



United States Department of State

Washington, D.C.

Intergovernmental Preparatory Meeting
UN Commission on Sustainable Development – 19
Thematic Discussion: Waste Management
Intervention for March 2, Morning Session

Intervention Delivered by: **Marie Boucher**, Office of Resource Conservation and Recovery,
U.S. Environmental Protection Agency

Thank you, Chair. We are honored to join you again in this forum to address Waste Management and the roles of effective and efficient resource use in attaining sustainable development goals.

Historically, the United States has focused on building a regime for managing waste by: establishing a broad regulatory program; reducing priority pollutants; launching partnerships to reduce waste; promoting recycling, and building markets for recycled materials.

We have now broadened our focus to examine how resources can be used more productively and with fewer environmental impacts before they even become a waste. Our emphasis on sustainable materials management aims to capture upstream opportunities to reduce and transform materials use.

We know that materials use and waste generation are tied to products and services. The United States has worked to improve consumer and manufacturer awareness by providing information on the environmental implications of their decisions. We also rely on our partners in state and local governments, the private sector, civil society, and the global community to work with us to identify areas for collaboration and to use the most effective, science-based solutions for waste prevention and management.

Support for remanufacturing and the promotion of international trade in remanufactured goods exemplifies how cooperation to promote environmental solutions can also provide economic and social benefits.

The United States has long held the view that all actors involved in a product chain contribute to improving a product's environmental impact throughout its life cycle.

One example is the Electronic Product Environmental Assessment Tool (known as EPEAT). EPEAT is used globally by purchasers to identify, compare, and buy environmentally preferable electronic products. It provides an opportunity for purchasers to exercise their buying power to influence the design of electronics. Market demand for greener products drives greener design.

The United States shares technical information to support capacity building in local communities faced with managing wastes for which there is little infrastructure or technical expertise. On our websites, we offer guidance, case studies, tools, and training materials covering a range of topics addressing waste planning, prevention, management, and clean-up.

In addition, we urge cooperation and the use of existing international instruments to address environmental challenges. The Global Methane Initiative, to which we have provided financial and in-kind support, is a model example of international cooperation, tech transfer, and capacity building. This voluntary partnership reduces landfill methane emissions by encouraging its recovery for use as a clean energy source.

The United States is a major partner of the Global Partnership on Nutrient Management aimed at sharing best practices for managing agricultural wastes, maximizing nutrient value and preventing water pollution. We encourage other governments and major groups to participate.

Regarding the support and enforcement of international conventions, such as the Basel Convention, it is a priority for the United States to prevent illegal transboundary movements of waste. We support International Network for Environmental Compliance and Enforcement (INECE) as a means of strengthening international coordination on enforcement. Due to the success of an INECE Global Inspection Project in 2010, we urge the expansion of additional projects to build seaport inspection capacity to intercept illegal shipments of waste.

Various UNEP instruments provide the forum to strengthen local capacity in developing countries to manage waste and chemicals, including the Basel and Stockholm Conventions and the Strategic Approach to International Chemicals Management (SAICM). The United States, along with many other countries here, has provided financial and in-kind support for these conventions.

While we urge the inclusion of waste and chemicals management into development aid requests, we underscore the need to build on existing efforts to make the most of available funding.

While recognizing the link between chemicals and waste management, we appreciate the separation of chemicals and waste decisions coming out of this process.

In closing, we look forward to learning from and working with you to explore how we can collaborate to help create a green, resilient, competitive, and sustainable future.



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Extended Remarks Upon
Which Intervention is Based

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U.S. Environmental Protection Agency

Thank you, Chair.

We are honored to join you again in this forum to address the important matter of waste management and the critical roles of effective waste management and efficient resource use in attaining sustainable development goals.

At CSD-18, the United States stressed the importance of how society uses materials and how these uses fundamentally affect our economic and environmental future. Matters concerning materials and waste must be considered beyond national boundaries to maximize environmental results and to achieve efficient and safe materials management. In this forum, we look forward to exploring how we might collaborate to help create a green, resilient, competitive, and sustainable economy in the future.

Historically, the United States has focused on building a successful regime for managing waste by establishing a comprehensive regulatory program; setting national standards for landfills; identifying priority pollutants for reduction; launching partnerships to reduce waste, promoting recycling, and building markets for recycled materials; and providing education and technical assistance. We have also focused on the implementation of a variety of policies to foster a strong societal commitment to pollution prevention and the 3Rs.

More recently, we have broadened our focus to include a more holistic, cradle-to-cradle approach to using resources more efficiently and productively. A sustainable materials management approach emphasizes powerful upstream opportunities to reduce and transform materials use and signals a necessary change in how we think about waste and materials.

While we have undertaken the challenging task of considering life cycle impacts in the design, manufacturing, use, recycling, and disposal of products, we have also relied on our partners in state and local governments, the private sector, civil society, and the global community, such as the Organisation for Economic Co-operation and Development (OECD) and the UN Commission on Sustainable Development, to identify areas for collaboration and to seek innovative solutions to help advance our collective interest in a sustainable future.

Support for remanufacturing, for example, and the promotion of international trade in remanufactured goods exemplifies how international cooperation to promote innovative environmental solutions can also provide significant economic and social benefits. Remanufacturing provides opportunities to expand access to high quality goods at lower costs and also prevents end-of-life goods from entering landfills, recovers the energy and materials embodied in the end-of-life goods, and uses less materials, energy, and water than manufacturing.

Encouraging Sustainable Materials Management

By considering the impacts of materials use throughout their life-cycle, we know that materials use and waste generation are fundamentally tied to products, how they are designed, how they are used, and how they are recycled or managed at their end of life. The United States has worked to improve consumer and manufacturers awareness by providing online tools and information on the resource implications of their decisions. For example, we have conducted Life Cycle Building Challenge, a competition for students and professionals to design buildings that can be deconstructed and reused, to spark design innovation, fuel market demand for reuse of building materials, and prevent the disposal of construction debris. More details about this program can be found in the attachment.

The United States has long held the view that all actors involved in a product chain can make significant contributions to improving a product's environmental impact throughout its life cycle. The United States encourages *product service systems* - innovative business models that find new ways of delivering value by moving from selling products to selling product and service mixes. These systems have the potential to achieve both economic benefits (e.g., increased innovation, competitiveness, jobs) and environmental benefits (e.g., reduced environmental impacts, reduced resource use). In 2011, the United States will hold a workshop on product service systems and international participation will be encouraged. More details about this program can be found in the attachment.

Another highly effective tool that engages multiple actors in the product chain is the Electronic Product Environmental Assessment Tool (known as EPEAT). EPEAT is a ranking system used globally (covering electronic products registered in 41 countries) by purchasers to identify environmentally preferable electronic products such as those designed for energy efficiency, that use fewer toxic materials, and are easier to upgrade or disassemble for recycling. Manufacturer participation in this initiative is voluntary and only those products that meet the minimum standard can achieve EPEAT registration. Using EPEAT provides a significant opportunity for government and private sector purchasers and consumers to exercise their buying power to influence the design of greener electronics. This tool now has a total of 36 manufacturers currently participating with more than 3000 products registered worldwide.

We encourage countries to join EPEAT's standards development activities currently underway on imaging equipment and televisions and to engage in future activities related to mobile devices and servers. More details about this program can be found in the attachment.

Another voluntary approach is the Design for the Environment (DfE) program, a partnership of government agencies, industry, environmental groups, and academia to identify and evaluate the human-health and environmental concerns associated with traditional and alternative chemicals and products, which encourages industry to move to safer alternatives. This can lead to reduced generation of hazardous waste. The United States welcomes international participation in U.S. EPA's alternatives assessment program under its DfE partnership. More information about the DfE partnership can be found at <http://www.epa.gov/dfc>.

Tools for Waste Management

The United States government remains committed to addressing emerging waste management challenges in developed and developing countries. We value the transfer of knowledge through information sharing and technical assistance to support local capacity building in waste management for developing countries.

The United States provides substantial technical information and guidance on managing specific wastes, processes, and management planning. On our websites at www.epa.gov and www.usda.gov, we have made available guidance, case studies, tools, and training materials covering topics such as mercury waste management, disaster debris management planning, municipal or private sector waste reduction planning or waste exchanges, hazardous waste clean-up, pesticide and nutrient management, land revitalization and green remediation. The U.S. National Report for CSD 18 CSD provides extensive information on programs in the United States to manage materials safely in ways that promote their recycling and reuse.

The multilateral partnership, the Global Methane Initiative (GMI) has been a successful program to which we have provided financial and in-kind support. The GMI is designed for the purpose of creating a voluntary, non-binding framework for international cooperation to reduce anthropogenic methane emissions and advance the recovery and use of methane as a valuable clean energy source. GMI targets five major methane sources: agriculture, coal mines, landfills, oil and natural gas systems, and wastewater. By conducting technology transfer, improving local capacity, and marketing project opportunities across borders and sectors, GMI is developing local, clean energy resources while reducing GHG emissions.

Our commitment to supporting the environmentally sound management of waste extends to agricultural wastes. Appropriate management of animal waste is an important agricultural practice necessary for improving soil quality and subsequent crop yields. Careful management of this material maximizes nutrient value and prevents run off which leads to pollution of waterways or groundwater. The United States is a partner of the Global Partnership on Nutrient Management aimed at sharing fertilizer practices and policies for managing nutrients. We encourage other governments and major groups to participate.

Leveraging International Efforts

Various UNEP instruments provide the forum to strengthen local capacity in developing countries to manage waste and chemicals, including the Basel and Stockholm Conventions and the Strategic Approach to International Chemicals Management (SAICM). The United States

has committed, along with many other countries here, support, including financial and in-kind, for these existing international agreements. Providing and encouraging the flow of information and guidance on environmentally sound management (ESM) of waste is essential for local communities faced with managing wastes for which there is little infrastructure or technical expertise.

CSD-19 can explore ways to assist countries to use a variety of freely-available tools, databases and international frameworks to better incorporate waste and chemicals management into development aid requests. We underscore the need to build on existing programs and efforts to make the most of available funding.

We have provided financial and in-kind support for the activities of the Basel Convention and Stockholm Convention in general, and in particular, the work undertaken by the Basel Convention and Stockholm Convention Regional Centres.

We actively support the Basel Convention's Public-Private Partnership for Action on Computing Equipment (PACE), specifically with regard to finalizing technical guidelines on the environmentally sound recycling, reuse, and refurbishment of used and end-of-life computing equipment and advancing the PACE pilot projects focused on the informal sector in developing countries. We also continue to support the work conducted by the United Nations University's Solving the E-Waste Problem (StEP) as embodied in the Memorandum of Understanding between the United States Environmental Protection Agency and StEP such as tracking and information sharing.

Transboundary Movements of Waste

We recognize the concerns expressed to CSD-18 with regard to illegal transboundary movements of waste and calls for support and enforcement of existing international conventions. It is a priority for the United States to prevent illegal transboundary movements of waste and we are committed to advancing and strengthening international coordination on enforcement efforts targeting illegal shipments. We strongly support the International Network for Environmental Compliance and Enforcement (INECE), which is the only global organization committed to strengthening enforcement and compliance efforts for environmental protection.

Through INECE, the United States has participated in a coordinated global inspection project in 2010, which also included participation from Europe, Asia, Africa and the Americas. This global inspection initiative relied on the Seaport Environmental Security Network, which specifically targets seaports for monitoring and inspection of waste shipments. This network is dedicated to facilitating the building of capacity, the raising of awareness and the collaboration among environmental enforcement officials.

During the INECE Global Inspection Project in 2010, officials from customs agencies and environmental ministries of 12 countries worked together to identify and intercept illegal shipments of waste. Most of the seized illegal shipments involved electronic waste and ozone depleting substances. Collaboration and information sharing between importing and exporting countries and the development of peer-to-peer relationships among enforcement officials in these

countries were instrumental to the success of this project.

Due to the success achieved during the 2010 Inspection Project, we urge the expansion of additional projects to build seaport inspection capacity in developing countries. We believe that with greater coordination among importing and exporting countries and expanded use of intelligence-led enforcement and risk assessment techniques, seaport inspection efforts can be more targeted and effective. Effective communication between importing and exporting countries is a prerequisite for successful enforcement collaboration - - and targeted efforts are especially important where enforcement resources are limited. Additionally, the U.S., through the Commission for Environmental Cooperation, is establishing a collaborative process for sharing intelligence on illegal e-waste shipments within the North American enforcement community.

Conclusion

We look forward to continuing these important discussions concerning the sustainable management of materials and waste and increasing collaboration with all sectors of society to meet sustainability goals and to address the challenges we all face. While recognizing the link between chemicals and waste management, we appreciate the separation of chemicals and waste decisions coming out of this process. As we further our own national efforts in waste management and capturing the value of waste as a valuable resource, we look forward to learning from and working with international partners on the environmentally sound management of waste and improving materials and product sustainability, which we believe will play a critical role in achieving global sustainability goals.

Attachment: Background and Supplemental Information on Waste

Waste Management: INECE Seaport Environmental Security Network (SESN)

SESN Goals: The INECE Seaport Environmental Security Network (SESN) is an operational network of professionals involved in the inspection and monitoring of transboundary movements of hazardous waste through seaports. SESN participants work together to **build capacity, raise awareness, and facilitate enforcement collaboration** relating to the detection and control of illegal and dangerous transboundary shipments of environmentally-regulated goods through seaports, including hazardous materials, electronic waste, and ozone depleting substances.

Current Activities: In 2009 and 2010 the SESN hosted workshops in Accra, Ghana, and Siem Reap, Cambodia, for the purposes of assessing needs in sensitive regions of waste trade, and sharing capacity-building tools and training. Two primary tools presented by the SESN at the workshops were course materials to assist countries in developing more effective cooperation between environmental and customs enforcement officials through the negotiation of Memoranda of Understanding concerning the operation of joint activities and information sharing, and intelligence-led enforcement as a methodology for effective targeting purposes. The Ghana workshop also featured the exchange of information about waste inspection techniques at ports. These various tools and techniques from the workshops given to date are transferable to future activities of the SESN.

In addition, in 2010 the SESN International Hazardous Waste Inspection Project was launched at the request of the Ghana workshop participants. This project was a simultaneous inspection exercise involving environmental, customs, and other enforcement authorities from countries in Africa, the Americas, Asia, and Europe. Project results indicate that compliance with international treaty provisions regarding international hazardous waste movement remains a challenge. Most importantly, a framework for cooperation during global inspection events was developed during this project, which can facilitate the development of future similar activities now under consideration.

Opportunities for Participation: Looking to the future, the environmental and customs ministries of the countries participating in the SESN will continue to collaborate and build enforcement capacity, leading to more effective detection and deterrence of illegal shipments of hazardous waste through seaports.

Additional information on the SESN activities and available tools can be found at <http://www.inece.org/seaport/>. Enforcement officials interested in participating in future workshops and inspection events are invited to contact the INECE Secretariat at inece@inece.org

Electronic Product Environmental Assessment Tool (EPEAT)

EPEAT® is a resource for finding electronic products designed to reduce environmental impact, combining comprehensive empirically-based criteria for design, production, energy use, and recycling with ongoing independent verification of manufacturer claims. It is the definitive global registry for greener electronics, covering the most products from the broadest range of manufacturers with the most extensive geographical coverage. For those looking to ‘green’ their computing operations, the EPEAT rating system offers a way to integrate environmental performance requirements into IT purchasing. EPEAT is a requirement for US, Canadian, Australian, and New Zealand national government purchasing, and is used by national government agencies around the world. Hundreds of other private and public purchasers use EPEAT as a comprehensive specification to green their IT asset base.

EPEAT is a multi-attribute ranking system developed through a comprehensive stakeholder process whose outcome was formally adopted by the Institute of Electrical and Electronics Engineers (IEEE) as the IEEE 1680 family of Standards for Environmental Assessment of Electronic Products. EPEAT currently applies to laptops, desktops and monitors (Standard 1680.1), and is expanding to cover a wide array of electronic products, including printers and imaging devices, servers, and mobile devices. The system is managed by the nonprofit Green Electronics Council based in Portland OR, and is open for use by any purchasing entity at no cost.

EPEAT is global – currently covering 41 countries (the US, Canada, EU and EFTA countries, Japan, China, Singapore, Taiwan, Australia, New Zealand, Brazil, and Mexico). Registration is by country, enabling purchasers to select products for the attributes met and verified in their jurisdiction. Most global manufacturers, and many smaller ones, register products in the EPEAT system; currently 46 manufacturers are participating and more than 3000 unique products are registered worldwide. Visit the website at www.epeat.net for more information on: participating manufacturers (www.epeat.net/companies.aspx); a sampling of EPEAT purchasers (www.epeat.net/RFP.aspx); EPEAT evaluation criteria (www.epeat.net/criteria.aspx) and model purchasing language (<http://www.epeat.net/ContractLingo.aspx>); the environmental benefits of EPEAT purchasing (www.epeat.net/FastBenefits.aspx); and the product database (www.epeat.net/search.aspx).

EPEAT-registered products cost no more than conventional products. However, compared to traditional computer equipment, all EPEAT-registered computers have reduced levels of toxic materials (RoHS compliance and beyond) to better protect human health and the environment. They are more energy efficient, which reduces emissions of global warming greenhouse gases, and they are also easier to upgrade and recycle. Manufacturers must offer institutional purchasers safe and cost-effective recycling options for EPEAT-registered products and their rechargeable batteries, even when sold outside WEEE jurisdictions. All companies registering products in EPEAT must also maintain environmental management systems and environmental reporting schemes.

Sample Purchasers

- **National Governments:** Australia, Canada, New Zealand, United States
- **National Government agencies:** France, Poland, Singapore, UK
- **States/Provinces:** California, Maine, Massachusetts, Michigan, Minnesota, New York, Ohio, Oregon, Pennsylvania, South Carolina, Washington, Wisconsin, British Columbia, Nova Scotia, Ontario, Quebec, Warwickshire County (UK), Minas Gerais state (Brazil)
- **Higher Education:** University of California system, American University, Cornell, Harvard, Penn State, Southern Michigan, Yale, Centre Nationale de Recherches Scientifiques (France)
- **Private sector:** Broadlane, Fairmount Hotels, HSBC, Kaiser Permanente, KPMG (US), Microsoft, Nike, Premi

Disaster Debris

Each year, natural disasters such as wildfires, floods, earthquakes, hurricanes, tornados, and winter storms challenge American communities. These disasters can create large amounts of debris, including building rubble, sediments, vegetative debris, wood waste, personal property, and other materials. Cleaning up this debris is often the most time-consuming and costliest element of disaster recovery.

How a community manages disaster debris depends on the debris generated and the waste management options available. Many communities are finding effective ways to salvage, reuse, and recycle all kinds of disaster debris. Soil, green waste, and construction and demolition (C&D) materials can be recycled or composted into useful commodities. For example:

- Green waste, such as trees and shrubs, can be "recycled" into valuable organic material, such as compost or mulch.
- Concrete and asphalt can be crushed and sold for use in road building.
- Metal can be recycled and sold by scrap metal dealers.
- Brick can be sold for reuse or ground for use in landscaping applications.
- Dirt can be used as landfill cover or a soil amendment for farmers.

Benefits of recycling disaster debris include:

- Recovering large amounts of materials for reuse.
- Reducing the burden of large volumes of material on local landfills.
- Saving money by avoiding disposal costs and through re-sale of materials.

To help communities prepare to clean up after one of these events, the U.S. Environmental Protection Agency has developed the Planning for Natural Disaster Debris Guide. The guide, which updates a 1995 document, provides helpful planning suggestions and information on dealing with the waste that is created by natural disasters. It is consistent with information provided by the U.S. Federal Emergency Management Agency and individual States. One of the Guide's main recommendations is that local communities develop disaster debris management plans. These plans help determine how disaster debris will be managed before a natural disaster happens. In addition, the Guide includes information on:

- Management options for various debris streams found after a natural disaster.
- A collection of case studies that highlights how several communities prepared for and managed debris generated by recent natural disasters.

For a copy of the document, please visit:

<http://www.epa.gov/epawaste/consERVE/rrr/imr/cdm/debris.htm>

Product-Service Systems

Product-service systems are business models that blend products and services in a value package (e.g., voice mail service, cell phone service, IBM ebusiness, and Zipcars). They typically operate through performance-based contracting where products are not necessarily the emphasis. These business models are viewed as having the potential to achieve both economic (increased innovation, competitiveness, prosperity, and jobs) and environmental benefits (reduced environmental impacts, reduced resource use, and optimized material flow), facilitating a move toward sustainable green economies and changing how the industrial sector meets society's needs. The labor-intensive aspect of applying these models makes them attractive on the job front, and their tendency to minimize and optimize material flows makes them more nimble and adaptable in changing markets.

Research conducted primarily in Europe shows these business models (especially those that fulfill a function) can achieve a 4-10 factor reduction in material use – comparable to the estimated reduction needed to live within the biocapacity of the Earth. Interest and activity around these models for environmental improvement can be found in many countries including Canada, European countries, Japan, Korea, and the United States, as well as international organizations such as the EU, OECD, UN and the Nordic Council of Ministers.

The U.S. Environmental Protection Agency (EPA) published a report entitled “Green Servicizing for a More Sustainable US Economy” looking at these models as a means for achieving a more sustainable U.S. economy. The report makes an important point that while these models may have high sustainability potentials, they can be implemented in unsustainable ways. Thus, policies need to address both market adoption and sustainability.

Governments can facilitate the market adoption and operation of these models. They can:

- **Level the playing field.** Enable these models to fairly compete with present business practices. The existing policies and market environment tend to favor present business approaches. Policies can “level the playing field” through such means as reducing information asymmetries, internalizing pollution or other environmental costs, and/or offsetting the advantage that externalized environmental costs may confer on present approaches (e.g., incentivize reduced resource use and lower unfair competition from subsidized resource use).
- **Reduce entry barriers.** Market forces are understood to function least effectively at the earliest stages of a new offering, where, for example, customer awareness and information is highly imperfect, financing is scarce for unfamiliar business concepts, and past performance “success stories” are scarce. Policy engagement can address these and other barriers to entry, including the entry of proven models into new customer sectors.
- **Formal and informal standard-setting.** Standards, whether formal or informal, are essential for markets to function efficiently, and standard-setting usually requires a facilitating actor.

In September 2010, the Nordic Countries held a “Green Business Models” workshop, the first such workshop taking on policy-making for market adoption of these models. The U.S. EPA is working toward holding a similar workshop in 2011. Looking to experiences in applying product service systems as expressed in these workshops, U.S. EPA is working to engage a wider audience and facilitate a dialogue in the potential economic and environmental benefits of these business models as part of the United States’ commitment to sustainability.

More information can be found at: <http://www.epa.gov/osw/partnerships/stewardship/docs/green-service.pdf>

Lifecycle Building Challenge

The Lifecycle Building Challenge was developed by the U.S. Environmental Protection Agency, the American Institute of Architects, the Building Materials Reuse Association, and West Coast Green. This national competition collects building and building component ideas that encourage the reuse of building materials by making them easy to disassemble and recover. Lifecycle building creates stocks of resources for future buildings, and the designs from the competition will keep materials at their highest value to minimize energy and resource consumption. Lifecycle building is designing buildings to facilitate disassembly and material reuse in ways that minimize waste, energy consumption, and associated greenhouse gas emissions. Also known as design for disassembly and design for deconstruction, lifecycle building creates high-performance buildings for today consisting of materials that can be used in the future. Its objectives are to:

- Create designs that facilitate local building materials reuse;
- Consider the full lifecycle of buildings and materials—from resource extraction through occupancy and, finally, deconstruction and reuse;
- Focus on quality and creativity of designs and concepts;
- Develop strategies that maximize materials recovery;
- Reduce the overall embodied energy and greenhouse gas emissions of building materials through reuse;
- Decrease environmental and economic costs ; and
- Address real world issues.

Ideas from the design contest will help jumpstart the building industry to reuse more of the 170 million tons of building-related construction and demolition debris sent each year to landfills in the United States.

Entries have included:

- houses that grow with families;
- solar cell walls that move;
- entire buildings designed to snap apart like Legos;
- shape-shifting multi-family housing/commercial space, and
- disaster shelters designed to be built out by community members.

For more information on the Lifecycle Building Challenge and for resources related both to new and existing buildings see www.lifecyclebuilding.org.

Waste Exchanges

Materials and waste exchanges are markets for buying and selling reusable and recyclable commodities. Some are physical warehouses that advertise available commodities through printed catalogs, while others are simply Web sites that connect buyers and sellers. Some are coordinated by State and Local governments. Others are wholly private, for-profit businesses. The exchanges also vary in terms of area of service and the types of commodities exchanged. In general, waste exchanges tend to handle hazardous materials and industrial process waste while materials exchanges handle nonhazardous items.

Typically, the exchanges allow subscribers to post materials available or wanted on a Web page listing. Organizations interested in trading posted commodities then contact each other directly. Materials exchange programs usually contain a brief description of the services offered, including the materials available for exchange, how to contact the exchange, and other pertinent information. As more and more individuals recognize the power of this unique tool, the number of Internet-accessible materials exchanges, particularly commodity-specific exchanges, continues to grow.

EPA has provided a comprehensive list of materials exchanges in the United States on its website that may serve as an example for other regions who wish to set up their own waste exchange. More information can be found at:

<http://www.epa.gov/epawaste/conserves/tools/exchange.htm>.