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J/11-02/SR  
ORIGINAL: English

**Commission for Environmental Cooperation (CEC) of North America**

**Regular Session of the Joint Public Advisory Committee (JPAC) 11-02  
Public Forum on Managing E-waste in North America**

**21–22 June 2011**

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**Summary Record<sup>1</sup>**

The Joint Public Advisory Committee (JPAC) of the Commission for Environmental Cooperation (CEC) of North America held its Regular Session 11-02 on 21–22 June 2011 in Montreal, Quebec, Canada. The first day of the Session consisted of a public forum to examine the issues surrounding the rapidly growing amount of electronic waste in North America, and to explore ways the three NAFTA countries can promote better management of e-waste and curb the illegal trade of e-waste products. The results of the Managing E-waste in North America public forum will be considered as possible Advice to Council. The second day of the Session, also open to the public, was dedicated to receiving reports from the National and Governmental Advisory committees and to discussing a potential Letter of Advice to Council.

This Summary Record reports on each agenda item, records all decisions made by the Committee and identifies action items and responsibilities. (Please refer to Annex A for the agenda and Annex B for the list of participants).

Previous summary records, advice from JPAC to Council and other JPAC-related documents may be obtained from the JPAC liaison officer or through the CEC's web site at <http://www.cec.org>.

**Tuesday, 21 June 2011**

**Welcome and Opening Remarks, by the JPAC Chair, Irasema Coronado**

The JPAC Chair welcomed participants to the public meeting. She provided an overview of the Commission for Environmental Cooperation (CEC), noting that the CEC was established as an adjunct to the North American Free Trade Agreement (NAFTA). The CEC's mission is to foster the conservation, protection and enhancement of the North American environment for the benefit of present and future generations, in the context of increasing economic trade and social links among Canada, Mexico and the United States (the Parties), and to facilitate collaboration and public participation in this work. Ms.

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<sup>1</sup> Disclaimer: Although this summary was prepared with care, readers should be advised that while JPAC members have approved it, it has not been reviewed nor approved by the interveners and therefore may not accurately reflect their statements.

Coronado outlined the role of the Joint Public Advisory Committee (JPAC) in seeking balanced public input on key environmental issues and in preparing Advice to Council (senior ministers of the environment from Canada and Mexico, and the Administrator of the Environmental Protection Agency of the United States).

JPAC has three Regular Sessions per year. This meeting in Montreal was the second of 2011 and was being held in conjunction with the 18th Regular Session of the CEC Council. All JPAC Regular Sessions are open to the public. Ms Coronado announced that the events would be broadcast and be viewed by many other participants via the Web. She added that JPAC was making extensive use of technology such as Facebook and Twitter, to ensure balanced discussions and wide access for public participation. The Session would be simultaneously broadcast in Spanish, French and English and she described the translation services that were available to those in the audience.

Ms Coronado reviewed the agenda for the public meeting, noting that there would be opportunities for questions and answers and discussions. She added that the public would have an opportunity to engage the Council members the next day, at the public portion of the 18th Regular Session of the CEC Council.

Ms. Coronado thanked everyone responsible for organizing this Regular Session public forum on e-waste. She then asked that each member of JPAC introduce him/herself to the audience. Their biographies are available on the CEC website <[www.cec.org](http://www.cec.org)>.

### **Managing E-waste in North America: A Public Forum**

The Chair then opened the public forum by introducing the first speaker, Sarah Westervelt, e-Stewardship Policy Director at the Basel Action Network (biography available on the CEC website), who would make her presentation on the challenges and opportunities of e-waste in North America.

### **Presentation, by Sarah Westervelt, e-Stewardship Policy Director, Basel Action Network: E-waste in North America: Challenges and Opportunities**

Sarah Westervelt began her presentation by describing how, being in the midst of the IT (information technology) age, we are awash in new gadgets, toys and tools that are fundamentally changing our lives. As with any such dramatic change, there are benefits and there are consequences that can take us unawares. She described how we are dealing with consumer products that are experiencing staggering rates of growth, stating that in 1965, there were 19,430 computers in the US and by 2009, there were 274,500,000, or approximately 900 computers per 1000 people. Currently in the US it's estimated we now have one computer per person. She went on to say that the challenge is about more than computers, it encompasses all things electronic, and that the advent of green energy technology such as solar panels and electric cars will add to the burden.

In addition to hyper-growth in these areas, we have the phenomenon of hyper-obsolescence. Never before have we had substantial hardware become obsolete so quickly. Our old refrigerators and toasters would last 15–20 years but that is no longer the case, perhaps because of rapid innovation but also because of planned obsolescence caused by the fact that there is no incentive for manufacturers to produce long-lived products. There is, however, incentive to produce high-turnover products and get consumers to discard the old for the new—justified always by the concept of recycling. The combination of hyper-growth and hyper-obsolescence working together has created mountains of e-waste globally.

The per annum e-waste generation in North America is estimated (as of 2009) to be 220,000 tons in Canada, 3,000,000 tons in the US, and 180,000 tons in Mexico. These massive amounts of e-waste being generated each year would be a terrific problem on their own but things really get deadly serious when we realize that this material is not just waste but, by international definition, toxic waste. Ms Westervelt went on to describe in detail the toxic materials, some of which are lead, cadmium, mercury, beryllium, selenium, lithium, antimony, arsenic, PVC (polyvinyl chloride), CFCs (chlorofluorocarbons) and rare-earth elements.

She stated that well intentioned legislation has diverted the e-waste from landfill to recycling, adding that while this tack seemed laudable, few realized that many recycling facilities are not actually recycling but really could be better described as global waste distribution centers: they are shipping the material off for recycling elsewhere. While there are no accurate data, most industry insiders admit that between 50–80 percent of that which is delivered to “recyclers” is put on container ships and exported to parts of the world which have no infrastructure to deal with the e-waste at all. In all three NAFTA countries this issue has surfaced as a very serious one. There have been some enforcement actions but the penalties for those few that are prosecuted are paltry and do not serve as a disincentive.

Ms Westervelt then went on to describe some of the solutions to the collective and growing problems of e-waste. In discussing the legal efforts to stop the export, she described the Basel Convention and the 1995 Basel Ban, which embraced a single principle of environmental justice and which stated that no person or group of people should shoulder a disproportionate share of negative environmental impacts. She stated that the Basel Ban provides a legal restraint on the abuse caused by market forces that seek to externalize costs to the poor via global pathways.

While the Basel framework for dealing with e-waste applies mostly to Europe, it is considered that the use of such a framework would be beneficial in the NAFTA context as well. Ms Westervelt stated that laws to stop the global dumping need to be enacted. Further, significant effort needs to be focused on promoting high standards of recycling, and green design needs to be encouraged and incentivized. We would not have so many problems with e-waste if we were to produce products that were long-lived, easily recyclable and toxic-free, and we can start encouraging this with our wallets by buying green. She concluded by saying that if we are to turn back the toxic tide of e-waste, leaders at all levels need to do the right thing by helping promote green design in products and supporting the use of various report cards that are being devised to rate manufacturers and their products.

Chair Irasema Coronado thanked Sarah Westervelt for her very informative presentation and opened the floor to questions from the audience and the Internet.

Question/Comment: Geoffrey Garver thanked the speaker for reminding us of this very important environmental challenge and the impact it is having in various parts of the world. He asked if she would elaborate on her comment about the US sending e-waste to various parts of the world, sometimes under the guise of new technology.

Response: Sarah Westervelt replied that there are many people who believe that we should set aside the Basel Convention and allow shipments to countries that have the infrastructure to deal with e-waste material and are ISO 14001–certified. She believes this should not be permitted to happen because it is important to look at the legality of trade between the two involved countries first. Because the United States is not a Basel Convention country, it is actually illegal for all the Convention countries to trade in Basel-regulated waste with the US. Secondly, it is also important that the receiving country have a facility to deal with the waste stream in a way that can be monitored and not be hazardous to its people.

Question/Comment: Tim Hearn asked if the speaker could elaborate on her concerns regarding green design in, for example, the area of computers.

Response: Ms Westervelt replied with an example where industry had asserted in the past that it could not produce a lead-free solder which was demanded in order to meet European legislative requirements. However, when forced to do so, it met the requirements. Meeting the challenges of taking the toxins out of production is possible, which, for instance, Apple has done by switching from plastic computer shells to aluminum. Fewer turnovers in the hardware would assist as well. Manufacturing for recyclability is also important. Manufacturers need to assist recyclers by labeling what materials are involved in the production of their products. Getting the toxins out, designing for longevity and designing for recycling are all needed in order to address this issue.

Question/Comment: Rodolfo Lacy commented that the story told by the speaker is very similar to stories of other products that have dominated economic markets in the past, such as automobiles, refrigerators and air conditioners. He said that almost all the developing countries import from the rich countries. He asked the speaker if she could see the necessity for a law that evaluated the lifecycles of all of the products that affect the environment, and if there should not be legislation on a larger scale than e-waste alone.

Response: Ms Westervelt replied that in looking at the lifecycle of the products, right from the mining of the ore to the replacement only eighteen months later and the effects on the environment, what we are doing is profound. She added that the suggestion is a very good one and if manufacturers can take responsibility for their products from the mining stage throughout the entire lifecycle, we will end up with products that serve society rather than harm it with a great imbalance that damages our environment. Legislation is the great leveler of the playing field. Dealing with the end-of-pipeline product is not the answer.

Question/Comment: Martin Gutiérrez said that in the framework of the North American Agreement on Environmental Cooperation (NAAEC—the Agreement), a guideline has been developed for the three countries to manage the environmental impacts of free trade. Based on this, there is to be a free flow of trade in the electronics field, and some of the discussion we are having may be contradictory to the intentions of the Agreement. Mexico is the recipient of much of the waste from the United States and to some extent from Canada too. What can be done to promote free trade and yet restrict the movements of electronic waste from free trade initiatives? In Mexico, we are seeing that the recycling of e-waste is so expensive that it cannot be developed into a business that is profitable. Is there any way to lower the price of e-waste recycling, perhaps through incentives? With respect to the consumer, the challenges to recycle are so onerous that consumers become paranoid and paralyzed to the point where they continue to use technology but cannot seem to find recycling solutions, so they don't recycle anything. How can we reduce this paranoia?

Response: Ms Westervelt replied that for consumers the best message about where they can make a difference is to extend the life of their electronics for as long as possible. When it's time to turn them over, do it quickly while the product still has value instead of storing it indefinitely until it is obsolete. The most useful strategy for the recycling challenge is to encourage the selling of whole, working units into the re-use market. The second most lucrative thing is to sell working parts into the re-use market. The least lucrative thing is to try to reclaim the various metals, etc. Sending materials to a smelter or a shredder is not good, as we are mixing toxic materials with non-toxic materials. Separation of materials after going through the shredder is becoming more and more sophisticated and is evolving. It is incumbent on communities to understand that the costs must be covered and financing is required, so as

not to export the material to countries that are at risk with respect to the health and safety of the environment, as well as of the workers involved. With respect to NAFTA, each sovereign nation has the right to protect its public members and its environment. It is important to hang on to and exercise those rights, within the Agreement.

Question/Comment: Glen Wright commented that, in comparison to some of the other environmental challenges such as greenhouse gases, this challenge seems quite solvable. Based on your experience, what is the receptivity of the producers and manufacturers within the industry to taking responsibility for the end-of-life challenges to the environment that their products present?

Response: Ms Westervelt replied that there is a wide range of acceptance of this responsibility for the industrial participants to engage with the environmental community. Some of them are very willing to fund research to address the problem of this waste stream. There is capacity on the design side but the challenge is in how very competitive this industry is and in how the consumer is not willing to incur the elevated costs of green design. We need to create a level playing field, much in the way Europe did through legislation. In this way, there would be a race to meet the new baseline level, as opposed to the current practices of price discrimination only. Legislation is the only way to establish a single baseline for all of the producers and manufacturers, which keeps the sector competitive.

Question/Comment: Adriana Nelly Correa commented that she saw certification as a tool if used correctly. It could be used to protect both the quality of the job and the environment. Certification is linked to the creation of standards and is a good tool to provide competitive guidelines to the organizations that are involved. The organization e-Stewards may have some experiences we could learn from and she asked if the speaker would comment on this.

Response: Ms Westervelt replied that the value of certification programs to governments is that they embrace laws that are driven by the standards. Laws are difficult to establish but the standards can evolve much more quickly than the regulations can be changed. Once standards are established, they can be followed by laws that require adherence to the standards, and auditors can be trained and put in place. The e-Stewards Standard (for Responsible Recycling and Reuse of Electronic Equipment) is the best standard there is and it is constantly under revision in order to keep up with the changes of the e-waste stream.

Chair Irasema Coronado thanked the speaker for her fascinating presentation and dialogue. She then adjourned this segment of the Session, informing the audience that JPAC would be grateful for suggestions that might be useful in sending an Advice to Council, and she provided the e-mail address for further communications with JPAC. She also stated that a segment of the Session tomorrow morning would be dedicated to discussing a potential Advice to Council. She then turned the floor over to Felicia Marcus, JPAC Member for the United States, to moderate the next segment on e-waste inter-agency cooperation and enforcement.

### **Panel Discussion: E-waste: Inter-agency Enforcement Cooperation under the CEC**

Moderator Felicia Marcus introduced the three panel members (whose biographies are on the CEC website):

- Albert Holtz, Senior Advisor, Environment Canada
- Felipe Olmedo, *Director de Inspección de Residuos Peligrosos, Dirección General de Inspección y Vigilancia en Puertos, Aeropuertos y Fronteras* (Director of Dangerous Wastes Inspection, General Authority of Inspection and Enforcement in Ports, Airports and Borders), Profepa

- Dr. Deborah Kopsick, Environmental Protection Specialist, US Environmental Protection Agency (EPA).

Felicia Marcus asked each of the panelists to make a brief presentation, before opening the floor and the Internet to questions and comments.

**Albert Holtz, Senior Advisor, Environment Canada**

Albert Holtz led off the panel presentation by stating that in Canada, the management and control of hazardous and non-hazardous waste, as well as hazardous recyclable materials, is a shared responsibility. The federal government regulates international and inter-provincial/territorial movements while the provincial and territorial governments regulate intra-provincial movements and also establish controls for licensing waste generators, carriers and treatment facilities within their respective jurisdictions. Municipal governments are responsible for the collection, diversion, and disposal of residential waste.

He then described the known cases of illegal export of e-waste from Canada over a six-year period from 2005 to 2010, during which time 40 enforcement actions had been taken. The common findings from investigations suggested that the majority of shipments were by sea through marine ports and involved a small portion of the regulated community. There were multi-jurisdictional challenges (immigration, transport, Canadian Border Services Agency [CBSA]) but the e-waste materials were most often misclassified as scrap plastic or metal scrap and shipped as part of other legal materials, with no valid permits. The shippers claimed the material was scrap, which is non-regulated, and that it was going to the destination for re-use.

Mr. Holtz outlined the need for and development of trilateral cooperation arrangements and provided the example of the interception of an illegal e-waste shipment, by US authorities. He stated that the EPA sent information to Environment Canada regarding the Canadian company operating in the US that was being charged and that Canada conducted a background search and found two related companies operating in the US and nine in Mexico. This information was shared with Mexico and the US, resulting in the US successfully prosecuting the US operating companies. Four of the Mexican companies were operating without permits and they are currently under investigation.

**Felipe Olmedo, *Director de Inspección de Residuos Peligrosos, Dirección General de Inspección y Vigilancia en Puertos, Aeropuertos y Fronteras, Profepa***

Felipe Olmedo divulged that Mexico generates approximately 180,000 to 257,000 tons of electronic waste per year. Products include computers, cell phones, TVs, personal digital assistants (PDAs), telephone devices, audio and video devices, monitors, computer peripherals (keyboards, speakers and accessories), copiers, printers, and scanners. In 2007, Mexico had about 11.2 million computers, 50.6 million mobile phones and 1.7 million PDAs.

Mr. Olmedo then went on to describe Mexico's General Law for the prevention and integral management of waste, stating that there are two categories of wastes. In the first category are wastes generated in production processes that do not meet the criteria to be considered as producing hazardous or solid waste, and wastes that are produced by large generators of municipal solid waste. In the second category are hazardous wastes: wastes that exhibit the characteristics of corrosivity, reactivity, explosivity, toxicity or flammability, or contain infectious agents, as well as contaminated packaging, containers and soils that are transferred to other sites in accordance with the General Law.

Mr. Olmedo went on to say that the federal authority verifies compliance with regulations on hazardous waste and imposes corrective measures, security and sanctions for import and export. The states verify compliance with the legal provisions regarding waste, including applicable special handling, sanctions and security measures.

He added that since the entry into force, under the Agreement, of the classification and codification of goods (whose import and export is regulated by Semarnat), in Mexico there have been no registered imports or exports of electronic waste and only 2,905 tonnes of cathode ray tubes, which in Mexico are considered hazardous waste, for export and 18,327 tonnes for import. A challenge is presented by the difficulties of differentiating between secondary raw materials and wastes and the common understanding of terms such as “re-use,” “reconditioning” and “repair.” He added that collaboration with customs authorities to correctly identify and classify used electronic equipment and determine when equipment has reached the end of life is difficult and adds to the challenges.

Felipe Olmedo said that Mexico had engaged in the training of customs officers and Profepa staff to identify e-waste shipments at major ports of entry. Profepa has requested an amendment of the tariff on electronic waste in order to aid in proper classification and increased control. Profepa continues to contribute to the activities of the CEC E-waste Working Group to develop procedures for sharing intelligence on illicit hazardous waste shipments. Mexico, in accordance with its international commitments to the Organisation for Economic Co-operation and Development (OECD), the Basel Convention, and the La Paz Agreement between Mexico and the United States, works to control the smuggling of electronic waste.

#### **Dr. Deborah Kopsick, Environmental Protection Specialist, US EPA**

Deborah Kopsick began her presentation by stating that the Resource Conservation and Recovery Act (RCRA) regulates the handling and disposal of hazardous waste for the US. Cathode ray tubes (CRTs) are not a regulated hazardous waste if certain safe management conditions are satisfied, and this is intended to promote the re-use and recycling of CRTs. The federal government is responsible for import/export issues, and once notifications for exports are received, inspections may be conducted by regional and/or state enforcement officials. Numerous voluntary programs to facilitate the sound management of electronic materials exist within the United States. The states may enact programs to manage electronic waste, such as source reduction, take-back programs, recycling fees, disposal bans, etc. Twenty-four states have e-waste legislation and twelve have active criminal enforcement cases.

Beyond this, there has been collaboration with local/state/federal counterparts, Interpol, the Environmental Crimes Programme and the CEC’s E-waste Working Group. Dr. Kopsick described the Seaport Network Inspection Project, which began in the summer of 2010 among Canada, Mexico and the US and utilized a combination of investigative, regulatory, and enforcement information to share intelligence with customs concerning the export of CRT waste. The initiative identified multiple recyclers, brokers, freight forwarders, and consignees involved in the apparent illegal movement of waste CRTs to Hong Kong, China, and Vietnam. The project helped develop an overall understanding of the illegal e-waste trade and resulted in the implementation of methods to facilitate the dismantling and disruption of the illegal flow of electronic waste.

Dr. Kopsick stated that to address the problem of e-waste it is important to share and share often and to develop a system to communicate among our three NAFTA countries. Also, it is important to develop relationships, both domestic and international, and respect for everyone’s role—working as a team and cooperation between environmental and customs agencies are critical to success. She added that the

provision of adequate and coordinated training of inspectors is essential and that the publishing of successes is important, as deterrence is the ultimate goal. The promotion and the adoption of environmentally sound management (ESM) principles in small and medium-size e-waste recyclers and refurbishers in North America will be important in order to establish facilities practicing ESM principles, and the development of legal standards for domestic e-waste handling is important if increased compliance with regulatory requirements and reduction of illegal exports is to be accomplished.

Question/Comment: Felicia Marcus commented that the enforcement work in this area is necessarily different from that of other areas of environmental enforcement. She asked the panelists, as enforcers in this area, what the hardest part of the job is.

Response: The panelists replied that one of the hardest parts of the challenge is the constant changing of the players and their modes of operation. Finding and bringing charges against entities that constantly change, disappear or morph into other entities is very challenging. Another difficulty is the issue of communicating to the players involved the benefits to the environment of adequately controlling e-waste. Without an understanding of the repercussions on the environment that are involved, many of the players look for alternatives to the directions that are given by the authorities. Even the environmental regulations themselves are not known to all of the players. The proper culture for e-waste management is not in place. Also, because this issue involves the crossing of borders, information sharing is vital and will be necessary if we are to stop the bad practices.

Question/Comment: A question from the Web: what levels of mercury and beryllium are permissible in the management of scrap and are there any guidelines for the certification of recycling companies?

Response: The panelists suggested that the answer to the question would more appropriately come from the next group on the agenda.

Question/Comment: A Mexican member of the public, who teaches at the University of British Columbia in Canada, commented that one of the mechanisms that may be useful is the Citizen Submissions on Enforcement Matters (SEM) process. Since e-waste is trilateral, the SEM process is a trilateral mechanism for just this purpose. The best way to strengthen enforcement is to strengthen the national-level regulatory frameworks. It is within the domain of each country, and indeed is each's own responsibility, to strengthen its own regulations and thereby strengthen the trilateral enforcement process.

Response: The panelists wholeheartedly agreed with the comment.

Question/Comment: Irasema Coronado asked what is being done internally at the environmental agencies of each of the three countries to address e-waste. She added that this is a call for us to be leaders and to set examples for other agencies and companies that are struggling with the challenges of e-waste.

Response: The panel replied that in the past, computers would be donated to other countries and because they had a life of a year or less left, they would then become trash in the country they were donated to. Countries that have set limits on the age of computers that can be imported are to be applauded. Now, governments are being very cautious and restrained about where their computers are going and are making more use of recycling facilities. Awareness is heightened and it is realized that this issue is much larger than what one country can handle on its own. More use of leasing within contracts that include e-waste management clauses is occurring.



Question/Comment: From the Web, a question regarding how to find which companies in Mexico have been sanctioned for trafficking in e-waste and how to find information about what sanction was applied.

Response: The panel replied that they do not have this information but that State authorities do have it.

Question/Comment: Is it possible to learn of the names of the companies in Canada, the United States and Mexico that were involved in the cases mentioned by the panel? We need to know who they are if we are to support the environment.

Response: The panel replied that that it was not able to give out the names of the violators but that the EPA website contains the lists of accredited players for the US.

Question/Comment: Diane Takvorian asked the panelists if they had looked at the OK International report [*Exporting Hazards: US Shipments of Used Lead Batteries to Mexico Take Advantage of Lax Environmental and Worker Health Regulations*, June 2011], which indicates the increase in hazardous waste exports to Mexico. What suggestions do the panelists have on how the CEC could undertake to encourage cooperation to stem the exporting of waste to Mexico?

Response: The panel replied that they did not know the report in detail. They did say that in the case of exports from the United States to Mexico, they have information on such movements. On the Semarnat website there is a list of authorized companies which can carry out such movements. Training for customs agents in Mexico has been provided. Cooperation between the three countries is important.

Question/Comment: Linda Angove commented that JPAC will be looking to provide an Advice to Council and asked the panel what they thought that Advice should be to enhance and facilitate the management of e-waste.

Response: It is important to look at this problem from a lot of different angles. The CEC is beginning to do that through its work in various projects under its new Operational Plan. The important hurdle that we need to get over now in the area of information sharing is the legal challenge. We must continue to carry out the exchange of information between the three countries in order to coordinate our reaction to illegal trade.

Question/Comment: How do we get higher fines and penalties for those who have been convicted? What is involved in all three countries? Are these penal or criminal law issues?

Response: The panel replied that the answer to the question is out of their area of expertise but perhaps could be answered by others in attendance. They agreed that higher fines and more-educated courts would be better deterrents.

Question/Comment: Governments in North America have a role to play in the cradle-to-grave concept by insisting that manufacturers take a major role in disposal. We should really push that sort of a concept.

Response: The moderator thanked the intervener for the very important point, stating that the afternoon roundtable would deal with this issue in more detail.

Question/Comment: Geoffrey Garver asked the panel if they were satisfied with the level of deterrence they have and if not, how would they like to improve upon it? Specifically in the case of the US, what is the magnitude of criminal activity out there?

Response: The panel replied that it is difficult to know if the levels of e-waste are being reduced by their efforts, since one of the areas lacking is data. E-waste competes with a lot of issues that challenge borders and crossings, such as smuggling of drugs, arms, and weapons of mass destruction. The number of personnel required to do more inspections needs to be increased, and training is an issue. The program is building now. At the ports in Canada, intelligence is increasing through information-sharing. The biggest challenge at the border is the challenge of competing interests. We need to enhance the capability of targeting.

Question/Comment: Laurent Benarrou asked if the panel could explain the financial flow that is involved with these exchanges. Specifically, who benefits from these exchanges? What makes this market profitable to the extent that companies would take the risk of violating the law? For example, for how much can you sell a ton of e-waste? Who is paying and who is receiving the money and is there a cost of transportation that plays a role? Can this market be infiltrated by organized crime?

Response: The panel replied that they could not answer the question. We are just beginning to share the information and the working group will determine that as it matures. Domestic recycling is very expensive. Goods from Asia to North America are delivered in containers which then would return to Asia empty, so you can rent out the space for very little money—less than recycling costs.

Question/Comment: A student from the University of Vermont commented that the government of Mexico carried out a life-cycle analysis of electronic equipment that the government was purchasing. When they determined what equipment was more environmentally friendly due to longer life cycles, they began to purchase that type of product. Also, governments can upgrade rather than replace and dispose of their electronic items.

Felicia Marcus thanked the three panelists for their coordinated input and valuable perspectives and thanked the audience, both present and on the Web, for its questions and comments.

Chair Irasema Coronado adjourned this segment of the Session, advising the audience that JPAC would be grateful for suggestions that might be useful in providing advice to Council, and gave the audience the e-mail address for further communications with JPAC. She then turned the floor over to Martin Gutiérrez, JPAC Member for Mexico, to moderate the next segment, on the results of the CEC Workshop in Guadalajara.

### **Report on the Results of the CEC Workshop in Guadalajara and Upcoming Work to Promote Environmentally-sound Management Practices in Small and Medium-size Enterprises, Specifically E-waste Recyclers and Refurbishers**

Martin Gutiérrez, JPAC Member for Mexico, introduced the topic and the three panel members, as follows (biographies are on the CEC website):

- Arturo Gavilan, *Subdirector de Estudios sobre Substancias Químicas, Instituto Nacional de Ecología (INE)* (Assistant Director of Chemical Substances Studies, National Institute of Ecology), speaking on behalf of the e-waste officials group
- Michael Vanderpol, Senior Program Coordinator, Waste Reduction and Management Division, Environment Canada
- Rick Picardi, Acting Branch Chief, Office of Resource Conservation and Recovery, US EPA

Martin Gutiérrez announced that an overview of the Guadalajara Workshop would be given by Arturo Gavilan and that after his presentation, the other two panel members would join him in the question-and-answer portion of this segment. Mr. Gutiérrez then asked Arturo Gavilan to make his presentation, before opening the floor and the Internet to questions and comments.

**Presentation, by Arturo Gavilan, *Subdirector de Estudios sobre Substancias Químicas, Instituto Nacional de Ecología (INE): CEC Workshop on E-waste Recycling and Refurbishing: Environmentally Sound Management Practices***

Arturo Gavilan stated that the overall progress from 2009 to 2010 that the CEC has made regarding e-waste is illustrative of the utility of the Commission as a forum for collaboration and cooperative work on the part of literally hundreds of environmental officials and experts, including public members and communities from each of the three countries. He added that the Guadalajara workshop was organized in pursuit of the Council's strategic objectives.

Mr. Gavilan then described the increase in world production of electronic products, and the complexity in the international flows of e-waste. He stated that there is wide and growing international concern for e-waste management and recycling.

There have been background activity and trilateral action through the CEC on e-waste, and Mr. Gavilan describing the Clean Electronics Pollution Prevention Partnership that was started in 2004. There were other initiatives addressing electronic waste that were started in 2007. Overall, the goal has been to find different ways to contribute to more-effective enforcement at the domestic level in North America. The Enforcement Working Group and the Electronic Waste Experts Working Group have implemented projects related to e-waste, most notably in the area of environmentally sound management within small and medium-size enterprises (SMEs) for e-waste recycling and refurbishing.

Mr. Gavilan then went on to describe what environmentally sound management entails and how it is basically the taking of steps to ensure that used and/or end-of-life products or wastes are managed in a manner that will protect human health and the environment. This includes the reduction of risk to the environment and public health from e-waste. The environmentally sound management of e-waste involves trade benefits, due diligence, improved safety, improved relationships with regulators and the public, improved business relationships, and the protection of stockholder and stakeholder interests.

For facilities to qualify as practicing environmentally sound management of wastes, they must meet several criteria, some of which involve management commitment, risk prevention, training, record keeping, verification, and legal requirements.

Mr. Gavilan then turned to the main theme of the presentation, which was the Workshop on E-Waste Recycling and Refurbishing: Environmentally Sound Management Practices, that was held on 15–16 February 2011 in Guadalajara, Mexico, and about which more detailed information may be found at the website <[www.cec.org/ewaste2011](http://www.cec.org/ewaste2011)>. The workshop was designed to address the problem of e-waste recycling practices and highlight the benefits of the adoption of environmentally sound management practices by small and medium-size enterprises in North America. He added that it also served to identify opportunities that would bolster the e-waste recycling and refurbishing industry in Mexico.

He described the themes of the six sessions that were held as part of the workshop, which hosted 98 participants from all three countries, with an additional 300 enterprises participating through the webcast. The workshop focused on what the enterprises felt were the easiest and the most difficult environmentally

sound management practices to implement, and Mr. Gavilan noted that this would be useful information for the CEC's e-waste-related projects in the Operational Plan.

Mr. Gavilan remarked that while the workshop was beneficial to the participants for several reasons, one of the most useful outcomes was to learn what assistance, other than financial, was needed by the enterprises in order to implement environmentally sound management practices, and he described them as the following:

- The harmonization of regulations in the three levels of government
- The creation of a transparent registry of North American recycling and refurbishing operators that meet international standards
- Assistance to transfer knowledge and best business practices
- Assistance to SMEs to receive training for capacity building
- The creation of programs that result in faster growth of the e-waste recycling and refurbishing industry

Mr. Gavilan said that the information from the workshop was invaluable to the CEC in determining the future work it would do with the small and medium-size e-waste recyclers and refurbishers in North America to promote the adoption of ESM practices. He then thanked the audience for its attention and pointed out that additional information was available through the CEC's website.

Martin Gutiérrez thanked Arturo Gavilan for his presentation and introduced the question-and-answer session, which would be addressed by all three panelists.

Question/Comment: An intervener from the webcast to Mexico remarked that people don't know what to do with the waste and they end up storing it. How can we assist households to get rid of e-waste that they have in their homes in a way in which they can be confident that they are complying with regulations?

Response: This issue is of great concern and we have not yet addressed it adequately. There are many programs but they are not consistent in their processes. Each locality varies in its procedures, and differences exist with differing e-waste types. The best thing that a consumer can do at present is to ask the local authorities and that is how they will find out what is the right procedure to carry out in their community.

Organizing collection events is one way to address this challenge. Such events have been done in the past and have been successful in the local communities that have carried them out. In terms of where the material goes once it is collected, there are certification programs that list certified recyclers. Open dumping and open burning are prohibited by law, so knowing the recycler's process is important. Some of the provinces have regulations pertaining to the disposal of e-waste, so progress is mounting. Communication is vital, in order for consumers to know what role they should play. Consumers have a very active and central role to play. However, it is important to know that there are operations out there that we do not want to have handle this toxic form of waste and we must avoid using them.

Question/Comment: Knowing that the United States has not been signing international agreements, what is it doing to try to harmonize legislation in terms of waste management in North America?

Response: As Sarah Westervelt pointed out, the US is not a party to the Basel Convention, and the EPA regrets that. In terms of harmonizing e-waste regulations, each country needs to address it within its own legal system while cooperating with other countries as much as possible. The harmonization of legislation

and regulations will not contribute as much between the three countries as cooperation, collaboration and joint efforts will.

Question/Comment: Carlos Sandoval asked if there is a sense how many businesses are involved in the management of e-waste.

Response: There has been some diagnosis in this area and there are estimates of between five and ten percent of the e-waste produced by the industry is being reclaimed. The rest is being improperly disposed of. About forty or fifty percent remains in the household as waste because people don't know what to do with it.

Question/Comment: From the webcast, a member of the public wanted to share a concern regarding the certification of a facility in Mexico that is doing well and may be able to compete with facilities throughout North America. The intervener asked the panel if they know about this facility and its experience.

Response: The panel member from Mexico replied that he did not know of this case. There are some facilities that have all the environmental controls in place and they comply but there are some others that do not. We should work hard to encourage everyone to work with those that have good environmental practices. There will be more cooperation between the United States and Mexico in the future through collaborative programs that are being developed.

Question/Comment: A member of the public agreed with the view that re-use should come first before recycling. He asked the panel if they knew of the experience in Ontario, where it seems that the manufacturers are forcing people to buy new laptops instead of re-using them. How can governments force people to keep the first design and upgrade it for re-use as opposed to replacing it in its entirety?

Response: The Ontario Electronics Stewardship program manages the collection of electronic waste in that province. That program is mandated under provincial law and is outside the jurisdiction of the federal government. The federal government has been supportive of the principle of re-use under its own programs, where it provides refurbished electronics to libraries and schools across Canada. The federal government is working with all of the provincial governments by providing a useful forum in which to have these types of discussions. The challenge really lies when the end of life of the electronic components is actually reached. Opportunities are being explored for triaging, refurbishing and other measures.

Question/Comment: We have been talking more about extended producer responsibilities. Earlier we heard of fines and punishments. How can we encourage the behaviors we want and get more recycling done properly? How is each country looking into doing that?

Response: In Canada, the revenue generated at the provincial level is generated by consumers. The program was developed and is managed by first-sellers within the industry through product stewardship plans that are reviewed by the ministers within each province. There aren't really any financial incentives for recycling for the consumer. It's not a deposit refund system like with beverage containers. There is heavy reliance on the aspect of communications, and donations are encouraged in the case of direct re-use. The federal government has detailed protocols for the disposal of electronic material, especially when recyclers take custody of government materials.

There is some work in the United States that encourages companies to take responsibility for their own electronic waste. Some of the major companies have take-back programs.

In Mexico, legislation is based on the concept of shared responsibility—not extended responsibility on the part of the manufacturer. Companies are encouraged to give each of the components a value so that recyclers can have a sense of worth and of the potential for revenue.

Question/Comment: An audience participant from Monterey asked how much support the municipal governments have provided in order to establish recycling programs.

Response: Mexico has been encouraging the development of plans that meet the needs of each individual municipality. A pilot program is being developed at the municipal level for just this purpose. The municipal governments are being provided with information so that they can develop their own plans.

Chair Irasema Coronado thanked everyone for their presentations and participation throughout the events of the morning. She then invited everyone to a networking luncheon with the public, to continue the discussions in a more social setting.

Upon reconvening the Session, Ms Coronado introduced Glen Wright, JPAC Member for Canada, who would moderate a roundtable discussion on opportunities to promote better management of e-waste in North America.

### **Roundtable Discussion on Opportunities to Promote Better Management of E-waste in North America**

Glen Wright, JPAC Member for Canada, introduced the four panel members, as follows (biographies are on the CEC website):

- Álvaro Núñez, Director General, *Recicla Electronicos México* (REMSA)
- Mike Watson, Director of Compliance, Dell Global Takeback
- Sheila Davis, Executive Director, Silicon Valley Toxics Coalition
- Michael Vanderpol, Senior Program Coordinator, Waste Reduction and Management Division, Environment Canada

Glen Wright then asked each of the panelists to make a brief presentation, before opening the floor and the Internet to questions and comments.

#### **Álvaro Núñez, Director General, *Recicla Electronicos México* (REMSA)**

Álvaro Núñez remarked that he thought it was important to share what is being done in Mexico. In a country of 110 million people, it is important to create a recycling culture. Sixty percent of the population are concerned about where they will live and what they will eat, and do not have a choice to recycle. He said that the biggest need and most important opportunity is in the area of education. The challenge is to make people aware of what they are buying and the hazards they cause.

#### **Mike Watson, Director of Compliance, Dell Global Takeback**

Mike Watson began by stating that he had learned a lot already today. He said that several years ago, Dell committed to becoming highly transparent in the work that it does to drive the best programs in the industry and to lead the industry in best practices concerning responsible electronics recycling. In 2005, Dell committed to collecting 125 million kilograms of its own product and to recycling it responsibly. It now has another commitment to recycle 454 million kilograms of its own brand product by 2014. Its policies, practices, programs and all of the data are on the Dell website, including its recycling standards, which have been audited by third parties.

**Sheila Davis, Executive Director, Silicon Valley Toxics Coalition**

Sheila Davis stated that the Coalition has worked for many years on electronic waste. There is an emerging aspect, in the form of a new wave of this type of waste: it is the electronic waste resulting from clean technologies like solar energy and other clean energy initiatives. While they burn cleanly and are being showcased as clean technologies, they have many of the same characteristics as other forms of e-waste, with the same hazardous materials, such as cadmium and lead. With this new wave, there is a new opportunity. She described the European Union initiative whereby producers are required to take back and recycle their own products. This “extended producer responsibility” is a voluntary initiative in the EU, with respect to clean energy technologies. The manufacturers are establishing their own recycling capabilities because they know they will be required to do so by law eventually. She suggested that there is an opportunity for the CEC to invite this group to come and establish operations in the NAFTA countries. In this way, infrastructure and recycling technologies can be transferred to and established in North America.

**Michael Vanderpol, Senior Program Coordinator, Waste Reduction and Management Division, Environment Canada.**

Michael Vanderpol stated that in Canada the generated e-waste is recognized as an ongoing issue both domestically and internationally. The responsibility for this is shared among the federal government and the provinces. Extended producer operations are rapidly emerging across Canada. Collection programs are often the responsibility of municipal levels of government. Many levels of government work together. Rural and remote areas in Canada such as the territories are presenting a challenge because of the lack of infrastructure. Additionally, the federal level is very involved with the CEC projects pertaining to e-waste, which are a good forum for sharing challenges and best practices as well. He described several issues which contain a lot of ambiguity, especially when multiple countries are involved, and he suggested that the CEC is a good forum for addressing this.

Question/Comment: Glen Wright led off the question-and-answer session by asking Mike Watson to elaborate on how Dell carries out its recycling program.

Response: Dell is a very large company, it is global, and we have a wide variety of material streams. In 78 countries and growing, if you have in your possession anything with a Dell brand on it you can request someone to come to you and pick up your Dell product at no cost. We have over 200 material streams within the operations of our business. Dell has a very crystal-clear disposal policy that makes sure that all of the recyclers doing this work prioritize re-use and refurbishment into a hierarchy, right down to commodity materials recovery. All of Dell’s recyclers around the world work to the same standards, with respect to triage, and their activities are located as close to the Dell installation bases as possible. All of these are audited by third-party auditors. Through the audits, the programs are continuously improved. If there are data storage devices associated, we implement privacy protocols that are rigorous and audit this aspect as well.

Question/Comment: Glen Wright commented that while it was very expensive to recycle, there were valuable materials to be had from the process. What is e-waste worth? Is it all expense or is there intrinsic value? Could you share your thoughts regarding this?

Response: Álvaro Núñez replied that it is very difficult to create self-funding recycling companies in Mexico. There is inadequate legislation regarding the standards that must be adhered to, which has resulted in poor practices. While many of the components are recycled, the sellers of the material are paid the going rate in the market place. In a few instances this is profitable but many of the components are attracting prices that are not profitable. Electronics has created an underground market and it is difficult for a legitimate business to become self-sufficient. We are requesting legislation in Mexico to classify the recyclers who meet high standards. There is not enough knowledge and education in Mexico to properly manage e-waste.

Mike Watson replied that it is important to look at the economics of this material stream from a manufacturer's perspective, from the time it leaves the customer until it reaches the recycler. There is intrinsic value in some of the material streams. If business approaches this like it approaches any other business challenge, the economics can be driven to a reasonable solution, if you break it down properly.

Question/Comment: Diane Takvorian made a comment regarding pollution prevention, asking how some kind of a system linked to extended producer responsibility, one that is government-run and is something like the energy rating system, might work for electronic waste. She added that if we are going to give consumers some tools, we need to give them a variety of tools.

Response: Mike Watson replied that as an industry, the manufacturer is constantly working toward design for environmental criteria and is improving upon it constantly. It is important to look farther, toward design for recycling. We ask for feedback from the recycling partners regarding the decisions we are contemplating at the manufacturing stage and get their opinions regarding recyclability. We also compare that to customer wants and we have learned that some of the advice is completely opposite to what customers want. There are a lot of decision factors when creating the design of an electronic device. We also bring our designers through our recycling facilities and this has changed their behaviors.

Michael Vanderpol suggested that there are some opportunities that are attractive. There is the voluntary aspect that can make a difference. There is the mandatory design criteria and regulation that is worth pursuing, such as in the EU experience. Extended producer responsibility programs are another area that can make a difference. Certification of the system that is in place to manage the waste stream is also important as an opportunity that all countries can explore. Green procurement is a huge opportunity that has been unexplored in many countries. Environmental labeling programs can be broadened to put them more in the consciousness of the general public. Directives and legislation also are motivators and are especially effective when combined with extended producer responsibilities. Extended producer responsibility is really an environmental policy concept and resembles a product take-back program. This program allows consumers to give back those products that are at the end-of-life stage, in order to ensure that the product undergoes some kind of responsible management.

Sheila Davis replied that there are many issues that need to be taken into consideration at the design stage. She said it is important to consider the market drivers, suggesting that there are scorecards that track progress. Over the last ten years, there has been more and more incorporation of green designs into the electronic components that make up the stream. Some of the marketing money of the big producers could be spent on marketing green electronics. There is a powerful marketing mechanism within the industry that can really help us to buy green.



Question/Comment: A participant from Montreal referenced a comment regarding smelters, stating that smelter operators think of e-waste as “urban ore,” which is a total mindset change from past practices. This is much like the pulp-and-paper industry’s stating that instead of starting with a tree, it would start with waste newspapers. He added that all automobiles have electronic and computer components in them and asked what is being done in terms of automobile recycling operations in recovering the electronic components.

Response: Sheila Davis replied that automobiles have a much more historic tradition of being recycled, albeit it largely through smelters without separating out many of the components.

Question/Comment: A public member from the audience asked what the experience was at Dell when initial discussions were taking place regarding becoming an industry leader and what the motivation was. What moves an industry to take a leadership role?

Response: Mike Watson replied that part of the impetus was from his CEO, who is widely motivating as a speaker. There was also a convergence of several business issues as well. There are no such things in large corporations as big budgets. There are business opportunities and challenges and there was a strong desire to meet customer needs. The customer can be part of the solution and the customer wants to be, because unlike in many other areas, customers can actually enact recycling and help the environment, so it resonates with them.

Sheila Davis suggested that one of the reasons why Dell has the policies that it has today is because of nongovernmental organizations (NGOs) and the Basel Action Network, adding that her organization targeted Dell as a corporation.

Question/Comment: A member of the public asked Sheila Davis about the pro-active plan regarding nano materials that are beginning to be introduced. Also, he asked how much Wal-Mart’s sustainability indexing program has helped, describing the program as demanding a full life-cycle analysis from vendors, and carbon footprint labeling for consumers. He added that these are examples of bold leadership from business, given the lack of policy direction from governments.

Response: Sheila Davis replied that nano materials have developed as an incredible concern, especially with respect to the solar industry. Dispersing nano materials throughout the environment would be detrimental to all of us. She said that take-back programs, indexing programs and other such programs drive change.

Mike Watson stated that it was important to have a good solid target for industry to aim at and not multiple targets, which would dilute the work being done.

Question/Comment: An audience participant commented that the cradle-to-cradle initiative by Dell should be publicized. With respect to recycling fees, he wondered why we couldn’t give a refund in that area, suggesting that it would be a tremendous incentive.

Response: With respect to cradle-to-cradle, one of the challenges with recycling is to get enough material to guarantee an entire production run with the recycled material. The sourcing out of old end-of-life material demands reliability of supply throughout the product run.

Question/Comment: A participant on the Internet asked how to convince Dell to include non-profit educational institutions when making use of re-useable computers. A second question was how those who

need second-hand computers for educational programs can prevent destruction of these devices by California authorities.

Response: Sheila Davis replied that the California system requires that you pay a \$6–10 recuperation fee at the point of sale when you purchase a computer with a certain screen size. At the appropriate time, the recycler receives payment for the recycling. There is not a clause to cover re-use. The recyclers are not given an incentive to keep it in the system but receive the incentive for destroying the product.

Mike Watson stated that Dell has committed 1% of all of its top-line revenue to charitable organizations, and 90% of that is to educational programs. He added that when they give equipment, they prefer to give new rather than old, and that typically most of the donations go to education.

Question/Comment: Martin Gutiérrez remarked that, from the consumer's side, fear may be generated because of the lack of regulations regarding recycling. We need to focus on clear messages and make good recommendations to the Council. What are the recommendations that we should make to our ministers? Also, what happens in the United States and Canada with regard to the multiple levels of government involved in the disposal of electronic waste? Poor communities that have received computers as donations don't know what to do with them when they are at the end of their life cycle. This may be an opportunity for recyclers.

Response: Álvaro Núñez declared that education is the most important program for all levels of government to support. This must become a national program and the knowledge of what to do must be readily available everywhere. It is important for governments, businesses, universities and the public to create a network that links everything to recycling. Recognizing those who do recycling well is very important. Right from design to disposal, it is essential to know that everything is linked.

Sheila Davis suggested that a solid recommendation would be to transfer the solar recycling program from the EU to North America. She described the program as setting aside funds for the end-of-life events of solar products, even though these events won't happen for some time. This is not a government initiative. She suggested that the electronic industry can do the same thing. In terms of government procurement, the federal government is committed to take-back and recycling but unfortunately it does not track where the material goes after the recyclers have the items. The federal government needs to adopt the e-Stewards practices.

Michael Vanderpol said that electronics, if used and stored properly, will not develop environmental issues. The inherent risk is when these things become a waste because that is when they have a likelihood of going down the wrong road. Different countries are in different stages of their evolution, and the knowledge of what works can be shared with counties that are less sophisticated. Regardless of the regulations at all levels, there is an opportunity to share best practices. It is important to put a level playing field in place so that there aren't inequities that can be exploited. The Basel Convention has some sound guidelines that should be considered. We need to recognize there is a lot of activity taking place and take care to explore the best models that are out there. Provisions need to be in place to ensure environmentally sound management and we need to be clear about realistic standards and provide tools to embrace them. There are a lot of lessons that have already been learned.

Mike Watson suggested that information availability is very important. Using already existing communications, we could be adding information regarding end-of-life electronics. Leveraging outreach is very important. Measurement is also very important, especially with respect to end-of-life metrics and

the effectiveness of programs. Educate, execute, track progress and report it out to the public would be great advice to government.

Question/Comment: Felicia Marcus said that she really wanted to thank the panel for their engaging dialogue. She asked everyone to consider how to incentivize design and how to level the playing field.

Question/Comment: A Canadian member of the audience asked how you address planned obsolescence. Are there any plans to incentivize people to keep the electronics longer?

Response: Mike Watson replied that planned obsolescence is frustrating. A lot of hardware turnover is driven by software applications that require more and different hardware to run them. Perhaps we need to think more smartly on how to extend software longevity.

Question/Comment: A member of the audience who is a researcher from Mexico commented that there has been little discussion about the people who are doing the job. Specifically, there is concern about toxic damage and the health and safety of the workers and people who are exposed to the materials. How are we going to address the effects on workers and children and the homeless? What are the right measures to follow?

Question/Comment: An audience member from a Mexican company commented that they have developed a recycling program with Apple. The resellers were given a green bonus for reselling Apple products. This program provides good results. It is a win-win situation.

The moderator asked for brief final statements from the panelists as a prelude to ending this segment of the Session.

Álvaro Núñez expressed the hope that the next stage can bring everyone to the table and find a solution. He stated that if the EU can do it, we can.

Sheila Davis suggested that some of the planned obsolescence might be driven by software but there may also be software solutions to assist designers at the design stages. She added that incentives can be provided to the software designers.

Michael Vanderpol reiterated that it is important to think of what we are doing internationally. Trans-boundary movements are important and the Basel Convention is significant. Infrastructure at home to process the equipment for re-use and recycling is necessary. There are flagship organizations that can be replicated. Tracking, data and verification by third-party auditors will help operating facilities raise the benchmark as high as possible. Raising awareness and communications are vital to success in ensuring environmentally sound management.

Mike Watson stated that the effect of internal finances changes the behaviors of manufacturers more than any incentives do. When an industry-run program costs the company internally, there are very uncomfortable conversations, and cost internalization becomes a game changer.

Glen Wright thanked the panelists and the participants from both the audience and the webcast for a fruitful and enlightening discussion. He then turned the floor over to the Chair, Irasema Coronado, who thanked everyone for their input and reminded everyone that the Regular Session would resume the next morning at 9:15 AM.

The Chair then announced that the Networking Session for the Public would follow the adjournment of the JPAC Session first day's events. The public was invited to meet and exchange views on North American environmental issues, with JPAC members attending as observers. Ms Coronado stated that public feedback was important in providing sound advice to Council. She then described the 18<sup>th</sup> Regular Session of Council, which would begin at the Montreal Biosphere in the evening. She thanked everyone for a day that was truly insightful, educational and inspirational.

The JPAC Regular Session was adjourned for the day.

### **Networking Session for the Public**

The results of this Networking Session for the Public would be presented at the public portion of the Council Session the next day, 22 June.

## **JPAC Regular Session 11-02 (with the public as observers) Wednesday, 22 June 2011**

### **Overview, by Irasema Coronado, JPAC Chair, and Approval of the Provisional Agenda**

The Chair welcomed everyone, and the provisional agenda for the session was reviewed and approved. Ms Coronado stated that a provision of the Agreement (NAAEC) was for each country to have a national advisory committee (NAC) and a governmental advisory committee (GAC). It is customary to have presentations by those groups as part of the agenda for the day. She then asked each of the committees to come forward in turn and make its presentation.

### **Reports from the Representatives of the National and Governmental Advisory Committees**

Mr. Jeffrey Wennberg, Chair of the US Governmental Advisory Committee (GAC), briefly outlined his background. He followed by saying that the previous interaction with JPAC during the New Orleans Session was very beneficial and that the outcome was enormously helpful to all of the GAC members. The GAC and the NAC work very closely together. He added that while they provide Administrator Jackson of the EPA with separate Letters of Advice, in the case of the CEC the advice from both the GAC and the NAC was similar. He reviewed the GAC Letter of Advice on the Draft Operational Plan of the CEC that was submitted to Administrator Jackson and the response letter that had been received. The specific recommendations and responses that were contained in the documents will be available to the public on the EPA website and will be widely circulated.

Having reviewed the Letter of Advice on the CEC Operational Plan's format and presentation in detail and the EPA response in general, Jeffrey Wennberg turned the floor over to Gail Small for the NAC presentation.

Gail Small, Member of the US National Advisory Committee (NAC), was representing the NAC Chair, Karen Chapman, who was not able to attend. She outlined the role of the NAC, adding that the NAC members were grateful for the opportunity to interact with JPAC at the New Orleans Session. She stated that many of the NAC comments were similar to those reflected in the GAC letter but the NAC had added comments regarding the SEM process, transboundary environmental impact assessments and an initiative to establish a North American indigenous peoples subcommittee.

She reviewed the NAC Letter of Advice that was submitted to Administrator Jackson and the response letter that had been received. The specific recommendations will be available to the public on the EPA website and will be widely circulated. Because the NAC membership had not yet reviewed the EPA response, she would only comment briefly on it.

Ms Small stated that, with respect to the SEM process, the NAC noted the Parties' commitment to a yearlong review and that concerns were being seriously considered. The EPA had replied that they were liaising with the State Department for a reinstatement of the process surrounding transboundary environmental impact assessments. With respect to the establishment of a North American indigenous peoples subcommittee with representation from all three countries, the NAC was pleased to see the level of interest in indigenous issues exhibited so far. The NAC looked forward to continuing work on these and other issues in the future.

The Chair thanked the two presenters and said that their perspectives play an important part in JPAC's deliberations. She then opened the floor to questions and comments.

Question/Comment: Geoffrey Garver said that there may be a missed opportunity to engage members of the public more in the selection of projects, and that with respect to the North American Partnership for Environmental Community Action (NAPECA), he hoped that engaging the public through panels of experts would be considered.

Question/Comment: Glen Wright stated that he believed that the interaction between the various committees, as in the New Orleans JPAC Session, was helpful. He said that the fact that two of the three countries do not have a NAC or a GAC creates an imbalance. He reiterated that some form of capacity in each of the countries to embrace the NAC and GAC approaches would be helpful to creating a well-balanced level of participation.

Question/Comment: Felicia Marcus commented on the thoughtful, good work that both the NAC and the GAC had done on their Advice to Council, adding that JPAC's Letters of Advice are also similar, which gives more voice to the issues.

Response: Mr. Jeffrey Wennberg observed that the EPA may be able to offer Canada and Mexico some judgments as to the value of the two committees. He added that it would be helpful if counterparts existed in all three countries and that the EPA's support and desire to be positive contributed greatly to the success of the NAC and the GAC.

Question/Comment: Carlos Sandoval commented that Mexico was concerned that there were provisions for the establishment of a NAC but the new appointments are yet to be made. He expects it will happen soon and he added that, with respect to the establishment of a GAC, there are complexities around political structures which make it difficult.

Response: Gail Small noted that there was an elevated focus on the establishment of indigenous peoples subcommittees within North America.

Question/Comment: JPAC Chair Irasema Coronado asked Gail Small if she could elaborate on the projects and focus of the indigenous peoples subcommittees.

**Response:** Gail Small said that there were several ongoing projects that would continue but that the establishment of the subcommittee would also entail looking at transborder issues which need addressing, because indigenous peoples live on both sides of the borders and share common environments.

The Chair thanked the participants and said that she looked forward to working with the NAC and the GAC in the future.

### **JPAC Discussion on Potential Advice to Council**

#### **Moderator: JPAC Chair Irasema Coronado**

The JPAC Chair, Irasema Coronado, opened the floor for discussion on whether or not an Advice based on this Session's discussions should be presented to Council and if so what that Advice should contain. She described the role of JPAC in providing Advice to Council and identified the members of the Working Group and their responsibilities in this regard. She added that JPAC encouraged the participation of the public and that the public perspectives were valued by both JPAC and the Council.

Linda Angove stated that she felt that, based on the discussions, there was sound advice that could be given, especially regarding the good participation from the public and the excellent speakers. The presentations showcased an excellent example of all three countries working together. The power of information-sharing with enforcement authorities is very valuable for stopping the illegal exporting of e-waste. Targeting through information sharing is clearly more effective than random inspections. She commented that it is obvious from the presentations that the design phase is vital to controlling e-waste and pays dividends down the road. Also, it is important to showcase the role of re-using before recycling and the benefits to the environment of such a focus. A theme that surfaced throughout many of the discussions was the need for the governments to establish high standards for e-waste recycling and to create a level playing field. She added that we should consider supporting e-Stewards certification as an effective tool to controlling the damage e-waste can cause to the environment.

Adriana Nelly Correa stated that certification is a very important strategy to integrate into the commercial sector and the business of e-waste. It is important to provide companies with the necessary information to embrace high standards for certification and it is important to involve every public member, every government and every business sector in the focus on e-waste. This is an essential strategy for changing e-waste into a sustainable opportunity where everyone is an ally.

Martin Gutiérrez said that there is a need for certification standards that are approved and shared between the three countries. This has been done in other areas of the world. He suggested that we might not be ready to provide an Advice to Council today and asked the other JPAC members and the public whether or not there was enough detailed information or if we need more.

Glen Wright noted that the purpose of this segment was to share ideas, from which the Working Group would write a proposal for an Advice to Council that would be presented to all of the JPAC members for their consideration. He said that it would be helpful to hear all of the ideas so that JPAC could determine whether there was enough for a formal Advice to Council.

Felicia Marcus suggested that we need to consider whether we are ready to decide the priority that should be accorded to e-waste and what kind of Advice should be given, adding that good examples from the European experience exist and might be useful. We also need to take into consideration the perspectives from the public that will be briefed to Council later on in the day.

Glen Wright stated that we have an opportunity to provide an Advice on the issue but we also can get into practical initiatives that contribute to the overall goal of improving the North American environment. He added that it is obvious that there is a necessity for the sharing of information and that there is already a good start on this. We could put forward an Advice that says this is where the CEC can uniquely promote and facilitate even beyond current levels.

Geoffrey Garver suggested that it might be worth considering advising that there is a dirty side to clean technology. This is an opportunity for the three countries to be ahead of the issue at the trinational level. With respect to procurement, there are examples where the governments are beginning to address this and there may be an opportunity for the CEC to review its own strategy and set an example for all to see.

Felicia Marcus said that it might be worth suggesting that the Working Group that is focused on transboundary issues involve all of the other players within government that have an effect on this. To create stronger incentives for a level playing field and to have a significant focus on prevention through green design will require several government departments.

Linda Angove suggested the need to reference some of the work that has already been done at the CEC and within the government organizations. While there is a lot of work that is already being done, it must be acknowledged that there is a requirement to better track e-waste data. There is a need to focus on outreach; the education of the public is vital to success and could be accomplished through simple methods, such as by messaging bills, etc., that the public already receives.

Tim Hearn commented that trying to solve this e-waste problem at the back end is a huge undertaking. There is value in focusing on the front end by establishing a level playing field and by addressing manufacturing through public policy without destroying the competitive nature of the industry. In this way we could reduce the massive challenges at the back end of the e-waste cycle.

Diane Takvorian stated that focus on the front end is critically important to reducing the back-end junk piles that are growing rapidly. There is a need for common criteria trilaterally. The back-end reports of where the waste is going, particularly between the US and Mexico, are a motivator for a focus on the front-end opportunities to meet the environmental challenges.

Martin Gutiérrez remarked that, in the case of Mexico, the issue is a lack of information to address or measure the problem. We need to know more about the commercial side and understand the economics of the problem. If there is a business case in real terms for the recyclers, we need to know of this. We need to analyze successful cases and use them as an example. Many of the companies in Canada that are dedicating themselves to recycling are not present here and we need to look at them for advice and information.

Geoffrey Garver suggested that we need to underscore the necessity of involving the private sector, especially those parties taking leadership roles. The Working Group should incorporate companies that have shown some leadership, not just in the green design aspects but in all parts of the process. He added that we might consider our past Advice on Greening the North American Economy to see what elements of that Advice are elements that contribute to the e-waste issue.

Laurent Benarrous advised that there is a need to focus on green product design, adding that even the current achievements still require a lot of work. It is important to know about recycling companies that are truly green economically and use them as examples of the changes that are required, because these changes are long-term.

Carlos Sandoval commented that it is important to focus on how to turn this problem into a commercial success, and to oversee all products so that they cannot harm the North American ecosystem. The life cycle of many machines, cars for example, from many countries are causing environmental problems and e-waste is only part of a larger issue within the free trade agreement. We need to strengthen all of our vigilance mechanisms at the borders so that we can avoid all of the non-compliance issues. The Commission can facilitate and promote solutions to all the three governments. We should not focus solely on e-waste but on all of the products that harm the environment, because of life cycles. He added that we need to have an inventory of what is going across the borders so that we can analyze the impact on the environment.

### **Observers' Comments**

The Chair, Irasema Coronado, stated that at this point, JPAC would welcome perspectives from the public that could be considered for inclusion in the Letter of Advice to Council.

A member of the public, from the Canadian Environmental Network, remarked that it is important to go beyond e-waste and that there is a need to prove the issue of green design on a wider scale. She used the example of multi-chemical sensitivity, stating that the numbers of peoples who are affected is spiking. She suggested that PRTR (Pollutant Release and Transfer Register) can be used as a tool and that JPAC should consider a daylong session on multi-chemical sensitivities and the link to human health.

The Chair reminded the audience that PRTR would be discussed, during JPAC's absence, in a presentation to the public that follows.

A member of the public from Canada stated that Sarah Westervelt's presentation was a key to the Session's focus. He observed that disposal in e-waste centers in Quebec can result in atmospheric emissions of heavy metals from the smelters they ship to. He noted that the Quebec government has imposed tougher limits on industrial waste, adding that the environmental consequences of recycling are manageable. He also said that there are emerging problems with the issue of private data, belonging to previous owners, that have been left still residing on refurbished electronic equipment.

A Mexican member of the public commented that he had experience in the collection of material and e-waste recycling and that, from a business perspective, it was not profitable. He suggested that there is a need for support from the governments and that the producers of electronic devices should be held responsible for the cleanup of their products.

A Mexican member of the public who is a student at the University of Vermont remarked that this problem will not be solved overnight. She suggested a Working Group be formed of all of the main players, to map the stakeholders and determine how to get commitment from them. Consumers and NGOs should be included. NGOs should be the bridges between the various players and encourage interaction to determine how they all can work with each other. She added that it is important to develop data and indicators and share information freely and to include the public.

Glen Wright suggested that the CEC could act as a catalyst to bring together on a trilateral basis all of the best practices and that perhaps our JPAC Sessions should consider doing this as part of the agenda.

Felicia Marcus commented that there were some very good points and that mapping what is out there is very important. It is necessary to pull together leaders at all levels, including labor, for health reasons, and share best practices among the various stakeholder groups.



A Mexican member of the public, from the Business Council in Guanajuato, stated that we are in danger of leaving the small and medium-size companies behind while we focus on the big producers. There is a need to generate databases to help manage the information from all of the players, and certification standards are very important for success.

Carlos Sandoval stated that the financial aspects of e-waste are very important. He added that there are many resources but that they are not used well. He suggested that the CEC should be the coordinator and that including the small and medium-size companies would be imperative.

Rodolfo Lacy said that, as an example, Germany will not support the importation of biofuels from other countries if it affects businesses within those countries. In a similar way, e-waste is not allowed to be imported from abroad, and this protects small and medium-size companies that are in the recycling business. North America does not have such import criteria and there is a need for similar regulations. The Commission needs to be involved in establishing the criteria for imports and exports of this material.

A Canadian member of the public, who is the environmental officer for McGill University, remarked that collaboration with other agencies is vital, as is communication and outreach to the public and private sectors. The education sector can play a role, since it exists already; the United Nations University has had an e-waste task force since 2004. She added that there are avenues available where focus on the e-waste issues with manufacturers has already begun and that we should not let politics prevent us from coming to a common solution.

An American member of the public, who is a biofuel thermal conversion advocate, stated that the template used in addressing biodiesel sustainability standards may be useful in establishing standards in other areas as well.

A Canadian member of the public, a biologist, stated that it was important to re-emphasize the role of partnerships between industry and the public in addressing e-waste, adding that no one can do this alone.

Rodolfo Lacy emphasized that it is important to map imports and exports and that a more systematic approach is needed. It is important to take stock and rank the importance of various goods crossing borders.

A Mexican member of the public, from a recycling company in Mexico, stated that there is a need for recycling certification standards and suggested that the standards within the United States could be applied to the Basel Agreement to create common standards for everyone in our three countries.

Martin Gutiérrez commented that it is obvious that we need to have a greater flow of information to the public to address this issue. He suggested that JPAC establish an e-mail account so that the public could send in ideas to make recommendations to Council.

Chair Irasema Coronado advised that the public could e-mail JPAC through the address <jpac@cec.org> and encouraged all members of the public to send in their ideas and recommendations.

Felicia Marcus remarked that the role of the United States, in the context of the Basel Convention, needs to be as responsible as it can be and that we should encourage this whenever possible. However, she added that it may not be easy to involve the United States in the Basel Convention, given the current political climate.

A member of the public from Mexico suggested that it was important to make a list of everything that is traded between the three countries and to have the CEC prioritize the items on the list and determine where the Commission was best suited to take action. He added that wildlife trade fits into this category and that the CEC is best suited to address this area, which has been left behind.

Felicia Marcus suggested that it was important to keep our dialogue related to the effects of trade on the environment in our future deliberations.

### **Closing Remarks, by Irasema Coronado, JPAC Chair**

Chair Irasema Coronado provided closing remarks, noting that it was a substantive Session with good input. Ms Coronado stated that the input received will be considered in framing a Letter of Advice to Council. She announced that all the presentations will be available on the CEC website and that further questions can be posted on the website for follow-up. She added that another area of interest for consideration was the concept of deceptive use of green marketing as a PR tool throughout North America. It is important to be aware of this; the public needs to be properly informed to make sure they don't become victims of brainwashing.

There being no further observations, the Chair announced that JPAC would now proceed to an in-camera session with Council. While JPAC was in-camera with Council, the public would receive a presentation, Building Healthy Communities and Ecosystems by Tracking and Managing Pollutants of Common Concern: The CEC's North American PRTR Project and Mercury Initiatives, to be given by Orlando Cabrera-Rivera and Ned T. Brooks.

With sincere thanks to everyone for a very positive Session, Irasema Coronado formally adjourned the JPAC Regular Session 11-02. She stated that the Council Session, which was open to the public, would take place throughout the afternoon. The summary and minutes of the follow-on 18<sup>th</sup> Regular Session of the CEC Council will be promulgated under separate cover.

Approved by JPAC  
31 August 2011



**Commission for Environmental Cooperation (CEC) of North America**

***XVIIIth Regular Session of the CEC Council  
and meetings of the Joint Public Advisory Committee (JPAC)***

***21–22 June 2011***

Palais des congrès  
1001, place Jean-Paul-Riopelle  
Montréal, Québec, H2Z 1H2  
Tel.: (514) 871-8122 / Fax.: (514) 871-9389

**Program of Public Events**

*Monday, 20 June 2011*

**19:00–20:00 Registration of Participants – Palais des congrès 511a**

*Tuesday, 21 June 2011*

**8:00–9:00 Registration of participants – Palais des congrès 511a**

**9:00–16:30 Managing E-waste in North America: A Public Forum – Palais des congrès,  
Room 511abde**

9:00–9:05 Welcoming remarks, Irasema Coronado, JPAC Chair

9:05–9:25 Overview presentation on E-waste in North America: Challenges  
and Opportunities, by **Sarah Westervelt**, E-Stewardship  
Director, Basel Action Network

9:25–10:00 Question and answer period

10:00–10:10 Break

10:10–10:35 E-waste: Inter-agency Enforcement Cooperation Under the CEC

**Manon Bombardier**, National Director, Environmental  
Enforcement, Environment Canada

**Felipe Olmedo**, Director de Inspección de Residuos Peligrosos,  
Dirección General de Inspección y Vigilancia en Puertos,  
Aeropuertos y Fronteras, Profepa

**Deborah Kopsick**, Environmental Protection Specialist,  
US EPA

10:35–11:35 Question and answer period

11:35–12:00 Report on the results from the CEC workshop in Guadalajara and upcoming work to promote environmentally-sound management practices in small and medium-size enterprises, specifically e-waste recyclers and refurbishers

**Arturo Gavilán**, Subdirector de Estudios sobre Sustancias Químicas, Instituto Nacional de Ecología (INE), on behalf of the e-waste officials group.

Also in the question and answer period:

**Michael Vanderpol**, Senior Program Coordinator, Waste Reduction and Management Division, Environment Canada

**Rick Picardi**, Acting Branch Chief, Office of Resource Conservation and Recovery, US EPA

12:00–13:00 Question and answer period

13:00–14:00 Networking lunch [provided] – *Intercontinental Hotel, Maisonneuve Room*

14:00–16:30 Roundtable discussion on opportunities to promote better management of e-waste in North America

*Moderator: Glen Wright*, JPAC member for Canada

**Álvaro Nuñez**, Director General, Recicla Electrónicos México (REMSA)

**Mike Watson**, Director of Compliance, Dell Global Takeback

**Sheila Davis**, Executive Director, Silicon Valley Toxics Coalition

16:30–17:00 Wrap-up, by Irasema Coronado, JPAC Chair

**17:00–18:00 Networking Session for the Public** – *Palais des congrès, Room 511abde*

The public is invited to meet and exchange views on North American environmental issues. JPAC members will attend as observers. Participants should appoint the chair for this session, who will present a summary at the public portion of the Council Session on 22 June.

**18:30–19:00 Transportation to the Montreal Biosphere** – *(Transportation will be provided departing from the lobby of the Intercontinental Hotel at 18:30 hrs.)*

**19:00–21:30 Welcoming Reception and Official Opening of the XVIIIth Regular Session of Council** – *The Montreal Biosphere*

- Welcoming remarks, by Pierre Arcand, Minister of Sustainable Development, Environment and Parks, Province of Quebec
- Remarks by Evan Lloyd, CEC Executive Director
- Remarks by Irasema Coronado, Chair of the CEC Joint Public Advisory Committee

- Remarks by Juan Elvira Quesada, Mexican Secretary for Environment and Natural Resources
- Remarks by Lisa P. Jackson, Administrator, US Environmental Protection Agency
- Welcoming remarks and official opening of the 18th Regular Session of the Council, by Peter Kent, Canadian Environment Minister

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| <b>Wednesday, 22 June 2011</b> |
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- 8:00–9:15**      **Registration of participants** – *Palais des congrès 511a*
- 9:15–11:15**    **JPAC Regular Session 11-02, open to the public** – *Palais des congrès, Room 511abde*
- 9:15–9:20      Overview, by Irasema Coronado, JPAC Chair, and approval of the provisional agenda
- 9:20–9:40      Report from the National and Governmental Advisory Committee representatives
- 9:40–10:50     JPAC discussion on a potential Advice to Council
- 10:50–11:15    Observers' comments
- 11:15–11:30**    **Break**
- 11:30–12:30**    **Building Healthy Communities and Ecosystems by Tracking and Managing Pollutants of Common Concern: the CEC's North American PRTR Project and Mercury Initiatives** – *Palais des Congrès, Room 511abde*
- 11:30–11:50    Presentation by Orlando Cabrera-Rivera, Program Manager, Air Quality and PRTR
- 11:50–12:00    Presentation by Ned T. Brooks, Program Manager, Chemicals Management
- 12:00–12:30    Question and answer period
- 12:30–13:50**    **Lunch [provided]** – *Intercontinental Hotel, Maisonneuve Room*
- 13:50–15:00**    **Council Session, open to the public** – *Palais des congrès, Room 511abde*
- 13:50–14:20    Progress report from the Executive Director
- 14:20–14:50    Highlights of 2011–2012 Operational Plan activities
- North American Grasslands: Management Initiatives and Partnerships to Enhance Ecosystem and Community Resilience
  - Big Bend-Río Bravo Collaboration for Transboundary Landscape Conservation/North American Invasive Species Network
  - Improving Indoor Air Quality in Alaskan Native Populations and other Indigenous Communities in North America
- 14:50–15:00    Council discussion on the North American Partnership for Environmental Community Action (NAPECA)

**15:00–15:30 Break**

**15:30–17:00 Council Public Meeting – Palais des congrès, Room 511abde**

- Introduction on the conduct of the session, by Irasema Coronado, JPAC Chair
- Reports on the JPAC Public Forum on E-waste in North America and on the results of the Networking Session
- Statements by pre-selected presenters
- Comments by Council members

**17:00–17:15 Council Session Closing – Palais des congrès, Room 511abde**

- Signing of Council Resolutions and Ministerial Statement
- Closing remarks, Secretary Elvira, and Passing the Torch: New Council Chair and Announcement of 2012 Council Session, Administrator Jackson
- Concluding remarks by the Session Chair, Minister Kent

**17:15 End of Session**

**Eighteenth Regular Session of the CEC Council  
and meetings of the Joint Public Advisory Committee (JPAC)  
Montreal, Quebec, Canada  
21–22 June 2011**

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