Technical and Vocational Education and Training for Sustainable Development: An Inter-Agency Panel Discussion

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Concept Papers and Background Details of the Panel Presenters
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Skills and Employability Department, International Labour Organisation (ILO), Geneva

Presenters:

- Mr Arvil V. Adams, Senior Advisor for Social Protection,
  Africa Region, World Bank, Washington D.C.

- Mr Ulrich Hillenkamp, Deputy Director,
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- Mr Wataru Iwamoto, Director,
  Division of Secondary, Technical and Vocational Education, UNESCO, Paris

- Mr Günter Klein, Director,
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Jane Stewart

Jane Stewart joined the ILO in May of 2004 as Director of the Skills and Employability Department, having participated in elected politics in Canada for a decade. Ms. Stewart represented the riding of Brant in south-western Ontario from 1993 until her move to the ILO in 2004.

She was a member of Cabinet for eight years and led three ministries. As Minister of Revenue, Ms. Stewart was instrumental in the work that transformed the Department into the Canada Customs and Revenue Agency, a new government structure. As Minister of Indian Affairs and Northern Development, she developed the Government’s response to the Royal Commission on Aboriginal Peoples, including the implementation of Canada’s Inherent Right to Self-Government policy and the Statement of Reconciliation for the physical and sexual abuse at residential schools. As Minister of Human Resources Development Canada, Ms. Stewart was responsible for the administration of Canada’s pension programmes, Employment Insurance programme and employment policy, including the Youth Employment Strategy. The Department of Labour was part of the Ministry. Ms. Stewart co-chaired Canada’s Innovation Strategy with the Minister of Industry and was Chair of the Cabinet Committee on Economic Policy.

Building on her experience as a Human Resources professional with companies like Imperial Oil Limited and as a consultant in the field, Ms. Stewart has the opportunity to provide management support to the ILO Department focussed on skills development and employment services. She also has the responsibility for coordinating youth employment work of the Employment Sector.

Skills Development for Sustainable Livelihoods

It is a commonplace in debates about how to reduce poverty to assert that poor people’s main or only asset is their labour. It seems obvious that training has a critical role to play in improving productivity, incomes and equitable access to employment opportunities. Yet a striking feature of most poverty reduction strategies in developing countries is that the vocational education and training component is largely absent.

Training is in crisis nearly everywhere in the developing world.1 Existing systems are underfunded and widely criticized for catering mainly to the needs of formal sector enterprises, with programmes for traditional trades mainly taken up by those able to afford the investment of time and forgone earnings in lengthy courses in mainly urban training centres. At the same time, governments are gradually coming to realize the need for substantial reforms. Training is no longer a once-and-for-all investment at the beginning of working life, but is a process of lifelong learning in which skills are constantly renewed and adapted.2

The distinction between “education” at school or in colleges and universities and “training” at work or through separate skill formation institutions is becoming blurred. Ensuring that young women and men learn core work skills that equip them for a wide variety of potential jobs is particularly vital to the economically vulnerable and socially excluded. The foundation of a lifelong learning approach to training is learning how to learn. It is easier said than done, however. Governmental responsibilities for education and training are often spread over several ministries. Employers or private and public agencies have a direct role in providing training, and in many countries voluntary bodies such as unions, charities and non-governmental organizations (NGOs) are also active. Rationalizing these dispersed institutions into a

1 See P. Bernell: Learning to change: Skills development among the economically vulnerable and socially excluded in developing countries, Employment and Training Paper No. 43 (Geneva, ILO, 1999).
coherent system that is focused on the needs of working people, especially the poor, while acknowledging the institutional interests of education and training providers, is a major policy challenge.

The ILO is tackling these issues from two directions. First, it has launched a major drive to help its constituents rethink human resource development policies. In partnership with the United Nations Educational, Scientific and Cultural Organization (UNESCO), the ILO is seeking ways to ensure that expansion and reform of school systems are linked to a strategy for improving the skills needed for a productive working life. Second, it is working on the ground in a number of countries to develop new delivery techniques focused on the needs of the working poor.

The first step in reorienting policies for education and training was a general discussion at the International Labour Conference in 2000 on human resources training and development. Amongst other things, the Conference called for a review of the Human Resources Development Recommendation, 1975 (No. 150). A first discussion on this subject will take place at the current session of the Conference, followed by a second discussion in 2004, with a view to the adoption of a new instrument. The ILO has also collaborated closely with UNESCO on the preparation of a new Revised Recommendation concerning Technical and Vocational Education, adopted in 2001 by the UNESCO General Conference.

It is now widely recognized that education and training systems must make it easier for working people, especially the economically vulnerable and socially excluded, to take up decent work opportunities and refresh their skills throughout their working life. The ILO has highlighted the following key issues:

- Recognition that the primary responsibility for investment in training rests with governments but has to be shared with enterprises, the social partners, and individuals so that education and training are closely linked to economic and employment growth strategies and programmes.
- Urgent reforms are needed to improve basic education and literacy of women and men in the poorest countries. The development of core work skills (such as communication and problem solving) is an important part of a reform package to prepare individuals for the knowledge-and skills-based society.
- Training systems need to become more flexible and responsive to rapidly changing skill requirements. Reforms should focus on how learning can be facilitated, not just on training for specific occupational categories. School-to-work schemes for young people should integrate education with workplace learning.
- The social partners must be more closely involved in discussions on training policy and skills development, if the desired reforms and increased investment are to become a reality. Experience demonstrates that a strong social dialogue process generating a powerful political constituency for training underpins the more successful systems.
- People should have their skills recognized, however they were acquired, as part of a national qualifications framework. This is particularly important in developing countries, where many of the “unskilled” have in fact learnt skills but do not have the certificates that many employers require.

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6 idem: Revision of the Human Resources Development Recommendation (CD containing the above mentioned reports and approximately 500 examples of national training policy initiatives).
Learning to read and improving work skills in Honduras

Nearly half the population of Honduras live on US$2 a day or less. Deep-seated poverty was further exacerbated by the devastating consequences of Hurricane Mitch in 1998. The lack of community organization and the low level of education, coupled with inadequate work opportunities, perpetuate low income and living conditions for many families, especially in rural areas.

A quarter of adult Hondurans are illiterate. The ILO project "Education for Work" (POCET) was launched to help meet the education needs of farmers aged between 15 and 49 years having incomes lower than the minimum wage. By combining occupational training with learning to read and write, the project equips participants to solve some of the day-to-day problems of earning a living. It also includes training in the skills needed to set up and run small businesses, including cooperatives.

The ILO's local partner in this endeavour is the National Centre for Education for Work (CENET). After five years of ILO technical assistance, the Centre now has the institutional, financial and methodological capacity to continue the work of rural poverty reduction. The lessons learned in working with poor communities about the design and implementation of mixed literacy and vocational training are being applied in many rural and some marginalized urban areas. The Centre's diploma programme in Education for Work provides a strong foundation for training trainers.

Source: ILO Regional Office for the Americas, Lima.

The foundation of the ILO's work on skills formation for employment and income generation for working women and men living in poverty is its community-based training (CBT) methodology. It consists of a set of procedures for systematically identifying employment- and income-generating opportunities at the local level, designing and delivering appropriate training programmes, and providing necessary post-training support services, including credit, technical assistance and market information.

An integrated programme at community level generally requires the support of several agencies, and vital components include an interministerial committee and consultations with the social partners. By taking responsibility for training of local programme staff, such bodies help to ensure that the methodology is transferred into the national training policies. Similarly, local training committees in the selected areas are key to identifying opportunities and needs, and provide the best means of organizing delivery. In the implementation phase, flexibility is essential. Training should be delivered as close to the clients as possible, with particular attention to ensuring that women benefit fully from programmes. Important aspects in this respect are training of trainers, selection of trainees and finding sources of credit to make up lost income during training and help start up small businesses based on the new skills.

Good organization, rather than large amounts of money, is needed to apply the ILO methodology. Experience in more than 20 countries over the last ten years shows that the rewards are considerable, with a very high percentage of trainees using their skills to earn a better income. In addition, a number of countries, including Cambodia, Jamaica, Nepal, and the Philippines, have integrated the CBT methodology into their national training policies.

Community-based training in Cambodia

Working from eight provincial training centres scattered around Cambodia, an ILO/UNDP project on vocational training for the alleviation of poverty, and its predecessor project, trained over 8,000 women and men in a diverse range of skills from 1993 to 1999. Follow-up surveys over the 12 months after completion of training showed that over 82 per cent of trainees had work using their new skill and were earning US$33 a month on average, well above the average per capita GDP of about US$22 a month. Over half of the trainees were women and over a third were women heads of household. Many were unskilled farm workers, often having little or no cash income prior to participating in the project.

A key to the success of this project was that it did not offer predetermined courses. Rather, the project staff worked with the local community to find out what skills were in short supply locally. Then people with the scarce skills, recruited from among those trained in the border refugee camps, were asked to help train others, but only enough to satisfy the needs of the local community. The project wanted to make sure that trainees could make a living with their new skill, and an over-supply would lower their earnings.

Many of the successful courses were not typical of ILO training programmes, for example, pig rearing and vaccination, duck rearing and vaccination, incense-stick making and vegetable growing. Duck vaccination proved particularly attractive, as graduates of the course were much in demand to quell an outbreak of disease that was decimating farmers’ flocks. Hairdressing was another winner with over 90 per cent of graduates still using the skill after a year and earning US$65 a month on average.

All told, 35 skills courses were offered and, since a majority of the trainees ended up as self-employed people, they all acquired basic business skills too. Courses were run as close as possible to the trainees’ homes in the villages at times most suitable to them. Course length varied, but usually consisted of several hours’ training a week over two or three months. This was particularly important to ensuring a high participation by women in the programme.

An essential part of the project strategy was to build the capacity of Cambodian counterparts to implement a flexible system of skill training linked to identified employment opportunities. A total of 76 government staff received various forms of training support while working on the project. Responsibility for the provincial training centres was handed over to the Cambodian Government at the end of the project, with the aim of integrating their operations into the permanent services provided by the public authorities.

A number of other countries have launched projects and programmes based on the ILO community-based training approach, including Azerbaijan, Bangladesh, Belarus, China, Jamaica, Kenya, Nepal, Nigeria, Pakistan, Philippines, the Russian Federation, Sri Lanka, the United Republic of Tanzania and Uganda.

Source: ILO InFocus Programme on Skills, Knowledge and Employability (IFP/SKILLS).

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Arvil V. Adams

Mr. Arvil V. Adams is Senior Advisor for Social Protection in the Africa Region of the World Bank.


Prior to joining the World Bank in 1989, Arvil V. Adams was Professor of Economics and Director of the Doctoral Program in Public Policy, George Washington University 1979-89. He served as Executive Director of the U.S. National Commission on Employment and Unemployment Statistics 1977-79 for U.S. President Jimmy Carter. He previously was a faculty member at the University of Utah and the Ohio State University.

The World Bank and TVET for Sustainable Development

1. A brief history of the World Bank and Technical Vocational Education and Training (TVET)
   a. First loan for education was to TVET in 1963
   b. TVET dominated education lending into the 1980s accounting for nearly 33% of this lending
   c. Two events changed this
      i. Jomtien and the new priority given in 1990 to primary and basic education of good quality
      ii. The 1991 WB Policy Paper on TVET shifted the focus to policy reforms from investing in classrooms and workshops

2. Current trends in lending for education and TVET
   a. Primary and basic education dominates lending with 32% in 2004
   b. Success in expanding access to basic education is leading to an increased focus on general secondary (20%) and tertiary education (29%)
   c. TVET lending in 2004 accounts for about 9% of education lending globally
   d. Overall the level of TVET lending has declined modestly while falling sharply in relative terms as lending for basic education has grown

3. The concept of TVET for sustainable development is not widely recognized or understood as a goal
   a. The focus on education today in the World Bank is on the Millennium Development Goals (MDGs)
   b. Attention of policy makers centers on goals that can be measured and for which accountability exists; the sustainability concept does not yet meet this test
   c. The UNESCO statement on Sustainable Development recognizes that countries and international organizations will develop their own priorities and schedules for implementation of the concept in accordance with their needs, policies and programs
   d. The World Bank maintains its focus on opening access to good quality basic education, while balancing the focus, as appropriate to the country context, on post-basic education and skills development.
4. The global environment places renewed emphasis on skills development as an outcome of TVET
   a. Economies must be flexible in adjusting to markets
   b. The ability to adapt and apply new knowledge is essential in today's knowledge economies
   c. A sound basic education extending to general secondary and even tertiary education forms a foundation for a life cycle learning and skills development model
   d. No government today can afford to deliver and finance all the skills needed by a modern market economy
   e. Public-private partnerships in skills development are needed.
   f. Building a policy environment that supports this remains at the center of the World Bank's support for TVET

5. Looking over the past decade of TVET reforms in Sub-Saharan Africa, a new study shows promise, but challenges remain
   a. Public TVET institutions continue to suffer many of the weaknesses today they did a decade ago in terms of access, relevance, equity, cost and financing
   b. Delivering skills for the informal economy where the jobs are remains a challenge
   c. New partners, however, are emerging in the form of non-government sources of skills development
   d. How TVET is financed and managed can make a difference to the outcome of reforms
   e. Developing a strategic role for governments alongside partners in skills development can lead to better results

6. World Bank support for reforms in Sub-Saharan Africa is focused on the agenda above
   a. Sustainable development as a concept does not appear in this agenda.
   b. Francophone countries have been slower to reform than Anglophone countries
   c. Building effective new TVET systems requires a long-term commitment by development partners, e.g. the cases of Zambia, South Africa, Lesotho, Mozambique
   d. Global demand for knowledge on TVET reforms is expanding, e.g. Mexico, Iran, China

7. World Bank capacity to meet this demand is limited
   a. The post-Jomtien shift in the institution's sector skill mix
   b. The role played by economists and general educators
   c. A key question for TVET's future is whether other development partners will step forward to meet this demand
   d. Evidence from the Working Group for International Cooperation on Skills Development leaves the question open

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Dr. Ulrich Hillenkamp is Deputy Director of the European Training Foundation (ETF), an agency of the European Union working in the field of vocational education and training. By sharing expertise in vocational education and training across regions and cultures, the ETF helps people to develop their skills, thereby promoting better living conditions and active citizenship in democratic societies that respect human rights and cultural diversity. The ETF promotes the values and objectives of the European Union.

Dr. Ulrich Hillenkamp holds a degree in Law. He has professional experience in all fields of education, training and science and in the relative links to economical and labour market development issues and to the society as a whole.

Dr. Hillenkamp previously worked as a senior official covering various national and international functions; in particular in the German Federal Ministry of Education, Science, Research and Technology, and in the International Labour Office in Geneva and the Permanent Representation of Germany at UNESCO in Paris.

ETF – Sharing Expertise in Training

The European Training Foundation (ETF) supports the reform of vocational training in its partner countries within the context of European Union external relations programmes.

Through programmes such as MEDA, CARDS, Tacis and Phare, the Community seeks to promote its external policy objectives and to convey the value which can be added by the European approach. This recognises that investing in people and developing a country’s human resources is of paramount importance not only for successful economic development but also for employment, social cohesion and stability.

Activities cover four main groups of countries across three continents: the Mediterranean partners; the countries of the Western Balkans; the New Independent States and Mongolia; and the future Member States of the European Union.

The ETF is a centre promoting the development of training and skills in the context of EU external aid to third countries. The Foundation offers:

- in-depth know-how and experience in labour market related vocational training and lifelong learning issues;
- insight into those political, social and economic dimensions which are relevant for the development of training systems in third countries; and,
- experience of the project cycles of EU external relations programmes.

The ETF also provides technical assistance to the Commission for the Tempus programme in the field of higher education.

These programmes provide the background for the ETF’s operations and include the promotion and dissemination of information access to European expertise and practices in human resource development in general and the European Employment Strategy in particular.
The European Employment Strategy recognises the importance of economic growth, not as an end in itself, but as a means to promoting prosperity and reducing poverty. This strategic objective requires a combination of efforts on four fronts: economic growth, employment, social cohesion and sustainable development.

In the last two years the Commission has developed a "Wider Europe" strategy which suggests a new framework for relations with the Eastern and Southern neighbours of the European Union: the development of a "zone of prosperity and friendly neighbourhood". The Communication recognises the importance of economic growth, not as an end in itself, but as a means to promoting prosperity and reduce poverty.

The European Employment Strategy provides a framework of employment policy that emphasises the exchange of experience and transfer of good practice. With this aim in mind, attention is given to the state of development of employment policies and, in particular, its implications for skills development and VET programmes.

Education and Training reforms have a great deal to offer societies that are in the process of development and transition. Reform offers the promise of new skills, new opportunities for employment and an expanded knowledge base in society. Realising this potential in practice is very difficult and takes considerable time. Our experience is that in order for reform to be of lasting benefit to our partner countries the elements of reform need to be linked practically to their context. This involves a wide ranging engagement process in which all stakeholders can contribute to the process of reform and adapt international experiences to their local circumstances. We refer to this process of engagement as policy learning. It draws on a combination of ideas partly based on the Open Method of Co-Ordination used by the European Union and on development approaches that emphasise Joint Development between international donors and local agencies.

The ETF supports these aims by:

- Assessing progress and future priorities for reform in partner countries in vocational education and training and its links to socio-economic development;
- Designing, monitoring and assessing projects at the request of the Commission of the European Union;
- Building capacity so policy makers and practitioners in partner countries take full part in modernising their vocational education and training systems;
- Contributing actively to international debate on reform in transition countries. In particular we draw on relevant experience in the EU to pilot innovative approaches to reform in partner countries;
- Facilitating dialogue amongst stakeholders by developing and supporting international, national and local networks.

The focus of the Foundation's work is to promote system wide and system deep reforms within national frameworks to enable policy makers and key stakeholders achieve improvements in quality, resource use and outcomes in education. Our work is aimed at both macro levels achievements that facilitate the more sustainable outcomes at the system level and micro level activities such as time limited projects that develop local and regional processes.

In the last year the ETF has been celebrating ten years since its inception. In the course of the last year we have been reflecting and evaluating our experiences to understand better how our work contributes to the development of policies and programmes that lead to sustainable improvements in education systems. We commenced our reflections at the end of 2003 with a major international conference in Turin where we brought together over 600 stakeholders from our partner countries to engage in a dialogue about the course of educational reforms. Our deliberations led us to the conclusion that
sustainable development is achieved when there is learning throughout an education system – at the policy level, at the institutional level and at the individual level.

Facilitating this learning encourages processes that share information, bring groups together and provide opportunities for those involved to provide their opinions and enable decision making over viable options.

From local perspectives comes new knowledge and understanding.

Such processes need to be flexible to be applicable to many different countries and diverse enough to cover a very wide range of learning needs. In addition, the process must allow the participants to develop their own pathways to informed decision-making.

Over the years the ETF has been working in co-operation with its partner countries towards a set of instruments aimed at facilitating knowledge sharing. In some cases the instruments are aimed at consciousness raising, e.g., seminars, in other such as peer reviews, they aim to give feedback on progress towards implementation. To be good instruments that facilitate learning the processes must be adaptable to specific contexts.

The instruments which include such things as study tours, seminars, development projects and peer reviews need to be re-invented from technical assistance processes into collaborative mechanisms designed to create knowledge and develop understanding amongst local stakeholders on their capacities and possibilities of reform. By combining a range of approaches, the ETF can facilitate policy learning strategies in its partner countries.

The instruments can also be designed to bring several countries at once to share their experiences. This use of instruments does not aim to prescribe a particular approach but rather seeks to develop the countries own understanding as an aid to their own decision making process.

There is no single model that results from this process. The process encourages the development of knowledge about reform strategies in the countries themselves. As such the focus is as much on intra-national learning as on learning about developments in other countries.

In each region the ETF runs a small number of its own activities to prepare the ground for potentially more substantial measures at a later stage. It is through such development activities that we encourage and support partner country innovation across a wide range of issues associated with economies and labour markets in transition. The results of these test bed initiatives are also intended to contribute to the stock of knowledge at ETF and thus further its development as a centre of expertise.

Of these the most relevant to TVET for sustainable development are:

**Local Development of HRD Strategies in Albania and Kosovo**

The project has been considered as successful by the beneficiary countries especially in establishing strong partnerships, in designing strategies for local development and in identifying training needs. Investment in HR is central in the process and is complemented by addressing the following needs:

- The assessment of the current status of vocational education and training in the area in order to define:
  - Short term and medium term priority measures to help revitalisation of the local labour market;
  - The improvement and harmonisation of the curricula, VET private schools included;
  - The improvement of the currently weak collaboration between vocational education and training schools and local enterprises.

**Support programme for SME in Albania**

This project is supported by the Italian and Albanian Governments and is designed to support the SME sector through two main financial support schemes (a) the establishment of an SME Credit Line to be disbursed by the local Albanian banking system for approx 25 MEURO, and (b) the establishment of a Loan Guarantee Scheme (2.5 MEURO). The project is also supported by a technical assistance component for 2.5 MEURO.
Training Strategies for Local Development in a Poverty Alleviation Context
The project aims at consolidating the learning and experience through the production of a cross-country analysis. It involves a range of dissemination events to be organised in Armenia, Georgia and Moldova. The objective is to strengthen the training and skills development components of local and community-driven initiatives in the VET reform agendas.

Impact Assessment of Training for Company Development
This project aims to better understand the contribution that management training has made to the development of companies to create an open environment. It provides an analysis of the manager’s profile (skills and competencies) needed in the current labour market, who must be able to face the company’s growth

Labour Market Reviews
A series of in depth reviews of the labour markets in the Western Balkan countries with the aim of contributing to a better understanding of their functioning, examine countries’ policies and identify main challenges for employment policy and education and training systems in view of the economic restructuring process. The framework of the reviews is inspired by the revised European Employment Strategy, while analysis is based on sound qualitative and quantitative information using all available information sources produced by national and international organisations.

CONCLUSION
The ETF aims to make its contribution to the Sustainable development through TVET through a variety of avenues. These involve large projects and local interventions. At the core of each is the aim to promote sustainable development through understanding the local context and learning from experience. To date our experiences have taught us that

• Each partner country has its own traditions and context. Sustainable reform can only be achieved through policies tailored to the specificities of each partner country and developed in consultation with local policy makers. Policies cannot simply be copied from other countries;

• Reform is highly dependent on the capacity of partner country institutions and stakeholders to drive the changes forward. Capacity-building measures are a prerequisite for successful reform. In particular, capacity building should target potential ‘agents of change’ within the VET system.

• Reform should be system-driven rather than project-driven. Sustainable reform must be based on an established, stable reform policy agenda fully owned by local stakeholders and their institutions;

• True reform takes a long time to work through the system. Investment in reform by the partner country and from external agencies must have a long-term perspective.

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Wataru Iwamoto

In September 2001, Mr Iwamoto joined UNESCO and was appointed Director of the Division for Secondary, Technical and Vocational Education.

In 1977, he jointed the Ministry of Education, Science and Culture of Japan where he held a number of key positions relating to higher education planning, legal affairs, social education and cultural affairs.

In 1998, Mr Iwamoto was appointed to the post of Director of the Technical Education Division in the Japanese Ministry of Education, Science and Culture. In that capacity, he designed programmes to popularize science and technology studies and careers among secondary school students and to improve engineering education at the university level to make it more fitting to the needs of industry. He also promoted the introduction of an accreditation in the Japanese engineering education system.

UNESCO is a Specialized Agency in the United Nations System, and Article I of its constitution defines the purpose of UNESCO as "to contribute to peace and security by promoting collaboration among the nations through education, science and culture [...]"

UNESCO’s programmes on education cover the various stages from early childhood to higher education, among which technical and vocational education and training (TVET) has an important place within UNESCO since five decades because of its important role in the development of both individuals and the society.

UNESCO’s present activities in the field of TVET are as follows:

- Playing the role of a standard-setter through its normative instrument the Revised Recommendation concerning Technical and Vocational Education (2001) which was recently updated to take into consideration contemporary issues such as ICTs and globalization. Ministries of Education are encouraged to reform their TVET systems in accordance with these internationally acknowledged sound standards and practices. These standards relate to most aspects relevant to TVET such as access, gender equity, quality, articulation with general education, facilities, teacher training etc.

- Upgrading cooperation with the International Labour Organization (ILO) in view of the inseparable nature of education and training in technical and vocational fields. UNESCO’s normative instrument is published together with the ILO’s Conclusions concerning human resources training and development (2000). This cooperation is also expected to encourage closer working relations between the Ministries of Education and Labour in the Member States.

- Promoting training in selected crosscutting areas that are needed for effectiveness in most technical and vocational fields. These include training in entrepreneurship, ICTs, and incorporating environmental considerations in TVET. Improved career guidance and counselling are also being promoted.

- Responding to requests from individual Ministries of Education to provide policy advice regarding the improvement of national TVET systems.
• Carrying out a crosscutting theme project focusing on improving the access of girls in communities that may be described as the poorest of the poor, to scientific, technical and vocational education, with a view to alleviating their poverty.

• Promoting TVET for the disadvantaged, such as ex-combatants in post-conflict countries in order to facilitate their re-integration in civil society.

The central thrust of UNESCO’s educational programme at the moment is Education for All (EFA). During the World Education Forum held in 2000 in Dakar, Senegal, an international conference organized by several international agencies under the lead of UNESCO, the participating governments agreed on six main goals to achieve quality basic education for all, with a particular emphasis on girls education, by 2015, which together form the so-called Dakar Framework for Action. One of these goals is to “ensure that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills programmes”. Life skills are generally considered as including psychosocial, cognitive and practical skills. It is clear that TVET is an essential component of such programmes, since it is one of the providers of learning and life-skills programmes for young people and adults. Accordingly, TVET is strongly linked with the movement of EFA and constitutes a part of the basic education programme. UNESCO assists Member States with their human capacity building exercises in the area of policy planning for their basic education programmes. Education policy planners are being trained to integrate skills training for productive livelihoods in their Education For All National Action Plans. This contributes to the capacity-building of the nation and alleviation of poverty.

In September 2002, the World Summit on Sustainable Development recommended to the United Nations General Assembly that “it considers adapting a Decade of Education for Sustainable Development (ESD) (2005-2014)) starting in 2005”. In December 2002, a Resolution was adopted by the United Nations General Assembly and UNESCO was designated as the lead agency for the promotion of the Decade.

Accordingly, UNESCO has a dual role to play in relation to ESD: that of one of the substantive implementers of ESD and that of the lead agency for the Decade.

The United Nations Decade International Implementation Scheme was prepared through a consultative process with the UN partners, international organizations, NGOs and other stakeholders. It is now ready to be presented at the 59th session of the UN General Assembly on 19 October 2004. The International Implementation Scheme has four sections:

- **Section I**: Education for Sustainable Development (objectives, components of the DESD)
- **Section II**: Implementation of the Decade (advocacy, ownership, partnership, capacity building, ICTs)
- **Section III**: Making the Decade effective (implementation at international, regional and national level)
- **Section IV**: Programming the Decade (resources, timeline)

The key areas of ESD are environment, society and economy, with culture as a cross cutting dimension. But there is no universal model of education for sustainable development. While there will be overall agreement on the concept, there will be nuanced differences according to local contexts, priorities and approaches. Each country has to define its own priorities and actions. The goals, emphases and processes must, therefore, be locally defined to meet the local environmental, social and economic conditions in culturally appropriate ways. Education for sustainable development is equally relevant and critical for both developed and developing countries.

The Revised Recommendation concerning Technical and Vocational Education already recognizes various aspects of sustainable development. Paragraph 5 of the Recommendation defines the objectives of TVET as follows:

(a) contribute to the achievement of the societal goals of greater democratization and social, cultural and economic development, while at the same time developing the potential of all individuals, both
men and women, for active participation in the establishment and implementation of these goals, regardless of religion, race and age;

(b) lead to an understanding of the scientific and technological aspects of contemporary civilization in such a way that people comprehend their environment and are capable of acting upon it while taking a critical view of the social, political and environmental implications of scientific and technological change;

(c) empower people to contribute to environmentally sound sustainable development through their occupations and other areas of their lives.

Furthermore, the Recommendation insists on the necessity of enabling those engaged in working life to "inculcate an awareness of the possible impact of technology on the environment and of the concept of sustainable development" (Paragraph 23) and emphasizes "instruction in safe and environmentally sound procedure relative to the materials and equipment used in a given occupational field, the importance of safe working conditions, and the health aspects relative to the occupation as a whole, including emergency and first-aid training" (Paragraph 37).

At country level, the suggestions of the Recommendation should be implemented in the countries' TVET policy.

Through Education for Sustainable Development, a radical change of the mindset on the relations between society, consumption and production, will be necessary. TVET for sustainable development should play a key role in the educational programmes of every country. All sectors of the workforce can contribute to local, regional and national sustainability. Business and industry are thus key sites for ongoing vocational and professional training so that all sectors of the workforce have the knowledge and skills necessary to make decisions and perform their work in a sustainable manner.

In summary, UNESCO’s TVET programme contributes to the improvement of all three domains of sustainable development – economy, environment and society:

- it contributes to economic development by helping Member States to prepare competitive and flexible workforces;
- it encourages Member States to adopt environmentally sound TVET practices;
- and most importantly - the social dimension – it aims at empowering all people, young and old, men and women, and all excluded groups with the skills to engage in income-generating livelihoods and to become responsible citizens.
Dr Günter Klein joined the WHO in 1995 as Director of the Department for Environment and Health at the WHO Regional Office of Europe, Copenhagen, with more than 10 Offices throughout the EURO region of WHO. In 2001, Dr Günter Klein was reassigned to Germany as Director of the newly founded WHO European Centre for Environment and Health, Bonn Office.

After his studies of Marine Biology at the Institute of Marine Research in Bremerhaven and Biology, Chemistry, Physics and Environmental Hygiene at the Ruhr-University Bochum and graduation as a Doctor-Engineer in Sanitary Engineering at the Technical University of Darmstadt, Dr Klein pursued his public health career and held positions as the Head of the Biological Laboratories of the Federal Health Office of the FRG in Berlin and Director of the Water Hygiene Department (former Federal Health Office, now Environmental Protection Agency of the FRG) in Berlin and of the former National Institute for Hygiene and Microbiology of the GDR in Bad Elster.

**TVET for Sustainable Health and Hygiene**

**Good Health is good business – promoting health through the work force**

The workplace can be one of the most dangerous environments in the world – particularly in developing countries. It is important to teach people how to maintain their health and working ability, and equally important to make enterprises and Occupational Health services aware of their responsibility to keep the workforce healthy. The human capital has been, and will be the essential resource for every country’s development, prosperity and sustainable living conditions. Therefore, the workplace has to be converted into a place where health competence is being built up and implemented.

Lessons from Public Health need to be highlighted which help reorienting TVET for Sustainable Development. Very often, we find human health and safety under “social aspects”, commonly reduced to the tasks of health services. This reduction of Health to the provision of services to sick people is by far too narrow. It is of course relevant not to neglect the provision of adequate health services to everyone. But at the same time we need to capture the wide range of elements through which the working environment and educational mechanisms can support sustainable Health.

Sustainable health needs a much stronger focus on promoting health and well-being at all appropriate entry points. Therefore, TVET for Sustainable Health will focus on preventive action to be taken at and via the workplaces, as well as using means for (remote) education in order to ensure wide participation of every citizen in securing his own health and well-being.

Established institutions providing health service need to expand their portfolios much more towards preventive action. This is equally true for the poor and the world’s richest countries, where health policy makers struggle to lower the financial burden of treating sick people. In many countries, the policy shift from providing expensive care towards investing in effective prevention has just been kicked off. However, we need to bear in mind, that societies in developing countries have to deliver both at the same time: Expanding health services to achieve equal access to appropriate care for everyone, and exploring avenues for prevention in order to avoid the economic collapse of the growing health services.
Experience gained in many industrialized countries is to be made available at the earliest possible stage: Sustainability will only be achieved, if the global society works together and will avoid the repetition of mistakes.

**No public wealth without public health**

WHO has been successful, at national or global scale, in guiding policy towards effective control of diseases. While SARS provides the best recent case study for effective global collaboration, the ongoing HIV/AIDS epidemic teaches the world how reluctance in policy development combined with lack of individual health competence can lead to a disaster. TVET for sustainable health should be developed as a tool to reach audiences, who traditionally will not care for, or will not be confronted with, the necessary information for individual and public health.

We need an unprecedented effort to highlight

- that there will be no alleviation of poverty before and without success in control of serious public health threats
- there will be no economic prosperity and sustainability without a healthy workforce
- there will be no social stability and peace as long as people have to fear that their young children die of malnutrition or lack of safe water.

All documents about social and economic development over the last centuries have proven how political targets have to be set: first make your people healthy, than your country will be wealthy. In this sense, alleviating poverty is possible on the basis of good public health.

Health Promoting Schools, Healthy Cities and other WHO related networks provided their specific experience, but they have no effective link to UNESCO’s global mechanisms. Specialists can find this experience on homepages and in libraries, but universal access needs to be improved. How do we make good practice available for worldwide use? How to explain the economic gains, the enormous savings that a health promoting policy can provide for local and national budgets, as well as for individuals?

**The simple means for survival – Lessons from Hygiene and public Health**

The impact of global hygiene education (workplace and other) is key in reducing injuries and illness. However, significant barriers exist in transferring this knowledge to those who need it most because of inadequate access to schools, the internet, books or magazines. Therefore, using the workplace as a ‘classroom’ to impart this knowledge is of extreme importance and presents opportunities to reach previously untouched audiences. Topics such as disease prevention, vaccination, sanitation, HIV/AIDS information, occupationally safe work practices and environments, etc. can effectively be covered in this manner.

Public awareness used to be strong, when the news about a newly emerging health threat were spreading – usually much faster than the disease itself. Recent experience with SARS or the chicken flue epidemics in Southeast Asia gave some insight into these mechanisms.

The silent success of Public Health and Hygiene does not receive headline attention. It has required continuous maintenance of living conditions supportive to health. Public Health success around the world had secured the constant increase of life expectancy, the elimination of life threatening epidemics in a majority of countries. However, an increasing part of the growing populations living in poverty does not benefit from this progress. By facilitating access to basic hygiene education the disadvantaged members of the work force could get a better share of information and thus also improve their own and their families' health and living conditions.
Good Governance and Health competence – a successful couple

Only if the individuals are good receptors of political provisions, a society can successfully implement available good guidance. Let us look at some examples of effective coupling of governance and competence in Health:

**HIV/AIDS education** for all will help to move this threat up from the hidden private sphere of individual suffering to the level of a public health threat. Success of several African and Latin American countries, in cooperation with WHO and UNAIDS, is convincing.

- Present it as a task for the health professions at all levels, and for public Health actors in political and Health services!
- Address publicly and commonly: Preventing people from acquiring the AIDS-virus means preserving a common good – beyond the release of individuals from fear and sickness!
- The link to sexual offense at the workplace (see below) is obvious and makes it even more attractive to use the TVET profile as a platform for building competence.

**Exposure to chemicals** continues to be one of the major threats to workers health and to their environment around workplaces and enterprises.

- Good practice has been agreed upon in global conventions by many countries, and will consequently lead to improving national and regional policies.
- This process requires a "matching effort" to help workers to protect themselves while doing their job.
- General rules for handling chemicals can be spread into the commune and be "carried home" especially for protecting the children.

WHO’s Children Environment and Health actions, and networks of Poison Centres provide examples of a useful and effective tool set to this end.

**Gender issues** need special attention in the world of work.

- Pregnant women, even at the very early stages, need special protection against exposures – for themselves and for their babies – and need to learn how to insist on it.
- Tools for training and enforcement at the enterprise and work place were developed and should be adapted in many local languages to become easily understandable.
- Young female workers need to be taught and encouraged how to protect themselves.

Working environments need to be developed and “morally structured” against the widespread reality of sexual harassment and abuse (see HIV/AIDS), and ought to be a "safe haven" for working women.

**Health professionals general education** curricula, and vocational training on environment and health of general practitioners is far away from being sufficiently comprehensive and harmonized, as e.g. requested by the Budapest Ministerial Conference for Environment and Health in June 2004.

- WHO is supporting these initiatives, however a wider recognition of these tasks in the medical professional education can best be achieved through the networks of UNESCO, and via a reform of medical education towards sustainable health targets.
- Effective collaboration of occupational medical services, environmental health professionals and general hygiene works in some countries. Their experience ought to be spread worldwide, and be reflected in health care and education reform.

Once the overall economic and social benefit from this approach becomes evident, political support will grow.
A joint effort and strong partnership is needed

Most WHO publications and documents are geared towards professionals and health policy makers, and in general not designed for dissemination at the workplace. It is the key interest of any successful strategy for sustainable development, to reach out and involve people at the local level and in their individual capacity. While WHO very successfully supports good governance towards achieving a high level of Public Health, there is still a need to develop and apply mechanisms to reach individuals, families and communicators.

In cooperation with UNESCO-UNEVOC and the University of Bonn with their networks the Bonn WHO Centre for Environment and Health can help in making this material accessible for distribution through the TVET mechanisms, in order to complete the set of governmental and individual components of Public Health. **Health competence and hygiene – key elements for Sustainable Public Health** will be the working title for a planned event to take place at Bonn in autumn 2006, co-organized by the Bonn based WHO and UNESCO Offices and the Bonn University with various partners. This will be offered to be a contribution to the Decade under the main headline **Sustainable Global Health**.

With such a joint effort, WHO and UNESCO will raise the profile of **TVET for Sustainable Health** worldwide. May this conference provide a good start for some promising initiatives.
Ogbugwe, Akpezi

Ms Akpezi Ogbugwe is the Head of Environmental Education and Training, Division of Environmental Policy Implementation at UNEP.

Prior to joining the UNEP she was a Professor of Environmental Law at the Rivers State University of Science and Technology, Rivers State, Nigeria and had been involved in the promotion of both formal and informal environmental education programmes in Nigeria.

Ms Ogbugwe is passionate about her work and the role of environmental education in promoting sustainable development. She has several publications to her credit such as "Environmental Imperatives for the African Region in the Next Decade", ACFED Port Harcourt (1998), "Empowerment through Legal Education: Human Rights, Democracy and Development in Nigeria." Vol.1 pp.280-285, "Environment for Development and the Poor: Role of Environmental Education" (2003).

Environmental Education and Training

The United Nations Environment Programme (UNEP) is the voice for the environment within the United Nations system. It was established in 1972 to act as a catalyst, advocate, educator and facilitator to promote the wise use and sustainable development of the global environment.

The mission of UNEP is to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations. UNEP's motto is environment for development.

Environmental education and Training in UNEP

Flowing from the above, the objective of Environmental Education and Training in UNEP is to promote sustainable development through functional environmental education that inspires, informs and enables in a global and local context. By functional we mean environmental education that promotes attitude and value systems that influence environmentally ethical behavior by developing understanding, skills and values that will enable people participate as active and informed citizens in the development of an ecologically sustainable and socially just society. It cuts across all aspects of sustainable development, and forms the backbone of UNEP's capacity building on the environment.

There are three main areas of focus for EE&T:

(i) immediate awareness-raising on environmental education and training, development of learning resource materials and extended networking;
(ii) assisting governments, institutions and individuals to acquire the necessary knowledge, skills and tools for assessing and solving environmental problems in their countries and regions;
(iii) collaborating closely with other United Nations agencies and partnering institutions in programme implementation of awareness, environmental education and training.
ALL UNEP’s training programmes are designed to promote skills development for employability and education for the world of work. Examples of current programmes are:

**UNEP/GPA – UNESCO-IHE-UN/DOALOS TRAIN-SEA-COAST Training Course on Improving Municipal Wastewater Management in Coastal Cities;**
This course provides participants with analytical tools, substantive information and skills on how to select, plan and finance appropriate and environmentally – sound municipal wastewater management systems.

**UNEP-WCMC/IMO Training Course for Emergency Response Planners;**
Known as ‘Exercise Clean Seas’, this course is designed to meet the needs of emergency response teams at all levels.

**UNEP-WCMC Information Management Training course;**
This course is designed to give attendees an excellent grounding in the principles of information management as it relates to the conservation of biodiversity. Participants come from a wide variety of background, ranging from those with extensive experience in the field to those new to environmental topics.

**UNU/UNEP/Norwegian Government Global Virtual University (GVU) project**
The GVU is an online network university on environment and sustainable human development. It has a particular objective to meet the educational needs of the developing world.

**UNEP/Watson International Scholars of the Environment (WISE) Programme;**
The WISE programme gathers together environmental leaders from non–governmental organizations, governments, institutions of learning throughout the developing world. These practitioners engage in environmental science, technology and policy approaches vital to problem solving.

**UNEP Training Programme on Environmental Reporting for African Journalists.**
This training programme provides a forum for African journalist working together with international colleagues to interact and strengthen their environmental reporting skills.

**Training/Information materials for specific user groups on innovative environmental management practices**

(For more information on these programmes and resources please see [UNEP programmes and Resources for Environmental Education and training](www.earthprint.com)).

UNEP’s entire programme activities are inspired by UNEP’s motto – Environment for Development. Furthermore UNEP has seized upon the opportunity presented by the United Nations Decade of Education for Sustainable Development (UNDESD) (2005 – 2014) to formulate an Environmental Education and Training (EE&T) Strategy to clearly articulate an appropriate path for EE&T in UNEP in the coming decade and to achieve greater impact and strengthened delivery of EE&T Programmes through an interdisciplinary, holistic and integrated approach to environmental education.
for sustainable development. Programmes are designed to ensure that beneficiaries have the core knowledge and range of skills for responsive and ethical decision-making for sustainable development.

UNEP is already collaborating with UNESCO, the agency charged with the implementation of the UNDESD on the environment component. UNEP will contribute actively by promoting collaborative environmental education for sustainable development through its flagship programmes which will draw on UNEP’s past achievements and exemplars of good practice as a way of stimulating innovation in and enhancement of environmental education policies and programmes. The programme areas include:

- UNEP Environmental Leadership Programmes *(for governments, technical and vocational institutions etc)*;
- Promoting efficient delivery methods of environmental education through ICT and other non traditional forms of learning;
- Sustainable Environmental Learning for Tomorrow’s Leaders Programme;
- Development of innovative user friendly learning resource materials in collaboration with local experts and publishers;
- Training of community level environmental advocates and Leaders including women;
- Development of environmental action toolkit for civil society outreach programmes;
- Strengthening of Networks of academics for Environment;
- GEO Education;
- Mainstreaming Environment into Technical and Higher Education Programme;
- Media Environmental Reporting Programme;
- Inter-Divisional and Inter-Agency Coordination and Support;
- UNEP/GPA - UNESCO-IHE-UN/DOALOS Train-Sea-Coast Programme.

UNEP is looking forward to collaborating with governments, donor agencies, national and regional intuitions and other key players for effective implementation of these programmes.

Environmental Education in UNEP is an effective “product” in the quest for sustainable development.
Juan Carlos Villagrán de León

Dr Juan Carlos Villagrán de León joined the recently established Institute for Environment and Human Security United Nations University (UNU-EHS) in Bonn in September 2004 as Deputy Director.

As a consultant on issues regarding risk management, early warning, and risk assessment, Dr Villagrán de León has worked for various institutions dealing with disaster reduction and prevention in several Central American states, as well as for UNDP and the German Technical Cooperation Agency (GTZ).

He has written several publications on issues regarding risk management, early warning systems, and disaster preparedness, including articles in journals, magazines, as well as technical manuals.

Dr Villagrán de León has a B.S. in Physics from the Worcester Polytechnic Institute of Massachusetts and a Ph.D and MA in Experimental Physics from the University of Texas /Austin.

UNU – A Global Organization

The United Nations University: a Global Organization

The United Nations University (UNU) was established by the UN General Assembly in 1973; and the initial academic activities began in 1975. The University consists of the UNU Centre in Tokyo, Japan; 13 research and training centers and programmes worldwide; as well as a network of associated institutions and scholars. The two main themes of UNU’s work are:

- Peace and Governance – FREEDOM FROM FEAR
- Environment and Sustainable Development – FREEDOM FROM WANT

Since its foundation, UNU was created with a mission:

UNU Mission

"to contribute, through research and capacity building, to efforts to resolve the pressing global problems that are the concern of the United Nations, its Peoples and Member States"

In order to fulfil its mission, UNU has identified five key roles:

- An international community of scholars;
- A bridge between the United Nations and the international academic community;
- A think-tank for the United Nations system;
- A builder of capacities, particularly in developing countries;
- A platform for dialogue and creative new ideas.
Capacity Development: Aims

Within the role of capacity building, several aims have been established:

- Support the growth of vigorous academic communities in developing countries firmly linked with international academic networks.
- Support the UN System and other international and regional organizations in their efforts to promote human security and development.
- Support policy-makers and practitioners on all levels: global, regional, national and local; in all sectors of society in their efforts to design and implement sustainable and equitable development strategies.
- Improve the capacity of institutions, especially those in developing countries, to contribute to the solution of pressing global problems of human survival, development, and welfare; and
- Improve the availability of human resources necessary for institutional development.

Capacity Development: Characteristics

Reflective of the aim of UNU capacity development, activities go beyond the provision of academic training courses. Rather, the concept underlying all UNU capacity development activities is "Integrated Capacity Development". This term refers to the contextualization of the university's capacity development activities along three trajectories:

1. as an integral part of the research and policy studies undertaken by the university;
2. as a reflection of the inter-disciplinary approach stressed in all of the UNU’s academic activities;
3. as an integral part of the policy-making, development and advocacy processes to which the UNU’s activities contribute.

The degree of integration along these trajectories varies with each capacity development activity according to its specific objectives.

Capacity Development: Types of activities

Throughout its Institutes and Research Centres, UNU carries out many types of activities, such as:

- Strengthening the capacities of the individual, as well as those of its home-institution in developing countries to contribute to the extension, application, and diffusion of knowledge and skills. Activities include:
  - short- and long-duration training programmes;
  - degree-oriented programmes covering a variety of subjects fields, all within the priority areas or the University.

- Project-based capacity development: UNU upgrades the skills and knowledge of individuals, groups or institutions through their involvement in UNU project work. Project-based capacity development includes:
  - Manifold topical training seminars and workshops,
  - Community-based, multi-stakeholder participations in the design, implementation, and evaluation of UNU projects.

With regard to the topic of Education for Sustainable Development, UNU has been integrated as a multi-thematic system to focus on the many different aspects related to development. In addition, the thirteen UNU Research and Training Centres are distributed throughout the world to enhance capacities at the global scale. It is important to mention additionally the multi-level approach which UNU employs in terms of education, spanning from the highest research-oriented Ph.D. level to the professional level.

The Peace and Governance Programme examines the nature, roots, outbreaks, tools, and consequences of conflict; and how to prevent and manage conflicts. It develops recommendations and guidelines for
making the world safer and better, through just and equitable institutions and policies, protection and promotion of human rights, and enhancement of quality of life.

In contrast, the Environment and Sustainable Development Programme probes issues of development, science, technology, environment, and their inter-linkages. Issues of poverty and inequity, as well as growth and employment, are at the core of UNU’s work. The University also examines globalization, technological change (information, software, and bio-technology) and urbanization, and their implications for humankind. The global environment, natural resources management, and sustainable energy use and production are critical concerns.

Research and Training Centres:

World Institute for Development Economics Research, WIDER
Helsinki, Finland    www.wider.unu.edu
This Centre focuses on studies regarding global economic policies that improve human life. An in-house staff of research fellows, economists, and scholars works to help developing countries form economic policies that lead to strong, equitable, and environmentally sustainable growth.

Institute for New Technologies, INTECH
Maastricht, The Netherlands    www.intech.unu.edu
This Centre conducts policy-oriented research and training on the economic and social implications of new technologies for developing countries. It links to developing country institutions pursuing similar research.

International Institute for Software Technology, IIST
Macau, China    www.iist.unu.edu
This Centre helps developing countries strengthen capabilities and become self-reliant in the development of software, university-level software, curriculum development, and participation in international research.

Institute for Natural Resources in Africa, INRA
Accra, Ghana    www.inra.unu.edu
The work of this Centre focuses on rehabilitation of Africa’s natural resources, strengthen African research institutions, mobilize scientists and technologists, and empower them to formulate self-reliant policy options. Activities focus on soil and water management, indigenous food crops and other useful plants, and mineral resources.

Institute for Advanced Studies, IAS
Tokyo, Japan,    www.ias.unu.edu
This Centre conducts research into science-technology policy, ecosystems approaches, urbanization, environmental governance, and ecological economics, IT and environmental, and bio-technology policy. It also offers Ph.D. and other advanced fellowships and training courses.

Programme for Biotechnology in Latin America and the Caribbean, BIOLAC
Estado Miranda, Venezuela,    www.biolac.unu.edu
This Programme examines the role of bio-technology in promoting social and economic development in the region.

International Network on Water, Environment, and Human Health, INWEH
Hamilton, Canada    www.inweh.unu.edu
This Programme undertakes capacity building and applied research related to freshwater. The Programme helps respond to the growing water crisis that threatens sustainable development, particularly in the developing world.
International Leadership Institute, ILI
Amman, Jordan  
www.ili.unu.edu
This Programme is the focal point for the exchange of information and experiences among young future leaders of the world.

Institute for Environment and Human Security, EHS
Bonn, Germany  
www.ehs.unu.edu
This institute is devoted to the study of the social and natural factors which constitute a threat to human security emanating from environmental degradation, unsustainable land use practices, and from natural and man-made hazards. The Institute will spearhead UNU's research and capacity building activities in the broad interdisciplinary field of ‘risk and vulnerability’

Food and Nutrition Programme for Human and Social Development
Cornell, New York  
www.unu.edu/capacity/Pg_foornut/cornell.html
This Programme focuses on capacity-building in the fields of food and nutrition.

Geothermal Training Programme, GTP
Reykjavik, Iceland  
www.os.is/unugtp
This Programme offers training in geothermal research, exploration, and development.

Fisheries Training Programme, FTP
Reykjavik, Iceland  
www.unu.edu/iceland/fisheries/fisheries.html
This Programme offers training in fisheries research and development.

Initiative on Conflict Resolution and Ethnicity, INCORE
Ulster, Northern Ireland  
www.incore.ulst.ac.uk
This Programme focuses on research, training, and other activities on ethnic, political, and religious conflicts. This is a joint undertaking of UNU and the University of Ulster.

Governance Programme
Barcelona, Spain
In this Programme UNU works with a consortium of research entities to promote greater understanding in the process of governance.

Context of the Inter-Agency Panel Discussion, UNU-EHS

In the issue of promoting skills development for employability for sustainable development, EHS's scope of work spans capacity building at the Ph.D. level, which includes building capacities within countries to contribute to sustainability through research along the following lines:

- Foster better understanding of forces and processes of environmental degradations and their influence on hazard magnitude and frequency and subsequent disasters.
- Explore links between different hazard events as well as creeping processes such as climate change, soil erosion and their impact on the inherent risk and vulnerability.
- Contribute to development, testing and verification of vulnerability indicators, and investigate relationships between risks, vulnerability and coping capacity.

At this time, EHS-UNU is training three Ph.D. students focusing on issues related to the analysis of policies regarding the development of the international basin of the Mekong river in Asia; a comparative study of risk perception in communities in Germany and China; and the impacts of land degradation on the quality of water in the Volta river in Africa. It is to be expected that Ph.D.s, having returned to their home countries, will play an important role in issues of disaster reduction, and therefore, sustainable development.
In addition, in the context of awareness, EHS will play an important role within decision makers at various levels regarding vulnerability and its reduction to promote sustainable development. Expected contributions will span aspects related to policies and measures which can be put in place to promote a more sustainable development via reducing risks. Finally, EHS-UNU is expected to reach out to the urban disaster-reduction managers to improve their job performance incorporating concepts of risk and vulnerability and their proper management.

With regard to the UN Decade on Education for Sustainable Development, EHS will contribute, as many of UNU’s programmes, through contributions in terms of awareness raising on the issues of environment and human security.