THE GIVEN WORLD: ENVIRONMENT AND LIFELONG LEARNING

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I am happy to be among friends and feel privileged once again to have been given the chance to address this distinguished group of scientists from all over the world. I would like to extend my special thanks to my good friend and President of IAS H&E Professor Walter Koffer and through him to his colleagues, for their hard work in organizing this symposium and also say “happy birthday” to him on his 60th birthday. I would like to start by reminding what Sultan Suleiman the Magnificent, the ruler of the Ottoman Empire at the zenith of its power once said when he fell ill: “Nothing in this world is as precious as even one breath of health”.

INTRODUCTION

I would like to start by quoting the motto of the symposium:
“to think is a pleasure by itself (By Galileo)
“to think for the future should be a pleasure for others too”

I suggest that “lifelong learning for a sustainable environment might be a lifelong pleasure” if scientists and educators take up the challenge.

Secondly I would like to point out that the general theme of the Conference - “extended view of our world” as a basis for understanding of a human person for a better understanding of health is particularly relevant to the topic on sustainable environment. The learning and action to achieve a sustainable environment is inevitably an effort to improve the conditions/ prevent the worsening of conditions for human health. Because what can be more healthy for humans than achieving a sustainable environment, which would strike a balance in the use of the environment and it’s renewal.

The central dilemma on environmental issues is the clash between pressures for rapid economic development/investment on one hand and the need
to protect the environment on the other. Pressures for economic development are driven by short term commercial-profit motive backed up by well organized business firms. Environmentalists are driven by concern for the environment and usually have longer term view. While the scene has been transformed much, the basic conflict between the two still remains. The overall challenge is to reconcile the two.

Much remains to be done however and we are far from having reached the "critical mass" of ideas and steps to ensure sustainability.

EDUCATION FOR SUSTAINABILITY

The United Nations Conference on the Environment and Development (UNCED), held in Rio de Janeiro (June 1992) led to various education recommendations. It said "education is critical for promoting sustainable development." The topics addressed in some chapters of Agenda 21 drew up a platform upon which education in the future must be organized. Agenda 21 peaks not only of the need for international cooperation, but also of the necessity of maintaining a global perspective while taking action and responsibility in the context of local communities. This proposal came to be used by people as "think globally but act locally"/1/.

It must be emphasised however that the broad scope of the Conference posed a problem and in 1996 the Commission on sustainable development initiated a special program on education which was instrumental in establishing priorities and focussing efforts. Since then major steps have been taken in advancing the new vision of education.

FROM EDUCATION TO LIFE LONG LEARNING FOR SUSTAINABLE ENVIRONMENT

In recent years increased public attention, involvement of professional organizations and intensified activities by non-governmental organizations as well as impetuses provided by the Earth Summits internationally are catalyzing increased public attention to education for sustainability and more recently to lifelong learning for sustainability/2/.

The phrase "lifelong learning" is used here as an umbrella term that bridges formal and non-formal education. It is employed in this broad sense to emphasize the integrated nature of all education, throughout one's life. All forms of formal and non-formal education are part of the process of lifelong learning/3/.
The potential for learning about sustainability of environment throughout one's life exists both within formal and non-formal educational settings. But increasingly lifelong learning is acquiring major importance

a) as human beings constantly need to update their knowledge and know-how to keep up with changes

b) Research shows that human learning is a complex process which involves learning throughout one's lifetime a lot of it outside formal schooling and in daily life

- Maybe we have already reached the point described by futurologist Alvin Toffler:

"The illiterate of the year 2000 will not be the individual who can not read and write, but the one who can not learn, unlearn and relearn." - Why lifelong learning is necessary?

"A critical point is reached when information and technology become obsolete faster than the approximately 20-year time frame in which the leadership of one generation is taken over by the next one." (Abraham Pais, 1997)

A general metaphor on the role of life-long learning might be useful here: Individuals in a community or the wider world are like the individual cells of the brain which may stimulate the thinking process. While each may not alone shape the thinking of the whole, if enough individuals (cells) can be mobilized to think and act in the same direction, the thinking process of the brain as a whole, which transmits instructions for the hands, legs and the body as a whole will be influenced.

Scientific communities are like the nerve centres- or the power stations- which can constantly inform, motivate and encourage the brain cells to act in a well informed way. This is their challenge. If this challenge is met, individuals through continuous learning and organized/collective action tied to each other nationally and internationally can make a major difference. As an English saying goes "You take care of the pennies and the pounds will take care of themselves"

CHALLENGES AHEAD: WHAT ROLE FOR THE SCIENTISTS?

Clearly educators/scientists face a compelling responsibility to serve society by bringing about the transformations needed to set us on the path to sustainable development. The time has come to ensure that the concepts of learning for sustainability -- in the broadest sense -- are discussed and formed into a framework upon which current and future educational and the wider teaching/learning policy could be based.

To achieve the kind of public awareness necessary, infusing the concepts of sustainability throughout learning experiences is necessary. Involvement of all
the actors - educators, government, businesses, and nongovernmental organizations working toward common goals- will lead to an understanding of multiple perspectives and informed decision-making needed on environmental issues (3).

I. The need for developing inter-disciplinary perspectives

Environmental issues by its very nature traverse studies of the natural sciences (biology, earth sciences), social studies (anthropology, geography, economics and history), and the humanities (the arts, philosophy ethics, and literature).

Learning about sustainability in the final analysis necessitates breaking down the walls between disciplines, perhaps by focusing on a single real-world issue addressed from various perspectives. To support this kind of experience, existing education standards need to be revisited to embrace the major elements of sustainability.

For example, education for sustainability will prepare policymakers for merging economics and the natural sciences with other disciplines when developing environmental policy.

Equally important, interdisciplin ary approaches should be encouraged as part of non-formal educational experiences. "Non-formal education" is used by educators to indicate those forms of learning acquired in informal contexts, such as the media, workplaces, and community activities. All learners-- both children and adults-- need to see the connections among discrete bits of knowledge gained on a daily basis if they are to respond to the challenges posed by sustainability.

II. Systemic thinking

There is a general agreement among the educators that the first goal of learning is to impart knowledge and the second is to teach skills such as problem solving, conflict resolution, consensus building, information management, interpersonal expression, and critical and creative thinking. Education encompassing the concepts of sustainability offers an exemplary vehicle for developing and exercising many of these skills which are increasingly being sought by employers. Increasingly, these are the skills that employers are seeking in a world of complex problems requiring integrative solutions.

The importance of systems thinking cannot be ignored. Any concept-- including sustainability-- should be open to informed debate and sustainable development should not be taught as an ideology or as a goal, but rather as an ongoing process: not as a set of irrevocable answers, but as a way of continually asking better questions.
III. Expanding partnerships

In addition to bridging disciplines and developing interdisciplinary approaches, education for sustainability will mean reaching beyond schools to involve businesses and individuals with specialized expertise throughout the community. It is now the responsibility of the public and private sectors, communities, businesses, and individual citizens worldwide to learn about economic and social development as well as the built environment and natural resources. Partnerships among governments, educational institutions (from K-12 schools to community colleges and universities), industries, nongovernmental organizations, and community groups are increasingly important.

Increasingly, businesses require a workforce that is both environmentally literate and skilled in interdisciplinary systems approaches to solving problems. Therefore involving the private sector with education and training more and more is quite useful and should be widely encouraged.

Governments can support educational activities in the public and private sectors and build intergovernmental alliances to advance lifelong learning and training by supporting educational activities. Educational institutions should seek ways to collaborate with nongovernmental organizations and industry to advance common objectives on sustainability.

IV. Making Educational Material Relevant To People

To be effective in reaching people across the country and around the world with a message that is relevant and meaningful, education for sustainability must include an appreciation of diverse geographical locations, cultural perspectives and other such factors.

This requires that the content of educational materials reflect divergent cultural or local approaches to sustainability. Educational materials and programs should be made accessible to all interested communities.

Furthermore, educational programs should be rooted in the actual experiences of people in their own communities. These programs should not assume a common understanding of sustainability's political and social context.

V. Empowerment

All of the above challenges- Lifelong learning, interdisciplinary approaches, systems thinking, partnerships, and relevant education/learning- in the final analysis empower individuals and institutions to contribute to sustainability.
Education is generally agreed to be the most effective way to impart knowledge and skills that can be applied outside the classroom in everyday life. The objective is the informed citizens who are prepared to participate responsibly in a sustainable society. Students can be empowered by giving their voice to new ideas and through action, such as voluntary community service, which is, by itself, an educational tool. Non-formal education programs also provide good opportunities for learners to act individually and collectively by providing the knowledge and skills necessary to evaluate and discuss complex issues.

Sharing experiences about successful actions that are engendered by education for sustainability in its formal and non-formal modes will accelerate the transition to sustainability. Information about existing models of sustainability can be disseminated through the media, multimedia technologies, information clearinghouses, and other means, both nationally and internationally.

TRANSFORMATIONS VERSUS OBSTACLES AND INTERESTS

While setting out the above challenges, the difficulties should not be underestimated. Maybe stating few of them here briefly might help us to get a balanced view. There are major interests involved in and obstacles in the way of transforming the societies along this path. For example developing interdisciplinary approaches will face the difficulty as it may be difficult to breakdown the frontiers between academic disciplines. It is a slow process at times. Equally education is under-financed in many parts of the world and may find such restructuring not easy to do. It is worth noting that while formal education systems are hard to change, informal education—lifelong education might more quickly adopt new concepts and methods.

The best example to show the difficulties in pursuing global policies for sustainability is the refusal of the US to sign the Kyoto Protocol on Gas emissions. Despite major steps taken internationally to reduce pollution, develop sustainable environment and pursue global policies, the world sees that because of the huge interests involved in maintaining the status quo rather than take expensive steps to reduce gas emissions, the Us alone refuses to sign the protocol /6/.

This by the way brings us to the central question I mentioned between economy and ecology, between profit versus environment discussed in the introduction section.
NEAR EAST UNIVERSITY AND LIFE-LONG LEARNING

Our small country, the Turkish Republic of Northern Cyprus is a good example to show how sustainable environment is critical for the future of people and countries. The country is small with a population of 200 000 and has no natural underground resources. It’s most precious asset is it’s beautiful and clean environment – beaches, mountains, plains and Mediterranean climate. It's largest sector is tourism which is also the biggest foreign exchange earner.

Firstly as a small country we have a shorter time within which to take steps to formulate environmentally sustainable policies. Because rapid economic development - particularly in the tourism sector - if not carefully planned within the framework of sustainable environmental policies, might bring about the loss of our environment. Beaches, mountains, scarce water resources might all be overexploited and polluted within a relatively short period compared to much larger countries with less suitable climates.

At this point I would like to say a few words about the efforts of the Near East University which I work for. In view of the critical importance of the sustainable environment and lifelong learning, the University has taken a lead in setting up a lifelong learning centre to help the community. By the time you visit our University in 2007 for the international conference on “Environment and Water: for Survival”, this centre will be a well developed centre providing opportunity for learning for individuals and organizations locally, nationally and hopefully internationally.

CONCLUDING COMMENTS

- The fundamental question needs to be restated to establish the general perspective. Environmental problems arise in general due to a clash between the activities of the commercial profit motivated firms and the environmentalists driven by longer term perspective to preserve the environment.
- There is a general acceptance of the critical role for the education in increasing the public awareness of the need for environmental sustainability
- Over the years however the need to broaden the concept of education increased to include the formal as well as non-formal education. The process of learning is complex and continues throughout one’s life. The new term is indeed called life-long learning to stress the continuation of the learning process for the individual until death.
- Lifelong learning for environmental sustainability is now seen as the main vehicle to increase public awareness of sustainability. Scientists face a particularly strong challenge in setting the stage for sustainability.
Yet there are difficulties however as there are major interests and other technical obstacles involved in meeting the challenge.

REFERENCES