

Participation of CSCE Members in a China Water Resources/Ecology Workshop in May 2014

In November 2012, a meeting was arranged by Jeanne Huang [CSCE International Affairs Committee (IAC) Special Envoy to China] and Todd Chan (CSCE VP- International) for a CSCE delegation headed by Jim Kells (CSCE President) with four senior executives of the China Association for International Exchange of Personnel (CAIEP) to discuss opportunities for the CSCE to undertake technical exchanges with Chinese counterparts. At the meeting, it was brought to our attention that the State Administration of Foreign Experts Affairs (SAFEA) in China would organize the 10th Sino-American Technology and Engineering Conference (SATEC) in May 2014 in China. After further discussions with CAIEP, an important unit of SAFEA, in the spring of 2013, the CSCE was officially invited by SAFEA to participate for the first time in the 10th SATEC in China in May 2014.

Over the past 20 years, SAFEA has sponsored a biennial set of workshops on various topics in SATEC. Each workshop has a Chinese and a foreign contingent. In the past nine events, the foreign contingents in all workshops have been mostly American. The CSCE team, through the coordinating efforts of Todd Chan and Jeanne Huang (College of Engineering, Tianjin University), worked closely with the Chinese Hydraulic Engineering Society (CHES) with which CSCE has had long term collaboration, in organizing the water workshop that was held in Suzhou from May 25 - 27, 2014

The theme of the workshop in which CSCE was involved was water resources/ecology and the venue was Suzhou, a city of 10 million, near the mouth of the Yangtze River. The workshop was among about a dozen workshops in the SATEC event. Todd Chan was delegated to lead the CSCE team. Last year CSCE members were invited to submit extended abstracts on topics related to the theme. Bruce Anderson, Ron Droste, Christos Katopodis, Ed McBean, Slobodan Simonovic, Van-Thanh-Van Nguyen, and Fayi Zhou were selected as CSCE members based on their (anonymous) abstract submissions and peer review by a third-party committee. Jeanne Huang was also a participant on the CSCE team. In addition, the CSCE team was complemented with Christopher Benosky from AECOM in New York and Liong Shie-Yui from the Tropical Marine Science Institute, National University of Singapore. The Chinese contingent consisted of 24 experts from China including participants from CHES,

universities, and water resources government agencies at the local, provincial and national levels.

Suzhou and Its Water Issues

Suzhou is about a two-hour drive from Shanghai. It is a typical large city in China, which has been enjoying rapid economic development in the region which is responsible for about 18% of the economic output of China. Construction cranes building 30-50 story high rise apartment complexes proliferate throughout the city not to mention accompanying industrial growth. Being near the mouth of the Yangtze and near the confluence of a few rivers, there is no shortage of water in the region which, of course, is not necessarily typical of all population centers in China. (Water abundance in the south contrasted with shortages in the north is responsible for the largest water diversion project in progress in the world.) But at the same time Suzhou is suffering from major water problems as a result of rapid urbanization and industrialization and climate change. The city is facing many challenges in addressing these problems. The main objectives of the workshop were to evaluate the current water ecology situation in China, taking Suzhou as an example, and to propose recommendations to address water ecology issues now and in the future.

The first day of the workshop consisted of site visits. The entire team visited Taihu lake, which is the third largest freshwater body in China, 2300 km² in area although it is relatively shallow, bordering Suzhou and extending into the surrounding province. The lake achieved notoriety in 2007 with a massive blue-green algae (toxic cyanobacteria) bloom that overwhelmed water treatment plants and shutdown some water supplies for one week. Dredging and removing sediments, reduction of pollution sources, flushing the lake with cleaner water from the Yangtze River, and harvesting algae are major efforts that have been instituted to prevent future episodes of this magnitude in this lake but the northern part of the lake still has highly visible degradation.

Topography flattens in the vicinity of Suzhou as the waters begin their meander to the sea. There are numerous canals through the city that comprise a significant part of the passageways for the large volumes of water to be transported eastward to the sea but nonetheless water in the majority of canals moves slowly. Wastewater discharges into the canals coupled with conditions that are almost stagnant are significant challenges. Pollution

prevention through treatment and elimination of sources are some obvious measures implemented to reduce water degradation along with building some weirs in waterways to cause a modicum of turbulent overflows and providing pumping for some circulation and aeration. Despite these combative measures, much work remains to be done.

On the second day all members of the CSCE team and some members of the Chinese team made presentations on various remedial measures for pollution problems and other significant water resources issues such as climate change, flooding and river restoration. There were discussion periods in both the morning and afternoon sessions.

Results from the Workshop

Preliminary findings and recommendations for short- and long term actions had been advanced and refined by both sides prior to the workshop. The third day was devoted to finalizing the report to be presented to the SATEC executive. The report directly focused on the water problems and potential measures to mitigate them. The report from our workshop was favorably received by SATEC. Indications are that CSCE will be invited to participate in the next SATEC event in two years.

One of the important recommendations was to establish international exchanges and cooperation to work on solutions to these problems some of which are common to both countries. In particular, it was suggested that China and Canada establish a joint research institute on water ecology technologies when conditions allow. IAC will continue to work on making this objective a reality through the contacts made in this workshop.

On May 30, 2014, some of the key organizers of the 2014 SATEC event were invited to meet with the Vice-Premier of China, Mr. Ma Kai, and several ministers for about an hour at the Great Hall of the People in Beijing. Out of about 20 international SATEC participants, three people were asked to make presentations about the recommendations from the workshops. Todd Chan, representing CSCE, was one of the three speakers at the meeting with Vice-Premier Ma. Consult the link below to have a couple of glimpses of Todd Chan at this prestigious meeting which was a news item. (You will first view some commercials before the news.)

<http://tv.cntv.cn/video/C10420/028edbf41dc4178baa15dc7f3133543>

Concluding Remarks

We believe that the participation of the CSCE in the 10th SATEC has raised the profile of the Society to a very high level in China and that we have strengthened our relationship with SAFEA, the Chinese Ministry of Water Resources and CHES. Contacts have been made with senior professors at several universities and research institutes in China as well. These connections will certainly provide long term benefits to CSCE members for years to come.