Commission for Environmental Cooperation (CEC) of North America

Session of the Joint Public Advisory Committee (JPAC)
14–15 July 2015

Summary of Public Events
(Appendix A)

Opening and Introductory Remarks by Gustavo Alanís-Ortega, JPAC Chair

Mr. Alanís-Ortega welcomed the meeting participants and invited each JPAC member to introduce themselves. He provided an overview of the agenda and a summary description of the JPAC's mandate, which is to make recommendations to the Council of Ministers on issues pertaining to the CEC Work Program and the NAAEC and provide information, as needed. He added that JPAC's mission was to promote cooperation for environmental protection and sustainable development throughout North America. Finally, he explained that JPAC met several times a year with members of the public and with experts.

Keynote Presentation by Frederick A. Laskey, Executive Director, Massachusetts Water Resources Authority (MWRA)

Link to presentation

Mr. Laskey provided an overview of MWRA's mission and mandate and explained that the MWRA was born from a series of violations of the Clean Water Act in the Greater Boston Area. Between 1985 and 2014, the MWRA improved water quality, decreased water demand, reduced overflow, and allowed public access to all facilities throughout the Greater Boston region. Mr. Laskey explained that the project also included 400 acres of wetlands used as green infrastructure. He added that the challenges ahead included addressing the pollution load from stormwater runoff, the increasing concentration of pharmaceuticals in wastewater, climate-induced changes and response actions, the need to increase resilience of coastal facilities, and debt management.

Key comments from the Q/A period

- There seem to be apparent benefits of combining water and wastewater infrastructure with renewable energy, including greater financial viability.
- Infrastructure maintenance and investments are important.
- For Mexico, providing clean beaches is important for tourism and protection of fauna and flora.
- Measuring co-benefits (e.g., economic and social) of green infrastructure could improve water resources management.
- Sharing and demonstrating good examples will help promote green infrastructure to other regions.
- The best examples for water management may be at the local and regional scale, not at the national scale.
- Collaborating with multiple jurisdictions is important for water management planning.

- There is a need for better understanding the role of the federal government in regard to climate change adaptation and the way public works collaborate with municipal-level planning.
- There is limited federal funding in the US for water infrastructure.
- It is important to take into account the impact of green infrastructure on local communities.
- Analyzing the benefits of improved water quality on local economic development would be useful.
- The impacts of emerging contaminants (e.g., pharmaceuticals) are misunderstood.

Panel I: Stormwater in Cities (*Moderator:* Felicia Marcus, JPAC member)

Felicia Marcus described green infrastructure as an innovative solution to water management challenges that may be able to achieve several objectives simultaneously; however, such infrastructure remains a challenge for jurisdictions (due to the multi-level nature of infrastructure projects) and from a technical standpoint.

Christopher Hilkene, President, Clean Water Foundation

Link to presentation

Christopher Hilkene presented several examples of successful green infrastructure projects throughout Canada that also provide solutions to risk management and community needs. These were: bioremediation and shoreline revegetation; retention ponds and drainage pathways also used for recreation; a sustainable neighborhood adaptation retrofit action plan, including stormwater management, and water use and conservation; interconnected rain barrels with remote monitoring systems for operation and data gathering; rain gardens to retain peak rainfall and increase infiltration; and a green roof that slows the release of rain water to drains.

Georgita J. Ruiz Michael, Executive Director, Tierra de Aves, A.C.

Link to presentation

Georgita J. Ruiz Michael mentioned that there needed to be a new paradigm for water management (e.g., integrated watershed management) and she presented examples of urban stormwater management strategies in response to climate change. Mexico is vulnerable to a variety of threats, such as floods, droughts, accelerated deforestation and erosion, and that the infrastructure currently in place is inadequate. She presented several examples of flood- and other water-related damage in Mexico which are compounded because urban development is taking over natural habitats that would otherwise be providing mitigation measures. In her opinion, Mexico needs to work on its hydraulic systems, recover water pathways, restore ecosystems, build terraces to grow specific plants; educate communities, create employment, and recover hope. Lastly, she said that Mexico needs political will and that the time is short—the water is rising.

Wing Tam, Assistant Division Manager, Watershed Protection Division, City of Los Angeles

Link to presentation

Wing Tang spoke about the adaptation efforts made by the City of Los Angeles that involve green infrastructure. LA's new approach is to manage all water as *one water*, in the sense that stormwater, rainwater and wastewater are regarded as a resource. One important objective is to reduce imported water by 2024. Several strategies were described, including integrating water

cycles, innovating with new technology and designs, and applying the principle of inclusion. Mr. Wang described other strategies, such as low impact development, which retains all water onsite to be infiltrated and reused; green streets that increase infiltration; and the use of regional best management practices, such as improving existing parks and recreational access. He explained that LA's solutions had multiple benefits, including increased public use and open space, habitat restoration, climate adaptation, improved water supply and quality, and flood prevention.

Key comments from the Q/A on Panel I on Stormwater in Cities

Community engagement

- Early community engagement and transparency are key aspects for successful development and implementation of new stormwater management strategies. It is important to ask communities *what* and *where* they want to be, understand the level of risk they are willing to take, listen to them for their ideas of solutions, and gather their support. Community members and politicians who get involved can help with infrastructure maintenance and gather the political will needed.
- Organizing capacity-building workshops and training for communities is important to support the construction and maintenance of green infrastructure. Communities also have to exchange information with other communities.
- Citizens need to perceive themselves as being connected. This will strengthen their desire to protect water resources.
- Information on sustainable water management must be collected from indigenous populations, and shared with everyone (e.g., via the CEC).

Cost-benefit assessments

- There is a lack of tools to measure the efficiency, benefits, and success of green infrastructure projects and a need to better understand the responsibility of each authority for supporting these initiatives.
- There is value in calculating the long-term economic benefits of green infrastructure initiatives. For example, the City of Los Angeles estimated a $22 benefit for each $1 spent.

Financing

- It would be worthwhile to consider the role that financing mechanisms and institutions, (e.g., water funds, water bonds), companies (e.g., via their social responsibility objectives) and insurance companies (e.g., the Institute for Catastrophic Loss Reduction) can play to promote green infrastructure investment and development.
- Since the return on investment for several green infrastructure projects takes place on a longer term, investors (private and public) need to be open to and better understand this type of development.
- It is important to inform communities at all levels of the funding that is available from multiple sources, and to share that information with other communities.
- Carbon pricing and other market-based approaches have the potential to increase funding for green infrastructure.
- Governments should provide funding to adaptation and mitigation programs equal to the amount currently allocated to natural resources.

Monitoring and readiness

- There are technical limitations in addressing climate-induced changes and impacts. Projections for future high-risk zones are difficult to assess. In many cases, the results of modeling and projections show several areas at high risk for droughts and floods. This makes it difficult to select the right areas and invest in the right green infrastructure project.
- There is a lack of knowledge, monitoring and reporting on extreme weather events in Mexico. Better awareness building and prevention-response programs are needed. There is an opportunity for Mexico to learn how other countries respond to those events.
- Risk maps (such as the one shown in Ms. Ruiz's presentation for Mexico) are useful tools. It would be worthwhile to discuss their application and compare with similar Canadian and US maps.

Policy and leadership

- Water management objectives should be integrated into all infrastructure projects. The current approach to infrastructure development is 'siloed', where there is no one agency with overarching responsibility and able to develop infrastructure that supports several needs at once (e.g., transportation, energy, water and land). As a result, infrastructure projects are not automatically designed to produce water management co-benefits.
- Stronger federal requirements for infrastructure development could bring support to decision-making at the municipal and regional levels.
- Environmental standards for the industrial sector should be stricter. Industry should stop polluting across the entire country (this comment is geared toward Mexico), not just in touristic areas.
- The Toxics Use Reduction Program in Massachusetts is a good example of addressing environmental pollution. Business also benefitted from being covered. Paying more attention to the use of toxic materials and opportunities pays off.
- We need to analyze the pressure that mega-cities exert on water resources, rethink the concept of mega-cities and limit their development.
- There needs to be a conversation about water exports, which are exempt from NAFTA.
- The green roof initiative in Vancouver, BC, should be replicated elsewhere.

Panel II: Adapting to Changing Stormwater Quantities through Land-use Planning (*Moderator:* Gustavo Carvajal, JPAC member)

Roberto Romero Ramírez, Director, Water Program, *Fundación Gonzalo Río Arronte*

Link to presentation

Roberto Romero Ramírez provided an overview of the Gonzalo Río Arronte Foundation, which funds water management projects focused on conserving natural water factories (functional ecosystems) and optimizing water use. He described the following strategies: integrated watershed basin management, water for marginalized communities, and "detonator-trigger actions." He explained that the Foundation was developing programs and management plans that assessed watersheds and prioritized issues within watersheds, with the participation from federal and regional levels, civil society, communities and academia. Mr. Romero Ramírez proposed 1) launching a trinational forum on "sustainable water use as a means to reduce vulnerability to the

effects of climate change, both for ecosystems and human populations," and 2) developing a common strategy based on consultation with experts and the public.

Isabelle Thomas, Associate Professor, Institute of Urbanism, Université de Montréal

Link to presentation

Isabelle Thomas presented ways in which cities can assess their vulnerability and become more resilient, sustainable and adaptive. She provided examples of data collection and mapping approaches that assess zones of vulnerability in Montreal and New Orleans. She stressed the importance of early public engagement to discuss solutions and mitigation measures.

Carlton Ray, Director, Long-term Control Plan, Clean Rivers, District of Columbia Water and Sewer Authority (DC Water)

Link to the presentation

Mr. Ray provided an overview of the Washington, DC, Clean Rivers Project. He mentioned that the city had reduced its combined sewer overflow points by adding green infrastructure (in Georgetown and along Rock Creek). The project had a strong community involvement component, which was instrumental to its success. Mr. Ray also mentioned an example from Indianapolis—Pogues' Run—which showed success in reducing flood and insurance requirements, and improved water quality and recreational and educational opportunities. He stated the importance of providing training for green jobs to maintain and build green infrastructure, and a need for a nationally recognized program for employers and construction firms to train personnel in green infrastructure.

Key comments from the Q/A on Panel II: Adapting to Changing Stormwater Quantities through Land-use Planning

Public participation

- Public participation in green infrastructure projects and planning is essential. Local actors and community members must be informed and involved from the beginning. It is important to integrate, educate, and promote citizen participation in order to prevent mistakes.
- Success in achieving resilience is a combination of working with the population and implementing long-term technical solutions.
- Traditional native knowledge is a way of thinking, behaving, and understanding. It is a holistic paradigm. We can't "fix the water" without fixing climate change.
- Traditional ecological knowledge is a way to reach goals and mitigate damage from poor management.

Education and knowledge sharing

- It would be worthwhile to assess the need for early education on environmental issues, specifically green infrastructure and land use.
- It would be important for communities to know where in the watershed their water comes from, how water is treated and recirculated, and how ecosystems offer several services related to water.
- The roles played by local leaders and schools are important for raising awareness.
- Sharing information and data between communities is important.

- It is important to increase local adaptation capacity and ensure that “the best of nature” and science can be integrated.
- Water resource management is a very complex issue. We need a better exchange of information and knowledge. This will help us develop solutions more quickly.

Financing

- We need to assess existing public-private partnerships on green infrastructure in North America and in Europe, including projects that successfully engage with indigenous, local, traditional ecological knowledge, academia and civil society.
- There is a lack of progress in making resources available to smaller and mid-size communities for monitoring and gathering data.
- Stormwater permits from the US Department of Agriculture could be an avenue and opportunity for increasing resources to smaller towns.

Policy and leadership

- Better public policies are needed that promote achievements in responding to climate change.
- It should be of concern that water resources and environmental management strategies are inadequate due to a lack of interaction and understanding of the political realities at the regional level.
- Public policy should address infrastructure needs of rural and remote communities.
- It is important to create good public policy before we get to a crisis point.
- The role agro-businesses play in water management should be assessed.
- A cost-benefit analysis and assessment of the economic and social benefits of green infrastructure are needed.
- We urgently need to focus on arid regions that are experiencing changing water regimes, compare approaches and best practices, and find solutions.

Report from the National and Governmental Advisory Committee Representatives
Presentation by Paolo Solano, Interim Director of the Submission on Enforcement Matters Unit

Link to presentation

Paolo Solano provided an overview of the SEM process and recent submissions and factual records. He also presented the results that the new guidelines have had on the timeline of the SEM process.

Comments on the Presentation

Felicia Marcus commented that the new SEM guidelines have had great impact even though more improvements is needed. Gustavo Alanís-Ortega asked what would improve the coordination between the Council and the Secretariat on recommendations for preparing factual records. He pointed out that four factual records had been denied recently, which concerned him very much. He added that, to him, the mechanism seemed to be dying and asked if the Secretariat was considering strategies to make the process friendlier and less confrontational. He added that the

time taken for the Council to provide responses was improving, but that submissions were not being put forward.

Mr. Solano commented that the Secretariat was also concerned and was working hard to create seminars and outreach activities to communicate to the public their concerns regarding specific SEMs. They are also working on a video to inform the public about the SEM process. He added that the purpose of the process was to communicate the concerns and make an impact on public policy within the established guidelines and timeline, and that the information presented in the factual records could be useful.

A participant recommended that JPAC look more closely at the long-term impacts of factual records on policy and regulation changes. He commented that there was no impact because of a lack of policies and regulations to protect public property. The participant submitted a report to JPAC from the University of Guadalajara, which assessed public policy in the region, related to the Lake Chapala II factual record, and added that the situation there hadn't changed in the last ten years despite the factual record.

Cecilio Ortiz from the University of Puerto Rico mentioned the shortcomings of the current governments and public administration, and suggested that governments shift toward a public-service paradigm to better manage common assets. He would like to see the CEC serve as an information and initiatives exchange platform between the three countries in order to more easily share research and reports created at the local level. He added that since sustainability was locally defined, localities must communicate among each other to learn and share the initiatives on resilience and adaptive management to climate change. Finally, Mr. Ortiz mentioned that others could learn from Puerto Rico's experience in dealing with climate change.

Report from the National and Governmental Advisory Committee Representatives

José Carmelo Zavala Álvarez (member, Mexican National Advisory Committee—NAC) emphasized the importance of engaging communities and mentioned that the Mexican NAC and the Governmental Advisory Committee (GAC) provided recommendations to Secretary Guerra. He mentioned the trust fund established for the shared Río Colorado watershed environment and the need for Mexico to use water more efficiently for agriculture. He talked about gender and the perverse indicator of public investment when talking about poverty. He emphasized the need for improving the NAC/GAC recommendation approach and the factual records process. He added that we need role models from other ministries, not only the environment ministry. Juana García Palomares (Mexican NAC member) mentioned that the NAC had been providing their recommendations to Semarnat on topics such as wetlands and natural resource conservation focused on reducing water vulnerability. She mentioned that Mexico was hosting the next integrational meeting on biodiversity and, therefore, has to show it is working hard to preserve natural resources trough protected areas, such as the *Unidades de Manejo para la Conservación de la Vida Silvestre* (UMA). She emphasized the interconnection between water and other topics. María Guadalupe Hernández Balderas (Mexican NAC member) added that her group met with young people on the topic of climate change and also participated in environmental law discussions. The work of the NAC was carried out during a consultative meeting within the framework of sustainable development. She encouraged JPAC to utilize the NAC as a springboard to receive feedback from the public on the factual records and other published information.

Jeffrey Wennberg (US GAC member) mentioned that the US NAC and GAC members met in person in April 2015 in Washington, DC. During the meeting, the group reviewed the draft 2015–2016 Operational Plan and heard a presentation on TEK. The committee supported the roster of TEK experts and made recommendations on the Operational Plan, including: the lack of cross-border air quality projects, holding off on projects 12 and 13 (focused on the monarch butterfly) until the regulatory issues in the US regarding glyphosate herbicides were sorted out, and

suggestions on how to better spend the funding instead. Regarding the NAPECA grants project, the GAC recommended providing better guidance for applicants, such as releasing a budget range; selecting proposals based on quality and consistency with the guidelines; and adding 'links to vulnerable communities' and 'replicability' in the selection criteria list. Mr. Wennberg added that the GAC also would encourage selecting: 1) proposals for which no other funding sources may exist; 2) 'first funder' proposals (e.g., for perhaps 10% of the projects selected), to whom some mentorship would be provided; and 3) proposals from indigenous communities. The GAC recommended an Article 13 report on hydraulic fracturing and a study on community reactions to renewable energy installations in the long term (e.g., wind and solar). Finally, Mr. Wennberg mentioned that they had requested a meeting with EPA to discuss and learn about trains transporting oil. He thanked the EPA, Irasema Coronado and Robert Varney.

Tracy Hester (US NAC member) shared the NAC's recommendations on the 2015–2016 Operational Plan, including: reconceptualization of projects 12 and 13 (focused on the monarch butterfly) to prevent litigation and, instead, being better focused to achieve a quicker result; support of Article 13 reports on the topics of hydraulic fracturing, economic and social impacts of renewable energy projects and traditional ecological knowledge; and the inclusion of an assessment of water as a trade resource, given that water is already traded within products. Regarding the NAPECA grants, Mr. Hester mentioned that the NAC recommended selecting fewer proposals in order to increase the budget for each, thereby increasing impact and prioritizing proposals focused on vulnerable communities and capacity building. He suggested that each grant cycle have a focal area. He made recommendations for raising the profile and participation in the process, such as radio or social media annoucements targeted to remote communities. Finally, Mr. Hester recommended outreach to law schools and policy NGOs to encourage feedback on the SEM process.

Gail Small (US NAC member) thanked the CEC for creating the roster of TEK experts and recommended extending the two-year term for experts. She also mentioned that the issues discussed by JPAC could greatly benefit from TEK input and that the experts were looking forward to providing comments on the two-year cooperative work program and the NAPECA grant proposals. She also thanked the Yellowknife Town Hall meeting for its focus on TEK. She added a recommendation to promote research that encourages inclusion of TEK in climate initiatives, including the current climate treaty negotiations.

Presentation by Austin Blackmon, Chief of Environment, Energy and Open Space, City of Boston

Link to presentation

Austin Blackmon presented Boston's Climate Action Plan and the initiatives that Boston had in place to prepare to climate change.

Remarks on the presentation:

- The city of Boston signed a Memorandum of Understanding with the Netherlands to learn from Holland's experience and share expertise on adaptive actions, such as using tides and currents to create green infrastructure.
- A good example of a partnership between vulnerable communities, universities, and city/state governments is the Metro Boston Climate Preparedness Commitment and its Metro Mayors Climate Preparedness Summit, which was held at the University of Massachusetts (Boston) in May 2015. The event was aimed at developing a common policy framework for climate change preparedness throughout the Metro Boston area.