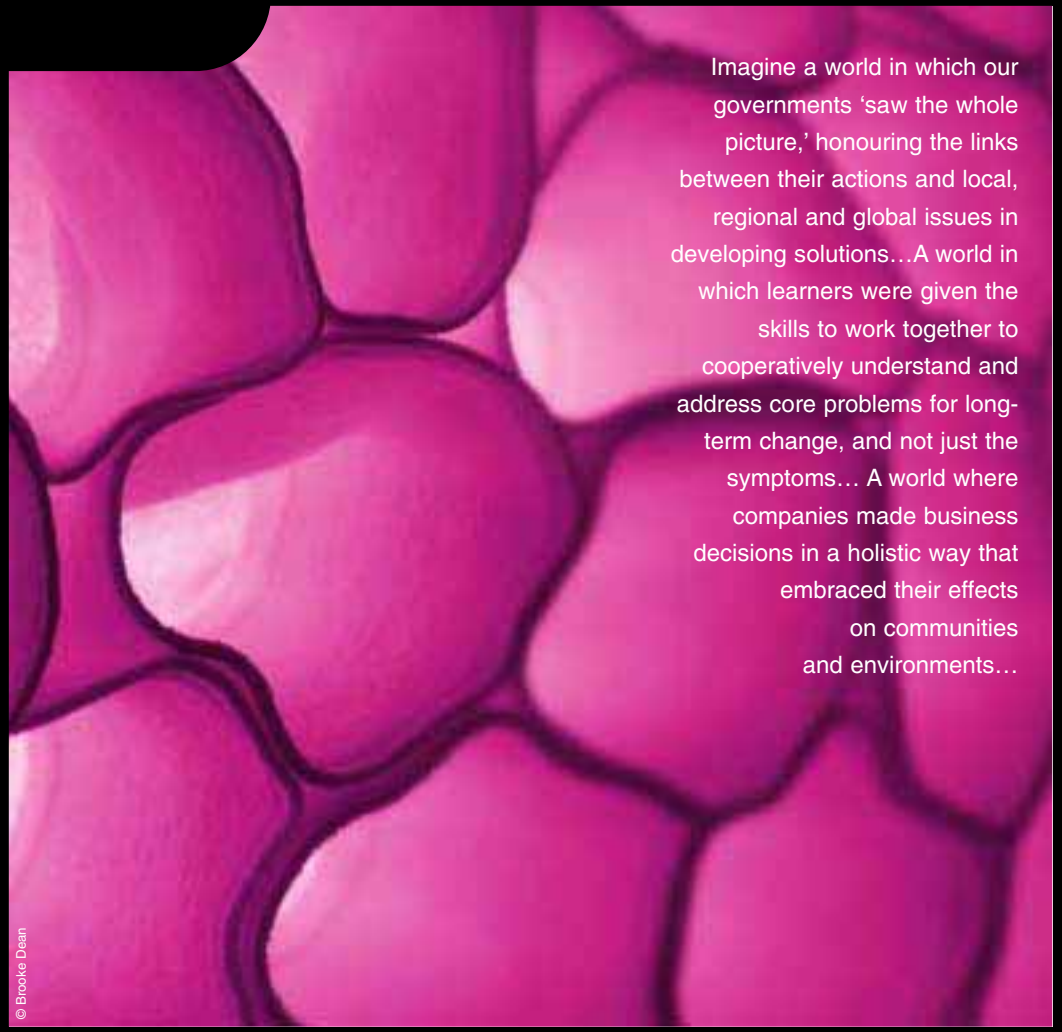
University Leaders for a Sustainable Future (2004)
Global Higher Education for Sustainability Resource Project' [24]

Summary: opportunities offered by partnerships

Partnerships…

- Create synergies between organisations to work for change
- Foster building shared visions among partners
- Allow partners to combine resources and talents
- Increase capacities to attract financial and technical support
- Help to break hierarchies and power relationships by linking partners at different levels and across different disciplines
- Bring together people and partners with different perspectives to reconcile interests and challenge world views
- Add value to local initiatives while maintaining relevance[25]
- Help motivate partners to work toward long-term, institutional change

06 systemic thinking



Imagine a world in which our governments 'saw the whole picture,' honouring the links between their actions and local, regional and global issues in developing solutions…A world in which learners were given the skills to work together to cooperatively understand and address core problems for long-term change, and not just the symptoms… A world where companies made business decisions in a holistic way that embraced their effects on communities and environments…

Thinking systemically

Dr. Stephen Sterling

Suppose… your government wants to combat global warming, yet is planning to develop new airports… your company wants to encourage more people to ride public transport but then builds more car park spaces… or your local school wants to promote youth leadership but excludes them from school management decision making… Why are such decisions being made?… And is there a better way to approach them? The answer is 'yes,' and the promise lies in a process called 'thinking systemically'…

Systemic thinking helps us approach such questions by seeing the world differently. In essence, it inspires us with a new approach, an alternative to the 'thinking legacy' so evident in educational thinking and practice which emphasises analysis and understanding things by taking them apart. Systemic thinking offers a better way to understand and manage situations marked by complexity. In wider society, in business, management and government, there is a growing understanding that systemic thinking can replace our old ways of thinking, with an increasing emphasis on integrated and adaptive management, 'joined-up thinking' and interdisciplinarity and participative approaches – all of which challenge education to respond similarly. There is some evidence that the world of education for sustainability is beginning to realise the potential of systemic thinking.

> *'You think because you understand 'one',*
> *you must understand 'two', because one and one make two.*
> *But you must also understand 'and'.'*
>
> *Ancient Sufi saying*

> "We are accustomed to analytic and reductionist thinking which understands things by taking them apart. But in a highly complex and turbulent world, there's a strong argument that says that analytic thinking is not enough. Indeed, by itself, it is probably increasing our problems."
>
> Stephen Sterling (2004) *'LinkingThinking: Unit 1, education and learning, an introduction. p.3* [1]

The problem with much of our current thinking is we tend to think in 'boxes'. We don't always see the connections between things, how 'this' relates to 'that', or recognise that there might be other consequences to our actions than those we intended. One result is that we often don't notice the 'side effects', 'hidden costs' or 'externalities' of our actions, evident at all levels, from community, to country to global affairs. We either don't include these effects consciously in our thinking - or we just don't perceive them as being relevant. In a world of rapid economic, social and environmental change characterised by complexity and uncertainty, such limited thinking will not help us to work toward change for sustainability. How can we do things in a way that doesn't contradict our intended actions? How can we make our decisions complement rather than conflict with each other? How can we think, act and educate in a way more appropriate to a complex and deeply interrelated world?

Fragmented thinking is evident:

'…in every newspaper or newscast; the search for short-term solutions that worsen the problem over time; the focus on individual persons or organisms or even species seen in isolation; the tendency to let technological possibility or economic indicators replace reflection…'

Mary Catherine Bateson (2000) *'Steps to an Ecology of Mind' p.xiv* [2]

In essence, systemic thinking is *relational* thinking, and its emphasis on integrative approaches and long-term solutions is critical to addressing the issues of sustainability. Whilst its roots go back over half a century, systemic thinking offers an innovative approach to looking at the world and the issues of sustainability in a broader, more relational way. Closely related to holistic and ecological thinking, systemic thinking is a way of perceiving, and a set of principles, tools and techniques that is helping lead to more genuine solutions for sustainability – solutions that address core problems and lead to sustained change. Essentially, systemic approaches help us shift our focus and attention from 'things' to processes, from static states to dynamics, and from 'parts' to 'wholes'.

For many years, scientists, educators and policy makers have followed a fragmentary approach to knowledge – reflecting the roots of modern Western thinking in 300-plus years of an essentially reductionist and linear outlook which is deeply embedded in our culture. This is evidenced in separate disciplines, separate professions, separate government departments and overspecialisation. Similarly, our approaches to problems tend to be simple and mechanistic, evidenced in such phrases as 'problem-solution,' 'either-or,' and 'cause-effect.'

A sad tale

This tale about the reductionist approach to the world leads us to some sense of systems thinking. Systems thinking looks at the whole, puts things into context and looks for pattern in relationships…

Once there was a man who wanted to understand an onion. 'What was it?'… 'What was it made of?' he thought. He took off a layer to find out. Underneath, he found another layer, so he removed that too. And kept going… When he'd finished, he had no onion apart from the fragments on the table. He felt he still didn't understand the onion, and maybe - he thought - he might have learnt more by looking at it whole.

And this is why we cry when we peel onions…!

Simple problem solving encourages us to stick labels on things and 'put them in a box,' where we then seek singular solutions to what we perceive to be singular problems. Unfortunately, this approach often leads us to only address the symptoms of problems, rather than their underlying causes. Moreover, the 'solution' can then lead to further unanticipated problems.

But most sustainability issues cannot be 'solved' in this sense – they are too complex, often involving many interacting environmental, economic and social factors, causes and consequences. Environmental and sustainability issues require approaches which go beyond simple 'problem-solution' and 'cause-effect' thinking, and rather emphasise the multiple dimensions and dynamic nature of problems, and our need to adapt and continually learn to address them.

Beyond simple problem-solving

Here are some common problems:	**And some common simple solutions:**
• Too much crime	• Increase number of policemen
• Declining crop yield	• Increase use of fertilizers
• Road congestion	• Build more roads

These are solutions of sorts, but they are clearly limited. Why? How would you need to think about the problems differently to come up with more systemic ways forward? Try looking at 'solutions' to problems in the news – how far do they reflect a simple or a systemic approach?

case study

Making connections –the LinkingThinking project

Scotland

How can we help educators, students and our broader communities to perceive and think more relationally? With increasing calls to introduce systemic thinking skills both in education and sustainable development, WWF Scotland launched the 'LinkingThinking' project to demystify and make accessible systems ideas and methodologies for educators and students. Launched in 1997 as a curriculum research and development project, the initial focus was around systems thinking, sustainability and the ecological management of Scotland's wild rivers. WWF Scotland thought that systems thinking had real potential to help teach about river catchments and sustainability. Later, this emphasis was broadened to address the issue of how to introduce systemic and relational thinking in education generally, and into specific Scottish curricula in particular. A team of writers and an advisory board was gathered together, and materials were developed, culminating in a successful trialing period in 2003. The 'LinkingThinking' materials now consist of seven learning and teaching units plus a 'Toolbox' of activities, designed for flexible use by the interested teacher or lecturer for self-study and/or teaching. The materials also have potential use in community education, business and administration.

The project launch is due in late 2004, after which the project will continue as a research project involving a network of educators, using the WWF-UK learning website. The project has much potential for adaptation to different sectors and for international adoption. Details can be found at: **http://www.wwflearning.co.uk**

'Linkingthinking is a crucial skill in coping with the complexity of sustainability, however, linkingthinking is an intellectual skill that should be developed and nurtured throughout one's entire education to address life itself.'

Charles Hopkins
United Nations University Chair for Education for Sustainable Development

Systemic thinking encourages us to see the world in a wider, more holistic way, recognising that issues and relationships are much more like a connected web than simply a series of separate boxes. A systemic thinker approaches issues in a way that is inclusive and integrative, seeing them as often highly interactive and interdependent. Whilst critical thinking is concerned with ideology, power and justice, systemic thinking is concerned with assumptions, pattern and relationship, and as such, is an essential – though often overlooked – complement to critical thinking. Systemic thinking also engages us in actively exploring and reflecting on our values, knowledge and skills, and can instill a sense of appreciation, humility and empathy – a recognition that sustainability issues often require a shift from a culture of control to one of participation and cooperative working. It helps us to consider how issues and possible solutions relate to others in our community – whether they are our neighbours, communities, distant environments or future generations – and to better understand the connections and interdependence between human and natural systems[4]. In this way, systems understanding inevitably leads to questions of ethics.

In summary, it is helpful to view systems thinking as relating to three dimensions:

- ***Perception*** – extending our viewpoint and boundaries of concern
- ***Conception*** – helping us recognise connections and patterns of relationship
- ***Action*** – helping us to design and act in a holistic and integrative way

> “Valid knowledge and meaningful understanding comes from building up whole pictures of phenomenon, not by breaking them into parts.”
>
> Robert Flood (2001) *‘The Relationship of ‘Systems Thinking to Action Research’ p. 133* [3]

Thinking systemically… looking at purpose and context

The purpose of a car is to provide us with transport, and, for some of us, a sense of freedom and wealth. But cars also increase mortality, pollute the environment and consume natural resources. Nobody actually wants the latter, but they are an inevitable part of a transport system that centers on cars. Can we design things better - to minimise negative effects and maximise benefits? By thinking about the wider context, change towards ‘sustainable systems’ becomes more possible.

One transport solution might be to provide better public transport. But what are the effects of this new option? Public transport also consumes resources and pollutes the environment, but to a lesser degree. When looking at such matters and alternatives, think about the following:

- If this is the solution, what is the problem?
- What is this solution supposed to do (its purpose)?
- What does it actually do?
- What new solution might help address the problems? What other problems or benefits might it create?
- Who or what gains and who/what loses from this solution?

From the, ‘You Can Never Do One Thing’ Activity, WWF Scotland (2004) *‘LinkingThinking Toolbox’* [5]

Perception of the wider world…

Systems thinking can help us to ask the right questions and look at problems so that we can perceive the world in a broader way. The integrative nature of sustainability requires us to question our own and other's assumptions, boundaries and 'systems of interest'. Our common divisions such as economy/ecology, local/global and present/future come under scrutiny as we struggle towards a more inclusive and ethically based worldview which recognises the planet as essentially a single system where all fates, both human and non-human, are ultimately bound together. By questioning the boundaries we have created around issues, and looking at different perspectives, we can see the 'bigger picture' and begin to take action by considering the effects of change to whole systems.

> "To see not only things but also relationships opens your vision immensely. You never confuse hastily constructed apartment blocks with real communities. You never make an urban policy separate from a rural policy. You begin to lose the distinction between humanity and nature, or between economic benefits and environmental ones…"
>
> *Donella Meadows (1982) 'Whole Earth Models and Systems' p.102* [6]

Reflection: what's in a name?

How we label things reflects our perception. For example: that is an 'economic issue', this is a 'health issue', that is a 'social issue', this is a 'biodiversity issue' and so on. While labels are important, they can hide assumptions and limit our approaches. Try this with your students or group.

Participants are asked to name an environmental issue. Don't say whether this should be at local, national or global level. Take whatever they come up with – species loss, global warming, water pollution, whatever. Write this topic down on a whiteboard, or a piece of paper or card. Divide the group into a number of subgroups depending on the number of descriptors you want to use. For best effect, arrange the groups in a semi-circle or circle, so that each subgroup physically represents a different perspective on the issue. Pre-prepare cards, each with one label on it, and hand one card to each subgroup.

Here are some suggested labels (*you might want to change this, or simplify for the age group*):

Economic, social, ethical, political, historical, scientific, technological, aesthetic, health, human rights, non-human rights, spiritual, quality of life, intergenerational.

Say to the group:

'You have defined an environmental issue. But is it only an environmental issue? In this activity, I want you to explore it by thinking about it in different terms too.'

Each subgroup is then asked to discuss their label in relation to the identified issue, and then speak to the whole group, using these words:

'This issue is an (*name of descriptor e.g. 'economic'*) issue because…

While they speak, you can if you wish, construct a spider diagram on the board to illustrate main points.

When each subgroup has had a turn, then ask the whole group: 'what sort of issue is this?' It is likely to be seen as having many dimensions. How has the use of multiple labels changed their perspective on the original 'environmental' issue? Is there any such thing as a purely 'environmental issue'?

Abbreviated from WWF Scotland's *'LinkingThinking Toolbox'* [7]

case study

Systems and ecoliteracy

United States

The Center for Ecoliteracy in California recognises food systems and watersheds as essential systems that provide meaningful contexts for achieving ecological literacy. Its projects address a need to understand ecosystems and the cycles of life in order to create sustainable communities. Through their work, students gain a reverence for life as well as a connection to their local community.

Currently, the Center is running a 'Rethinking School Lunch' project as part of an integrated curriculum using local food systems as a context for learning whilst restoring the connection of farms to communities, meals to culture and health to our children and environment.

Details can be found at: **http://www.ecoliteracy.org**.

> "To understand things systemically literally means to put them into a context, to establish the nature of their relationships."
>
> Fritjof Capra (1996) '*The Web of Life' p. 27* [8]

Conception: seeking out relationships…

With the complexity of today's sustainability issues and the links between local, regional, national and global actions, systemic thinking helps us to better see the interconnections and relationships among such issues. It goes beyond asking questions of substance, 'what is the nature of this?'and 'how does it work?' to ask questions of relation, 'how does this relate? and 'what might this lead to?' With a better ability to understand the links and patterns between issues, we can seek to better understand both the nature and the consequences of relationships and change.

With increasing complexity in the world and connections between human and ecological systems, heightened by the telecommunications revolution and economic and cultural globalisation, it becomes more difficult to predict or determine the outcome of any of our actions. Systemic thinking helps us to see how the effects of even a simple action can have effects on social, personal, economic or environmental conditions beyond the original intention across time and geographic space. Yet at the same time, systemic thinking can help us to see that not all of these interconnections are equally strong, and it is possible to navigate with awareness and respect for the whole.

Practice: wisdom in action…

Common to many definitions of sustainability is the importance of relationships between present and future generations, physical and human systems, economy and ecology, local and global scales and people's wants and needs[9]. Ultimately, systemic thinking skills are needed to move us towards sustainability, to help us cope with, understand and address the complex and interdependent issues that increasingly dominate our lives. It helps people to better anticipate the outcomes of actions, and to seek more positive synergies through an integrative approach to design and practice. While systemic thinking may seem like a challenging approach to resolving problems, it prompts us to act mindfully and carefully with 'systemic wisdom' – working to build resilience and self-organisation in systems, all the while recognising that economic, social and ecological dimensions are inextricably linked.

> "The way we think influences what we see."
>
> Stephen Sterling (2004) *'LinkingThinking: Unit 1, Education and Learning, an introduction.' p5.* [10]

Whilst systems approaches are used in participatory rural development, and are a key part of ecological design, systemic thinking has been little recognised in most education for sustainability circles. Why is this? In some ways, systems thinking is easy and natural – the late Donella Meadows, a champion of systems thinking, suggested we have an 'innate ability' to think in this way. But in other ways, it is unfamiliar and difficult - it's as if we have the ability but we don't use it much, and it's not practised. Interestingly, children seem to think this way quite naturally, but may be it's knocked out of them later. Certainly, we don't much bring it to the surface, recognise it and identify it as a necessary way of seeing and an important skill.

There is a huge but largely unrealised potential for the education mainstream to embrace systemic thinking and cultivate systemic thinkers better-equipped for a deeply connected and rapidly changing world. Systems thinking leads to an enhanced ability to work more effectively and creatively in these conditions and to a changed viewpoint. Now's the time to affirm the key importance of systemic thinking, particularly in education for a sustainable future.

How to deepen systemic understanding:

- Look for multiple influences and interactions, rather than trying to identify a single, linear cause and effect.
- Be wary of the 'obvious' explanation, and look for deeper issues that might be influencing the problem.
- Take a 'helicopter' perspective 'above the issue' to look at the larger picture.
- Look for relationships and feedback by asking, 'what does this have to do with that?'
- Put yourself in 'others' shoes' – what is their perspective?
- Question boundaries and assumptions when an issue is labelled or a solution is suggested.

Stephen Sterling (2004) *'LinkingThinking: Unit 2, developing linkingthinking perspectives and skills in problem-solving'* [11]

> It is absolutely essential to change the way we think. All other attempts at change will fail if we do not transform our thinking… A proper understanding of the way the world works requires people to think systemically, holistically, integratively, and in a futures mode.

Lester Milbrath (1996) *'Envisioning a Sustainable Society' p.188, p. 194* [12]

Summary: opportunities offered by systemic thinking[13]

Systemic thinking…

- Looks at the whole, larger context, resisting our tendency to simplify problems and solutions
- Sees the larger properties of whole systems that emerge from the interaction of individual parts
- Integrates decision making and adaptive management, and encourages more participative and interdisciplinary approaches to problem solving
- Helps us to look at multiple influences and relationships when we explore and participate in resolving problems
- Helps us appreciate others' viewpoints
- Expands our world view and helps us to be more aware of the boundaries and assumptions we use to define issues
- Helps restore a sense of connection to place, to others and the wider world
- Recognises the influences of our values, self perception and interpretations of the world, as well as our intuitional and non-rational ways of knowing
- Helps us accept uncertainty and ambiguity, and to participate and learn from change
- Identifies strategies that better generate sustainable solutions for system change, emphasising self-organisation and resilience.

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final thoughts…

The path to sustainable development is not clear. There are many books which try to identify the characteristics of sustainable development; many articulate the rationale for sustainable development. There are other texts which provide in-depth coverage of the complexity of sustainable development issues. Few consider approaches and tools for engaging and managing change towards sustainable development.

This book identifies key ideas and practice relating to education for sustainability as a process for change. All of the tools shared in this book – imagining a better future, critically thinking and reflecting, participating in decision making, creating partnerships and thinking systemically – are key elements in education for sustainability programs that can help us on our journey towards a more sustainable future. They inspire us with hope, help us to see the world differently, challenge the status quo and engage us in working together more effectively towards a better future.

This text deliberately focuses on the process of working towards sustainable development. It aims to help fill what we see as a void on 'how we achieve it' and intends to answer the many questions we have heard from community leaders, educators and practitioners regarding change. We recognise, however, that the journey towards sustainable development just as importantly needs to focus on the content and substance of sustainability issues, the 'what we achieve'. Whether it is undertaking a community health project, addressing consumption patterns or protecting biodiversity, working towards sustainability is about taking key actions in our communities, schools and companies. It is our hope that this book will help practitioners bring together good process with content, so that we can all more effectively move towards a sustainable future.

The Authors

endnotes

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Chapter 1: Introduction

[1] The concept of education for sustainability is known under different terms, such as Education for Sustainable Development or Sustainability Education. However, what is common to all of these interpretations are a number of core elements which have been identified in the education for sustainability framework featured in this publication.

[2] The education for sustainability framework has been drawn and adapted from a number of authoritative sources but does not aim to represent the only model of best practice in education for sustainability. Refer to the education for sustainability framework on page 11.

[3] The Sydney Catchment Authority commissioned an Education for Sustainability program in 2004 which engaged education and community officers and managers in assessing the implications of sustainability for their work. A mentoring program assisted them to make changes towards sustainability within their projects. The workshops and mentoring program were facilitated by Macquarie University.

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[5] The terms 'sustainable development' and 'sustainability' are used interchangeably in this document; however, it is recognised that some people associate different meanings with each of these terms. The publication 'ESDebate,' published by IUCN, provides a comprehensive discussion of the diverse meanings behind these terms. See: Hesselink, F., van Kempen, P.P. & Wals, A. (eds) (2000) *ESDebate: International Debate on Education and Sustainable Development*. IUCN: Gland.

[6] Paden, M. (2002) 'Engaging people in sustainability draws a crowd' in *Human Nature*, U.S. AID, Washington, 7 (2): p. 2.

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[13] Refer to the education for sustainability framework on page 11.

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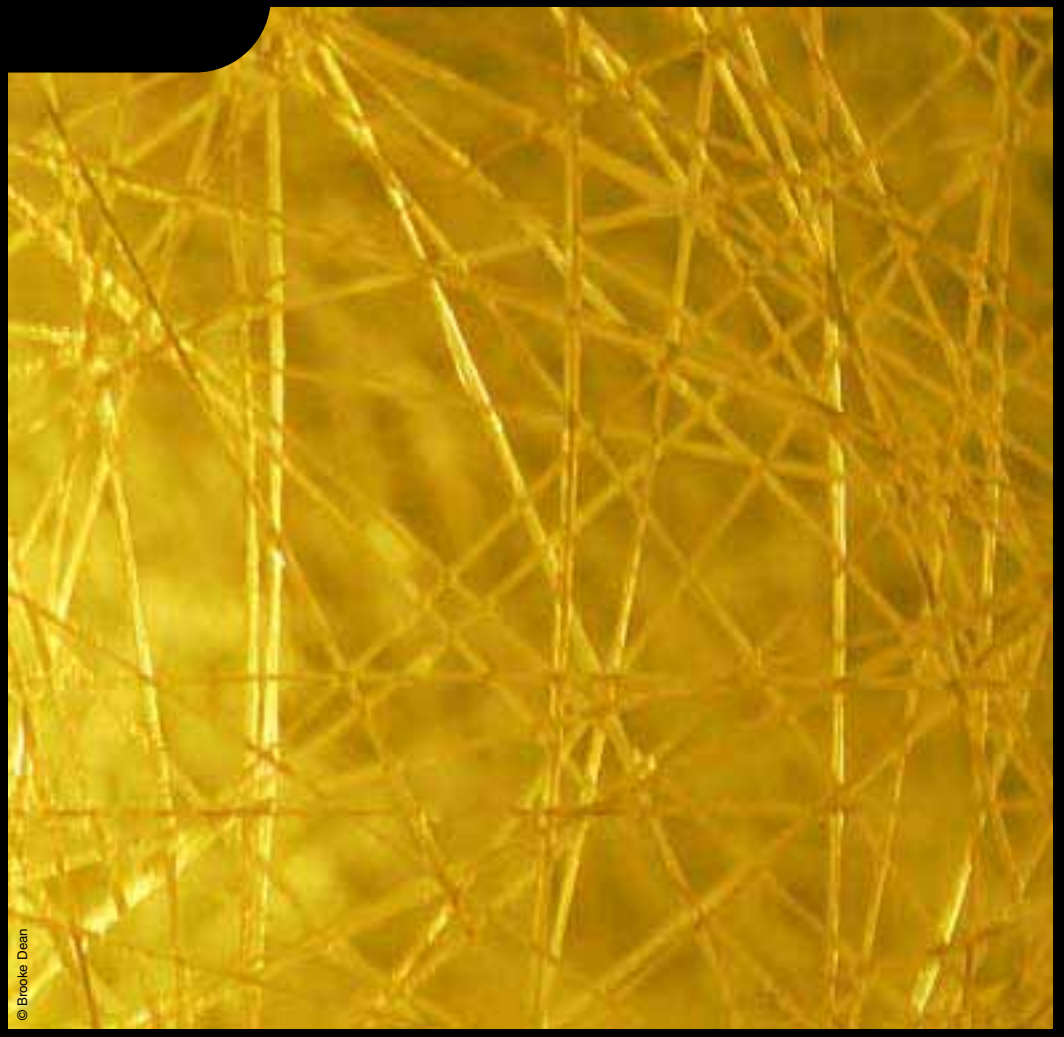
appendices



appendix a

news about the workshop

Engaging people at WSSD

This collection of papers is the result of the IUCN's Commission on Education and Communication (CEC) workshop, 'Engaging People in Sustainability,' held during the World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa, 2002. What makes this event extraordinary is how as a whole this workshop, its presenters, its organisers and its participants captured the imaginations of the delegates who began to think and talk in terms of engaging people as a mode of operation to create a sustainable future.

The government business discussions in the halls of the Sandton Centre were articulating commitments, defining outcomes, setting targets and timetables, creating and promoting partnerships, expanding the input into the negotiations through dialogues, lobbying and strategy meetings, word-crafting, listening to strategic advisory speeches from world leaders. This was combined with many side events offered by major international organisations.

In the end there simply were too many activities and events to choose from. Amongst my work for the UN Commission on Sustainable Development (CSD) Education caucus, I highlighted the IUCN two day workshop, 'Engaging People in Sustainability' with the intention of attending as many sessions as possible.

As Co-Chair of the CSD Education Caucus, one of the greatest challenges is being strategic and being on top of the main issues, such as the evolving approaches to environmental sustainability and sustainable development. In partnership with CSD delegates and working committees, the UN is developing mechanisms that will create learning opportunities to strengthen Agenda 21 and

the implementation of the current CSD Plan of Work 2004-2017. As Agenda 21 never listed the education community as a Major Group, work is ongoing to establish policy making processes and procedures that actively utilise the education community at all levels. However the community of educators is ill defined. For one, we have found that few people recognise themselves as educators and quickly think, 'Education – that's schooling… my interests are not in that field.' Others say we will educate for sustainable development which is to imply there is an answer to educate about. These are some issues that need clarification.

It was made clear in Stockholm, Belgrade and Tbilisi, the WSSD Johannesburg Plan of Implementation), the CSD Plan of Work 2004-2017, and the UN Millennium Development Goals that no single blueprint of sustainability would be found, as economic and social systems and ecological conditions differ widely among countries and ecosystems, from the local to the global scale. During the next decade a major effort is underway within the UN to link environmental protection and sustainable development with civil society – individuals, practitioners, groups and organisations – at the local, national and regional levels. This will be to shape the decision making and influence policy at the global or multi-lateral level. What is needed is a dialogue on education among policy makers and all stakeholders, a dialogue focused on the complexity and potential of education as an integral, cross-cutting issue.

Two major understandings emerged out of the WSSD. The common ground that resonated was the phrase that came from the simple title of the IUCN workshop, 'Engaging People in Sustainability.' Brilliant. Given the number of people participating in the Summit, the number of activities to choose from, and the fact that only some of the 22,000 people attended the workshop, it should have been added to the WSSD list of excellent events on education for sustainable development. What was not anticipated was the enthusiasm this slogan generated among the delegates. 'Engaging People in Sustainability' became the buzz in the hallways the rest of the Summit. Who would have guessed?

The second was that, it is the educated, not the uneducated, who need to be educated about environmental sustainability and sustainable development. It is the educated that have access to power and influence to make decisions that can bring about large-scale changes. It is common knowledge that the major institutions – in particular corporations, school systems, and governmental institutions – cannot address the issues of sustainability in isolation. Civil society must also be involved, as it is our collective decision making, and as educators all, we are beginning to learn how to take responsibility.

In novelist Daniel Quinn's book *My Ishmael*, a lowlands gorilla plays the role of a mentor to a twelve-year-old girl. Ishmael, pp. 198-208, makes a compelling statement about how present-day societies can accomplish the sweeping changes needed to begin to live harmoniously with the world and with each other. His simple directive, 'be inventive'.

After more discussion, Ishmael suggests that the needed transformation and learning to meet the challenges:

"won't take place all at once…
"will be achieved incrementally, by people working off each other's ideas…
"will be led by no one…
"will not be the initiative of any political, governmental, or religious body…
"has no targeted end point…
"will proceed according to no plan… (and)
"will reward those who further the revolution with the coin of the revolution…"
The coin of the revolution will be a better way of living.

This book is about engaging people in sustainability. It makes an important contribution to the developing role of education as a strategic priority. The quest for environmental sustainability has shifted the world's reality and the way we conduct our daily affairs as professionals. Yet changing the modes of operation in policy making, practice, and at work towards sustainable development is not an easy task. I am confident that this thoughtful and useful collection will lead more of us to take these ideas and to build on them.

P.J. Puntenney
Co-Chair, UN CSD Education Caucus
Ann Arbor, Michigan
2004

Human Nature
December 2002
EE&C Builds Support at World Summit
EE&C at the World Summit
Professional Associations Issue Joint Statement Supporting EE&C for Sustainable Development

HumanNature
“Engaging People in Sustainability” Draws a Crowd
Decade, Declarations, and Partners at Summit

HumanNature

Despite Disappointments, Earth Charter Makes Gains at WSSD

What Is ESD?

UNESCO: ESD Is More About Values Than About Science

Ad Agency Leads Global Partnership

USAID/IUCN Pledge Cooperation on Actions for EE&C

Declaration Signed at Summit

Resources

HumanNature

GreenCOM

IUCN

CEC

AED

WWF

appendix b

case study contacts

The case studies in this book celebrate the many successes in education for sustainability from around the world. Below are contact details for each case if you would like to learn more about any of these cases or to link up with the people making them happen:

Introduction

Title	Sydney Catchment Authority and Macquarie University	
Country	Australia	
Contact	Caroline Dearson	Professor Daniella Tilbury
Address	Sydney Catchment Authority Outreach Education Coordinator Level 2, 311 High Street, Penrith NSW 2750 PO Box 323, Penrith NSW 2751	Australian Research Institute in Education for Sustainability Macquarie University, Sydney North Ryde NSW, 2109 Australia
Web	http://www.sca.nsw.gov.au	http://www.aries.mq.edu.au
Email	caroline.dearson@sca.nsw.gov.au	dtilbury@gse.mq.edu.au
Phone	+ 61 2 4725 2503	+ 61 2 9850 7981

Envisioning

Title	Enviroschools
Country	New Zealand
Contact	Heidi Mardon
Address	Enviroschools Foundation National Office c/- Environment Centre 25 Ward Street PO Box 19104 Hamilton7777 New Zealand
Web	http://www.enviroschools.org.nz/
Email	info@enviroschools.org.nz heidi.mardon@enviroschools.org.nz
Phone	+64 7 839 5605

Title	Vision 2020 Sustainable Community Project
Country	Canada
Contact	Linda Harvey
Address	Planning and Development Department Long Range Planning and Design Division The City of Hamilton 71 Main Street West Hamilton ON L8P 4Y5 Canada
Web	http://www.vision2020.hamilton.ca/
Email	liharvey@hamilton.ca
Phone	+1 905 546 2424 extension 1276

Title	Sustainability for Real: Brecon Beacons National Park's Initiative for Environmental Education
Country	Wales
Contact	Not available
Address	Brecon Beacons National Park Authority Plas y Ffynnon, Cambrian Way, Brecon, Powys, LD3 7HP Wales
Web	http://www.breconbeacons.org
Email	enquiries@breconbeacons.org
Phone	+44 1874 624437

Title	It's a Living Thing ESD Professional Development Program	
Country	Australia	
Contact	Professor Daniella Tilbury	Community Education Department
Address	Australian Research Institute in Education for Sustainability (ARIES) Macquarie University, Sydney North Ryde NSW, 2109 Australia	NSW Department of Environment and Conservation 59-61 Goulburn Street, Sydney NSW 2000, Australia
Web	http://www.aries.mq.edu.au	http://www.epa.nsw.gov.au/home.htm
Email	dtilbury@gse.mq.edu.au	info@environment.nsw.gov.au
Phone	+ 61 2 9850 7981	+61 2 9995 5000

Critically thinking and reflection

Title	Engaging People in Critical Thinking for Sustainability
Country	China
Contact	Liu Yunhua, Education Programme Of_cer:
Address	WWF China Beijing
Web	http://www.wwfchina.org/english/sub_loca.php?loca=14&sub=93
Email	wwfchina@wwfchina.org
Phone	+86 10 6522 7100

Title	What We Consume
Country	United Kingdom
Contact	Lorraine Lacey
Address	WWF-UK Panda House, Weyside Park Godalming, Surrey, GU7 1XR
Web	http://www.wwflearning.co.uk
Email	LLacey@wwf.org.uk
Phone	+44 0 1483 412494

Title	Women's Actions Toward Responsible Consumerism
Country	Mexico
Contact	Karin Balzaretti Heym,
Address	Institute for the Environment and Human Communities, University of Guadalajara
Web	http://www.udg.mx
Email	balzakh@yahoo.com
Phone	Not available

Title	Business and Entrepreneurship: The Sustainability Centre's Education for the 21st Century (BEE21)
Country	United States
Contact	Maya Agarwal, Director of Programs
Address	Sustainability Education Center 307 Seventh Avenue, Suite 1201 New York, NY 10001
Web	http://www.sustainabilityed.org/
Email	info@sustainabilityed.org
Phone	+ 1 212 645-9930

Title	Critically Thinking for Sustainability in Business Education	
Country	New Zealand	
Contact	Dr Delyse Springett	Dr Kate Kearins
Address	Centre for Business and Sustainable Development Massey University PO Box 11-222 Palmerston North Aotearoa/New Zealand	Professor of Management Faculty of Business Auckland University of Technology Private Bag 92 006 Auckland 1020 New Zealand
Web	http://cbsd.massey.ac.nz	http://www.aut.ac.nz
Email	D.V.Springett@massey.ac.nz	kate.kearins@aut.ac.nz
Phone	+ 64 6 3505961	+64 9 917 9999 ext 5422

Participation and action in decision making

Title Leadership for Environment and Development (LEAD)
Country Worldwide
Contact General Enquiries to Nina Kaye
Address LEAD International
based at Imperial College London,
48, Prince's Gardens
London SW7 2PE
UK
Web http://www.lead.org/
Email nina@lead.org
Phone +44 870 220 2900

Title Learning for Sustainability
Country South Africa
Contact Professor Eureta Janse van Rensburg
and Professor Heila Lots Sisitka
Address Rhodes University
Web http://campus.ru.ac.za/index.php?action=category&category=1453
Email h.lotz@ru.ac.za
Phone Not available

Title Won Smolbag
Country Vanuatu
Contact Peter Walker, Director
Address P.O. Box 1024
Port Vila, Vanuatu
Web www.wan-smolbag-theatre.org
Email smolbag@vanuatu.com.vu
Phone +678 24397

Creating partnerships

Title Educating for Sustainable Living: The Earth Charter
Country Worldwide
Contact Mohit Mukherjee
Address The Earth Charter International Secretariat
University for Peace Campus
P.O. Box 138-6100
San José, Costa Rica
Web http://www.earthcharter.org/
Email info@earthcharter.org
Phone +506 205 9061

Title OECD Environment and Schools Initiative (ENSI)
Country Europe / Worldwide
Contact Günther Franz Pfaffenwimmer
Address Austrian Federal Ministry of Education,
Science and Culture
Minoritenpl. 5
A-1014 Vienna
Austria
Web http://www.ensi.org/
Email guenther.pfaffenwimmer@bmbwk.gv.at
Phone +43 1 53120 2532

Title WWF Tanzania Environmental Education Program (TEEP)
Country Tanzania
Contact Mary Shuma, Coordinator
Address WWF Tanzania Programme Office,
Dar es Salaam (TZ)
Plot No. 350 Regent Estate Mikocheni Dar es Salaam
Tanzania
Web www.panda.org
Email Not available
Phone +255 22 277 5535

Title University Leaders for a Sustainable Future (ULSF)
Country Worldwide
Contact ULSF Secretariat
Address 2100 "L" Street, NW,
Washington, DC 20037
USA
Web http://www.ulsf.org/
Email info@ulsf.org
Phone + 1 202-778-6133

Systemic thinking

Title Systemic Thinking
Country UK
Contact Stephen Sterling
Address Stephen Sterling
The Old Forge
Frome St Quintin
Dorchester DT2 OHG
United Kingdom
Web Not available
Email srsterling@compuserve.com
Phone +44 1935 83548

Workshop organisers

Title Japan Environmental Education Forum (JEEF)
Country Japan
Contact Not available
Address Not available
Web http://www.jeef.or.jp/english/
Email Not available
Phone +81 468 55 34842

Title USAID GreenCOM
Country USA
Contact Strategic Participatory Communications
Address Academy for Educational Development
1825 Connecticut Avenue, NW
Washington, DC 20009-5721
USA
Web http://www.greencom.org/index.asp
Email Via website
Phone +1 202 884-8000

Title IUCN Commission on Education
and Communication
Country Worldwide
Contact Wendy Goldstein
Address Rue Mauverney, 28 CH-1196
Gland, Switzerland
Web http://www.iucn.org/cec
Email wendy.goldstein@iucn.org
Phone +41 22 999 0282

appendix c

workshop evaluations and feedback

'Engaging People in Sustainability'

Workshop - 29th and 30th August
IUCN Environment Centre
WSSD Side Event

Evaluation comments from participants

'A great day, nice, productive, constructive energy and opportunities to learn. Thank you'

'Making us change places was excellent. Got to know several very interesting people'

'Keep interactive but give enough time to do it (so perhaps a few less). Thanks'

'Daniella's presentation was excellent, blending interactive sessions with the presentation.'

'Interactive sessions are excellent J. Make people put cell phones on mute… please'

'Subgroups could be a suggestion…to follow up on different aspects with each group having one speaker. Thank you'

'More time for discussions'

'It was a very well organised day with good speakers and fun activities for the participants. Thank you'

'The sessions were interactive, stimulating and eye-opening. SIYABONGA!'

'Excellent… more cups 4 tea'

'Please continue interactive process, but could use/have some more time during this process.'

'Thank you very much for a great workshop…all of the things are great'

'Is there a chance for affinity group connections? Maybe lunch?

'Interaction we had was very fruitful. I hope we can keep such relations (net-works) after WSSD. Any ideas for this?'

'GREAT – interactive exercises!!! Lots of practical inspiration for my own work – too many presenters and topics, not enough time.'

'I have learned many new things. I had come to Jo'Burg to learn and I THANK YOU that you made it possible for me today.'

'Very good diversity of topics and speakers'

appendix d

list of workshop attendees

List of attendance

'Engaging People in Sustainability' Workshop
Johannesburg, 29-30 August, 2002

name	organisation
Aht Y.	Peres Centre for Peace, Israel
Alcantara Aisha	AIESEC
Alexander Gary	The Open University, UK
Allen Irma	GreenCom
Aranha Maria	INDE/FLAO
Bakobi, Bernard	SADC
Balster Susanne	DN, Denmark
Balzaretti Karin	Universidad de Guadalajara
Banscherus Ulf	YOIS
Baranga Deborah	CEC Uganda
Barnett Manoy	Common Ground, South Africa
Bartlett Dick	National Council for Science & Environment
Baumgardner S	Sambazon
Birney Anna	Stakeholder Forum
Black Ryan	Sambazon
Blome Christine	Student - Free Universität Berlin
Bojer Mille	Pioneers of Change
Bongolo-Berre	Foundation for Environmental Education (French office)
Bonilla Luis	University of Puerto Rico
Boojh Ram	Centre for Environment Education, India
Brand Margie	Ecoventures International
Bruch Carl	ELI
Burkot Ursula	FoE, Poland
Cachot Fatima	
Canals Puri	IUCN Regional Councillor
Canga José	World Student Community
Cappellini A.	AIESEC
Castellas Jeffrey	Global Knowledge Venture
Castellas Peter	Global Knowledge Veterans
Cazorla Javier	REDMESO
Cele Sanele	SADC-Reep
Chan Yoke Mun	Environmental Protection Society, Malaysia
Chin Kenneth S.	Society for Human Ecology
Chumo Nathaniel	EAEN / CEC Kenya
Cira Manuel	Nausicaa/and Planet'ERE
Clark Larry	USDA
Clarke Amelia	Sierra Club of Canada
Cloud Jaimie	Sustainability Ed. Centre
Clugston Rick	ULSF/CRLE
Comstock Paula	Onetribe Foundation
Coombe Richard	USDA
Cso bod Eva	Regional Environmental Centre
Curiel A.	Univ. Guadalajara, Mexico
Czippan, Katalin	Environmental Education & Communication Office, Hungary
Dahlbom Caroline	
D'Artista Ettore	AIESEC
Davies Kate	Imzimvubu Sustainable Agric. & EE
Davies Nicky	Conservation Council
Deer Chad	Fulbright
Djika Joel Ohe	National Wildlife Forum Kenya

name	organisation
Dong William	AIESEC Australia
Dundar Ayse Kaya	TTGV – Turkey
Dutoit R.	Award
Fereshteh G. Hashgai	Research & Full-scale dev. Centre
Fernandez Anny	AIESEC
Fien John	UNESCO/Griffith Univ., Australia
Flora Toni	Citizens Network
Fonseca Susana	Quercus
Freedman Kati	WASH-BAC
Ftouhi Mohamed	CMEP, Morocco
Gapenne Cñline	Campagne Demain le Monde
Gerrard Roland	Planet'ERE
Gets Hetti	WWF South Africa
Gibson Karen	Alliance for Global Sustainability
Gie Andrew	City of Cape Town
Gonzalez Edgar	SEP
Griessel Mariëtte	Cape Town Municipality
Gulezian Joseph	Tufts University
Gunawardene N.	TVE Asia Pacific
Gunnarsson Ulrika	Swedish Ecodemics
Herardin Richard	Anglican Student's Federation
Hhoelzer Winfried	L'Oreal
Hopkins Charles	York U.
Jackson Jean L.	Negril Chamber of Commerce
Jeyakaran Jessie	CEC member
Kalinowska Anna	University Environmental Centre / IUCN
Kamino Catherine	OISCA – International
Kamino Yukio	Japan Forum for Johannesburg
Kay Helen	Environmental Consultant for Media and UK local authorities
Kitamura Yoko	Japan

name	organisation
Knusi Heli	National Board of Education, Finland
Kreidie Hiam	Lebanon Window to Environment
Lalonde Roxanne	Masetha Foundation Zambia
Le Clue Sophie	Hong Kong Rod. Council
Lebaka Nontsasa	Dept. of Justice SA
Lee Wendy	St. Ana Env Protec. Assoc., Jamaica
Leon-C Malan	Colby Sawyer College
Levet Stephanie	Monoprix
Liu Yunhua	WWF China
Louisor M.Line	Graine Guyane
Makhetha K.S.	Group for Environmental Monitoring
Manuel Theo	Water Programme South Africa
Matsumoto Yuka	The Yomiuri
Mbengashe Maria	Dept of Environmental Affairs and Tourism
Medellín Enriqueta	Council CCND Mexico
Menecy Wafaa	Arab Network for Environment
Mfihlo Fezeta	Group for Environmental Monitoring
Mgqweto Thandi	City of Cape Town
Mitchell Leanne	Worldwatch Institute
Mkefe Xola	NBI
Moattori Syamak	Green Front of Iran
Mokoha Sibongile	BirdLife South Africa
Mosidi Solly	UNULA
Mpolweni Irene N.	Dept. Public Service Admin.
Mtapsela Jyoti	
Muharram Aref	Environment Protectors Society EPS
Munzhedzi Shoni	Johannesburg City Parks
Murad Sham	Children and Mothers Welfare Sty, Bahrain
Mutekanga David	Uganda Wildlife Society
Naicker Kiruben	DALEH Nature Conservation

name	organisation
Naison Bhunhu	Achtou
Nasser Shafika	Arab Network Environment & Development
Naylor Gordon	Canadian Baha'i Community
Nelyuhalam Edgar	NEEP Project
Ng Suchen Julia	WWF Malaysia
Ngubane Japhet	EESISA, Kwangwanase
Nkwalale Bokani I.	Nyangabgwe P. School, Botswana
O'Callaghan Michael	Global Vision Corporation
Oguri Yuko	Japan Forum for Johannesburg
Ohmann Ian Brix	Danish Society for Conservation of Nat.
Oshima Junko	Japan Forum for Johannesburg
Paas Leslie	Federal University of S. Catarina, Brazil
Paraguassú A.	Ministry of Environment, Brazil
Phillips Mayoral	University of Pretoria
Pollard Sharon	Award, ICM
Quirola Dania	Pioneers of Change
Rastegar Laila	Green Front of Iran
Reigota Marcos	IEPD/UNISO
Rodriguez Marcelo	Southern Hemisphere
Romano R	ALD
Ruge Tiahoga	Cecadesu, Mexico
Russo Vlady	SADC REEP
Sakurai Hiro	SGI
Sanguan Sarika	CERES
Sarabhai Kartikeya	Director, CEE India
Schreck Chrystal	College of the A. Society of Human Ecology
Schwaller Christa	AIESEC – Int. Assoc. of Students in Economics and Management
Sekhamane L.M.	Ministry of Environment
Shah Faiz	Responsible Business Initiative
Sharp Irene	Wildlife Zimbabwe
Shongwe Doc	GreenCom
Shuma Mary	WWF Tanzania
Smith Geoffrey	Oz Green
Spencer Anna	INR
Stocck Sabine	YOIS Europe e.v.
Stowell Emilie	ICRE
Sundstrom Mikael	Oikos International
Talry Gregory	Graine Guyane
Tema Wazha	CEC Southern Africa
Tyrrell Marianne	Citizens Network
Urquieta Katia	Bolivian National Biodiversity Strategy
Uyar Tanay Sidki	KADOS, Turkey
van Wyk Charlotte	City of Cape Town
Vatandarast A	Green Front of Iran
Venatainen Maija	Assoc. for EE, Finland
Virgilio S.	CEC member
Visbeck Brigitte	Universität Hamburg
von Willich Ilse	GreenHouse Project
Wassingham B.	Broamfontein, Sprint Trust
Waheed Ambreen	Responsible Business Initiative
Walk Heike	Technical University Berlin
Watts Nicholas	CHEC Commonwealth Human Ecology Council
Wedeman Nick	AED
Weiser Brenda	Environmental Inst. Of Houston, UHCL
Wiechers Thomas	AIESEC
Williams Vivienne	University
Zahreddine Abbas	MEP-MSDA
Zimmermann B.	Environment & Development Network
Zui Herman	CINADCO, Israel

about the authors

Daniella Tilbury

Daniella Tilbury is internationally recognised for her research and publications in education as a process to engage people in change towards sustainability. She is the Director of the recently launched Australian Research Institute in Education for Sustainability (ARIES) and Convener of the Masters of Sustainable Development at Macquarie University, Sydney.

Daniella's doctoral study undertaken at the University of Cambridge in the early 1990s developed a framework in Education for Sustainability. Since then she has lectured in many universities across the globe and facilitated programs for NGOs, corporate and government agencies in this area of learning.

She is the Chair in Education for Sustainable Development and member of the Executive Bureau of the Commission on Education and Communication (CEC) of the World Conservation Union (IUCN). Daniella organised and facilitated 'Engaging People in Sustainability' held in Johannesburg at the World Summit for Sustainable Development.

David Wortman

David Wortman is a researcher and graduate student in Sustainable Development at Macquarie University, Sydney. His interests include sustainability in community and regional planning, resource protection and community participation. As a senior consultant and project manager, David has led projects with municipalities, regional agencies and state and provincial governments throughout North America to develop comprehensive land use plans and craft land and resource protection strategies. He has facilitated numerous community participation programs and worked with a range of advisory committees to develop policies on sustainable development.

David is also a widely published freelance writer, and his work has appeared in several refereed journals, popular magazines and newspapers throughout North America. His published work has covered land use and development conflicts throughout western North America, 'green' consumerism and community-based sustainability projects. He is also the author of two books on travel and outdoor recreation in the Pacific Northwest region of the United States.

In addition to his studies at Macquarie, David holds a Master of Science degree in Environmental Planning from the University of Washington, Seattle. He makes his permanent home in Seattle.

Stephen Sterling

Stephen Sterling is a co-director of the Bureau for Environmental Education and Training (BEET), and an independent consultant in environmental and sustainability education working in the academic and NGO fields in the UK and internationally. He was a founder of the Education for Sustainability Masters Programme at London South Bank University (LSBU), London, where he is an Associate Fellow of the Centre for Cross-Curriculum Studies and an academic tutor. He is also a Visiting Research Fellow at Centre for Research in Education and the Environment at the University of Bath, and a member of the IUCN Commission on Education and Communication.

His publications Education for Sustainability (Earthscan 1996), Education for Sustainable Development in the Schools Sector (Sustainable Development Education Panel, 1988), and Sustainable Education – Re-visioning Learning and Change, (Green Books, 2001). His interest lies in the interface between systemic thinking, ecological thinking, learning and sustainability and this was the subject of his doctoral research. He was the lead researcher/writer for the WWF Scotland LinkingThinking project, introducing systemic thinking in education (WWF UK 2004).