



**Learning for Work, Citizenship and Sustainability**

**Apprendre pour le travail, la citoyenneté et la durabilité**

**UNESCO International Experts Meeting**

**FINAL REPORT**



**Bonn,  
Germany  
25-28 October 2004**



UNESCO International Experts Meeting

Learning for Work, Citizenship and Sustainability

## Final Report

Bonn,  
Germany  
25-28 October 2004

Compiled by:

**UNESCO-UNEVOC International Centre  
for Technical and Vocational Education and Training**

Görresstr. 15

53113 Bonn

Germany

Tel: [ +49] (228) 2 43 37-0

Fax: [ +49] (228) 2 43 37-77

E-mail: [info@unevoc.unesco.org](mailto:info@unevoc.unesco.org)

Website: [www.unevoc.unesco.org](http://www.unevoc.unesco.org)

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The valuable inputs from various experts who attended, particularly the elected President of the meeting Prof. Jang-Ho Kim (President, Korea Research Institute for Vocational Education and Training) and the Rapporteurs-General Prof. John Fien and Prof. David N. Wilson, to the preparation and conduct of the meeting are gratefully acknowledged.

Gratitude is due to the following UNESCO partner organizations for their significant contributions to the Meeting through preparing reference documents and leading discussions: the International Labour Organization, the World Bank, the European Training Foundation, the World Health Organization – European Centre for Environment and Health (Bonn), the United Nations Environment Programme, the United Nations University – Institute for Environment and Human Security (Bonn), the Korea Research Institute for Vocational Education and Training and the Youth Employment Summit Campaign .

Special thanks also go to the Government of Germany for providing financial support to selected participants from developing countries.

Finally, UNESCO would like to express its sincere appreciation to all who contributed intellectually to the meeting particularly the keynote speakers, resource persons and technical experts whose lively and thought-provoking interventions brought together the concepts that led to the formulation of the Bonn Declaration which is a blueprint that can guide UNESCO's Member States in their efforts to adapt their TVET systems to contribute to sustainable development.



## Acting Today, Sowing into the Future

*Yes, We Can!*

*The challenges are many and the stakes are high.*

*It seems almost somewhat daunting.*

*Someone asks – Can we?*

*I say YES!*

*Yes we can – If we dare to dream a new dream*

*Yes we can – If we are bold enough to take the very next step*

*Yes we can – working together, utilising the vehicle of education for sustainable development and our vast human potentials*



*If animals, monkeys and dogs can be trained, then we can! We can amend and change our ways*

*If we can conquer the skies and fly as birds, then we can manage effectively nature's resources*

*If we can discover and visit planets in space, we can find ways to make our world better*

*Yes we can! We can amend and change our ways*

*A lot of good work is being done.*

*A lot more is needed*

*If we reach out across – natural and man made barriers*

*From the far North down to the utmost South*

*From the far East across to the utmost West*

*Building bridges of learning partnerships*

*UN agencies and Institutions worldwide*

*Government and civil society organizations,*

*Corporations and of course individuals*

*Where together, strengthening one another*

*We can use our challenges as stepping stones and overcome by dogged commitment*

*Making Sustainable Development a reality and not just a goal!*

Ms Akpezi Ogbuigwe,  
Head, Environmental Education and Training  
United Nations Environment Program.



## I

## Introduction

### Background

Following the First International Congress on the Development and Improvement of Technical and Vocational Education in Berlin in 1987, the United Nations Educational, Scientific and Cultural Organization (UNESCO) established its International Project on Technical and Vocational Education (UNEVOC) in 1992 with the goal of strengthening technical and vocational education (TVET) in the Organization's Member States. This International Experts Meeting is part of a long series of initiatives undertaken by UNESCO to achieve this goal and focussed on the theme of "Learning for Work, Citizenship and Sustainability".

The Second International Congress on Technical and Vocational Education was held in Seoul, Korea, in April 1999 on the eve of the twenty-first century. Anticipating the new century as one of globalisation and a revolution in information and communication technologies which would both have significant impacts on the world of work, the central theme of the Seoul Congress was *Lifelong Learning and Training for All: A Bridge to the Future*. A key conclusion of the Seoul Congress was that a new paradigm of both development and TVET was needed. As the Preamble to the Recommendations in the Final Report stated:

We have considered the emerging challenges of the twenty-first century, a century that will be an era of knowledge, information and communication. Globalization and the revolution in information and communication technology have signalled the need for a new human-centred development paradigm. We have concluded that Technical and Vocational Education (TVE), as an integral component of lifelong learning, has a crucial role to play in this new era as an effective tool to realize the objectives of a culture of peace, environmentally sound sustainable development, social cohesion, and international citizenship.<sup>1</sup>

The "new human-centred development paradigm" was elaborated at the Millennium Summit of the United Nations General Assembly in September 2000. With an emphasis upon poverty eradication, infant, maternal and sexual health, literacy, housing, water security and environmental protection, the Summit agreed on a set of Millennium Development Goals underpinned by a global partnership for sustainable human development.<sup>2</sup>

Recognising imperatives such as these, the Seoul Congress looked to an innovative paradigm of technical and vocational education based upon "a learning culture" that encourages and skills people "to be productive and competitive, and to care for the well-being of its people". It was agreed that "a vibrant training culture is a key factor in attaining that goal ... and empower[ing] youth and adults to play a part in the new development paradigm."<sup>3</sup>

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1 UNESCO (1999) Final Report, Second International Conference on Technical and Vocational Education, UNESCO, Paris, p. 61.

2 See <<http://www.un.org/millenniumgoals/>>.

3 UNESCO (1999) op.cit. p. 54.

Parallel with such developments, the international Education for All programme emphasises vocational preparation within a context of social and environmental responsibility. Thus, Goal 3 in the Dakar Framework for Action includes a call to "ensure that the learning needs of all young people are met through equitable access to appropriate learning and life skills programmes". This Goal emphasises the importance of skills development for employment and for effective citizenship, and the important relationships between them. Similarly, the 2000 Youth Employment Summit in Cairo called for educational approaches that empower youth, especially young women and the disadvantaged, to face the future with hope and optimism, secure in the knowledge that they have the human capabilities to care for themselves and their families and contribute to sustainable human development.

These ideas reflect the jointly published UNESCO Recommendations and ILO Conclusions concerning Technical and Vocational Education for the Twenty-First Century which state that, as "a vital aspect of the educational process in all countries", TVET was:

- (a) an integral part of general education;
- (b) a means of preparing for occupational fields and for effective participation in the world of work;
- (c) an aspect of lifelong learning and a preparation for responsible citizenship;
- (d) an instrument for promoting environmentally sound sustainable development; [and]
- (e) a method of facilitating poverty alleviation.<sup>4</sup>

These five dimensions are central to TVET as preparation for the world of work, citizenship and sustainability. They also reflect the broad concept of sustainable development agreed at the 2002 World Summit on Sustainable Development and the goals of the United Nations Decade of Education for Sustainable Development (2005–2014), which was established to emphasise the importance of education and training in the achievement of sustainable development.<sup>5</sup>

## Organisation and Scope of the Meeting

In October 2004, UNESCO hosted an International Experts Meeting as part of a five-year review of progress since the Second International Congress on Technical and Vocational Education, in co-operation with the German Federal Ministry of Education and Research (BMBF).

As a "Category 6" UNESCO meeting, participants were invited experts rather than representatives of Member States, and the deliberations and conclusions of the meeting deemed as advice to the Director-General for consideration and presentation to the Executive Board of UNESCO for further action.

Accepting the invitation of the Director-General of UNESCO, a total number of 122 technical and vocational education experts from 50 countries and representatives from 18 UN agencies and intergovernmental and non-governmental organisations attended this important meeting. A list of the participants is attached as an annex.

The focus of the Meeting was an assessment of the extent, and ways in which, the

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4 UNESCO and ILO (2002) *Technical and Vocational Education for the Twenty-First Century*: ILO and UNESCO Recommendations, UNESCO, Paris and ILO, Geneva, p.7.

5 UNESCO (2004) *United Nations Decade of Education for Sustainable Development (2005–2014)*: Draft International Implementation Scheme, UNESCO, Paris, October.

recommendations on TVET from the Seoul Congress are being implemented by UNESCO Member States with particular reference to the three themes of:

1. Learning for Skills Development
2. The Transition to the World of Work
3. TVET for Sustainable Development.

Following keynote and orienting lectures, the business of the Meeting was conducted through three Working Groups, one on each of these three themes.

### **Opening Ceremony**

The Opening Session of the Meeting commenced at 10.30 a.m. in the International Conference Centre in Bonn, in the presence of Mr Peter Finger, Mayor of Bonn, Mr Koïchiro Matsuura, Director-General of UNESCO, His Excellency Hans-Heinrich Wrede, Chairman of the Executive Board of UNESCO, and Ms Edelgard Bulmahn, German Federal Minister of Education and Research.

Mr Finger welcomed participants to Bonn and outlined the role of Bonn as a "United Nations City" and the wide range of international agencies that are based in Bonn.

Mr Matsuura began his Opening Address by paying tribute to the host country and the organisers. He then outlined the legacy of the Seoul Congress in 1999 and the importance of this meeting, five years after Seoul, in meeting the two inseparable challenges of sustainable development and building equitable knowledge societies based upon lifelong learning. Mr Matsuura said that "for TVET programmes to be part of the solution and not part of the problem, they must be reoriented so that they contribute to sustainable development worldwide".

His Excellency Wrede outlined the many initiatives of UNESCO in its international work programme, especially in relation to Education for All and the Millennium Development Goals. He said that "technical and vocational education offers an extremely vital empowering tool for improving living conditions" by enhancing the capacities of individuals to "gain employment, obtain decent work, increase their earning power" and thus impacts "on the ability to afford good health care, adequate food, clothing and shelter".

Ms Bulmahn argued that orienting TVET to the needs of industry and the world of work are "an indispensable prerequisite" for success – but that it was not enough. She argued that "we need a more comprehensive perspective – the perspective of sustainable development which ensures the ability of the current generation to cope with future problems and, at the same time, safeguards opportunities of future generations".

### **Work of the Meeting**

During the first plenary session, Prof. Jang-Ho Kim, President of the Korea Research Institute for Vocational Education and Training (KRIVET), was elected President of the Meeting by acclamation and assumed office. The Meeting also elected the following officers by acclamation:

**Vice-Presidents:**

Mr Abdul-Wahab Al-Akil (Yemen)  
Mr Patrick Facey (Jamaica)  
Mr Michael Schlicht (Germany)  
Mr Nuru Yakubu (Nigeria)

**Rapporteurs-General**

Prof. John Fien (Australia)  
Prof. David Wilson (Canada)

The meeting then adopted its Rules of Procedure as a "Category 6" meeting and the Agenda.

The Bureau of the Meeting comprised the President, four Vice-Presidents, the Rapporteur-Generals, and representatives of UNESCO and BMBF.

The Meeting met in Plenary Sessions on 25, 26, 27 and 28 October and in the three Working Groups on 25, 26 and 27 October. An International Agency Panel, comprising representatives of UNESCO, UNEP, WHO, ILO, World Bank, United Nations University and European Training Foundation was held on 26 October.

Based upon the presentations and discussions that took place, a draft Bonn Declaration on Learning for Work, Citizenship and Sustainability was formulated as well as a set of suggestions to assist UNESCO in developing the TVET component of its own action plan for the United Nations Decade of Education for Sustainable Development. These documents were approved by the Meeting in the Closing Session following the oral report of the Rapporteur-General. These documents and the text of the report of the Rapporteur-General are presented in this report.

**Closure of the Meeting**

The closing session of the Meeting involved contributions from Dr Phonephet Boupha of Lao PDR as a representative of participants, Ms Veronika Pahl, the Director-General for Vocational Training and Educational Reform in the Federal Ministry of Education and Research in Germany, and Ms Aïcha Bah-Diallo, the Assistant Director-General (Education) a.i. of UNESCO.

Speaking on behalf of all participants, Dr Phonephet Boupha thanked UNESCO and BMBF for the opportunity to attend, to share experiences and to learn from the high level of discussion that took place. She spoke of the commitment to TVET shown by UNESCO, UNEVOC Centres and represented countries and that, while the road from Seoul to Bonn may have been uneven, we now have the Bonn Declaration and the suggestions for UNESCO for action planning of the TVET component of the Decade of Education for Sustainable Development to guide us in coming years.

Ms Pahl spoke of the pleasure of the German Ministry of Education and Research in co-hosting the meeting and the value of its partnership with UNESCO. She expressed her support of the decisions of the meeting to promote action planning in TVET related to the 2005-2014 United Nations Decade of Education for Sustainable Development. Emphasising the important contributions of the UNEVOC Network, Ms Pahl encouraged participants to continue nurturing networks and partnerships that promote TVET for social equity, economic prosperity and environmentally sound development.

Representing the Director-General of UNESCO, Ms Aïcha Bah-Diallo, the Assistant Director-General (Education) a.i., congratulated the meeting and the TVET sector on beginning the first international sectoral plan for the United Nations Decade of Education for Sustainable Development. She emphasised the importance of focussing on quality education and Education for All in the Bonn Declaration and the suggestions for UNESCO in Action Planning for TVET and Sustainable Development. She accepted these documents and agreed to convey them to the Director-General for his consideration and presentation to the Executive Board of UNESCO. In closing, she thanked the organisers, the representatives of other international agencies and, especially all participants for their contributions to Learning for Work, Citizenship and Sustainability.



## II

### Opening Addresses

- *Learning for Work, Citizenship and Sustainability: UNESCO's Role and Contribution*. Mr Koïchiro Matsuura, Director-General of UNESCO
- *Education for All: UNESCO's Prime Mission*. His Excellency Hans-Heinrich Wrede, Chairman, Executive Board of UNESCO
- *TVET for Sustainable Development*. Ms Edelgard Bulmahn, German Federal Minister of Education and Research

## Learning for Work, Citizenship and Sustainability: UNESCO's Role and Contribution

**Mr Koïchiro Matsuura**

Director-General

United Nations Educational, Scientific and Cultural Organization (UNESCO)

Madam Minister,  
Mr Chairman of the Executive Board of UNESCO,  
Mr Mayor,  
Excellencies,  
Distinguished Participants,  
Ladies and Gentleman,

It is a great pleasure for me to be here once again in Bonn and to open this conference, whose theme of "Learning for Work, Citizenship and Sustainability" combines both topicality and foresight. Let me warmly welcome all the participants to what promises to be a most stimulating event.

I was last here four years ago for the purpose of signing the agreement with Germany establishing the UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training – the Bonn Centre. On that occasion, my co-signer was Madam Bulmahn and I am delighted that we are together again here today. I am also very pleased that Ambassador Wrede, the current Chairman of UNESCO's Executive Board, has joined us for this event. He is the first German to hold this position in the lifetime of the Organization, which was founded almost sixty years ago, and he is an excellent Chairman.

Madam Minister,

I wish to thank you, the Federal Government of Germany and the City of Bonn for hosting this important UNESCO international meeting of TVET experts. This is not an isolated occasion, of course, for it fits into a pattern of strong support to UNESCO's work in the field of TVET sustained over many years. Your support for the Bonn Centre in particular is greatly appreciated, not only by UNESCO but also by the many countries, especially in the developing world, that benefit from its services.

The main focus of the UNESCO-UNEVOC International Centre is upon capacity-building and technical assistance with a view to promoting innovation and best practices in TVET, developing TVET systems, improving access to TVET and assuring the quality of TVET. In addition, of course, the Bonn Centre is at the heart of the UNEVOC Network, with its 225 specialised TVET institutions across 154 UNESCO Member States.

Germany's long-standing tradition of TVET was undoubtedly one of the factors contributing to its industrial success in the last two centuries. By hosting the UNESCO-UNEVOC International Centre in Bonn, Germany indicates its willingness to share its experience and expertise in TVET with the rest of the world.

Germany has long been in the vanguard of TVET developments and this remains true today. Now, in the early years of the twenty-first century, Germany is at the forefront of the movement towards sustainable development. By helping to bring both of these concerns together, Germany is demonstrating its sense of relevance and its clarity of vision of the way ahead.

For its part, one of UNESCO's basic roles is to provide a platform for international co-operation and this meeting in Bonn is designed to serve this purpose. It is an opportunity for education policy-makers and TVET specialists from around the world to join together in common cause to re-orient TVET so that it is in harmony with the tenets of sustainable development. In order to understand why this agenda has arisen, let me now look briefly at the background to this conference.

You may recall that UNESCO convened the Second International Congress on Technical and Vocational Education in Seoul, Republic of Korea, in April 1999. On that occasion, 40 Ministers of Education were among the more than 700 participants who met to discuss how the field of TVET should adjust in order to meet the challenges of the world of work in the early years of the twenty-first century.

The Seoul Congress generated a set of recommendations on how the field of TVET needed to adapt to the new global situation. UNESCO used these recommendations to update its normative instrument or standard-setting document concerning Technical and Vocational Education. UNESCO's Revised Recommendation concerning Technical and Vocational Education (2001) was adopted by the Organization's General Conference at its 31st session.

This meeting in Bonn, which marks five years since the Seoul Congress, has two main purposes. First, it will attempt to assess the extent to which TVET systems in UNESCO's Member States have benefited from the outcomes of the Seoul Congress and the Organization's updated normative instrument.

Second, it will seek to stimulate discussion on how TVET may contribute to sustainable development worldwide. The very title of the meeting – "Learning for Work, Citizenship and Sustainability" – encapsulates the key precepts of sustainable development and touches on its three major domains – economy, society and ecology. The conclusions of this meeting in Bonn will provide an important contribution to the United Nations Decade of Education for Sustainable Development, which will commence in 2005 and for which UNESCO is the lead agency.

Madam Minister,  
Ladies and Gentlemen,

The challenge of sustainable development looks set to become one of the dominant themes of international co-operation in the twenty-first century. This reflects our fundamental interdependence in a dynamic world that requires constant adaptation from each of us, without exception. The key to this adaptability is education, the vital tool for updating our knowledge, enhancing our capacities and skills, learning to live together with our differences and attuning ourselves to changing values, beliefs and lifestyles.

The international community's recognition that education is central to achieving sustainable development was a clear outcome of the Earth Summit in Rio de Janeiro in 1992. This

consensus was strongly reinforced at the World Summit on Sustainable Development in Johannesburg two years ago. The United Nations General Assembly, in follow-up to Johannesburg, has declared the new Decade of Education for Sustainable Development (2005-2104) in order to galvanise the international community into taking urgent and enhanced action to educate the world's population about sustainable development and to encourage the wider practice of sustainability.

This growing focus on education, in its broadest sense and taking in the different types and levels of organised education, including TVET, is a clear trend within the sustainable development debate. It is now widely agreed that achieving sustainable development is essentially a process of learning. In recent centuries, we learned to live in an unsustainable way – and thereby created the social and environmental problems the world is currently facing. Today, we need to learn how to live together as communities in harmony and to work in ways that are sustainable. This implies a model of development that alleviates poverty, that includes the well-being of all segments of the community and ensures the conservation of the natural environment.

It is in this perspective that, through a re-orientation of TVET, learning for work and learning for citizenship must be integrally related to learning for sustainable development. Let me now look briefly at each of these key themes of your meeting.

Work is a major feature in most people's lives. Not only does it provide them with the means of subsistence in terms of food, clothing and shelter, but the type of work undertaken by individuals also has a major impact on their identity, social status and standard of living.

In the developed countries, most work opportunities in the twenty-first century are likely to be centred on new processes and services that require specialised knowledge and skills not yet available in general education institutions. TVET will be required to meet these needs. In developing countries, there will be an accelerating process of diversification of employment opportunities, although rural agricultural work will continue to prevail in many economies. TVET will be required to meet these needs too. Non-formal TVET, for example, will be needed to help alleviate the poverty of rural communities by helping to add value to agricultural products. TVET, in other words, can be expected to play a useful role in both developed and developing countries by providing people with more choices in their lives.

To continue providing real benefits, however, TVET must respond to the changing world of work and its insistent demands for learning and re-learning throughout the life-span. It must respond to changes in the meaning and practice of work in knowledge economies and in globalised networks of production and trade linking rich and poor countries alike. TVET, of course, cannot just be reactive but must itself become a force for positive change at work, whether this means breaking down gender barriers, empowering the excluded or addressing ethical issues relating to the uses of technology.

In a globalizing world, we must also re-visit our understanding of citizenship. It can no longer be narrowly political or narrowly national in scope but must embrace a wider conception of our rights, freedoms and responsibilities. The challenge of sustainable development gives fresh meaning to the notion of global citizenship. At the same time, it forces us to look at the practical exercise of democratic citizenship differently – not as an occasional visit to the polling station but involving, on a daily basis, choices about what we consume, how we

dispose of our waste, where we work, what means of travel and communication we use, and how we interact with our fellow citizens and neighbours.

If sustainable development requires committed, active and knowledgeable citizens, it also requires caring and informed decision-makers capable of making the right choices about the complex and inter-related issues facing human society. Education for sustainable development, in fact, must embrace not only specific education and training programmes but also the use of policy and legislation as opportunities for teaching and encouraging new forms of personal, community and corporate behaviour. TVET can and must contribute to this broader education of public opinion as well as cater to the learning needs of particular groups. In doing so, TVET will become increasingly integrated into, and make a stronger contribution to, the wider process of Education for All (EFA) and its interface with the challenge of sustainable development.

Madam Minister,  
Ladies and Gentlemen,

These remarks show that I am convinced of the enduring, indeed growing, importance of TVET for work, sustainability and responsible citizenship in the world of today and tomorrow. This Experts' Meeting on TVET is an opportunity to re-examine the key issues on this agenda. Some of those issues concern the kinds of learning that TVET must increasingly address if the principles of sustainability and citizenship are to be applied. They also concern the types of partnerships, especially between the state, business and industry, appropriate to the new forms and modalities of TVET that will emerge.

Above all, I believe that this conference will show that the challenge of sustainable development is inseparable from the challenge of building equitable knowledge societies based on lifelong learning. For TVET programmes to be part of the solution and not part of the problem, they must be reoriented so that they contribute to sustainable development worldwide. It remains for me to wish you every success in your important deliberations. I look forward to being informed of the outcomes of your discussions.

Thank you.

## Education for All – UNESCO's Prime Mission

**His Excellency Hans-Heinrich Wrede**

Chairman  
UNESCO Executive Board

Chairman,  
Director-General,  
Distinguished Minister, (Ms Edelgard Bulmahn),  
Director of UNESCO-UNEVOC International Centre,  
Dear Colleagues,  
Ladies and Gentlemen,

It is, indeed, a pleasure and honour to participate here in this meeting. Thank you for inviting me, Mr Maclean. Let me also express my deep appreciation to the UNESCO Secretariat, to the German Government, and to the UNESCO-UNEVOC International Centre Bonn for organizing this important gathering.

On behalf of UNESCO's Executive Board, I would like to extend my full support to all of you for the task you are undertaking. The work you will accomplish here will certainly make a substantial contribution towards implementing the 'Education for All' goals.

This impressive conference provides an excellent opportunity for continuing to pursue, at the international level, the immediate benefits education can provide – in the field of "Technical and Vocational Education and Training" and beyond it. The just published EFA Global Monitoring Report 2005 called "The Quality Imperative" pointed out, with regard to youth and adult learning: "Efforts to raise the level of skills among youths and adults are marginal in the few developing countries that have conducted evaluations of skills development programmes. Progress remains difficult to assess on a global basis."

So, this actually is what you are facing here! "Technical and Vocational Education" offers an extremely vital empowering tool for improving living conditions. At this meeting you are exploring the further potential, the manifold possibilities of TVET.

Skills development provides individuals with a better chance to gain employment, obtain decent work, increase their income earning power. Consequently, it might have a good impact on the ability to afford good health care, adequate food, clothing and shelter.

As Chairman of UNESCO's Executive Board, I am pleased to inform you that one of the principal missions of the Board has always been to support the Organization in accomplishing the Dakar framework goals. Just a week ago, we completed a results-oriented session. The Executive Board, for those who may not be familiar, meets twice a year, and consists of 58 of UNESCO's 190 Member States. It is responsible for the execution of the programme adopted by the Organization's General Conference. The Secretariat, headed by the Director-General, implements the programme. At our rather intensive session, we looked for ways to breathe more life into existing programmes and activities.

On the basis of proposals submitted by the Director-General, the Board created a first framework for the next programme and budget focussing mainly on "Education for All". This was the most extensively debated topic at the Executive Board. UNESCO takes the task of "Lead Coordinating Role" in "Education for All" very seriously. It is in the field of Education that the world looks to UNESCO for leadership and rightly so. The advancement of Education touches all of us profoundly.

With over 550 million women and 300 million men illiterate, illiteracy is the main hindrance to social and economic progress in developing countries. Indeed, Education is a principal force in reducing poverty, and knowledge is the basis of social transformation. Danton once said, "Next to bread, education is man's first need".

Ladies and Gentlemen,

Quality education for all requires us to think "globally, yet act locally". Even the lack of visible resources should not be used as a pretext to impede any national plan in implementing "Education for All".

On that note, I bring good news from Paris: within the Board, we adopted a decision to reinforce mechanisms for developing South-South co-operation in the field of Education. In general, we also called for better coordination and active participation from Member States. One of UNESCO's strengths is our partnerships and coordination efforts at country levels. Our advocacy role has built momentum and will continue to do so as we strengthen co-operation, for example, with NEPAD in Africa and other key stakeholders worldwide.

Understanding that tangible results usually start at the grassroots level, UNESCO held the "First Meeting of the Forum of African regional and sub-regional organizations to support co-operation between UNESCO and NEPAD (FOSRASUN)" some weeks ago. The Organization fully supports EFA in Africa, and it helps governments to mobilise resources, strengthen capacity and foster "ownership" as well as self-sufficiency among communities. In fact, UNEVOC in Bonn and other UNEVOC Centres around the world have assisted through regional co-operation with activities in Southern Africa, and project implementation is expanding to include West Africa. In Africa, UNESCO's first aim is early education. Africa is a young continent; half of the people are under 16 years of age, and yet too many receive very little education or none at all.

Moreover, the Executive Board studied the question: Are Member States adequately equipped to attain the universal primary education (UPE) goal of the Millennium Declaration? This goal is to ensure equal access for boys and girls to primary schooling by 2015. My colleague from Tanzania, on behalf of all African Board members, expressed the Group's concern of the "likely possibility of African countries not achieving the Millennium Development Goals and Dakar goals, due to a number of challenges and obstacles facing the continent; these include, inter alia, inadequate resource flows, insurmountable debt burden, challenges of HIV/AIDS pandemic and other diseases, high incidence of poverty and illiteracy and challenges due to competing social demands". The African Group appealed to EFA partners to meet the pledge made in Dakar in 2000 that "no countries seriously committed to "Education for All" will be thwarted in their achievement of this goal by a lack of resources". We must take to heart the obstacles far too many countries still encounter; but we can be encouraged by the fact that, as my colleague stated: "All African countries now have credible EFA plans".

In an overwhelming consensus, the 58 Board Members challenged the Organization to invigorate the Education programme – facilitate a more interactive process across the different activities and push forward in mobilizing the assistance of the international community. How do we accomplish this? What are the tools UNESCO has at hand that can really get movement and action? The Board suggested using the "EFA Strategic Review Process" as the guiding instrument. The review re-affirmed the centrality and priority of "Education for All" in UNESCO's work and emphasised the need to become the "Global Champion of EFA". It highlighted the need for increased external support to build UNESCO's advocacy and policy analysis capacities. The Board considers EFA a "collective enterprise" which calls for a 2005–2015 strategy on results-based yearly implementation plans.

One obvious and necessary tool in EFA is exploiting our teachers' resources. Improved teacher training will go a long way to strengthening education activities. Another good programme, the E-schools initiative, is an area where UNESCO's assistance can increase universal access to all in education.

Dear Colleagues,

The Board also addressed the ongoing fight against HIV/AIDS. The Organization has a clear role in the international response to the HIV/AIDS epidemic. This horrific disease devastates families, and in numerous countries, lowers the life expectancy dramatically. Preventative education can halt and reverse the pandemic. UNESCO is at the helm of a new educational strategy designed to do just that. Along with it, a gender specific approach to preventive education is crucial. In the quest to promote gender equality, significant progress has been made. Yet, two-thirds of the world's functional illiterates and those most affected by HIV/AIDS are women.

To help people learn to live together, UNESCO is promoting new educational approaches for human rights and sustainable development, as well as helping to reform curricula to reflect socio-cultural needs. As you know: we are currently within the United Nations Literacy Decade and the United Nations Decade of Education for Sustainable Development.

"Education for All" affects all of the Organization's fields of competence. "Education for All" constitutes a daunting challenge, but it is within reach. With the right strategy and the collective will of all stakeholders, success is possible. Abraham Lincoln once said, "You cannot escape the responsibility of tomorrow by evading it today". I am sure all of you are actively meeting your responsibility in addressing these ambitious endeavours. I wish you every success in your joint work during the next days in Bonn; but, please, do have a good time here as well!

Thank you for your attention.

## Education for Sustainable Development: The Contribution of Vocational Education and Training

**Ms Edelgard Bulmahn**

Federal Minister of Education and Research, Germany

Ambassador Wrede,  
Director-General Matsuura,  
Excellencies,  
Ladies and Gentlemen,

Our greatest challenge in the 21st century is to turn the currently still abstract idea of sustainable development into reality for all people on this planet.

With these words, Kofi Annan, Secretary General of the United Nations, did not only point out the fundamental significance which we have to attach to the implementation of the lead idea of the Earth Summit in Rio but also summarized the objective of the United Nations Decade of Education for Sustainable Development.

The implementation of sustainable development cannot be restricted to the objective of creating ecologically compatible societies but refers to a holistic political process which includes the economic, social and cultural challenges of our century. This understanding has meanwhile been accepted worldwide.

The "Agenda for Development", probably the most important programmatic work of the United Nations in the last decade of the 20th century already states and explains in a very concrete form five closely interlinked dimensions which penetrate all aspects of development.

One of these five dimensions is the realization of a just society which includes the principle of responsibility between generations as well as social justice and the just distribution of work, income and opportunities in life.

Education plays a key role in this area in particular. Education provides access to knowledge. Education provides orientation in an increasingly complex world. Education is the key to the labour market for all of us – and only education enables us to really participate in social life and society.

The Second International Congress on Vocational Education and Training in Seoul and the recommendations developed there represent milestones in our multilateral co-operation for which I would like to thank and compliment UNESCO and the Korean Government. I am pleased to be able to invite you, together with Director-General Matsuura, to continue this dialogue and would like to welcome you very much to the German UN site in Bonn.

Ladies and Gentlemen,

Worldwide demand for qualified labour is growing rapidly against the background of increasing globalization and rapid technological and demographic change. It is obvious that

we therefore ask ourselves in all countries how to provide quality vocational education and training for the largest possible number of people. The orientation to the needs of industry and the world of work is an indispensable prerequisite for the success of any vocational education and training policy – but it is not enough.

We need a more comprehensive perspective – the perspective of sustainable development which ensures the ability of the current generation to cope with future problems and, at the same time, safeguards the opportunities of future generations. This means that the objectives we have to keep in mind are economic performance as well as the contribution which vocational education and training can make to the social and political development in our countries and to conserving natural resources – as the title of this conference states: "Learning for Work, Citizenship and Sustainability".

The social, economical and ecological aspects of vocational education and training are closely interrelated – no matter whether management know-how and specialised technical knowledge are to be taught or simple techniques in the crafts or in agriculture. In almost all highly developed industrialised countries, for example, the areas of occupational safety and health and accident prevention are part of the qualification of skilled labour because they do not only mean an economically significant reduction of absenteeism rates of staff but also because the responsibility for healthy living and working conditions is an important task. Countries where the struggle for survival determines everyday life must focus first and foremost on food and drinking water. But even in these countries, suitable qualification measures are often the only way to setting the course for people being able to secure their livelihood on a long-term basis.

Vocational education and training is an important lever to implement sustainability because it reaches people at the interface between learning and work. What is important is, on the one hand, imparting knowledge and skills which place what has been learnt in a theoretical context and, on the other hand, the specific implementation of acquired knowledge in vocational practice.

And there is another issue: Vocational education and training does not only impart modern occupation-related skills and knowledge but also cross-occupational skills such as independence and communication skills, the ability for networked thinking, openness towards other cultures and the ability to deal with contradictions and conflicts. In this sense, vocational education and training promotes the ability to recognise and use opportunities for sustainable action at the workplace. Furthermore, it enables people, as consumers and politically mature citizens, to take responsibility for other people and for the conservation of the environment.

This is a comprehensive and a demanding mission for vocational education and training. However, there is no alternative. We need structures which, in view of limited resources, enable everyone to further develop their ability to improve their own living conditions and to benefit society at the same time.

How can this mission be realised in political terms? Ladies and Gentlemen, the discussion over the coming days will show us, once again, that the objectives and possibilities of vocational education and training policy vary greatly from one country to another. However, there are cross-cutting tasks which deserve our attention at national and international level.

First of all, there is optimal co-operation of all stakeholders – which is important for international coordination as well as for the division of responsibilities between government and social partners. In Germany, the contribution of private enterprise has traditionally played an important role. For more than 50 percent of young Germans, vocational education and training under the dual system means learning in companies as well as in part-time vocational schools and is their entry into the labour market. Besides university studies, this is an attractive and practice-oriented alternative for occupational qualification.

The performance of our companies is largely based on the qualifications of their skilled labour whom they train in their own interest, for example in the technical occupations, in the service sector and in the commercial occupations. In agreement with the social partners, we have established a system of state-recognised training occupations which standardises and continuously modernises the different qualification profiles required by the market. We thereby create transparency and secure quality for both, employees and employers. We see international co-operation in vocational education and training in the same perspective. We collaborate with numerous countries to support them in the development and enhancement of their system of vocational education and training. Let me take our co-operation with Turkey as an example: We advise our Turkish partners on the development of standards for vocational education and training, exams and certificates. And in specific projects, we support the modernization of existing training courses, for example in the textile industry.

However, it is neither possible nor advisable to simply copy the German system in other countries. We therefore pursue the approach of strengthening and further developing the traditional structures in our partner countries. Core elements of the German system, such as practice-orientation, which are systematically learnt in the companies can lead to a useful symbiosis with the strengths of other systems.

International co-operation in vocational education and training is no one-way street. For us, co-operation with other countries also helps us in the further development of our system of vocational education and training. I would like to stress the example of co-operation with other European countries within the framework of the LEONARDO DA VINCI programme for vocational education and training. The projects run under this programme are a driver for innovations in vocational education and training.

Participation in these programmes enables the individual learners to acquire international qualifications. This is important because intercultural competence is a key qualification for a successful career in an increasingly globalised world. It is also among the core competencies which are necessary for sustainable action in economic, ecological and social terms. In Germany, the new Vocational Training Act has established provisions which, for the first time, ensure that training periods spent abroad are recognised as an equal part of vocational education and training under the dual system. In this way, we provide apprentices with a secure basis regarding international mobility.

Ladies and Gentlemen,

Vocational education and training is of outstanding importance to us because the occupational and life opportunities of young people and therefore their opportunities for social participation are determined in this area. We therefore must facilitate access to vocational education and training for young people with poorer starting conditions. This

includes young people with deficits at school and with social problems as well as many young migrants.

We have developed and tested concepts that enable us to support young people requiring particular support, in keeping with their individual situation – for example within the framework of practical placements, qualification modules and out-of-school support.

In international co-operation in vocational education and training we also aim at making occupational knowledge and skills accessible to broad target groups in our partner countries. We must therefore keep in mind the continued demand for basic vocational education and training as well as the new demand for highly specialised technology and management skills.

Education and training, however, must no longer be isolated phases but must become an integral part of our lives. We must also ensure that no one is excluded from continuing training. This is the objective of the "Lifelong Learning for All" programme. The programme aims at more transparency, more quality and the reduction of barriers hampering access to qualifications. Via the "Learning Regions" initiative we have been able to establish in over 70 regional networks an education infrastructure which is tailor-made to each specific region. Lifelong learning can thus be filled with life.

Ladies and Gentlemen,

There is no ready-made solution for implementing the lead idea of sustainable development in political reality. We need innovative solutions reconciling economic performance, social justice and responsibility for our natural environment. A central success factor is the orientation to the needs of the people affected and to the political and cultural specifics. The contribution of vocational education and training to sustainable development must take a concrete form at regional and national level. Still, I am convinced that we need more concerted actions between countries for the development of sound solutions. I would like to give you an example.

The orientation towards the lead vision of sustainable development leads to new job profiles worldwide, with new demands for occupational qualifications. Specific know-how is, for example, necessary where an economically viable use of renewable resources or the resource-conserving development of products in materials chains must be assured. However, these skills are not yet taught to a sufficient extent everywhere. We should jointly ask ourselves how we can better recognise and take into account these demands. Because this is about the integration of sustainability aspects into the worldwide exchange of goods and services. But it is also about innovations applied worldwide and about new jobs in cross-border markets. A national perspective is no longer adequate.

One thing becomes clear in this context. We need differentiated knowledge on the global issues which must be solved, on possible answers and on the preconditions which might bring them to success. The available means are limited. It is therefore in our common interest to promote the exchange of information and experience and to make it more effective and cost-efficient by means of better coordination.

The activities of the UNEVOC network start exactly here. I am pleased that the UNESCO-UNEVOC Centre here in the UN city Bonn has been able to promote worldwide co-operation in vocational education and training by means of its commitment as a hub in this network, and

to provide valuable support in numerous countries to the development and modernisation of vocational education and training.

Ladies and Gentlemen,

In the run-up to the United Nations Decade of Education for Sustainable Development, let us jointly contribute to strengthening vocational education and training so that it can truly fulfil its key role in securing a liveable future.

I am optimistic that the co-operation of vocational training providers from countries on all continents will provide important ideas and concrete suggestions over the coming days.

Thank you very much for your attention.



### III

## Keynote Presentations

- *From Seoul to Bonn: Five Years of TVET Reform.* Prof. Jang-Ho Kim, President of KRIVET, Republic of Korea
- *Skills for Work and Life in a Sustainable Society.* Dr Lourdes R. Quisumbing, President of APNIEVE, Philippines
- *Corporate Responsibility for Sustainable Development.* Mr Albrecht Sanner, Director, Human Resources and Educational Policies, DaimlerChrysler AG, Germany

## From Seoul to Bonn

### Prof. Jang-Ho Kim

President, Korea Research Institute for Vocational Education and Training (KRIVET)  
UNEVOC Centre, Republic of Korea

Ms Bulmahn, German Federal Minister of Education and Research,  
Mr Matsuura, Director-General of UNESCO,  
Excellencies,  
Distinguished delegates,  
Ladies and Gentlemen,

It is my great pleasure to speak to you, on behalf of the Korea Research Institute for Vocational Education and Training, and on my own behalf, at this UNESCO International Experts Meeting on Technical and Vocational Education and Training, five years after the Second International Congress on Technical and Vocational Education in Seoul.

As Mr Matsuura said: Five years ago, UNESCO convened the Second International Congress on Technical and Vocational education in Seoul in close collaboration with the Government of the Republic of Korea. The Seoul Congress had the theme "Lifelong Learning and Training: A Bridge to the Future". It brought together more than 700 participants from 130 countries including forty Ministers.

The Seoul meeting clearly established the realisation that growing economic globalisation, the information-based economy, and new technologies require a flexible and well-qualified labour market, one with rich and diverse skills that are continuously updated and developed throughout life.

Discussions were held in Seoul in 1999 on how the field of TVET should adapt in order to meet the challenges of the world of work at the turn of the millennium. Themes included: The changing demands of the twenty-first century; Improving systems providing education and training throughout life; Innovating the education and training process; Technical and vocational education for all; the Changing role of government and other stakeholders in TVET; and, Enhancing international co-operation in TVET.

As we all know, the Seoul Congress produced a set of recommendations that would help member states establish new TVET policies and practices to better prepare their young people and adults for the world of work. The recommendations made at the same meeting centre around the above six main themes. For each main theme, numerous practical and useful recommendations have been made with regard to how to improve TVET policies and practices.

I believe this meeting to be very timely and important in checking the progress of countries in terms of the TVET policy reforms according to the Seoul Congress recommendations made five years ago.

It is noted that the majority of Member States expect TVET to prepare their workforce for the future. We will have sessions to share good and innovative practices in TVET of selected

countries and will draw some lessons from other Member State's experiences to improve systems of TVET in each of our own countries.

I would like to take a couple of minutes to share with you what we have done to improve TVET in Korea during the past five years. The Korean government developed a skills development strategy within the context of an overall national development plan. The Ministerial Commission on HRD, which consists of 14 ministers, was established in 2000 as a coordinating body to look after overall government policies related to human resources development which includes TVET. Under this scheme, TVET systems have been planned and managed in a more coordinated manner.

Access to TVET has been facilitated through the use of Information and Communication Technology. As a country with over two thirds of its population having access to the Internet, the government provides financial and administrative support for people to undertake e-Learning programmes so that everyone can receive training anytime, anywhere.

International co-operation in TVET also needs to be addressed. In 2000, KRIVET, which for many years has been an active member of the important worldwide Network of UNEVOC Centres, was designated as a UNESCO Regional Centre of Excellence in TVET. To fulfil this role, KRIVET is always endeavouring to develop new and effective initiatives to foster the development of TVET in the Asia-Pacific region.

The biannual training programme for leaders and experts in the fields of TVET and HRD is one initiative that was launched in 2002 by KRIVET. Through lectures, discussion sessions and site visits, the training programmes provide opportunities for participants to exchange ideas, information and experiences, and to learn from Korea's experience of developing TVET and HRD. After six successful training programmes, KRIVET has provided training for a total of 66 experts and leaders from 26 different countries.

As KRIVET continues its endeavours to provide quality training opportunities for experts and leaders from around the Asia-Pacific region, I beg all of you to please take interest in our activities and to help us further improve our programmes.

Madame Minister and Mr Director-General,  
Ladies and Gentlemen,

Before we go into the main discussion, I would like to take time to think about the current issues on the future of work and TVET. I believe this will provide us with a good context to understand the main theme of this meeting, which is "Learning for Work, Citizenship and Sustainability".

We have experienced unprecedented technological advances in the last several decades, and the pace of change will almost certainly continue for the next decade or more. The practical implications of further technical advances will include greater processing speed, higher storage capacity, and a wide array of applications.

Other technologies such as biotechnology and nanotechnology are expected to have profound consequences for the economy in the next several decades. In the near future, progress in biotechnology is expected to generate medical advances that will further extend life expectancy and improve the quality of life. Nanotechnology – manipulation of matters at the atomic scale – could afford even more drastic revolutions in products, services, and quality of life over the next half-century.

The rapid pace of technological change is expected to continue to propel demand for highly skilled workers who can develop new technologies, bring them to the market, and exploit the new technologies in the production of goods and services. Shifts in organisational forms and the nature of employment relationships, brought about by new technologies and global competition, also favour such high-level cognitive skills as abstract reasoning, problem-solving, communication, and collaboration, attributes associated with so-called "knowledge work."

At the same time, technology has great potential to support the education and training of the workforce prior to labour market entry, and as a part of lifelong learning. Technology mediated learning – the use of computers and other information technologies as an integral part of the learning process – is gaining ground through such applications as computer-based instruction, Internet-based instruction, and other methods of customised learning. Information technology potentially allows access to instructional materials any time, any place.

Economic globalisation is expected to continue in the decades ahead. Technological advances and other changes stemming from the globalisation of economies around the world are now changing the way production is structured, pushing firms toward vertical disintegration and specialisation, and decentralised decision-making. Within these new paradigms of specialised and decentralised firms, in coming decades employers will require a workforce with well-developed analytical, communication and collaboration skills. Also, the constantly changing workplace of the future requires continuous, lifelong learning.

The objective of this meeting in Bonn is twofold. First, we will assess the progress of Member States with respect to their TVET policy reforms that benefited from the Seoul Congress recommendations. Second, we will share specific strategies we can adopt to achieve sustainable development, and improve the effectiveness of the link between TVET for sustainable development.

The assessment of the Seoul Congress outcomes will be addressed, focussing on the following four key themes: "Policy, planning and management of TVET systems"; "Access to TVET"; "Relevance and quality of TVET programmes"; and, "Monitoring progress in TVET".

For the first theme, "Policy, planning and management of TVET systems", we will address policy reform efforts to improve the TVET system at the macro level, such as with regard to planning and management.

With regard to the second theme, "Access to TVET", we will share the experiences and best practices of Member States on ways to improve access to TVET for marginalised groups, such as women, the unemployed, disadvantaged youth, rural populations and the disabled.

For the theme of "Relevance and quality of TVET programmes", we will listen to and give comments on the various practices that have been adopted to increase the relevance of TVET

programmes. Issues discussed for this theme will include, but will not be limited to, such broad issues as the partnership between training providers and industry, integrating and diversifying TVET curriculum in view of the changing demand of society, teacher training for TVET, and the topic of vocational and employment guidance.

Also, with regard to "Monitoring progress in TVET", we will address measurement issues on how to identify and monitor the degree of progress each country has made in the field of TVET. In the era of globalisation, setting up internationally sharable standards to monitor progress in TVET is a very meaningful process.

Finally, we will share deliberations on how TVET can contribute to achieving our common goal of sustainable development, given the different context each country faces.

Sustainability, as discussed in the article prepared by the UNESCO-UNEVOC International Centre for this meeting, has three dimensions: economic, environmental and social. Therefore, the achievement of sustainable development through TVET should be also considered along these three dimensions. The deliberations shared in this meeting will contribute to setting the standards for the UN Decade of Education for Sustainable Development, which commences in 2005.

I expect this important and potentially influential meeting will shed light on the future prospects and trends of TVET, thereby providing us with lessons on what we really need to focus on for the next decade. Also, I expect that the lessons, experiences and recommendations shared in this meeting will play a very important role for the member countries of UNESCO in setting up workable plans to improve and reform their TVET systems and finally achieve sustainable development. I am sure that we will be able to gain some significant insights from your active participation in this conference.

I would like to take this opportunity to publicly thank UNESCO and the Government of Germany for the excellent arrangements that have been made and the warm welcome we received. I also thank you all for contributing your time, knowledge and experiences in this important event. With the participation of the most renowned experts in the field, I am sure that this meeting will turn out some valuable results.

I hope the next four days will offer you guidance in further enhancing our efforts to placing TVET at the heart of education for sustainable development throughout the world. Let us strive for progress.

Thank you very much for your kind attention.

## Education for the World of Work and Citizenship: Towards Sustainable Future Societies

**Dr Lourdes R. Quisumbing**

President, UNESCO-Asia Pacific Network for International Education  
and Values Education (APNIEVE), Philippines

It is a great honour and privilege for me to be invited to address this body of experts gathered in Bonn to reflect on how technical and vocational education has fared, five years after the Second International Congress on Technical and Vocational Education held in Seoul in 1999. I am here today not as one especially knowledgeable in the field of TVE, but as a lifetime learner and an eager student during the turning point of its history. As an educator, I had only a limited experience in TVE, but my exposure to the various specialised areas and levels of the formal educational system, plus my subsequent involvement with UNESCO and UNEVOC, have led me to realise that while education is a key to any development strategy, TVE is the master key that can transform the world of work and the economy, alleviate poverty, save the environment, and improve the quality of life. As students are being prepared to become efficient, skilful and competent workers, they can at the same time be educated to become productive and responsible citizens, the creators of better tomorrows, of sustainable future societies.

Of course, this presupposes a quality TVE, which is relevant and accessible to each and everyone who seeks it and can profit from it, regardless of background, gender, social class, nationality or religion.

A paradigm shift is taking place in TVE. Its philosophy, vision and mission, goals and objectives, policies and practices, content and methodologies are undergoing transformation. Its new and enhanced vision is leading to an expanded and strategic role in the 21<sup>st</sup> century, an era of rapid change and dramatic revolutions, of globalisation and democratisation, of breakthroughs and breakdowns, never before experienced by humankind. The resulting challenges in education in general, and in TVE in particular, are tremendous and overwhelming. We are called upon to meet these challenges not just for our sakes but especially for the survival and progress of future generations.

### **The Present Global Scenario: Challenges for TVET**

We are witnessing breakthroughs in almost every field of human endeavour: in science and technology, in industry, transportation and business, in information and communication – yet, never before have we seen human suffering in such a magnitude – injustice, inequity, poverty and such sophisticated forms of violence, torture and war, daily occurrence of terrorism, ethnic conflict and genocide, resulting from intolerance and discrimination, escalating degradation of the environment, destruction of all life species, threats to the planet Earth – the breakdown of human, ethical and spiritual values, the crisis of confidence, and the loss of hope.

Only four years after the UN Proclamation of 2000 as the International Year of the Culture of Peace, we live in an Age of Terror, in fear and insecurity, and we have embraced instead a culture of Greed and Corruption. Nature itself is sending us alarm signals: devastating floods, landslides, global warming, forest fires and drought, air and water pollution, not to mention the pollution of minds and hearts of the youth by the irresponsible use of information and communication technologies (ICTs).

At the 2002 World Summit on Sustainable Development in South Africa, two major approaches were identified as those leading to global catastrophe: Poverty and the Degradation of the Environment, both brought about by our own making – our materialistic and consumeristic values and behaviour, our egoistic lifestyles, our irresponsible patterns of production and consumption, causing the Earth's finite resources to be exploited to satisfy the wants and whims of a few at the expense of the needs of the many.

A major shift in our personal and educational paradigms, a massive attitudinal and behavioural change, a re-education of our ways of thinking, feeling and acting is called for. We need to educate towards a globalisation that humanises, instead of one that marginalises; an Information and Communication Technology that bridges gaps, and unites instead of divides; a Scientific Humanism that chooses humanistic technologies which improve the quality of life for all. We must exert all our efforts to work together to transform our culture of war, violence and death to a culture of peace and tolerance, non-violence, and respect for life. We must safeguard the rights of future generations to a sound and secure, just and free, peaceful and human world order, where people learn to know and understand each other, to work and to live together in peace and harmony.

There is a feeling of dissatisfaction with the way we have educated our youth in the formal school system. There is a frenzy to modernise our schools to become computerised learning systems. We are feeding our students with knowledge and information, to the extent of overloading their minds with more and more data than they can understand, interpret, or much less appreciate. We have enabled them to acquire skills to make them think more exactly and analytically, perform tasks mechanically and efficiently, but not necessarily effectively. We have taught them to be more ambitious and progressive, calculating, materialistic and selfish, but we have not developed their capacity to care for something or someone beyond themselves. We have stymied their ability to care and to share. We make sure that they are informed, but not equally inspired or motivated to stand for what is right and just.

Awareness of the responsibility that falls on educational systems to develop the human potential towards the building of a more humane and just society, should shock us into questioning our educational philosophies and strategies, and into searching for new and better ways to educate in the context of present-day realities and future scenarios and challenges; to transform the culture of war and violence, of greed and selfishness into a culture of peace and love where true human development can occur. Yes, we must educate for peace and tolerance, for human rights and democracy, for responsible citizens who know their rights as well as obligations, for a sustainable future. We must learn how to live together in peace and in harmony in this our one world, as in a global village where people know, understand, and care for one another.

We have to realise that modern-day education has become too specialised, compartmentalised and fragmented. We have not developed all the powers and faculties of the human person.

We have tried to educate the mind but failed to educate the emotions and the will. Overemphasis on knowledge and skills has led to the neglect of values and attitudes. The product of our educational system is an informed, knowledgeable and competent professional who may not be mature or emotionally stable, an intelligent and informed individual, a financial wizard who may turn out to be corrupt or ruthless, a skilful and competent technician but not necessarily an honest or responsible member of the workforce.

Allow me to anchor my presentation on two of the most important documents in TVE history: *Lifelong learning and training: A bridge to the future*, Final Report of the Second International Congress on TVE, Seoul, Korea, 1999, and *Technical and Vocational Education and Training: A Vision for the Twenty-First Century*, UNESCO and ILO Recommendations, 2001, from which I have drawn so much insight and inspiration.

The Preamble of the Recommendations to the Director-General of UNESCO states that in the light of the emerging challenges of the 21<sup>st</sup> century, an era of rapid changes in knowledge, information and communication, science and technology, industrialisation and globalisation, "a new paradigm towards a human-centred development" is imperative, if TVET is to play "a crucial role as an effective tool to realise the objectives of a culture of peace, environmentally sound and sustainable development, social cohesion and international citizenship." This statement is a clear manifestation of TVET's need and desire for the formation of that set of values, attitudes, modes of behaviour, and ways of life that lead to a culture of peace.

There is no doubt that the development of skills and knowledge are not sufficient for achieving a lasting culture of peace and sustainable, human-centred development. Information, knowledge and work must be imbued with meaning and significance, in order for an ethical stance and a genuine commitment to human well-being to be developed. This is where the role of values and ethics must be central to any programme of technical and vocational education and training.

Theme 1 of the Recommendations of the 1999 Seoul Congress states: "TVE systems must adapt to its rapidly changing demands of globalization and of knowledge-based societies." Yet history tells us that many of the world's problems are due not to the lack of knowledge but to inappropriate skills, values and attitudes. It is important to note that Theme 1 underscores the need for a human-centred development paradigm which considers a culture of peace and sustainable development as its central features. It advocates "that values and attitudes, policies and practices of TVE must henceforth be founded on this paradigm, encompassing inclusiveness and wider access, a shift to human development needs and effective participation in the world of work, with focus on the needs and potentials of the individual in society."

That our knowledge-based society must be values-centred, anchored on the respect for life, human dignity, the plurality and diversity of societies and cultures, human labour and work as a source of self-actualisation and self-fulfilment, as well as the power that fuels all economic and social development, cannot be emphasised enough. TVET must include values education in its new modalities of education and training. It must focus on the needs and potentials of the individual in society. This necessitates a holistic and integrated approach to education and development, the aim of which, to quote Delors, is "the complete fulfilment of the individual in all the richness of the human personality, the complexity of the human powers of expression and commitment – as individual, as member of a family, community, as citizen, producer, inventor of techniques and creative dreamer."

A holistic and integrated human resource development programme for TVET aims to prepare the individual to become a responsible, free and mature person, equipped not only with the appropriate skills and know-how of the latest technologies, but also with deep human and spiritual values and attitudes – a sense of self-worth, self-esteem and dignity; an ability to work by oneself and with others in teams, with integrity and honour, with honesty, punctuality and responsibility; to adapt to varying situations; to know and understand problems and issues; to work out solutions creatively; to resolve conflicts peacefully; to have a good grasp of the reality of the world, of oneself and of others; to possess some general knowledge with specialisation in some field or area of work; and to acquire the ability to continue learning and pursue lifelong education in a learning society.

Section 1.4 of Theme 1 underscores the importance of imparting human values and standards for responsible citizenship, alongside with the development of generic competencies, the work ethic, technological and entrepreneurial skills. Again, this underscores the importance of citizenship education in a globalised world as an essential element in TVE. Today's citizenship education should be founded on a multidimensional model, taking into consideration the personal, social, spatial and temporal dimensions of citizenship. Its contents includes three areas: civic education, the building of a knowledge base for civic beliefs and skills for civic participation; values education to provide the foundation for civic values and attitudes; and environmental education, the process of developing understanding, skills and values for sustainable development. To these three, I would strongly advocate work education as the fourth component of citizenship education, without which the citizen will not be able to make his maximum contribution to society. For in the words of a famous poet, Kahlil Gibran, all knowledge is vain save there is work, just as all work is empty save where there is love.

All these recommendations manifest TVET's clear recognition of the role and importance of values and attitudes, as a necessary component of a holistic and integrated education, based on the synergy among the 4 pillars of education, imperative for the citizen of tomorrow, a multi-dimensional type of citizen who has allegiance to a country and a commitment to the world.

For TVET to adapt its programmes to this new human-centred development paradigm, it must embrace a holistic approach to education which aims at the development of the worker, the technician, the entrepreneur, the professional, which does not neglect the education of the human person, the citizen of the nation state and of the global community.

Furthermore, the first *UNESCO and ILO Recommendations, Education and Training for the Twenty-first Century*, cites that among the objectives of technical and vocational education in relation to the educational process, the needs and aspirations of individuals must be taken into account. Thus, technical and vocational education should:

- a) Permit the harmonious development of personality and character and foster spiritual and human values, the capacity for understanding, judgment, critical thinking and self-expression;
- b) Prepare the individual for lifelong learning by developing the necessary mental tools, technical and entrepreneurial skills and attitudes;
- c) Develop capacities for decision-making and the qualities necessary for active and intelligent participation, teamwork and leadership at work and in the community as a whole.

Quality TVE educates students for responsible citizenship and sustainable development as it prepares the young learner for an occupation in the field of work. Traditional barriers and distinctions between TVE and general education are gradually disappearing. The world of work, citizenship and sustainable development are intertwined and interconnected.

Given the need for new relationships between education, the world of work and the community, TVE should operate as an integral part of lifelong education adapted to the needs of each particular community and at the same time keeping abreast with technological global development. To this end, UNESCO and ILO recommended in 2001 the abolition of barriers between levels and areas of education, between education and the world of work, and between school and society (UNESCO-ILO Revised Recommendation, 2001).

At this point, it is important to pause and reflect on the question: What is quality TVE?

We need a redefinition of educational quality which goes beyond cognitive learning, where achievements are measured not just by test scores but by innovative evaluative techniques that include the values and attitudinal dimensions of work. We need a new vision of quality education that does not stop at academic excellence and productivity, but goes further into moral excellence and a service-orientation, that considers the total well-being of the learner in a safe and healthy environment. Quality TVE is learner-centred and socially oriented. It aims at the total development of the learner and the creation of a better future, of environmentally sound sustainable societies.

Quality education refers to the lifelong process and to the teaching-learning outcomes which take place in a learning society, in and out of the classroom, formal and non-formal; meeting standards of excellence, relevance and equality of opportunity for all, aiming to discover and develop the innate potentials of the individual to bring about the full flowering of his/her multi-faceted personality, the total development of the human person, the formation of the citizen of the nation and of the world so as to be of service to others for the improvement of the quality of life and sustainable future societies.

A sustainable future society is our dream, our vision of a preferred future, better tomorrows for our children and all generations to come. It consists of a planet Earth which is sustainable, the provision of basic food, shelter and health care for all, the presence of social justice, respect and appreciation of diversity, participatory democracy and caring and compassionate relationships that lead to peace. This view is put forward in *Educating World Citizens* by Jack Campbell, Nick Balkaloff and Colin Power.

We know that Sustainable Development is an evolving concept. It emerged in the 1980's as a response to the growing realisation of the need to balance economic and social progress with concern for the environment, advocating for a just and responsible stewardship of nature's resources (*Our Common Future*, World Commission on Environment and Development, 1987). It was defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable Development was the key item on the agenda of the Earth Summit (Rio Conference, 1992) leading to a global action plan, Agenda 21, designed to conserve, protect and restore the health and integrity of the Earth's ecosphere.

Unfortunately, concepts and action plans are not sufficient to bring about genuine concern and commitment that lead to action. The role of values education for sustainable development is crucial. Sustainable development is best understood as a continuing and holistic process of change that takes place within the local context, needs and priorities, involving the co-operation of the entire community. While the issue of the carrying capacity of the Earth vis-à-vis the demands of a fast growing population is urgent and imperative, it is just as important and crucial to develop and expand the caring capacity of humankind for compassion and to embrace the wisdom of simple and less selfish lifestyles.

## **A new paradigm for the twenty-first century**

### ***Lifelong education in a learning society***

The concept of education throughout life, with all its advantages in terms of flexibility, diversity and availability at different times and in different places, is clearly an educational paradigm to be considered for the new century. It constitutes a continuous process of forming whole human beings, enabling people to develop awareness of themselves and of their environment and encouraging them to play their social role at work and in the community (Jacques Delors, 1996).

Learning throughout life is referred to by the Delors Commission of UNESCO as the "heartbeat of society," a major key in meeting the challenges of a rapidly changing world. The Commission discussed the need to advance this concept towards a learning society. In truth, the world is our classroom. Learning takes place not only within the walls of the classroom during specific periods of time, not only in the school campus during one's student days, but anywhere and everywhere when one is sensitive and alert to "teachable moments." The opportunities in our modern media, learning provisions in the world of work, cultural and leisure activities, civic and community affiliations are almost limitless. This, of course, emphasises the need for a healthy learning environment for our youth, conducive to their development into responsible and caring citizens, with our guidance and support.

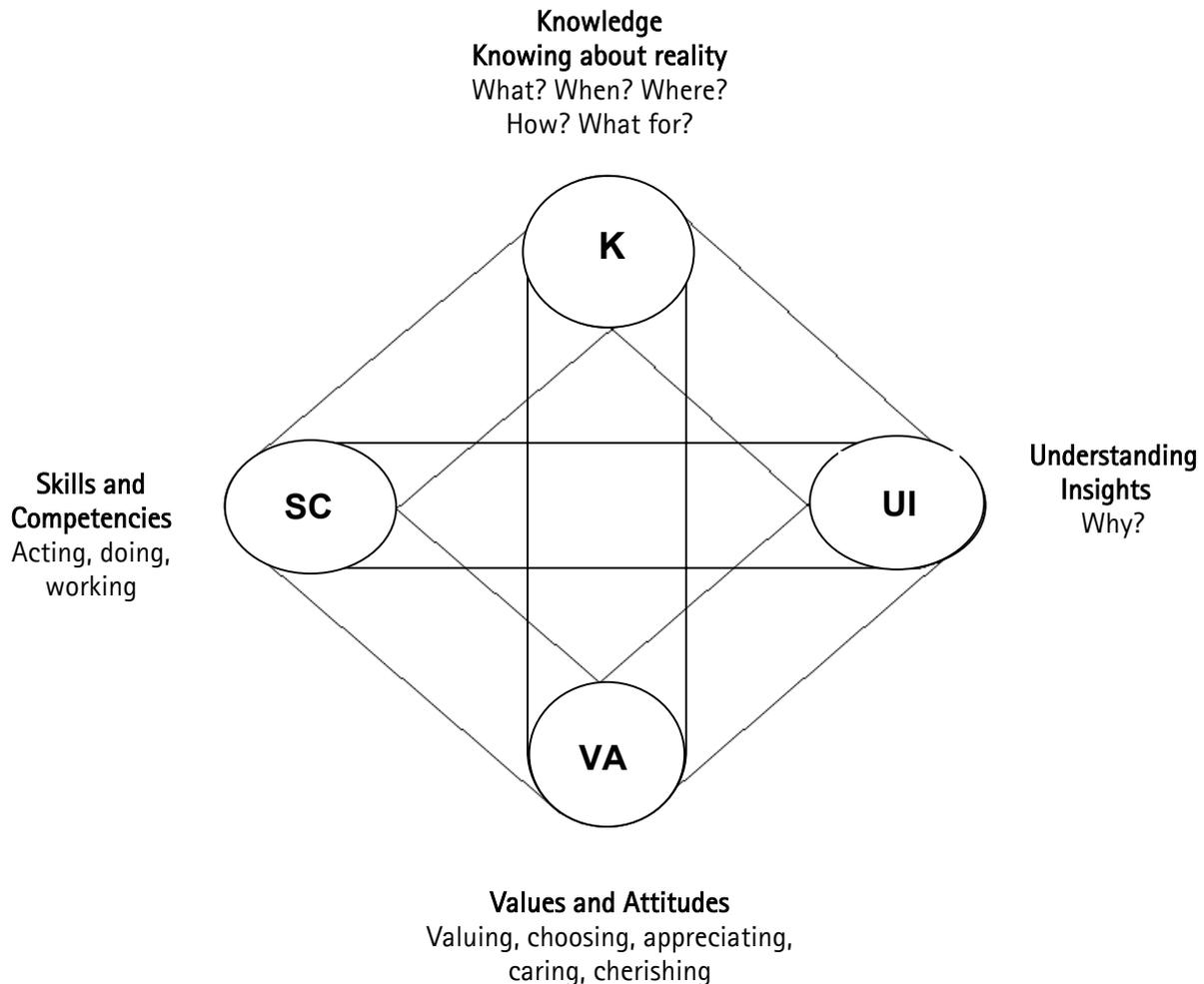
The Delors Commission states that the only way for the individual to cope with the ever-increasing demands, tensions and changes in society is to learn "how to learn". This is crucial to provide citizens with tools to deal with new situations that will arise in their personal and social lives. Another requirement is a better understanding of other people and of the world at large, mutual respect and tolerance of diversity, peaceful and harmonious relationships. Thus, one of the four pillars or foundations of citizenship education should be learning to live together – the other three being: learning to know, learning to do and learning to be.

### ***A Holistic and Integrated Approach to Teaching and Learning***

Quality TVE requires a holistic and integrated approach to the teaching and learning process in the classroom and other educational settings. This total approach focuses on the holistic development of the individual's faculties and capacities as a human person and as a member of society. It seeks to embrace the totality of the human person, develop intellectual, emotional and volitional powers and faculties, educate the mind, heart and will, respecting the sacredness, the intrinsic worth and uniqueness of each individual, to become free and responsible, critical and creative, peaceful and compassionate workers and citizens of a multi-diverse, multi-ethnic, multi-cultural world.

There is no time today to discuss a new holistic and integrated approach to teaching and learning which could be used for classroom use and in non-formal settings. It must suffice here to say that I believe that powerful outcomes can be achieved through an educational process that focuses on knowing, understanding, valuing and acting. The following diagram illustrates some integrated learning outcomes.

## Integrated Learning Outcomes



What are the core and related values needed in education for the world of work, citizenship and sustainable development? What can motivate the learner to become skilful and competent workers, productive and responsible citizens who, as individual human persons and as members of their societies and of the world, can help build sustainable futures?

### A Call for Innovation and Reform in TVE Policy and Practice

Major shifts in educational paradigms and approaches must be accompanied by corresponding changes and reforms in our educational system, in TVE policies, practices, and strategies, such as:

#### 1. Learner-centred and learning-oriented curriculum

- a) Change in the role of the teacher as sole purveyor of knowledge to facilitator and motivator of learning;

- b) From rigid selection of students based on single and fixed criteria to more open and flexible standards taking into account the learner's multiple intelligences, aptitudes and interests; and,
- c) From prescribed methodology to more flexible teaching styles that respect the uniqueness of the learners' intelligences, motivations, needs and situations.

## **2. Contextualised learning**

- a) From pre-organised subject matter to contextualised themes, relevant and appropriate to the society and culture;
- b) From knowledge limited to the local scene to globalised knowledge, values, attitudes and skills interfaced with local wisdom;
- c) From traditional methodologies to more modern strategies of teaching and learning with the freedom to use mixed modes of instruction and more interactive technology; and,
- d) From rigid subject matter boundaries to more interdisciplinary and multidisciplinary approaches to problems and issues.

## **3. Holistic and innovative methods of assessing educational outcomes**

- a) Revising the scope and content of assessment of learning outcomes for greater relevance;
- b) Designing qualitative and quantitative methods of assessment of performance according to objectives; and,
- c) Developing more diversified and creative forms of assessment that can be applied to such categories as civic values and attitudes, rights and obligations in the workplace, etc.

## **Conclusion**

All this calls for bold innovations in TVE educational philosophy and practice. Instead of a rigid and compartmentalised knowledge-based and skills-oriented curriculum, we need a more holistic view of education which aims at the development of the faculties and powers of the whole person – cognitive, affective, emotional, aesthetic, volitional and behavioural. Quality TVE needs a teaching-learning approach which does not stop at knowledge and information nor at developing skills and competence, but proceeds to understanding and gaining insights, educates the heart and the emotions and develops the ability to choose freely and to value, to make decisions and to translate knowledge and values into action.

The heart of education is the education of the heart. Values education is a necessary component of a holistic work education and citizenship education.

By values education we do not mean merely teaching about values, but rather learning how to value, how to bring knowledge into the deeper level of understanding and insights; into the affective realm of our feelings and emotions, our cherished choices and priorities into loving and appreciating, and how to internalise and translate these into our behaviour. Truly, values education is a holistic process and a total learning experience.

Indeed, it is time for decision-makers and practitioners in the field of TVE to lead in the total effort of designing and implementing new and more effective ways of preparing our future workers, citizens and leaders to lead in the creation of better societies, the transformation of our present culture of violence and greed into a culture of peace and non-violence.

Our priority task is to translate the valuable learnings and insights, as well as recommendations of this meeting and of previous ones, into planning and development of curricula, in designing concrete but flexible programmes, courses, subjects, and activities, so that the technical and vocational school can fulfil its mission in this diverse, multi-cultural world, educating youth for the world of work, for a citizenship that possesses the knowledge, values and action competencies needed to create a better and more human world for themselves and the future generations, a culture of peace, justice and love.

The final challenge is how to bring these paradigms and approaches, concepts and values to each and every technical and vocational school, indeed to every place of education, formal and non-formal, and to each and every place of work, as well as to all sectors of society and culture.

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## Corporate Responsibility for Sustainable Development

**Mr Albrecht Sanner**

Director of Corporate Human Resources and Educational Policies,  
DaimlerChrysler AG Stuttgart, Germany

Good morning Ladies and Gentlemen,

I would like to begin with the question: Corporate Social Responsibility – is that really a new issue?

And my answer is "No and Yes".

For the "No" answer, let us have a look back some 120 years. In Germany this was called the "time of the founders", corresponding to the period of industrial mechanisation. Many founders – we can call them "pioneers" – led their companies like families; the employees were family members with some adequate attributes like company flats, kindergardens or social security. But there was also a clear family structure. The owner was the "father" and the "family" had to follow his instructions. Nevertheless – in his town, in his region, he practised social responsibility. The sustainability (of the company) was guaranteed by sons and daughters (mostly sons) who were the pioneers' natural successors.

Successful companies grew up, some of them still existing in the fifth or sixth generation; some successors failed, some lost their interest in leading the company, some sold or founded a stock company. The pioneers retired, the "manager" was born; with defined responsibility for his department – not more. The formerly practised Social Responsibility did not keep pace with the expansion of the company; the family spirit got lost and some typical attributes too; in French (and other) languages the stock company is called "Société Anonyme". That may describe with two words what happened to the spirit of the company.

In this anonymity the feeling for entirety and context had no place, was not requested and no one was paid for it. Many examples of environmental incidents, of unacceptable working conditions including child work, of wasting natural resources and of violating human rights bear witness of the dark side of this development.

And thus we are coming to the "Yes":

Corporate Social Responsibility with this background and in today's definition is new. It is new because it is the brother of globalisation – or, to complete it – Globalisation, Corporate Social Responsibility and Corporate Citizens are siblings in a world network with limited resources (which was not seen 120 years ago).

### **Why is Corporate Social Responsibility important?**

Companies – "Global Players" – which are doing business in this world are part of it. If they want it or not – they are Corporate Citizens. Today we have the insight that – in the long run – a company can only exist if it is a good Corporate Citizen, recognising the social impact of its business, recognising the environmental impact of its business.

That is one reason – probably the most important one – why DaimlerChrysler immediately signed the “Global Compact”, and agreed to the “Principles of Social Responsibility” with our World Employee Committee and is working with lots of projects concerning environmental and social development.

As a Corporate Citizen – as part of our communities as well as a citizen of this world – we are very sure that there is no way out of the interdependencies between the company and its worldwide surroundings. But – beyond brochures and speeches – how to begin and where to begin to lever this awareness within our workforce? The answer seems to be easy: As soon as possible in our own vocational training – with our future workforce – worldwide. Vocational education and training for us means not only to “deliver” skilled people to manufacturing sites. It means to educate and train for employability – including social awareness.

“Social learning” is an integrated part of our vocational training worldwide. And – as we are practising this since many years – it is part of our educational culture. Social learning takes place in internal courses but also – more and more – in projects in cities and countries where we are maintaining training centres. So – for example (that is my most favourite example), the apprentices of DaimlerChrysler Thailand will plan and build up a public school during their “social learning courses”. And this year, it will be the ninth school so far because they have built one public school per year in the poorest landscapes of Thailand for eight years.

### **Conclusion (our findings)**

- a) Without profit social engagement is not possible. Without social engagement profit in the long run is nothing because a company will not be accepted as a good Corporate Citizen.
- b) Corporate Social Responsibility is a prerequisite for Sustainable Development.
- c) The mindset for Sustainability can only be successfully developed if there is a basis in the culture of a company. The respective culture can only be developed in a sense of Sustainability. That is a cycle or better – a symbiosis – between both. This needs time, perseverance and continuity!
- d) It is not always necessary to create big programmes. It is more important to have someone who takes the initiative and who has access to an efficient network. So he “only” has to connect the needs and the resources. This is what we are doing in Afghanistan where people are trained in mechanics by the skilled people of the German military.
- e) Education for Social Responsibility and Sustainability should begin as early as possible, not only in TVET but firstly in schools. Young people/students are open for this, as we saw at the Mondialogo Symposium in Barcelona.

Thank you for listening.

## IV

### Orienteing Presentations

- *Skills for Work in the Future: A Youth Perspective*. Mr Bremley Lyngdoh, Youth Employment Summit Campaign, USA; PhD Scholar, London School of Economics, UK
- *Economy, Ecology and Society: The Contribution of TVET*. Ms Shaizada Tasbulatova, UNEVOC Centre, Kazakhstan
- *International Data for TVET and Their Limitations*. Mr Simon Ellis, UNESCO Institute for Statistics, Canada

## Skills for Work in the Future: A Youth Perspective

**Mr Bremley W.B. Lyngdoh**

Youth Employment Summit Campaign, USA

Ph.D. Scholar, London School of Economics and Political Science

As the representative of the Youth Employment Summit Campaign, it is a great honour to address this Seoul + 5 UNESCO international technical experts' meeting on "Learning for Work, Citizenship and Sustainability", I want to take this opportunity in saluting UNESCO for organising this meeting and for the important role it played as task manager for Education since the Earth Summit in Rio back in 1992. On behalf of the YES Campaign, I would also like to extend our full support to UNESCO as it leads the United Nations Decade on Education for Sustainable Development which is to commence in 2005.

The point of my presentation is to set the tone for the next few days of the meeting in terms of highlighting the important "Voice of Youth". As the youth speaker I hope to help all the participants to be mindful of the youth demographic throughout the meeting, in the ideas and policies that will be carried forward into the declaration and other meeting outcomes. The focus of my presentation will be on "Skills for Work in the Future: A Youth Perspective" and it will combine many different elements such as: Sustainable Development (3 pillars – economic, environmental, social); the role of TVET; how the role of youth plays out in all of this; how it affects them in particular; what their specific roles need to be. I will try to draw the connections between skills development for employability and the changing nature of work using success stories from some of the 70 YES Country Networks.

We know that many developed countries face challenges associated with aging populations; however, the situation in most developing countries is the very opposite. The rapid population growth rates in many developing countries require listening to their voices and giving central roles in any comprehensive approach to vocational education and training. The creation of Sustainable Livelihoods has become an important factor in sustainable development, particularly in developing countries and among disadvantaged populations. A livelihood comprises the capabilities, assets and activities required for a means of living. It is sustainable when it can cope with and recover from stresses and shocks and still maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base. Therefore, more support should be given to the promotion and development of economically and environmentally sustainable youth livelihoods.

According to a new ILO report, young people represent 130 million of the world's 550 million working poor who are unable to lift themselves and their families above the equivalent of the \$1 per day poverty line. These young people struggle to survive, often performing work under unsatisfactory conditions in the informal economy. The report puts global youth unemployment at 14.4 per cent in 2003, a 26.8 per cent increase over the past decade, with rates highest in the Middle East and North Africa (25.6 per cent), followed by sub-Saharan Africa (21 per cent), transition economies (18.6 per cent), Latin America and the Caribbean (16.6 per cent), Southeast Asia (16.4 per cent), South Asia (13.9 per cent), industrialised economies (13.4 per cent), and East Asia (7 per cent). The industrialised economies region was the only region where youth unemployment saw a distinct decrease from 15.4 per cent in 1993. The report shows that the growth in the number of young people is rapidly outstripping

the ability of economies to provide them with jobs. While the overall youth population grew by 10.5 per cent over the last 10 years to more than 1.1 billion in 2003, youth employment grew by only 0.2 per cent to around 526 million.

I believe that addressing these unemployment concerns of young people worldwide is critical to the success of achieving the UN Millennium Development Goals because they are the current and future leaders of our communities. Encouraging civic involvement and investing in youth's key concerns must be an urgent priority of governments and civil society. Recent major international conferences have addressed issues surrounding youth livelihoods development through technical and vocational education and training. However, the resolutions that emerged from these conferences have, in some areas, failed to be sufficiently acted upon. Therefore, it is up to us the youth to take actions consistent with the commitment made by governments in these world conferences. To that end we have created a global movement called the Youth Employment Summit Campaign, which is working with all concerned stakeholders to implement the Millennium Development Goals of the United Nations through its 70 YES Country Networks. About 1500 young people from 150 countries launched a Decade Campaign of Action in Alexandria, Egypt at the first Youth Employment Summit in 2002 so that young adults, especially youth facing poverty, will be engaged in educational, technical and vocational training programmes that will then give them the skills and capacity to create productive and sustainable livelihoods for themselves and their communities. Policies to tackle global youth unemployment have also been identified by Secretary-General Kofi Annan's Youth Employment Network (YEN), a UN-World Bank-ILO partnership that pools the skills, experiences and knowledge of diverse partners at the global, national and local level.

Young people are the forefront of social, economic and political developments, and they are often agents of change and innovation. The world of work provides the environment through which youth can actively participate in society, contribute their talents and visions for the future and develop a sense of commitment and belonging. Yet, youth unemployment is on average two to three times higher than that of the older populations.

While 88 million young women and men are unemployed throughout the world, millions more barely eke out a living, often under hazardous conditions. Therefore, I think that technical and vocational educational and training (TVET) for Sustainability issues are particularly important for youth because they will inherit many of the environmental, economic and social problems created over the past decades and incorporating their opinions and perspectives into the educational and training programmes at all levels is critical to the success of achieving sustainable development. This will help build and shape the capacity of young people to address sustainability issues and become leaders in their communities and countries. We must also realise that sustainable development is not solely about tackling the environmental issues, but also the economic and social sustainability aspects that it includes. Therefore, by implementing TVET for Sustainability young people will benefit in the following ways:

- *Economic*: Youth face higher unemployment than any other demographic. Youth make up the majority of the enrolled in TVET courses. Therefore, it seems like a natural fit for TVET courses to use one disparity to counteract the other. Young people aged 15 to 24 represent nearly half the world's jobless although they are only 25 per cent of the working age population, and halving world youth unemployment rate would add at least \$2.2 trillion to global gross domestic product (GDP) equal to around 4 per cent of the 2003 value, according to a new ILO analysis, "Global Employment Trends for Youth 2004".

- *Environmental*: Because the youth in TVET are learning working habits that will be carried on throughout their working lives it is important that sustainability issues are adequately addressed in curricula to instil environmental-friendly work habits.
- *Social*: Using TVET to create sustainable livelihoods can combat feelings of despair and desperation among youth. Integrating life-skills into TVET can help youth to: cope with daily struggles, integrate into their community/society, decrease criminality, etc.

The YES Campaign sees the relevance of working in partnership with UNEVOC which can offer the services of UNESCO's Network of over 250 UNEVOC Centres in 156 countries to help promote the decade-long global campaign for youth employment. Now I want to draw upon examples of good practices from some of the YES Country Networks that are actually using and shaping TVET to further sustainability in the economic, social, and environmental sense in their countries. The six E's of the YES Campaign, i.e. Employability, Entrepreneurship, Employment creation, Equity, Environmental Sustainability, and Empowerment are the cornerstones of all YES Strategies. However, Education is a fundamental pillar upon which each of these six E's of the YES Campaign is built. The different projects that are being implemented by the YES Country Networks target the six E's of the YES Campaign and include a range of activities such as:

- *Translating Ideas into Action*: The YES Country Network in Honduras has launched an US\$80,000 project funded by the United States Agency for International Development (USAID). YES Network member organisation, Center for Health and Family Assistance (CEPROSAF) was awarded the grant on behalf of YES-Honduras to work with persons infected with HIV/AIDS, the majority being youths under the age of 35. The project focuses on building the capacity of people living with, or affected by, HIV/AIDS. The focus is on youth creating productive and sustainable livelihoods, in line with the goals of the YES Campaign. Activities include vocational and technical training in a wide variety of skills. This 15 months project that has translated ideas into real action on the ground of using TVET will also include other stakeholders such as local authorities, churches, health workers, communities and families of people living with HIV/AIDS.
- *Building Trust and Respect*: The YES Country Networks in Burundi and Holland have been building trust and respect with each other since they met in Alexandria in 2002 by collaborating on a joint project. Youth in Reconstruction of World in Destruction (DRWD), the lead YES agency in Burundi, teamed up with the Dutch YES 2002 delegates from Foundation Zero-Kap, to fund a micro-credit scheme for Burundian families. About 37 families received 100 Euros each to begin micro-enterprise activities in late 2002. Other activities included technical training provided by the lead agency for youth to set up small businesses in different villages. In addition, a shipment of school materials arrived in Burundi from Europe in late 2002. The shipment consisting of basic classroom items such as notebooks and pens was donated by HEMA, a Dutch department store and Villa Zebra, a children's art museum.
- *Developing a Shared Vision*: The YES Country Network in Jordan provides schools with tools to link education to market policies by developing a shared vision and working closely with the academic and training institutions. The campaign on national youth employment started in early 2004 with a national conference attended by concerned stakeholders such as government, private sector, academic institutions, NGOs and other organisations to develop a national strategy for fighting youth unemployment and integrating and empowering youth in productive societies.
- *Negotiating and Impacting the System*: The Ministry of Commerce, Industry and Tourism and the Ministry of Social Protection of Colombia are working together to construct a government bill for employment creation through technical and vocational

training for youth. The members of the YES Country Network in Colombia consulted and negotiated on the initial design of the legislation, and they are developing proposals to support its implementation and hence impacting the system.

From the success stories presented above it is clear that young people bring entrepreneurship, dedication and a sense of possibility to international policy planning. Therefore, I think youth organisations worldwide must maintain sustained international pressure to help forge a coherent follow-up to the UN world conferences commitments. This is the challenge that lies ahead. Young people have contributed to each "Plan of Action or Platform for Action" adopted by the UN conferences. They have joined forces with the broader civil society, after all issues that affect humanity also affect youth.

In order to facilitate discussions, I have identified five barriers that we face in imparting TVET for Sustainability values/education to young people for employment creation. I will share the opportunity that these barriers provide for action and advocacy, and suggest outcomes towards which the participants can focus their strategies and action plans. The other barriers include lack of skilled trainers that truly understand the concept of sustainability, lack of resources to train trainers in developing countries, lack of funding to impart training for rural youth, lack of practical implementation of skills acquired to create employment, etc.

**Barrier #1:** Lack of targeted education, employment and training services to serve youth employment needs.

*This provides the opportunity for:* Initiating the development of skills-based education, targeted employment and training services to serve Youth Employment needs.

*Outcomes and recommendations needed:*

1. Appropriate use of new technologies in education and training for employment;
2. Schools and the public and private sector supporting career counselling and school to work transition programmes;
3. Informal and formal education both contributing to providing skills for employment;
4. Community participation in linking education and training to employment;
5. Full access to education and training for young girls in developing countries;
6. International/regional organisations funding learning institutions charged with facilitating dissemination of good practices, lessons learned, success stories, and networking;
7. Government and private industry embrace lifelong learning.

**Barrier #2:** Lack of access and appropriate use of new technologies to impart TVET to support youth employment.

*This provides the opportunity for:* Lobbying for the development and increased access of new information and communications technologies to impart TVET to support youth employment and training services that will serve Youth Employment needs.

*Outcomes and recommendations needed:*

1. Government and the private sector making investments in developing and supporting innovative approaches for using technology to impart TVET to support youth employment and training;

2. Government and other suppliers of education and training use appropriate technology to increase access and efficiency;
3. National governments invest in creating the infrastructure needed for bringing the information super highway to their countries, so that all global citizens have access to technology.

**Barrier #3:** Lack of enabling policies and partnerships for youth employment.

*This provides the opportunity for:* Advocating the development of key policies and public-private partnerships that promote youth employment.

*Outcomes and recommendations needed:*

1. Policies and models that lead to:
  - job-led economic growth;
  - enable self-employment;
  - support vulnerable youth, young women, disabled, rural, etc;
  - promote integration of education and training with employment services;
2. Awareness among policy-makers on the high cost of neglect – violence, alienation, etc;
3. Youth participation – including lobbying and solidarity groups – for creating policies for youth employment;
4. National governments setting goals for creating employment opportunities for youth;
5. Accountability among government and private sector training providers for demand-driven skills development;
6. Governments act as catalyst in supporting the private sector to join in providing a universal education and training infrastructure;
7. Emphasis on entrepreneurship, both social and economic.

**Barrier #4:** Lack of credit and other services to serve youth in generating self-employment after education and training.

*This provides the opportunity for:* Reaching youth with credit and other services to support self-employment.

*Outcomes and recommendations needed:*

1. Financial institutions providing credit and other services for promoting self-employment;
2. National governments promoting privatisation leading to enterprise development and economic growth;
3. Public and private investment in creating an enabling environment for youth enterprise development such as incubators, mentors, teams etc;
4. Governments, private sector and communities accept youth enterprise as a viable career option;
5. Governments create policies to provide support and to remove barriers to youth self-employment;
6. The promotion of self-employment as a career option;
7. Creation of an enabling environment and support structure to help youth in ensuring the sustainability and viability of their initiative;
8. Providing the infrastructure needed to ensure that potential entrepreneurs are trained and ready to face the many challenges.

**Barrier #5:** Discrimination against young people and specifically young women.

*This provides the opportunity for:* Lobbying and promoting the empowerment and inclusion of young women.

*Outcomes and recommendations needed:*

1. All government policies tested to ensure that they have no ill effects on women;
2. Government policies respect the different needs of men and women;
3. Government and private sector ensure equal pay to men and women;
4. All social policies support families with the explicit aim of making sure that all girls and young women attend school;
5. Governments ensure no gender bias in credit policies, in education, in training and in employment;
6. National policies in place for affirmative action for women in countries where they are traditionally discriminated against.

The policies/strategies that we should be considering at this meeting are to allocate more funding for TVET programmes at the country level, retrain the trainers and give them the tools that will enable them to better equip the youth in their programmes, create an enabling environment for young people to be entrepreneurs who can use their new skills to create new jobs for themselves and their peers. This meeting should consider adopting these policies/strategies in order to overcome these barriers. With better policy and programming congruence among education, training and credit provision, youth with enhanced skill sets will be better equipped to access credit, develop and sustain self-employment initiatives. More effective and relevant education and training will result in more productive employment in micro and small businesses, particularly in the informal sector, larger enterprises that seek enterprising self-motivated employees, and government and civil society that seek enterprising employees. The improved skills and self-motivation of the emerging generation will contribute to increased social and economic productivity of communities. Improved skills will also be conducive to fewer social and political problems that are based on youth unemployment and lack of initiative.

Overall, improved skills will contribute to enhanced employment opportunities and the practical generation of sustainable livelihoods for young women and men.

A livelihood is a broader category than employment and more in line with the actual manner in which many young people in developing countries organise themselves and their activities in order to survive. Adaptability and dynamic livelihood capabilities is the key to generating sustainable livelihoods. Dynamic livelihood capabilities can be thought of as enterprising behaviour in a developing context. The institutional challenge is to improve the effectiveness of the non-formal training system in order to mediate the latent potential of young people into productive social and economic activity, while understanding their current livelihood conditions and capabilities. Governments need to address key global policies that affect youth employment and livelihood. They need to take strategies that promote self-employment and entrepreneurship, school-to-work programmes and work-based training.

Partnerships with the private sector must be strengthened and the use of new information and communication technologies to support youth employment and training must be encouraged. The youth themselves must be fully empowered to generate the solutions to youth

employment and their best practices and success stories must be acknowledged at all levels to support further replication of such initiatives from the grassroots to the global level.

To end I want to quote President John F. Kennedy who said, "The future promise of any nation can be directly measured by the present prospects of its youth". Let us show a true partnership with youth in the international community. The youth are not only the leaders of tomorrow but they are your partners for today.

## **Economy, Ecology and Society: Contribution of TVET**

**Ms Shaizada Tasbulatova**

Team Leader of the UNEVOC Centre  
National Observatory for VET in Kazakhstan

I am delighted to be here today, invited to share some observations with my colleagues from around the world. Five years ago I was a delegate at the Seoul Congress and to be here at the Seoul+5 meeting provides the perfect opportunity for reflection on changes in vocational education and training (VET).

I believe that education is the most important tool for developing human resources in any part of the world. Technical and vocational education and training has a special importance for economic and social progress as people trained by this system make up the basis of productive forces of society. However, in the studies that explore the interrelations between the content of education and other areas of human activity, the specific role of VET is not described clearly. Therefore, issues related to the relationship of VET and economy, ecology and social development and how VET affects these important spheres of human life have both theoretical and practical interest.

The focus of this presentation is on the relationship between VET and the economic, social and ecological development of countries and on ways to strengthen the role of initial VET. Recognising the importance of the processes ongoing in the field of VET in developed countries, today I will focus on the situation in transition countries and mainly Kazakhstan as one of them.

### **Increasing role of VET in the knowledge-based society**

There is a common understanding that VET is not limited to providing the level of qualifications required for the labour market, for increasing labour productivity, but also contributes to developing the individual personality, extending participation of people in the economic and social life. Dr Quisumbing has made a passionate case for educating the whole person, not just the worker. VET graduates contribute to developing national economy, make up a foundation of the civil society, teach children, lead effective governments and make important decisions affecting the life of the whole society. Vocational education, its formal sector in particular, covering primarily young people, contributes to strengthening social cohesion, reducing crime and increasing fair distribution of income.

Countries that do not invest in developing professional qualifications for people, and do not create conditions for updating skills required on the labour market, risk being marginalised in the knowledge-based economy.

Such understanding is shared by the majority of government leaders in many countries. In his message to the people of Kazakhstan, President Nazarbaev underlined that the "physical and intellectual abilities of the people of Kazakhstan in the situation of globalisation and increasing world competition are key factors to the success of our plans, the competitive ability of the country and its survival under the current conditions". In this connection we

have to reconsider the role of VET in the knowledge-based economy, and to establish a stronger relationship between VET and environmental and social development.

## VET and economy

Knowledge-based economies have far-ranging implications for education and training through several key features:

- *Knowledge is being developed and applied in new ways.* The information revolution has expanded networks and provided new opportunities for access to information, for education institutions as well. Changes in information and communication technologies have revolutionised the transmission of information. Semiconductors are getting faster, computer memories are expanding, and ICT prices are falling. Data transmission costs have fallen considerably, Internet has become more accessible and cellular phone usage is growing worldwide. All this adds to the pace of, and capacity for, change and innovation both in economy and education.
- *Product cycles are shorter and the need for innovation greater.* In 1990 it took six years to go from concept to production in the automobile industry; today that process takes just two years. The number of patent applications is growing, and more and more international and multiple applications are being filed. As OECD reports, industrial countries filed 82,846 patent applications at the European Patent Office in 1997, a 37 percent increase over 1990.
- *Trade is increasing worldwide, increasing competitive demands on producers.* Countries that are able to integrate into the world economy may be able to achieve higher economic growth and improve health and education outcomes.
- *Small and medium-sized enterprises in the service sector have become increasingly important players, in terms of both economic growth and employment.* Such tendencies in the economy require that these processes should be supported by adequate developments in the education system as well and in VET in particular. The level of VET conformity to the achievements and principles of knowledge-based economy can be judged by indicators proposed by the World Bank. The proposed indicators are:
  - A supportive economic and institutional regime to provide incentives for the efficient use of existing and new knowledge and the flourishing of entrepreneurship.
  - An educated and skilled population to create, share, and use knowledge.
  - A dynamic information infrastructure to facilitate the effective communication, dissemination, and processing of information.
  - An efficient innovation system of firms, research centres, universities, consultants, and other organisations to tap into the growing stock of global knowledge, assimilate and adapt it to local needs, and create new technology.

Availability of these conditions in the countries demonstrates harmony of education and economy and vice versa. The lack of one of the mentioned factors can be viewed as a challenge, a problem reflecting inadequacy of the education system, unpreparedness to train human resources able to provide economic growth.

Certainly, the mentioned indicators are very approximate and describe the nature of links between economy and education in very general terms. However, there are a number of research studies where this link is more evident. In particular, there has been proved a link

between investments in human capital and growth of GDP. OECD inter-country comparative studies have shown that lack of qualifications causes decrease of labour productivity and reduced growth.

A number of studies conducted in the 1990's confirmed the significant influence of R&D and human capital in addition to investments in physical capital, on economic growth. Such researchers as Ankiw, Romer and Weill have even explained 80 per cent of the variation of national income level across 98 countries by the effects of investment in real capital, human capital and the compound effect of population growth, technical change and depreciation.

Research confirms the essential influence of education on economic growth, though the arguments are not always expressed in concrete numbers. Maybe there is no need – it seems to be clear that there is a link and interdependence between economic growth and the level of skills and competences of people.

There is common agreement that education, including VET contributes to increasing labour productivity and income. The relationships may be described as indirect since they operate through the impact of skills of the workforce on growth, innovation and technical progress, and these can be difficult to measure and present in numbers.

To put it in other words, it is difficult to imagine that the above mentioned economic and technological changes could have been achieved without high investments in education and training in previous years. And it is clear that lack of efforts to raise the skill level of the population would result in economic and social stagnation, especially in view of the challenges to be met in the global economy and dynamic technological changes.

Five years after the Seoul Congress, we gather to assess changes, we assume improvements in vocational education and training. But for some countries in transition, such as Kazakhstan, the effects of socio-economic change have been uneven.

In Kazakhstan, VET has become an orphan of the education and social policy of the country. There has been a dramatic decrease in the number of VET institutions and a decrease in their financing. During the ten year period of 1990 to 2000 (a period when many countries invested in skills development) the number of VET institutions in the country decreased by nearly 60 per cent, from 471 to 276. Over the same period the number of trainees decreased by nearly two thirds from over 212,000 people in 1990 to around 85,000.

Changes in the scheme and volume of financing has resulted in significant reduction of, or closing down of, subsidised residential hostels. Rural young people could not continue their study in cities leading to an imbalance in the social distribution of qualifications. Following these changes the structure of training specialists in terms of occupations has changed and caused oversupply in such sectors as economy, business, law, the service sector and an undersupply in others, i.e. metal works, machine building, etc.

In order to fill the skill gap many enterprises set up their own in-company training centres (for example, Philip Morris). The basic training package is accompanied by providing technical and information support, exchange of experience, provision of micro-credits and grants (either separately or along with training), consultancy services. The content of training is demand-driven and to a considerable extent depends on the available resources and priorities of the organisation implementing such programmes. In the "agronomical project" implemented by

Philip Morris training is complemented by free provision of plants, technical means and transport (for agronomists), i.e. the company takes care of the whole cycle of professional training and skills upgrade of trainees. And it is clear that it is based on the specific production needs of the company which the trainees are supposed to satisfy.

Summarising we can say that the link between economy and VET is evident, though being indirect it is not always expressed in numbers. Under a stable economy this link might be observed not as clearly as it is in the transition economy. It can be seen especially well from the example of enterprises that "are forced" to invest in HRD as they need trained staff to increase the efficiency of production. Another observation I would make is that at present skills training is better done in the non-formal sector.

### **Response of VET: how the content of training needs to be changed**

Preparing workers to compete in the knowledge economy requires a new model of education and training, a model of lifelong learning. A lifelong learning framework encompasses learning throughout the life cycle, from early childhood to retirement. Its specific feature – integrity of formal, non-formal and in-formal education and training when people have choice of training programmes – depending on the needs of individuals and the labour market. In an OECD study in 2001, Rychen and Salganik pointed out that operating successfully in the knowledge economy requires mastery of a set of knowledge and competencies. There are three key categories of competencies: acting autonomously, using tools interactively, functioning in socially heterogeneous groups.

Performing in the global economy and functioning in a global society require mastery of technical, interpersonal, and methodological skills. Technical skills include literacy, foreign language, math, science, problem-solving, and analytical skills. Interpersonal skills include teamwork, leadership, and communication skills. Methodological skills include the ability to learn on one's own, to pursue lifelong learning, and to cope with risk and change.

People also need to be able to create and disseminate knowledge as a knowledge-based economy relies primarily on the use of ideas rather than physical abilities and on the application of technology rather than the transformation of raw materials or the exploitation of cheap labour.

In traditional industries most jobs require employees to learn how to perform routine functions, which, for the most part, remain constant over time. In the rapidly changing knowledge economy workers must constantly acquire new skills while on the job.

Therefore, the nature of knowledge and skills acquired by new labour market entrants has to be changed. In this environment, firms can no longer rely solely on new graduates or new labour market entrants as the primary source of new skills and knowledge. They need workers who are willing and able to update their skills throughout their lifetime. To support the new demands, the national systems of education have to equip graduates with required skills and train them to create new knowledge.

However, experience shows that many countries have not solved the problem of equipping people with skills and competences required on the labour market. In the vast majority of countries education is inadequate for sustainable development. Coverage is insufficient, access is inequitable, especially in employee and adult training, and the quality of education is poor.

In the transition economies of newly independent states, the problems in the field of adult learning are especially big. Evidence from international assessments of students suggests that some developing countries and transition economies lag significantly behind industrial countries in providing their people with the skills needed in the knowledge economy, in particular for the ability to apply knowledge in practice. Lack of flexibility, exam-driven schooling, prevalence of rote learning, and the high cost of private education are still important policy concerns in our countries. Nevertheless there are some optimistic practical examples in various countries that deserve attention and dissemination.

To conclude, we can say that in order to fit the level of economic development in the knowledge economy, VET should:

- Have a continuing nature;
- Be holistic and flexible;
- Support mastery of new knowledge and competences;
- Be oriented towards needs of economy, social groups and people of all ages;
- Have sufficient investments to implement the strategies demanded in the country.

### **Ecology and VET: need for new competences**

During recent years environment skills and competences have been increasing in importance. Various measures are being adopted in an effort to reduce energy consumption, volumes of solid, fluid and gasiform pollutants. Separation of wastes is aimed at facilitating recycling of great quantities. It is also useful for storing and destroying residual wastes in an eco-friendly way. The reactive environmental protection previously practiced is insufficient to cover these activities. Preventive environmental protection is gaining importance. This requires a deeper understanding of environmental correlations and greater specific know-how. This also means that technologies for use of renewable energy sources constitute new growth markets in the environmental sector.

This implies that in companies in many sectors new skills and competences have become necessary in order to develop more easily these new markets of energy sources (solar heating market, wind energy market, biodiesel market), which suggest use of products and services less harmful for the environment and which comply with more restrictive legal constraints.

Therefore, there is a need to integrate general knowledge of environmental correlations and specific vocational training in the occupations concerned. It is important as well to equip students in VET institutions for other occupations with basic environmental knowledge.

In various countries there is some experience in this field, which can be divided into two groups:

- Vocational training initiatives in the field of the use of solar and geothermal energy;
- Environmental education and training initiatives aimed at integrating low-skilled or unemployed young people and other problem groups into the labour market.

These initiatives are implemented through a variety of formal and non-formal education and training programmes.

However, in Kazakhstan and Central Asian countries, as can be judged from the information available, environmental education in the formal VET is realised implicitly, through the content of general subjects and special disciplines, i.e. in a fragmented way. In this sector training of specialists-ecologists is organised within the framework of agricultural occupations. There is no holistic, integrated approach based on developing environmental education as a life skill. There is some experience of implementing environmental programmes and projects through non-formal education.

In many EU countries (for example Greece, Austria, Sweden, Denmark) laws were adopted to make it possible for teachers to integrate environmental knowledge into general and vocational education as knowledge of global interrelations can be viewed as a basic component of both general and vocational skills. Adoption of more restrictive legislation and the constantly growing environmental awareness of the general public have given rise to new fields of activity and new markets in the environmental protection and environmental technology sectors. According to Roland Roos, these will continue to increase in importance in the future.

Thus, strengthening VET's role in solving environmental problems can be achieved through training new eco-friendly technologies and through development of a supportive and friendly attitude towards natural objects throughout lifetime.

### **VET and social development**

The process of globalisation has a social aspect, which requires a social reaction on the part of governments. Education and training are one of the components of the social reaction to globalisation. Studies show significant positive correlation of education with non-monetary aspects. For example we will touch upon the contribution of VET to health, employment, reduction of social exclusion and crime. Experts assume that better educated, professionally prepared people can process more health-related information. They generally have better health prospects, lower mortality and morbidity, less heart disease and hospital utilisation and lose less working time through sickness. Research findings reported by Behrman & Stacey in 1997 indicate the major crime reducing effects of education. These are due not only to higher education attainment by individuals, but also the "socializing and supervisory activities of education programmes. Reducing early school drop-out and failure may contribute significantly to avoiding crime and anti-social behaviour among young people". As we know youth makes up the majority of VET trainees.

The avoidance of unemployment by quality education and training is a benefit not only for the individual in terms of work career, avoidance of skill losses and social exclusion. It is a benefit for society which avoids transfer of payments to the unemployed and therefore resources can be allocated more productively for other social actions. OECD estimates show that individuals with higher levels of education are likely to spend fewer years in unemployment than less educated ones. VET helps to reduce poverty and unemployment. If countries do not aim to provide more possibilities for their citizens to learn through lifetime the gap between the developed and developing countries will increase.

Quality VET can be an important tool for preventing social exclusion and discrimination, in particular in the field of employment. In this connection it is important that they involve all groups of population, and especially the disadvantaged ones – women, people with special needs, rural and urban poor, elderly, continuously unemployed, low-skilled workers, migrants,

etc. Helping these people to acquire necessary skills it is important to offer and develop various forms of formal as well as non-formal vocational education and training.

The importance of these positions is proved by the review of projects implemented in Kazakhstan during 2003-2004, which have a social orientation. The content of their training programmes is aimed at fostering adaptation of people to the market environment, reorientation of business through setting up small business, socialisation of youth, reduction of unemployment and poverty, enabling youth and adult population to update and acquire lifeskills, etc.

Along with social objectives these programmes are targeted at solving economic, ecological and psychological problems of local population. In one of the regions, which according to the agreed criteria is considered to have no potential for development, a combination of training and grant support had a crucial importance. In the situation of management decentralisation, the fact itself of creating the precedent of self-employment through starting an own small business, environment protection and preservation and being involved in such activities was very promising. The experience has shown that the most productive type of training was learning from each other. It should also be noted that local authorities actively participated in implementing these initiatives.

Co-operation of government and communities is a prerequisite for extension of the positive practice in the rural communities. Recently VET institutions are playing an increasing role in local development. Both VET institutions and NGOs were involved in implementing training programmes for local communities. Participating in implementing the state "Programme for reducing unemployment and poverty" through training unemployed in the VET schools they learned to meet the needs of the local labour markets. According to the data of the Ministry of Labour and Social Protection referring to the results of the abovementioned Programme, during 2000-2002 around 56,000 unemployed people were trained and retrained. In 2002 out of 24,000 unemployed people who received training just over 50 per cent (12,400 people) found jobs.

But on the whole we have to admit that the contribution of VET institutions of formal education to community development is very modest. They have not yet become a resource for local communities. They are still conservative, not open enough to implement non-formal programmes, and are insufficiently involved in solving local problems linked to human resource development. Some optimistic examples are there. VET school 18 in Almaty during the last several years regularly conducts labour market analysis based on the adapted EU methodologies. The outcome of the work is used in the content of curricula and training methodologies. This results in the quality of preparing graduates to enter the job market. One hundred per cent of graduates gain employment – this is one of the positive achievements.

The positive impact of the majority of programmes on local communities is proved by the improvement of various aspects of life of people in regions: number of employed, starting own business, increase of income, involvement in the political life, etc. However, the question to what extent exactly these changes contributed to improving the socio-economic situation in the regions remains open, as we do not have enough empirical figures and arguments to carry out such an analysis. It would be more correct and justified to talk of the indirect and intangible effect of training on local development, through the above mentioned and other factors.

## Summary

The global knowledge economy is transforming the demands of the labour market throughout the world. It places new demands on citizens, who need more skills and knowledge to be able to function in their day-to-day lives.

Equipping people to deal with these demands requires a new model of education and training, a model of lifelong learning. Lifelong learning is crucial to preparing workers to compete in the global economy. By improving people's ability to function as members of their communities, education and training increase social cohesion, reduce crime, and have other positive effects on the economy, ecology and society.

Vocational education and training based on lifelong learning principles should be viewed as one of the significant prerequisites for growth development not only because it assists to develop human capital, but also to develop social capital. Implementation of VET programmes might not cause immediate changes in the social environment. However, its remote postponed impact results in more favourable conditions for combating poverty and unemployment, starting small business, socialisation of youth. In this way it helps to mitigate the impact of transition through contributing to improving the social situation, professional and psychological adaptation of the population.

## International Data for TVET and Their Limitations

**Mr Simon Ellis**

UNESCO Institute for Statistics, Canada

Ideally, this meeting requires a global statistical picture of TVET, presenting, for every country in the world, data such as:

- Enrolment rates by age and programme;
- The relative proportions of people enrolled in general and vocational programmes;
- The relative proportions enrolled in programmes provided by enterprises, government and other agencies (NGOs, private providers, etc.);
- Class size;
- On-the-job v. classroom-based provision;
- Sources of finance for TVET.

To name but a few potential indicators. So why is this not possible?

The UNESCO Institute for Statistics (UIS) is the lead UN agency for education statistics. UIS publishes statistics annually for the vast majority of countries in the world from early childhood provision to tertiary level. UIS is the lead agency for monitoring progress towards the Education for All goals and the Millennium Development Goals related to education. However, for an area such as TVET there are some very immediate and problematic gaps in our data. UIS collects annually from Ministries of Education (including sometimes Ministries of Higher Education), and is limited to what such ministries know. UIS asks for private sector data (including enterprise provision of formal education), but ministries for the most part do not have this data. Such private sector data can, especially in the case of TVET, be held to be commercially sensitive. To make matters worse not only does TVET tend to be private-sector-led, but the majority of it (especially in developing countries) is non-formal or informal provision.<sup>6</sup>

UIS does not limit its work to data that it collects itself. We have a database of international household survey data, and we work on literacy data obtained from all forms of national survey including national censuses, dedicated literacy assessments, and other surveys. Literacy data indeed covers the whole of adult and lifelong learning. In areas of interest such as literacy UIS freely admits that administrative data is not the ideal source.

However for TVET, whilst there may be many national or regional studies, there are next to no globally or regionally comparable statistics. To address this, UNEVOC and UIS, with the financial support of the German government, have undertaken a study to examine the limits of what can be said about TVET at a global level. The study was principally based on UIS data, as little other internationally comparable data was identified, and aimed to suggest how UIS might aim to improve its collection of TVET data.

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<sup>6</sup> UIS has contributed to the development of an EU classification of non-formal and informal learning. Non-formal learning is not institution-based, but does lead to nationally recognised qualifications. Informal learning does not lead to such recognised qualifications.

The study was undertaken by the Institute of Education of the University of London in the UK.<sup>7</sup> Because of the limitations of the data it was decided that the work should concentrate on the current picture of TVET based on data for 2001–2002 rather than trying to explore trends.

### **The International Standard Classification of Education (ISCED)**

ISCED classifies education programmes by level, the destination of the learner and to some degree by programme content. It does not classify institutions, and so, for example, a particular college could provide a variety of different learning programmes at a variety of different levels. The main levels that concern us are:

- ISCED 2 – Lower secondary, when students start to specialise and are normally taught for the first time by subject teachers. Usually two years in duration
- ISCED 3 – Upper secondary, when almost all teaching is by subject. Usually 2–3 years duration.
- ISCED 4 – Post secondary non-tertiary education. Generally of one to two years duration.
- ISCED 5 – Tertiary education, including advanced occupationally specific skills. Usually three years duration.

In addition to levels, ISCED classifies programmes by destination:

- A programmes lead students to further levels of education and are normally general education programmes.
- B programmes lead to further programmes which prepare students for the labour market. These are often identified with pre-vocational programmes.
- C programmes lead directly to the labour market and out of formal education. These programmes are often identified with vocational programmes.

Thus, for example ISCED 3C is a programme which terminates secondary education and leads directly to the labour market. ISCED 4A, on the other hand, is a post secondary programme that will lead to tertiary education (ISCED5).

ISCED distinguishes in terms of programme-orientation between general education, pre-vocational or pre-technical education, and vocational or technical education. At tertiary level information is also available on the field of study, allowing more specific occupational courses like Engineering or Medicine to be identified. Examining the various combinations of level, destination, and orientation allows us to say something about TVET in a number of countries, even though the coverage is generally limited to formal public provision.

### **Some results and cautions**

The study favoured the calculation of a Vocational Gross Enrolment Rate (VGER). This is calculated as the percentage of the general population in a defined age group corresponding to the ISCED level concerned who are enrolled in vocational education (defined by programme orientation). The VGER is complementary to enrolment in general, or non-vocational programmes, with which it would have to be combined to show the overall educational enrolment at the level concerned.

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<sup>7</sup> The authors were Andy Green, Moses Oketch and John Preston. The work was managed from UIS by Simon Ellis and José Pessoa.

VGER is at present probably the only TVET indicator that can be presented for a large number of countries in the world. Some other data such as age distributions, and graduates from secondary courses, can only be reliably presented for a more limited number of countries; usually those belonging to OECD or the World Education Indicators project (WEI).<sup>8</sup>

Statisticians in some 17 countries were interviewed as part of the study to assess the validity of their reporting to UIS. Although in many cases responses indicated that statisticians were able to report programmes reliably to UIS, there were in particular several instances in which it was unclear whether programmes should be classed in the A, B or C streams. Such classification issues were not limited to developing countries but also concerned programmes of OECD and EU member states.

Before proceeding to examine the statistics it is worth repeating that, for the most part they concern only public provision, and do not include either non-formal or enterprise-based training. They may, however, include dual programmes; courses which involve both formal public training and an element of work-based training in the same programme. The report highlights the role of apprenticeships as one very important form of TVET training that is not clearly classified, nor data collected, under the existing UIS system.

### **TVET at Secondary Level (ISCED 2 and 3)**

The pattern of public provision of vocational education varies and shows distinct regional variations. Little data is available for sub-Saharan Africa, but what does exist suggests very low public provision. This is not to say that there is no vocational training, but rather that it is more likely to be informal provision outside government. Two North African countries, Egypt and Libya, have above average VGERs of over 20 per cent. Several countries in Latin America and the Caribbean, in particular the latter sub-region, have VGERs of around 30 per cent. In Asia, public provision of vocational programmes would seem to be quite low, with highest vocational GER that of the Democratic Republic of Korea at 16 per cent. In Europe VGERs of many countries are over 30 per cent, with Sweden providing the highest indicator in 2001–2002 at 43 per cent. Finally, in Oceania, Australia stands far above any country with a VGER of 68 per cent.

Issues of classification affect these results. Thus, for example, while Asian VGERs are seen to be low, the Malaysian school curriculum includes vocational training at an early age. A "Living Skills" curriculum including "entrepreneurship", and "maintaining, repairing, and producing" is introduced even at primary school. In EU and OECD countries it should be noted that programmes for adults are often included as secondary education, thus raising VGERs above what would otherwise be the case. ISCED classifies provision by programme not by age group, so if a programme has content similar to secondary education, it can be classified as ISCED 2–3. UIS is considering how to better define adult education and to distinguish programmes aimed at adults from "overage" adults in "basic" or regular "school" education.

The report suggests that throughout the world there is a tendency to value general education more than vocational education. In the majority of countries the emphasis is on high achievement in order to obtain access to higher levels of education (in ISCED terms the A route). Thus, programmes with vocational content may still be classified as general. In Europe

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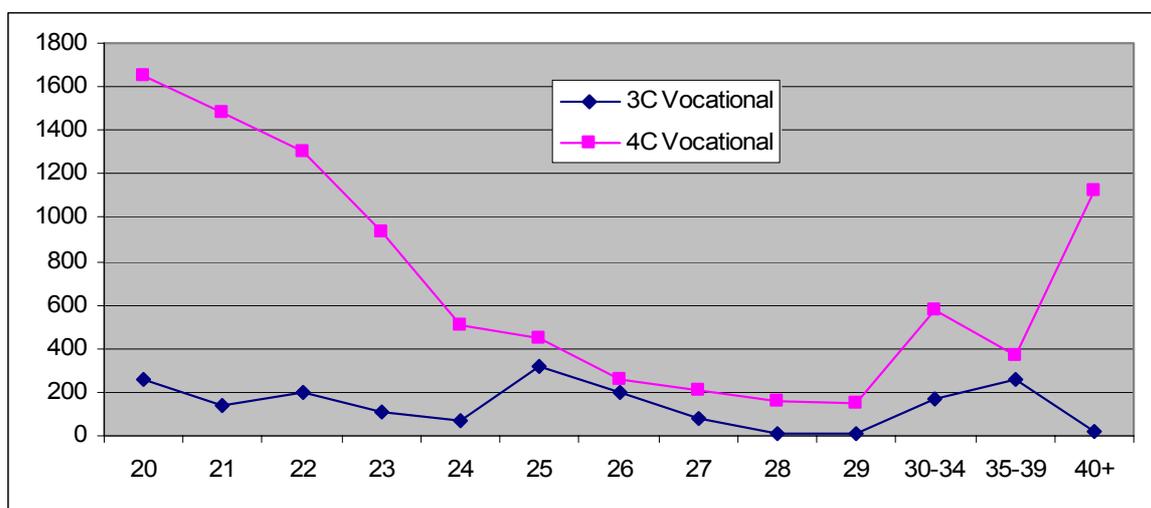
<sup>8</sup> The WEI is a joint OECD/UIS project involving 19 middle-income countries.

there has been a tendency to drop vocational education at lower secondary education (ISCED2) as more and more children stay on to upper secondary education (ISCED3), as a tertiary qualification becomes the main advantage in the labour market. Even outside OECD/Europe the report found only a few countries (Tunisia, Ghana) with lower secondary programmes that gave direct access to the labour market (ISCED2C).

### TVET at ISCED 4 – post secondary non-tertiary

This is the level at which one would expect to find the majority of TVET courses. However, it is extremely difficult to classify ISCED4 courses due to varying target age groups, differences in programme duration, and a wide variety of programmes of different natures. Because of this it is difficult for any one country to define a particular "official" ISCED4 age group.

ISCED 4A courses include the 3rd year of the 3rd stage of vocational upper secondary education in the Flemish community in Belgium (*gewoon secundair onderwijs 3de leerjaar van de 3de graad BSO*) which gives access to higher education and is classified as a vocation 4A type programme. Second cycle Dual System apprenticeships in Germany gives access to technical school (*Fachschulen*) 5B programmes and are classified as vocational Level 4B. Tunisia has two-year BTS (*brevet de technicien supérieur*) courses for baccalauréat graduates which are classified as vocational Level 4B. They can lead to technician level employment or to higher-level training. Peru's postsecondary vocational programmes (*escuela de sub oficiales*) require Level 3 completion for entry and lead to technical certificates. They are classified by the OECD as Level 4C. Asian countries in particular tend to see ISCED 4 courses as terminal courses and therefore ISCED 4C.



Numbers of students on ISCED 3C and 4C programmes in Malaysia

One possible form of analysis is to look at the age distribution across ISCED 4 provision. In Malaysia, whereas 3C programmes have a relatively even distribution including people from age 20–40 and over, 4C programmes concentrate on the early 20s, and 30+ age groups. Such bifurcated age distributions may suggest that two distinct programmes are included in the data, one for school leavers, and one for adults of over 30.

In some countries classification of programmes seems to be dependent on the level concerned, thus, in China ISCED 2 programmes are classified as pre-vocational and ISCED 3B–C and 4C programmes are seen as vocational and terminal.

## TVET at ISCED5

In higher education it is possible to define vocational education either by field of study or by destination. The report took the latter approach identifying vocational courses as those which concentrated on occupationally specific skills and which led to the labour market. The expansion of higher education in both the developed and developing world is (for different reasons) widening the traditional post compulsory schooling youth age group for this level of education. The main indicator used at this level was the proportion of higher education students who were enrolled in ISCED5B courses that, by the nature of the programme, lead directly to the labour market rather than to any higher research qualification. When this indicator is calculated in this way it suggests that the highest enrolment rates are for small islands.

This is because many islands in both the Caribbean and the Pacific have dedicated tertiary institutions concentrating on applied studies such as fishing, maritime studies, agriculture, etc. Bermuda and Samoa have over 80 per cent of tertiary students enrolled in ISCED 5B programmes. Several African and Asian countries have between 40 and 80 per cent of their tertiary students enrolled in ISCED 5B courses that are expected to lead to the labour market. It should be remembered that an ISCED5B programme is defined as "being more practically oriented and occupationally specific than programmes at ISCED5A, and does not provide direct access to advanced research programmes", "it provides access to an occupation". Nevertheless it is worth considering that many tertiary programmes in developing countries are classified as ISCED5B because there are no higher research programmes in the country. Thus, high enrolment in ISCED5B may reflect absence of research programmes as much as a proclivity for vocational training.

## Literacy and TVET

Literacy levels are a key educational statistic. Literacy can be seen as a vital skill for acquiring TVET. Though much TVET can be taught "on the job", reading is essential for training manuals, health and safety instructions, etc.

Moreover literacy is measured throughout the adult population and is thus a key indicator for sustainable education, and is included as such in the Millennium Development Goals. Although basic education theory has it that 5 years of schooling are enough to create sustainable literacy it is well known that adults who do not have access to written texts can lose their literacy skills.

A short question asking whether respondents and their families are literate is included in very many censuses and surveys worldwide. This information is often self-declaration rather than tested and is subject to many other provisos – language, cultural context, reading v. writing, numeracy, etc. UIS is working to replace this kind of data with a new literacy assessment (LAMP), which will be internationally comparable and will set a new global standard. Nonetheless until LAMP is undertaken by a significant number of countries, self-declared or reported literacy must be used.

When examined at regional level Africa and Asia lag behind the other continents in their level of literacy. It is notable that, whereas the levels of literacy are relatively equal between the sexes in the other continents, in Africa and Asia literacy for women is significantly less common than for men. South Asia as a sub-region has the highest level of illiteracy and contains a large proportion of the world's illiterate adults.

## Conclusions

This paper has presented some broad conclusions regarding the global situation for public sector provisions of TVET, as well as some methodological limitations of existing international data.

Developing countries as a whole are more likely to emphasise TVET in curricula earlier in the secondary education cycle. Developed countries by contrast are increasingly emphasising "generic" skills that are more abstracted from everyday tasks. This debate is being encapsulated in the discussion of Education for All Goal 3, which emphasises the training needs of youth and adults especially for "life skills".

Among the trends that have been noted there is an almost universal preference of demand for general education leading to higher qualifications. This has been driven by a desire to increase the number of people with higher level skills. In the developed countries, and to some degree in Asia, this has been driven by globalisation and a sense that only countries and people with the highest qualifications will be able to compete. In developing countries the move has been driven by higher qualifications as a means to move up in society and by countries' needs to expand a more limited tertiary sector. This move towards general education has affected TVET courses themselves resulting in a "broadening" of TVET courses so that they can address a broader learning experience, and to avoid a "low skills" label.

Countries, such as small islands, which lack universities seem more likely to have high levels of TVET enrolment. It has been suggested that such programmes may also reflect a tendency to classify such courses as terminal, rather than specifically labour-market oriented. Thus, for developed countries the figures may also reflect, as at secondary, a concentration on general programmes in regions with a larger tertiary sector.

In all of this it is important to realise that what may be regarded as the most important part of TVET, enterprise-based training, is missing from UIS data. Dual type programmes are captured for some countries such as Sweden and Germany. Such courses may include some apprenticeships. UIS needs to give consideration how its data collections exercise might do more to capture apprenticeship data. Although it is perhaps not possible for UIS to collect data from enterprise surveys in the medium-term future, some data from dual programmes and apprenticeships might be captured from some countries.

## Next steps

The data presented in this report must be regarded as preliminary and subject to validation. UIS needs to acquire metadata for every country to determine what type of provision is included and what proportion of overall TVET it represents. We would welcome comments from everyone at this meeting on this subject.

We would propose that during 2005 we review further countries' data in this area. For this work we would turn to our contacts in ministries of education, but we would also want to obtain some broader sense of whether such data included broader provision from non-ministry sources. To attempt to address this problem we would propose to seek validation of country data from the UNEVOC Network.

During 2005, UIS will be reviewing the nature of its regular data collection. This presents an important opportunity to see if our questionnaires can be refined to identify apprenticeships, dual programmes and other specific types of TVET programmes. UIS is clear that with this work it has initiated a long-term strategy to provide a reliable, more complete, global coverage of TVET activity.

## Annex: TVET Statistics by Country

Country	Year	ISCED 2-3 vocational enrolment as % of secondary school age population				ISCED 5B enrolment as % of all tertiary students			
		Enrolment		School Age Population	VGER	ISCED 5B Enrolment	Total ISCED 5 Enrolment	5B%	
Albania	1998	14,486	**	479,153	3.0				
	1999	14,501		479,668	3.0	1,177	40,125	2.9	
	2000	16,344	**	481,308	3.4	1,224	40,859	3.0	
	2001			484,337					
Algeria	1998	62,725		4,266,811	1.5				
	1999	85,442		4,323,237	2.0				
	2000	84,537		4,370,013	1.9				
	2001	85,734		4,408,397	1.9				
Angola	1998	44,334		1,980,092	2.2				
	1999	58,196		2,037,523	2.9		7,845		
	2000	70,260		2,099,961	3.3				
	2001	76,540		2,168,046	3.5				
Anguilla	1998	47							
	1999	50							
	2000								
	2001	52	**	1,078	4.8				
Argentina	1998	557,096		3,993,483	14.0				
	1999	854,384		3,974,009	21.5				
	2000	987,509		3,964,955	24.9				
	2001	1,209,638		3,969,778	30.5	481,472	1,918,708	25.1	
Armenia	1998			454,362					
	1999			452,373			67,193	**	
	2000	4,966		446,472	1.1		68,669		
	2001	4,929		436,484	1.1		75,474	**	
Aruba	1998	1,125		6,121	18.4				
	1999	939		6,151	15.3	1,166	1,578	73.9	
	2000	1,076		6,594	16.3	1,166	1,578	73.9	
	2001	1,198		6,660	18.0	1,168	1,592	73.4	
Australia	1998			1,572,004		221,714	869,172	25.5	
	1999			1,593,329		195,911	838,397	23.4	
	2000	1,213,168		1,611,382	75.3	191,061	845,032	22.6	
	2001	1,110,875		1,625,053	68.4		868,689		
Austria	1998	260,902		756,786	34.5				
	1999	261,722		757,921	34.5		289,722		
	2000	263,081		759,716	34.6				
	2001					26,592	223,735	11.9	
Azerbaijan	1998	23,527		1,207,602	1.9	36,657	(60) 144,440	(60) 25.4	
	1999	22,696		1,247,583	1.8	39,755	(60) 156,832	(60) 25.3	
	2000	22,944		1,280,157	1.8	42,612	163,305	26.1	
	2001	21,619		1,304,880	1.7	49,203	170,678	28.8	
Bahamas	1998			34,429					
	1999			34,350					
	2000			34,416					
	2001	7,924	**	34,656	22.9				
Bahrain	1998	8,930		62,619	14.3				
	1999	10,143		63,996	15.8				
	2000	11,392		65,711	17.3				
	2001	13,115		67,814	19.3				

Country	Year	ISCED 2-3 vocational enrolment as % of secondary school age population			ISCED 5B enrolment as % of all tertiary students		
		Enrolment	School Age Population	VGER	ISCED 5B Enrolment	Total ISCED 5 Enrolment	5B%
Bangladesh	1998	102,499	21,531,203	0.5		709,224	
	1999	105,791	21,961,877	0.5		726,701	
	2000	105,157	22,387,236	0.5		878,537	
	2001	123,746	22,805,033	0.5	77,936	855,339	9.1
Barbados	1998		21,007			3,908	
	1999		20,800			6,508	
	2000	114	20,540	0.6	3,591	7,307	49.1
	2001	110	20,207	0.5			
Belarus	1998	6,608	1,176,125	0.6	104,181	353,108	29.5
	1999	6,146	1,183,190	0.5	109,559	377,039	29.1
	2000	5,721	1,172,974	0.5			
	2001	5,148	1,167,908	0.4	155,352	463,544	33.5
Belgium	1998	556,868	725,878	76.7			
	1999	580,842	727,074	79.9	181,939	355,907	51.1
	2000	643,304	728,998	88.2	184,738	359,265	51.4
	2001				189,681	366,982	51.7
Belize	1998		33,436				
	1999		33,882				
	2000	900	34,410	2.6			
	2001		35,048				
Benin	1998	25,439	1,011,903	2.5	3,297 (8)	16,284 (8)	20.2
	1999	20,343	1,045,990	1.9	2,488	18,753	13.3
	2000	23,567 **	1,077,418	2.2			
	2001	24,338 **	1,105,864	2.2			
Bermuda	1998						
	1999						
	2000				1,942	1,942	100.0
	2001						
Bhutan	1998		53,237				
	1999		54,887				
	2000		56,588				
	2001	444	58,342	0.8			
Bolivia	1998	52,053	1,045,767	5.0			
	1999	48,784 **	1,070,240	4.6			
	2000	63,753 **	1,096,440	5.8			
	2001	64,823	1,124,363	5.8			
Botswana	1998	4,022	207,327	1.9			
	1999	5,529	210,514	2.6		6,332	
	2000	4,184	213,382	2.0	697	7,551	9.2
	2001	5,104	215,933	2.4	957	8,372	11.4
Brazil	1998		17,837,813				
	1999	1,520,554	24,892,457	6.1			
	2000		24,775,184				
	2001		24,590,506			3,125,745	
British Virgin Islands	1998	161 **	1,529	10.5			
	1999		1,567				
	2000	240 **	1,615	14.9			
	2001	271	1,673	16.2			
Brunei Darussalam	1998	1,707	40,045	4.3	1,550	2,917	53.1
	1999	1,848	40,608	4.6	1,840	3,705	49.7
	2000	1,862	41,316	4.5	1,824	3,984	45.8
	2001	2,149	42,192	5.1	1,894	4,479	42.3

Country	Year	ISCED 2-3 vocational enrolment as % of secondary school age population			ISCED 5B enrolment as % of all tertiary students			
		Enrolment	School Age Population	VGER	ISCED 5B Enrolment	Total ISCED 5 Enrolment	5B%	
Bulgaria	1998	189,851	782,781	<b>24.3</b>	22,065	270,077	<b>8.2</b>	
	1999		767,619		18,461	261,321	<b>7.1</b>	
	2000	186,135	751,695	<b>24.8</b>	16,369	247,006	<b>6.6</b>	
	2001		735,383		16,646	228,394	<b>7.3</b>	
Burkina Faso	1998	13,109	1,833,397	<b>0.7</b>				
	1999	15,188	1,889,915	<b>0.8</b>				
	2000	17,396	1,946,888	<b>0.9</b>				
	2001	17,923	**	2,004,204	<b>0.9</b>			
Burundi	1998	5,800	**	1,027,303	<b>0.6</b>			
	1999	5,837	**	1,065,035	<b>0.5</b>			
	2000	8,542	**	1,103,482	<b>0.8</b>			
	2001	9,293	**	1,142,816	<b>0.8</b>			
Cambodia	1998	8,176	1,993,713	<b>0.4</b>				
	1999	8,049	2,114,725	<b>0.4</b>				
	2000	7,856	2,196,021	<b>0.4</b>				
	2001	8,814	2,229,981	<b>0.4</b>				
Cameroon	1998	164,929	**	2,359,585	<b>7.0</b>			
	1999			2,427,663				
	2000			2,495,104				
	2001	160,821	**	2,561,767	<b>6.3</b>			
Canada	1998		2,435,963					
	1999		2,450,677					
	2000	102,377	2,468,479	<b>4.1</b>				
	2001		2,490,070		302,385	**	1,192,570	**
Cape Verde	1998	1,000	**	65,609	<b>1.5</b>			
	1999			67,226				
	2000	1,050	**	68,675	<b>1.5</b>			
	2001	1,424		69,954	<b>2.0</b>			
Chad	1998	2,885	1,149,267	<b>0.3</b>				
	1999	3,310	1,189,196	<b>0.3</b>				
	2000	3,310	**	1,230,269	<b>0.3</b>			
	2001			1,272,518				
Chile	1998	358,278	1,564,462	<b>22.9</b>				
	1999	370,016	1,596,519	<b>23.2</b>				
	2000	377,958	1,627,361	<b>23.2</b>				
	2001		1,656,458					
Colombia	1998							
	1999							
	2000							
	2001				178,841	977,243	<b>18.3</b>	
Comoros	1998	159	115,810	<b>0.1</b>				
	1999	116	**	118,464	<b>0.1</b>			
	2000	49		120,659	<b>0.0</b>			
	2001	226		122,326	<b>0.2</b>			
Congo	1998		516,942					
	1999		535,204					
	2000	20,327	**	553,293	<b>3.7</b>	2,598	13,403	<b>19.4</b>
	2001	18,196	**	571,077	<b>3.2</b>		12,164	
Costa Rica	1998		400,010					
	1999	46,596		412,333	<b>11.3</b>			
	2000	48,892		422,372	<b>11.6</b>			
	2001	59,384		429,813	<b>13.8</b>	13,758	79,182	<b>17.4</b>

Country	Year	ISCED 2-3 vocational enrolment as % of secondary school age population				ISCED 5B enrolment as % of all tertiary students			
		Enrolment		School Age Population	VGER	ISCED 5B Enrolment	Total ISCED 5 Enrolment	5B%	
Côte d'Ivoire	1998	25,699	**	2,633,288	1.0				
	1999			2,717,802					
	2000		**	2,789,254					
	2001		**	2,846,587					
Croatia	1998	161,652		475,435	34.0	23,362	95,889	24.4	
	1999	156,681		470,224	33.3				
	2000	155,360		463,441	33.5	30,460	104,168	29.2	
	2001	155,213		454,900	34.1	36,262	112,537	32.2	
Cuba	1998	183,515		932,024	19.7				
	1999	202,286		963,860	21.0				
	2000	226,761		988,832	22.9				
	2001	257,400		1,004,800	25.6		191,262		
Cyprus	1998	4,261		67,630	6.3	8,463	10,842	(169) 78.1	
	1999	4,392		68,190	6.4	7,825	10,414	75.1	
	2000	4,497		68,559	6.6	9,068	11,934	76.0	
	2001			65,910		10,771	13,927	77.3	
Czech Republic	1998	315,952		1,124,838	28.1		231,224		
	1999	347,320		1,089,054	31.9	32,345	253,695	12.7	
	2000	388,548		1,060,842	36.6	27,738	260,044	10.7	
	2001	391,928		1,042,272	37.6	27,977	284,485	9.8	
Denmark	1998	113,728		336,366	33.8		189,970		
	1999	119,878		332,356	36.1		189,158		
	2000			332,550		18,499	186,997	9.9	
	2001			337,334		20,142	196,204	10.3	
Djibouti	1998	2,207		95,700	2.3				
	1999	1,242		99,152	1.3				
	2000	1,280		102,220	1.3	261	496	52.6	
	2001	1,447		104,808	1.4				
Dominica	1998	1,351		8,333	16.2				
	1999	1,130							
	2000	957		7,818	12.2				
	2001								
Dominican Republic	1998	35,484		1,087,903	3.3				
	1999	36,352		1,105,156	3.3				
	2000	36,948	**	1,116,829	3.3				
	2001	36,622		1,122,134	3.3				
Ecuador	1998	173,703		1,601,883	10.8				
	1999	176,179		1,612,865	10.9				
	2000	185,166		1,623,311	11.4				
	2001	203,179		1,633,415	12.4				
Egypt	1998			9,489,591					
	1999			9,644,669					
	2000	2,420,734	**	9,753,650	24.8				
	2001	2,532,868	**	9,812,826	25.8				
El Salvador	1998	96,813		799,601	12.1				
	1999			787,757					
	2000	86,900	**	780,799	11.1				
	2001	86,226		779,780	11.1				
Equatorial Guinea	1998	1,254	**	64,738	1.9				
	1999	1,222		66,913	1.8				
	2000	1,254	**	69,118	1.8				
	2001	1,425		71,350	2.0				

Country	Year	ISCED 2-3 vocational enrolment as % of secondary school age population				ISCED 5B enrolment as % of all tertiary students			
		Enrolment		School Age Population	VGER	ISCED 5B Enrolment	Total ISCED 5 Enrolment	5B%	
Eritrea	1998	839		494,575	0.2		3,994		
	1999	1,266		513,296	0.2		4,135		
	2000	1,609		532,952	0.3		5,505		
	2001	1,662		553,328	0.3		5,507		
Estonia	1998	18,896		105,320	17.9	8,063	48,684	16.6	
	1999	18,000	**	107,262	16.8	7,204	53,613	13.4	
	2000	17,714		108,076	16.4	6,964	57,778	12.1	
	2001			107,638		7,862	60,648	13.0	
Ethiopia	1998	3,374		8,215,092	0.0		52,305		
	1999	7,738		8,491,343	0.1		67,732		
	2000	8,639		8,786,958	0.1		87,431		
	2001	8,716	**	9,104,496	0.1		101,829		
Fiji	1998			122,948					
	1999			122,141					
	2000	2,733	**	121,162	2.3				
	2001	2,895	**	120,011	2.4				
Finland	1998			396,938			258,466		
	1999	161,805		394,063	41.1	15,250	270,185	5.6	
	2000	170,466		391,601	43.5	6,959	279,628	2.5	
	2001					2,447	283,805	0.9	
France	1998	1,515,437		5,435,320	27.9				
	1999	1,505,783		5,455,250	27.6				
	2000	1,461,392		5,453,912	26.8				
	2001					502,927	2,029,179	24.8	
Gabon	1998	6,161		189,334	3.3				
	1999	6,377	**	195,345	3.3				
	2000	6,605	**	201,148	3.3				
	2001	7,587		206,704	3.7				
Gambia	1998	337		153,115	0.2				
	1999	373		159,143	0.2		1,169		
	2000	405		165,042	0.2				
	2001	417	**	170,781	0.2				
Georgia	1998	25,225		605,163	4.2		130,164		
	1999	23,705		602,249	3.9		137,046		
	2000	20,703		594,234	3.5		140,627		
	2001	19,537		580,526	3.4		149,142		
Germany	1998	1,729,976		8,339,190	20.7		2,087,044	(169)	
	1999	1,735,846		8,427,574	20.6	312,604	2,054,838	15.2	
	2000	1,740,473		8,478,369	20.5	317,211	2,083,945	15.2	
	2001	1,753,409		8,484,615	20.7	324,150			
Ghana	1998	22,947		2,790,157	0.8				
	1999	13,830	**	2,848,175	0.5	21,857	54,658	40.0	
	2000	14,090		2,899,191	0.5	23,824	64,098	37.2	
	2001	15,172	**	2,942,751	0.5	20,439	68,389	29.9	
Greece	1998	101,362		821,014	12.3				
	1999	119,644		799,081	15.0				
	2000	134,515		776,900	17.3				
	2001			754,599		171,561	529,233	32.4	
Guatemala	1998	134,986	**	1,302,393	10.4				
	1999	132,090		1,333,803	9.9				
	2000	144,758		1,364,908	10.6				
	2001	156,439		1,653,714	9.5				

Country	Year	ISCED 2-3 vocational enrolment as % of secondary school age population				ISCED 5B enrolment as % of all tertiary students			
		Enrolment		School Age Population	VGER	ISCED 5B Enrolment	Total ISCED 5 Enrolment	5B%	
Guinea-Bissau	1998			140,740					
	1999	869		144,921	0.6				
	2000			149,424					
	2001			154,283					
Guyana	1998	7,353		81,966	9.0				
	1999	7,494	**	79,418	9.4				
	2000			77,110					
	2001			75,081					
Hong Kong (China), SAR	1998								
	1999								
	2000	10,812		624,705	1.7	39,095	128,052	30.5	
	2001	9,675		617,576	1.6	44,327	134,038	33.1	
Hungary	1998	55,044		1,056,616	5.2		279,397		
	1999	50,821		1,020,248	5.0	2,153	305,702	0.7	
	2000			993,430		6,724	330,549	2.0	
	2001	65,400		978,206	6.7	9,560	354,386	2.7	
Iceland	1998	6,439		29,693	21.7		8,462		
	1999	6,576		29,804	22.1	829	9,667	8.6	
	2000	7,149		29,936	23.9				
	2001			30,084		789	11,584	6.8	
India	1998			122,108,039					
	1999	618,116		146,798,516	0.4				
	2000	513,548		149,368,719	0.3	77,993	9,834,046	0.8	
	2001			151,602,188		81,656	10,576,653	0.8	
Indonesia	1998			26,024,475					
	1999	2,053,893	**	26,087,959	7.9				
	2000			26,127,654					
	2001			26,145,623		748,307	3,175,833	23.6	
Iran, Islamic Republic of	1998	586,235		12,574,722	4.7				
	1999	673,343		12,747,541	5.3				
	2000	698,697		12,851,880	5.4				
	2001	736,199		12,894,245	5.7				
Iraq	1998	66,725		3,091,656	2.2		271,508		
	1999	75,808		3,195,816	2.4		288,670		
	2000			3,292,472					
	2001			3,380,098					
Ireland	1998						151,137		
	1999					65,329	160,611	40.7	
	2000					62,718	166,600	37.6	
	2001					68,599	176,296	38.9	
Israel	1998	138,825		626,933	22.1		245,963		
	1999	113,337		632,168	17.9	50,288	255,891	19.7	
	2000	115,424		637,257	18.1	58,797	270,979	21.7	
	2001	125,674		642,206	19.6	63,094	299,716	21.1	
Italy	1998						1,797,241		
	1999	636,068		4,747,720	13.4	26,938	1,770,002	1.5	
	2000	688,093		4,663,231	14.8	43,705	1,812,325	2.4	
	2001					22,887	1,854,200	1.2	
Jamaica	1998								
	1999	457		273,887	0.2				
	2000	498		273,319	0.2				
	2001	371		273,109	0.1	25,517	45,394	56.2	

Country	Year	ISCED 2-3 vocational enrolment as % of secondary school age population			ISCED 5B enrolment as % of all tertiary students			
		Enrolment	School Age Population	VGER	ISCED 5B Enrolment	Total ISCED 5 Enrolment	5B%	
Japan	1998	1,170,216	8,803,820	13.3		3,940,756		
	1999	1,144,475	8,603,059	13.3	1,066,925	3,982,069	26.8	
	2000	1,125,375	8,397,453	13.4	1,015,309	3,972,468	25.6	
	2001	1,091,676	8,183,613	13.3	980,492	3,966,667	24.7	
Jordan	1998	41,821	666,910	6.3				
	1999	41,534	677,842	6.1				
	2000		689,128					
	2001	42,169	700,939	6.0	19,177	162,688	11.8	
Kazakhstan	1998	94,863	2,249,472	4.2				
	1999	89,863	2,275,233	3.9				
	2000	86,089	2,284,373	3.8				
	2001	87,327	2,275,843	3.8				
Kenya	1998	16,720	**	3,870,454	0.4			
	1999	16,500		3,986,905	0.4	41,712	89,016	46.9
	2000	16,638	**	4,084,602	0.4	45,602	95,104	47.9
	2001	24,500		4,162,498	0.6		98,607	**
Kuwait	1998	3,991	**	240,454	1.7			
	1999	4,145		260,094	1.6			
	2000	4,237	**	275,616	1.5			
	2001	4,470	**	285,730	1.6			
Kyrgyzstan	1998	25,469		741,963	3.4		131,222	**
	1999	26,541		764,832	3.5		134,096	**
	2000	26,541		783,079	3.4		190,508	
	2001	25,903		796,121	3.3		209,245	
Lao People's Democratic Republic	1998	3,110		718,312	0.4	7,456	12,076	61.7
	1999	3,789		744,179	0.5	8,054	14,149	56.9
	2000	4,019		768,087	0.5	9,995	16,745	59.7
	2001	4,542		789,654	0.6	20,916	28,540	73.3
Latvia	1998	35,067		288,861	12.1	5,389	82,042	6.6
	1999	39,985		294,022	13.6	6,268	91,237	6.9
	2000	40,009		295,968	13.5	10,867	102,783	10.6
	2001			294,335		16,408	110,500	14.8
Lebanon	1998	38,280		480,602	8.0			
	1999	39,642		491,628	8.1	12,145	116,014	10.5
	2000	39,959		426,532	9.4	14,531	134,018	10.8
	2001	41,466		434,478	9.5	18,221	142,951	12.7
Lesotho	1998	973	*	227,876	0.4	856	4,046	21.2
	1999	1,183		231,414	0.5		3,524	
	2000	1,321		234,184	0.6	2,028	4,449	45.6
	2001	1,347		236,158	0.6	2,025	5,005	40.5
Liberia	1998	19,752		373,198	5.3			
	1999	45,067		400,545	11.3	17,416	52,251	33.3
	2000			424,854				
	2001			445,271				
Libyan Arab Jamahiriya	1998			811,762				
	1999			812,142			290,060	
	2000	245,165		804,192	30.5			
	2001	183,393		787,129	23.3			
Lithuania	1998	51,357		425,076	12.1	32,887	107,419	30.6
	1999			434,485		37,559	121,904	30.8
	2000	43,594		439,853	9.9	40,330	135,923	29.7
	2001			440,518		41,875	148,788	28.1

Country	Year	ISCED 2-3 vocational enrolment as % of secondary school age population			ISCED 5B enrolment as % of all tertiary students		
		Enrolment	School Age Population	VGER	ISCED 5B Enrolment	Total ISCED 5 Enrolment	5B%
Luxembourg	1998	10,622	35,251	30.1		2,717	
	1999	10,853	34,943	31.1	1,886	2,437	77.4
	2000	11,172	34,977	31.9	1,053	2,533	41.6
	2001				1,179	2,965	39.8
Macao (China)	1998	1,361	42,197	3.2	2,163	7,458	29.0
	1999	2,190	44,877	4.9	2,167	7,471	29.0
	2000	2,478	46,919	5.3			
	2001	2,588	48,234	5.4	2,521	20,420	12.3
Madagascar	1998	12,691	2,426,736	0.5			
	1999		2,496,347				
	2000		2,568,633		6,070	31,386	19.3
	2001		2,643,368		6,611	32,593	20.3
Malaysia	1998		3,103,212				
	1999	124,816	3,141,753	4.0			
	2000	131,511	3,183,433	4.1			
	2001	134,302	3,227,385	4.2	263,602	557,118	47.3
Maldives	1998		33,658				
	1999		35,091				
	2000	1,154	36,306	3.2			
	2001	2,139	37,273	5.7			
Mali	1998	26,784	1,602,453	1.7			
	1999		1,649,023				
	2000		1,697,622				
	2001		1,748,410				
Malta	1998	4,445	40,862	10.9		5,768	(40)
	1999	3,636	40,601	9.0	1,079	6,315	17.1
	2000	4,286	40,290	10.6	1,204	7,422	16.2
	2001		39,944		1,325	7,259	18.3
Mauritania	1998	1,682	338,854	0.5			
	1999	1,871	346,636	0.5			
	2000	1,916	354,837	0.5			
	2001	1,893	363,510	0.5			
Mauritius	1998	7,153	144,506	4.9	4,314	7,559	57.1
	1999	8,883	140,509	6.3	3,993	8,256	48.4
	2000	9,984	137,858	7.2	7,396	12,469	59.3
	2001	11,136	136,788	8.1	6,929	12,602	55.0
Mexico	1998	1,238,452	12,618,575	9.8		1,837,884	
	1999	1,367,199	12,670,774	10.8	43,750	1,962,763	2.2
	2000	1,413,243	12,732,568	11.1	53,633	2,047,895	2.6
	2001	1,448,550	12,805,513	11.3	62,049	2,147,075	2.9
Micronesia (Federated States of)	1998	610	61,372	1.0			
	1999		62,432				
	2000		63,583				
	2001		64,833				
Mongolia	1998	11,650	352,228	3.3	4,094	64,272	6.4
	1999	9,251	360,163	2.6	4,371	74,025	5.9
	2000	12,177	366,397	3.3	4,224	84,970	5.0
	2001	13,056	370,872	3.5	3,605	90,275	4.0
Morocco	1998	103,448	3,895,595	2.7	2,700	273,183	1.0
	1999	100,112	3,920,221	2.6	5,555	276,375	2.0
	2000	104,745	3,929,836	2.7		310,258	
	2001		3,923,770				

Country	Year	ISCED 2-3 vocational enrolment as % of secondary school age population				ISCED 5B enrolment as % of all tertiary students			
		Enrolment		School Age Population	VGER	ISCED 5B Enrolment	Total ISCED 5 Enrolment	5B%	
Mozambique	1998	15,581	**	2,748,829	0.6				
	1999	20,573		2,845,208	0.7		9,303	**	
	2000	20,047		2,940,888	0.7				
	2001	20,880		3,035,143	0.7				
Myanmar	1998								
	1999								
	2000					2,600	553,456	0.5	
	2001								
Namibia	1998					8,711	11,209	77.7	
	1999								
	2000								
	2001					3,890	11,266	34.5	
Nepal	1998	28,462		3,569,241	0.8				
	1999	18,463		3,664,006	0.5		94,401		
	2000	20,856		3,758,601	0.6		103,290		
	2001	20,546		3,852,520	0.5		119,670		
Netherlands	1998	456,479		1,096,982	41.6		469,885		
	1999	464,948		1,111,932	41.8	7,485	487,649	1.5	
	2000	487,832		1,127,805	43.3	7,265	504,042	1.4	
	2001					7,252	510,843	1.4	
Netherlands Antilles	1998	2,064		20,587	10.0				
	1999	6,440		20,782	31.0	1,682	2,561	65.7	
	2000	5,554		21,000	26.4	1,567	2,433	64.4	
	2001	6,158		21,242	29.0				
New Zealand	1998			378,821		41,882	161,288	26.0	
	1999			386,858		41,596	167,308	24.9	
	2000	70,116	**	394,974	17.8	43,156	171,962	25.1	
	2001			403,020			177,634		
Nicaragua	1998	15,481	**	593,953	2.6				
	1999	17,324	**	606,562	2.9				
	2000	17,856		617,206	2.9				
	2001	18,738		625,354	3.0				
Niger	1998	6,571		1,569,539	0.4				
	1999	6,402	**	1,620,407	0.4				
	2000	5,888	**	1,672,847	0.4	64	3,606	1.8	
	2001	2,736		1,727,046	0.2				
Norway	1998	119,238		313,986	38.0		187,482		
	1999	122,294		317,816	38.5	15,445	190,944	8.1	
	2000	119,650		322,830	37.1	13,308	190,054	7.0	
	2001					9,358	197,064	4.7	
Pakistan	1998	75,093	*	22,787,936	0.3				
	1999	90,829	*	23,516,941	0.4				
	2000	82,714	*	24,207,367	0.3				
	2001			24,854,631					
Palestinian Authority	1998	2,274		563,700	0.4	5,436	66,282	8.2	
	1999	2,898		591,884	0.5	5,157	71,207	7.2	
	2000	3,605		618,094	0.6	4,964	80,543	6.2	
	2001	4,045		641,567	0.6	5,313	88,930	6.0	
Panama	1998	101,000	**	339,073	29.8				
	1999	101,309		344,146	29.4				
	2000	99,976		348,712	28.7				
	2001	101,170		352,631	28.7				

Country	Year	ISCED 2-3 vocational enrolment as % of secondary school age population				ISCED 5B enrolment as % of all tertiary students			
		Enrolment		School Age Population	VGER	ISCED 5B Enrolment	Total ISCED 5 Enrolment	5B%	
Papua New Guinea	1998	15,663		649,341	2.4				
	1999	15,579		667,751	2.3				
	2000	14,484		686,343	2.1				
	2001	14,827	**	704,552	2.1				
Paraguay	1998	22,512		723,696	3.1				
	1999	31,136		746,066	4.2				
	2000	34,639		766,261	4.5				
	2001	39,861		783,929	5.1	34,554			
Peru	1998	293,713		2,706,322	10.9				
	1999			2,731,990					
	2000			2,761,231					
	2001			2,794,699					
Philippines	1998			6,747,002					
	1999			6,865,801					
	2000			6,985,416					
	2001			7,106,100		216,550	2,467,267	8.8	
Poland	1998	1,768,262		4,011,499	44.1		1,399,090		
	1999	1,758,058		3,981,262	44.2	18,020	1,579,571	1.1	
	2000	1,725,570		3,924,128	44.0	17,809	1,774,985	1.0	
	2001	1,338,304		3,838,386	34.9	19,421	1,906,268	1.0	
Portugal	1998	102,730		773,651	13.3				
	1999	98,490		742,080	13.3	18,713	373,745	5.0	
	2000	114,438		715,560	16.0				
	2001			694,831		7,109	393,738	1.8	
Qatar	1998	741		48,107	1.5		8,880	**	
	1999	760		50,773	1.5				
	2000	593		52,902	1.1		7,808		
	2001	552		54,349	1.0		7,831		
Republic of Korea	1998			4,372,988		1,062,173	2,636,388	40.3	
	1999	860,150	**	4,283,285	20.1	1,143,292	2,837,880	40.3	
	2000	753,587		4,203,949	17.9	1,224,180	3,003,498	40.8	
	2001	656,606		4,135,080	15.9	1,284,723	3,129,899	41.0	
Republic of Moldova	1998	32,476		575,489	5.6		105,493		
	1999	22,972		579,648	4.0	20,572	106,053	19.4	
	2000	22,804		578,544	3.9	19,946	102,825	19.4	
	2001	22,999		571,801	4.0				
Romania	1998	654,738		2,812,534	23.3	27,244	407,720	(169) 6.7	
	1999	573,110		2,776,696	20.6	36,028	452,621	8.0	
	2000	592,465		2,732,079	21.7	49,080	533,152	9.2	
	2001			2,679,398		55,070	582,221	9.5	
Russian Federation	1998	1,353,100		16,959,863	8.0				
	1999			16,921,836					
	2000			16,631,479					
	2001	1,399,112		16,059,577	8.7	2,462,966	8,022,791	30.7	
Rwanda	1998	13,794		951,955	1.4				
	1999	22,033	**	1,044,913	2.1				
	2000	19,923		1,114,720	1.8				
	2001	20,662	**	1,155,842	1.8				
Samoa	1998								
	1999								
	2000					950	1,182	80.4	
	2001								

Country	Year	ISCED 2-3 vocational enrolment as % of secondary school age population			ISCED 5B enrolment as % of all tertiary students			
		Enrolment	School Age Population	VGER	ISCED 5B Enrolment	Total ISCED 5 Enrolment	5B%	
San Marino	1998							
	1999	282			811	942	86.1	
	2000							
	2001							
Sao Tome and Principe	1998		19,156					
	1999		19,135					
	2000	40	19,023	0.2		181		
	2001	40	18,809	0.2				
Saudi Arabia	1998	33,797	2,612,943	1.3	16,329	349,599	4.7	
	1999	33,161	2,698,199	1.2	47,916	404,094	11.9	
	2000	35,503	2,787,462	1.3				
	2001	40,098	2,881,873	1.4				
Senegal	1998	9,180	**	1,436,692	0.6			
	1999	6,334	**	1,476,918	0.4			
	2000	6,452	**	1,517,695	0.4			
	2001	5,952	**	1,559,281	0.4			
Serbia and Montenegro	1998	278,497		882,180	31.6	42,216 (154)	197,410 (154)*	21.4
	1999	274,314		870,635	31.5	61,147	233,043	26.2
	2000	267,129		858,035	31.1	50,901	208,689	24.4
	2001			858,035				
Sierra Leone	1998			560,228				
	1999			572,777		5,098	6,744	75.6
	2000	21,454		589,547	3.6	4,938	8,913	55.4
	2001			611,185			9,041	**
Slovakia	1998	240,606		791,475	30.4		122,886	
	1999	206,629		775,648	26.6	5,605	135,914	4.1
	2000	205,610		759,862	27.1	6,001	143,909	4.2
	2001	210,209		744,739	28.2	6,109	152,182	4.0
Slovenia	1998	87,544		222,876	39.3	32,891	79,126	41.6
	1999	84,534		217,225	38.9	38,267	83,816	45.7
	2000	90,408		211,308	42.8	44,682	91,494	48.8
	2001			205,228		48,261	99,214	48.6
South Africa	1998	160,351	*	4,725,717	3.4	51,490	633,918	8.1
	1999	160,351		4,797,302	3.3		632,911	
	2000	198,328		4,854,544	4.1		644,763	
	2001	199,937	**	4,893,933	4.1	93,927	658,588	14.3
Spain	1998	444,318		3,029,177	14.7		1,786,778	
	1999	409,189		2,902,579	14.1	159,569	1,828,987	8.7
	2000	432,196		2,787,536	15.5	199,358	1,833,527	10.9
	2001	443,665		2,686,155	16.5	225,327	1,832,760	12.3
St. Kitts and Nevis	1998							
	1999	586	**					
	2000	511		3,985	12.8			
	2001							
St. Lucia	1998			15,419				
	1999	519		15,046	3.4			
	2000			14,834				
	2001			14,821				

Country	Year	ISCED 2-3 vocational enrolment as % of secondary school age population				ISCED 5B enrolment as % of all tertiary students			
		Enrolment		School Age Population	VGER	ISCED 5B Enrolment	Total ISCED 5 Enrolment	5B%	
St. Vincent and the Grenadines	1998			14,240					
	1999	1,814	**	14,279	12.7				
	2000	1,795	**	14,238	12.6				
	2001	1,763		14,112	12.5				
Sudan	1998	24,270	**	3,382,891	0.7				
	1999	25,708		3,437,981	0.7				
	2000	30,657		3,500,739	0.9				
	2001	31,028		3,571,787	0.9				
Suriname	1998			59,053					
	1999			59,120					
	2000	19,613		58,601	33.5				
	2001	19,170		57,379	33.4		5,186		
Swaziland	1998	355	**	125,560	0.3	902	4,880	18.5	
	1999	366	**	129,128	0.3	330	4,738	7.0	
	2000	377	**	132,471	0.3		4,762	**	
	2001	348	**	135,558	0.3		5,193		
Sweden	1998			602,159			335,124		
	1999	282,478		611,178	46.2	13,877	346,878	4.0	
	2000	293,265		624,146	47.0	13,501	358,020	3.8	
	2001	275,887		641,389	43.0	13,615	382,851	3.6	
Switzerland	1998	175,874		544,876	32.3		156,390		
	1999	179,474		549,980	32.6	34,506	156,879	22.0	
	2000	180,156		555,659	32.4	33,624	163,373	20.6	
	2001					34,627	170,085	20.4	
Syrian Arab Republic	1998	104,434		2,534,638	4.1				
	1999	113,750		2,590,990	4.4				
	2000	114,595		2,630,507	4.4				
	2001	117,505		2,651,687	4.4				
Tajikistan	1998	24,688		1,015,076	2.4				
	1999	23,827		1,051,514	2.3				
	2000	24,450		1,079,066	2.3		78,540		
	2001	25,323		1,096,407	2.3		85,171		
Thailand	1998			6,904,180					
	1999			6,819,128					
	2000	634,881		6,738,423	9.4				
	2001	592,370		6,664,045	8.9	445,800	2,155,334	20.7	
The Former Yugoslav Rep. of Macedonia	1998	59,027		265,855	22.2	2,429	35,141 (169)	6.9	
	1999	59,665		264,411	22.6	2,532	36,922	6.9	
	2000	59,087		262,637	22.5	2,444	40,246	6.1	
	2001			260,558		3,120	44,710	7.0	
Togo	1998	15,464		690,798	2.2				
	1999	17,287	**	714,942	2.4	256	15,171	1.7	
	2000		**	738,278					
	2001		**	760,520					
Tonga	1998	575		14,644	3.9				
	1999	896		14,418	6.2				
	2000	878	**	14,261	6.2				
	2001	830	**	14,184	5.9				
Trinidad and Tobago	1998	2,000	**	143,191	1.4				
	1999	2,014	**	141,738	1.4	1,340	7,737	17.3	
	2000	2,100	**	139,224	1.5	1,300	8,614	15.1	
	2001	2,500	**	135,619	1.8	1,612	9,867	16.3	

Country	Year	ISCED 2-3 vocational enrolment as % of secondary school age population				ISCED 5B enrolment as % of all tertiary students			
		Enrolment		School Age Population	VGER	ISCED 5B Enrolment	Total ISCED 5 Enrolment	5B%	
Tunisia	1998			1,451,547					
	1999	88,761		1,463,742	<b>6.1</b>				
	2000	78,942		1,472,607	<b>5.4</b>				
	2001	63,648		1,478,359	<b>4.3</b>		226,102	** (8)	
Turkey	1998			7,057,935					
	1999	1,129,606		7,134,772	<b>15.8</b>	218,099	1,015,412		<b>21.5</b>
	2000	1,121,291		7,194,882	<b>15.6</b>				
	2001	1,240,288		7,236,776	<b>17.1</b>	401,969	1,677,936		<b>24.0</b>
Uganda	1998	38,113		3,086,735	<b>1.2</b>	19,198	40,591		<b>47.3</b>
	1999			3,187,969		25,276	55,066		<b>45.9</b>
	2000	28,043		3,288,496	<b>0.9</b>	26,393	62,586		<b>42.2</b>
	2001	30,734	**	3,387,928	<b>0.9</b>		71,544	**	
Ukraine	1998	354,343	**	5,356,104	<b>6.6</b>	503,687	1,736,999		<b>29.0</b>
	1999	348,132	**	5,364,353	<b>6.5</b>	525,652	1,954,817	**	<b>26.9</b>
	2000	346,106		5,328,967	<b>6.5</b>	528,041	1,955,371		<b>27.0</b>
	2001	333,634		5,149,541	<b>6.5</b>	561,265	2,134,676		<b>26.3</b>
United Arab Emirates	1998	1,772		245,378	<b>0.7</b>				
	1999	1,713		260,378	<b>0.7</b>				
	2000	1,659		273,743	<b>0.6</b>				
	2001	1,667		285,223	<b>0.6</b>				
United Kingdom	1998	3,898,368		5,133,669	<b>75.9</b>		2,080,960		
	1999	4,042,939		5,221,775	<b>77.4</b>	612,162	2,024,138		<b>30.2</b>
	2000	4,051,489		5,303,521	<b>76.4</b>	644,514	2,067,349		<b>31.2</b>
	2001					710,923	2,240,680		<b>31.7</b>
United Republic of Tanzania	1998	22,881	**	4,520,097	<b>0.5</b>	10			
	1999	23,567	**	4,659,889	<b>0.5</b>				
	2000			4,800,849			21,960		
	2001			4,943,167					
United States	1998						13,769,362		
	1999					2,764,387	13,202,880		<b>20.9</b>
	2000					2,947,624	13,595,580		<b>21.7</b>
	2001					599,701	15,927,987		<b>3.8</b>
Uruguay	1998			311,510					
	1999			310,045					
	2000	59,397		309,943	<b>19.2</b>				
	2001	61,227		311,454	<b>19.7</b>	20,968	99,301		<b>21.1</b>
Uzbekistan	1998			3,963,346					
	1999			4,096,005					
	2000			4,207,753					
	2001	373,615	**	4,296,278	<b>8.7</b>	8,203	227,490	**	<b>3.6</b>
Vanuatu	1998	1,660	**	33,587	<b>4.9</b>				
	1999	1,665		35,172	<b>4.7</b>				
	2000	1,173		36,590	<b>3.2</b>				
	2001	892		33,723	<b>2.6</b>				
Venezuela	1998	33,660		2,530,009	<b>1.3</b>				
	1999	41,129		2,570,146	<b>1.6</b>				
	2000	50,941	**	2,606,929	<b>2.0</b>				
	2001	53,622		2,640,273	<b>2.0</b>				

Country	Year	ISCED 2-3 vocational enrolment as % of secondary school age population			ISCED 5B enrolment as % of all tertiary students		
		Enrolment	School Age Population	VGER	ISCED 5B Enrolment	Total ISCED 5 Enrolment	5B%
Viet Nam	1998	178,244	11,963,701	1.5		810,072	
	1999	182,994	12,192,284	1.5	186,779	732,187	25.5
	2000	200,225	12,405,624	1.6	199,415	749,914	26.6
	2001	194,831	12,607,862	1.5	217,472	784,675	27.7
Yemen	1998	9,389	2,486,129	0.4			
	1999	10,826	2,591,687	0.4			
	2000		2,696,489				
	2001		2,800,428				
Zambia	1998	5,788	1,142,998	0.5	9,262	22,701	40.8
	1999	5,892	1,172,573	0.5		23,155	**
	2000	6,398	1,202,162	0.5		24,553	**
	2001	6,967	1,231,627	0.6			

**NOTES**

\* National estimate

\*\* UIS estimate

Countries only shown where data exist for ISCED 2 vocational streams, or ISCED5 enrolment figures. A blank cell or absence from this table does not imply that there is no vocational training at this level.



## V

## Reports of Working Groups

The focus of the Meeting was an assessment of the extent, and ways in which, the recommendations on TVET from the Seoul conference are being implemented by UNESCO Member States with particular reference to the three themes of:

- A. Learning for Skills Development
- B. Transition to the World of Work.
- C. TVET for Sustainable Development.

Following the Keynote and Orienting Presentations, much of the business of the Meeting was conducted through three Working Groups, one on each of these three themes. This section contains a summary of the deliberations of these three Groups.

### Working Group A. Learning for Skills Development

Group A was structured in five sections: (A1) *Globalisation and TVET Policy Reform*, (A2) *TVET and EFA Planning*; (A3) *TVET at the Secondary Level: Developing Key Generic Competencies*; (A4) *Improving Access and Equity*; and (A5) *Non-formal TVET Skills for Poverty Alleviation*. Each section responded to discussion questions and, following thematic presentations and deliberations, generated issues.

Session (A1) was chaired by Mr Abdul-Wahab Al-Akil of Yemen. Thematic presentations for Group (A1) were: a case study on Belize by Mr Ernest Raymond and a case study on India by Dr M. J. Ravindranath. The third presentation was made by Mr Arvil Van Adams of the World Bank, who asserted that *Globalisation* refers to the growing integration of economies in societies, through the flow of information, ideas, activities, technologies, goods and services, capital and people. Countries cannot escape or reverse globalisation, except at very high cost to individual freedom. The problem for many of the poor is not the effects of globalisation, but rather the consequences of being left out of globalisation. TVET is part of this picture in terms of its responsiveness to open markets and change.

Session (A2) was chaired by Mr Gunnar Mandt from Norway and the introductory speech was given by Mr David Atchoarena of UNESCO-IIEP, followed by a case study of Lao PDR by Dr Phonphet Boupha. The issues raised in (A1) *Globalisation and TVET Policy Reform* were: (1) The need for recognition of private sector contributions to TVET, since no single institution can fully finance TVET; (2) The need to implement compensation for those impacted negatively by globalisation; (3) We can no longer accept TVET systems that are not responsive.

Issues raised in (A2) *TVET and EFA Planning* were:

- (1) An all-round, humanistic component is essential to any technical and vocational training;

- (2) Introducing TVET at a very early stage into the curriculum may prevent dropouts from leaving school without any employable skills;
- (3) Skills required should not be looked at solely from the point of view of the education system, but also from that of employers; and
- (4) Attitudinal skills must be taught in TVET to prepare students for lifelong learning and increase their chances of becoming flexible.

TVET reform in Norway identified five basic competencies to be integrated at all levels and areas of the curriculum: (1) reading ability; (2) writing ability; (3) expression; (4) mathematical skills; and (5) ICT competencies. An IIEP/UNESCO pilot project assisted five countries to ensure integration of skills development components to improve equitable access to appropriate learning and life-skills programmes called for in EFA Goal no. 3. In Lao PDR, education for self-employment was considered the best means for poverty reduction.

Section (A3) was chaired by Mr Zoana Blaise of Madagascar and the introductory speech was given by Mr Teeluck Bhuwane, UNESCO, BREDA, followed by country reports from Japan by Mr Shigeru Ikemori; Kenya by Mr Meshack Kidenda; Finland by Ms Heli Kuusi; and the Russian Federation by Prof. Evgeny Butko. Issues raised in (A3) *TVET at the Secondary Level* were:

- (1) There is need to increase the number of young people in TVET;
- (2) Articulation between TVET and General Secondary Education (GSE) should be improved;
- (3) TVET programmes must be made flexible so that they are transferable between GSE and TVET curricula; and
- (4) Integrating TVET into GSE must be done in close collaboration with social partners.

To establish better links between TVET and GSE, a cluster of essential generic competencies was called for. These include: (i) collecting, analysing and organising information, (ii) communicating ideas and information, (iii) planning and organizing activities, (iv) working with others in teams, (v) using mathematical ideas and techniques, (vi) solving problems, (vii) using technology.

The (A4) thematic presentation was given by Mr Efison Munjanganja of UNESCO, Bangkok. Case studies for (A4) *Improving Access and Equity* were presented by Mr Jones Chafa from Malawi, *The Technical, Entrepreneurial and Vocational Education and TVET System in Malawi*, and Mr Ernest Raymond from Belize, *Enhancement of Technical Vocational Education and Training Project*. Issues raised included:

- (1) Access to TVET requires an active policy which allows: (i) structuring of the organisation of TVET; (ii) articulation of response abilities and actions at both national and local levels; (iii) focus on particular groups, if necessary through establishing quotas; (iv) defining complementary forms of recognition of competencies: both formal and non-formal; and
- (2) Access to TVET for disenfranchised groups also required particular actions: (i) financial aid to structures (building and equipping training centres) and people; (ii) training in basic skills, such as literacy; (iii) flexible organisation of programmes; (iv) partnerships with the private sector, which does not necessarily mean adapting completely to the needs of business; and (v) training of trainers.

The (A5) thematic presentation was given by Mr David Atchoarena, followed by case studies from Mexico by Mr S. Aguado Gutierrez, and Yemen by Mr Abdul-Wahab Al-Akil. Issues raised in (A5) *Non-formal TVET Skills for Poverty Alleviation* were:

- (1) There is need for a local approach, as development always starts in the local sphere;
- (2) Rural/urban migration patterns should be recognised;
- (3) There is need for skills development mapping at the local level;
- (4) Impact of globalisation should be recognised; and
- (5) Basic skills should be seen as a public good.

Although there is empirical evidence that TVET contributes to productivity, there is no direct relationship between investment in TVET and poverty reduction. Although Skills for Poverty Alleviation refer to primary education and gender equity, they do not refer to other EFA goals. Poverty is a multi-dimensional phenomenon and there is a need to develop skills development "mapping" at the local level. Rural-urban migration patterns should be recognised and TVET should be aware that the provision of skills training in rural areas may not automatically lead to the reduction of poverty, due to migration to rural areas.

## Working Group B. Transition to the World of Work

Group B was also structured in five sections: (B1) *Aligning TVET to the Labour Market*; (B2) *Skills for the Future: Guidance and Counseling*; (B3) *Lifelong Learning*, (B4) *TVET for Countries in Crisis*; and (B5) *Statistical Measurement of TVET*.

Session (B1) was chaired by Mr Nuru Yakubu, NBTE, Nigeria. The introductory paper for (B1) by Mr Trevor Riordan, ILO, stressed that lifelong learning is based on three fundamental principles: (a) the belief that literacy and basic education are fundamental for continual learning throughout a lifetime, (b) the belief that learning occurs in many and varied settings, and (c) the notion that learners should be motivated for the process of learning. The *learning society* has been visualised as a goal for the future globalised society and it has been recognised that the pursuit of lifelong learning is a societal endeavour, rather than merely an educational venture. The challenges include: (i) reviewing and strengthening the base on which lifelong learning is built, (ii) to engage all partners – the state, enterprises and individuals – and to benefit from the multiplicity of learning contexts, experiences and competencies – at work, in small enterprises, in the community, in trade unions and in social movements, and (iii) to promote conducive and motivating learning environments and a culture of learning and teaching. National case studies were presented on Bahrain by Mr Hassan Saleh Mubarak and Mauritius by Mr Pradeep Kumar Joosery.

The issues raised in (B1) *Aligning TVET to the Labour Market* included:

- (1) The problems of matching the skills needed in industry and TVET provision across the world are similar;
- (2) Degree and diploma graduates tend to have the highest employment outcomes;
- (3) There is a crisis situation in TVET in some developing countries;
- (4) Issues in developed countries tend to revolve around ageing populations;

- (5) Partnerships are required between industry and training providers;
- (6) The role of government is critical – institutional and structural reform, funding and management;
- (7) The closer TVET is to the workplace, the better the chance of a closer match between skills requirements and training provision.

Session (B2) was chaired by Ms Liisa Vehkaoja, EVTEK, Finland, and the thematic presentation was by Mr Brian Hiebert, IAEVG, and Mr William Borgen, IAC, of Canada.

The issues in (B2) *Skills for the Future: Guidelines and Counseling* are:

- (1) Guidance and Counseling – in fact a different view of TVET, providing a focus on the consumers of TVET, i.e. young people navigating the learning and labour markets and a different perspective on the concept of "sustainability";
- (2) Global changes – labour shortages, new technologies, perceptions of TVET;
- (3) What is required is: (i) a flexible approach to education and training guided by a vision for one's life; (ii) sustainability for people across career choices; (iii) blurring of boundaries between education and work; (iv) circles of education and training – overlap with work and allowing for mobility; (v) collaboration and partnerships – who provides guidance and counseling in a lifelong learning context;
- (4) Initiatives from Fiji – career pathways for those returning to study;
- (5) Initiatives from Saudi Arabia – walking the talk.

Session (B3) was chaired by Ms Eliane Clifit-Minot, European Commission. The introductory presentation to Session B3 was given by Dr Madhu Singh of the UIE, Hamburg. She was followed by case studies from France, Ms Maryannick Malicot, Ministère de l'éducation nationale; Australia, by Mr Tom Karmel, NCVET; and Jamaica, by Mr Patrick Facey of the Ministry of Education.

The issues in (B3) *Lifelong Learning*, in a provocative discussion were:

- (1) Lifelong learning is a continuous process, integrating learning vertically and horizontally;
- (2) It is questionable whose knowledge we are talking about;
- (3) Fundamental change is required in teaching and learning systems – Australian open system is an example of a holistic approach;
- (4) Individual motivation is a key to lifelong learning;
- (5) European Union goals – to improve quality, access, open systems to the wider world. Priority areas include: (i) transparency of qualifications, (ii) validation of formal and informal learning, (iii) counseling and improving quality;
- (6) The French example of how lifelong learning can decrease the number of dropouts from the school system indicates the importance of individuals seeing the value of lifelong learning;
- (7) Quality and the relevance of training are important reasons for participation in educational change throughout a person's life;
- (8) National policy trends tend to be *top down* – an approach that is not always the most effective;
- (9) The teacher is crucial to the lifelong learning process – what is the role of the teacher and what is required to ensure that teachers can meet these expectations?

Session (B4) was chaired by Minister Youssouf Soumahoro, Côte d'Ivoire. Mr Kacem Bensalah, UNESCO, Paris, gave the thematic presentation, followed by case studies from Somalia, by Mr James Wamwangi; Cambodia, by Mr Phearin Bun; and Sierra Leone, by Mr Mohammed Jalloh.

The issues in (B4) *TVET for Countries in Crisis* were:

- (1) Several examples of situations and contexts of armed conflicts presented the: (i) background to situations of conflict, (ii) reasons and impacts on civil society, (iii) the role of education in post-conflict situations, and (iv) training modalities and principles required for social recovery;
- (2) The impact upon TVET and educational systems affected both infrastructure and human resources;
- (3) Education is at the centre of the peace, development and democracy triangle as a vital component of post-conflict transition and reconstruction and concerns: (i) the right to education, even during conflict situations, (ii) education for peace and tolerance and reconciliation, (iii) social, cultural and economic issues, (iv) should be given priority in sustainable development, (v) TVET is an instrument for human resources development, (vi) TVET is a strategic approach for social and cultural change.

The issues in (B5) *Statistical Measurement of TVET* concerned:

- (1) The need to monitor and evaluate TVET policies and programmes at both national and international levels, which should be linked to the Bonn Declaration;
- (2) When developing a process for TVET data collection mechanisms, it should be asked: (i) what data need to be collected? The response should be concerned with scope and definitions of the data, (ii) how should these data be used? The response should describe the advantages and disadvantages, collection of administrative versus household survey data, (iii) how to use the data? The response should concern dissemination, analysis and how to formulate and support data usage;
- (3) What are the gaps and challenges for monitoring and evaluation of TVET data? These include: (i) the non-formal sector is large in many countries, (ii) TVET can be supported by enterprises and employers, (iii) criteria for monitoring and evaluation should also include longitudinal studies, which are important but limited.

## Working Group C. TVET for Sustainable Development

Group C was also structured in five sections, each prefaced by *TVET for Sustainable Development*: (C1) *National Initiatives*; (C2) *Outcomes and Activities*, (C3) *Planning and Implementation*, (C4) *Drafting the Plan for Action*; and (C5) *Plan for Action*.

Mr Michael Schlicht of BMBF, Vice President for the Europe Region, chaired the Sessions. The first thematic speaker in (C1) was Ms Judith Cohen of the UK Learning and Skills Centre, Learning and Skills Development Agency, who addressed *UK skills for the 21<sup>st</sup> century*. She was followed by Mr Michael Härtel of BIBB, Germany, on *Technical and Vocational Education and Training: Policy Making Strategies and Project Experiences in Germany*. Ms Qujitera Mabote and Mr Alexander Machin then spoke on "National Policy/Planning in Mozambique: A Case Study."

The issues in (C1) *Sustainable Development: National Initiatives*, were:

- (1) It must be ensured that skills and skills training match and are flexible enough to change with our economic needs;
- (2) There is a need to understand the different training needs of Small and Medium-sized Enterprises (SMEs) – particularly regarding course duration. Due to the pace of innovation and the nature of SME, training courses of long duration are not optimal. Motivation was found to be a key issue. Therefore, adopting a "Coaching rather than courses" mentality is important, as is provision through a variety of channels;
- (3) Bridging the gap between sustainable development and sustainable communities requires a common language and understanding of these concepts;
- (4) There is a need to include all relevant actors in SD-related activities (trade unions, private enterprises, universities, governments, NGOs, etc.) – the challenge lies in organising them. We want to avoid resistance to SD due to the perception of it as a burden shouldered by the unlucky few;
- (5) Education for SD does not have to be viewed as an extra-curricular burden, it should be infused throughout existing curricula (using a cross-curricular approach) and does not necessarily have to be stand-alone.
- (6) Education can have a large impact in the reduction of HIV/AIDS. There need to be frank discussions about this topic throughout the community, churches, schools, workplaces and so on. The workplace is particularly important because it is one of the few venues where many adults have access to new knowledge. From a business perspective, it doesn't pay to have a sick workforce.

In section (C2) discussion starters were regional case studies by Mr Efison Munjanganja, UNESCO Bangkok, on *Vocational Training in Asia with Reference to Sustainable Development*, and Mr Sulieman Sulieman, UNESCO Beirut, on *Orienting TVET for SD in Arab States: Progress Report*. These were followed by national case studies from India, by Dr M. J. Ravindranath on *Integrating Education for Sustainable Development in TVE*, and Kazakhstan, by Ms Shaizada Tasbulatova, UNEVOC Centre, on *Development of Work Related Skills of Disadvantaged Groups*.

The issues in (C2) *TVET for SD: Outcomes and Activities*, were:

- (1) TVET systems are changing in many ways (decentralised, lifelong learning strategies, nationwide curricula development, students' needs prioritised) to meet the needs of changing economies (free market, global competition, etc.) – countries are looking to TVET to impart the necessary skills to maintain competitiveness;
- (2) Developing sensitivity and responsibility in instructors and providing them with training and curriculum in Environmental Education, embracing a lifelong learning concept and incorporating ICT in TVET should all be priorities in restructuring TVET;
- (3) There is a need to bring learning to the people – community learning through mobile training teams and community learning centres;
- (4) The image of TVET needs to be improved and training structured with articulation mechanisms so that TVET graduates can continue on to tertiary education.

Discussion starter speakers for (C3) were: (i) Mr Chris Chinien, UNEVOC Canada, on *Generic Sustainable Development Skills for the Workforce*, (ii) Mr David Atchoarena, UNESCO IIEP, on *TVET and Sustainable Rural Development*, and (iii) Mr Trevor Riordan, ILO, on *Training for Rural Economic Empowerment in the Philippines*.

The issues in (C3) *TVET for SD: Planning and Implementation*, were:

- (1) There needs to be a shift in rural areas from simply delivering agricultural education towards training for rural development;
- (2) We need to focus on bridging the "skills divide" by incorporating a skills element into poverty alleviation strategies;
- (3) It must be recognised that employment in the formal economy is as much a matter of markets or lack thereof. Focus should first be on generating income and establishing a solid foundation of peace, quality training and so on;
- (4) Previous collaboration between the ILO and UNESCO has been useful in pulling sources together – the understanding at headquarters is transmitted to regional offices where inclusion of partners is facilitated;
- (5) TVET for SD must embrace the three pillars of sustainable development in unison – problems arise when one is given precedence over the others.

One salient issue in (C4) *TVET for SD: Planning and Implementation*, was that enforcement is a key concern – you cannot only count on good will. From procurement, maintenance and administration SD is integrated by developing a comprehensive sustainability strategy.

For sections (C4) and (C5) participants broke into four groups to prepare aspects of the Action Plan. Then those completing the four parts in different groups were asked to compare their output. The salient points were:

- (1) If TVET is the key to development, quality TVET teachers are the master key;
- (2) Various national policies were presented for developed, developing nations, NICs, and countries in transition, suggesting that policies for TVET for sustainable development must be relevant to local, national and regional needs and conditions. Having competing policies must be avoided;
- (3) The quality of TVET teachers and instructors, together with curricula relevant to labour market needs, viable facilities and adequate training materials, and competitive salaries are key to attaining TVET for sustainable development.

The constraints identified included:

- (1) Inadequate and/or inappropriate education provision in rural areas. To reach rural people with TVET for SD, HIV/AIDS, and other ideas, one must first create a basic infrastructure, provide trained teachers, etc. It is difficult enough to reach rural areas in developed countries, let alone developing countries.
- (2) There is a human resource shortage in TVET because: (i) The best teachers are lost to private employers as the economy grows (Mozambique). Remaining teachers have low skill levels and the institutions have poor management skills. (ii) Losing many teachers to HIV/AIDS because there is not enough open dialogue on the subject; and (iii) The low status of TVET.
- (3) There are financial resource constraints, due to under-funding of TVET systems, because: (i) TVET provision is expensive to begin with and many nations received TVET institutions requiring considerable budgetary support that was

- not sustainable; (ii) Only those who can forego work and pay for education have access.
- (4) There are also physical infrastructure constraints, in particular, the routine and preventive maintenance of the physical plant has been neglected.
- (5) Access to school problems, including gender enrolment disparities, which are very much an economic issue. Many families cannot afford to have girls/women attend school. Scholarships are an effective means to offset this imbalance.
- (6) Language constraints, including: (i) Transfer of knowledge is difficult, (ii) To reach people in rural areas we must work/publish materials in the local language, (iii) For TVET to have real value, certificates granted need to be widely recognised.
- (7) The environmental dimension for SD is a weak point in some regions;
- (8) (The lack of coordination of activities across and between national ministries;
- (9) Transition in former command economies with dependence on state provision also makes TVET reform difficult;
- (10) The vast majority of the working poor are unskilled, yet most poverty alleviation strategies do not include a skills training element;
- (11) Finally, there is uncertainty of what SD means in practice and how to incorporate it in TVET.

In order to develop the Action Plan, strategies to overcome barriers were devised:

- (1) Relate TVET for SD to national priorities;
- (2) Encourage multi-stakeholder dialogue by involving the private sector and communities;
- (3) Address the social dimension as well as the technical dimension;
- (4) Raise the standards agenda by identification of knowledge, skills and attitudes;
- (5) Reform training and/or re-training of TVET teachers and instructors;
- (6) Link education and training reforms with preparation for work;
- (10) Improve recognition and possible standardisation of TVET certificates;
- (11) Develop recognition mechanisms for informally-acquired skills and/or prior learning assessment;
- (12) Need for networking and sharing of experience;
- (10) Develop new training delivery techniques;
- (11) Provide TVET through a variety of channels: course, NFE, apprenticeship, OJT;
- (12) Preparing people for citizenship is part and parcel of preparing people for the world of work;
- (13) Develop sensitivity and responsibility of TVET instructors towards SD concepts;
- (14) Community saving and credit provision can enhance entrepreneurship training;
- (15) Pre- and post-training support services are essential;
- (16) Embrace local level initiatives;
- (17) Need for capacity development in TVET policy development;
- (18) Change the mentality in transition economies from authoritarian provision to democratic consultation and needs assessment;
- (19) Re-orient agricultural education to broaden sources of work and income for rural people and improve linkages between rural education and economic return;
- (20) Produce guidelines for planning and implementation of TVET for SD.

## Background Papers for the Working Groups

The Background Paper prepared by UNESCO, Paris, entitled: *Learning for Work, Citizenship and Sustainability*, was intended to provide participants with the background to the first two objectives of the meeting and to orient participants to the thematic areas discussed in the two concurrent working groups *Learning for Skills Development* and *Transition to the World of Work*. The issues relating to the working group on *Orienting TVET for Sustainable Development* were dealt with in the Background Paper prepared by the UNESCO-UNEVOC International Centre and which is being published separately.

Over more than five decades UNESCO has implemented a vigorous technical and vocational education (TVE) programme that has included a significant standard-setting component. During this period the programme was updated periodically in response to needs expressed by interested Member States, but with the advent of the twenty-first century, the profound social and economic changes taking place necessitated a broader consensus on the direction that TVE should follow.

Since TVE is a branch of education directly concerned with the acquisition of the knowledge and skills required for the world of work, it has been increasingly challenged to adapt itself to the diverse and constantly changing needs of the labour market. In addition, the field of TVE is vital for effective participation in societies that are becoming increasingly complex and inter-dependent.

UNESCO convened the Second International Congress on Technical and Vocational Education in Seoul in April 1999 in close collaboration with the Government of the Republic of Korea. The Seoul Congress, as it has since come to be known, had the theme *"Lifelong Learning and Training: A Bridge to the Future."*

Since the Seoul Congress recommendations represented an international consensus on the new priorities for the field of TVET, UNESCO used them as the basis for updating its normative instrument, the *Revised Recommendation concerning Technical and Vocational Education*, that had been first adopted in 1962 and revised in 1974. After further consultations with the Member States and key non-governmental organisations working in this field, the updated normative instrument was adopted by UNESCO's General Conference at its 31st session in November 2001 as the *Revised Recommendation concerning Technical and Vocational Education (2001)*.

Thus, the *Revised Recommendation*, developed after extensive consultation with technical experts, the Member States and concerned NGOs, represents an internationally acknowledged set of sound standards and practices for the education component in TVET.

In view of the complementary nature of education and training in TVET and the need for Ministries of Education and Labour to co-operate in the management of national TVET systems, UNESCO and the ILO decided to produce in a single publication, UNESCO's *Revised Recommendation concerning Technical and Vocational Education (2001)* and the ILO's *Conclusions concerning Human Resources Training and Development* which had been adopted by the International Labour Conference at its 88th session in 2000.

In fulfilment of the Seoul Congress' request to UNESCO to carry out five-yearly assessments on the implementation of its recommendations, *Learning for Work, Citizenship and Sustainability*, which has been called the "Seoul +5" meeting and was held in close collaboration with the Government of Germany, served as a stock-taking event. This meeting determined how the Seoul Congress recommendations and the UNESCO *Revised Recommendation* have benefited Member States. In other words, have the UNESCO *Revised Recommendations* influenced countries to establish new TVET policy and practice that will better prepare their young people and adults for the world of work?

In order to find out, UNESCO's Section for Technical and Vocational Education launched a survey in all its Member States. The survey was not intended to be a comprehensive statistics gathering exercise. Rather, it was designed to obtain primarily qualitative information about national policy reform in selected broad areas of TVET, such as Policy Planning and Management, Enhancing Access, Relevance and Quality, and Monitoring Progress. The survey consisted of a questionnaire that was sent to the UNESCO National Commission in each country, which in turn was expected to direct it to the national authorities best positioned to provide the required information.

The preliminary survey analyses provided the starting point for discussion at the 10 ninety-minute sessions that made up the two working groups *Learning for Skills Development and Transition to the World of Work*. Countries that put in place novel policies shared their experience with other countries, especially those with similar developmental situations.

Finally, an important objective of the substantive sessions was to strengthen TVET around the world, the statistical comparison of TVET systems is a complex undertaking. In developing countries and countries in transition, the problem is further compounded by the existence of a large informal economy that draws on workers whose skills have been acquired outside the formal education and training system. Novel methods of evaluation are required if even a rough estimate of the numbers of current learners, trainers and skills needs, as well as projected future needs are to be determined. To accomplish these objectives, the UNESCO Institute for Statistics (UIS) presented the methodology it currently uses for gathering statistics on TVET systems in UNESCO's Member States. This plenary presentation stimulated discussion about more effective methods of measurement, particularly of TVET in the non-formal setting. New proposals for measuring TVET will be considered by UIS in its future data gathering exercises. These new methods may also be adopted for assessing TVET systems in preparation for future UNESCO meetings.

## VI

### Report of the Inter-agency Panel

An Inter-agency Panel of TVET experts drawn from major UN and other international agencies was a central feature of the meeting. Hosted by and held at the office of the German Federal Institute for Vocational Education and Training (BIBB), the Panel was chaired by Ms Jane Stewart, Director of Skills Employability at ILO. Panel members comprised:

- Mr Arvil Van Adams, World Bank
- Mr Ulrich Hillenkamp, ETF
- Mr Wataru Iwamoto, UNESCO Headquarters
- Dr Günter Klein, WHO
- Ms Akpezi Ogbuigwe, UNEP
- Mr Juan Carlos Villagrán De León, UNU.

Mr Helmut Puetz, President of BIBB, welcomed participants to the Inter-agency Panel and noted the many years of association with UNESCO and UNEVOC by BIBB. He noted that sustainable development has become the focus of cross-ministerial activity in Germany. Examples of the importance of high-quality TVET to sustainable development were presented. Interrelationship between economy, ecology and social sphere must be taught during initial TVET training. Tomorrow's workers should acquire competence that BIBB has been involved in many years working together with companies to develop instructional materials for use in vocational training. Five pilot projects that BIBB is currently conducting serve the objective of issues of renewable resources and rural development, training for sustainable development in skilled trades, automotive components industry, building and facility management for sports and process control in the manufacturing industries.

As Panel Chair, Ms Stewart asked the panellists to answer three questions:

1. What would a TVET system for sustainable development look like?
2. Where is this on the agenda? What priority are agencies giving issue of TVET for sustainable development?
3. What are the outcomes trying to achieve over the UN Decade for Sustainable Development?

Mr Villagrán addressed Question 1 by noting that the task of UNU is to do research on what sustainable development is and what factors inhibit its attainment, e.g. agricultural practices leading to soil degradation and practices leading to climate change. Steps to be taken to reverse environmental damage should then be studied and recommendations made to policy-makers and decision implementers.

Dr Klein addressed Question 1 by noting that environment is not only about butterflies and whales, there is need to find tools to overcome lack of sustainability. TVET is for making people competent to make money and be able to afford good health, living and working conditions. In order to address issues of occupational health, there is a need to bring health ministry people together with those who reach out to people to make HIV/AIDS a

commonplace discussion. TVET can bring WHO's vision to people to learn about how to deal with sustainability and non-renewable or renewable resources, like water. Workplace knowledge can be brought home to make children's health better.

Mr Ulrich Hillenkamp was asked to respond to Question 2. The European Training Foundation supports formal training systems and support to employability in the EU and abroad. Sustainable development means to prepare TVET systems to cope with issues of sustainable development, e.g. poverty reduction, health care, environmental issues. A training system would need two features: 1) The Seoul Congress reported that it is not sufficient to provide education only at one point in youths' lives. Lifelong education is necessary to learn more than just skills for one profession. A TVET system must be sustainable by providing multiple opportunities for people to access learning. 2) You need partnerships at all levels, at local, regional and national, to give people a say in what is needed to ensure sustainability.

Ms Akpezi Ogbuigwe of UNEP noted that the destruction of the environment is part of a vicious circle. We need to infuse sustainable values into our training to produce graduates who can dispose of oil, etc. in an environmentally friendly manner. We need to produce people who think of the impact of their work on society, on the environment, and on their future. We need to develop knowledge skills and values to empower people to change TVET.

Mr Iwamoto of UNESCO thinks that TVET policy should contribute to both economic and personal development, and it should encourage countries to adopt environmentally sound policies. Objective 3 of the Dakar framework for Action on EFA is linked with TVET in the sense of the life skills for livelihoods. In the context of the education for sustainable development, we should connect also quality education including value education (Goal 6) to TVET. While UNESCO is the lead Agency for the Decade of Education for sustainable Development, inter-agency partnership and collaboration is very important in this field.

Mr Arvil Van Adams of the World Bank, asked whether the questions being addressed were the most important ones to address in order to engage agencies to adopt sustainable development. TVET history and goals set in the past have been an instrument: to resolve youth unemployment, reducing demand for costly higher education by diverting students, to create aspirations favourable to the world of work, and to balance opportunity by gender, etc. The sad message is that TVET has fallen short of all of these goals. If it has achieved anything, it has provided skills for jobs where they exist, i.e. economic motivation and goals are key instruments by which TVET can be proved favourable.

What is the World Bank doing about sustainable development? Sustainable development is not a concept well understood and embraced by education people at the Bank. While it has departments engaged in protection of environment, social development, public health and workplace health, etc., these are not well integrated. The Bank is focussing on Millennium Development Goals and we need a standard that is common to make TVET sustainable. Will it take root?

Ms Akpezi Ogbuigwe from UNEP said that the concept of Education for Sustainable Development must lie at the heart of development. We do not have people with the right attitude, background or frame of mind to meet the goals. The mission of UNEP is to provide leadership and provide partnership in caring for the environment to improve quality of life and work. There is a need to educate people to inspire them. This makes UNEP a natural ally to UNESCO. Environmental education that involves sustainability promotes attitude and value

systems that encourages people to be active and informed citizens. It cuts across all aspects of sustainable development and forms background of focus on environment. The natural response of UNEP to MDG is to collaborate with UNESCO to see how to strengthen sustainable development. The strategy for the decade is discussed with UNESCO and other partner agencies.

Ms Akpezi Ogbuigwe concluded the panel discussion by stating that listening to the speakers had inspired her to write a poem – *Acting Today is Sowing into the Future*. This poem is presented in the opening pages of this report.



## VII

### Summation by Rapporteurs-General

Prof. John Fien and Prof. David Wilson

Mr President, distinguished participants and, now, at the end of the week, dear friends:

We have been meeting this week, five years on from Seoul, to review progress on what we have been doing to make this old world of ours a fairer, less troubled, richer and more sustainable place in which to live. We have also agreed on a resolution, the Bonn Declaration, to guide us as we make plans for the future.

We have agreed that, through our work in Technical and Vocational Education (TVET), we have major responsibilities to present and future generations.

We have listened to, and heeded, the call from the world leaders who attended the World Summit on Sustainable Development in Johannesburg, who said in their Political Declaration that we have:

... a collective responsibility to advance and strengthen the interdependent and mutually reinforcing pillars of sustainable development – economic development, social development and environmental protection – at local, national, regional and global levels.

Thus, we have been discussing this week how we can respond to the challenge of Seoul to re-orient TVET so that it reflects "a new human-centred development paradigm", an approach to development that encourages not just economic growth for its own sake – for after all didn't Ghandi-ji tell us that the world has enough resources for everyone's need but not nearly enough for a single man's greed? – but a paradigm of development based upon environmentally sound development, social cohesion, a culture of peace, and international citizenship.

And, ahead of us, we have the opportunities of the Decade of Education for Sustainable Development in which to enhance the quality and relevance of TVET for sustainability – and we have prepared suggestions for UNESCO when it develops the TVET component of its action plan for the Decade.

Ladies and Gentlemen,

Up until Seoul, we saw our role in TVET as pertaining to two types of capital – human capital and economic capital. Our task was to equip our countries with a world-class labour force, capable of competing in the global economy.

So we taught the technical and vocational skills needed for this and, more subtly, we taught the values of hard work and upward mobility so that each individual employee would seek to maximise his or her income and wealth and thus boost economic growth.

Both human capital and economic capital are important, and we need to continue to emphasise and enhance our contribution to them.

However, as agreed at Seoul, we need to balance these two forms of capital with two others – the natural capital of Earth's resources and the social capital that builds strong communities and social well-being.

As the American educator, David Orr, argues:

The generation now being educated will have to do what we, the present generation, have been unable or unwilling to do: ... stabilize and then reduce the emission of greenhouse gases ...; protect biological diversity ...; reverse the destruction of rainforests ...; and conserve soils....

Those who follow us must learn how to use energy and materials with great efficiency. They must learn how to utilize solar energy in all its forms. They must rebuild the economy in order to eliminate waste and pollution. They must learn how to manage renewable resources for the long term. They must begin the great work of repairing, as much as possible, the damage done to the earth in the past two hundred years of industrialization. And they must do all of this while addressing worsening social and racial inequities. No generation has ever faced a more daunting agenda.<sup>9</sup>

The challenges of reorienting TVET towards conserving and building natural and social capital – as well as human and economic capital – were at the forefront of all the presentations, panel discussions and group deliberations this week.

Perhaps, this point was most graphically made by Dr Quisumbing, a former Secretary of Education, Sports and Culture in the Republic of the Philippines, when she said in her Keynote Presentation that:

... while education is a key to any development strategy, TVE is the **master key** that can transform the world of work and the economy, alleviate poverty, save the environment, and improve the quality of life.

Indeed, one idea was central to all our work this week: The skills, aptitudes and attitudes we used to industrialise the Earth are not necessarily the same as those we need to heal the Earth, eradicate poverty and to build durable economies and healthy communities.

Resolving the great challenges we face requires us to reconsider the purposes, substance and processes of education at all levels.

The purpose of our Meeting was to work out exactly what this means in terms of TVET.

Indeed, the focus on practical ways forward this week means that, if Seoul represented a paradigm shift in TVET philosophy, this Bonn meeting represents a working out of the detail – the paradigm in practice. As Ms Jane Stewart from the ILO challenged us at the Inter-agency Panel, we have been answering the question of what TVET will look like when it is reoriented to integrate work, citizenship and sustainability outcomes.

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9 Orr, D. (1992) *Environmental Literacy: Education as if the Earth Mattered*, Twelfth Annual E. F. Schumacher Lecture. Available on-line at URL <<http://www.rainbowbody.net/Ongwhehonwhe/Enviroeducat.htm>>.

These details of a practical way forward focus on at least six important elements:

1. Sustainable livelihoods
2. Rural development
3. Values education
4. TVET and basic and general education
5. Sustainability
6. Importance of partnerships.

However, we must bear in mind that exactly how these elements are defined and how they are applied will be different in every country. Our different cultural contexts, political situations and education systems demand that TVET for sustainable development be culturally appropriate and locally relevant. For example, it may be more appropriate for TVET systems and institutions in industrialised countries to focus special efforts on sustainable/cleaner production strategies involving energy conservation, the use/reuse of materials, etc. to reduce the size of their Ecological Footprints. In countries newly emerging from conflict, it may be appropriate for TVET to focus on developing aptitudes and skills for peace building and enhancing workplaces as centres of community development and learning. Or, in countries where the vast majority of people live in poverty, it may be appropriate for TVET to focus on income generation skills, rural transformation, food security, water quality, and so on. These are but examples and, to repeat, TVET for sustainable development will only be effective if it is culturally appropriate and locally relevant.

1. So to Element 1. This was an affirmation that TVET plays a key role in economic development by developing **skills and aptitudes for the world of work**. We never want to undermine the importance of livelihood skills, and despite what some people think, sustainable development is not just about environmental protection. Improved access to resources and appropriate economic growth are an integral part of sustainable development. And it is here we need to promote generic work skills, industry specific skills, and the capacity to change careers throughout one's life as local economies change under the influence of globalisation and technological change.

However, TVET for economic livelihoods is not enough. It is certainly necessary, but not sufficient. Indeed, we agreed that we need to see the three components of sustainability – the economic, the social and the environmental – as integrated. Not balanced, but integrated. As the WHO representative explained, the “maldevelopment” of many countries is the result of focussing on economic sustainability – and trusting that the resultant accumulation of wealth would trickle down to pay for environmental protection and improved social well-being. However, societies that have followed that path of development seem to be characterised by great breakthroughs in technology and levels of consumption but also great breakdowns in environmental health, community vitality and the human spirit.

This means that we need to emphasise *TVET for sustainable livelihoods* – not economic livelihoods. And it is here where we asked for increased collaboration between UNESCO, ILO, FAO and the other agencies who have been pioneering the concept of sustainable livelihoods and capacity building and training for them.

And this brings us to Element 2, TVET for rural transformation.

2. In spite of rapid urbanisation, three billion people – or 60 per cent of the population in developing countries, indeed half the world's population – still live in rural areas. Three-quarters of the world's working poor, those earning less than a dollar a day, live in the countryside. Today more than ever before, education, especially TVET, is the key to **rural transformation**. Indeed, TVET is essential to the economic, cultural and ecological vitality of rural areas and communities. Moreover, not a single one of the Millennium Development Goals will be achieved without giving special attention to TVET for rural people.

We saw this as a deep challenge, especially to reach those in the “deepest” rural areas. However, case studies from Kazakstan, Cambodia, the Philippines and several other countries showed us that this was possible – but required a major emphasis on TVET for workers in the non-formal economy, alternative forms of delivery – for example through community-based training – and particular efforts to provide sustainable livelihood training for women, youth, indigenous groups and other special groups such as persons with disabilities.

News of the UNESCO-FAO Flagship Programme on Education for Rural People was received with great enthusiasm and many spoke of the need to expand this initiative.

3. The third element on the new paradigm of TVET is **values education**. The theme of this meeting, “Learning for Work, Citizenship and Sustainability” emphasised that. This was an important outcome of Seoul, of course, but here in Bonn, we began to detail what the important values were. We saw them in the characteristics of a sustainable future society – which was described for us by Dr Quisumbing as “a planet earth which is sustainable, the provision of basic shelter and health care, for all, social justice, respect and appreciation of diversity, participatory democracy and caring and compassionate relationships that lead to peace.”

Importantly, also, we saw a responsible and committed work ethic as an important value to be developed. Do you remember the saying, “You can lead a horse to water but you can't make it drink”? Well, it is the same with TVET. All the skills in the world are of little value without a commitment to the dignity of work and a willingness, to “pull your own weight” and “go the extra mile”. In other words, “learning to do” is interdependent with character building goals of “learning to be”, the adventure of “learning to know” and the values of “learning to live together”, the four pillars from the Delors Report. Mr Sanner from Daimler-Chrysler described this as the important *social learning* dimension of TVET.

And this brings us to Element 4, the question of the relationship between TVET and general and basic education.

4. On one level, there was a tension in our discussion this week between the technical and the humanistic perspectives in TVET. If we don't have the skills to earn a living, all the humanistic values in the world will not enable us to fulfil our responsibilities to ourselves and our families. As a modern variation of the old Chinese proverb goes, it is more important to be taught how to fish than to be given a free fillet-o-fish dinner! Thus, we spoke of the need to complement the technical perspective with the

humanistic one that underlines the role of TVET as a central feature of basic and general education.

The UNESCO Institute of Statistics report indicated a contrast between OECD economies and others with OECD countries focussing more on generic skills and developing countries focussing more on vocational skills. However, the emphasis on learning for the world of work as an integral part of basic education, through Education for All, means that this distinction is disappearing. We heard of experiences in some countries in which TVET is being developed as an alternative, or at least, parallel system with secondary education and, in others, where pre-vocational skills are being integrated into primary education. Indeed, we have stressed that preparation for the world of work must be integral to basic education as the first step in lifelong learning for work, citizenship and sustainability. This means that we are urging UNESCO, other international agencies and Member States to ensure that skills for the world of work are integral to Education for All policies and programmes.

We were deeply moved by the statement related to this by Mr Hiebert from the International Association for Educational and Vocational Guidance to the Inter-agency Panel when he answered the question of how TVET for work, citizenship and sustainability would be different from other types of TVET by outlining three differences:

First, it would have a learner-centred curriculum: Learner-centred in contrast to programme-centred or stakeholder-centred. Learners would be involved as partners in creating their learning experiences and the resulting programme would have a large inquiry-based focus rather than a lecture- or an instructor-centred format.

Second, the programme would have a component that would help learners, regardless of their age, get in touch with their passions in life. What were they passionate about? What sorts of things really mattered to them? How could those passions be pursued in their paid employment? To what extent would they pursue their passions outside of paid employment, through other kinds of work: volunteer work, church work, hobby work, or perhaps even house work?

Third, and it's related to point number two, the programme would help them engage in the self-exploration needed to develop a vision for their life. What sort of person did they want to be? People's vision for their life, i.e., what they are passionate about, and what sort of person they want to be, will be a central driving force, motivating them to pursue education and training experiences should be an important component in their TVET experiences.

I submit that when a person has a vision for their life that embraces their education and training experiences, it helps them look down the road, stay focused on their personal goals and that ultimately it will lead to more stability in their personal career paths and also lead to more stable and sustainable labour market conditions.

This emphasis on personal and social sustainability clearly shows the links with economic well-being and environmental quality, and brings us to our fifth focus in the new paradigm of TVET – sustainability.

5. The focus on the interlocking nature of the three dimensions of **sustainability** brings new opportunities – and the rationale and justification – to focus on key areas such as:

- TVET and HIV/AIDS in workplace;
- TVET and cultural tolerance;
- TVET and human rights;
- TVET and gender equality;
- TVET and indigenous knowledge of medicine, agriculture, food preparation, forest management and crafts;
- TVET and environmental protection;
- TVET for sustainable production and consumption;
- TVET and environmental health;
- TVET for occupational health and safety;
- TVET for enterprise and entrepreneurship – focussing on innovation, creativity, assessing and managing risk, making and managing one's own job, and managing a small business.

All these are important dimensions of TVET and sustainability – and may be integrated as stand-alone courses or infused in general and industry-specific courses. They also remind us that it is not just a matter of integrating sustainability into existing occupations – such as we saw in the marvellous example of the importance of tree planting as a foundation for carpentry and the importance of carefully disposing of chemicals in hairdressing and oil in motor mechanics. They also remind us of the many new jobs being created in sustainability industries, e.g.:

- Environmental care and recycling;
- Landscape rehabilitation and site remediation;
- Water supply and quality;
- Organic agriculture;
- Eco-design;
- Solar and other renewable energy generation;
- Micro-hydro development and repair.

And we invite you to make your own list of new and emerging occupations and industries concentrating on economic and social sustainability.

Sustainability reminds us also of the importance, as the delegate from Saudi Arabia said, of "walking the talk". Our TVET systems and institutions need to walk the talk of sustainability. There was much talk of the importance of monitoring and evaluation and performance indicators. If we are going to "walk the talk", then maybe we could consider performance indicators (PIs) such as:

- Emission of CO<sub>2</sub> per student;
- Percentage of materials recycled;
- Percentage of recycled materials purchased;
- Percentage decrease in the use of toxic materials;
- Percentage of renewable energy generated and consumed;

- Percentage of organic wastes composted;
- Water use per student; and
- Percentage of food served that was locally and organically grown.

And we invite you to make your own list of PI's for auditing the economic and social sustainability of our institutional operating and management practices.

6. **Importance of partnerships.** Reorienting TVET towards work, citizenship and sustainability will require great effort. I don't think we should kid ourselves – but then nothing of value in life comes without effort. However, we are fortunate in that we do not have to walk the path alone. We saw at this meeting that partnerships are the key to success.

We were a meeting of TVET administrators, teachers, researchers and policy-makers, of international and non-governmental organisations, business, government and youth. Our success this week was the result of our combined wisdom and spirit of collaboration.

Moving forward in TVET will require us to maintain the partnership spirit.

And it is the spirit of enhancing and expanding our network of partnerships that we have prepared the Bonn Declaration and a set of suggestions for UNESCO in developing an action plan for TVET for the Decade of Education for Sustainable Development. As you have seen in the drafts of the documents this morning, these have been prepared straight from the discussions in our three Working Groups.

And with the start of the Decade only 65 days away, we would like to conclude with an inspiring paragraph from the International Implementation Scheme that was presented to the General Assembly in New York last week:

There can be few more pressing and critical goals for the future of humankind than to ensure steady improvement in the quality of life for this and future generations, in a way that respects our common heritage – the planet we live on.

As people we seek positive change for ourselves, our children and grandchildren; we must do it in ways that respect the right of all to do so. To do this we must learn constantly – about ourselves, our potential, our limitations, our relationships, our society, our environment, our world. Education for sustainable development is a life-wide and lifelong endeavour which challenges individuals, institutions and societies to view tomorrow as a day that belongs to all of us, or it will not belong to anyone.

## Conclusion

We would like to conclude with several personal comments.

We have enjoyed ourselves this week and want to thank everyone concerned, especially our fellow participants for the very high quality of presentations and discussions, and for the professional interactions we have shared. This illustrates the value of small and medium-sized

meetings of experts where practitioners, administrators, policy-makers and researchers can meet in a spirit of dialogue.

We would also like to thank everyone involved in the organisation of the meeting, especially the demonstration of the value of partnerships given to us by the very hard work, efficient organisation and helpful attitude of the staff from the Divisional Office of UNESCO in Paris, the UNESCO-UNEVOC International Centre, BMBF and BIBB. We value the faith in TVET shown by the contributions to the meeting by the representatives of the many international agencies who participated.

## VIII

### The Bonn Declaration

We, the participants in "Learning for Work, Citizenship and Sustainability", a UNESCO meeting of international experts on technical and vocational education and training, are agreed that, since education is considered the key to effective development strategies, technical and vocational education and training (TVET) must be the master key that can alleviate poverty, promote peace, conserve the environment, improve the quality of life for all and help achieve sustainable development. Our conclusion was reached following deliberations among 122 technical experts from Member States, intergovernmental and non-governmental organizations and industry who met in Bonn, Germany, from 25 to 28 October 2004, on the threshold of the United Nations Decade of Education for Sustainable Development, to assess progress since the Second International Congress on Technical and Vocational Education, held in Seoul, Republic of Korea, in April 1999.

1. Following the deliberations at this meeting, and recalling:
  - the recommendations of the Second International Congress on Technical and Vocational Education (1999),
  - the goals set out at the World Forum on Education (2000)
  - the Millennium Development Goals adopted by the United Nations General Assembly (2000), and
  - the Revised Recommendation concerning Technical and Vocational Education (2001) adopted by the UNESCO General Conference at its 31st session,

the participants in this meeting of experts affirm that the appropriate development of TVET is central to the attainment of those agreed goals.

2. Recognizing that the vast majority of the worldwide labour force, including knowledge workers, require technical and vocational knowledge and skills throughout life, we affirm that skills development leading to age-appropriate TVET should be integral to education at all levels, and can no longer be regarded as optional or marginal. It is especially important to integrate skills development in Education for All (EFA) programmes and to satisfy TVET demand created by learners completing basic education.
3. Preparation for work should equip people with the knowledge, competencies, skills, values and attitudes to become productive and responsible citizens who appreciate the dignity of work and contribute to sustainable societies. We call on all stakeholders to adopt this broader perspective for TVET.
4. The development of TVET since the Seoul Congress clearly shows that there is enhanced recognition of this branch of education as a means to productive livelihoods and social cohesion. However, the UNESCO TVET Survey of 2004 has revealed that progress has been uneven. Renewed effort to modernise TVET and ensure its enhanced status and sustainability is necessary. Increased scope for TVET is recognised in "sustainability industries" such as environmental conservation, cultural heritage site preservation and renewable energy production.

5. Accordingly, we invite the Director-General of UNESCO to urge Member States, the concerned agencies of the United Nations system and other relevant stakeholders, both public and private, to build partnerships and to revitalise efforts to implement the recommendations that have not yet received sufficient attention or resources.
6. Given the scale of the task and the complexity of the conditions in which action must be taken, we ask that particular priority be given to TVET initiatives that alleviate poverty, promote equity, especially in relation to gender, arrest the spread of the HIV/ AIDS epidemic, support youth in crisis, support rural communities and people in excluded groups, encourage north-south and south-south co-operation and assist the development of countries in transition and those in and emerging from crisis and conflict. These TVET initiatives are pivotal to human-centred sustainable development.
7. As TVET experts, we call for approaches to development that harmonise economic prosperity, environmental conservation and social well-being. We therefore call for responses to globalization that humanise rather than marginalise, and for applications of information and communication technology that narrow the digital divide.
8. We commit ourselves, in each of our own countries and organizations, to taking the action necessary for quality skills development that leads to economically viable, environmentally sound and sustainable communities.

Bonn, Germany  
28 October 2004

## IX

# Suggestions to UNESCO for Action Planning in TVET for Sustainable Development during the United Nations Decade of Education for Sustainable Development

### Preamble

We, participants at an International Experts Meeting on Learning for Work, Citizenship and Sustainability, meeting in Bonn, Germany, 25-28 October 2004, elaborated the following range of activities which we would like UNESCO to take into account when developing an Action Plan for TVET and Sustainable Development to guide its actions in the TVET sector during the United Nations Decade of Education for Sustainable Development (2005-2014).

It is recognised that all Member States have been invited by the General Assembly of the United Nations to develop their own Action Plans for the Decade. However, the varying levels of capacity, resources and physical infrastructure for undertaking this task around the world, especially related to TVET where the relevance and significance of sustainability is a newly emerging priority, means that UNESCO, in partnership with other international agencies, has an important role to play in advocacy and vision building to catalyse understanding and action through knowledge sharing, capacity building, research and innovation, and monitoring and evaluation.

Seven interlinked strategies that are similar to those in the draft International implementation Scheme for the Decade (October 2004) are proposed for TVET for Sustainable Development:

1. Advocacy and Vision Building
2. Support for the Review and Development of National TVET Policies
3. Guidelines for Planning and Implementation
4. Capacity Building and Training Programmes
5. Learning Support Materials, Resources and Equipment
6. Networking and Partnerships in TVET
7. Ongoing Monitoring, Evaluation and Research.

We recognise that we have suggested a very diverse range of activities and invite UNESCO to select from these, as relevant to EFA, MDG and TVET priorities in order to develop a manageable, focused and effective Action Plan for TVET and Sustainable Development.

We urge UNESCO to reinforce existing partnerships, and build new ones, with other UN agencies, Member States and concerned stakeholders for the implementation of an action plan for TVET in the UN Decade of Education for Sustainable Development.

**UNITED NATIONS DECADE OF EDUCATION FOR SUSTAINABLE DEVELOPMENT**

**Suggestions to UNESCO for Action Planning in TVET for Sustainable Development**

<i>Strategy</i>	<i>Short-term activities (1–3 years)</i>	<i>Medium-term activities (4–6 years)</i>	<i>Long-term activities (7–10 years)</i>
<p><b>1. Advocacy and Vision-Building for TVET for SD</b></p>	<ul style="list-style-type: none"> <li>• Conduct high-level consultations with all relevant ministries of governments to encourage access and commitment to TVET and awareness of the importance of integrating sustainable development as a core theme in TVET</li> <li>• Translate and disseminate relevant TVET for Sustainable Development documents in local languages</li> <li>• Recognise premier institutions as “centres of excellence” in TVET and sustainable development to play a lead role in promoting the field</li> <li>• Develop a communication plan for the dissemination on TVET for Sustainable Development, including:               <ul style="list-style-type: none"> <li>▪ Disseminating regular briefing materials to UNESCO magazines, the educational press and mass media</li> <li>▪ Engaging National Commissions, UNESCO Clubs, ASP-Net schools and other relevant bodies affiliated with UNESCO in Member States</li> <li>▪ Engaging the Education, Youth and other relevant Caucuses at the CSD in advocacy of TVET for Sustainable Development</li> <li>▪ Maintaining a UNESCO website on TVET for Sustainable Development</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Review, revise and maintain the communication plan</li> <li>• Publish case studies that illustrate ways in which TVET is integrating sustainability principles at national, institutional and programme levels</li> <li>• Produce campaign materials (e.g. TV programmes, multi-media and documentaries) from activities implemented in the first 3 years for mass distribution</li> <li>• Hold interim consultations with member countries to gauge the extent of the awareness and recognition given to TVET and to take appropriate measures for its implementation</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct an end-of-decade review of the impact of the Advocacy and Vision-Building programme</li> </ul>

**UNITED NATIONS DECADE OF EDUCATION FOR SUSTAINABLE DEVELOPMENT**

**Suggestions to UNESCO for Action Planning in TVET for Sustainable Development**

<i>Strategy</i>	<i>Short-term activities (1-3 years)</i>	<i>Medium-term activities (4-6 years)</i>	<i>Long-term activities (7-10 years)</i>
<p><b>2. Support for the Review and Development of National/Regional Policies Supporting TVET for SD</b></p>	<ul style="list-style-type: none"> <li>• Conduct regional consultation processes (2005-2008) on TVET for Sustainable Development) in preparation for a Seoul+10 international meeting in 2009</li> <li>• Prepare and trial flexible guidelines to inform the review of national/regional policies supporting TVET for Sustainable Development. The guidelines should include, among other elements, advice on policies for:               <ul style="list-style-type: none"> <li>▪ Strategies for multi-stakeholder dialogue as part of the policy review and development process</li> <li>▪ Ways of relating TVET to national MDG and EFA goals</li> <li>▪ Exit and entry to/from TVET and other educational systems</li> <li>▪ A system of credit for prior working experience, especially in the non-formal sector</li> <li>▪ Enhancing values, as well as cognitive and skills education through TVET, emphasising "education of the heart" by putting "action" at the centre of TVET education, e.g. skills PLUS values, attitudes, self-esteem</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Make TVET for Sustainable Development a central theme of a Seoul+10 international meeting in 2009</li> <li>• Conduct capacity-building programmes to facilitate the review of education policies to promote TVET for sustainable development</li> <li>• Establish a dynamic knowledge base that demonstrates detailed successful implementation of SD-based TVET systems</li> <li>• Review the status of TVET for Sustainable Development in national/regional education policies</li> </ul>	<ul style="list-style-type: none"> <li>• Review the status of TVET for Sustainable Development in national/regional education policies</li> </ul>

**UNITED NATIONS DECADE OF EDUCATION FOR SUSTAINABLE DEVELOPMENT**

**Suggestions to UNESCO for Action Planning in TVET for Sustainable Development**

<i>Strategy</i>	<i>Short-term activities (1-3 years)</i>	<i>Medium-term activities (4-6 years)</i>	<i>Long-term activities (7-10 years)</i>
<p><b>3. Guidelines for Planning and Implementation of TVET for SD</b></p>	<ul style="list-style-type: none"> <li>• Develop and pilot sample guidelines for integrating sustainability principles into the operating procedures and programmes of TVET institutions, especially emphasising the importance of comparable profiles and standards</li> <li>• Conduct regional workshops to adapt the guidelines</li> <li>• Conduct regional training workshops for key personnel from Member States, including UNEVOC Centres, on using the guidelines for planning and implementation strategies</li> <li>• Develop and trial sample guidelines on assessment processes that facilitate the achievement of quality TVET standards</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct regional workshops to report on the use of the guidelines in different national contexts and industry sectors</li> <li>• Conduct inter-country benchmarking of TVET for Sustainable Development</li> <li>• Develop and trial guidelines for evaluating the success of planning and implementation strategies for TVET for Sustainable Development</li> </ul>	<ul style="list-style-type: none"> <li>• Repeat benchmarking</li> <li>• Evaluate the impact of the planning implementation guidelines</li> </ul>

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<p><b>4. Capacity Building and Training Programmes for TVET for SD</b></p>	<ul style="list-style-type: none"> <li>• Adapt relevant modules in the UNESCO multimedia programme, <i>Teaching and Learning for a Sustainable Future</i>, to suit the pre-service and continuous in-service professional development needs of TVET educators, policy-makers, curriculum developers, etc.</li> <li>• In partnership with UNESCO field offices and UNEVOC Centres conduct regional training workshops on how to integrate <i>Teaching and Learning for a Sustainable Future in TVET</i> into relevant pre-service and continuous in-service courses</li> <li>• Prioritise development of sample guidelines and training materials to support capacity building and training for TVET in rural transformation, the non-formal sector and for women, unemployed youth, indigenous people and persons with disabilities</li> <li>• Prioritise professional development materials on values education in TVET</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate, revise and maintain a programme to support the pre-service and continuous in-service professional development needs of TVET educators, policy-makers, curriculum developers, etc. Development</li> <li>• Develop and trial demonstration projects on e-learning for professional development</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate, revise and maintain a programme to support the pre-service and continuous in-service professional training of personnel</li> <li>• Evaluate the outcomes and impacts of these professional development support activities</li> </ul>

**UNITED NATIONS DECADE OF EDUCATION FOR SUSTAINABLE DEVELOPMENT**

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<i>Strategy</i>	<i>Short-term activities (1-3 years)</i>	<i>Medium-term activities (4-6 years)</i>	<i>Long-term activities (7-10 years)</i>
<p><b>5. Learning Support Materials, Resources and Equipment for TVET for SD</b></p>	<ul style="list-style-type: none"> <li>• Develop exemplar learning support materials on environmental and values education for use in different TVET programmes, e.g. in relation to industry skills, work values, lifelong learning, developing personal and lifelong goals, and entrepreneurship</li> <li>• Develop guidelines and training packages in partnership with WHO for health competence and HIV/AIDS and values-driven TVET</li> <li>• Develop guidelines for instilling a culture of routine and preventative maintenance in the world of work</li> <li>• Provide staff training for using guidelines and training packages for TVET</li> <li>• Develop a virtual library with support materials for use in different TVET programmes</li> <li>• Collaborate with IITE to establish and maintain open courseware to support TVET for Sustainable Development</li> </ul>	<ul style="list-style-type: none"> <li>• Review curriculum and learning materials on learning for work, citizenship and sustainability, and evaluate achievements in consultations with employers and community leaders</li> <li>• Monitor and evaluate the use of guidelines and training packages</li> <li>• Develop regional and international networking for the use of support materials, including ICTs</li> <li>• Review, revise and maintain the virtual library</li> </ul>	<ul style="list-style-type: none"> <li>• Revise the guidelines and training packages to keep up-to-date</li> <li>• Review, revise and maintain the virtual library</li> </ul>

**UNITED NATIONS DECADE OF EDUCATION FOR SUSTAINABLE DEVELOPMENT**

**Suggestions to UNESCO for Action Planning in TVET for Sustainable Development**

<i>Strategy</i>	<i>Short-term activities (1-3 years)</i>	<i>Medium-term activities (4-6 years)</i>	<i>Long-term activities (7-10 years)</i>
<p><b>6. Networking and Partnerships in TVET for SD</b></p>	<ul style="list-style-type: none"> <li>• Request UNEVOC Centres and other relevant networks to prepare action plans for TVET in the UN Decade of Education for Sustainable Development</li> <li>• Share research results, case studies, best practices via publications and websites</li> <li>• Support regional and national training programme networks and TVET professional associations</li> </ul>	<ul style="list-style-type: none"> <li>• Support networks in the conduct of their Decade activities</li> <li>• Organise meetings, conferences, events, etc. particularly in places where UNEVOC Centres are strong</li> <li>• Joint research and publications</li> </ul>	<ul style="list-style-type: none"> <li>• Support networks in the conduct of their Decade activities</li> <li>• Joint research and publications</li> </ul>
<p><b>7. Ongoing Monitoring, Evaluation and Research on TVET for SD</b></p>	<ul style="list-style-type: none"> <li>• Develop agreed indicators and processes for monitoring the quality of outcomes and impacts of integrating sustainability into TVET programmes, institutions and systems</li> <li>• Develop agreed instruments for monitoring the knowledge, beliefs and behaviour of TVET students regarding sustainable development in all regions</li> <li>• Research and trial skill profiles appropriate to TVET for sustainable development</li> </ul>	<ul style="list-style-type: none"> <li>• Monitor and evaluate outcomes for Sustainable Development</li> <li>• Conduct benchmarking studies of the knowledge, beliefs and behaviour of TVET students regarding sustainable development in all regions</li> <li>• Validate and adapt skill profiles appropriate to TVET for sustainable development</li> </ul>	<ul style="list-style-type: none"> <li>• Monitor and evaluate outcomes for Sustainable Development</li> <li>• Repeat benchmarking studies of youth knowledge, beliefs and behaviour regarding sustainable development in all regions to assess the success of TVET for sustainable development during the UN Decade of Education for Sustainable Development</li> </ul>



## X

### Closing Remarks

**Ms Aïcha Bah-Diallo**

Assistant Director-General for Education a.i., UNESCO

Mr President,  
Distinguished participants and guests,

It is a pleasure and an honour to represent the Director-General of UNESCO, Mr Koïchiro Matsuura, at this closing session. After four days of high quality discussion on the important theme of "Learning for Work, Citizenship and Sustainability", you have developed the Bonn Declaration and Action Plan on TVET for Sustainable Development as recommendations to UNESCO to strengthen the upcoming United Nations Decade of Education for Sustainable Development.

Allow me to mention that UNESCO was tasked to lead this Decade and to develop a draft International Implementation Scheme (IIS). I made an oral presentation of the draft to the Second Committee of the General Assembly of the United Nations on 18 October 2004. In this IIS, the linkages between the Decade and the other ongoing global education initiatives: EFA and UNLD were highlighted. UNESCO is also leading the United Nations Literacy Decade (UNLD) and is the Coordinating Agency for Education for All. In the Dakar Framework for Action, EFA = Meeting our Collective Commitments, Goal 3 says: "ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills programmes". Thus, the output of this meeting emphasizing the importance of TVET addresses this goal. To that end, the Education Sector will continue, and more than ever, to promote TVET programmes.

With regard to SUSTAINABLE DEVELOPMENT, you are the first specialist group to work with the International Implementation Scheme. The success of your deliberations – as evidenced by the summary report of Prof. John Fien, our Rapporteur-General, the closing remarks by Dr Phonphet Boupha of Lao PDR, and by Ms Veronika Pahl, the Director-General for Vocational Training and Educational Reform in the Federal Ministry of Education and Research in Germany, are very strong evidence that the Technical and Vocational Education Sector is well prepared to play a leading role in the upcoming UN Decade of Education for Sustainable Development.

Mr President,  
Distinguished participants and guests,

Allow me now to extend my congratulations, thanks and good wishes to you all. I would like to pay a special tribute to the various departments of the German Government, especially BMBF and BIBB, and also to the organising teams both at UNESCO Headquarters and here at the UNESCO-UNEVOC International Centre. This meeting would not have been possible without the many hours of dedicated planning, workshopping and writing that made the meeting stimulating, action and policy focused, and socially enjoyable.

The quality of the presentations – whether as keynote lectures, orienting lectures or panel discussion starters – were the backbone of the meeting and complemented the Background Papers prepared to guide the discussions at the meeting and the many examples of good practices that participants brought with them to share.

I would also like to thank our colleagues from ILO, the World Bank, the European Training Foundation, UNEP, WHO, and the United Nations University, who participated in the high level panel on sustainable development. Their contributions to the debate and discussions in the fifteen working groups were highly appreciated.

Mr President,  
Distinguished participants and guests,

The results of this meeting, your recommendations, the Bonn Declaration on Work, Citizenship and Sustainability and the Action Plan for TVET for Sustainable Development will be used for further planning and action in the Decade which will start on 1 January 2005.

All my thanks to all of you today, and my very best wishes for a safe and happy homecoming.

Au revoir et bon voyage!

Thank you.

## Annexes

1. Programme of the Meeting
2. List of Participants



## Annex 1

### Programme of the Meeting

#### Sunday 24.10.2004

14:00 Registration at Hotel Bristol lobby.

18:00 Welcome Reception at Hotel Bristol hosted by UNESCO.

#### Monday 25.10.2004

##### Opening Ceremony

10:00 Tea/coffee in lobby of Plenary Hall

**Musical performance:** Olga Zenker and Ina Hofmann of the Musikgymnasium Schloss Belvedere, Weimar, Germany, will play a number of pieces such as traditional Klezmer and compositions by Astor Piazzolla. As an ASPnet school, the Musikgymnasium Schloss Belvedere fosters international exchange and hosts benefit concerts for those in need.

11.00 **Welcome and Opening Remarks**

Mr Rupert Maclean, Director of UNESCO-UNEVOC International Centre, Bonn, on behalf of the Meeting organisers

##### **Cultural performance: From Seoul to Bonn (I)**

Six boys from the dance group of the Helene-Lange-Schule, Wiesbaden, Germany, will play traditional Korean drums (*Buk-Zum* – Voice of the Drums). The Helene-Lange-Schule joined the ASPnet in 1987.

##### **Welcome to the City of Bonn**

Mr Peter Finger, Mayor of the City of Bonn

##### **Opening Addresses:**

- *Learning for Work, Citizenship and Sustainability: UNESCO's Role and Contribution.* Mr Koïchiro Matsuura, Director-General of UNESCO
- *Education for All: UNESCO's Prime Mission.* His Excellency Hans-Heinrich Wrede, Chairman, Executive Board of UNESCO
- *TVET for Sustainable Development.* Ms Edelgard Bulmahn, German Federal Minister of Education and Research

##### **Cultural performance: From Seoul to Bonn (II)**

Four girls from the dance group of the ASPnet school Helene-Lange-Schule, Wiesbaden, Germany, will perform a traditional Korean dance (*Bu-Ce-Zum* – fan dance).

### **Keynote Presentations:**

Chair: Mr Wataru Iwamoto, Director of Division for Secondary, Technical and Vocational Education, UNESCO Headquarters, Paris

- *From Seoul to Bonn: Five Years of TVET Reform*. Prof. Jang-Ho Kim, President of KRIVET, Republic of Korea
- *Skills for Work and Life in a Sustainable Society*. Dr Lourdes R. Quisumbing, President of APNIEVE, Philippines
- *Corporate Responsibility for Sustainable Development*. Mr Albrecht Sanner, Director Human Resources and Educational Policies, DaimlerChrysler AG, Germany

13:15 Reception and Lunch Buffet

### **15:15 Plenary Session**

Interim Chair: Mr Rupert Maclean (UNESCO-UNEVOC)

- Election of Officials: President and 4 Vice-Presidents
- Chair: Elected President of the Experts Meeting
- Adoption of Agenda
- Introduction to work methods and structure of the meeting
- Appointment of Drafting Group and Rapporteur-General
- Expected outcomes of the meeting: Bonn Declaration on TVET and an Action Plan on TVET for Sustainable Development
- Explanation of Group Sessions A, B and C

### **Orientation Topics**

- *TVET Today: An International Profile*. Mr Simon Ellis, UNESCO Institute for Statistics, Canada
- *Skills for Work in the Future: A Youth Perspective*. Mr Bremley Lyngdoh, Youth Employment Summit Campaign, USA, PhD Scholar, London School of Economics, UK
- *Economy, Ecology and Society: The Contribution of TVET*. Ms Shaizada Tasbulatova, UNEVOC Centre, Kazakhstan

16:30 Refreshment Break

### **17:00 Group Sessions 1**

- A1: Learning for Skills Development: Policy Reform
- B1: Transition to the World of Work: World of Work
- C1: TVET for Sustainable Development: National Initiatives

19:00 Reception and dinner at the Historic Town Hall (*Altes Rathaus*) hosted by the Lord Mayor of Bonn

## **Tuesday 26.10.2004**

### **09:00 Group Sessions 2**

- A2: Learning for Skills Development: Education for All
- B2: Transition to the World of Work: Skills for the Future
- C2: TVET for Sustainable Development: Outcomes and Activities

10:30 Refreshment Break

11:00 **Group Sessions 3**

- A3: Learning for Skills Development: Secondary Level
- B3: Transition to the World of Work: Lifelong Learning
- C3: TVET for Sustainable Development: Planning and Implementation

12:30 Lunch

14:30 **Group Sessions 4**

- A4: Learning for Skills Development: Equity and Access
- B4: Transition to the World of Work: Post-Conflict Countries
- C4: TVET for Sustainable Development: Plan for Action

16:00 Refreshment Break

17:30 **TVET for Sustainable Development: an Inter-agency Panel Discussion**

Hosted by and held at the office of the German Federal Institute for Vocational Education and Training (BIBB)

- Ms Jane Stewart (Panel Chairperson), ILO
- Mr Arvil Van Adams, World Bank
- Mr Ulrich Hillenkamp, ETF
- Mr Wataru Iwamoto, UNESCO Headquarters
- Dr Günter Klein, WHO
- Ms Akpezi Ogbuigwe, UNEP
- Mr Juan Carlos Villagrán De León, UNU

Rapporteurs: Prof. John Fien, Prof. David Wilson and Ms Astrid Hollander, UNEVOC, Bonn

19:30 Reception and dinner hosted by BIBB

**Wednesday 27.10.2004**

09:00 **Plenary Session**

Chair: President of the Experts Meeting

- Progress report on summary of proceedings to date: Vice-Presidents responsible for Groups A, B and C
- Presentation of possible outline of Bonn Declaration on TVET: Vice-President responsible for drafting of Bonn Declaration
- Presentation of possible structure for an Action Plan for UNESCO on TVET for Sustainable Development: Moderator Group C
- Explanation of field visit options: Mr Michael Härtel, BIBB.

10:30 Refreshment Break

11:00 **Group Sessions 5**

- A5: Learning for Skills Development: Non-Formal Learning
- B5: Transition to the World of Work: Measuring TVET

- C5: TVET for Sustainable Development: Plan for Action

12:30 Lunch

14:30 **Field Visits**

- Building-Media-Centre for Cooperative Learning and Construction in Düren, or
- Chamber of Skilled Crafts (*Handwerkskammer*) in Koblenz which has 10 training and technology centres
- Concurrently, a meeting will be held of the Drafting Group for the Bonn Declaration on TVET

**Thursday 28.10.2004**

09:00 **Plenary Session 3**

Chair: President of the Experts Meeting

- Presentation and discussion of draft Bonn Declaration (Vice-President responsible for Drafting Group)
- Presentation and discussion of a proposed Action Plan on TVET for Sustainable Development for the United Nations Decade for Education for Sustainable Development (Vice-President responsible for Group C)

10:30 Refreshment Break

11:00 **Closing Plenary**

Musical entertainment from ASPnet school Musikgymnasium Schloss Belvedere

Chair: President of the Experts Meeting

- Summing up of proceedings and introduction of final version of Bonn Declaration (Rapporteur-General)
- Adoption of the Bonn Declaration (President)
- Adoption of the proposed Action Plan on TVET for Sustainable Development (President)
- Closing Remarks (by a Senior Participant)
- Closing Remarks – Ms Veronika Pahl, Director-General for Vocational Training and Educational Reform, Federal Ministry of Education and Research, Germany
- Closure of Meeting – Ms Aïcha Bah-Diallo, Assistant Director-General for Education a.i., UNESCO Headquarters, Paris

12:30 Farewell Lunch

## Meeting of Current Members, and Candidate Institutions, of the Worldwide Network of Associate Centres

Friday 29.10.2004

### 09:30 UNEVOC Centres Network Meeting

Hosted by and held at the UNESCO-UNEVOC International Centre, for all participants from UNESCO-UNEVOC Centres and from Candidate UNESCO UNEVOC Centres. The purpose of the meeting is:

- To update UNEVOC Centres on an Action Plan to strengthen and upgrade the UNEVOC Network;
- To discuss implementation of the UNESCO Revised Recommendations on TVET;
- To identify ways in which the UNEVOC Network can contribute to the UN Decade of Education for Sustainable Development, and develop an Action Plan for the UNEVOC Network.

The meeting will be an opportunity for participants at the Experts Meeting who are also members of the UNEVOC Network to meet and develop concrete activities within the UNEVOC Network with regard to TVET for sustainable development. This meeting will be the first of a series of workshops based upon this theme. This UNEVOC Network Meeting will also be open, for the first time, to Member States who do not yet have a UNEVOC Centre, but who are interested in establishing one.

17:00 Farewell Reception hosted by UNEVOC

The report on the **UNEVOC Centres Network Meeting** is available online at [http://www.unevoc.unesco.org/publications/pdf/SD\\_UNEVOC\\_CentresNetworkMeeting\\_ef.pdf](http://www.unevoc.unesco.org/publications/pdf/SD_UNEVOC_CentresNetworkMeeting_ef.pdf)



## Annex 2

## List of Participants/Liste des participants

Representing/ Représentant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
APNIEVE	Lourdes R. Quisumbing (Ms)	Asia-Pacific Network for International Education and Values Education (APNIEVE) Miriam College, UPPO Box 110, Diliman, 1101 Quezon City, Philippines Tel: [+63] (2) 4260169 Fax: [+63] (2) 4260172 Email: mqbaybay@mc.edu.ph, lrquisumbing@im Manila.com.ph
Australia / Australie	Di Booker (Ms)	TAFE South Australia Adelaide City Campus GPO Box 1872, 120 Currie Street, Adelaide, SA 5000, Australia Tel: [+61] -82078239 (office), -412767504 (mobile) Email: Di.Booker@ait.org
Bahrain / Bahreïn	Ali Abdulla Al-Saba (Mr)	Centre of Excellence
Bahrain / Bahreïn	Hassan Saleh Mubarak (Mr)	Technical Secondary Education PO Box 336, Isa Town, Bahrain Tel: [+973] -17680098 (office), -39692123 (mobile); Fax: [+973] 17680155 Email: hsalehm@bahrain.gov.bh
Bangladesh	Idris Ali (Mr)	Bangladesh Technical Education Board Technical Teacher's Training College, Quarter: -A/3, Begoon Bari, Dhaka-1208, Bangladesh Tel: [+880] 2 -8113345, -914 4205 (office); -8115365 (residence) Fax: [+880] 2 8113345 Email: bteb@bdcom.com
Belarus / Bélarus	Arkady Shklyar (Mr)	Republican Institute on Technical and Vocational Education Uliza Karl Liebknechta 32 220004 Minsk, Belarus Fax: [+375] 172 463892 Email: master@ripo.unibel.by, cit@ripo.unibel.by
Belgium / Belgique	Alex Zoccali (Mr)	Communauté française 17 Clos de la Magneroule, 6001-Charleroi, Belgique Tel: [+32] 479 71 99 58 Email: alex.zoccali@village.uunet.be, alex.zoccali@cfwb.be

Representing/ Représantant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
Belize / Belize	Ernest N. Raymond (Mr)	Ministry of Education, Youth and Sports Suite 303, 3rd Floor Cor. Hutson/Eyre Street. PO Box 1769, Belize Tel: [+501] 224 5781 Fax: [+501] 223 7331 Email: tvetbelize@hotmail.com, eraymond@moes.gov.bz, moeproject@btl.net
Bhutan / Bhoutan	Karma Loday (Mr)	Department of Human Resources Ministry of Labour and Human Resources Doebum Lam P.O. Box No 835 Thimphu, Bhutan Tel: [+975] (2) 324844 Fax: [+975] (2) 324846 Email: klods_bht@druknet.bt
BIBB	Ute Hippach-Schneider (Ms)	Federal Institute for Vocational Education and Training (BIBB) Robert-Schuman-Platz 3, 53175 Bonn, Germany Tel: [+49] (228) 107 1630 Fax: [+49] (228) 107 2971 Email: hippach-schneider@bibb.de
BMBF	Dieta Lohmann (Ms)	Federal Ministry of Education and Research (BMBF) Dienstsitz Bonn, Heinemannstr. 2, 53175 Bonn-Bad Godesberg, Germany Tel: [+49] (1888) 57 2538 Fax: [+49] (1888) 57 8 2538 Email: dieta.lohmann@bmbf.bund.de
BMBF	Dietrich Nelle (Mr)	Federal Ministry of Education and Research (BMBF) Dienstsitz Bonn, Heinemannstr. 2, 53175 Bonn-Bad Godesberg, Germany Tel: [+49] (1888) 57 2109 Fax: [+49] (1888) 57 8 2109 Email: dietrich.nelle@bmbf.bund.de
Botswana	Kgomotso Motlotle (Ms)	Botswana National Commission for UNESCO Ministry of Education Private Bag 005 Gaborne, Botswana Tel: [+267] -3655400, -3655439, -3655440 Fax: [+267] -3655458, -306610 Email: kmotlotle@gov.bw, fmaoto@gov.bw

Representing/ Représantant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
Cambodia / Cambodge	Phearin Bun (Mr )	Institut national de formation technique (National Technical Training Institute) Russian Blvd. Sankat Thuktla, Khan Russey Keo, Phnom Penh, Cambodia  Tel: [+855] 12 844741 Tel/Fax: [+855] 23 883039 Email: ntti@everyday.com.kh
Cameroon / Cameroun	Nsahlai Wome Shadrack (Mr)	Ministère de l'Enseignement technique et la formation professionnelle DET-MINETFOP B.P. 1600 YAOUNDE, Cameroon  Tel: [+237] 760 1450 Fax: [+237] 222 -2711, -1940
Canada	Chris Chinien (Mr)	National Centre for Workplace Development, University of Manitoba, Faculty of Education 10 Harbour Bay, Winnipeg, Manitoba, Canada R3T 5G6  Tel: [+1] (204) -4748271, -2611630 Fax: [+1] (204) -4747696, -2611630 Email: chinien@ms.umanitoba.ca, chinien@mts.net
Canada	Richard Gagnon (Mr)	Université Laval, Faculté des sciences de l'éducation, Département d'étude sur l'enseignement et l'apprentissage, UNEVOC-Canada C.P. 2208, Succ. Terminus, Québec, Québec, Canada G1K 7P4  Tel: [+1] (418) 656 2131 ext. 3867 Fax: [+1] (418) 656 2905 Email: richard.gagnon@fse.ulaval.ca
CEDEFOP	Steve Bainbridge (Mr)	European Centre for the Development of Vocational Training (CEDEFOP) PO Box 22427 - Thessaloniki 55102 Thessaloniki, Greece  Tel: [+30] 2310490029 Fax: [+30] 2310490020 Email: sb@cedefop.eu.int
Center for Environment Education (India)	M. J. Ravindranath (Mr)	Centre for Environment Education Southern Regional Cell Kamala Mansion, 143, Infantry Road, Bangalore 560001, India  Tel: [+91] (80) -22869094, -22869907 Fax: [+91] (80) 22868209 Email: raviatri@hotmail.com

Representing/ Représantant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
CINTERFOR	Fazal Karim (Mr)	CINTERFOR National Training Agency Trinidad and Tobago 115 Endeavour Road Chaguanas Port of Spain - Republic of Trinidad Et Tobago Tel: [+1868] 672 9409 Fax: [+1868] 672 2171 E-mail: ntatt@tsstt.net.tt
Côte d'Ivoire	Philippe Bouedy (Mr)	Agence nationale de la formation professionnelle (AGEFOP) BP 32 CEDEX III Abidjan, Côte d'Ivoire Tel: [+225] 21 21 26 -26, -21 Email: bouedy@yahoo.fr
Côte d'Ivoire	Adèle Dédi (Ms)	Ministry of TVET 15 BP 95 Abidjan 15, Côte d'Ivoire Tel: [+225] -2021 1702, -2022 1505, -0565 4466, -0759 6527 Fax: [+225] 2021 5333
Côte d'Ivoire	Mamadou Diomande (Mr)	Ministry of TVET 15 BP 95 Abidjan 15, Côte d'Ivoire Tel: [+225] -2021 1702, -2122 3125 Fax: [+225] 2021 5333 Mobile: [+225] 0744 7578
Côte d'Ivoire	Jeannette Koudou (Ms)	Agence nationale de la formation professionnelle (AGEFOP) Angle Rue du Canal Rue Pierre et Marie Curie, Côte d'Ivoire Tel: [+225] -2135 0028, -2121 2601, -2022 2637 Fax: [+225] 2125 7600 (standard) Email: agefop@aviso.ci, info@agefop.ci
Côte d'Ivoire	Youssef Soumahoro (Mr)	Ministry of TVET B.P. 362 Abidjan CEDEX I, Côte d'Ivoire Tel: [+225] -2021 1702, -2122 3125 Fax: [+225] 2021 5333 Email: soumahoroyoussef2004@yahoo.fr
Croatia / Croatie	Efka Heder (Ms)	Institute of Education of the Republic of Croatia Zavod za školstvo Republike Hrvatske, Badaliceva 24, 10000 Zagreb, Kroatien Tel: [+385] 1 -3820 244, -4814 908 Fax: [+385] 1 -4814 908, -3631 536 Email: efka.heder@zg.htnet.hr

Representing/ Représantant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
Denmark / Danemark	Torben Jessen (Mr)	International Business College Dronning Margrethes Vej 6-12 DK-6200 Aabenraa, Denmark
		Tel: [+45] 73 63 73 33 Fax: [+45] 73 62 73 01 Email: Tje@ibc.dk
Denmark / Danemark	Henrik Skovgaard Nielsen (Mr)	Gaeslingestien 21 DK-2950 Vedbaek, Denmark
		Tel: [+45] 45 89 26 18 Email: h.skovgaard@privat.tele.dk
Equatorial Guinea / Guinée équatoriale	Jenguiñ Anvam (Mr)	Instituto Politécnico Bata
Equatorial Guinea / Guinée équatoriale	Joaquin Michia Oyana (Mr)	Instituto Politécnico Bata
		Tel: [+240] 244866 Fax: [+240] 082874
Ethiopia / Éthiopie	Bizuneh Debebe (Mr)	Ministry of Education Addis Ababa P.O. Box 1367 Ministry of Education Addis Ababa, Ethiopia
		Tel: [+251] 01 -56 5553 (office), -338 117 (residence) Fax: [+251] 01 550299 Email: bizunehd2003@yahoo.com
European Commission	Eliane Clifit-Minot (Ms)	European Commission B-7 5/56B-1049 Brussels, Belgium
		Tel. : [+32] (2) 299 10 93 Fax: [+32] (2) 299 53 25 Email: eliane.clifit-minot@cec.eu.int
European Training Foundation (ETF)	Ulrich Hillenkamp (Mr)	European Training Foundation (ETF) Villa Gualino Viale Settimio Severo, 65, I-10133 Torino, Italy
		Tel: [+39] 011 630 22 22 Fax: [+39] 011 630 22 00 Email: info@etf.eu.int
Fiji / Fidji	Josefa Natau (Mr)	Ministry of Education Private Mail Bag, Government Building, Suva, Fiji
		Tel: [+679] -3314477, -3220546 Fax: [+679] -3314757, -3303511 Email: jnatau@govnet.gov.fj
Finland / Finlande	Carola Fortelius (Ms)	Head of Biotechnology Lab, EVTEK Institute of Technology Leritie 1, FIN 01600 VANTAA
		Tel: [+358] (9) 5119 759 Fax: [+358] (9) 5119 977 Email: carola.fortelius@evtek.fi

Representing/ Représantant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
Finland / Finlande	Heli Kuusi (Ms)	National Board of Education Hakaniemenkatu 2, FIN 00530 HELSINKI  Tel: [+358] (9) 7747 7600 Fax: [+358] (9) 7747 7715 Mobile: [+358] 50 2845 Email: Heli.Kuusi@oph.fi
Finland / Finlande	Liisa Vehkaoja (Ms)	EVTEK Espoo-Vantaa Institute of Technology Vanha maantie 6, FIN 02650 ESPOO  Tel: [+358] (9) 5119 826 Fax: [+358] (9) 5119 988 Email: liisa.vehkaoja@evtek.fi
France / France	Maryannick Malicot (Ms)	Direction des enseignements scolaires Ministère de l'éducation nationale, de l'enseignement supérieur et de la recherche Paris, France  Tel: [+33] 1 55 55 32 20 Email: maryannick.malicot@education.gouv.fr
Gambia / Gambie	Ousman G. M. Nyang (Mr)	National Training Authority (NTA) Regional Education Office Region 1 Kanifing The Gambia, West Africa  Tel: [+220] 4462047 Fax: [+220] 4392781 Mobile: [+220] 9971948 Email: gaws80@yahoo.com
German Commission for UNESCO	Barbara Malina (Ms)	German Commission for UNESCO Colmantstr. 15, 53115 Bonn, Germany  Tel: [+49] (228) 60497 17 Fax: [+49] (228) 60497 30 Email: malina@unesco.de
Germany / Allemagne	Michael Härtel (Mr)	Federal Institute for Vocational Education and Training (BIBB) Robert-Schuman-Platz 3, 53175 Bonn, Germany  Tel: [+49] (228) 107 1013 Email: haertel@bibb.de
Germany / Allemagne	Hans-Wolf Rissom (Mr)	German Commission for UNESCO Colmantstr. 15, 53115 Bonn, Germany  Email: wrissom@yahoo.de

Representing/ Représantant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
Germany / Allemagne	Michael Schlicht (Mr)	Federal Ministry of Education and Research (BMBF) Dienstszitz Bonn, Heinemannstr. 2, 53175 Bonn-Bad Godesberg, Germany Tel: [+49] (1888) 57 3142 Fax: [+49] (1888) 57 8 3142 Email: michael.schlicht@bmbf.bund.de
Ghana	Asamoah Duodu (Mr )	Tec/Voc Education, Ghana Education Service PO Box M 45 Accra, Ghana Tel: [+233] -21 683679, -24 4839490 (mobile) Fax: [+233] 21 673958 Email: asamoahd@yahoo.com
Ghana	Comfort Ntiamoa-Mensah (Ms)	Vocational Training for Females (VTF) Programme P.M.B.CT 114 Cantonment Accra, Ghana Tel: [+233] (21) 784514 Email: vtf@africaonline.com.gh
GTZ	Klaus Sodemann (Mr)	German Agency for Technical Cooperation (GTZ) Dag-Hammarskjöld-Weg 1-5 65760 Eschborn, Germany Tel: [+49] (6196) 79 1247 Fax: [+49] (6196) 79 80 1247 Email: klaus.sodemann@gtz.de
Guinea / Guinée	Soriba Youla (Mr)	Ministère de l'Enseignement Technique et de la Formation Professionnelle P.B. 6728 Conacry, Guinée Tel: [+224] 46 2971 Mobile: [+224] 11290345 Email: mamaddiallo@yahoo.fr, fad@mirinet.net.gn, tkaba@mirinet.net.gn
Hungary / Hongrie	Antal Jekkel (Mr)	TVET Department, Ministry of Education Ministry of Education Szalay u. 10-14. 1055 Budapest, Hungary Tel: [+36] 1 4737029 Fax: [+36] 1 3120426 Email: jekkel.antal@om.hu
ILO	Wolfgang Heller (Mr)	ILO, Germany Internationale Arbeitsorganisation, Vertretung in Deutschland, Karlplatz 7, 10117 Berlin, Germany Tel. [+49] 30 280 926 -68, -69 Fax [+49] 30 280 464 40 E-mail: berlin@ilo.org

Representing/ Représantant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
ILO	Trevor Riordan (Mr)	<p>ILO Skills and Employability Department (IFP/SKILLS) Employment Sector International Labour Office 4 route des Morillons 1211 Geneva 22, Switzerland</p> <p>Tel: [+41] (22) 799 6661 Fax: [+41] (22) 799 7650 Email: riordan@ilo.org</p>
ILO	Jane Stewart (Ms)	<p>ILO Skills and Employability Department (IFP/SKILLS) Employment Sector International Labour Office 4 route des Morillons 1211 Geneva 22, Switzerland</p> <p>Tel: [+41] (22) 799 7512 Fax: [+41] (22) 799 6310 Assistant - Anne Sullivan Email: sullivan@ilo.org</p>
International Association for Counselling (IAC)	William Borgen (Mr)	<p>International Association for Counselling (IAC) ECPS, Faculty of Education University of British Columbia Vancouver, B.C, Canada V6T 1Z5</p> <p>Tel: [+1] (604) 822 5261 Fax: [+1] (604) 822 2328 Email: borgen@interchange.ubc.ca</p>
International Association for Educational and Vocational Guidance (IAEVG)	Bryan Hiebert (Mr)	<p>International Association for Educational and Vocational Guidance (IAEVG) Division of Applied Psychology University of Calgary Calgary, Alberta, Canada T2N 1N4</p> <p>Tel: [+1] (403) 220 5651 Fax: [+1] (403) 282 9244 Email: hiebert@ucalgary.ca</p>
Jamaica / Jamaïque	Patrick Facey (Mr)	<p>Technical and Vocational Education Unit Ministry of Education, Youth and Culture 37 Arnold Road, Kingston 4, Jamaica W.I.</p> <p>Tel: [+1876] 922 0040 Fax: [+1876] 967 3975 Email: edtec@cwjamaica.com</p>

Representing/ Représantant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
Japan / Japon	Shigeru Ikemori (Mr)	<p>Vocational Education and Information Technology Education Division, Elementary and Secondary Education Bureau, Ministry of Education, Culture, Sports, Science and Technology 2-5-1 Marunouchi Chiyoda-ku, 100-8959 Tokyo, Japan</p> <p>Tel: [+81] 3 5253 2057 Fax: [+81] 3 6734 3744 Email: ikemori@nier.go.jp</p>
Japan / Japon	Tomohiro Terasaki (Mr)	<p>Vocational Education and Information Technology Education Division, Elementary and Secondary Education Bureau, Ministry of Education, Culture, Sports, Science and Technology 2-5-1 Marunouchi Chiyoda-ku Tokyo, Japan</p> <p>Tel: [+81] 3 6734 2380 Fax: [+81] 3 6734 3744 Email: terasaki@mext.go.jp</p>
Kazakhstan	Khadzhimukan Arynov (Mr)	<p>Kazakh Academy of Education 25, Zhambyl str 470100 Almaty, Kazakhstan</p> <p>Tel: [+7] (3272) -910333, -912700 Fax: [+7] (3272) 910703 Email: kao777@mail.ru Web: www.kao.kz</p>
Kazakhstan	Shaizada Tasbulatova (Ms)	<p>National Observatory of Kazakhstan, UNEVOC Centre Association "EFA in Kazakhstan" Mitin Street 6 Room 109 480020 Almaty, Kazakhstan</p> <p>Tel: [+7] (3272) -650007, -641286 Fax: [+7] (3272) 641286 Email: shaizada@nursat.kz</p>
Kenya	Alex Kibebe (Mr)	<p>Kenyan National Commission for UNESCO Ministry of Education, Science and Technology National Bank Building (14th floor), Harambee Avenue P.O. Box 72107 - 00200 Nairobi, Kenya</p> <p>Tel: [+254] (20) 2290 -53, -54 Fax: [+254] (20) 2130 25 Email: kncunesco@todays.co.ke</p>

Representing/ Représantant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
Kenya	Meshack O. Kidenda (Mr)	Ministry of Labour and Human Resources Development P.O. Box 74494 00200 Nairobi, Kenya Tel: [+254] (20) 558545 Fax: [+254] (20) 553023 Email: mokidenda@ditkenya.org
Kenya	Arthur A. Rateng (Mr)	Ministry of Education, Science and Technology Jogoo House B P.O. Box 60209 City Square 00200 Nairobi, Kenya Tel: [+254] (20) 228411 Fax: [+254] (20) 225205 Mobile: [+254] 733 803 332 Email: kncunesco@todays.co.ke
KRIVET	Janette Han (Ms)	Korea Research Institute for Vocational Education and Training (KRIVET) 15-1, Chongdam 2-dong, Kangnam-gu, Seoul, Republic of Korea 135-949 Tel: [+82] 2 3485 5212 Fax: [+82] 2 3485 5048 E-mail: jchan@krivet.re.kr
KRIVET	Jang-Ho Kim (Mr)	Korea Research Institute for Vocational Education and Training (KRIVET) 15-1, Chongdam 2-dong, Kangnam-gu, Seoul, Republic of Korea 135-949 Tel: [+82] 2 -3444 6320, -3485 5001 Fax: [+82] 2 3485 5007 Email: jhkim@krivet.re.kr
Lao People's Democratic Republic / République démocratique populaire lao	Phonephet Boupha (Ms)	HTVE Department, Ministry of Education Avenue Lane Xang P.O. Box 067 Vientiane 01000, LAO PDR Tel: [+856] (21) -212098, -216473 Fax: [+856] (21) -212108, -216473 Email: pboupha@laotel.com, phonephet12@hotmail.com
Lithuania / Lituanie	Romualdas Pusvaskis (Mr)	Ministry of Education and Science A. Volano str. 2/7, LT-2600 Vilnius, Lithuania Tel: [+370] 5 274 3152 Fax: [+370] 5 261 0777 Email: Romualdas.Pusvaskis@smm.lt
Madagascar	Blaise Zoana (Mr)	Commission nationale malgache pour l'UNESCO 11, rue Naka Rabemanansoa-Behoririka, B.P. 331, Antananarivo (101), Madagascar Email: unes.zoanabl@wanadoo.mg

Representing/ Représantant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
Malawi	Jones Chafa (Mr)	<p>Technical, Entrepreneurial and Vocational Education and Training Authority (TEVETA) Kang'ombe House P/Bag B4056 Lilongwe 3, Malawi</p> <p>Tel: [+265] 01 773 784 Fax: [+265] 01 774 7997 Email: jchafa@teveta.malawi.net</p>
Malawi	Robson Chakwana (Mr)	<p>Technical, Entrepreneurial and Vocational Education and Training Authority (TEVETA) Kang'ombe House P/Bag B4056 Lilongwe 3, Malawi</p> <p>Tel: [+265] 01 773 784 Fax: [+265] 01 774 7997 Email: rchakwana@teveta.malawi.net</p>
Malawi	Helmuth Klaucek (Mr)	<p>GOPA Consultants P.O. Box 31131 Lilongwe 3, Malawi</p> <p>Email: gtztevet@malawi.net</p>
Mauritius / Maurice	Pradeep Kumar Joosery (Mr)	<p>Industrial and Vocational Training Board IVTB House, Pont Fer, Phoenix, Mauritius</p> <p>Tel : [+230] -601 8000, -698 4200 Fax: [+230] 697 8988 Email: pjoosery@ivtb.intnet.mu; headoffice@ivtb.intnet.mu (standard);</p>
Mexico / Mexique	Serafin Aguado Gutierrez (Mr)	<p>Secretaría de Educación Pública Nicolás San Juan 1319 Bis Col. Del Valle 03100 México, D.F. Mexico</p> <p>Tel: [+52] 55 -5605 5000, -5606 6065 Email: sejec@sep.gob.mx</p>
National Directorate for Technical and Vocational Education (Mozambique)	Quiteria Mabote (Ms)	<p>Direcção Nacional do Ensino Técnico-Profissional (National Directorate for Technical and Vocational Education) Avenida 24 de Julho, 167-7, Maputo, Mozambique</p> <p>Tel: [+258] (1) 490192 Fax: [+258] (1) 492196 Email: telmina@mined.uem.mz or quiteria.mabote@mined.gov.mz</p>
National Directorate for Technical and Vocational Education (Mozambique)	Alastair Machin (Mr)	<p>Direcção Nacional do Ensino Técnico-Profissional (National Directorate for Technical and Vocational Education) c/o GTZ Caixa Postal 2766, Maputo, Mozambique</p> <p>Tel: [+258] (1) 486917 Fax: [+258] (1) 486916 Email: alastair.proetfp@tvcabo.co.mz</p>

Representing/ Représantant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
NCVER	Tom Karmel (Mr)	National Centre for Vocational Education Research Ltd Level 11, 33 King William Street, Adelaide SA 5000, Australia Tel: [+61] 08 8333 8400 Fax: [+61] 08 8331 9211 Email: exec@ncver.edu.au
Nigeria / Nigéria	David Awanbor (Mr)	National Business and Technology Exams Board (NABTEB) PMB 1747, Ikioba Hill Benin City, Nigeria Tel: [+234] 52 238 197 Fax: [+234] 52 255 972 Email: dawanbor@yahoo.com
Nigeria / Nigéria	Nuru Yakubu (Mr)	National Board for Technical Education P.M. B 2239, Plot B. Bida Road, Kaduna, Nigeria Tel: [+234] 62 246554 Fax: [+234] 62 247507 Email: nyakubu@nbte-nigeria.org
Norway / Norvège	Baard Meidell Johannesen (Mr)	Confederation of Norwegian Business and Industry PO Box 5250 Majorstuen 0303 Oslo, Norway Tel: [+47] 9521 0399 Email: bjohanne@nho.no
Norway / Norvège	Gunnar Mandt (Mr)	Ministry of Education and Research Akersg. 44, PB 8119 Dep 0032 Oslo, Norway Tel: [+47] 22 24 75 13 Email: gma@ufd.dep.no
Palestinian Authority / Autorité palestinienne	Salah Al-Zaroo (Mr)	P.O Box 247 Hebron West Bank, via Israel Tel/Fax: 00970 22219157 Email: szaroo@tvvet-pal.org, szaroo@hotmail.com
Rapporteur	David Wilson (Mr)	Ontario Institute for Studies in Education Comparative, International and Development Education Centre University of Toronto 252 Bloor Street West Toronto, Ontario, Canada M5S 1V6 Tel: [+1] (416) 923-6641, ext 2312 Fax: [+1] (416) 926-4744 or 54 Email: dnwilson@oise.utoronto.ca

Representing/ Représantant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
Rapporteur - General	John Fien (Mr)	Faculty of Environmental Science, Griffith University Nathan Campus Brisbane Nathan QLD 4111, Australia Tel: [+61] (7) 3875 6716 Email: j.fien@griffith.edu.au, j.fien@mailbox.gu.edu.au
Republic of Korea / République de Corée	Kisung Lee (Mr)	Korea Research Institute for Vocational Education and Training (KRIVET) 15-1, Chongdam 2-dong, Kangnam-gu, Seoul, Republic of Korea 135-949 Tel: [+82] (2) 34855097 Fax: [+82] (2) 34855048 EMail: kslee@krivet.re.kr
Russian Federation / Fédération de Russie	Evgeny Butko (Mr)	Educational Organizations Department, Russian Federal Education Agency, Head of Committee for Technical and Vocational Education at the Commission of the Russian Federation for UNESCO 115998, Russia, Moscow, Lusinovskay str. 51 Tel: [+7] 095 -237 46 74, -237 72 68 Fax: [+7] 095 237 46 74 Email: butko-unpo@mail.ru
Russian Federation / Fédération de Russie	Michael Rachkov (Mr)	International Centre of Educational Systems (ICES) Off 38-42, 3/4 Novaja polshad, entr. 4101000 Moscow Russian Federation Tel: [+7] (95) 923 3905 Fax: [+7] (95) 924 6852 Email: rachk-v@mail.msiu.ru
Rwanda	Emma Rubagumya (Ms)	Ministry of Education, Science, Technology and Scientific Research BP 622, Kigali, Rwanda Tel: [+250] -582446 (office), -08454080 (mobile); Email: erubagumya@mineduc.gov.rw
Saudi Arabia / Arabie saoudite	Khaled Alangari (Mr)	General organisation for technical education and vocational training (GOTEVOT) P.O Box 7823 Riyadh 11472, Saudi Arabia Email: alangari@gotevot.edu.sa
Senegal / Sénégal	Abdoulaye Mboup (Mr)	Inspecteur de Spécialité / option Industrie, Directeur de l'Enseignement Secondaire Technique 'DEST' Tel: [+221] 821 5221 Fax: [+221] 822 0114 Mobile: [+221] 551 3859 Email: mboup_abdoulaye@yahoo.fr, abdoulaye@yahoo.fr

Representing/ Représantant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
Sierra Leone	Mohamed A. Jalloh (Mr)	<p>National Council for Technical, Vocational and Other Academic Awards (NCTVA), Ministry of Education, Science and Technology A.J. Momoh Street Tower Hill Freetown, Sierra Leone P.O. Box 135</p> <p>Tel: [+232] -22 221695, -76 686983 Fax: [+232] 22 223030 Email: director@nctva.org, kortorma@yahoo.fr, nctvasl@yahoo.co.uk</p>
Sierra Leone	David Shears (Mr)	<p>Ministry of Education Science and Technology Freetown, Sierra Leone</p> <p>Tel: [+232] 22 240929 Fax: [+232] 22 235048 Email: dshears@sierrutel.sl</p>
Sri Lanka	T. A. Piyasiri (Mr)	<p>Tertiary and Vocational Education Commission Vocational Training Complex, 354/2, Elvitigala Mawatha, Colombo 05, Sri Lanka</p> <p>Tel: [+94] 11 5348 141 Fax: [+94] 11 2555 007 Email: dg@tvec.gov.lk</p>
Thai – German Institute (TGI)	Walter Kretschmar (Mr)	<p>Thai – German Institute (TGI) 700/1 Moo 1, Amata Nakorn, KM.57; Bangna-Trad Rd., Tambol Klong Tamru; Amphur Muang, Chonburi, 20000 Thailand</p> <p>Tel: [+66] 38 743 463 Fax: [+66] 38 743 465 Email: kretschmar@tgi.or.th</p>
Thai – German Institute (TGI)	Revadee Kuprasert (Ms)	<p>Thai – German Institute (TGI) 700/1 Moo 1, Amata Nakorn, KM.57; Bangna-Trad Rd., Tambol Klong Tamru; Amphur Muang, Chonburi, 20000 Thailand</p> <p>Email: kuprasert@tgi.or.th</p>
Thailand / Thaïlande	Siripian Choomnoom (Ms)	<p>Vocational Education Commission Office, Ministry of Education Bangkok 10300, Thailand</p> <p>Tel: [+66] (2) -282 4832, -281 5555 ext. 1815, 1816 Fax: [+66] (2) 282 4832 Email: siripanch@hotmail.com</p>

Representing/ Représantant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
Thailand / Thaïlande	Harirak Mangkorn (Mr)	Office of Vocational Education Commission-OVEC, Ministry of Education Rajadamnoen-Nok Avenue, Bangkok 10300, Thailand Tel: [+66] (2) 280 2945 Fax: [+66] (2) 280 4487 Email: mangkorn@vec.go.th
Togo	Kokou Yende (Ms)	Ministère de l'enseignement technique et de la formation professionnelle BP 12769 Lomé-Togo Tel: [+228] -222 04 57, -903 73 77 Fax: [+228] 221 89 34 Email: joyende@yahoo.fr
UNESCO	Hashim Abdul-Wahab (Mr)	UNESCO 7, place de Fontenoy 75007 Paris, France Tel: [+33] (1) 45 68 1737 Fax: [+33] (1) 45 68 55 45 Email: h.abdul-wahab@unesco.org
UNESCO	Kacem Bensalah (Mr)	UNESCO 7, place de Fontenoy 75007 Paris, France Tel: [+33] (1) 45 68 10 34 Fax: [+33] (1) 45 68 56 45 Email: k.bensalah@unesco.org
UNESCO	Wataru Iwamoto (Mr)	UNESCO 7, place de Fontenoy 75007 Paris, France Tel: [+33] (1) 45 68 1737 Fax: [+33] (1) 45 68 5622 Email: w.iwamoto@unesco.org
UNESCO	Masanori Kono (Mr)	UNESCO 7, place de Fontenoy 75007 Paris, France Tel: [+33] (1) 45 68 0859 Fax: [+33] (1) 45 68 5630 Email: ma.kono@unesco.org
UNESCO	Halima Letamo (Ms)	UNESCO 7, place de Fontenoy 75007 Paris, France Tel: [+33] (1) 45 68 0830 Fax: [+33] (1) 45 68 5545 Email: h.letamo@unesco.org

Representing/ Représantant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
UNESCO	Elspeth McOmish (Ms)	UNESCO 7, place de Fontenoy 75007 Paris, France
		Tel: [+33] (1) 45 68 0829 Fax: [+33] (1) 45 68 5545 Email: e.mcomish@unesco.org
UNESCO	Mohan Perera (Mr)	UNESCO 7, place de Fontenoy 75007 Paris, France
		Tel: [+33] (1) 45 68 0822 Fax: [+33] (1) 45 68 5545 Email: m.perera@unesco.org
UNESCO	Patricia Toïgo (Ms)	UNESCO 7, place de Fontenoy 75007 Paris, France
		Tel: [+33] (1) 45 681011 Fax: [+33] (1) 45 685626 Email: p.toigo@unesco.org
UNESCO	Karina Veal (Ms)	UNESCO
		Email: k.veal@unevoc.unesco.org
UNESCO IIEP	David Atchoarena (Mr)	International Institute for Educational Planning (IIEP) 7-9, rue Eugène Delacroix 75116 Paris, France
		Email: d.atchoarena@unesco.org tel. [+33] (1) 45 03 -77 49, -77 00 fax. [+33] (1) 40 72 83 66
UNESCO Institute for Education (UIE)	Adama Ouane (Mr)	UNESCO Institute for Education (UIE) Feldbrunnenstraße 58 20148 Hamburg, Germany
		Tel: [+49] (40) 44 80 41 03 Fax: [+49] (40) 410 77 23 Email: a.ouane@unesco.org
UNESCO Institute for Education (UIE)	Madhu Singh (Ms)	UNESCO Institute for Education (UIE) Feldbrunnenstraße 58 20148 Hamburg, Germany
		Tel: [+49] (40) 44 80 41 -26, -0 Fax: [+49] (40) 410 77 23 Email: m.singh@unesco.org
UNESCO Institute for Statistics (UIS)	Simon Ellis (Mr)	UNESCO Institute for Statistics (UIS) C.P. 6128 Succursale Centre-ville, Montreal, Québec, H3C 3J7 Canada
		Tel: [+1] (514) 343 6880 Email: s.ellis@uis.unesco.org

Representing/ Représantant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
UNESCO Institute for Statistics (UIS)	José Pessoa (Mr)	UNESCO Institute for Statistics (UIS) C.P. 6128 Succursale Centre-ville, Montreal, Québec, H3C 3J7 Canada Tel: [+1] (514) 343 7686 Email: j.pessoa@uis.unesco.org
UNESCO Office Bangkok	L. Efison Munjanganja (Mr)	UNESCO Asia-Pacific Regional Bureau for Education P.O. Box 967, Prakanong P.O. Bangkok 10110, Thailand Tel: [+66] (2) -3910577, -3910550 Fax: [+66] (2) 3910866 Email: e.munjanganja@unesco.org
UNESCO Office Beirut	Sulieman Sulieman (Mr)	UNESCO Office Beirut P.O. Box 11-5244 Beirut, Lebanon Tel: [+961] (1) 850015, 850013 Fax: [+961] (1) 824854 Email: s.sulieman@unesco.org, beirut@unesco.org
UNESCO Office Dakar	Teeluck Bhuwanee (Mr)	UNESCO Office Dakar P.O. Box 3313 Senghor Avenue Dakar, Senegal Tel: [+221] 849 23 47 Email: t.bhuwanee@unesco.org
UNESCO Office Nairobi	James Chomba Wamwangi (Mr)	UNESCO PEER United Nations Office, Gigiei, United Nations Avenue, Block C Nairobi, Kenya Tel: [+254] -20 622459, -721 207969 Fax: [+254] 20 622324 Email: tve.ac@unesco.unon.org, jwamwangi@yahoo.com
UNESCO Office New Dehli	Huma Masood (Ms)	UNESCO Office New Delhi and Regional Bureau for Information and Communication B 5/29 Safdarjung Enclave New Delhi 110 029, India Tel: [+91] (11) 6713000 Fax: [+91] (11) -6713001, -6713002 Email: h.masood@unesco.org
UNESCO-UNEVOC	Hans Krönner (Mr)	UNESCO-UNEVOC Goerrest. 15, 53113 Bonn, Germany Tel: [+49] (228) 243 3713 Fax: [+49] (228) 243 3777 Email: h.kronner@unevoc.unesco.org

Representing/ Représantant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
UNESCO-UNEVOC	Rupert Maclean (Mr)	UNESCO-UNEVOC Goerrestr. 15, 53113 Bonn, Germany Tel: [+49] (228) 243 37-0 Fax: [+49] (228) 243 3777 Email: r.maclean@unevoc.unesco.org
United Kingdom of Great Britain and Northern Ireland / Royaume-Uni de Grande-Bretagne et d'Irlande du Nord	Judith Cohen (Ms)	Learning and Skills Development Agency (LSDA) 1 Whitehall Whitehall Road Leeds LS1 4HR, UK Tel: [+44] (113) 390 6316 Fax: [+44] (113) 390 6155 Email: jcohen@lsda.org.uk
United Nations Environment Programme (UNEP)	Akpezi Ogbuigwe (Ms)	United Nations Environment Programme (UNEP) P.O Box 30552 Nairobi, Kenya Tel: [+254] 20 623381 Fax: [+254] 20 624249 Email: akpezi.ogbuigwe@unep.org
United Nations University (UNU)	Juan Carlos Villagrán de León (Mr)	United Nations University Goerrestr. 15, 53113 Bonn, Germany Tel: [+49] (228) 422 85513 Fax: [+49] (228) 422 85599 Email: villagran@ehs.unu.edu
United Republic of Tanzania / République-Unie de Tanzanie	Bernadetta Ndunguru (Ms)	Vocational Education and Training Authority (VETA) P.O. Box 2849 Dar Es Salaam, United Republic of Tanzania Tel: [+255] -22 286 36 83; -741 56 53 13 (mobile) Fax: [+255] 22 2864759 Email: bndunguru@hotmail.com, veta@raha.com
WHO	Günter Klein (Mr)	European Centre for Environment and Health, World Health Organization Goerrestr. 15, 53113 Bonn, Germany Tel: [+49] (228) 2094 -100 (direct), -0 (switchboard); Fax: [+49] (228) 2094 201 Email: gkl@ecehbonn.euro.who.int
World Bank	Arvil Van Adams (Mr)	The World Bank 1818 H Street NW, Washington DC 20433, USA Tel: [+1] (202) 473 3435 (direct) Fax: [+1] (202) 473 8299 Email: aadams1@worldbank.org

Representing/ Représantant (country or organisation/ pays ou organisation)	Name/Nom	Contact Information / Coordonnées
Yemen / Yémen	Abdul-Wahab Al-Akil (Mr)	Ministry of Technical Education and Vocational Training PO Box 25235, Baghdad St., San'a, Yemen Tel: [+967] (1) -406300, -406292 (direct) Fax: [+967] (1) 406300 Mobile: [+967] 716 00400 Email: alakil27@hotmail.com, alakil27@yemen.net.ye, vtpiu@y.net.ye
Yemen / Yémen	Mohamed Awadh Bin-Rabiah (Mr)	Technical Education and Vocational Training Baghdad str. Sana'a, Yemen Tel: [+967] (1) 212010 Fax: [+967] (1) 212010 Email: Ben-Rabia.hotmail.com
Youth Employment Summit Campaign	Bremley Lyngdoh (Mr)	Youth Employment Summit Campaign / London School of Economics & Political Science Houghton Street London WC2A 2AE, England UK Tel: [+44] 207 955 6054 Fax: [+44] 207 955 6844 Email: b.w.lyngdoh@lse.ac.uk, bremley@youthlink.org





