



International Experts' Workshop

Green TVET and Education for Sustainable Development: Capacity Development Needs for Water Education

13 – 17 September 2010



Background

Among the greatest challenges, we face in the world today are those of delivering growing, secure and affordable supplies of clean water, energy and air to meet the needs and expectations of ever expanding population while reducing CO₂ emission and the human contamination to climate change.¹ Technical Vocational Education and Training (TVET) is the largest producer and consumer of natural resources that has multiple concerns about sustainability. This exploitation of natural resources remains major a concern for all. The inclusion of the principles of sustainable development in all the courses of TVET can be built upon the traditional practices in which skills taught appreciates to repair, reuse, and recycle materials and components at all levels in both developed and developing countries.

Sustainable development, therefore, is one of the central challenges faced by the world today. In the light of persisting global patterns of poverty and inequality, as highlighted by the UNESCO's MDG agenda, along with emerging issues like the impact of climate change and the current financial and economic crises, it is no exaggeration to say that, at the start of the 21st century, the world is at a major turning point.²

We are at the stage of learning to recognize and appreciate these complex connections and interrelationships, which are critical to solving this challenging problem.³ Therefore, countries throughout the globe are already committed to working with climate change over the next 100 years.

Our society needs to live with this change (adaptation), and to work out ways to reduce as well as reducing the change (mitigation).³

Achieving sustainable development requires a global change of mindset and behaviors. Indeed, it has long been recognized that education is crucial for achieving sustainable development. The UN Conference on the Human Environment ('Stockholm Conference') in 1972 emphasized education as a way of addressing human-environment problems. Agenda 21, the document adopted at the UN Conference on Environment and Development (UNCED, 'Rio Summit', Rio de Janeiro, 1992), emphasized the need to promote education, public awareness and training in order to assist bringing about sustainable development. In particular, Chapter 36 on promoting education, public awareness and training states, "Education and Training are critical for promoting sustainable development and improving the capacity of the people to address environment and development issues."⁴

The Bonn Declaration (2004)⁵ in particular, gives special emphasis to the significance of education for the global development agenda and underlines the essential contribution of ESD to shaping the purpose, content and quality of all educations including TVET.

The *Bonn Declaration on Learning for Work, Citizenship and Sustainability*, argues 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.

Education for Sustainable Development (ESD) can contribute substantially to addressing key sustainable development challenges. Indeed, without reorienting education, successfully confronting issues like water and climate change, among many others, will not be possible. Moreover, introducing sustainable development issues into all areas of education will help make education more relevant. Engaging students and learners in contemporary questions related to development brings education closer to life and enhances the learning experience by stimulating motivation and interest.² ESD is about helping us develop the skills, understanding and motivation to bring about transformative change from our currently unsustainable world towards one that is sustainable.

In this light, ESD is becoming the central agenda in various major education and development forums such as international conferences and negotiations like the G8, G20, Copenhagen Climate Change Conference (2009), EFA High-Level Group, UN Chief Executives Board and UNESCO world Conferences among many other ongoing events and activities. The overall goal of the UNESCO Strategy for the Second Half of the DESD is also to support Member States and other stakeholders in addressing global sustainable development challenges through ESD, thus addressing the challenges of learning for bring about a more sustainable world.

The United Nations system sees an alternative future out of the crisis in terms of "Green Economy." The Inter-agency statement of 25 June 2009 on Green Economy:

A transformation to address multiple crises clearly states that "the shift towards a green economy requires education for sustainable development". Indeed,

building green economies and sustainable societies requires more than clean technologies. Humankind will not solve the problems it faces today with the same values and approaches that created them.

Hence, the international community needs to understand green economies as sustainable societies, creating a balance between environmental, societal, cultural and economic considerations in the pursuit of enhanced quality of life. The learning process can facilitate an enabling environment that in turn provides people with the chance to apply sustainable development principles and to better understand the multiple potential impacts of their actions and behaviors.⁷

Water, for example, is an essential and cross-cutting theme for ESD, being a foundation of economy, society and the environment, and thus is reflected as a priority by the UNESCO Member States among other emerging and recurrent issues. As concluded in the UN World Water Development Reports, the looming water crisis, more than a result of the availability of the resource, is a result of existing water governance approaches.

Education at all levels and of all stakeholders has a decisive role to play in water governance and in integrated water management. This requires specific action and educational programmes could be developed in order to learn from each other. As such, international programmes and networks are actively working on water education, including the international Hydrological Programme (IHP), chairs and centres, the UNESCO Associated Schools Project Network (ASPnet), the UNESCO Institute for Hydrologic Education (UNESCO-IHE), the UNESCO-UNEVOC International Centre for TVET and its Networks, and the University twinning networking scheme (UNITWIN).

It is increasingly acknowledged that sustainable solutions for water challenges strongly depend on the availability of adequately trained human resources, from high-level experts to communities and stakeholders. TVET should undertake action to create more exchange and knowledge platform for water and education professionals and to develop needs assessments for capacity development, e.g. to set priorities, and establish pilot projects and programmes to implement capacity development.

Unfortunately, TVET in many countries remains locked up into the role of being a mere supplier of skilled labor to industry and is thereby unable to respond effectively to the needs of the sustainable development strategies. The complexity, breadth and diversity of Green TVET and Water Education in pursuit of ESD require that a wide range of stakeholders become active and come together to implement the DESD through a partnership approach: governments, parliaments, non-governmental organizations, media, the private sector, education institutions, research institutes, individual educators and students, among others. In view of these, bottom-up and top-down strategies must be combined.⁴

As a result, the joint ILO and UNESCO Recommendations on Technical and Vocational Education for the Twenty-First Century states that, as “a vital aspect of the educational process in all countries” TVET should:

- (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.¹

In this context, TVET should open a window to the world and vice versa, e.g. TVET institutions should explore and exchange information about innovative teaching and learning methods, such as programs on clean energy, clean water and clean technology, reorientation of TVET curricula, sustainable campus management programs and examples of innovative approaches to integrating learning in TVET with on-the-job training and community services aimed at positive societal responses to bring the relevance and emphasis for a sustainable future.

Some of the initiative taken by the organizers in the recent past includes:

- *The widespread dissemination of the recommendations of the Bonn Declaration (2004) on Learning for Work, Citizenship and Sustainability.*
- *Activities in 2005 to put the Action Plan into operation, including the preparation of a special issue of UNESCO's journal Prospects on TVET and sustainable development and convening the first two of a series of regional dissemination and capacity building conferences on the outcomes of the Seoul+5 conference in October 2004 on Learning for Work, Citizenship and Sustainability in the Asia-Pacific region (in partnership with the CPSC and the Office of the Vocational Education Commission (OVEC) of Thailand and in Oman for the Arab States.*
- *Two regional programs in July 2008 and November 2008, respectively on TVET for Sustainable Development by CPSC, where key priority areas in TVET in support of Sustainable Development were identified to meet emerging challenges.⁶*
- *UNESCO-UNEVOC, CPSC and InWEnt Advocacy for TVET for SD, capacity building in TVET for SD, development of the appropriate curriculum for integrating SD in TVET, learning resource materials development for TVET for SD, public-private-community partnership to enhance SD involvement and compilation of indigenous knowledge. Identifying new kind of approaches and creating new kind of teachers for implementing SD in TVET.*
- *Contribution to the Workshop on Education for Water Sustainability: Where Decades Meet at the UNESCO World Conference on "Education for Sustainable Development- moving into the Second Half of the UN Decade" organized in Bonn, Germany from March 31 to April 2, 2009.⁴*

Building upon these past and ongoing key initiatives, the 2010 International Experts Meeting on [Green TVET and Education for Sustainable Development: Capacity Development Needs for Water Education](#) will seek to clarify the implications of such issues for TVET. The sharing of experiences in responding to such issues will be used to identify lessons of leading practice, catalyse networks, and make plans for the enhancing the contributions of TVET to the changing world of work.

¹ UNESCO and ILO (2002) *Technical and Vocational Education for the Twenty-First Century: ILO and UNESCO Recommendations*, UNESCO, Paris and ILO, Geneva, p. 9.

The meeting will be jointly organized by UNESCO-UNEVOC International Centre (Bonn, Germany), InWEnt (Magdeburg, Germany), CPSC (Manila, Philippines), and DWA -the German Association for Water, Wastewater and Waste, (Germany) in collaboration with UNESCO-IHP International Hydrological Programme (Paris, France). In a good opportunity to avail of an enriching and enabling environment to achieve new perspectives in TVET for Water Sustainability, the workshop is being organized on conjunction with the 2010 International Trade Fair for Water (IFAT) in Munich.

Programme Outline

Aims and Objectives

The International Experts working group session aims to contribute to Greening TVET in support of DESD and the role of TVET for Water Sustainability within the context of the changing nature of industry and work, the pressures of global financial crisis and the limits and opportunities posed by climate change and other environmental imperatives. These changing circumstances create opportunities for TVET to contribute not only to enhanced productivity but also to social development, environmental protection and citizenship.

The meeting will provide opportunities for participants to identify drivers of change in the workplace and the implication of these for policy and innovative practice in TVET in support of DESD. The programme will focus on the implications on the following TVET related emerging issues on:

- Greening TVET in Support of DESD
- TVET for Water Sustainability & Governance

The programme will:

- Review current trends and international discourse for TVET and Water Education;
- Comprehend country perspective of best practices in reorienting towards Green TVET in support of DESD;
- Assimilate innovative and applied technologies in water sector for TVET;
- Formulate policy directives and strategies for building capacity in reorienting towards Green TVET and Water Education in pursuit of ESD.

This workshop is expected to foster South-South and North-South technical cooperation through national, regional and international collaboration through training programs and projects. Following the workshop, the organizers intend to publish a cutting-edge book on key issues, concerns and prospects concerning Green TVET and Water Education. A rigorous process of peer-review will then be used to select the papers for inclusion in the book.

Participants

The international experts' workshop will be attended by representatives and experts from Asia-Pacific region, representing national policy makers, curriculum planners and teacher educators, TVET institutions and their managers, teachers, industry leaders, as well as the UNEVOC Network members in the region. This wide scope of participants invited by UNESCO-UNEVOC, InWEnt and CPSC, DWA will

ensure “Green TVET for Water Sustainability” becomes a key part of the agenda to be followed during the Second Half of Decade on Education for Sustainable Development.

Expected Outcome

- Increased understanding of the important role of TVET in supporting productivity, social development, citizenship and sustainable development, and the opportunities and responsibilities of governments, businesses, associations, educational institutions and civic society organisations in supporting DESD.
- A set of lessons of leading practice distilled from the analysis of shared experiences.
- Increased awareness of TVET as resources for supporting the enhancement of water sustainability.
- Strengthened South-South and North-South technical cooperation through national, regional and international collaboration ;
- Identification of policy implications and outcomes, including a long term follow up plan

References

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