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**UNESCO World Conference on ESD**

**Reports on Workshops in Cluster III: Accelerating action for sustainable development**

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The reports were submitted by workshop coordinators to UNESCO, who subsequently reviewed and consolidated them. Minor editorial changes have been made to the original reports for the sake of clarity and consistency of style across the reports. The workshop coordinators are responsible for the choice and presentation of the facts contained in them and for the opinions expressed therein, which are not necessarily those of UNESCO and do not commit the Organization.

# 1. Water education and capacity building: key for water security and sustainable development

*Co-coordinated by UNESCO International Hydrological Programme and UNESCO Chair, Water, Women & Decision Power, Al Akhawayn University, Morocco*

### Workshop chairs and facilitators

- *Asma El Kasmi,* UNESCO Chairholder, Water Women and Decision Power, Al Akhawayn University, Morocco
- *Miguel de França Doria,* Programme Specialist, UNESCO

### Workshop speakers and resource persons

- *Rachid Belmokhtar,* Minister of Education and Professional Training, Morocco
- *Michael Scoullos,* University of Athens, Greece
- *Arakchaa Kara-Kys,* The United Nations Permanent Forum on Indigenous Issues (UNPFII)
- *Forzeya Al Mahmoud,* Environmental Outreach, Environment Agency - Abu Dhabi, United Arab Emirates
- *Aurelie Charpentier,* Regional Representative, World Youth Parliament for Water, Canada
- *Katsunori Suzuki,* Professor, Environment Preservation Centre, Kanazawa University, Japan

### Workshop rapporteur

- *Jim Taylor,* Director, Environmental Education, Mission Project Development, WESSA, South Africa

### Key points from presentations

The workshop considered ESD as a critical lever for advancing policies and practices. Freshwater is fundamental for life and development. To a large extent, sustainable access to water depends on the human capacities to manage and govern this resource and on the acquisition of the values, knowledge and skills needed for water security. Water education and capacity building are essential for coping with the many challenges related to Integrated Water Resources Management (IWRM). It needs to consider economy, wealth distribution, geography and gender implications, among others. In Africa, for example, women are responsible for fetching water, and women and girls in general have to administrate house chores and sanitation issues, sometimes spending up to 6 hours a day to fetch the resource (UN Water for Life, 2007). This can compromise their personal development and education. In addition, women are underrepresented in decision-making processes. Water education needs to count on the participation of governments, institutions, corporations, civil society and individuals in order to tackle economic and gender inequalities and manage water in accordance with sustainable principles.

In his keynote speech, Rachid Belmokhtar, Minister of Education and Professional Training of Morocco pointed out that water is not only crucial as a source of life but also as a source of knowledge. The beginning of agriculture, and indeed evolution, was closely tied to water. Water has been linked to human conflict and has a remarkable chemical composition that needs to be studied, especially in its different forms. Hydrologic systems, water use and abuse, as well as its environmental significance are all linked to human wellbeing. Water scarcity and climate change are further issues to be considered. Education systems do not pay sufficient attention to water. The adequate governance and management of water involves many disciplines and actors, and needs to

be addressed in a cooperative and sustainable way. Thus, water must be addressed by ESD and its adequate integration in education curricula is crucial for sustainability and to reach development goals.

Substantial progress was achieved during the Decade of Education for Sustainable Development (DESD). As capacity building actions on water started to be oriented towards the achievement of sustainability, education efforts on water were enlarged to integrate additional disciplines and to cover also values and skills, rather than just knowledge. However, these achievements need to be scaled up and much still remains to be addressed. The following points were raised by the workshop participants:

1) Higher education is often isolated from other levels of education. The DESD has generated very positive outcomes: Water issues are better known at the international level. Nevertheless more dialogue, cooperation and information among education institutions, stakeholders and local communities are needed.

2) The benefits related to water management are not shared widely enough. There is focus on sharing water, not the benefits of water. The dissemination of water knowledge, depending on the economic situation of the communities, the goodwill of leaders and traditional training of water professionals, results in a greater inequality of access to both knowledge of water, and water.

3) Sustainable values have yet to be addressed properly; Sustainability cannot stay an abstract concept, but needs to become an everyday habit.

4) Health, diseases and sanitation are very significant issues but are not always approached at school; these themes are not adequately approached in the academic environment. Furthermore, some schools teach about water and sanitation without having access to them, which is contradictory.

5) Teachers often lack the training and capacities to conduct lessons and activities in line with ESD principles; they often have insufficient understanding of the importance of adopting a holistic and multi-disciplinary approach to teach about water and the importance of spreading sustainable values.

6) The current methodologies for water education often contemplate only children with more academic profiles; the methodologies are very technical, specific, and uni-disciplinary. The different fields are isolated and it is not clear how they relate to each other.

7) The role of other water professionals in ESD is often unclear or disregarded; Water technicians, media professionals and companies among others are rarely seen as potential value-builders.

8) There is no structure for community participation in water management; communities and individuals, being the most affected by water management policies, are often excluded and unaware of decision-making processes. This leads to an underrepresentation of the individual's interest compared to those of the most powerful actors.

9) Traditional and Indigenous practices and knowledge about water are rarely taken into account. Some important information might be lost when the Western model is the only well-promoted education model, excluding individuals from different backgrounds and making them feel outsiders to the mobilisation.

Two other considerations to guide future water ESD work were identified:

1) Water and energy are deeply interconnected – much energy is used to secure water and vice-versa. Both need to be considered in this relation;

2) Rural-urban migrations markedly influence water management.

## Activities

The participants issued recommendations for three areas of education, based on the focal areas of the International Hydrological Programme (IHP) VIII, theme 6 (water education):

### (a) Tertiary education of water professionals

Integrated water resource management is important. Higher education should not be isolated from other levels of education. Positive outcomes of the past 10 years include that water issues are more known, and the issue has become more clearly international, from sharing water to sharing the benefits of water. However, much more still remains to be done. Such benefits are not shared widely enough. Water education needs to be an integral part of ESD. Economic scarcity is a further issue. Dissemination of water knowledge was patchy and scarce. Values were not adequately addressed.

It is felt that the following is needed:

- Institutions need to be open and transparent and develop cooperation skills. Joint courses must be offered and these need to be linked to water challenges and community issues at all levels of education (Priority Action Area 1).
- A new culture of innovation and integration is needed.
- Higher education institutions, through GAP, should transform themselves and become real, successful examples of water management.
- New professionals need to be trained using better educational approaches.
- Higher education institutions must serve society and develop and apply feedback (Priority Action Area 5). Human and social scientists should be engaged in this learning and sharing.

### (b) Water education in schools – Shaping principles for the GAP

Schools are considered to be excellent places to foster water education. They are well structured and have links to the parent community. The UN Habitat project has proven helpful in supporting water knowledge sharing. Water purification must be addressed and expertise must be shared to create a bridge between home and schools. The maintenance of water infrastructure is important. Health, disease and sanitation issues are significant. The majority of the learners need to be addressed and accommodated in the learning – not just the more academic children.

When children are learning about water, it was pointed out that the following approaches are important:

- Developing values related to water before acquiring knowledge about it (e.g. the importance of saving water, not polluting water);
- Inter-disciplinary approaches;
- Methodologies that include action-based learning and participatory approaches; and
- Learning about the local reality (situated learning).

Additionally, teacher capacity development was considered to be very important in the forthcoming GAP period.

### (c) Water education for decision-makers, water technicians, communities, stakeholders and mass-media professionals

Democratization of science is important such as through the Stream Assessment Scoring System (miniSASS) and Google Earth platform. The importance of linking Indigenous Knowledge and culture was made, with examples shared from Mongolia and Central Asia where water is used for medicinal processes. It is important to work with local government and the private sector.

## Recommendations and conclusions of the workshop

Concrete recommendations and activities for the GAP include the following.

1) Create stronger links between schools and communities. Community-based value systems need to be developed. Water committees are important for sharing values, risk mitigation practices, and knowledge. All institutions involved in water education and training should have access to freshwater, drinking water and sanitation.
2) Communicate scientific knowledge in accessible ways ("De-mystify" scientific knowledge). Formal and non-formal methods should be used. New methodologies should be employed, uniting innovation with multidisciplinarity, both to train teachers and educators and to empower them to better disseminate knowledge and values about water.
3) By focusing on transforming schools, improving pedagogical approaches and enhancing teacher capacities, the youth will automatically be contemplated. Youth is a critical group as they carry a great potential to implement change at households and will grant long-term change for the future generations.
4) Creating economic incentives (sliding scale of water pricing) and enabling governance approaches is important.
5) Communities and any other professionals related to water or education also need to acquire sustainable values. Encourage and support active public participation. Water volunteers are helpful in supporting wise water management.
6) Water security and sustainability is deeply interlinked with gender equality and equity. Educational approaches in water education must acknowledge and advance the interconnections between water and gender equality.
7) Provide prime-time TV and radio access for water related messages.
8) Multilingualism beyond French and English should be considered for publications, workshops and courses related to ESD.

## 2. One planet, one ocean: ESD and marine knowledge

*Co-coordinated by Intergovernmental Oceanographic Commission (IOC) and World Ocean Network (WON)*

### Workshop speakers

- *Yutaka Michida,* Intergovernmental Oceanographic Commission (IOC) vice-chair, Professor, Center for International Collaboration, Atmosphere and Ocean Research Institute, The University of Tokyo, Japan
- *Lisa Svensson,* Sweden's Ambassador for Oceans, Seas and Freshwater
- *Peter Tuddenham,* Executive Director and President, College of Exploration, United States of America, *'Ocean Literacy framework'*
- *Alejandra Cornejo,* Secretary, CeDePesca – Center For Development and Sustainable Fisheries, Argentina, *'World Ocean Network activities throughout the world and in Latin America'*
- *Tsuyoshi Sasaaki,* Professor, Tokyo University of Marine Science and Technology, Japan, 'Cherry salmon studying project in tsunami area enhancing local community resilience'
- *Toyohisa Emoto,* Japan Contact, World Ocean Network, *'The divers, our eyes into the Ocean and 1st Citizen of the Ocean'*
- *Timoté Vaioleti,* Faculty of Education, University of Waikato, New Zealand, 'Education, ocean literacy activities – New Zealand (NZ) Pacific : Tahi (one, sea [space that connects and separates])'
- *Virginie Torrens,* ESD Expert, Islands Project, Indian Ocean Commission, *'Islands and ESD'*
- *Gail Townsend,* Executive Director, Education Commissioner, Cook Islands Ministry of Education, *'Les Iles de demain, renforcer la resilience dans un monde en mutation'*
- *Kirsten Forsberg,* Director, Planeta Oceano, Youth Conference Representative, *'Voices of Youth'*

### Chair/Facilitator:

- *Peter Pissierssens,* Head, IOC Project Office for International Oceanographic Data and Information Exchange (IODE)
- *Manuel Cira,* Director, World Ocean Network, France

### Rapporteur

- Judy Mann, South African Association of Marine Biology Research, South Africa

### Key points from presentations and activities

The workshop was well attended by approximately 35 participants, 50% from Pacific, 30% from Atlantic, and 20% from Indian Ocean. Following the welcome and introduction, participants were invited to express their vision of the relationship to Ocean. The participants' responses clearly showed that the world's oceans contribute to all aspects of our life on this planet (see Figures 2.1 and 2.2).

Figure 2.2

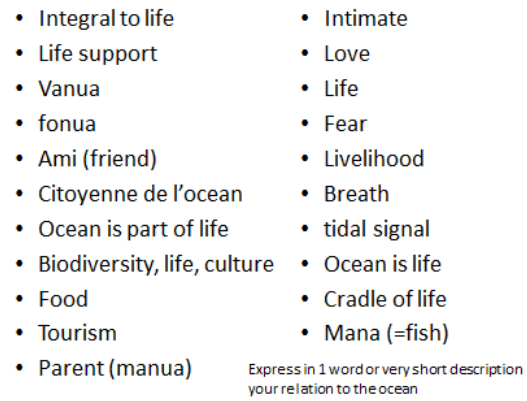



**Figure 2.1. Summary of responses to the opening activity "Express in one word or very short description you relation to the ocean"**

Introductory remarks by Yutaka Michida were followed by the overview presentation by the co-coordinators of the workshop, IOC/UNESCO and WON. In the question and answer session, a question was raised by a Peruvian participant regarding how to engage fishery industries who are traditionally not very interested in sustainable development. Speakers in response noted the need for engaging not only fisheries industry but also other economic stakeholders, highlighting the importance of applying Marine spatial planning (MSP), a process that brings together multiple users of the ocean – including energy, industry, government, conservation and recreation – to make informed and coordinated decisions about how to use marine resources sustainably. The issue of commodification of the ocean was also raised. The ocean is seen as a big commodity, and people's spiritual connection to the ocean is lost and the indigenous knowledge is ignored. In this regard also considering "high seas" as owned by everyone is not correct as some countries benefit (those who can exploit them) while other countries are not considered.

Following the introductory presentations, eight speakers took the floor and presented on various activities

## Recommendations and conclusions of the workshop

The workshop participants formulated the following recommendations.

***Taking into account the importance of education for sustainable development with regard to Ocean and coastal areas,***

***Recalling that the World Ocean is the support system for our life on Earth, and insisting that this knowledge should be part of the essential knowledge base of all humankind,***

***Taking into account the diversity of cultures and Ocean knowledge, and highlighting the importance of fostering a holistic vision of our relationship to the Ocean,***

***Supporting the establishment of a Green and Blue Society,***

***In a spirit of cooperation and mutual learning,***

the workshop participants recommended that:

1. Ocean should be included in the post-2015 goals for sustainable development goals and in all subsequent strategies and policies, especially regarding ESD;
2. The IOC of UNESCO should be recognized as the competent body within the United Nations system to provide science based knowledge for decision making in implementation of sustainable development goals related to Ocean;
3. The IOC of UNESCO should be actively involved in Ocean Literacy, as the appropriate science-policy interface platform to communicate science; and engagement with all relevant stakeholders and decision makers;
4. International guidelines on ocean literacy should be developed that can be used and adapted to local needs by Governments to promote and facilitate their engagement;
5. Ocean Literacy should be mainstreamed into national school curricula;
6. Ocean education initiatives based on traditional/indigenous knowledge should be promoted and reinforced;
7. Education for sustainable development with regard to Ocean and coastal areas should be encouraged for all groups and in all contexts; the use of media ant new technologies, especially to reach audiences that were often excluded, should be encouraged
8. Ocean ESD frameworks should be inclusive (involving all stakeholders), creating partnerships with existing national and international expertise;
9. UNESCO should connect local activities globally, while governments should collect local activities;

**SHORT-TERM WORK PLAN**

To act upon these recommendation, the workshop participants decided to launch following actions:

1. Establishment of initial partner community composed of participants of the workshop;
2. Development of repository of information on existing Ocean ESD activities by region and stakeholder, and specific approaches (e.g. to take into account indigenous knowledge, culture, etc.)

## 3. Energy: Self sufficiency in sustainable energy development and education

*Co-coordinated by Institute of Electrical and Electronics Engineers (IEEE) and Emirates Environmental Group*

### Workshop presenters

*Speakers*

- *Hiroto Tamura,* Professor, Laboratory of Environmental Microbiology, Meijo University, Japan, "Self-sufficient renewable energy generation from rice straw in paddy field- GET system"
- *Miroslav Begovic,* President, IEEE Power & Energy Society, USA, "IEEE Power and Energy Society and Sustainable Development."
- *Hiroki Murakami,* Deputy General Manager, Products Development Center Corporate Research & Development, Japan, "Research and development of technology for renewable energy System and high energy efficiency System for Sustainable Society"

*Chair/Facilitators*

- *Toshio Fukuda,* Director, IEEE Region 10, Japan
- *Habiba Al Marashi,* Chairperson, Emirates Environmental Group-UAE (Apology)

*Overall Chair/Facilitator*

- *Tariq Durranti,* 2010-2011 IEEE Vice President & Professor, UK

*Workshop rapporteurs*

- *Lena Neij,* Director and Professor, UNESCO Chair in ESD, International Institute for Industrial Environmental Economics (IIIEE), Lund University, Sweden
- *Rosalyn McKeown,* Secretariat, UNESCO Chair on Reorienting Teacher Education to Address Sustainability, York University, Canada

### Key points from presentations

*Following the introduction to the Workshop by Professor Toshio Fukuda, the session opened by a number of presentations.*

1) The curriculum of the education in Dept. Agriculture and environment was shown, including the practice in the field. In particular, an example of the GET System is shown as one of the bio-power generation methods. Methan gas is generated from the rice field by using straws cut into pieces after rice cultivation and is converted to electricity power.
2) The electric distribution in the current world is shown for the developing and developed countries. The electric power distribution is necessary among countries for the daily life and industry. Education and Government support is also important from the electric and electronics industry viewpoint.
3) The Industry requirements are proposed for the ESD from the Industry. Three examples are presented for the power generation and how industry solves problems. ESD is required for the wide scope of industry but needs much wider spectrum of variety for ESD which is currently rather limited to the narrow spectrum.

After these presentations a discussion followed highlighting the following topics.

- The need for further coal-based energy was discussed and the possibilities of a coal free energy system. Barriers to renewable energy were highlighted in general terms. The need for backup was discussed and specifically the use of gas generators. The cost of such generators was seen as high for larger systems but affordable on a household scale. Wind and solar photovoltaic (PV) was stressed as important sources for renewable energy and the need for storage.
- The efficiency of energy from straw was discussed and a question was raised concerning the cost. However, it was difficult to provide a precise answer regarding the cost.
- The cost of renewable energy in general was raised and the high cost in developing countries. At the same time the cost reductions of PV was highlighted.
- The demand for energy in Southern nations is huge, especially as Northern technologies, such as air conditioning, are standard in new buildings. Policy and investment can make a difference that technology alone cannot make.
- A question was raised asking for projects on renewable energy in Africa. The answer was highlighting projects by the World Bank focusing on PV, waste and biofuels.
- The need for electrification worldwide was highlighted, especially in relationship to primary and secondary schooling in rural areas. For example, children in households with electricity can do homework longer in the evening than children in households without electricity. Furthermore, Internet access comes with electricity and children learn from the Internet.
- At the end the need for ESD was discussed highlighting project-based ESD, community-based ESD, ICT, system integration, human resources, interdisciplinary ESD, etc.

### Recommendations and conclusions of the workshop

In relation to ESD the workshop can be summarized in the following words:

- Need for policy that bridges new renewable energy technologies to local communities, which prioritizes educational institutions and educational activities. (Action areas 1 and 5)

- Project-based and community-based education are effective in teaching about renewable energy technologies and solutions. (Action area 3)

- A large need exists for training and professional development for energy professionals, leaders, policy-makers, and the general public. These programs are audience specific. (Action areas 1 and 2)

- A large need exists for interdisciplinary education and training to advance a holistic understanding of the energy transition. (Action areas 1 and 2)

- ICTs are a good tool for reaching out to create widespread educational opportunities for children, youth, and adults. (Action area 3)

## 4. Schools and health: the micro-ecology of ESD

*Co-coordinated by World Health Organization (WHO) and FHI 360*

### Workshop presenters

- *John Gillies,* Director of the global NGO FHI 360, USA
- *Yolanda De las Alas,* Regional Coordinator "Fit for School Programme", SEAMEO INNOTECH, Philippines
- *Ralf Panse,* German International Cooperation GIZ, Consultant to SEAMEO INNOTECH, Philippines
- *Horacio Alvarez Marinelli,* Inter-American Development Bank, Bogota, Colombia

### Workshop rapporteur

- Unnikrishnan Payyappallimana, Research Coordinator, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)

### Key points from presentations

Workshop coordination was led by Mr Alexander von Hildebrand, WHO. The session discussed diverse issues related to ESD and health specifically in the context of school health including aspects such as access to good water, sanitation, nutrition and an overall healthy school environment leading to reduction of morbidity; better participation and learning in schools; and in turn leading to an overall healthy society and intergenerational health.

The workshop departed from the premise that the inter-dependency of health and education is a basic fact of development, that is, good health leads to better education outcomes, and better education leads to better health and environment. Beyond this macro-level correlation, the school is a critical space where the dynamics of often negative feedback loops come into play. This is particularly true for schools in poor and marginalised settings. Highlighting the concept of micro-ecology of ESD, and flagging basic health sector challenges in different countries, case studies from South East Asia and Latin America were presented with examples such as hand washing in schools, de-worming, supervised tooth brushing and improvement of access to water, sanitation and toilets and overall improvement of environment of schools. Importance of quality of education; teaching and learning core values of ESD and its impact on school as well as overall community health was also stressed. While the concrete successful experience in 4 Asian countries demonstrated that improved school based management practices focused on policy, skills development and community engagement are driving measures of health improvements, evidence presented of the poor state of secondary schools in Latin American countries highlighted the need for policies and institutional arrangements that allow integrated strategies and approaches to the education-health nexus.

This was followed by discussions on how to upscale good practices in terms of projects as well as integrating health in schools through a systemic, whole institution approach. It was pointed out that several basic issues such as access to health, hygiene, sanitation, nutrition through schools and other educational environments were missing in the more abstract and conceptual discussions of ESD at the World Conference.

### Activities

Two central questions were discussed in the small group discussions:

1. What are the biggest obstacles to effective school health interventions and education in your country?

2. What are the most important priorities for investment in school health and education in your country?

Participants deliberated on policy development and implementation to facilitate intersectoral collaboration for an integrated pedagogy to develop the health and environment skills for teachers and learners.

## Recommendations and conclusions of the workshop

The status of SD concerns – water, sanitation and hygiene, food and nutrition, environment, safety – is manifested in student health, which has a direct impact on school attendance, persistence, completion, and ultimately learning. Successfully addressing these challenges has a multiplier effect, greatly improving financial and operational efficiency of both health and education systems.

Major recommendations include the following.

- As health and education are central to sustainable development, there needs to be focused discussions on access to health, hygiene, sanitation, nutrition in the ESD deliberations. It was suggested that UNESCO should aim at facilitating national and local processes to achieve that 80% of all schools have functioning adequate basic hygiene facilities by 2020.
- Health as a central theme of ESD needs to be more strongly linked to the Global Action Program on ESD and SDGs.
- Stronger interagency collaboration (between agencies which were represented in the group such as the UNESCO, WHO, United Nations University-International Institute of Global Health, UNU-ESD-Regional Centres of Expertise Program, UNICEF, and other development agencies such as GIZ, SEAMEO-INNOTECH, Inter-American Development Bank, Korean overseas development cooperation agency and so on) is critical.
- There is a need for stronger political commitment from governments; better convergence, policy planning, coordination and implementation among the ministries of health, ministries of education, and other relevant bodies at national, sub-national and local levels
- There is a strong need for mutlistakeholder networking in local communities for effective implementation of school health programs specially with sensitivity to community's needs and cultural contexts through nuanced approaches
- Teacher training programs and curriculums should incorporate ideas like pride and ownership, value of education, citizenship, local context including traditional customary practices and the overall importance of ESD in health and wellbeing and vice versa. Teaching methodology should be through a rights-based approach.

The discussions very well focused on all the GAP areas such as development of appropriate policies to create and enabling environment for better health and ESD through a systemic approach; integrating sustainability principles in education through whole system approach increasing capacity of educators and trainers for better health; inclusive approach with different groups including youth and importance of focusing on local communities through public institutions such as schools.

## 5. Formal, non-formal and informal education: implementing big and small projects in agriculture and food security

*Co-coordinated by Heliopolis University for Sustainable Development for Sekem, Egypt, and Food and Agriculture Organization of the United Nations (FAO)*

### Workshop presenters (name, organization, e-mail):

- *Ibrahim Abouleish,* Professor, Heliopolis University for Sustainable Development
- *Hani Sewilam,* Professor, American University in Cairo
- *Omar Ramzy,* Associate Professor, Heliopolis University for Sustainable Development
- *Francesca DallaValle,* FAO
- *Reuben Sessa,* FAO

### Workshop rapporteur

- *Ms Heidi Johnson, International Relations Officer, Young Masters Programme (YMP)*

### Key points from presentations

The overview presentations showed, through examples, the importance of formal, informal and non-formal education in achieving behavioural change in areas related to agriculture, food security and nutrition. Presentations highlighted the negative consequences of traditional agricultural practices will have on food security around the world, and in particular the importance of integrating sustainability issues along the food chain and how consumers become positive givers back down the production chain. Presenters emphasised the greater importance needed in creating effective programmes with adequate monitoring and reporting so that we can learn from successes and failures ensuring future programmes are more effective, efficient and integrated into general national, regional and international strategic objectives.

The key takeaway from the presentations of the workshop mostly regarded the essential component of addressing Agriculture and Food Security around the world through innovative teaching methods and ESD. This was also emphasized in the different round tables as the participants discussed the different approaches to this, namely through policy support, whole-institution approach, educators, youth, and local communities.

### Activities

Workshop participants were divided into five groups with each one being hosted by a rapporteur and addressing one of the five Priority Action Areas of the GAP. Each rapporteur/host led discussions with the rotating groups in the world café style on different approaches which could be taken to address each action area. Then, each world café host brought consolidated recommendations on the action area, producing a single document outlining a holistic approach to addressing food insecurity.

### Recommendations and conclusions of the workshop

The linkage between ESD and agriculture and food security is clear. Agriculture and sustainable agricultural practices should be considered to be applied at any kind of scale (micro, small, medium and large). Given the high number of rural and agricultural economies in the world, it is pivotal that sustainable agriculture is integrated into future transitions and education and capacity building programmes. In this respect, there is a need for an inter-stakeholders social dialogue (which is also gender and age-sensitive) to ensure a harmonized approach towards agriculture and food security issues.

Workshop participants pointed out that education on climate smart agriculture and organic farming is required. They also identified the need for agriculture education and knowledge to be kept adequate to the contexts and levels of learning. Community and rural radios can have a major role in penetrating the ESD concepts and also training programmes into deep rural contexts while mobile devices can concentrate where local lines are available in developing countries. For more adequate settings, apps can be developed for simple mobile devices, and further used for educating farmers even with low levels of education, on climate smart agriculture, improved farming methods and recommended regeneration techniques through the use of pictograms.

Considerable new research is required on formal, non-formal and informal education involving a whole set of stakeholders, to understand the drivers of sustainable agricultural practices from production to consumption and how to effectively create positive divers of change. Agro value chains should be strengthened in order to avoid food waste. Influencing consumer behavior is one of the optimal strategies in creating drivers which encourages ESD compliant production systems. In respect of formal education, research should be further implemented in practice and imbed sustainable development themes and concepts into school and university curricula.

The major stakeholders include the public sector organizations (Agricultural Unites, international organizations, local government) as well as producers (private companies, famer organizations) and consumers, media, and educators (especially teachers of eco-schools). Some concrete names, such as PAALAE[1] and Wwoof.net[2], were identified. Civil society and faith-based communities can also be involved and can possibly have a large impact on training to increase food and nutrition security with included ESD concepts.

Below other major recommendations of the workshop are organized according to the Priority Actions Areas of the GAP.

Priority Action Area 1: Policy

Mainstreaming ESD into both education and sustainable development policies will create an enabling environment for ESD and bring about systemic change. In order to fully address sustainability within the different sectors of Food and Agriculture, there must be a strong support for policies addressing this. There is a need for a global policy on ESD that targets policy makers for supporting sustainable agriculture. This will help key decision makers to understand ESD and support it in their own country contexts. There is also a need for a policy that connects universities, communities and other related stakeholders to facilitate agriculture and food and nutrition security.

[1] The Pan African Association for Literacy and Adult Education (PAALAE) is a non-political, non-governmental, voluntary partnership based in Dakar, Senegal. The Association is recognized by UNESCO and the Organization of African Unity (OAU). It is a founder member and, currently, a regional member of the International Council for Adult Education.

[2] World Wide Opportunities on Organic Farms, or Willing Workers on Organic Farms, is a loose network of national organisations that facilitate placement of volunteers on organic farms.

A marketing strategy for ESD has additionally been identified as a major need; ESD to be treated as a brand, in schools, in the community and in advocacy tools at global level.

It has been highlighted that inclusion of agriculture and food and nutrition security issues in ESD curricula is key. The UNESCO and other organizations should provide assistance to governments around the world in the fields of ESD, specifically for infusing it with food and agricultural issues. The UNU-coordinated Regional Centres of Expertise (RCEs) can be engaged in researching ways to infuse food security within the teaching methods of national curricula around the world.

It is important to engage the different political parties around the world in order to include ESD as a national agenda, rather than as a partisan issue. It will be meaningful to develop projects which bring together diverse groups of political parties from different countries to support policy making in the direction of ESD and, in particular, infusing food security issues into such education.

In order to influence ESD in schools and how it is taught, it will be effective to encourage accreditation institutions to mandate schools to address Agriculture and Food Security in a meaningful way as one of the accreditation criteria. This would encourage schools to more actively engage in ESD and a whole-institution approach.

FAO will integrate ESD into its skills development methodology – Junior Farmer Field and Life Schools (JFFLS)[3] – and will generate ESD related educational materials through its Youth and United Nations Global Alliance (YUNGA)[4]. It will also ensure that such resources are linked into other UN process such as the UNFCCC Article 6 and UN Alliance on Article 6 which has similar objectives as ESD.

Priority Action Area 2: Whole-institution approaches

Using a whole-institutions approach, integrating sustainability principles is needed in education and training settings. For example, sustainable agricultural practices and knowledge can be integrated since primary schools through the creation of school gardens. Schools can initiate various activities to create incomes for such activities.

The Workshop recommends that there be an effort for schools and universities to take the whole-institution approach such as the SEKEM schools. The GAP can further promote the whole-institution approaches by developing guidelines which schools from around the world can adapt in their effort to transform their whole institution to address ESD. One way to further promote ESD could be to take a whole-institution approach to existing farms and farmland as learning sites. Establishing communications and networks between schools and farms will not only facilitate organization of student visits to farms but also allow the farmers to engage the students in hands-on knowledge and practicums on agriculture.

Priority Action Area 3: Educators

Increasing the capacities of educators and trainers for effective delivery of ESD is needed. More education and learning is needed on this aspect at all levels – formal, informal, non-formal. The Regional Centers of Expertise (RCEs) around the world can be utilized to implement training programs and sessions for school staff. These training sessions should focus not only on school teachers but also on managers, administrators, and supervisors in order to reorient the entire school towards SD policies. This can include training on gardening and farming methods. Additionally, by using farms as training grounds for educators and by allowing educators to see Agricultural issues

[3] http://www.fao.org/rural-employment/en/
[4] http://yunga-youth.weebly.com/

first hand, this will help brining these concepts to life when conveying it to students in the classroom. By providing unconventional training for the teachers, they can become closer to the earth and the environment while internalizing the concepts that they will then convey to their students.

Priority Action Area 4: Youth

The youth must be a major target of the GAP, even when considering Food and Agriculture. It is recommended that small organic farms or gardens be established in conjunction with community centres that are cared for by the community's youth. This will have the benefit of teaching students on responsibility and hands-on practice with farming and growing in a sustainable, organic way. Furthermore, this will go a long way in allowing students to understand the hardships of poor farmers across the world and better appreciate programs that utilize the economies of love such as "Fair-Trade".

Priority Action Area 5: Local communities

In addition to policy support, it is critical to bring on board and connect with local communities in areas with major food and agricultural problems in order to garner grass-roots support for embedding ESD on Food and Agriculture in school curricula and practice. This will provide support and encouragement for the schools to transform themselves by adopting a model that incorporates ESD into its different practices.

Local communities and regional authorities can be encouraged to develop locally-based ESD embedded programmes engaging also farmers and producers' organizations in the capacity development process. The community must be engaged in order to bring out any concrete or sustainable results. Thus, it is recommended that accepting and purchasing sustainable and organic agricultural products be an initiative that is undertaken by and for the community. One way to achieve this is through the aforementioned small-scale farms made with the community centers. By engaging the local community (especially youths), the products derived can demonstrate that this kind of agriculture is a viable alternative and can encourage the community to begin working to ensure that their food comes from healthy, sustainable sources.

## Conclusion

The expected outcomes of these recommendations should be in the form of the following:

- Increased awareness of agricultural issues
- Increased capacity of both students and teachers
- Economics and environmental benefits due to enhanced teaching and agricultural methods
- Improve food security in different nations
- The transformation and development of schools and farms to become more holistically integrated
- Healthier youth and community from better access to healthier organic food
- More food from home gardens
- Improve good governance at the different schools

The overall outcome of the different world cafés and the entire workshop was very positive. The recommendations put forth have already begun to take hold and different projects and proposals for funding have already begun to be established for implementing pieces of the recommended actions. This workshop and the whole UNESCO event was an excellent step forward in addressing the individual issues related to ESD in and around the world.

## 6. ESD as a critical lever for advancing biodiversity policies and practices

*Co-coordinated by International Union for Conservation of Nature and Secretariat of the UN Convention on Biological Diversity*

### Workshop presenters

- *Daniella Tilbury,* IUCN Commission on Education and Communication (CEC) and University of Gloucestershire (co-organizer and Chair)
- *Neil Pratt,* Convention on Biological Diversity (CBD) Secretariat (co-organizer and panellist)
- *Kartikeya Sarabhai,* Centre for Environmental Education (CEE) (panel moderator)
- *Mita Goswami,* WWF India (panellist)
- *Shailaja Ravindranath,* Centre for Environmental Education (CEE) (panellist)
- *Tomonori Ugajin,* Ministry of Environment, Japan (panellist)
- *Jamie Agombar,* National Union of Student, UK, Leader of the Biodiversity and Student Projects (panellist)

### Workshop rapporteur

- *Ingrid Mulà,* COPERNICUS Alliance and RCE Penang at Universiti Sains Malaysia

### Key points from presentations

Recognizing the crucial importance of biodiversity for sustainable development, the workshop explored how ESD can play a catalytic role in achieving related aims, with regards biodiversity, of the Aichi Biodiversity Targets and the Sustainable Development Goals. It aimed to identify good practices and key challenges from different world regions. It considered tactics for the integration of education into biodiversity policy and practice and the reorientation of education systems and learning to respond to biodiversity challenges, aiming to generate concrete action proposals for advancing this in the next 5 years and beyond. The following key points summarise the workshop presentations:

1. **There has never been a more important international context to connect the ESD and biodiversity agendas.**
   - Biodiversity's crucial importance to sustainable development provides the basis of the internationally adopted Strategic Plan for Biodiversity 2011-2020. Public education and awareness (Target 1) are essential to the attainment of the Aichi Biodiversity Targets by 2020.
   - ESD will be foundational to the achievement of the sustainable development goals (SDG) that will be agreed in 2015. The ongoing work to define the SDGs gives strong recognition to education and biodiversity among potential goals and targets and it is important that this recognition is maintained in finalizing and implementing the Goals.
   - The GAP 2015-2020 will have an important role in supporting the attainment of the SDGs and the Aichi Biodiversity Targets.

2. **One important need, is to build understanding that biodiversity is not a problem to be solved but provides solutions to other challenges that the SDGs will address.** Biodiversity is foundational to many of the issues to be addressed by the SDGs, like water security, food security, health and wellbeing, climate change and disaster risk reduction. ESD approaches related to biodiversity should include focus on these important issues, and vice versa.

3. **In addition to including biodiversity concepts in the educational curriculum, there is a need for promoting whole-school or whole-institutional approaches,** so that institutions involve all key players in biodiversity issues; manage their school grounds or campuses taking into account biodiversity criteria; and involve the local community in biodiversity projects.

4. **Efforts to strengthen education for biodiversity should not be limited to formal education settings.** Experiential, social, community and outdoor learning should be further promoted. The media has a great potential role in shaping people's opinions on the sustainability agenda and would be an important partner to engage people in taking actions on biodiversity issues and challenges. However, media news on sustainable development issues tend to be quite negative, and more positive and inspiring stories are needed to engage people in this area.

### Activities

Following a brief overview by the organizers of the workshop and the issues, and an exercise to enable participants to interact, share reflections and meet one another, a moderated 5-member panel, convened in TV Chat Show style, provided brief interventions in response to questions posed by the moderator, capturing diversity of work currently being undertaken, drawing out lessons and recommendations for the GAP.

Based on key questions identified by each of the panellists, participants were then invited to join one of 5 discussion groups with a question to guide their conversations and a Chair appointed for each group.

The 5 discussion themes identified included local and indigenous knowledge and whole-school approaches.

### Recommendations and conclusions of the workshop:

The following recommendations were identified as important by workshop participants:

1. **Need for interdisciplinary approaches and inter-professional exchange**

   - Find appropriate ways of integrating biodiversity into all relevant disciplines.
   - Recognize biodiversity as a critical component of ecological health when developing an interdisciplinary approach.

2. **Recognize the validity of local and traditional knowledge**

   - Document and disseminate local and traditional good practices and knowledge. Find ways to translate the communication of traditions, often good sustainable practices, into modern terms.

3. **Embedding local sustainability themes in the educational curriculum**

   - All national curriculums should allocate significant time to local themes centered around sustainability issues. Relevant administrative and assessment structures must be realigned to this. Use nature and community as a learning ground – learning should be joyful.

4. **Mainstreaming ESD and biodiversity in education and sustainable development strategies**

   - Develop tailored educational strategies targeting different stakeholder groups. For example,

providing training to educators to help local communities to communicate effectively with politicians in order to gain equitable and sustainable development choices.

**5. Enabling adequate investment in biodiversity education for sustainable development**

- Strengthen advocacy to influence political choices on public investment, basing it on evidence and data, and emphasizing value of long-term investment. Consider innovative financing mechanisms, for example re-investment of revenue from ecosystem services into community education and health care etc.

## 7. Championing education as the foundation for climate resilient low emission societies

*Co-coordinated by National Council on Climate Change of the Dominican Republic and UN Alliance on Climate Change Education, Training and Public Awareness (Secretariat: UNFCCC)*

### Workshop presenters

- *Alla Metelitsa,* Team Leader, Capacity-building and Outreach unit, United Nations Alliance on Climate Change Education (UNFCCC) secretariat (Co-chair)
- *Jean Pierre Poncet,* France
- *Jamie Peters,* Co-Director, United Kingdom Youth Climate Coalition (UKYCC), United Kingdom United Kingdom
- *Daniel Abreu,* National Focal Point UN CC:Learn, National Council on Climate Change , Dominican Republic (Co-chair)

### Workshop coordinator

- *Moritz Weigel,* Associate Programme Officer, United Nations Alliance on Climate Change Education (UNFCCC)

### Workshop rapporteur

- *Edgar Gonzalez-Gaudiano,* Director, Institute for Educational Research; UNESCO Chair in Citizenship, Education

### Key points from presentations

- Building on the opening remarks by the United Nations Secretary-General, the UNFCCC secretariat highlighted the strong momentum of climate change education for sustainable development through the achievements of the DESD and the prominent inclusions of references to climate change education in draft UN Sustainable Development Goals (SDG) and in the elements for a draft negotiating text for a new climate change agreement under the UNFCCC.
- France committed to link the ESD process and the outcomes of the World Conference with the United Nations Climate Change Conference in Paris in December 2015.
- France said that raising awareness and educating on climate change as well as mobilizing young people are key to the success of the climate change negotiations in Paris.
- UKYCC stated that at the end of the DESD we are faced with greater environmental problems and crisis than we had at the start.
- UKYCC briefed participants that the Social PreCOP conference, held in Venezuela in November, had been a revolutionary process for engaging civil society and placing education at the heart of the transition to low greenhouse gases (GHG) emission economies. He stressed the need to move towards using climate change education as a means to instigate systemic change as well as behavioural changes.
- The Dominican Republic facilitated an ice-breaker exercise and outlined the objectives and mode of work of the workshop.

## Activities

Following the opening of the workshop, participants were invited to choose one of the following six sub-groups and relocate in the room to the respective group as necessary. Facilitated sub-group discussions started with a brief summary of outcomes of online discussions on the respective guiding question/s followed by focussed discussions on the development of recommendations based on the question/s.

- Sub-group 1A: How can we ensure that climate change education is integrated in a new intergovernmental agreement under the UNFCCC? How can we use the outcome of the Social Pre-COP?
- Sub-group1B: How to redesign the approach to climate change education to ensure that the proposed SDG 4 on education and SDG 13 on climate change are given adequate attention and sufficient resources at the national level? How can we ensure synergy between the UNFCCC and SDG processes as relates to the integration of climate change education?
- Sub-group 2A: In the absence of well-developed and tested approaches/methodologies to estimate GHG emissions reductions and adaptation benefits resulting from activities related to climate change education, how do we convince policy makers to introduce education as means for effective climate action?
- Sub-group 2B: What are effective approaches for ensuring bilateral and national budgets support for climate change education?
- Sub-group 3A: How can we develop climate change education policies at the primary, secondary, technical and higher education levels that promote low-emission and climate-resilient societies in the short-, mid- and long-term?
- Sub-group 3B: How to enforce the implementation of climate change education policies?

## Recommendations and conclusions of the workshop

Each sub-group presented the developed recommendations to the plenary. The recommendations can be summarized as follows:

- Redesign approaches to climate change education at different levels from teaching theoretical scientific information to participatory, locally-relevant and competency-based learning aiming at developing skills needed for transition to low-emission climate-resilient economies.
- Formal and non-formal climate change education programmes should highlight impacts of climate change on individuals and communities, target lifestyle and consumption changes and focus on transferring practical knowledge on coping with climate change impacts, including disaster preparedness.
- Develop a monitoring and evaluation framework for climate change education to assess its impacts and effectiveness.
- Foster multi-stakeholder processes that involve Ministries of education, environment, employment and other relevant Ministries as well as local governments, curriculum development and teacher training institutions, universities, civil society and other stakeholders to ensure broad support for the inclusion of climate change education in the national budget.
- Establish a national climate change education fund with access from youth and grass-roots organizations and other civil society groups.

- Identify good practices and success stories on climate change education to build the case for securing funding for their replication and scaling-up.
- Empower young people through means of non-formal and informal climate change education to act as catalysts for change at all levels of society.
- Build on successful examples of seed-funding for self-sustaining non-formal climate change education activities that expand in scope and numbers through voluntary initiatives.
- Communicate the significance of the UNFCCC process in a manner which is understandable for all groups of society, attributable to daily life, and does not create panic, but emphasizes opportunities.
- Incorporate a provision on commitments of developed countries to provide financial support to developing countries to design and implement climate change education programmes in a new climate change agreement under the UNFCCC.
- Include educators in country delegations for negotiations on Article 6 of the UNFCCC and bring consolidated inputs from the education sector to the UNFCCC process.
- Recognize the key role of youth activism and empowerment for the implementation of climate change education policies and activities.
- Develop effective monitoring and evaluation frameworks for climate change education to assess impacts and effectiveness.
- Education and communication strategies to highlight positive and negative synergies associated with mitigation and adaptation policies and their links to other environmental issues.
- Countries most vulnerable to the adverse effects of climate change to emphasize adaptation approaches that foster capacity-building and social resilience as part of their climate change education activities.
- Developed countries and affluent sector in developing countries should emphasize mitigation approaches towards orienting and changing patterns of production and consumption.
- Stress a linkage between climate change and water, agriculture and health in education activities and under the UNFCCC.

## 8. Education and building disaster resilient and sustainable communities

*Co-coordinated by Brazilian Center for Monitoring and Alerts for Natural Disasters, Ministry of Science, Technology and Innovation, Brazil, and Global Alliance for DRR Knowledge and Resilience in the Education Sector (represented by UNISDR)*

### Workshop presenters

- *Regina Célia Dos Santos Alvalá,* Director-Coordinator of Inter-Institutional Relations, Ministry of Science, Technology and Innovation; Director, Brazilian Centre for Monitoring and Early Warning of Natural Disasters (CEMADEN), Brazil
- *Somboun Masouvanh,* Lao National Commission for UNESCO, Laos
- *Bun Peuvchenda,* Asia Region Safe School Program Coordinator, Cambodia
- *Christine M. Kenney,* Senior Research Fellow, Joint Centre for Disaster Research, Massey University, New Zealand

### Workshop chair/facilitator

- *Jacobo Ocharan,* Head of DRR & Climate Change Adaptation, Plan International, UK

### Workshop rapporteur

- *Overson Shumba,* Dean, School of Mathematics and Natural Sciences, The Copperbelt University, Zambia

### Key points from presentations

Four speakers made presentations on the good practices of disaster risk reduction (DRR) education.

Regina Célia Dos Santos Alvalá (Brazil)npointed out a need to develop and transfer knowledge on disasters to foster a culture of safety, given that future generations will live with cc-related recurrent and more intense disasters, which could lead to loss of lives, livelihoods, and biodiversity. Women and children are more vulnerable, yet they are also critical to developing disaster preparedness of families and communities because of their roles in managing resources, securing livelihoods and providing safety information. Integration of DRR education is to foster education for sustainable societies.

Somboun Masouvanh (Laos) highlighted the need to (1) recognise local 'hazards' and how they become 'disasters' in local communities, (2) develop decentralized national disaster management plans (all the way down to district level), (3) address ESD in DRR education though existing school networks such as ASPnet, (4) integrate and mainstream DRR education through DRR education modules supplementary to the curriculum, and (5) sensitize policymakers, teacher educators and teachers.

Bun Peuvchenda (Cambodia) spoke about the importance of planning, building, and adapting school infrastructure to be disaster resilient and introduced a comprehensive school safety programme which addresses the three pillars of (1) learning facilities, (2) school disaster management, and (3) risk reduction and resilience education.

Christine Kenney (New Zealand) called for using local community networks and their knowledge and value systems to mobilise for disaster preparedness and recovery, highlighting the importance of participatory multi-stakeholder decision making and planning and opportunities for intergenerational learning. She also noted the need to address underlying risk factors including

poverty and social deprivation and the critical role of leadership in disaster management planning and implementation.

## Activities

Three groups were formed and developed recommendations for integrating DRR education into formal, non-formal and informal education.

Group 1 called for further strengthening the following:

- Targeted funding for physical structures
- School design adapted for use as shelters
- Multi-stakeholder collaboration in policy formulation at national and local levels
- Committed school and community leadership
- DRR education curricula
- Teacher training on DRR education
- Multi-method teaching and learning approaches
- Dedicated budgets and school fees for DRR

Group 2 made the following recommendations, some of them overlapping with those made by Group 1.

- Incorporate sustainability and DRR in school management plans, curriculum and pedagogy
- Promote intergenerational and peer learning at school and community levels
- Utilize ICT to share knowledge and information
- Apply student research to real-life DRR

Group 3 underscored the importance of:

- Generating actions among youths as drivers for community resilience
- Knowledge sharing for all generations
- Youth as drivers leading
    - Disaster drills, risk mapping and analysis
    - Educating school children
- Including knowledge of
    - Natural and man-made hazards and risk reduction
    - Data gathering and analysis
    - Post disaster care and actions

## Recommendations and conclusions of the workshop

The workshop produced fove major recommendations corresponding to the five Prioriy Action Areas of the GAO.

### 1) Mainstreaming ESD in DRRE

Systemic mainstreaming of ESD principles and values through DRRE is recommended for formal learning in schools and for non-formal learning in communities working together whereby (i) safe learning facilities are planned, constructed or existing ones adapted, (ii) school disaster management plans are in place, and (iii) risk reduction and resilience education is in the curriculum.

### 2) Whole-institution approaches for DRREE

For DRR, whole-institution approaches entail whole-school and whole-community approaches to integrate sustainability and DRR in school management plans and in curriculum and pedagogy. The

approach will provide opportunities for multi-stakeholder engagement, intergenerational and peer learning and for bringing in DRR-relevant community knowledge and value systems in DRRE.

**3) Increasing the capacities of educators and trainers for effective delivery of ESD in DRRE**

Effective and structured learning opportunities required for educators and trainers in formal and non-formal settings to acquire knowledge and skills for (i) risk mapping, for risk reduction, and for post disaster care and actions in schools and communities, (ii) for using multi-method approaches to deliver DRRE, and for analyzing underlying risks including poverty, inequality, and other social deprivation.

**4) Generating DRR actions among youth**

In DRRE, youths can be effective drivers for community resilience taking leading roles in disaster drills, risk mapping and analysis, and delivering DRRE to children.

**5) Creating communities for DRRE**

Create awareness and encourage local communities and municipal authorities to develop community for DRR at the same time ensuring (i) effective leadership and participatory governance in local communities, and (ii) ensuring the active involvement of women (and children).

## 9. Education for Sustainable Consumption and Production – Empowering and mobilizing youth

*Co-coordinated by the United Nations Environment Programme and Makhzoumi Foundation, Lebanon*

### Workshop presenters

- *May Makhzoumi, Makhzoumi Foundation*
- *Elie Michael*, Faculty of Education, Lebanese University

### Key points from presentations

Mrs. May Makhzoumi: The Makhzoumi Foundation was established, in Lebanon in 1997, out of a strong desire to help empower fellow citizens to achieve self -dependence and improved career prospects and it has been growing ever since.

The Foundation has implemented many environmental activities and trainings since its establishment on recycling, energy efficiency, renewable energy, environmentally friendly pest control and beekeeping. Over the past years, the following ESC related projects were and some are still being implemented by the Foundation:

1- (2010) YOUTH X CHANGE IN THE MEDITERRANEAN

2- (2011) UNESCO ESD and "YOUTH X CHANGE IN THE MEDITERRANEAN"

3- (2011) "Youth …The Ultimate Player in Sustainable production and consumption"

4- (2013-2014) "Green Demonstration Room"

5- (2014-2015) " Lebanese Youth as Messengers for Sustainability "

Dr. Elie Michael**:** Youth X Change in the Mediterranean project

This project aimed to transfer the know-how and the expertise developed so far to the Arabic countries, calling for a new consumption ethic of all youth from both sides of the Mediterranean

Rationality of YOUTH X CHANGE

Sustainable consumption is consuming not only less, but differently, more efficiently, while keeping an elevated quality of life»

We need to show youth that they have an immense power to change things by modifying simple everyday choices…

Every consumer act causes an impact (positive or negative) on the economy, social relations, nature and on the consumer him/herself. The impact of consumer choices determines the characteristics of the world in which we live.

***The outcomes***

-The printed guide:

-The train-the-trainer seminars and media events in the six partner countries to train educators on how to integrate the YXC kit in their teaching.

-Guidelines for educators: Available online at www.medies.net

***Design – Project Methodology***

-Ownership & commitment:

-Homogeneity and diversity

-Evolution

-Promotion and visibility

***Results***

-The theme of sustainable consumption is very appealing to young people teachers and the media, as they can relate to it in their daily lives, through their decisions as consumers, parents, teachers, etc.

-Two national partners repeated the events, on their own expenses (Jordan and Lebanon).

-Capacity building: By cooperating with the trainers of the seminars, the staff of partners was themselves trained on how to perform such trainings.

## Recommendations and conclusions of the workshop

The key recommendations on ESC with regards to the implementation of the Global Action Programme on ESD is summarised below:

1) Utilize technology to enhance access to information and awareness about products life cycle in young people to change behaviours and create awareness. (Priority Action Area 4)
2) Multi-stakeholder, multidisciplinary and whole-institution approach towards ESC. (All Priority Action Areas)
3) ESC should prominently feature in the higher education research agenda, which till now was focused on knowledge and skill development for employment. (Priority Action Area 1)
4) Creation of role models to inspire youth to consume and live sustainably. (Priority Action Area 4)
5) ESC should be 'integrated' in the existing national education strategy and not introduced as a new topic as there already exists a bridge between ESD and ESC. (Priority Action Area 1)
6) Pilot testing of best ESC approaches before scaling up and introducing it to a wider audience. (Priority Action Area 1)
7) ESC, like ESD, should emphasize on teacher training in both formal and non-formal settings. (Priority Action Area 3)
8) Fostering cooperation between competing agendas of the different stakeholders involved in the ESC. (Priority Action Area 1)
9) Creation of a 'parallel media' that provides information on sustainable products and practices. (Priority Action Area 1)
10) Provide alternative lifestyle options backed by strong policy instruments and media campaigns. (Priority Action Area 1)
11) Institutions should impart right values and attitudes through each subject, to transform an ordinary youth into a 'holistic individual'. (Priority Action Area 2)
12) Striving for seamless integration between SCP, ESD and ESC. (Priority Action Area 1)
13) Linking ESC to national priorities and vice versa through creation of a National Task Force or an Inter-agency committee. (Priority Action Area 1)
14) Understanding the aspects of sustainable consumption and lifestyles in the local context to identify priorities and a road map for the future. (Priority Action Area 1)
15) Influencing youth through educating families and especially parents. (Priority Action Area 4)

## 10. Green economies: the role ESD has to play post-2014

*Co-coordinated by Asian Development Bank and University of South Africa*

### Workshop speakers

- *Sanjit 'Bunker' Roy, Founder, Barefoot College, India*
- *Mary Ann Lucille L. Sering,* Secretary, Climate Change Commission, Republic of the Philippines

### Workshop Chairs/Facilitators

- *Godwell Nhamo, Professor, Exxaro Chair in Business and Climate Change - University of South Africa, South Africa*
- *Shanti Jagannathan*, Senior Education Specialist, Asian Development Bank, Philippines

### Workshop rapporteur

- *Gisele Mankamte Yitamben,* President, ASAFE (Association pour le Soutien et l'Appui à la Femme Entreprenneur)

In an environment where poverty is endemic, world leaders are eager to minimise risks associated with green economy and enhance opportunities it brings. At the centre of green economy is a need to depart from the business as usual growth path that is resource intensive, leading to the depletion of natural and other resources. What risks and opportunities does the green economy bring? How do the poverty and jobs narratives fit? What is the place of education in addressing green economy issues?

The workshop focused on discourses of green economy and its potential and evidence in creating jobs and movement towards poverty eradication in the context of and quest for sustainable development. It concluded that ESD needs to foster an informed and educated global citizenry that engages green economy to improve human wellbeing, knowing well that the one-size-fits-all will not work.

## 11. Learning cities: capacity development in the new Urban Agenda

*Co-coordinated by UN HABITAT and Ministry of Environment, Mexico City*

### Workshop Coordinator

- *Lilia Blades,* Human Settlements Officer, UN-Habitat

### Chair/Facilitator

- *Tanya Müller García,* Mexico City Minister of Environment, Mexico City, Ministry of Environment, Mexico
- *Patricia Narvaez-Garcia,* Mexico City Ministry of Environment, Mexico City, Ministry of Environment, Mexico

### Workshop rapporteur

- *Harold Glasser,* Professor & Executive Director for Campus Sustainability, Michigan State University, United States of America

**"As the world continues to rapidly urbanize, urban actors need the skills to deal with inequality, crime, environmental degradation and the new challenges of urbanization."**

Cities are becoming prominent players in the global arena, local governments have emerged as key institutional drivers of city/regional growth and cities are centers of change and innovation. Urban areas are increasingly connected and cities are merging into new regional spatial configurations, which act as nodes where global and regional flows of people, capital, goods and information combine and commingle, resulting in faster economic and demographic growth than that of the countries where they are located.

As the world continues to rapidly urbanize, the need for capacities increase and a new generation of urban practitioners require a broader and more inter-disciplinary skill set in order to address the multifarious problems and complexities that an urban future will hold.

Over the past several years it has become clear that capacity building is central to the quest for sustainable development. At the same time, there is an increased recognition of the need to link research and practice, and develop a consistent and common data infrastructure to handle and apply information about cities. There is a gap between research and policy and also, lack of reliable comparable data as an input into research. The dissemination of research results for sustainable urban development does not reach decision-making and often urban policies lack the adequate mechanism to monitor policy outcomes.

### Workshop Focus

The world is discussing the adoption of the New Urban Agenda (NUA) for 2015/16. The NUA aims at integrating the social, economic and environmental dimensions of sustainability. This will only be possible if relevant and timely information, knowledge, tools and skills support the present generation to meet their needs without sacrificing the ability of future generations to meet their own.

The workshop addressed the question "How can cities learn?" through the introduction of the New Urban Agenda and case studies of urban learning practices. Thereafter a live discussion was conducted among urban and education experts to generate proposals that encourage cities and local authorities to develop community-based ESD programmes and analyse how local and international policies should reflect ESD values.

**Agenda**

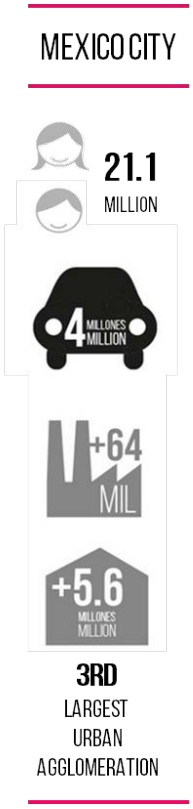
| | | |
|---|---|---|
| 15:15 – 15:20 | **Welcome and overview of the workshop objectives** | UN-Habitat/Ministry of Environment, Mexico |
| 15:20 – 15:40 | **Introduction to Habitat III**<br>20 years after Habitat II and the evolution of Capacity Development for Sustainable Urbanization | UN-Habitat |
| 15:40 – 16:00 | **Case studies on innovative learning and its relevance in policy development**<br>- Strengthening of training capabilities for better local governance and urban Development;<br>- Habitat UNI;<br>- Civic education and social cohesion. | UN-Habitat<br>Ministry of Environment, Mexico |
| 16:00 – 17:15 | **Working groups**<br>Key questions<br>1. What are the knowledge and capacity gaps in terms of implementation of urban policies?<br>2. What are the information and data required to measure the achievement of sustainable cities?<br>3. What indicators are developed to enhance our knowledge about sustainable cities?<br>4. How can cities and local governments ensure that policy, regulatory and operational frameworks support the education for sustainable urban development? | Moderators:<br>Lilia Blades (UN-Habitat)<br>Patricia Narváez (Environment Secretariat, Mexico) |
| 17:15 – 17:30 | **Wrap up and conclusions** | Moderators |

**Key points from presentations**

Lilia Blades, from the Capacity Development Unit at UN-Habitat, highlighted the importance of urbanization in the path towards sustainable development and introduced the New Urban Agenda as the main policy mechanism to realize pressing urban priorities. She described the possible role of

future urban practitioners in realizing a more sustainable urban environment and introduced the audience on innovative training practices.
Ms. Ritu Thakur from ICLEI South Asia shared the experiences and lessons learned from ICLEI's efforts to build cities' capacities for better planning and decision making through e-learning modules, study visits, documentation of best-practices, train the trainer workshops, etc.
Patricia Narvaez from the Environment Secretariat of Mexico City followed with a discussion of Mexico City's Urban Environmental Education Programme, which first focused on raising awareness (communication) and now has a goal to include ESD objectives into city government practice and policies.

**Case Study: Mexico City**




Mexico City, through its Ministry of Environment has implemented an Educational Environmental Program aimed to raise awareness and consciousness through educational campaigns, workshops and cultural activities. The Barter Market is an example of a successful environmental education program which promotes recycling and rational consumption culture by interchanging recyclable waste for organic, locally produced vegetables.
However, environmental educational programs in cities must integrate capacity building for a lasting policy of behavior change. Communication is not the same as education, and creating awareness is only one part of the effort. Education for sustainable development must provide citizens the tools and capacity to actively participate in the construction of a sustainable city.

"Environment educational programs in cities must integrate capacity building for a lasting policy of behavior change"

Aware of the importance of integrating education in local environmental policy, Mexico City launched in 2014 the new Climate Action Program 2014-2020, which aims to reduce 10 million Tons $CO_2$ Eq and reduce the vulnerability of 5 million inhabitants exposed to the effects of climate change. This program includes as one of the strategic guidelines Education and Communication with actions to empower the citizens and build capacity to mitigate and adapt to climate change. *A new living, learning laboratory has been created! The goal is to include ESD objectives into city government practice and policies.*
The resource persons, Bianca Bilgram (German Commission for UNESCO) and Jürgen Forkel-Schubert (ESD head, German Ministry of Urban Development and Environment), were introduced and they briefly discussed a new initiative, created by the German Commission for UNESCO, to create awards for cities demonstrating sustainability leadership (21 to date).

**Activities**

| | KEY QUESTIONS |
|---|---|
| 1 | What are the knowledge gaps and capacity gaps in terms of implementation of urban policies? |
| 2 | What is the information and data is required to measure the achievement of ESD? |
| 3 | What indicators can be developed to enhance our knowledge about sustainable cities? |
| 4 | How can cities and local governments ensure that policy, regulatory and operational frameworks support the education for sustainable urban development? |

**Building proposals**

In order to guide the discussion and encourage a live discussion with the urban and education experts, four questions were prepared by the workshop coordinators.
The group was divided into groups of 10 people; each

group was given 35 minutes to discuss one of the key questions. The group chose a rapporteur to write down the proposals built in the discussion; the conclusions were presented to the whole group.

## Conclusions

**"A real change of behavior will not be realized without a proper combination of citizen's awareness, motivation and skills"**

The groups were highly engaged in their discussions and they generated important insights including:

(1) The importance of distinguishing between knowledge and capacity building gaps. First of all, authorities need to understand sustainable policies and have the minimum skills to guide them. However, mechanisms to ensure implementation need to be built and should include: adequate participatory processes and understanding of people's expectations. Local people need to be aware, participate and be able to evaluate implementing policies.

(2) The significance of creating policies to build capacity for and support robust community engagement. Governments have a key role to play embracing sustainable development policies, and also understanding people's aspirations. A real change of behavior will not be realized without a proper combination of citizen's awareness, motivation and skills. .

(3) The need for policies to reflect community values, which include equity, accountability and transparency. That includes a system of indicators and civic education that reflects those values and can be embedded in existing policy.

(4) The importance of creating networks of cities to facilitate knowledge transfer, collaboration and advocacy for sustainable urban development.