

**WORLD FEDERATION OF ENGINEERING ORGANIZATIONS (WFEO)  
COMMITTEE ON ENGINEERING AND THE ENVIRONMENT (CEE)**

**Progress Report  
April to November 2014**

**Background**

Engineers Canada continues to host and chair the Committee until the December 2015 General Assembly in Kyoto, Japan. Mr. Darrel Danyluk, FEC P.Eng., a Past President of Engineers Canada and of APEGA serves as Chair. He is supported by a secretariat from Engineers Canada that includes Mr. David Lapp, P.Eng., Practice Lead – Engineering and Public Policy with administrative support provided by Ms. Lynn Tremblay, Executive Assistant, Regulatory Affairs.

**WFEO Meetings**

**Executive Board Meetings – April 7-11, 2014 Paris**

The Chair and Secretary participated in the following meetings:

Date	Meeting	Attended
April 8	Standing Committee Chairs	D. Danyluk (Chair), D. Lapp (Secretary)
April 9	Extended Executive Board	D. Danyluk, D. Lapp
April 10	WFEO UN Relations Committee (WURC)	D. Danyluk (Member), D. Lapp (Member)
	UNESCO Workshop	D. Danyluk, D. Lapp

D. Lapp prepared and distributed summary notes and action items for the STC Chairs and WURC meetings.

**United Nations Meetings and Workshops**

The Committee maintains an active profile with the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations Environment Program (UNEP) and working with the WFEO UN Relations Committee (WURC). The following meetings and activities were completed or in progress during the reporting period.

**UNFCCC Bonn Climate Talks (SBSTA and SBI 40) – Bonn, Germany – June 4-15, 2014**

Chair D. Danyluk and Secretary D. Lapp attended this meeting. Updates on the status of negotiations on and the work of standing committees were witnessed. Activities included:

- Attending numerous side events and workshops that were most relevant to CEE’s work
- Meetings and conversations with country delegates for potential capacity-building and project opportunities

- D. Danyluk was a speaker at a joint side event hosted by the WMO in partnership with the WFEO-CEE and the Global Water Platform
- Met with German International Development Agency (GIZ) to plan a 2015 workshop on PIEVC in Latin America
- Operated a WFEO and WFEO-CEE information booth for four days during the second week of the meeting
- Prepared a trip report and list of contacts

**UNFCCC Conference of the Parties Meeting No. 20 (COP-20) – Lima, Peru - December 1-12, 2014**

A delegation from the College Engineers of Peru and Secretary D. Lapp have been registered to attend the meeting on behalf of the Committee.

Background documentation, priorities for participation in workshops and side events as well as reporting expectations were prepared for delegates. Meetings with GIZ, the WMO and the Nairobi Work Program Focal Point Forum are planned.

**World Meteorological Organization (WMO) - WFEO Memorandum of Understanding**

The Memorandum of Understanding between the Federation and WMO was signed in November 2012. It focuses collaboration on projects of mutual interest that support the implementation and effective operation of the WMO Global Framework for Climate Services to meet the climate data needs of engineers.

WFEO’s engagement with WMO increased significantly in this period. Invitations to WMO meetings are received at an increasing frequency. The CEE Chair and WFEO Secretariat secured volunteers to observe several regional meetings to witness the discussions and add the engineering perspective. The aim is to find opportunities to communicate the climate data needs of engineers to WMO and its members. Summary reports on these meetings and events are available.

Date/Location	Meeting/Activity	Attended
April 10-15 Antalaya, Turkey	16 <sup>th</sup> Session – WMO Commission for Agricultural Meteorology	F. Thabet (Tunisia) Engineering and Agriculture Theme Leader
June 6 Bonn, Germany	UNFCCC Joint Side Event – WMO (host)with WFEO and Global Water Program: “Helping Countries Deal with Climate Adaptation”	D. Danyluk (Speaker) D. Lapp
September 15-20 Asuncion, Paraguay	WMO Sixteenth Session of Regional Association III	S. Fernandez (Argentina)
November 10-14 Geneva, Switzerland	2 <sup>nd</sup> WMO Intergovernmental Board on Climate Services	D. Favrat (Switzerland)

**WFEO United Nations Relations Committee (WURC)**

The Chair and Secretary continued to serve as members of the United Nations Relations Committee (WURC). Both participated in a face-to-face meeting held April 10 in Paris.

A teleconference was held on October 28 to prepare the agenda for the next face-to-face meeting on December 8 in Paris. The final agenda and meeting materials were prepared by the CEE Secretariat and distributed to all members in mid-November.

### **WFEO-CEE Strategic Plan – 2011-2015**

The strategic plan has five themes, each led by a Federation member country with a volunteer chair. The themes and lead countries include:

1. Engineering and Climate Change Adaptation – Canada
2. Climate Change Mitigation and Engineering – United Kingdom
3. Engineering and Agriculture – Tunisia
4. Engineering and Sustainable Mining – United States
5. Code of Practice on Sustainable Development and Environmental Stewardship – Canada

#### **Theme 1 - Engineering and Climate Change Adaptation**

The work under this theme focuses on the relationship of a changing climate and existing infrastructures and to implement tools for engineers to use in assessing impacts from an engineering perspective. Knowledge development and capacity building are the two key strategies being used, with a current focus on Latin and South American countries.

Activities in the reporting period included:

- Attending the UNFCCC Bonn Climate Talks in June 2014 and participation in a joint side event on adaptation with WMO
- Ongoing negotiations with WMO for a climate change expert meeting or workshop, to be funded by WMO , for the first or second quarter of 2015
- Follow-up discussions with UNDP on projects in Africa and Caribbean
- Follow-up discussion with Co-Chair of UNFCCC on improving the linkage between the engineering community and the UNFCCC
- Discussion with the UNFCCC Secretariat to propose a presentation of the engineering perspective at the Nairobi Work Program Focal Point Forum being held at COP-20 in Lima, Peru in December.
- Negotiation of a renewal of a license agreement with the Colegio of Engineers and Architects of Costa Rica (CFIA) for use of the PIEVC Engineering Protocol
- A two day workshop on the application of the PIEVC Protocol for climate risk assessment was held on September 25-26 in Victoria, BC Canada in partnership with the BC Ministry of Transportation and Infrastructure. Five engineers from the Ghana Ministry of Roads and Highways attended. Several members of the delegation had attended the PIEVC workshop at WES 2013 in Singapore as part of the 2013 WFEO General Assembly.
- A half day workshop on the PIEVC Protocol and its international application in Costa Rica and Honduras was delivered on November 13 in San Jose Costa Rica. It was organized under the auspices of the WFEO-CEE as a partnership between Engineers Canada, the Colegio Federadode

Ingenieros y de Arquitectos de Costa Rica (CFIA) and the Honduras CICH as part of a three day conference organized by the Costa Rica national water agency AyA and El Foro Centroamericano y Rep. Dominicana de Agua Potable y Saneamiento (FOCARD-APS).

- A brainstorming session will be held at the December CEE meeting to determine the value and feasibility of creating a model guide for climate change adaptation for infrastructure engineers

## **Theme 2 – Climate Change Mitigation and Engineering**

This theme focuses on the application of existing technologies and engineering practices towards the mitigation of climate change through Greenhouse Gas (GHG) reduction. The Institute of Civil Engineers and Institute for Mechanical Engineers Co-Chair this theme area through a cooperative understanding. The aim is to promote the key role of civil engineering and clean technologies efforts to mitigate climate change and thus reduce GHG emissions.

Activities in the reporting period included:

- Ongoing efforts to promote national assessments on opportunities to reduce GHG emissions on a national basis using the country reports from 2009 presented at the UNFCCC COP-15 in Copenhagen.
- Discussions on current and future leadership of this theme were held in October as part of the visit to the ICE. A verbal update will be provided in Paris.

## **Theme 3 – Engineering and Agriculture**

This theme is focusing on issues related to elements of the agricultural supply chain in selected regions of the world (focusing on Africa) that can benefit from engineering.

Activities in the reporting period included:

- Efforts continue to secure funding and logistical support for a regional workshop on engineering and food security and water in a location in Africa. The Theme leader is working with the Federation of African Engineering Organizations on funding.
- Technical support has been secured from the African Development Bank and potential speakers that would be organized by the UN Food and Agriculture Organization
- Continued efforts to recruit members for the engineering and agriculture task group. Assistance to secure African-based members is being provided by the Federation of African Engineering Organizations working with theme leader F. Thabet.

## **Theme 4 – Engineering and Sustainable Mining**

The Society for Mining, Metallurgy and Exploration, part of the American Association of Engineering Societies, leads this theme and has a substantial working group that has wide geographical and regional representation. The group is executing a four year action plan with five themes:

1. Environmentally Sound Engineering Practices and Technology
2. Best Practices in Social Sustainability and Responsibility
3. Best Practices in Eco-Efficient Use of Resources
4. Engineering Solutions to Reuse, Recycle and Repurpose Minerals
5. Risk Analysis, Mitigation, and Management Techniques

The action plan focuses on capacity-building for mineral producers, particularly the smaller ones which have less experience with sustainability practices and need to be more locally and culturally sensitive.

Activities completed or underway in the reporting period included:

- A successful workshop session on a framework for a capacity-building seminar was led by the Task Group chair at the annual meeting of the Society of Mining Professors (SOMP) held in Johannesburg, South Africa in the last week of June 2014. The national member from South Africa provided local support for the workshop.
- The Task Group convened a half day workshop on October 20 in Vung Tau City, Vietnam on capacity building and sustainable development. It was targeted at small and medium sized mining operations and stakeholder communities in Southeast Asia. The goal of the workshop was to provide mine operators, non-governmental organizations, local and regional government officials, regulators and other industry stakeholders a common platform for exploring critical issues around mining, sustainable development, and water resources in South East Asia. Assistance was provided by the CEE Chair and WFEO HQ to secure speakers and by WFEO national members in SE Asia for publicity.

### **Theme 5 – WFEO Model Code of Practice on Sustainable Development and Environmental Stewardship for Engineers**

The Model Code of Practice is published on the WFEO website and distributed electronically to all national and international members. The one-page summary of the ten principles and Interpretive Guide are available in English, Spanish and Arabic. The one-page summary is available in French.

Target audiences include national members of WFEO and their engineers as well as United Nations agencies.

A speaker presentation for the Code was completed in March 2014. It is available on the website in English and includes speaking notes to help deliver the presentation.

Activities completed or underway in the reporting period included:

- Developed a modified version of the 10 principles to communicate to external audiences such as the United Nations on what they can expect from engineers in their approach to the environment and sustainable development. This version complements the Model Code which is written and targeted at engineers.
- Translation into Chinese was completed in November and posted on the WFEO website. Many thanks to our SE Asia Regional Representative Engineer SC Tan, his colleagues and his company CH2MHill for their voluntary contributions.
- Engineers Canada is preparing a revision to its national guide using the WFEO Model Code of Practice as the starting draft to prepare a version appropriate for the Canadian engineering profession
- Completing negotiations with a willing national member to translate of the Code into French for availability by the end of 2014

- Completing negotiations with a willing national member to translate the presentation into French and Spanish by the end of 2014
- Delivery of the presentation via webinar to train speakers by the end of the year

### **Succession Planning**

The strategic plan includes finding a successor to host and chair the Committee when Engineers Canada term ends in December 2015.

The Institute for Civil Engineers United Kingdom has indicated they will become the host subject to the approval of WFEO. Face-to-face meetings were held with staff and volunteers at ICE in London in early October to advise on their proposal and plan for a successful transition to the end of next year.

The transition includes preparation of a strategic plan for 2016-2019. Each sub-theme will be reviewed to determine the value and the willingness of the theme lead to continue post 2015.

### **WFEO-CEE Newsletter**

The newsletter communicates the Committee's work within WFEO and the international community.

Newsletter #11 was published in April 2014. It focused on the Future Climate - Engineering Solutions Project that is co-lead by ICE and IMechE. Articles included a national climate plan for Denmark to reduce GHG emissions by 90% by 2050 while improving the country's self-sufficiency and economy.

The next newsletter will be published in April 2015.

### **WFEO-CEE Website**

Updates to the CEE's portion of the website were provided on a periodic basis. Many of these were related to the WFEO Model Code of Practice.

Prepared by:  
WFEO-CEE Secretariat

Approved by:  
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November 12, 2014