





International Forum on the Role of the UNEVOC Network in Transforming TVET for a Sustainable Future

14 to 16 November 2012, Bonn, Germany





· Education and Training

Organized by

UNESCO-UNEVOC International Centre

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United Nations Educational, Scientific and Cultural Organization



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Meeting Report

International Forum on
The role of the UNEVOC Network in
Transforming TVET for a sustainable future

14-16 November, 2012 Bonn, Germany

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Introduction



he UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training convened an International Forum on its premises at the UN Campus in Bonn, Germany, from 14-16 November 2012. The Forum was designed to find ways and means of implementing the recommendations and conclusions of the Shanghai 2012 World TVET Congress, to share ideas and practices to enhance knowledge effectively, to research a variety of perspectives on transforming TVET for a Sustainable Future, and lay the foundation for future work, including the strengthening of the global UNEVOC community and identifying relevant mechanisms to sustain it. The broad theme of the Forum was to find ways and means of promoting better teaching and learning for green economies and green societies through the strengthening of the UNEVOC Network.

The Forum was attended by 125 participants from over 60 countries. The keynote address on "Transforming TVET for a Sustainable Future" was delivered by Mr Yorck Sievers of the Association of German Chambers of Commerce and Industry (DIHK). The other Keynote address had as main theme the "Importance of Networking and partnerships in empowering TVET

teachers for agents of change for a sustainable future" and it was delivered by Sir John Daniel, previously ADG for Education in UNESCO and former Executive Director of the Commonwealth of Learning. The Forum was organized around ten plenary sessions and group work, followed by interactive discussions and recommendations.

The opening ceremony



The opening ceremony on Wednesday 14 November 2012 was performed by the German Ambassador and Permanent Delegate to UNESCO HE Ambassador Dr. Michael Worbs in the presence of the Deputy Mayor of Bonn Ms Angelica-Maria Kappel, of Ms Birgit Thomann from BIBB representing the German Commission for UNESCO and Mr Borhene Chakroun from UNESCO Paris representing the UNESCO Assistant Director-General for Education.

The Head of UNESCO-UNEVOC Mr Shyamal Majumdar welcomed all the guests and participants of the Forum to the UNEVOC International Centre in Bonn where several United Nations Organizations work together to achieve sustainable development. He particularly





welcomed UNEVOC's distinguished partners from Germany, the partner agencies that are part of the International Working Group on Greening TVET and the coordinators of UNEVOC Centres represented in Bonn, and all other UNEVOC Centres across the world.

"This Forum will serve as an opportunity to expand and enhance the capacities of the UNEVOC Network to play a key role in further developing the capacities of decision-makers and practitioners, and facilitate the involvement of all stakeholders", he added. Finally he wished for a synergy of strengths, to build on what each present organization has already been doing individually in its own ways, and synergize efforts for more committed actions.



Dr. Michael Worbs

The German Ambassador Dr. Michael Worbs conveyed the acknowledgments of the Minister of State for Foreign Affairs, Ms Cornelia Pieper and the message of the Federal German Government. He congratulated UNEVOC on the celebration of its ten years' existence as a Centre, mentioning the positive contribution made by UNEVOC over the years in the field of TVET. He added that.

"in the 21st century, the world of work is changing continuously. The scarcity of resources is becoming more and more of a problem. Focusing on these two issues through networks, consultations and expert meetings, UNEVOC supports sustainable development and facilitates the access of a large share of population to vocational training... UNEVOC is a pillar of the international education activities of UNESCO... Germany will continue to support UNEVOC."

Welcoming the participants on behalf of Lord Mayor Jürgen Nimptsch in Bonn, Ms Angelica-Maria Kappel mentioned that,

"as a city we do have a very broad understanding of education and we try to involve all our citizens in what we call Education for Sustainable Development. Children in our Kindergartens, pupils and students as well as citizens of all ages and all walks of life, we try to address them and to raise their awareness for the topics that our International Organizations are dealing with."



Angelica-Maria Kappel

She thanked the UNEVOC International Centre for ten years of commitment and wished all the best for its future work.

Congratulating UNEVOC for "an impressive result of ten years of dedicated work of committed people", Ms Birgit Thomann, Head of International Cooperation at the German Federal Institute for Vocational Training (BIBB), very much appreciated that UNEVOC devoted





Birgit Thomann

the discussions of the next three days to the important subject of greening

"A transition towards sustainable economies is impossible without greening TVET teaching and learning, as technical and vocational education and training lays the foundation for changes in the world of work... Providing such skills, of course,

presents challenges in terms of curricula, qualification standards and training programmes, but will alter existing workspaces towards a sustainable world. The UNESCO-UNEVOC Network with centres all around the world can be a powerful tool in fostering this process."



Borhene Chakroun

Mr Borhene Chakroun, Chief of the TVET Section at UNESCO Headquarters, presented the apologies of the UNESCO Assistant Director-General for Education, Mr Qian Tang, who could not personally attend the Forum due to last-minute commitments, and thus read his message. For Mr Tang, the decade of service provided by the UNESCO-UNEVOC International Centre to

countries around the world had been made possible in large part thanks to the steadfast support of the Government of Germany and he expressed UNESCO's deepest appreciation to Germany and all other partners who have helped along the way. He happily recalled the negotiations leading to the creation of the UNESCO-UNEVOC International Centre, and the spirit of goodwill and cooperation that underlay the long discussions with the German counterparts.

"As we approach the deadlines for the EFA goals and MDGs, as the Decade on Education for Sustainable Development reaches in term and as the global economic crisis forces us to reconsider how we envision future directions for development, we must assess how UNEVOC can deepen its contribution to these actions. It must continue to play an important role within the UNESCO family in shaping the global debate on TVET and fostering innovation and the open exchange of ideas and knowledge."

He ended his message by thanking the members of the UNEVOC Network for the expertise they have provided over the last decade and also the past and present leaders and staff of UNESCO-UNEVOC, whose hard work has done so much to raise the visibility of TVET on the agendas of governments around the world.

Session 1: Transforming TVET for a sustainable future. Keynote addresses

In his keynote address, Mr Yorck Sievers stressed the necessity for a paradigm shift for TVET to be demand-driven and to respond to the needs of the labour market, and young people in particular, for an effective transition from school to work. He pleaded for a smoother cooperation between the public and private sectors in order to boost investment in skills development to reduce unemployment, inequality and poverty. The industry and labour market have a great responsibility: firstly, to create sufficient jobs to help meet youth aspirations and expectations; and to meet youth training needs, particularly for those more in need, for increased productivity and professional perspectives. Finally, Mr Sievers described the benefits of the "dual system", as practised in Germany, for

companies and trade unions in their ability to influence the content and organization of training, to lower recruitment costs and to be assured of a next generation of skilled workers. Trainees benefit by getting training relevant to the labour market,-thus ensuring better job perspectives, acquiring social skills within the real life of a company and earning while learning. The government benefits



Yorck Sievers

from the dual system through the private contribution of participating companies, easing the burden on public budgets and lowering the youth unemployment rate.

In the next keynote address, Tom Leney from the University of Warwick presented the Global TVET Report that is currently being finalized and explained that, to shape and review the policy areas in a comprehensive way, the report introduced the three economic, equity and transformative - lenses: the first to examine the efficiency and effectiveness of TVET



Tom Leney

and the extent to which it was accountable, responsive and attractive; the second to consider the extent to which TVET promotes access, equity and inclusion; and the third to understand the implications of developing TVET for all and to see the possibilities of a transformed TVET in a lifelong learning perspective

that is context-sensitive and more focused on innovation and sustainable development. The Global TVET Report will focus on:

- linking labour-market demands and skills supply,
- making TVET available to all and empowering learners,
- improving the quality of TVET provision,
- recognizing the diversity of TVET learning,
- locating TVET in lifelong learning,
- increasing and diversifying finance for TVET, and
- strengthening governance and partnerships.

Defining the typology of green economies and green skills, he suggested that the impact of greeneconomy activities and technologies will lead to an increase in employment demand for an existing occupation, but that this does not entail significant changes in the work and worker requirements. He also postulated that the impact of green-economy activities and technologies will result in significant changes of the work and worker requirements of an existing occupation, but that the essential purposes of the occupation remained the same, though tasks, skills, knowledge, and external elements, such as qualifications, are changed. He also said that the impact of green economy activities and technologies created the need for unique work and worker requirements, which results in the generation of new occupations. Finally, most important was the way TVET would support growth while helping to secure a sustainable future, how TVET can better contribute to shared and inclusive growth and become attractive, while meeting high and multiple expectations, and how to identify, anticipate and provide the soft and technical skills that learners need for sustainability.

The presentation of Nicole Bella about the 2012 Global Monitoring Report (GMR) on Youth and Skills centred on the main recommendations made in the report, paying particular attention to the skills needs of young people. She specifically stressed

- the need to strengthen and enhance the three types of skills defined in the 2012 GMR report, namely foundation skills, transferable skills and technical and vocational skills, and find the right balance between them,
- to prioritize second-chance programmes in national programmes, with a careful balance between the three types of skills defined in the 2012 GMR, and

to provide the most disadvantaged, especially women, with relevant skills, including technical and vocational skills.

She gave examples of skills training delivery to urban and rural poor youth in Peru, where unemployed youth is targeted, in Senegal, where traditional apprenticeships are provided to support training, and in Mexico, where ICTs are used to reach young people in remote areas.



Nicole Bella

Speaking on behalf of youth, Ms Sandra Lüdemann shared her experience as a young person following her apprenticeship training in market and social research, according to her an excellent way to combine

theory and practical experience. The great advantage apprenticeship has over academic studies is that it allows young apprentices to find out if they made the right choice. A benefit for training companies is that they can teach apprentices special knowledge linked to their company, thus "building" their own special experts. For Sandra Lüdemann, two points could be improved in Germany:



Sandra Lüdemann

- theoretical knowledge learnt in vocational school and practical knowledge in the training company need to be more closely connected, and
- in many companies, job prospects following the apprenticeship are not guaranteed though one may be well trained or skilled. For many young people this means no security and no chance to plan ahead.

The ensuing discussions centred on the dual system, the issue of improving the image and attractiveness of TVET to transform it into a promising choice for young people. Many participants praised the dual system that is so successful in Germany but reminded that, for it to fit the framework of other developing countries, the system needs to adapt to local circumstances and contexts when implemented elsewhere. Participants also pleaded for putting a stop to the practice of streaming students in pathways that single out the top-notch ones in academic institutions while students with poorer academic performance were streamed in the vocational silos and apprenticeships. More diverse curriculum and more flexible index for school performance measurement should also be made possible for the same purpose.

Session 2: Panel Discussion on The Shanghai Consensus: Presentation of the Shanghai Consensus followed by Shanghai recommendations on the UNEVOC Network, TVET Teachers and Greening TVET



The second session was devoted to the recommendations of the Third TVET Congress on Technical and Vocational Education and Training (TVET) entitled Building Skills for Work and Life that took place in the People's Republic of China in Shanghai between 13 and 16 May 2012. Recognizing the potential of UNESCO-UNEVOC and its global Network, the participants present at the UNESCO Third International Congress invited the Director-General of UNESCO to seek to implement the following actions with regard to UNESCO-UNEVOC:

- collect and disseminate evidence demonstrating the multiple and diverse policy approaches for transforming and expanding TVET, using the global UNEVOC Network and UNESCO Chairs active in the field, and
- expand and enhance the capacities of the UNEVOC Network to play a key role in developing the capacities of decision-makers and practitioners, and facilitate the involvement of all stakeholders.

This session analysed the implications of the Shanghai Consensus for the future orientations of the UNESCO-UNEVOC International Centre and the UNEVOC Network. The objectives of the session were:

- to present the Shanghai Consensus and its implications for the UNEVOC Network,
- to introduce the repositioning of UNEVOC in the light of the Shanghai Consensus and UNESCO TVET Strategy, and
- to discuss how the UNEVOC Network can become a vehicle for implementing the Shanghai Consensus and UNESCO TVET Strategy.

Mr Borhene Chakroun presented the Congress context, especially the fact that TVET and skills development had become a policy priority in most Member States as a result of high rates of youth unemployment and underemployment and persisting inequalities in the face of changing and increasing demand for skills due to demographic, technological, economic and societal factors. Since TVET was expected to contribute actively to the EFA goals and MDGs as the target date of 2015 approached, it is high in the post-2015 international education and development agendas. He went on to list the three main messages of the Shanghai Consensus, namely, TVET development is at the heart of strategies for inclusive and sustainable development. Scaling up existing models of TVET provision to include more youth and adults is not the solution, but profound transformations are needed in the conceptualization, governance, funding and organization of TVET.

There is a resulting call for the transformation of TVET in an integrated manner based on policy evidence and practice capable of effectively responding to the multiple economic, equity and transformational challenges. TVET should be considered in relation to the specific country context, while recognizing its universal dimension.

The main recommendations for national policies relate to:

- enhancing the relevance of TVET,
- expanding access and improving the quality and equity of TVET,
- adapting qualifications and developing appropriate pathways,
- improving the evidence base,
- strengthening governance and expanding partnerships,
- increasing investment in TVET and diversifying financing of TVET, and
- greater advocacy for TVET.

He emphasized the three Congress follow-up dimensions, namely the programmatic, the institutional and the normative dimensions. Just as the Congress was organized with partners, its follow-up will also be organized in partnership with them with a view to coorganize follow-up events, and to review and monitor progress in the development of TVET at national, regional and international levels. In this regard, the



Shyamal Majumdar

roles of the UNEVOC Network pointed specifically to knowledge sharing and capacity development.

For Shyamal Majumdar, the UNESCO-UNEVOC International Centre will be a hub of resource sharing, knowledge development and management and facilitator of evidence-based diverse policy approaches through the world-wide UNEVOC Network. With regard to knowledge development and

resource sharing, efforts will focus on the compilation of TVET promising practices and the development of research studies to be eventually disseminated using both online and offline services. Examples were given of the online World TVET Database and the UNEVOC e-Forum, especially the moderated online conferences. Mr Majumdar also pointed to the different research studies and publications carried out by the International Centre. He informed that the UNEVOC Network was also being revamped and strengthened for it to become more relevant, effective, efficient, dynamic and sustainable. The thematic focus of the Centre will be in three areas: employable skills development, greening skills development and entrepreneurial development. Finally, emphasis will be placed on multi-stakeholder partnership with the Host Government, UNESCO Member States, the private sector, UNESCO Chairs and Institutes, developmental partners, Interagency Working Groups, International and Regional organizations, and different TVET Networks.

The discussion centred on how to transform TVET to make it sustainable, how to expand the TVET Network horizontally and how to meet local challenges of institutionalizing TVET. It was suggested that evidencebased development needs be linked to capacity development. There was also the need to engage politicians, practitioners more in the Network while focusing more on greening TVET. Expanding the TVET Network horizontally is much needed and is a big challenge. A proposal was made about using available information on capacity development needs, which are included in policy reviews by OECD, World Bank, skills development reviews, etc. Mr Chakroun suggested that the Network must reflect all stakeholders, including youth organizations, trade unions, and part of other wider organizations. It was agreed that TVET is at the heart of sustainable development, and the Shanghai Congress offers some answers to the challenges. To face these challenges, there is a need to integrate the Shanghai Consensus, the UNEVOC Network Action Plan and the UNESCO TVET Strategy.

Session 3: The UNEVOC Network Working Plan



In the session on the UNEVOC Network, Teeluck Bhuwanee presented the UNEVOC Network, a unique international platform of national centres for the sharing of knowledge and experiences regarding all aspects of TVET. The UNESCO-UNEVOC International Centre for TVET located in Bonn is the hub of the UNEVOC Network. UNESCO-UNEVOC has taken various actions to promote and foster collaboration in developing and improving TVET through the global Network of UNEVOC Centres, which works as an inclusive and effective network providing various forms of assistance to TVET leaders and practitioners and to share innovative practices. The UNEVOC Network is increasingly mobilized to assist Member States in national policy dialogue with a view to promoting sustainable lifestyles among all individuals.

To revamp and strengthen the UNEVOC Network, a Network Working Plan has been developed following

an intensive documentation review and member consultation. The working plan discusses, among others, the achievements of the Network so far, as well as its weaknesses and shortcomings, and ways to address these in order to achieve a better functioning, more effective and efficient Network that servers its members and the Member States well.



Teeluck Bhuwanee

A panel of five coordinators from the five regions (consisting of Janette Han from the Republic of Korea, Kai Gleissner from Germany, Muhammad Abubakar from Nigeria, Dermon Spence from Jamaica and Ahmed Al Ghassani from Oman) presented the rationale of the UNEVOC Network Working Plan, the roles of the International Centre and those of UNEVOC Centres, the concept of clustering and how the UNEVOC Centres are being coordinated (by some Centres that have volunteered to play this role) as well as the mechanisms proposed to streamline the Network and for the acquisition of new UNEVOC Centres. Among others, the Working Plan proposes the following principles according to which the Network can be more effectively re-organized:

Strengthen the capacities and define the roles of the International Centre, of the Network and the national Centres, and



 Revamp and reorganize the Network for better coordination and increased effectiveness.

These two strategic action lines were extensively discussed in a Cluster Coordinators meeting that took place in September 2012 in Bonn, Germany, and group discussions took place with regard to these two action lines.

Most of the discussion focused on the proposed criteria for new members joining the Network, and, to a lesser extent, the issue of 'life membership' for a centre after a certain qualifying period. Specifically, certain delegates expressed the concern that what was being proposed was 'not a partnership, but a hierarchy' and that, by introducing such strict criteria, there was a danger of stifling volunteerism and creativity. Criteria came across as very judgmental. There was a view that the Network should operate more as a bottom-up partnership. In addition, some delegates thought that criteria should not or could not be applied across all potential members in a uniform way as resources are different in different regions and no one region or Centre should feel excluded. Some delegates expressed concern regarding the possibility of obtaining 'life membership' once a certain qualifying period was completed. The response from the cluster co-ordinators and Teeluck Bhuwanee was that this set of criteria was being developed in co-operation with the existing members and not imposed on them. This was partly the focus of the cluster co-ordinators' meeting that took place in Bonn in September 2012. The aim of establishing clear criteria was not to exclude certain Centres but to avoid having a large number of 'inactive' Centres, as is the situation currently. Potential UNEVOC Centres should have a clear idea of what their role and responsibilities will be if they join the Network and what they will be gaining by becoming members.

Other elements of discussion were the following:

 Whether the International Centre in Bonn can provide training and internship opportunities to people from other countries: this is already being done in collaboration with GIZ, but more opportunities could be created.

 The types of institutions eligible to apply for membership. For example, it was asked whether quality assurance agencies are eligible. The answer was that they are and that some UNEVOC Centres are in fact QA agencies.

Finally, the UNEVOC Network Working Plan was validated by the participants.

Session 4: UNEVOC in Action – Regional panel presentations



The next session was devoted to the presentation of activities taking place in the respective regions and how the coordinating Cluster Centres were working with the UNEVOC Centres in their respective clusters in the light of the new Clustering as developed in the Network Working Plan. Five regional presentations offered snapshots of TVET activities and prospects for future projects and collaboration in their own region. The presenters were Matthews Phiri (Africa), Larbi Bellarbi (Arab Region), Hone McGregor (Asia and the Pacific), Kai Gleissner (Europe and North America) and Fernando Rodriguez Araya (Latin America and the Caribbean Region). The aim of the presentations and discussion was to share with all participants the variety of activities taking place in the UNEVOC Centres, specifically with regard to

- activities organized at national and regional levels.
- research, publications, surveys, case studies done by the Centres in the region, and
- Collaboration among Centres with regard to activities or studies and exchanges.

Africa

Poverty, diseases, unemployment, limited access to TVET training and inadequate financing are the many challenges faced in the African region. Current TVET priorities consist of teacher training, regional qualifications framework, open and distance learning, and structured work-based learning. Most communication between the coordinating TVET Centres of Africa goes through email and limited use of telephone. Regional meetings organized by UNESCO prove to be the most effective and useful way of coordinating.

Arab States

Incompatibility between graduates and labourmarket needs, inequity in the access to education, unemployment of graduate youth, and high illiteracy rate are challenges in the Arab States. In response to the Arab Region's needs, the most important TVET project supported by the UNEVOC Network strives to integrate entrepreneurial culture to the educational systems. In 2010-2012, related activities have been carried out in Jordan, Lebanon and Morocco. The success of the project has brought about great interest by policy makers and practitioners, students, parents and employers. Future regional activities also include teacher training, school-to-work transition, quality assurance and curriculum development.

Asia and the Pacific

TVET in Asia and Pacific shares many of the challenges faced in the other regions, such as enhancing the image of TVET, providing adequate and affordable teaching resources and infrastructure, increasing participation and achievement, and supporting regional harmonization and mobility. UNEVOC collaboration includes information, networking and resource sharing, joint research and regional symposia, participation in the UNEVOC e-Forum, and activities for institutional strengthening. Proposed activities consist of a South Asia regional seminar in Kathmandu by CTVET, an annual workshop for the Asia Pacific region by KRIVET, and the hosting of an e-Forum with Pacific Island Nations and linking with the East Asia summit TVET network.

Europe and North America

Assessment of technical skills, training recognition, educational solutions for an ageing population, quality assessment, teacher training and international cooperation represent TVET priorities in the European and North American region. Future tasks and tools

include building a database with all members, cooperative research and projects, further training, capacity building and networking. The UNEVOC Centre Magdeburg, Germany, provided examples of cooperation both within the region and between the regions, with countries such as China and Indonesia. Building new cooperation networks between North America, Europe and CIS states is one of the strategies for strengthening the UNEVOC Network during the next two years. A new cooperative research initiative and an international conference in the field of greening TVET, the organization of further training programmes of greening TVET, and cooperative publication represent other regional strategies.

Latin America and the Caribbean

High poverty rate (31%) and low public spending (4.7%) on education are characteristic for Latin America and the Caribbean. Labour competencies, youth training and unemployment, gender inequality, information and communication technology, entrepreneurship, greening TVET, and development and innovation all represent TVET priorities in the region. Regional centres have organized activities in training, youth employment and greening TVET in collaboration with ILO regional offices. Incorporating all local centres and good practices to the UNEVOC Network for conducting meetings and sharing experience are the future challenges in the region.

Session 5: Panel Discussion on Regional cooperation and **Networking for Greening TVET**



Pressures on natural resources, the environment and climate changes necessitate a transition from energy and emissions-intensive economies to energysaving and cleaner patterns of production and services. Greening the economy implies changing skills needs as new industries and occupations emerge, alongside new skills profiles in many existing occupations. This affects training needs and delivery.

In responding to sustainable development issues, TVET needs to be able to adapt to changing economic and social demands by creating relevant TVET learning opportunities for all young people and adults throughout their lives, while not compromising the ability of future generations to meet their own needs.

Sustainable development emphasizes a holistic, equitable and far-sighted approach to decision making at all levels. It emphasizes not just strong economic performance but intra-generational and intergenerational equity. It rests on integration and a balanced consideration of social, economic and environmental goals and objectives in both public and private decision-making.

This session was devoted to regional cooperation and networking for Greening TVET. Borhene Chakroun made an introduction to the Interagency Working Group, which is working at the international level, and its two thematic working groups. The first working group is on Indicators and Statistics for TVET. The second working group is on Greening TVET and Skills Development.

The main points presented were the following:

- Each panelist, as member of the Working Group on Greening TVET and Skills Development, presented their institutions' interest in greening TVET, from policy, training and technical perspectives. Each agency provided insights relevant to policy and capacity development on how they can see the process of greening TVET moving forward.
- Speakers emphasized the challenge of creating awareness on the need to embark on a greening TVET process, highlighting the potential for the opportunities to be gained through a more green economy framework.
- Speakers also considered potential for cooperation and synergies between the members of the Working Group on Greening TVET and Skills Development, and between the agencies and the UNEVOC Network.

CEDEFOP

CEDEFOP is an agency of the European Commission. It is a centre of policy-oriented research. It has a tripartite governing body and this influences the

approach to this issue. CEDEFOP has a group working on skills needs and anticipation, and over the last three to four years, CEDEFOP has been focusing on green issues. This work is guided by European policies, especially the Europe 2020 strategic document. Some of the most important targets in terms of policy are on resource-efficient development. The EU wants to show that it combines



Antonio Ranier

economic development and environmental protection, including sustainability. CEDEFOP believes that this is possible, but not easy, especially in a time of crisis and depression in the economy. CEDEFOP helps economies to move from low level, low skills, low environmental protection and low-quality jobs to development that is more sustainable.

UNESCO-UNEVOC

UNESCO-UNEVOC commented on the need to frame such a greening TVET process in the context of sustainable development and as a way to reduce poverty.

In 1999, the principle question was how to re-orientate TVET for sustainable development. This was also addressed by the 2004 expert meeting held in Bonn. Now the question is how TVET can be transformed to advance the



Naing Yee Mar

vision of a sustainable future. Reforming TVET for sustainable development may be interpreted in many different ways. We now ask ourselves how education and training systems can support transitions to the green economy and society. UNEVOC has advocated that TVET and skills development initiatives are not only about human and social capital, but also skills, knowledge and expertise for more sustainable societies and economies.



OECD

The OECD (Organisation for Economic Co-operation and Development) representative pointed out the need to develop indicators to measure the level of skills and establishing benchmarks as a way to monitor progress in this process.

For OECD, the push to bring economic activities from high carbon to low carbon is crucial now, and the skills



Cristina Martinez

that go into this evolution and transition need to be more focused. The OECD Skills Strategy of 2012 recognizes the key role of skills development as a particular part of economic development and growth. One of the key challenges is measuring the level of existing skills in a particular area. OECD has learnt from regional development strategies how looking at skills can help to accelerate development processes and this can be transferred to

a green environment to achieve low-carbon activities. Firms may be able to develop skills in a different way, not in formal training but through knowledgeintensive activities.

UNITAR

The UNITAR representative highlighted the need to tailor the training process, recognizing the different degrees of advances among countries and the need



to institutionalize the process within countries. Green economy education is essential for breaking the poverty cycle. It can help the environment, leading to better air and water quality. With better health, students can learn better, and then get an education that takes the environment into account. Some jobs will change and some jobs will scale up. Working in partnership with enterprises and NGOs, UNITAR has focused on

green skills and the skills that will be needed in the future. For skills development institutions there is the challenge of how to adapt curricula to green economy issues. There needs to be improved dialogue between environment and education ministries.

ILO - by video link

The ILO's understanding of green jobs includes those jobs which reduce environmental impact and which are decent. The Green Jobs Initiative is a joint initiative of the ILO, the United Nations Environment Programme (UNEP), the International Organisation of Employers (IOE) and the International Trade Union Confederation (ITUC).

There are several layers of challenges. The current paradigm has been unsustainable as it has been resource intensive. If the paradigm is not changed, the quality of life, the social situation, the economic possibilities of the future can be affected, which may negatively impact economic growth and possibly job growth.

There are several challenges:

- Climate change and environmental degradation already have a negative impact on employment, leading to losses in traditional income-generation opportunities. Greening economies requires adaptation, which requires skills development measures.
- Greening economies can bring enormous employment opportunities. However, jobs lost will not be created in the same occupations and even sectors. Retraining measures become key in avoiding high social and economic costs of restructuring. Furthermore, the challenge is to target training to disadvantaged groups.
- The major challenge is policy coherence between skills policies, environmental policies, employment policies, and development policy as such.
- There are skills shortages, both among specific occupations (including teachers) and also in soft skills like leadership, entrepreneurship. These shortages require adjustment of the training offer and teachers' training.

Anticipation of skills needs and labourmarket monitoring are needed to address these challenges.



Olga Strietska-Ilina

Since the truly massive change happens within wellestablished occupations, the education and training system at all levels and types has to adjust to this change. Effective social dialogue is an important aspect which becomes instrumental in tackling all the other challenges.

ETF

ETF works on VET and labour-market issues with a focus on the neighbouring countries of the European Union. ETF works on policy analysis in VET systems, labour market analysis, capacity building and networking. Interest in sustainable development and skills development for

green jobs comes from the regional environment.



Arne Baumann

Whilst the issue of sustainable development has a place from early childhood care and education (ECCE) to university, TVET has a specific place as it has the potential to link directly to the workplace and to supply the skills needed to protect against climate change effects and to use the potential of the green economy. ETF recognizes the need to approach the challenges of climate change through regional mandates, and recognizing existing limitations that need to be overcome when implementing such a greening TVET process.

For ETF the main challenges are two-fold:

- Lack of resources. Often VET systems are underfunded and use outdated teaching materials. The resources for modernization are not available. Funding is dependent on donors and initiatives and there is a lack of continuity.
- Lack of awareness. There is both lack of awareness of the challenge of climate change degradation and also a lack of knowledge about what education could or should be doing. There is a lack of knowledge about what schools could do and, at the governmental level, what should be addressed.

The discussion was opened to the floor and centred on the following issues:

- Developing green jobs sector by sector, for example, research conducted on greening TVET in mining (ACCC, Canada).
- Identifying the green jobs that will exist in the future so that the employability skills for the green economy can be developed in the right quantities.
- Green growth industries are typically very innovative with potential for job creation (OECD).
- Raising awareness about the importance of greening TVET.

Main discussion points

The transversal changes that can take place in all sectors are one of the main issues (CEDEFOP) and, to understand this, help is needed. One can talk about greening jobs and greener jobs in this context. In the short term there will be some jobs lost and in the longer term there will be more jobs (UNITAR).

In relation to greening the economy, the participation of SMEs in training is essential, as they make up 80 to 90 per cent of the enterprises. Aside from training, other ways of acquiring green skills, such as knowledge

activities, interaction with workers, suppliers and other organizations need to be explored.

While it is generally accepted that greening economies will result in net job creation (ETF, ILO), transformation of the economy also happens in the area of retraining and transforming existing occupations. Calibrations in these occupations can add up to significant improvements in emission reductions (ETF).

Advocating for greening the economy should not only be done from the employment perspective. The estimates for job gains and losses depend on context. What is green in one country may not be considered green in another. It is just as important to consider the costs of not making a transition to green economies and societies (ILO).

Employability skills are very important, including transferable skills such as knowledge of other languages, entrepreneurship, management and systemic thinking with regard to greening technologies. Successful greening requires these skills to be in place.

The need for partnerships in greening TVET

With respect to the question on the potential for cooperation and synergies between the agencies represented in the panel and members of the UNEVOC Network, each panellist shared with the audience the points of view of their respective agencies. ETF commented on the value of cooperation as a way to pool resources – partnerships with other institutions are needed for basic research. UNITAR offered expertise and an e-learning platform that has targeted climate change as a topic. OECD offered its experience on indicator systems as a way to build evidence so as to provide good advice to Member States. UNESCO-UNEVOC offered its portal and a framework to institutionalize the process; while ILO and CEDEFOP offered their policy-relevant experience.

Other elements of discussion were the following:

The potential for cooperation in the development of indicators for schools and governments to engage in the area of sustainable development was discussed in view of how schools themselves can assess their progress in terms of becoming more sustainable. Cooperation between UNEVOC Network members is needed to make the impact of one-off seminars more sustainable. UNEVOC partners could provide continuity (ETF).

UNITAR has developed a course on green economy with UNEP, which uses interactive elements and

applied case studies, delivered flexibly over five weeks. UNITAR can offer experience in e-learning and a whole methodology behind it (CC-LEARN). UNITAR would be interested to apply the latter to specific job areas, such as energy efficiency or waste recycling but partners are needed. In September 2013, an international knowledge sharing forum will take place, focusing on green and climate-resilient jobs as a basis for new partnerships (UNITAR). Due to its small size, cooperation is extremely important for UNITAR In general, there is a need to bring together policy advice, to gather findings on green economic activities and diffuse them through the UNEVOC Network. OECD and CEDEFOP are already collaborating on a forum on green skills. UNESCO-UNEVOC has proposed to involve members of the UNESCO-UNEVOC Network in this context.

In 2014, the UNESCO World Conference on Education for Sustainable Development will be held in Nagora (Japan), to which UNESCO will invite Member States to present what has been achieved so far, to assess how ESD reinforces quality education and what are the strategies for a common future.

It is important to promote interaction between the International Working Group (IWG) and the UNEVOC Network, as it allows the former a wider outreach, while UNEVOC Network members can benefit from access to an interagency group that is building knowledge and evidence on the value of investing in greening TVET and the labour market outcomes. There are interactions that can be built on (UNESCO HQ).

Members of the UNEVOC Network expressed their interest in becoming more aware regarding the activities of the agencies and of the IWG. The main challenge is to create awareness on the need to embark on such a greening TVET process, highlighting the opportunities that can be gained when embarking on a greener economy framework. The level of awareness of greening TVET in Africa and in developing countries is very low, and yet there are many related issues like desert encroachment, ecological disasters, erosion, and deforestation. Greening TVET should be a continuous process and the greening process itself will also change. The IWG should think about how these processes can be adapted to the needs of the less developed countries.

With other members of the IWG, more comprehensive training programmes and capacity development can be developed. The UNEVOC Network can be instrumental in curricula development and adapting standards and training programmes and implementing them. The real change relates to well-established occupations,

and how every existing qualification is affected. The capacity at the local level must also be considered, which is highly contextual. The local level will shape the training content. Greening TVET should become part of the entire community agenda, not only for certain organizations or certain sectors.

Finally, the Head of UNESCO-UNEVOC International Centre mentioned four areas for future action:

- UNESCO needs to boost its role in greening TVET. It is an issue of global importance, yet a lot more work in advocating and awareness-raising needs to be done.
- Policy dialogue: There are lots of existing resources but there is a need to engage in this topic in a wider way, for example by involving UNEVOC Centres.
- Supplementary research needs to be done at the country level and the local level.
- There is a need for capacity in teacher training, curriculum development, pedagogy etc. and collaboration is needed in this regard.

The Chair of the Panel was of the impression that the IWG on Greening TVET and Skills Development was tackling the global issue of greening TVET, pooling together the resources and know-how of the agencies that compose the group. In addition, an essential challenge for the IWG is to dedicate efforts to target those issues which have been raised by members of the UNEVOC Network; particularly as the IWG should assist the Network in its efforts throughout the world to institutionalize TVET including those efforts dedicated to greening TVET. The IWG needs to find its niche in complementing those efforts that are conducted by the UNESCO-UNEVOC Network at the regional and national level by the respective agencies or organizations.

The 42nd WorldSkills Competition

The next session was devoted to a presentation of the 42nd WorldSkills Competition to be held in Leipzig, Germany, from 2 to 7 July 2013. The aim of the session was examine how the UNEVOC Network could use the WorldSkills International Movement and the WorldSkills competitions to promote green industrial skills for sustainable development. The panel was constituted of the representatives of WorldSkills (International/Germany/Leipzig 2013), German Water Association (DWA), Festo Didactic, and the UNEVOC Centre BIBB acting as observer and representative of the UNEVOC Network.



Rüdiger Heidebrecht

The impact of skills competitions in the TVET sector, with a special focus on green industrial skills for sustainable development was analysed, along with its implementation within WorldSkills International and its 64 member organizations worldwide. Facts and figures about the WorldSkills Competition 2013 (including the section on Green Industrial Skills competition disciplines) were provided. A full presentation of the 2013 competition was made by

Mr Danny Gauch of Worldskills Germany, with greater emphasis on:

- the relevance of the competitions for TVET and their impact on TVET development,
- green industrial skills for sustainable development and the implementation of skills competitions in this field worldwide, and
- chances and opportunities on the common promotion of green TVET for WorldSkills International and its member organizations.



Danny Gauch

The presentation centred on the UNEVOC Network members' expectations and perspectives as well as their possible involvement in the 2013 competition.

Mr Nader Imani, Head of Global Education, Festo Didactic, made a presentation on "Capacity building in water and wastewater management qualification programmes". He provided

the background on challenges of clean water and wastewater sectors, the special requirement for smart solutions in qualification of staff in water and wastewater management, the target groups and benefits for the water industry. The main challenges of clean water and wastewater sectors are the lack of access to clean water as a barrier to human social progress, polluted wastewater and usage of fertilizers leading to pollution of rivers, lakes and groundwater causing severe damage to the eco-system, like contaminated water causing diseases such as cholera. He also referred to the lack of capacity which negatively affects public health, the environment and economic progress. He also addressed the shortage of qualified manpower with sufficient management and engineering know-how, resulting in low water

quality and an inadequate water supply and treatment. Overcoming shortfalls in the water and wastewater sectors constitutes a key area for basic and further training. Available trainings are usually too theoretical, as no holistic, practice-oriented training concepts are in place to teach staff about operational applications and processes. Analytical and problem-solving skills are lacking, as is systematic process-oriented thinking. Due to existing complexity, non-cognitive skills are specially required in water and wastewater plants. He finally presented the seminars and Modular Qualification Programs provided by FESTO as examples of north-south-south cooperation.

Jan Ebben made a presentation on BIBB's international co-operation with Word Skills and UNEVOC Network members. He presented the German dual system of TVET and its five key attributes:

- Work-based learning in companies and learning at school,
- Co-operation between the state, private sector and social partners,



Jan Ebben

- Societal acceptance of national training and quality standards,
- 4. Staff with technical and pedagogical qualifications, and
- 5. Institutionalized TVET and labour-market research and advisory services.

He also presented the structure and functions of BIBB as an organization collaborating with different countries. Mr Ebben also reminded participants of the side events taking place at the competition in Leipzig in July 2013, especially the one-day conference on "New Jobs for a Green Economy". The concluding Panel discussion of this side event will be on "The United Nations Decade of Education and Sustainable Development (ESD) – the Contribution of Greening TVET", in co-operation with UNESCO-UNEVOC. UNEVOC Centres are invited to participate in this meeting.

The ensued discussion provided more information on the Leipzig competition and centred on the following questions:

 How can student organizations be used to motivate young people and hone their noncognitive skills? How to pave a way for informal

- sectors and let them play bigger roles in refining the hands-on skills of students?
- What lessons can be drawn from the case of Germany, which is specific to its own environment, and can these lessons serve in an international context?

The competition is open to all categories of participants at national levels, from college up to non-formal sectors, and as such creates a handy way for the implementation of TV broadcasting and media marketing. By displaying the positive images of skills competitions, more young people can get inspired and become part of the event. Also, more customized skills training programmes need to be developed at global levels to motivate more young talents to express themselves in TVET. The session ended with the development of a roadmap for WorldSkills and UNEVOC Centres in the run-up to the Leipzig competition.

Session 6: Panel Discussion on partnerships and linkages with UNESCO Chairs on TVET



aunched in 1992, the UNITWIN/UNESCO Chairs Programme promotes international inter-university cooperation through twining and other linking arrangements among higher education institutions and academics throughout the world to enhance institutional capacities through knowledge sharing, collaborative work, increased faculty and student mobility. The programme supports the establishment of UNESCO Chairs and UNITWIN Networks in key priority areas in all of UNESCO's fields of competence as a means of reinforcing higher education institutions worldwide, bridging the knowledge gap, and stemming the brain drain phenomenon.

So far, UNESCO Chairs and UNITWIN Networks have proven useful in informing policy decisions, establishing new teaching programmes, generating innovation through research and contributing to the enrichment of existing university programmes while respecting cultural diversity. UNESCO Chairs and UNITWIN Networks serve as "think tanks", in their capacity as groups for reflection, and as "bridge builders" between academia, civil society, local communities, research and policy-making. They focus on topics aligned with UNESCO's priorities as defined in the Medium-term Strategy and the biennial programmes; contribute to strengthening north-south, south-south and north-south-south cooperation, partnerships and networking; and may evolve into poles of excellence and innovation at the regional or sub-regional levels.

Networking – as one of the strategic values of the UNITWIN/UNESCO Chairs Programme - has helped universities all over the globe to pool their resources, both human and material, to overcome stumbling blocks and to encourage academic institutions to play their role fully in society.

The Shanghai Consensus recommended that efforts be made to collect and disseminate evidence demonstrating the multiple and diverse policy approaches for transforming and expanding TVET, using the global UNEVOC Network and UNESCO Chairs active in the field. In this connection, a special session was devoted to ways and means of collaboration between the UNESCO Chairs and the UNEVOC Network. The aim of the session was to find ways and means whereby the UNEVOC Centres and the UNESCO Chairs, especially in the field of TVET and teacher education, can synergize their efforts to transform and expand TVET in the light of the Shanghai Consensus, to present the UNITWIN Network in terms of its differences and similarities with the UNEVOC Network, and to identify existing as well as potential new areas of collaboration between the UNESCO Chairs and UNESCO-UNEVOC.

The speakers firstly presented the work of their institutions and the priority areas in which they operate, as well as the cooperation mechanisms which they use.

Wang Li, Deputy Director of the UNESCO International Research and Training Centre for Rural Education INRULED at Beijing Normal University, China, presented the work of INRULED, which has the goal to empower rural people by equipping them with and upgrading their skills. As an example, when moving to cities, rural populations are in an environment which is not familiar and they thus need to attain a new set of skills. He presented several of the programmes conducted jointly with UNESCO and partners in other countries to promote rural education, notably three University Link Programmes with Australia, Bangladesh and Pakistan.

Bassim Abbassi, Dean of Scientific Research, UNESCO Chair in Development of Vocational Resources for the Future at Al-Balga' Applied University, Salt, Jordan, presented the institution's motivation behind its recent application for membership of the UNESCO Chairs Network, namely the opportunities it presents for networking, team-working, and mobilizing internal, regional and international expertise. He identified two domains in which the two Networks could best cooperate: in the training of technical teachers and vocational trainers, and in creating knowledge and competence networks with enterprises in different economic sectors. Other desired synergies are among universities, higher learning institutions, training centers, foundations and research centres. This Chair was specifically created as Jordan is strong in the construction industry. One aim of the Chair is to try to replicate the same experience in other countries of the Middle East.

Sergey Popov, Coordinator of the International Chair-Network UNESCO "Technical and Vocational Education and Training" at the International Centre of Educational Systems (ICES, Moscow, Russia) highlighted different aspects common to his organization and UNESCO-UNEVOC, in particular with regard to sustainable development. He proposed methods for strengthening ties between UNEVOC and UNITWIN, in particular he highlighted the importance and necessities of a strong connection between all steps of education and training from early childhood to tertiary education and reminded that this was the main reason why the International Network of Chairs was created. He also offered his experience of both networks for interaction and the development of programmes between UNITWIN and UNEVOC - in his opinion two of the most important projects of UNESCO.

Jean-Pierre Simoneau, Director of Operations, UNESCO Chair in Applied Research for Education in Prison

at Collège d'enseignement général et professionnel Marie-Victorin - le CÉGEP, Montreal, Canada, presented the work of the Chair in applied research for education in prison, which aims to identify and analyse pedagogical issues that have an impact in the application of education and training programmes. This Chair programme hopes to conduct the 1st international congress on education in prisons in 2014 and is seeking innovative practices in correctional education, in which skills development, and the formal recognition of skills acquired by prisoners, have an important role to play. With currently 15 million prisoners in the world, there are many important issues pertaining to prison education. Mr Simoneau quoted Nelson Madela Mandela, who stated about his imprisonment: "If we can learn just one thing every day, we will survive." Mr Simoneau also presented the case of Canada as a good example for the successful reinsertion of prisoners, with only 5 per cent of recidivists.

During the questions and answers following the presentations, Robert Parua of the UNESCO Kingston Office reminded that UNESCO Member Countries' message, as contained in the Shanghai consensus, is clear: more research in TVET needs to be done. In his opinion, the UNESCO Chairs can be a valuable resource in this regard, for example by sharing their examples of good practice in TVET. It was reminded that the Chairs were created to enhance north-south-south cooperation. In this regard, a strong commitment is needed from UNITWIN, as well as from UNEVOC, to enhance cooperation between these two networks.



Panellists of Session 6 on UNESCO UNITWIN. From left to right: Teeluck Bhuwanee and representatives of UNESCO Chairs Jean-Pierre Simoneau, Wang Li, session chair Hiromichi Katayama, and Sergey Popov, interpreted by Artem Kovryzhenko

UNEVOC Online Services



Max Ehlers

Subsequent to the session on the UNITWIN programme, Max Ehlers, UNESCO-UNEVOC's IT focal point, presented UNESCO-UNEVOC's online services, developed to enhance interaction between UNEVOC Network members and the wider TVET community. UNESCO-UNEVOC is facing big challenges in developing online services for the UNEVOC Network: how can we make sure it is not just another

website but an important and useful resource for the UNEVOC Network members, as well as the TVET community? He explained that the role of UNESCO-UNEVOC in maintaining its online services is a passive one: its tools can only become really valuable if everyone considers them to be a platform everyone needs to feed.

Mr Ehlers presented the various resources available on the website, and invited participants to utilize these to improve the interaction and communication that is so crucial to make the Network vibrant.

- UNEVOC Network Portal: Members of the UNEVOC Network are invited to update their UNEVOC Centre's online profile by sending photos of their Centre and staff so these can be featured on their individual profile page. UNEVOC Centres can also share information about the events and workshops they are planning. Information about these will show up on the UNEVOC Centre's page, as well as on the general Events Calendar. Cluster news can also be added here.
- Members only area: on their individual Centres' pages, UNEVOC Network members can also share their resources and documents under the "share news and documents" button: add some text, a weblink and/or a file, which we can put online.
- World TVET Database: this is a database containing reports on countries' TVET systems. The information contained in these reports needs to be validated by relevant country institutions. UNEVOC Centres are invited to assist the UNESCO-UNEVOC International Centre to verify the information contained in the reports under development so they can be validated and uploaded in the database.

E-forum and moderated online discussions: Mr Bhuwanee recommended participants to join and initiate discussions on the e-forum. He asked participants to also invite their students to connect as their opinions on TVET development is crucial.

Session 7: Keynote address: The importance of networking and partnerships in empowering TVET teachers as agents of change for a sustainable future



I hile policy aims and reform choices often call for \mathbf{V} improved training for TVET teachers and trainers, the low status of TVET teaching as a profession, the low quality and the lack of training are frequent barriers. Also, TVET teachers and trainers are a diverse and dispersed occupational group, and yet they are often expected to provide successful and innovative programmes for ever more heterogeneous groups of learners. Almost everywhere there is a shortage of continuing development of TVET teachers and trainers. For instance, how they will stay 'qualified' and how they will progress in their careers have received little attention.

Policy options regarding TVET teachers' and trainers' learning, skills and career development include the consideration of the competence profile and frameworks that may be appropriate for TVET teachers and trainers, the optimum pre-service TVET teacher and trainer education, a successful induction process and their continuing professional development.

Through its global UNEVOC Network, UNESCO-UNEVOC aims to develop and implement an Action Plan to promote the sharing of experiences, good practices and lessons learnt in mainstreaming greening issues into TVET. UNESCO-UNEVOC, as a member of the Interagency Working Group, advocates that investment in TVET and skills development initiatives needed for the green transition enhances environmental awareness, competency, innovation and entrepreneurship, and thus opens new market opportunities for environmental goods and services, promotes green innovation and green growth, and puts our world on a more sustainable development path.

The keynote address delivered by Sir John Daniel, previously ADG for Education at UNESCO and former Executive Director of the Commonwealth of Learning, was on the importance of Networking and partnerships in empowering TVET teachers for agents of change for a sustainable future. The main points presented by Sir John were the following:

- In the ten years since the UNESCO-UNEVOC International Centre was set up, the world has changed from economic optimism and confidence inglobalization to a world in recession, of economic crisis and high unemployment.
- The key challenges for teachers and institutions involved in technical and vocational education and training relate to the success of the EFA goal on universal primary education, which has created a huge demand for secondary schooling, including TVET. It is vital to support the expansion of skills training opportunities for people working in the informal economy and reaching those people who do not have ready access to conventional formal TVET.
- Much emphasis has been laid on the formal system of education and the unhelpful distinction between formal and non-formal education needs to be blurred.
- There is a need to build a bridge between knowledge acquisition and skills development as well as a need to reduce inequalities.
- With the changing needs taking place at all levels, TVET must increasingly serve the informal economy (80% of employment is in the informal economic sector but contributes only 18% to the GDP in many developing countries) and those who have no access to formal TVET. TVET must be geared to serve the needs of the industrial society.



Sir John Daniel

One of the approaches developed at the Commonwealth of Learning in response to these challenges has been the increased use of technology in a perspective of open schooling integrated in other approaches. This has created a powerful network for change among African TVET institutions and teachers. The approach is called Flexible Skills Development and the project is called INVEST. The main principle of the new

flexible TVET model is to work with the formal TVET sector to increase access for those in the informal sector and to impact training for the informal sector by introducing flexible approaches in the formal sector. The new flexible model

- uses new organizational structures,
- puts less focus on full-time face-to-face contact,
- provides open, distance and flexible learning courses,
- is more resource-based, providing individual and group learning, and
- uses media more effectively with elements of online programme delivery and formative assessment.

The discussion centred on the following questions:

- The issue of infrastructure in developing countries: sometimes it is difficult to implement a project that relies to a large extent on ICT if the basic infrastructure is not there. Sir John Daniel responds that this is slowly improving in most countries and there needs to be persistence in order to achieve steady progress.
- The issue of centralization in the educational systems of many countries. In order to implement innovative programmes and projects, a degree of confidence and responsibility at the level of local management is needed. However, it was argued that a good distance learning system has to have a certain level of centralization. Quality of scale and a certain degree of centralization is necessary to be able to offer quality courses in a cost-effective way. An example of a good balance between central- and local-level responsibility is the British Open University.
- The issue of delivering training and skills in remote rural areas, in countries such as China. The success of the Chinese Open University was discussed in this context. This institution is a very good example of combination of centralized and decentralized systems. It consists of a central body with hundreds of study centres and thousands of points where Chinese citizens can make contact with it. It shows commitment to flexible Internet-based lifelong learning.

How can the process of localization be made effective and sustainable? What incentives are necessary? It was argued that all stakeholders see an advantage in being the local drop point in a centralized structure. As all countries are different, the local context needs to be

taken into account when these issues are negotiated and implemented. A sustainable partnership is a winwin partnership.

The two key messages that came out of the address were the following:

- 1. how formal institutions can reach out into the informal sector, and
- 2. the important role of ICT in education and TVET in particular. UNEVOC and UNESCO HQ have done and are continuing to do work in both these areas.

Session 8: Panel discussion on TVET teachers as agents of change for a sustainable future



eachers play a significant role as agents of change for the next generation. Thus the professionalization of TVET teachers and trainers as well as of TVET teacher educators is widely regarded as a crucial issue that affects the effectiveness and quality of any TVET system. Although many variables affect the success of education and training programmes, it is the nature of the interaction between teachers and/or trainers and those being taught that has the greatest impact on the outcomes achieved.

The ensuing panel discussion focussed on ways and means of empowering TVET teachers as the main agents of change for a sustainable future. It followed on the main issues raised in the keynote address presented in the previous session. Presenters demonstrated practices of teacher preparation in the five regions of the world.

Shyamal Majumdar introduced the panel discussion by focusing on the challenges related to TVET teachers and their key role in ensuring quality TVET. In his presentation, Mr Majumdar pointed out the shortage of teachers - both in quality and quantity - around the world. 1,7 million teachers are needed by 2015 to reach the Education for All goals. Other major issues in this area include the gender divide in TVET teacher provision, the lack of demand-driven teaching, and in particular the weak industry linkages of TVET teaching, focusing on theory rather than practice. The absence of work-based teaching and the lack of resources and teaching materials impede TVET teachers from delivering quality TVET.

Mr Majumdar advocated for five pillars to enhance the quality of TVET teachers and with that the quality of TVET provision in general:

- setting the appropriate standards,
- to counter the poor image of TVET, attracting the best teachers and the provision of improved infrastructures and equipment, as well as better remuneration and career development,
- providing continuing professional development, including pre-service and in-service training,
- empowering teachers to show leadership and management skills, and
- developing TVET-relevant and effective assessment, performance appraisal and monitoring.

Mr Majumdar expressed the need for TVET teacher education policies to be integrated into national education policy. He also stressed the need to approach the non-formal and informal sector separately.

In her presentation, Sheren Hamed stressed the need to recognize teachers are agents of change for a sustainable future. She pointed out the various challenges in TVET provision in the Arab region. In particular, she highlighted that few countries are on track to counter gender inequality, women being underrepresented on the labour market.

There is a need for innovative TVET that promotes good academic knowledge and technical vocational skills. Ms Hamed stressed that the capacity of many TVET institutes does not match the labour market's needs. She advocated for the need to strengthen the relation with the private sector – engagement of this sector in developing TVET institutions is weak. Ms Hamed highlighted the need to incorporate ICT and entrepreneurial learning into TVET provision.

Sheren Hamed explained that policies are already in place, but these need to be upgraded and reformed as part of a National TVET strategy (in line with a national education system strategy). Such policies cover the need to

- collaborate closely with industries and the private sector,
- to establish a ranking system, and
- to promote TVET teacher rewards.

Improvements are necessary in terms of effective mechanisms, monitoring and evaluation, and the availability of online content Arabic TVET.

Songthanapitak Numyoot focused his presentation on the Asian region and Thailand in particular, pointing to the case of Rajamangala University of Technology Thanyaburi (RMUTT), where the focus is on hands-on teaching and learning, science and technology, and the integration of entrepreneurship. He conceded that there are many challenges due to the size and diversity of the region. Regional cooperation within the ASEAN community is necessary to improve the quality and impact of TVET. Mr Numyoot highlighted the need to improve the impact of TVET through:

- local initiatives demand-driven competencies of learners/teachers,
- career education,
- a sub-regional qualification framework, and
- Work-Integrated Learning (WIL) practical learning for teachers.

Mr Numyoot explained that teachers should be able to spend time outside the classroom to gain more experience from their industry as they usually come from university education. For many teachers, there is a lack of practical and industry skills. Mr Numyoot also explained that few TVET graduates decide to train as a teacher, so this needs to be encouraged. He suggested implementing tracer studies and enhancing monitoring and evaluation. He also advocated the need to work closely with industry and bring the production from outside into the schools.

Harry Stolte expressed the difficulties in terminology. The term 'teacher' has a different meaning in different contexts, and it is too narrow. Mr Stolte presented the different processes to train a teacher, highlighting that there are many different types of TVET teacher institutions and they offer different types of certificates/qualifications, and different models of

teaching, where the focus can be more on pedagogy or more on science. He highlighted the issue of enhancing pedagogical skills vs. vocational skills. He stressed the difficulty of organizing the improvement of teachers's skills, including the challenges of internationalization, changes in TVET etc. He advocated for the integration of theoretical and practical learning. He also stressed the need to train teachers as well as other personnel in the teaching environment.

Sonia Lesczynski's presentation focused on Brazil as a separate cluster. She explained that the focus of TVET teacher training is on in-service training. Teachers usually come from undergraduate background with technical and scientific knowledge. While most of the teachers are very knowledgeable in their field, they do not know how to teach others this field of work, as they lack pedagogical skills. In Brazil, 50% of the spaces are reserved for poor students as part of the inclusive education policy. However, teachers are not prepared to teach this audience. Ms Lesczynski advocated for including elements of research into teacher education. She stressed that teachers should research their own practice and develop professionally through this. She closed her presentation by stating that, while the importance of sustainability is recognized, it is difficult to achieve because it is about opposite interests and needs - both on economic and cultural levels.

Modesta Gavor started her presentation by explaining that, in many countries of the African region, umbrella bodies have been established to coordinate and organize TVET delivery. She explained that TVET teacher training takes places on different levels and through a range of education institutions, e.g. university and polytechnic. In the case of technical secondary schools, teachers come from polytechnics, but they do not have pedagogical skills.

The continuing professional development of teachers is left to the teachers themselves. The focus is on vertical professional development, and there is very



Panellists of Session 8 on TVET teachers. From left to right: Modesta Gavor, Songthanapitak Numyoot, Shyamal Majumdar, Borhene Chakroun, Sonia Lesczynski, Sheren Hamed and Harry Stolte

little in-service training. Ms Gavor expressed that some of the regional bodies have started to introduce in-service training for teachers. She mentioned the ECOWAS training on curriculum development for teachers (participations were not teachers but resource persons). She also explained the lack of formal training for teachers that train in the informal sector. She advocated for regional bodies, such as SADC and ECOWAS, to put together good practices from elsewhere and adapt it to national levels. The role of monitoring and evaluation is also important, as this will measure the extent to which policies are working and are being implemented.

Modesta Gavor stressed that more attention is needed to identify the gaps in policies that are put into place - e.g. Competency Based Training (CBT) is there, but can teachers implement it? Teachers that are in service for a long time should be informed about changes in market and IT development. She also advocated for regional and national cooperation at the teacher training level. She suggested specialization of the TVET institutions so that resources are being distributed effectively.

The discussion following the five regional presentations centred on the following issues:

- What kinds of initiatives or policies are already in place to tackle the issue of teacher preparation and professionalization in the different regions of the world?
- How and in what areas should TVET teachers be trained so that they can develop professional skills to cope with the changing and diversifying target groups in line with market needs?
- How to strengthen multi-stakeholder partnerships in order to support national, regional and interregional cooperation in the development of teacher standards for effective learning?
- What instruments need to be developed for promoting research and gathering relevant data to inform the global debate on the teaching professions?
- What mechanisms or modalities are needed to reinforce and strengthen national, regional and inter-regional strategic cooperation between technical and vocational institutions, universities and teacher training institutions and the world of work to break new grounds and create innovations in improving the teaching and learning process?

Other elements of discussion were:

- the importance of reflective practices and selfevaluation of teachers in their own professional development. Teachers should take action themselves, rather than wait for policies to be implemented and in-service training to be offered,
- monitoring and evaluation of teacher performance and assessment linkages to pedagogy,
- incorporating research into TVET teacher education,
- training of teachers in informal and non-formal sector should be discussed separately, and
- fragmentation of TVET teacher training provision.

The session highlighted the need to exchange success stories, lessons learned and promising practices within and between the different regions. Following the suggestion of Teeluck Bhuwanee for interested participants to continue this discussion on TVET teachers after the Forum, the following participants expressed an interest to continue this thematic discussion and could be contacted in this regard:

- Shyam Ranganathan, Centennial College (Canada)
- Daniel Labillois, Cégep de la Gaspésie (Canada)
- Joachim Dittrich, UPI (Indonesia)
- Kirstin Merete Bugge, Oslo and Akershus University College of Applied Sciences (Norway)
- Sara Panis, CINOP (Netherlands)

Session 9: Plans for 2013



As a prelude to the Group work, Ms Naing Yee Mar made a presentation on the UNEVOC regional focus action in 2013, covering the five regions. Building on the Shanghai Consensus and the recommendations of the Third International Congress on TVET as well as the two strategic action lines of the UNEVOC Network Action Plan, Ms Mar mentioned the 4^{*}four areas of action of the UNEVOC Network, namely:

- · knowledge sharing and development,
- policy influence through partnerships and interagency collaboration,
- Capacity development, and
- online services and clearinghouse function, on which the International Centre will focus in its plan of action for 2013.

The International Centre, in collaboration with the UNEVOC Network, will initiate a process of collaborative action with regard to regional capacity development through a process of identification and conceptualization of the regional priorities. This would be in line with UNEVOC's efforts at knowledge creation and dissemination to promote evidence-based policies and practices. She mentioned the international and regional consultation meetings that will take place, the

regional focus studies on thematic concerns expressed in the regional presentations in Session 4 and the validation of these studies and follow-up action.

Efforts will be on maximizing Centres' involvement and thus increasing the visibility of the UNEVOC Centres at national, regional and global level. Reinforced planned activities will ensure better contribution, more unified goals, coherent actions and increased cooperation within the Network. Stakeholders will be better engaged, resulting in improved information exchange and accessibility, enhanced and increased partnerships and networking, as well as additional funding opportunities and project development.

Session 10: Way forward



After the presentation of the UNEVOC Plan of Action, participants were divided in groups based on regional affiliations. Group work was based on the following questions:

- How have UNEVOC Centres in the region been clustered and how to make the clustering more effective? This implied a discussion on the division of work and responsibilities among coordinators in the Cluster and Region.
- What plans, activities and prospects exist in the region? What are the priority concerns in the



regions and which Centre is doing what? The groups were requested to identify two to three themes or areas for collaboration, synergy and for joint activity in 2013. This entailed a follow up on activities mentioned in the presentations in Session 4.

- Which potential donors, partners, support exist that can be tapped for these themes and activities? Who are the contact points? Who will contact them? Who will follow up?
- As a specific follow-up with regard to steps to be taken:
- To identify one Centre to host a regional workshop
- Potential Centres or partner to carry out regional study/studies.

In the coming plenary session, the five groups presented their discussions.

The Africa Region



Africa Region Cluster

The discussions of the group meeting focused initially on the different challenges that the cluster coordinators face in fulfilling their tasks. Here, the language issue, regarding the division between Francophone and Anglophone countries, and the Centres' limited capacities for translations was mentioned as a significant issue that also limits the level of communication between the Centres in general. Suggestions were made to solve this issue, such as the potential involvement of the UNESCO Chair in Senegal to provide support with regard to needed translations, and for the Desk Officer to provide translations when needed.

Furthermore, the present representatives discussed which thematic issues or areas of interest would be the most crucial going forward. In this context, regional harmonization (Botswana), greening TVET (Kenya) and entrepreneurship were the major foci. It was highlighted that the cooperation on all these issues should be region-wide, but that for each theme one Centre should take a lead and coordinating role to ensure a structured approach. Moreover, these themes should cut across the entire region, but individual Centres and countries should be able to focus on themes most significant to their particular situation.

In addition, all representatives emphasized that TVET teacher education was and is a major area of concern and importance for them and the region.

With regard to the upcoming year, the group agreed that a regional conference should be held, potentially by Spring. Prior to this conference, the respective cluster coordinators should collect input regarding the abovementioned themes from their UNEVOC Centres. The conference itself would then be used to turn the collected information into concrete projects and studies.

The Arab Region



Arab States Cluster

The first part of the working group discussion focused on the role of the cluster coordinators, the ways to engage other UNEVOC Centres in the region and the most effective way for communicating within the Cluster. Participants agreed that cluster coordinators should identify one UNEVOC Centre in each country to communicate with the other Centres in the country to ease the communication flow.

Ahmed Alghassani acted as the Chair of this session, and requested all members to express the TVET priorities of their respective Centres, and also highlight any initiatives that are already being taken in the different countries/UNEVOC Centres.

Mr Alghassani requested all members to express the TVET priorities of their respective Centres, and also highlight any initiatives that are already being taken in the different countries/UNEVOC Centres. The following themes were highlighted by participants:

- training of trainers (ToT), professionalization of TVET teachers,
- entrepreneurship education and school-to-work transition;
- curriculum review and development; and
- accreditation and quality assurance.

The Asia and Pacific Region



Asia and the Pacifc Region Cluster

Due to the diversity of countries and sub-regions within the Asia and Pacific region, challenges with regard to harmonizing activities and conducting collaborative work were raised by the cluster leaders. The region consists of three very diverse sub-cluster regions, namely:

- South Asia, with a growing, young population base, mobile workforce, which faces the challenge of 'mass' provision of TVET
- East and South-East Asia, with very diverse populations (young vs. ageing nations), high regional mobility, facing the challenge of recognizing skills and TVET across borders.
- Pacific Islands, which are geographically dispersed, have a small population base, and faces the challenge of 'remote' TVET delivery.

Considering these differences, the representatives from the region expressed the following themes as being of interest in the region:

- ICT in TVET.
- Greening TVET,
- Enterpreneurship education and training,
- Women and girls in TVET.

Although a decision was not made, the following possibilities for 2013 in the region were discussed among the representatives:

- CTVET (Nepal) have assigned a key sub-cluster focal person and are investigating a South Asia regional seminar in Kathmandu in 2013.
- KRIVET (Republic of Korea) are considering supporting an annual workshop for the Asia and Pacific region, using their networks and bringing the UNESCO Commissions on board.
- PINZ (New Zealand), TDA and NCVER are discussing hosting a moderated e-Forum discussion with Pacific Island Nations, linking with the Fast-Asia Summit TVFT network.

The Europe and North America Region (Europe, CIS States, North America)

The group members each presented their areas of work, as well as their priorities and their reasons for being part of an international Network such as UNEVOC.

The main themes requiring action and cooperation were identified, namely:

- 1. Greening TVET, sustainability,
- 2. Innovations in TVET teacher training,
- 3. Finding systemic approaches to TVET frameworks, e.g. with regard to innovations and linkages with industry,
- 4. Distance learning, use of digital media in TVET,
- 5. Applied research in TVET, with many participants keen to engage in international partnership and exchange to undertake applied research.

The participants also identified cooperation in itself as being an overarching topic that is relevant to all themes above, with mechanisms, tools, strategies and the use of indicators of good cooperation forming part of a strategy for north-south and north-south-south cooperation.

In addition, individual participants mentioned the following other areas of importance: employability skills, demographic challenges, standards, enhancing north-south and north-south-south cooperation with regard to specific projects individual Centres are already active in e.g. in Africa and Latin America.

The following strategic points for follow-up were agreed upon:

- 1. Map what is available in the cluster in terms of tools, strategies, information
- 2. Give support to UNEVOC Network/Centres in other regions and clusters through these tools
- 3. Expand information database to facilitate access to partnerships, according to needs and priorities



Europe and North America Region Cluster

- 4. Establish a communication base through a mailing list, then
- 5. Division of labour: Distribute responsibilities within the group for the various tasks, namely:
 - **Fundraising**
 - Drafting wanted achievements, drawing up a plan of action
 - Communication within and outside the group
 - Mapping and sharing available tools, strategies and information
 - Mapping needed tools, strategies and information

The following points needing concrete follow-up action were discussed:

- Canadian and USA UNEVOC Centres will hold a regional meeting in December 2012.
- Regarding the five main topics identified above: what can be the contribution of each Centre to this topic or activity? An action plan of who can do what should be drawn up, exploring the possibility of subclustering by theme and mutual interest.
- With regard to greening skills, every country in the cluster will make a report on comparison of approaches of green TVET.
- A regional workshop will be held in Leipzig in July 2013 in the frame of World Skills competition with the topic of "greening TVET".

The Latin America and Caribbean Region



Latin America and the Caribbean Region Cluster

Participants began their discussions by expressing the need to addresses the challenge in the region with regard to raising awareness of the potential of the UNEVOC Network, recruiting new members and placing it in the context of other networks and stakeholders

operating in the region.

In terms of priorities for 2013 and beyond, the following themes were mentioned as being of interest in the region:

- greening TVET, e.g. the use of alternative energies, waste treatment, climate change issues, particularly in Latin America and the Caribbean clusters,
- entrepreneurship education and training, particularly in the Caribbean, and
- inclusive education, particularly in Brazil.

The following activities are planned for 2013 in the region:

- A capacity development event organized and hosted by INA, with support from the UNESCO Regional Bureau in Latin America, will take place from 11 to 14 March 2013 in Costa Rica. The theme will be Greening TVET. It is expected to have approximately 50 participants from eight institutions in Latin America. Further funding opportunities in order to increase the number of participants are currently being sought, and UNEVOC will also explore the possibility of providing some input to the meeting, in the form of funding and/or technical assistance and expertise. It was suggested that it would make sense to explore the possibility of holding its regional meeting concurrently with or immediately before or after this event in the region or the one planned in the next paragraph.
- A Third TVET conference in the Caribbean will possibly take place sometime in 2013, although details about the themes and hosts are yet to be confirmed.

Conclusion



n the closing ceremony, Mr Shyamal Majumdar congratulated all the presenters, chairpersons, rapporteurs and other participants for the commitment and dedication shown throughout the meeting and expressed his appreciation with regard to the new directions that the UNEVOC Network was taking. He was certain that a stronger Network would emerge because of the goodwill demonstrated by all participants. He highlighted that the presentations focused on all the main themes of the Forum, namely greening TVET and the professionalization of TVET teachers, on coordinating ways of collaboration within the Network, and on identifying potential partners for strengthening the Network and on information sharing even further.

He reminded all participants of the online tools developed by the International Centre, especially the UNEVOC e-forum, an active and powerful tool that needs to be maximized, on the Network Portal that requires more ownership, and the Online World TVET Database that must be strengthened. It is essential that each Centre will share more information and communicate better via the different channels of communication and by updating information online. Common thematic issues such as greening TVET, empowering teachers and entrepreneurship will remain priorities for UNESCO-UNEVOC.

Mr Majumdar stated that it was important to undertake mapping with regard to the follow up of the Shanghai Congress: Who can do what? At what time? What activities can be proposed? Evidence-based case studies should be conducted and shared. Every region should have regional conferences on specific issues.

The key to strengthening and revamping the UNEVOC Network is effective partnership. The International Forum is already an excellent example of partnership that has been established among all the centres, nationally, regionally and globally. Each region is already committed to developing their plan of action and finalize the activities in line with the International Centre's efforts to engage all the stakeholders in the planning, design and implementation of actions in 2013. "It is important for all of us to remain focused, take the challenges, get engaged and work together to create another layer of TVET development," he added.

The Forum was finally concluded with a word of thanks to all participants and organizers of the Forum. A special tribute was paid to the full team of the International Centre who all worked very hard to make a success of the International Forum. Homage was also paid to Teeluck Bhuwanee, presently Head of the Network, who will reach retirement age at the end of January 2013.

Annex: List of Participants

Last Name	First Name	Institution	Region	Country
Abbassi	Bassim	UNESCO Chair Jordan	Mashreq states	Jordan
Abdulrazzak	Fawzi	Public Authority for applied education and training	Mashreq states	Kuwait
Abi Nader	Issam	leh	Mashreq states	Lebanon
Abubakar	Muhammad Sani	National Board for Technical Education, Centre of Excellence in TVET (NBTE)	Africa	Nigeria
Adamson	Robert	HK Institute of Education	Asia	HK, China
Alghafis	Ali	TVTC Technical and Vocational Training Corporation	Mashreq states	Saudi Arabia
Al-Ghassani	Ahmed	Ministry of Workforce/Higher Technical College - Muscat	Mashreq states	0man
Ananiadou	Katerina	Programme Specialist, UNESCO-UNEVOC International Centre Regional Contact Person for Latin America and Caribbean		Germany
Bajer	Caroline	Administrative Officer, UNESCO-UNEVOC International Centre		Germany
Barbieri	Marco	UNEP/AEWA	Europe	Germany
Basu	CK		Asia	India
Baumann	Arne	ETF	Europe	Italy
Belgaryan	Lilit	Global Developments Fund	CIS	Armenia
Bella	Nicole	UNESCO		France
Bhuwanee	Teeluck	Head of UNEVOC Network, UNESCO-UNEVOC International Centre		Germany
Blanc- Mannheim	Josiane	Assistant to the Head, UNESCO-UNEVOC International Centre		Germany
Büdke	Christoph	GIZ/BMZ	Europe	Germany
Byron-Cox	Richard	UNCCD	Europe	Germany
Caetano	Manuel	National Directorate for Technical and Vocational Education	Africa	Mozambique
Carillo	Stephanie	Centennial College	North America	Canada
Chaibi	Ahmed	CNIPE	Northern Africa	Morocco
Chakroun	Borhene	UNESCO		France
Charchut Leszczynski	Sonia Ana	Federal University of Technology – Paraná	Latin America and Caribbean	Brazil
Daniel	Sir John	Keynote Speaker	North America	Canada
Dave	Roshni	UNITAR	Europe	Switzerland
Delakowitz	Beate	BMBF	Europe	Germany
Dittrich	Joachim	UPI	Asia	Indonesia
Djusupova	Aliya	ucational Initiatives	CIS	Kyrgyzstan
Eastmond	Henderson Dacosta	TVET Council	Latin America and Caribbean	Barbados
Ebben	Jan	BIBB	Europe	Germany
Edward	Marcus	Ministry of Education, HR Development and Labour	Latin America and Caribbean	St Lucia
Ehlers	Max	IT Focal Point, UNESCO-UNEVOC International Centre		Germany

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Last Name	First Name	Institution	Kegion	Country
Farstad	Halfdan	Norway – Ministry of Training	Europe	Norway
Fortin	Marie–Josée	ACCC	North America	Canada
Foster	Helga		Europe	Germany
Fraeb	Jan	BIBB	Europe	Germany
Freiburg	Lisa	Communications Focal Point, UNESCO-UNEVOC International Centre Regional Contact Person for Arab States		Germany
Gamel	Abdul Rahman	Ministry of Technical Education and Vocational Training-Community Colleges	Mashreq states	Yemen
Ganz	Louise	GIZ	Europe	Germany
Gauch	Danny	World Skills	Europe	Germany
Gavor	Modesta E.	Department of Vocational and Technical Education - University of Cape Coast	Africa	Ghana
Gleissner	Kai	Otto-von-Guericke University	Europe	Germany
Greenwood	Peter	ETF	Europe	Italy
Gregory	Michael	Fiji National University	Pacific	i
Haiduk	Denise	DWA	Europe	Germany
Hamed	Sheren	National Center for Human Resources Development (NCHRD)	Mashreq states	Jordan
Han	Janette Chungnim	KRIVET	Asia	Republic of Korea
Hassi	Marja-Liisa	TVET Consultant, UNESCO-UNEVOC International Centre		Germany
Heidebrecht	Rüdiger	DWA - Head of Department	Europe	Germany
Hindi	Gizel	CERD	Arab	Lebanon
Holmes	Keith	UNESCO		France
Huot-Marchand	Hervé	NNESCO	Africa	Senegal
Hoffman	Stefanie	Programme Assistant Network, UNESCO-UNEVOC International Centre Regional Contact Person for Africa		Germany
Howell	Wendi	UNESCO-UNEVOC U.S. Centre on Education and Training for Employment	North America	USA
Imani	Nader-Iman	Festo Didactic	Europe	Germany
Jayalath	Janaka	Tertiary and Vocational Education Commission	Asia	Sri Lanka
Kappel	Angelica-Maria	Deputy Mayor of Bonn	Europe	Germany
Katayama	Hiromichi	UIS	North America	Canada
Kazaure	Dr Mas'udu A.	NBTE	Africa	Nigeria
Kinley	Richard	UNFCCC	Europe	Germany
Kitz	Jani	GIZ	Europe	Germany
Klandt	Peter	BMBF	Europe	Germany
Klein	Günther	Bonn Rhein-Sieg University	Europe	Germany
Klumpp	Elfi	World Skills	Europe	Germany
Kovryzhenko	Artem	Intern, UNESCO-UNEVOC International Centre		Germany
Köller	Anke	iMOVE/BMBF	Europe	Germany
Krämer	Ulrike	Office Assistant, UNESCO-UNEVOC International Centre		Germany

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Last Name	First Name	Institution	Kegion	Country
Kruse Vaai	Emma	National University of Samoa	Pacific	Samoa
Labillois	Daniel	Cégep de la Gaspésie	North America	Canada
Ladipo	Kudirat	Yaba College of Technology (UNEVOC centre)	Africa	Nigeria
Larbi	Bellarbi	L'Ecole Supérieure de l'Enseignement Technique (ENSET)	North-Africa	Morocco
Leney	Tom		Europe	NK
Lenten	Bert	UNEP/ASCOBANS	Europe	Germany
:5	Silei	Intern, UNESCO-UNEVOC International Centre		Germany
:i	Wang	INRULED	Asia	China
Lilienthal	Eckart	BMBF - Desk Officer	Europe	Germany
Limpf	Klaus	GIZ	Europe	Germany
Lindenthal	Roland	BMZ - Director	Europe	Germany
Madugu Yalams	Simon	University of Technology	Latin America and Caribbean	Jamaica
Majumdar	Shyamal	Head of Office, UNESCO-UNEVOC International Centre		Germany
Makulumiza Nkhoma	Wilson	Technical, Enterpreneurial and Vocational, Education and Training Authority	Southern Africa	Malawi
Malina	Barbara	German Commission for UNESCO	Europe	Germany
Mar	Naing Yee	Programme Officer, UNESCO-UNEVOC International Centre Regional Contact Person for Asia and the Pacific		Germany
Martin	Owono Owono	Technical School of Nkolbisson	Central and Eastern Africa	Cameroon
Martinez	Cristina	OECD CECD	Europe	France
Matsunaga	Satonobu	Ministry of Education, Culture, Sports, Science and Technology	Asia	Japan
McGregor	Hone	PINZ	Pacific	New Zealand
Mejia	Aldrich	IT Support and Multimedia Developer, UNESCO-UNEVOC Internatioanal Centre		Germany
Merete Bugge	Kirstin	Oslo and Akershus University College of Applied Sciences	Europe	Norway
Mueller-Solger	Hermann	BMBF (Ministerialdirigent a.D.)	Europe	Germany
Nang	H.E. Mohamed Asif	Deputy Ministry of Technical and Vocational Education and Training, Ministry of Education (DMTVET - MoE)	Asia	Afghanistan
Nauber	Jürgen	UNWTO	Europe	Germany
Silvia	Niediek	iMOVE/BMBF	Europe	Germany
Oleynikova	Olga	CVET	Europe	Russian Federation
Opitz	Helene	DWA	Europe	Germany
Panis	Sara	CINOP	Europe	Netherlands
Parua	Robert	UNESCO	Latin America and Caribbean	Jamaica
Phiri	Mathews Lebogang	Botswana Training Authority (BOTA)	Southern Africa	Botswana

last Name	Eirot Nome	Institution	Region	0
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Pimentel Yost	Edgar	INFOTEP	Latin America	Dominican Republic
			and Caribbean	
Popov	Sergey	UNESCO Chair	Europe	Russian Federation
Ranganathan	Shyam	Centennial College	North America	Canada
Ranieri	Antonio	CEDEFOP	Europe	Greece
Reineke	Thomas	BMBF	Europe	Germany
Rodriguez Araya	Fernando	National Institute of Apprenticeship (INA)	Latin America	Costa Rica
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Kubleva	Yulia	Programme Assistant, UNESCU-UNEVUC International Centre		Germany
Sasai	Hiromi	Ministry of Education, Culture, Sports, Science and Technology	Asia	Japan
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Schmidt	Peter	GIZ	Europe	Germany
Schröder	Frauke	German Commission for UNESCO	Europe	Germany
Schwertel	Markus	COSIO 000	Europe	Germany
Sievers	York	Association of German Chambers of Commerce and Industry	Europe	Germany
Simiyu	John	Department of Technology Education, Chepkoilel University College	Africa	Kenya
Simoneau	Jean-Pierre	UNESCO Chair	North-America	Canada
Numyoot	Songthanapitak	RMUTT	Asia	Thailand
Spence	Dermon	HEART Trust, National Training Agency	Latin America	Jamaica
			and Caribbean	
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Stolte	Harry	GIZ	Europe	Germany
Stone	James	National Research Center for Career & Technical Education	North America	USA
Streit	Andreas	UNEP/EUROBATS	Europe	Germany
Strietska-Ilina	Olga	110	Europe	Switzerland
Stupp	Stefan	BMBF	Europe	Germany
Tandan	Jay Bahadur	Council for Technical Education and Vocational Training (CTEVT)	Asia	Nepal
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Thomann	Birgit	BIBB	Europe	Germany
Ulanovska	Oksana	Intern, UNESCO-UNEVOC International Centre		Germany
Villagran de	Juan Carlos	UNOOSA/UN-SPIDER	Europe	Germany
Leon				
Visser	Rob	UNITAR	Europe	Switzerland
Visser	Tom	CINOP	Europe	Netherlands
Wallenborn	Manfred	ETF	Europe	Italy
Winzier	Dagmar	BIBB	Europe	Germany
Worbs	Michael	German Ambassador to UNESCO	Europe	Germany

Last Name	First Name	Institution	Region	Country
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	Theingi	Ministry of Science and Technology, Department of Technical and Vocational Education	Asia	Myanmar

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