



Workshop Report: The Sound Management of Chemicals in the Caribbean

Castries, Saint Lucia
October 29-31, 2007

Executive Summary

The Department of Sustainable Development of the Organization of American States (DSD/OAS) conducted a workshop on the Sound Management of Chemicals in the Caribbean, in Castries, St. Lucia, from October 29-31, 2007, to address the challenges to effective chemical management in the Caribbean region, and to identify areas for priority action. Participants in the workshop comprised of representatives from national governments, non-governmental organizations and international organizations (see Annex 1).

A series of questionnaires addressing the issue of chemical management in the Caribbean were sent to the national coordinators of the countries in 2007. The questionnaires addressed, *inter alia*, the stockpiling and management of obsolete pesticides and other hazardous chemicals, and persistent toxic substances (PTS). The management priorities of the countries were also indicated. Based upon the responses to the questionnaires, the workshop was organized with the following objectives:

- achieve consensus on priorities pertaining to the stockpiling of persistent toxic substances such as obsolete pesticides;
- promote information sharing and exchange of best practices in chemical management;
- provide a framework for the development of a regional strategy for the safe disposal of PTS;
- contribute towards a draft regional policy on chemical management and trans-boundary movement of PTS and other hazardous wastes

Pursuant to achieving these objectives, the workshop's agenda facilitated presentations and discussions on: national frameworks for the management of chemicals and obsolete pesticide stockpiles in the Caribbean; different approaches to the management of obsolete pesticide stockpiles; chemical management and international trade; stakeholder experiences and cross-cutting issues; and approaches for moving forward in strengthening frameworks for the sound management of chemicals and obsolete pesticides in the region.

At the end of the presentations and discussions a litany of recommendations ensued to include, *inter alia*: (1) the need to develop a system for licensing and registration, but that development of the system should first be informed by comprehensive inventories in member states where needed; (2) a regional database for licensing and registration; (3) harmonized legislation on licensing and registration; (4) a regional approach to the disposal of obsolete pesticide stockpiles and other hazardous wastes; (5) assistance for a regional Plan of Action for the management of agro-chemicals with the countries

deciding what aspects are national priorities; (6) remediation of sites contaminated by obsolete chemical stockpiles was seen as a critical, and the need for capacity building in this specialized area; (7) training/capacity building within agencies such as customs authorities and the training should be harmonized across the region; (8) establish a mechanism for sustainable financing for chemicals management; (9) secure financing to facilitate the disposal of obsolete pesticide stockpiles; and (10) strengthen national dialogue particularly between the Trade and Environment ministries.

Summary of Sessions

I. Opening Session

Chair: Crispin d’Auvergne, Ministry of Economic Development, Economic Planning, Investment and National Development, Saint Lucia

Speakers: Paul Spencer, OAS Saint Lucia Representative
Scott Vaughan, Director of the Department of Sustainable Development, OAS
Christopher Roberts, Caribbean Environmental Health Institute
Donavan Williams, Permanent Secretary, Ministry of Economic Affairs, Economic Planning, Investment and National Development

Mr. d’Auvergne opened the session by welcoming participants to Saint Lucia and to the workshop. He noted the collaboration between the Sustainable Development Unit (Saint Lucia) and the OAS in bringing this workshop to fruition.

Mr. Spencer highlighted the role of the OAS in supporting various hemispheric initiatives and also the collaboration between national and regional agencies in Saint Lucia to undertake various developmental programmes and activities including land use planning and mapping, land stabilization, agricultural census, the Pigeon Island development, and a tourism sector plan. He further reiterated the role of chemical management for improving trade and the need for consensus on priorities regarding the stockpiling of chemicals, the threat posed by illegal trade in chemicals, the need for safe disposal of toxic chemicals and the management of transboundary movement of hazardous wastes.

Mr. Scott Vaughan, alluded to the need for a Caribbean perspective to address the issue of chemical stockpiles and management. In so doing he noted the gaps in information and the need for improved inventories, and asked that consideration be given to whether risk models for chemical management used elsewhere are relevant to our region. He further highlighted the need for regional initiatives and capacity building and information sharing and networking in helping to address the issues pertaining to chemicals management. Negotiations with GEF and CIDA to implement projects aimed at chemical management were also noted.

Mr. Christopher Roberts representing Ms. Patricia Aquino, the Executive Director of the Caribbean Environmental Health Institute (CEHI) spoke to the regional mandate of CEHI with respect to environmental health, including areas of environmental management and chemical management. He reminded the gathering of work done in chemical management in St. Lucia and Antigua on POPs, and an inventory of hazardous wastes in Trinidad and Tobago. Mr. Roberts also spoke warmly of the collaboration with the OAS in various projects including sustainable land management and water resources management.

The Permanent Secretary in the Ministry of Economic Affairs, Economic Planning, Investment and National Development, began by apologizing on behalf of the Minister who due to a busy travel schedule could not attend. The Permanent Secretary then pointed out the critical role of chemicals in our existence, and noted that the effects and impact of misusing chemicals are often unnoticed until damage has been done to health, safety and the environment. He highlighted the role of the Stockholm and Basel Conventions in chemical stockpiles management and the transboundary movement of chemicals. He reminded the gathering of the importance of information sharing and networking in moving this initiative forward. He thanked all those involved in organizing this workshop and gave a warm Saint Lucian welcome to all.

II. Technical Session 1 - National Frameworks for the Management of Chemicals and Obsolete Pesticide Stockpiles in the Caribbean

Chair: Herold Gopaul, Caribbean Environmental Health Institute (CEHI)

The various National Coordinators made presentations on the work undertaken on the management of chemicals and obsolete pesticides in their territories. The representatives generally spoke to the following issues:

- The legal/regulatory framework
- National status on conventions
- Institutional arrangements
- On-going activities for chemicals and pesticides stockpile management
- Challenges
- Needs

Table 1 below summaries the Countries' presentations.

Table 1: Summary of Issues on Chemical Management at The National Level

Country	Status of Chemical Management	Challenges	Needs
Belize	<ul style="list-style-type: none"> - Signed on to Stockholm Convention - No production of hazardous chemicals - Regulatory framework include, DOE, PCB, Public health Bureau, Belize Agricultural Health Authority - Environmental Protection Act - Pesticide control Act 	<ul style="list-style-type: none"> - No comprehensive chemical management legislation - Inadequate enforcement - Lack of data - Financial constraints - Inadequate infrastructure 	<ul style="list-style-type: none"> - Strengthen legislation - Ratification of Stockholm Convention - Development of NIP
Barbados	<ul style="list-style-type: none"> - Legislative framework include Pesticide Control Act, Basel Convention, Stockholm Convention - Pesticide inventory in 	<ul style="list-style-type: none"> - Management of chemicals 	<ul style="list-style-type: none"> - Guidance in training of operators - Strengthen regulations, monitoring and enforcement - Policy formulation for

	2003-2004 for POPS, PTSs, SHPPs, obsolete pesticides		management of banned chemicals - Infrastructure- storage - Feasible disposal options
Grenada	<ul style="list-style-type: none"> - No distinct legal and institutional framework for dealing with obsolete pesticides - No action on Basel, Stockholm and Rotterdam Conventions - Party to Chemical Weapons Proliferation - Accession to Vienna Convention 	<ul style="list-style-type: none"> - No data on health risk and complications - Absence of information on land contamination - No reported or documented practices - Lack of expertise to deal with obsolete pesticide stockpile 	<ul style="list-style-type: none"> - Inventories - Legislation/regulations - Mechanisms for effective cleaning up of PTSs - Sensitization and awareness raising - Training and capacity building
St. Kitts/Nevis	<ul style="list-style-type: none"> - Legislation- Pesticide and Toxic Chemicals Control Act - Party to Conventions: Basel, Protection of Ozone Layer, Biological Diversity, Climate Change' Stockholm , Chemical Weapons - Registration of over 250 pesticides - Unknown quantities of obsolete stockpiles and types found mainly sugar estates - Have multi-purpose laboratory - Ongoing environmental training 	<ul style="list-style-type: none"> - Conceptualization and formulation of policies, legislation and programmes - Implementation of same - Building consensus among stakeholders - Mobilization of information and knowledge - Monitoring, evaluation, reporting and learning 	<ul style="list-style-type: none"> - Regional database to promote harmonization and information sharing - Inventory and disposal of obsolete pesticides and PCBs in the region
Guyana	<ul style="list-style-type: none"> - Legal framework include Pesticides Act, Environmental Protection Act, Stockholm and Rotterdam Convention - Monitoring by EPA, Guyana Geology and Mines Commission and Pesticides and Toxic Chemicals Control Board - No manufacture of pesticides and toxic chemicals and minimal export 	<ul style="list-style-type: none"> - Disposal of Pesticides and pesticides containers 	<ul style="list-style-type: none"> - Management tools to improve current management system
Trinidad and Tobago	<ul style="list-style-type: none"> - Uses wide range of chemicals including toxic, hazardous and generates hazardous waste - No formal system for management of hazardous waste 	<ul style="list-style-type: none"> - Problems with existing legislation re lack of enforcement standards' and low rates of enforcement, petty fines, tedious court processes - Lack of coordination among agencies 	<ul style="list-style-type: none"> - Updating inventory of stockpiles - Environmental monitoring - Education and public awareness - Establishment of national/regional

	<ul style="list-style-type: none"> - Legal framework: party to Basel, Stockholm and Rotterdam Conventions - Environmental, Protection Act and National Environmental Policy - Hazardous waste inventory (2006) 	<ul style="list-style-type: none"> - Overlapping jurisdiction - Lack of harmonization with MEAs and other international treaties 	<ul style="list-style-type: none"> facility for recycling/disposal of toxic chemicals - Phase-out/ban of toxic chemicals
St. Lucia	<ul style="list-style-type: none"> - Has institutional framework with Permanent Secretary as Contact Point, focal point- Sustainable Development and environment Section, monitoring by the Toxic Pesticides and Chemical Control Board (PTCCB) and enforcement by Customs and PTCCB - No specific Act or regulations to deal with POPs, obsolete pesticides, but management through various Acts/regulations - Inventory of POPs conducted - Stockpiles of chemicals and obsolete pesticides found in at least five locations - No formal and monitored system for obsolete pesticides and stockpiles - Management left to owner 	<ul style="list-style-type: none"> - Identifying existing stockpiles - Safe access to stockpiles - Identification owners of stockpiles - Inadequate storage facilities - No legislation regarding management of stocks 	<ul style="list-style-type: none"> - Development of appropriate legislation - Finance to implement NIP - Capacity building for chemicals management - Attracting national and regional attention the issues - Data gathering and analysis related to health risks
Haiti	<ul style="list-style-type: none"> - Increased agro-chemical use due to heavy dependence on Agriculture - Stockpiles of obsolete pesticides - 2003 inventory of obsolete pesticides shows private sector to be main culprit 	<ul style="list-style-type: none"> - Lack of harmonization of pesticide management laws - Stockpiles have not been identified and pose a threat to health and environment - Poor storage of stockpiles - Lack of awareness of pesticide hazards - Poor management of stockpiles - Lack of regulatory infrastructure - 	<ul style="list-style-type: none"> - Complete identification of sites storing obsolete pesticides - Comprehensive Inventory of obsolete pesticides and toxic chemicals - Development of a clean-up removal and disposal plan - Technical assistance in conduct of analysis to determine possible health and environmental effects of contaminated sites - Capacity building

			<p>Private sector level to identify and use best practices for pesticide use and management</p> <ul style="list-style-type: none"> - Harmonization of legislation and coordination of agencies - Awareness raising, education and training at all levels
Jamaica	<ul style="list-style-type: none"> - Party to Basel, Stockholm and Rotterdam Conventions - Importation of POPs banned - Some obsolete pesticides dispose (1996, 1998) and others awaiting disposal - Inventories of obsolete pesticides and POPs done in 2004 - Well developed system for managing imports of pesticides - 	<ul style="list-style-type: none"> - Lack of coordination among agencies - Inadequate resources for promotion of public awareness and respect of health and environment - Inadequate lab facilities - Weak legislative machinery - Resources for monitoring and research - No regulations for chemicals - No data on chemical imports - Stockpiles at port of entry - Local disposal 	<ul style="list-style-type: none"> - Strengthen and enact new legislation - Financial resources and capacity building
Antigua and Barbuda	<ul style="list-style-type: none"> - Only evidence of “dirty dozen” chemicals is traces of PCBs from transformers of Electricity company - Concern about PTSs from dry cleaning industry - Negligible incidents of stockpiles of toxic chemicals and no evidence of obsolete pesticides - Updating Pesticides Control Act to Pesticides and Toxic Chemical Act - Environmental management Bill which focuses on POPs being reviewed for approval - Central Board of health and Ministry of Agriculture handles chemicals management 	<ul style="list-style-type: none"> - Monitoring and management inadequate - Gaps in existing system to flow into implementation of new legislation - Health risk have not been adequately identified - Entry of pesticides into ports before license is granted 	<ul style="list-style-type: none"> - Inventory - Research studies to be conducted on health and environmental impacts - Public relations, design and implementation of effective monitoring and management plans for hazardous chemicals and waste
Dominican Republic	<ul style="list-style-type: none"> - There exists a Hazardous Substances’ and Waste Department which falls under the Ministry of 	<ul style="list-style-type: none"> - Options for disposal - Inventories not complete - Monitoring at port of entry - Disposal of DDT stock 	<ul style="list-style-type: none"> - Funds to complete inventory - Assistance for disposal of DDT - Capacity building

	<p>Environment and Natural Resources</p> <ul style="list-style-type: none"> - Have legislation that prohibit formulation and commercialization of 15 pesticides and have guidelines on import and handling of pesticides - Party to Basel, Stockholm and Rotterdam Conventions - There are 40 tonnes of obsolete DDT in storage imported in 1989 - Responsibility for disposal is that of the Ministries of Health and Environment and Natural resources - No complete inventory on obsolete pesticides - No infrastructure and financial resources for disposal - Considering export as option for disposal - Using other methods of vector control to minimize of toxic chemicals - Working to complete NIP 		<p>particularly at Customs to improve monitoring</p>
<p>St. Vincent & the Grenadines</p>	<ul style="list-style-type: none"> - Have legislation but no enforcement - No stockpiles of obsolete pesticides - Have attempted identification of possible sites where PTSs and toxic chemicals are used - Landfill storage of PCBs and export of batteries and used oil to Trinidad 	<ul style="list-style-type: none"> - Limited communication among relevant interest groups - Disposal of pesticide containers and impacts on health and environment 	<ul style="list-style-type: none"> - Continuous update of chemicals imported - Storage facilities for used oil from garages - Awareness , education and training - Systems for general disposal and storage

From the summary provided, cross-cutting priority issues identified include, mechanisms for financing, enactment, strengthening, harmonization of legislation, completion of inventories, capacity building, training, awareness raising, technical assistance in determining best options for storage and disposal, design of effective management and monitoring systems, research and evaluations of health and environmental risks, completion of NIPs, information sharing and networking and creation of databases.

Discussion Points

Concerns were raised about the situation in Guyana where mercury was being replaced by cyanide in the mining industry and whether studies had been undertaken to support such a move. It was not established that any studies had been done but that the decision had been taken by the Government and the Guyana Geology and Mines Commission (GGMC).

Regarding disposal, the question arose as to which domestic agencies are responsible for the export of chemical waste for disposal.

- Barbados indicated that their Environmental Protection department had regulations and prescribed arrangements for export to Canada or in some cases waste were re-exported to the USA.
- Belize stated that it has utilized GEF funds for disposal arrangements but they did not indicate the final export destination.
- The situation in the Dominican Republic was that most exports were of PCBs by private companies to Canada.
- Antigua indicated that it had negligible stockpiles which were still in storage but that the Central Board of Health, the Pesticide Control Board and the Environmental department would have jurisdiction of such a matter.
- Guyana stated that they have no stockpiles for export but the Environmental Protection Agency would be responsible.
- St. Lucia inquired of an overseas company about the disposal of pesticides. The cost indicated was US\$10,000 for transportation of equipment and US\$29,000 for export of waste. It was further elaborated that the Toxic Pesticides and Chemicals Control Board along with the Ministry of Agriculture and the Sustainable development Unit share responsibilities for disposal and export, and that there was a lack of coordination in the institutional arrangements, and that there was no coordination in chemicals management at the national level;
- The situation in St. Kitts is that new legislation was enacted in 2002 to allow for better control and management and that while there are no formal arrangements for disposal, there is a designated shed for holding stocks of obsolete pesticides and chemicals.
- In Jamaica, while the GTZ has funded export disposal of pesticides in 1996-1998, other options (incineration, cement kilns) have been explored but with negative effects that have rendered almost unsuitable. The cost of export is also a major concern.
- Exports of chemical waste from St. Vincent have been mainly to Trinidad to which lead acid batteries and used oil from the electric companies has been shipped for disposal.
- Trinidad has some procedures though not a formalized system in place for export disposal and was in the final stages of preparation for shipping 24 tonnes DDT to Canada for disposal.
- Grenada has no formal arrangements for disposal and it was noted that there were no stockpiles at present.

There were further discussions on the high cost of disposal and the options available for disposal. Questions arose as to whether a cost-benefit analysis was conducted and what range of investment would be required to meet disposal storage costs in light of some countries establishing facilities for storage of obsolete chemicals and other hazardous wastes.

A range of cost was presented based on national and international experiences and include the following:

Barbados	US\$ 70,000 /container US\$40,000 -50,000 for less than 1 tonne
Dominican Republic	US \$3,000-4,000
St. Lucia	US\$ 10,000 for shipping equipment and US\$29,000 for disposal
FAO	US\$ 30,000

There was also the question of the liability with respect to management costs.

The issue of illegal trade in pesticides and toxic chemicals was also elaborated on. There were concerns about labels that were not in the official language of the importing country and that consumers would not be aware of the dangers posed by such products. This is a matter that was thought needed regional attention. Guyana also cited that their experience in dealing with sized products was to utilize the service of technical institutions such as the University of Guyana and others to conduct field trials of these pesticides and based upon evaluation were subsequently labeled. The role of the Bureaus of Standards in the various countries was highlighted as an important element for controlling packaging and labelling of pesticides and chemicals. Saint Lucia shared that a member of the Pesticide Control Board sits on the relevant committee of the Saint Lucia Bureau of Standards. Dr. Gene Pollard of FAO directed attention of participants to the availability of an FAO International Code of conduct for the management and use of pesticides. Jamaica indicated that its licensing regime helped curb the illegal trade of pesticide and toxic chemicals and that fines were imposed should pesticides reach the port of entry and cleared before a license was granted.

Compliance with regulations/procedures was also a point of discussion. It was expressed that challenges to compliance included an inability of various states to set compliance standards with respect to the various regulatory or systems interventions in place. What was thought to be required was the ability to inspect, investigate, monitor and report. Enforcement challenges which included limited financial and technical resources were also noted. Tracking mechanisms were viewed as key elements for ensuring compliance. It was agreed that legal pesticides could be tracked through licensing and registration procedures, but that there were challenges at the field level in monitoring use.

The ability to monitor and track private entities that are contracted to dispose of stockpiles was discussed. In Belize, stockpiles are kept in storage and no disposal has taken place. The situation in the Dominican Republic is that one international company working in Central America has offered to control stockpiles except DDT which is controlled by the Health Department. In Grenada there is not much private sector participation; and in Guyana stockpiles reportedly do not exist and there is no system if private disposal takes place. Regarding Guyana, the Pesticide Control Board has now reestablished links with the Guyana National Bureau of Standards and engages in some monitoring. In Jamaica destruction certificates are to be provided as proof of disposal. St. Kitts and Nevis relies solely on the importers' goodwill to take obsolete stocks to the Solid Waste Management Authority for storage, while in St. Vincent reports are made to the Ministry of Health but there are no mechanisms in place to track private contractors. Trinidad and Tobago relies on compliance with the requirements of the Basel Convention such as the manifest, disposal certificates and methods of disposal. St. Lucia has no system to track and monitor disposal by private entities. Barbados shared that it keeps stockpiles in storage although there are concerns about unreported stocks that farmers may have and how they dispose of same.

The discussions also addressed programmes in place for monitoring storage sites, remediation of contaminated sites and measures in place after disposal to prevent contamination. Trinidad and Tobago is one of the few islands with major experience in land remediation and cited a few examples: (i) a lead

contaminated site was identified, excavated, the material encapsulated with lime plus cement and reduced to less than 5ppm lead and buried in a cell at the landfill; (ii) Explosion of solvents at a warehouse resulted in the identification of chemicals that were left; remediation followed by recycling and encapsulation and treatment as above. The point was made however that the absence of regulations for storage of chemicals was a serious problem that needed to be addressed.

The Dominican Republic reported lead contamination in one community and that the particular industry responsible is addressing the problem using new technology but that the process is very slow. Guyana noted the designation of a site for a national storage bond and that importers and vendors must have bonds meeting specific requirements to be granted import licenses.

III. Technical Session 2 - Different Approaches to the Management of Obsolete Pesticide Stockpiles

Chair: Lyndon Robertson - Caribbean Environmental Health Institute

Dr. Gene Pollard, Regional Plant Protection Officer, FAO, opened the proceedings on workshop's second day, presenting experiences from the 1999-2004 FAO Inventory of obsolete pesticide stockpiles in the Caribbean and related FAO's experience of donating pesticides such as Mirex, to Africa for pest control (leaf cutting ants) and that it was the pesticide of choice until recently.

He indicated the difference between obsolete and unwanted pesticides. Obsolete pesticides are those which can no longer be used for their intended purpose or any other purpose and therefore require disposal. While unwanted pesticides were defined as, apart from obsolete pesticides, pesticides which still could be used (legally) but are not being used and are regarded as unwanted because of: surplus stock, the problem for which it was obtained has passed, logistical constraints on distribution, unsuitable formulation for the application equipment, etc.

Dr. Pollard alluded to the global nature of the problem of pesticide control and management citing specific concerns about types of pesticides, types of storage containers, storage conditions and the extent and seriousness of associated hazards. Of particular concern are products already legally obtained but subsequently banned; registration that has been withdrawn and cannot be used; products that have exceeded their use-by date; products have deteriorated physically or chemically to a degree that makes them unusable; products that are no longer needed for their intended use; products that cannot be identified because they have no label, the label is in the wrong language or illegible; materials that have been contaminated by spilled pesticides; too much of a product supplied that cannot all be used; large quantities of containers for disposal; or damaged containers that may have leaked, exposing products.

In an effort to address some of these concerns in the Caribbean, a global project on the inventory and disposal of unwanted and banned pesticides and POPs was undertaken in which Belize, Dominica, St. Vincent and the Grenadines, Trinidad and Tobago, Suriname and Saint Lucia participated. Inventories were conducted which showed the presence of 124.5 tonnes of obsolete stocks. Efforts are now ongoing at the national level and through partnership with international agencies and donor funding to dispose of these stocks.

Stefanie Brackman of the World Bank shared her experiences with and lessons learnt from the Africa Stockpiles Project. Ms. Brackmann indicated that 50,000tonnes of pesticides had accumulated in Africa

for various reasons including pest control, inadequate management, weak import controls, lack of training on appropriate use, donations and aggressive sales, poor storage and stock management, pressure to stockpile for emergencies and lack of safe destruction strategies.

The project is a 15 year multi-country project being implemented in seven African countries (Ethiopia, Mali, Morocco, Nigeria, South Africa, Tanzania, Tunisia) as of July 2007 with the objectives of eliminating inventoried obsolete pesticides and preventing of the re-accumulation of stocks. Support for the project is also being provided by the FAO and various NGOs. The estimated cost of the project for the seven countries is US\$50,000,000 with funding from GEF, World Bank, FAO and many other countries.

The project is being undertaken in four components: country Projects which involves clean up and disposal, prevention and accumulation, capacity building and project management (Component 1), technical support (Component 2), cross cutting activities (Component 3), and project coordination (Component 4). Many challenges were cited with respect to operationalizing the project including: the complex institutional arrangements, the involvement of civil society and NGOs, the need for additional funds, the need for evaluation of risk and implementation of mitigation measures and complex funding mechanisms. The project does however present opportunities for implementation in other African states to include other chemicals, prevent accidents, document best practices, encourage networking and information sharing, and engage in capacity building activities.

In his presentation Mr. Ambrose, Technical Secretary of the Coordinating Group of Pesticide Control Boards (CGPC) and Specialist in Plant Protection, IICA, spoke to the collaborative and cooperative role of the CGPC in the promotion of sustainable agriculture and to protect human health and the environment through effective management of pesticides and toxic chemicals in the Caribbean. He noted the various activities that the CGPC engages in including the establishment of a regional registration system, disposal of pesticides and toxic chemicals, information flow and networking, training and public awareness, coordination of existing laboratories involved in pesticides and toxic chemicals analysis, interfacing with regional and international organizations, and involvement in related projects of pesticides and toxic chemicals control.

As part of its disposal activities the CPGC conducted an inventory of chemicals and found stocks of obsolete pesticides, with the specifics such as chemical name, year and place of manufacture of the compound unknown, and in many instances found in damaged, leaking or rusty containers. Mr. Ambrose also stated that there were a number of challenges associated with disposal including: the presence of obsolete (banned or deteriorated) stocks in most of the territories including at the ports, absence of safe and environmentally sound facilities for storage and disposal, excess pesticides, large quantities of empty containers for disposal, the inadequacy of legislation, and cost of export for disposal. In exploring options for disposal, assistance was being sought from the international community, and chemical suppliers guidelines were prescribe for in-country disposal. It was highlighted that for in-country disposal, consideration should be given to avoiding over stocking by non-acceptance of donations from third parties, and non-acceptance of damaged containers and documentation without pertinent information on the stocks. He noted that treatment options worthy of exploration include biodegradation, disposal in managed landfills, incineration. Some concerns were raised about incineration as a disposal option, since incineration in small countries could be dangerous; and regarding biodegradation specific sites would have to be identified. Also of concern was that many of the chemicals could not be identified to help determine the best treatment option. In the final analysis, it was recommended the expert help be sought.

Ms Margaret Kalloo of the CARICOM secretariat reiterated that Member States of CARICOM recognise that there was misuse and abuse of agrochemicals as evidenced by air pollution, residues, deaths, soil toxicity, and contaminated water supply which resulted in fish, human and animal poisoning. With that recognition a Strategy for the Management and Use of Agrochemicals was adopted by CARICOM countries by decision of CARICOM Ministers of Agriculture at the Nineteenth Meeting of COTED in May 2005. This strategy which will be implemented by CEHI will be based on a common approach to management and focus on legislative aspects, (including monitoring, enforcement and information sharing), supporting infrastructure including capacity building, development of laboratories, financing, training, monitoring and use of best practices, and establishment of databases among other areas.

It was proposed that the draft legislative framework for pesticides and toxic chemicals prepared for the OECS be utilized for harmonization across all CARICOM states. Some gaps with respect to execution of the strategy were identified including non-articulation of action plans at the national and regional levels, inadequate involvement of technical experts in the process, the input from the CAHFSA which is not functional as yet and differences in legislation across countries. In moving the process forward it was recommended that time frames be set for execution of action plans, improving institutional capacity and laboratory infrastructure, consideration of risk assessments and the role of CROSQ in terms of testing and meeting residue limits.

Ms Anya Thomas also of the CARICOM Secretariat spoke about chemical management at the regional level and noted the challenges of countries in managing and implementing international polices. Ms. Thomas also noted the great reliance on MEAs to govern chemical management at the national level in the absence of comprehensive legislation and coordination among agencies, and limited technical and financial capacity. She recommended that attention should be paid to issues of liability and redress, the illegal trade in chemicals, capacity of customs as the first line of defense to deal with illegal trade and lack of environmental and other data on impacts of these chemicals.

Ms. Thomas also opined that increased trade in chemicals and the significant level of chemical imports in the region, along with reliance on MEAs as a means of regulation and the economic development and prosperity expected as a result of CSME, were all reasons for improved chemical management in the Caribbean. Also, since Member States have identified similar/shared needs and challenges a regional approach was proposed as it would ensure that all Member States achieve progress within an environment of scarce human and financial resources. The regional approach should include strengthening the knowledge and information base, enhancing the legal and institutional framework, enhancing capacity building, increasing financial and technical assistance particularly as far as risk assessments are concerned and reducing the use of chemicals. She also highlighted the challenges that may be encountered in taking a regional approach such as: the broad scope of issues to be addressed, monitoring and enforcement, the different capacities of member states and efficiency in coordination.

Mr Herold Gopaul of CEHI looked at a strategy for improved management and use of agrochemicals in the Caribbean noting the problems associated with poor use and management and the obligations to be met under national legislations and by states as parties to various conventions.

A Caribbean Study (2000 -2003) on the Impact and Amelioration of Sediment and Agro-chemical Pollution in Caribbean Coastal Waters pointed to the urgent need for effective agro-chemical management in the Caribbean to increase potential for international trade in agricultural products, continued employment for rural people and protect the environment". It indicated a lack of personnel involved, weakness in enforcement of regulatory mechanism, absence of standards, complex

administrative arrangements, illegal imports of chemicals and abusive use of chemicals impacting on health safety and the environment.

Strategies for improving management and use of agro-chemicals include, recognition and use of standards for residue levels, use of GAPs, promotion of integrated pest management, environmental and health monitoring, financing and employment of full time staff for Pesticide Control Boards, harmonisation of registration activities in the region and development of data bases..

Mr. Gopaul also presented the findings of an inventory of hazardous waste in Trinidad and Tobago. The objectives were to: (i) improve the overall management of hazardous waste in the country (ii) assess the current status of the generation, importation, export, transportation, treatment, storage and final disposal of hazardous waste and (iii) allow Trinidad and Tobago to meet its reporting obligations under the Basel Convention. Out of 285 companies surveyed in Trinidad and 100 in Tobago representing sectors such as oil and gas, the petrochemical industry, food manufacturing, tourism, garages, dry cleaners, utilities, publishing & printing, hospitals and health centres, furniture manufacturing, there was a reported total of **11, 452, 471** kgs of hazardous waste, the most popular type of waste was the Y9 waste (waste oils/water, hydrocarbons/water mixtures, emulsions). These wastes were generated across every sector that was surveyed.

Discussion Points

Discussion focused on strategies for in-country disposal, given the high cost to export but at the same time concerns were raised about (1) the inadequacy of national infrastructure such as laboratories, for assistance in disposal and (2) the cost of such infrastructure and whether laboratories should be operated at the national or regional levels.. The role of the private sector was highlighted in terms of financing and providing technical expertise to assist in disposal while at the regional level the mandate of CARICOM in the holistic management of chemicals was raised. With respect to the role of CEHI as the implementing agency for the CARICOM strategy, the suggestion was made that CEHI should develop a working relationship with the agricultural sector.

IV. Technical Session 3 - Chemical Management and International Trade

Chair: Ms. Claudia de Windt, Department of Sustainable Development, OAS

Ms. Claudia de Windt opened the session by stating that there are linkages between chemical management and international trade, noting trade as a driver of the increased use and movement of chemical substances. Ms. de Windt indicated that there are specific trade obligations in multilateral agreements that focus on chemical and environmental management. She noted the tension between trade and the environment and that trade measures as sometimes the best way to protect the environment. She cited the example of the export of methyl bromide, used for production of melons in the USA but traded in the EU, that had been banned.

Dr. Ronnie Sookhoo, Regional Director of the Basel Convention Regional Centre for the Caribbean, addressed the issue of the trade and trans-boundary movement of persistent toxic substances and other hazardous waste in the Caribbean, and the requirements of the Basel Convention in that respect. He gave an overview of the obligations under the Basel Convention noting that the Basel Convention establishes a regulatory system for the monitoring and control of the trans-boundary movement and

disposal of hazardous wastes. He highlighted the various goals of the Convention and noted the mechanisms for achieving those goals. Regarding the Caribbean he indicated the issues pertaining to the illegal trade of chemicals and emphasized the need to focus on prevention and reducing movement, and granting entry only with permission from the state.

The role of Rotterdam Convention and its potential for implementation in the Caribbean was presented by Mrs. Hyacinth Chin-Sue Walters, Registrar at the Pesticides Control Authority, Ministry of Health, Jamaica. She reminded participants of the increasing production, trade and use of chemicals, and the growing concerns about risks posed by hazardous chemicals to human health and the environment. She further stated that there is an increase in the regulation of chemicals in developed countries and a possible shift in production and use of banned chemicals to less developed countries by 2010. She noted the need for adherence to the precautionary principle as a first step to limiting or preventing imports of chemicals, particularly those whose risk have not been evaluated in the territories. She pointed out that the issue of export notification needed to be understood by Caribbean states. Mrs. Walters also highlighted the need for local risk evaluations in that regard.

She went on to indicate cross-cutting issues as they pertain to the to trade of chemical in the region, including vulnerability due to illegal dumping – a consequence of free trade, the need to make trade and the environment mutually supportive, regional cooperation to focus on monitoring and enforcement and capacity building.

Ms. Michelle-Ann Williams of the Department of Sustainable Development, OAS, gave a summary of the commitments under the Stockholm Convention and highlighting the status of the Caribbean countries under that Convention, noting that there were ten Parties, three Non-Parties and two Signatories. Ms. Williams addressed the role of the National Implementation Plan (NIP), and reminded participants that the NIP is required to state how countries will fulfill their obligations under the Convention. It was pointed out that Saint Lucia was the only Caribbean country to transmit the NIP to the Conference of Parties as of July 2007.

Additionally, Ms. Williams highlighted the various compliance challenges that Parties from the region were encountering under the Convention, including: inadequacy of storage sites and containers, environmental management, disposal, developing the NIP, identifying contaminated sites. She then indicated some of the reasons for challenges in compliance such as, limited financial and human resources, design of legal and institutional frameworks, the need for harmonization of efforts across agencies, technical capacity and public awareness.

Discussion Points

The discussion focused on communication between national agencies responsible for the implementation of programmes for meeting obligations under the conventions and the regional agencies involved in trade issues and negotiations. Communication between National Focal Points and the Regional Negotiating Machinery was highlighted in that respect. It was reported however, that the RNM had no role in these negotiations, but it was the legal infrastructure including Customs and Quarantine Departments dealing with movement of chemicals within the region, and supported by adequate monitoring efforts, that would be required to do the job. It was also felt that since a large component of environmental cooperation was embodied in trade agreements, that the CARICOM region should better utilize those provisions. The increasing efforts for inclusion of environment issues in trade negotiations at the regional level through the increasing involvement of Trade Ministers discussing the issues at the COTED level was noted.

Increased vigilance and enhanced monitoring systems were viewed as priorities especially if countries will become more vulnerable to illegal trade after CSME. Dr. Pollard of FAO noted that chemicals/pesticides management is one element of the FAO's work programme and that parties can request assistance.

The discussion on communication sought to address the coordination and implementation of activities pertaining to the three conventions- Basel, Rotterdam and Stockholm and the issue was raised as to whether one person could manage coordination of the three conventions. It was felt that with one central coordinating and implementing agency, and the appropriate delegation of authority, the head of such an agency should be in a position to manage implementation activities pertaining to these conventions.

V. Technical Session 4 - Stakeholder Experiences and Cross Cutting Issues

Chair: Cletus Springer – Chief Caribbean Coordinator, Department of Sustainable Development, OAS

Mr. Dave Jacob, Managing Director of Green Engineering (T&T), addressed the role of the private sector in the management and disposal of pesticides and other hazardous wastes. He cited specific examples of work undertaken in Trinidad and Tobago. It was noted that due to industrialization in Trinidad and Tobago, large quantities of hazardous waste are generated. Most hazardous wastes are exported but small quantities of pesticides are treated locally. He emphasized that other than export and incineration, other options for disposal, such as using secure landfills are available.

With respect to pesticide disposal he pointed to various options for disposal including incineration, biodegradation, chemical stabilization and solidification, and encapsulation and that the method of choice depended on the nature of the chemical, the quantity for disposal, environmental factors (e.g. climate) and costs. The importance of applying the three R's- Reduce, Recycle, Reuse as an option to curb the need for disposal was highlighted along with the need for a waste management plan. The need to monitor during treatment was also emphasized.

Mr. DeCosta Pierre, Assistant Manager at Renwick & Company Ltd, St. Lucia, traced the history of Renwick and Company in the chemicals distribution trade to the introduction of bananas as an export crop on the island of St. Lucia. He spoke about the process involved in obtaining a license for the importation for pesticides/chemicals, with approval required from the Ministry of Agriculture/Pesticide Control Board. He highlighted best practices that the company engages in with respect to chemicals management and control including: containerized shipping of chemicals, specific storage facilities, monitoring of expiry dates, conduct of inventory before ordering, farm trials conducted with the relevant technical agency such as CARDI, training of staff, representative of institutions, farmers and other customers, advocating use of Integrated Pest Management and working in collaboration with the Ministry of Agriculture.

Ms. Alfaro, Director, Environmental Commission of the Private Sector, Costa Rica, emphasized that real changes in environmental management need the participation of public and private sector. She noted that the private sector faces new challenges in environmental issues particularly as it relates to trade negotiations and that the Government and NGO's must work with the private sector to change production technologies supportive of meeting multilateral or bilateral trade obligations. She noted that

the private sector gives a different perspective and contributes to a more realistic and effective action plan for environmental management as it relates to trade. The importance of the private sector with regard environmental matters in trade negotiations should not be underestimated, especially since the private sector has the finances to promote change. She also pointed out the Environmental Commission of the Private Sector is a useful agency for promoting regulations and strategies with regard trade and the environment at the national level.

Mr. Earl Arthurs of the, Caribbean Disaster Emergency Response Agency, spoke to the reality of chemical disasters in the Caribbean region and looked at preparedness and response issues in that respect. He emphasized the key role that CEDRA has to play in chemical management in the region. He noted that as the Caribbean Sea is a special area and that the region relies heavily on tourism, the use of chemicals in agriculture and other industries requires effective management. He also indicated that managing chemical hazards is a specialized area, hence the need for a Comprehensive Disaster Management (CDM) plan. He reiterated that given that hazard management is a specialized area, it requires developing policies, plans, procedures and guidelines for transporting, storing, inspecting, disposing, and responding to accidental spills or discharges, etc., along with the ability to acquire expertise nationally and regionally in addition to specialized kits & equipment.

Specific constraints and challenges were highlighted including: the availability of external assistance to support national capacity, the need for specialized equipment and the accessibility, the lack of funds, national plans and procedures that are not harmonized, the issue of safety and security versus speed and efficiency compounded by the lack of cooperation and coordination between agencies. Mr. Arthurs again proposed the use of CDM which is the integrated management of all hazards as a key tool to move hazard management forward and for sustainable development in the region.

VI. Technical Session 5 - Moving forward in strengthening the Sound Management of Chemicals and Obsolete Pesticides in the Region

Chair: Cletus Springer - Chief Caribbean Coordinator, Department of Sustainable Development, OAS

Ms. Michela Miletto of the Department of Sustainable Development, OAS, discussed the findings and establishment of an online database on Persistent Toxic Substances and Heavy Metals in Latin America and the Caribbean. The database is intended to serve as a tool for the region for the integrated, life-cycle management of hazardous chemicals and wastes, particularly persistent organic pollutants (POPs) and other persistent toxic substances (PTS) and heavy metals. The importance of the database was brought into focus with the point made that different approaches to PTS management will generate different data including toxicity to animals, risk to the environment, use and consumption patterns.

The database development formed part of the OAS-CIDA funded project “Supporting Trade-Related Capacity Building in Environmental Management”. Information for the database was derived from Regional PTS Assessments (UNEP, 2002), sixteen (16) National Profiles, nine (9) National Implementation Plans, documents from national and regional agencies, PTS related projects in various countries and questionnaires to the countries.

The data was generated for 48 PTSs including 36 pesticides, seven (7) industrial compounds, three (3) heavy metals, one (1) organometallic compound and one (1) compound unintentionally generated. It was reported that there were significant gaps in the data, discrepancies in accuracy in data among

countries, problems in recompilation of the data and different classification of the data which presented challenges in operationalizing the database.

It was noted however that the usefulness of the database would be demonstrated by generating information from a range of stakeholders including the public for information on exposure, industry emissions, emission management and risks and at the regional level for generating general information including reports. Information generated could be used for alerts, trade promotion, capacity building risk identification, etc.

Discussion Points

The discussion addressed duplication of effort, as there were other known databases including that of UNEP, and the EU which covered similar areas in more detail. Follow-up on this matter was proposed although it was felt that the initiative would add value to other work that had been done.

Concerns were also raised about the absence of specific types of data such as toxicological and ecological information, but that since it was a work in progress, a manageable set of data was utilized initially with other information to be added. Additionally, there were strong views expressed about security, access, design, ownership, protocols for use, disclosure of the database and the need for government involvement at the national level to ensure that no breaches or misuse of the information occur. This was particularly important given that both the public and relevant stakeholders would have access to the data base, although the former would have only limited access.

V. Action Points: The Way Forward

In the way forward, there was discussion led by Mr. Springer on the structure of a Regional Action Plan for the management of stockpiled PTS. The critical areas for consideration were identification of priorities and needs, agreement on options for a national versus regional policy, and regional project opportunities.

The following summarizes the major action points regarding priorities and recommendations for the way forward in the management of chemicals in the Caribbean Region:

- A system for licensing and registration should be a priority, but development of the system should first be informed by comprehensive inventories in Member States where needed. It was also proposed that the reporting format for FAO be used for pesticides inventories.
- Training/capacity building within agencies such as customs is critical and there should be a common basis for this training.
- A financing mechanism should be established to assist in disposal and the national governments should be engaged on this matter.
- Given that the Basel Convention is in force, disposal of chemical waste is very complicated and there should be a mechanism to ensure that Parties and non-Parties to the Convention are engaged in disposal initiatives.
- As a matter of priority a regional database for licensing and registration should be established and this should be supported by harmonized legislation.
- There should be a regional approach to disposal and the system used for the Montreal Protocol should be followed for tracking purposes.

- While there may be complex legal, technical, administrative and financial issues concerning disposal, it was agreed that the best approach was for a central disposal system.
- Harmonization of legislation should also consider the integration of MEAs. It was also recommended that that model OECS legislation on chemical control be utilized, with CARICOM providing the framework for refinement to cover the other countries.
- Consideration should be given to establishing a regional inspectorate for auditing purposes.
- There was a plea for assistance for developing a regional programme, i.e., the Plan of Action for the management of agro-chemicals in the Caribbean, with the countries deciding what aspects are national priorities.
- Greater focus on information exchange with dissemination of data on health and environmental impacts of chemicals, is needed.
- Remediation of sites was seen as a critical, and the need for capacity building in this specialized area was recommended.
- There development of HAZMAT capabilities in the region is critical.
- Greater consideration should be given to the impact of chemicals on water and water management projects. In this regard linkages between national and regional agencies should be strengthened.
- A mechanism for sustainable financing for chemical management in the Caribbean is needed. Also it was recommended that the GTZ model utilized in Jamaica be considered.
- In addressing the issue of chemicals and trade, it is important to focus on the priorities and challenges and seek opportunities for cooperation which would be facilitated through information sharing and exchange. In that regard there is need for internal/national dialogue followed by broader regional dialogue.
- National dialogue needs to be strengthened, particularly between Ministries of Trade, Environment and the national focal points on key environmental positions that should be taken which would then inform regional positions.
- CARICOM will facilitate dialogue among the RNM, the OAS and itself to discuss chemical management and trade issues.

List of Participants

NATIONAL COORDINATORS	
<p>Melesha Banhan Environment Officer Ministry of Tourism, Culture, Civil Aviation, and the environment 1 Prime Minister Drive St. John's Antigua Phone: (+ 1 268) -563-2568 Fax: 268-462-4625 Email: m_banmhan@yahoo.com mail@environmentdivision.info</p>	<p>Guido Marcelle Chief Analytical chemist Produce Chemist laboratory Tantee, St. George's Grenada Phone: (+ 1 473) 440-0105 (473) 404-4272 Fax: (473) 435-1589 Email: guimacel@caribsurf.com pclab@caribsurf.com</p>
<p>Oscar Alonzo Environmental Officer Department of Environment Ministry of Natural resources & the Environment 10/12 Ambergris Avenue Belmopan Belize Phone: (+011 501) 822 2542 (501) 602 -7202 Fax: (501) 822-2862 Email: envirodept@btl.net oscarmalonzo@gmail.com</p>	<p>Trecia David Inspector, Registration and Licensing Pesticides and Toxic Chemicals Control Board Lot 18, Second Flat Brickdam, Stabroek Georgetown Guyana Phone: (+011 592) 225-1209 (592) 225-1045 Fax: (592) 225-0954 Email: trecia_david@yahoo.com</p>
<p>Elsa Ferreras de Sanchez, MS.c Encargada del Epto. De Gestion de Sustancias Quimicas y Residuopus Peligrosos Secretaria de Estado de Medio Ambiente y Recursos Naturales Subsecretaria de Gestion Ambiental Avenida 27 de Febrero, Esquina Ave. Tiradentes Plaza Merengue, 2do. Piso Santo Domingo Republica Dominicana Telefono: (+1 809) 472-0626 Fax: (809) 472-0631 Email: sga.calidad@medioambiente.gov.do elsaferreras@yahoo.com</p>	<p>Hiram Williams Chemist (Multipurpose Labs) Pesticides and Toxic Chemicals Control Board P.o. Box 186 La Guerite, Basseterre St. Kitts and Nevis Phone : (+1 869) 465-5279 (869) 465-3852 Fax: Email: hw.mplbos@gmail.com</p>
<p>Gillian Guthrie Director of Projects and Enforcement Ministry of Local Government and Environment 16A Half Way Tree Road Kingston 5 Jamaica</p>	<p>Benedict Charles Focal Point for PTS Ministry of Health and environment St. Vincent and the Grenadines Phone: (+ 1 784) 593-6531 Fax:</p>

Phone: (+1 876) 960-5632/3 Fax: (876) 920-7267 Email: gguthrie@mlge.gov.im	Email: rosmondc@vincysurf.com
Crispin D’Auvergne Sustainable Development and Environment Section Ministry of Economic Affairs, Economic Planning, Investment and National Development Price Waterhouse Coopers Building Point Seraphine St. Lucia Telephone☺+1 758) 559-0492 Fax: (758) 453-0781	Wayne Rajkumar Assistant Manager-Water/Waste/GIS Environmental management Authority EMA Technical Services 8 Elizabeth Street, St., Claire Port of Spain Trinidad and Tobago Phone: (+1 868) 628-8042 Fax: (868) 628-9122 Email: wrjkumar@ema.co.tt
Jeffery Headley Director Environmental Protection Department Ministry of Energy and Environment Jemmots Lane St. Michael Barbados Phone: (+1 246) 436-4826 FGax: (246) 228-7103 Email: enveng@caribsurf.com	

REGIONAL INSTITUTIONS	
Caribbean Environmental Health Institute (CEHI) The Morne P.O. Box 1111 Castries St. Lucia Phone: (+1 758) 452-2501 Fax: (758) 453-2721 <u>Contacts:</u> Patricia Aquing – Executive Director Email: paquing@cehi.org.lc Harold Gopaul – Information Services Director Email: hgopaul@cehi.org.lc Lyndon Robertson Email: forbes.robertson@gmail.com Camille Roopnarine – Sanitary Engineer Email: croopnarine@cehi.org.lc Christopher Roberts	CARICOM Secretariat P.O. Box 10827 Georgetown Guyana Phone: (+011 592) 222-0001-75 Fax: (592) 222-0171 <u>Contacts:</u> Maragrete Kalloo – Deputy Programme Manager, Agricultural Development Unit Phone: (592) 222-0055-70 Fax: (592) 222-0155 Email: mkalloo@caricom.org Anya Thomas – Deputy Programme Manager, Sustainable Development Unit Phone : (592) 222-0055 (ext. 2625) Fax: (592) 222-0155 Email: anya@caricom.org

<p>Caribbean Disaster Emergency Response Agency (CDERA) Building # 1, Manor Lodge Complex Lodge Hill SDt. Michael Barbados Phone: (+1 246) 425-0386 Fax (246) 425-8854 Email : cdera@caribsurf.com</p> <p>Contact: Earl Arthurs – Team Leader, Preparedness and Response Email: earl.arthurs@cdera.org</p>	<p>Caribbean Agricultural Research and Development Institute (CARDI) UWI Campus St. Augustine Trinidad and Tobago West Indies Phone: (+ 1 868) 645-1205 Fax: (868) 645-1208</p> <p>Contact: Ronald Pilgrim _ Post Harvest technologist (St. Lucia Office) Phone: (+ 1 758) 453-3317 Email: cardi@candw.lc</p>
<p>Coordinating Group of Pesticide Control boards of the Caribbean (CGPC)</p> <p>Contact: Everton Ambrose <u>Technical Secretary</u> (see IICA contact details)</p>	<p>Basel Convention Regional Centre for the Caribbean Region in Trinidad and Tobago</p> <p>Contact: Dr. Ronnie Sookhoo Director Basel Convention Regional Centre C/o CARIRI Compound Trincity West Industrial Estate Macoya, Tunapuna Trinidad and Tobago Phone: (1-868) 662-2855 (868) 740-0652 Fax: (1-868) 645-6734 Email: Basel_ca@tstt.net.tt</p>
INTERNATIONAL ORGANISATIONS	
<p>Canadian International Development Agency (CIDA) 200 Promenade du Portage Gatineau (Quebec) Canada K1A 0G4</p> <p>Contact: Dean Moser – Inter-American Programme Director Phone : (+1 819) 997-0644 Fax : (819) 953-1516 Email : dean_moser@acdi-cida.gc.ca</p> <p>Yuri Chakalall – Snr. Development Officer High commission of Canada Bishops Court Hill, P.O. Box 404, Barbados BB1100 Phone: (+1 246) 429-3550, ext. 3453 Fax: (246) 429-3876 Email: yuri.chakalall@international.gc.ca Website: http://www.bridgetown.gc.ca</p>	<p>Food and Agricultural Organization of the United Nations (FAO) Rome, Italy</p> <p>Contact: Mark Davis – Coordinator & Chief technical Advisor Obsolete Pesticides Programme Plant Protection Service Viale Delle Terme di Caracalla, 00153 Rome, Italy Phone: (+ 011 39) 06 5705 5192 Cell: + 39 348 873 2701 Email: mark.davis@fao.org Website: www.fao.org/ag/obstocks.htm</p> <p>Gene V. Pollard – Regional Plant Protection Officer Sub-Regional Office for the Caribbean P.O. Box 631-C Bridgetown, BARBADOS Phone: (+1 246) 426-7110, ext. 247 Fax: (246) 427-6075</p>

	Email: gene.pollard@fao.org Website: www.fao.org
<p>World Bank 1818 H Street, NW Washington, DC 20433 USA Phone: (202) 473-1000 Fax: (202) 4778-6391</p> <p>Contact: Stefanie Brackmann Environmental Specialist Africa Region, AFTEN The world bank Washington, DC 20433 USA Phone: (+1 202) 473-6015 Fax: (202) 477-1609/1981 Email: sbrackmann@worldbank.org</p>	<p>Inter-American Institute for Cooperation on Agriculture (IICA) P.O. Box 55-2200 San Isidro de Coronado San Jose Costa Rica Phone: (+011 506) 216—0222 Fax: (506) 216-0233 General Email: iicahq@iica.ac.cr Website: http://www.iica.int</p> <p>Contact: Everton Ambrose – Specialist in Plant Protection IICA Office in Saint Lucia P.O. Box 1223, Castries Saint Lucia Phone (+ 1 758) 451-6760/61 Fax: (758) 451-6774</p>
<p>Organisation of American States 1889 F Street NW Washington DC 20006 Phone: (+1 202) 458-3000</p> <p>Contacts: Scott Vaughn – Director of the Department of Sustainable Development Phone: (202) 458-6248 Fax: (202) 458-3560 Email: Svaughn@oas.org</p> <p>Cletus Springer – Senior Sustainable Development Specialist and Area Coordinator for the Caribbean Phone: (202) 458-3148 Fax: (202) 458-3560 Email: cspringer@oas.org</p> <p>Michela Miletto – Senior Environmental Specialist Phone: (202) 458-3862 Fax : (202) 458-3560 Email : mmiletto@oas.org</p> <p>Michelle-Ann Williams - Consultant Phone : (202) 458-6455 Fax : (202) 458-3560 Email : usdecons11@oas.org</p> <p>Claudia de Windt – Legal Specialist</p>	

Phone : (202) 458-6914
 Fax: (202) 458-3560
 Email: cdewindt@oas.org

OTHER PARTICIPANTS

Theresa Yarde
 Senior environmental Technical Officer
 Environmental Protection Department
 Ministry of Energy and Environment
 Jemmots Lane
 St. Michael
 Barbados
 Phone: (+1 246) 436-4820
 Fax: (2460 228-7103)

Green Engineering
 173 Belmont Circular Road
 Belmont
 Port of Spain
 Trinidad and Tobago
 Phone: (+1 868) 624-1132
 Fax: (868) 624-7336
 Email: green@carib-link.net

Contact:
 Dave Jacob
 Pardeen Balgodin

Kirk Pennant
 Inspector
 Pesticides Control Authority
 2-4 King Street
 Kingston
 Jamaica
 Phone: (+1 876) 967-1281
 (876) 922-2829
 Fax: (876) 967-1285
 Email: pennant@caribpesticides.net

Hyacinth Chin-Sue Walters
 Registrar
 Pesticides Control Authority
 2-4 King Street
 Kingston
 Jamaica
 Phone: (+1 *76) 967-1281
 Fax: (876) 967-1285
 Email: chinsue@caribpesticides.net
 Website : www.caribpesticides.net

Guy Mathurin
 Senior Research Officer
 Ministry of Agriculture, Forestry and Fisheries
 4th Floor Sir Stanislaus James Building
 Waterfront, Castries
 St. Lucia
 Phone: (+1 758) 452-2526/468-4123
 (758) 450-6314
 Fax: (758) 453-6314
 Email: sro@slumaffe.org

Donna L. Daniel
 Environmental Health Officer
 Ministry of Health, Wellness, Family Affairs,
 National Mobilization, Human Services and
 Gender Relations
 Chaussee Road, Castries
 St. Lucia
 Phone: (+ 1 758) 452-2859
 Fax: (758) 452-5655
 Email: health@candw.lc

Lesmond Magloire
 Occupational Health and Safety Officer
 Ministry of Labour, Information and Broadcasting
 St. Lucia

Alma Jean
 Donnalyn Charles
 Caroline Eugene
 Sustainable development and Environment
 Officers
 Ministry of Economic Affairs, Economic
 Planning Investment and National Development
 Price Waterhouse and Coopers Building
 Point Seraphine, Castries

	<p>St. Lucia Phone: (+ 1 758) 459-0492 Fax: (758) 453-0781 Email: sdestlucia@gmail.com</p>
<p>Renwick & Company Ltd P.O. box 90 Castries, St. Lucia</p> <p><u>Contacts:</u> Irwin Cox Greg Mathurin Decosta Pierre</p>	<p>Marielos Alfaro Costa Rica National University Director of the Sustainable Development Commission of the Private Sector in Costa Rica Phone: (506) 277-3290 Fax : (506) 277-3289 E-mail: malfarom@racsa.co.cr</p>
<p>Nicole Felix Organisation of Eastern Caribbean States Phone: 9758) 452 7203/5058</p>	<p>Vernasla King Windward Island Gases Phone: (758) 450-1339</p>

WORKSHOP ON THE SOUND MANAGEMENT OF CHEMICALS IN THE CARIBBEAN
Bay Gardens Hotel, Rodney Bay
Castries, St. Lucia
October 29-31, 2007

Objectives

- To achieve consensus on priorities pertaining to the stockpiling of Persistent Toxic Substances such as obsolete pesticides
- To promote information sharing and exchange of best practices in chemical management
- To provide a framework for the development of a regional strategy for the safe disposal of PTS
- To contribute towards a draft regional policy on chemical management and transboundary movement of PTS and other hazardous wastes

Monday, October 29, 2007

OPENING SESSION		
Chair: Crispin d’Auvergne, Sustainable Development and Environment Section, Ministry of Economic Affairs, Economic Planning, National Development and Public Service , St. Lucia		
8.30 -9.00a.m	Registration	
9.00 -9:30 a.m.	Remarks <ul style="list-style-type: none"> • Minister/Permanent Secretary – Government of St. Lucia or Crispin d’Auvergne • Paul Spencer OAS St Lucia • Scott Vaughan, Director of the Department of Sustainable Development – Organization of American States • Patricia Aquing, Executive Director of the Caribbean Environmental Health Institute (CEHI) 	
9:30 – 9:45 a.m.	Overview of the Project and Workshop - Cletus Springer, Chief Caribbean Coordinator, Department of Sustainable, Organization of American States	
9.45 – 10.00a.m	Introduction of Participants and Logistics	
10.00 -10.15a.m	<i>COFFEE BREAK</i>	
TECHNICALSESSION 1		
National Frameworks for the Management of Chemicals and Obsolete Pesticide Stockpiles in the Caribbean		
Chair : Herold Gopaul – Caribbean Environmental Health Institute (CEHI)		
10.45 -11.00a.m	Antigua & Barbuda	Melesha Banhan, Environment Officer, Environment Division, Ministry of Tourism, Culture, Civil Aviation and the Environment
11.00 -11.15a.m	Bahamas	Deon Alexander Stewart, Deputy Chief Health Inspector, Bahamas Environment Science and Technology (BEST) Commission, Ministry of Energy and Environment
11.15 -11:30a.m	Barbados	Jeffrey Headley, Chief Environmental Engineer Division, Ministry of Physical Development and Environment
11.30 -11:45a.m	Belize	Oscar Alonzo, Department of Environment, Ministry of Natural Resources and the Environment
11.45 -12:00p.m	Dominica	Lloyd Pascal, Head of Environmental Coordinating Unit, Ministry of Agriculture, Fisheries and the Environment
12.00 -12:30p.m	Dominican Republic	Elsa Ferreras de Sanchez, Head of Chemicals Management and Hazardous Waste Section,

		Ministry of Environment and Natural Resources
12.30 -2:00p.m	<i>LUNCH</i>	
2.00 -2:15p.m	Guyana	Trecia David, Inspector (Registration and Licensing), Pesticides and Toxic Chemicals Control Board
2.15 -2:30p.m	Haiti	Dr. Michel Alain Louis, Director of Laboratory Veterinary, Food Control and Chemical Products Determination, Ministry of Agriculture / Ministry of Environment
2.30-2:45p.m	Jamaica	Gillian Guthrie, Director of Projects and Enforcement, Ministry of Health and Environment
2.45 -3:00p.m	Saint Kitts & Nevis	Hiram Williams, Chemist, Pesticides and Toxic Chemicals Control Board
3.00 -3:15p.m	Saint Lucia	Crispin d'Auvergne, Sustainable Development and Environment Section, Ministry of Economic Affairs, Economic Planning, National Development and Public Service
3.15 -3:30p.m	Saint Vincent & the Grenadines	Benedict Charles, PTS Focal Point, Ministry of Health and Environment
3.30 – 3.45 p.m	<i>COFFEE BREAK</i>	
3.45 -4.00p.m	Trinidad & Tobago	Wayne Rajkumar, Assistant Manager, Technical Services, Environmental Management Authority
4.00 -4:15 p.m	Grenada	Dr. Guido Marcelle, Chief Analytical Chemist, Produce Chemist Laboratory
4:15 – 5:00 pm	Discussion	

Tuesday, October 30, 2007

TECHNICAL SESSION 2		
Different approaches to the management of obsolete pesticide stockpiles		
Chair : Lyndon Robertson, Caribbean Environmental Health Institute (CEHI)		
9.00 -9.20a.m	Best practices in managing obsolete pesticide stockpiles	Mark Davis, Coordinator and Chief Technical Advisor, Food and Agriculture Organization of the United Nations (FAO)
9.20 -9.40a.m	Experiences from the 1999-2004 FAO Inventory of obsolete pesticide stockpiles in the Caribbean	Dr. Gene Pollard, Regional Plant Protection Officer, Food and Agriculture Organization of the United Nations (FAO)
9.40 -10:00a.m	Experiences and lessons learned from the Africa Stockpiles Project	Stefanie Brackman, Africa Region, AFTEN, The World Bank
10.00 -10.15a.m	<i>COFFEE BREAK</i>	
10.15 -10.30a.m	Experiences/Findings from the T&T Hazardous Waste inventory and Research Findings from the CAMP Project	Herold Gopaul, Information Services Director, Caribbean Environmental Health Institute (CEHI)
10.30 -10.45a.m	Importance of regional coordination in the management of agro-chemicals	Everton Ambrose, Technical Secretary, Coordinating Group of Pesticide Control Boards of the Caribbean; Specialist in Plant Protection, Inter-American Institute for Cooperation on Agriculture (IICA)
10.45 -11:00a.m	Agro-chemical management on the CARICOM agenda.	Margaret Kalloo, Deputy Programme Manager, Agricultural Development Unit, CARICOM Secretariat
11.00 -12:30p.m	Discussion	
12.30 -2:20p.m	<i>LUNCH</i>	
TECHNICAL SESSION 3		
Chemical Management and International Trade		
Chair : Ms. Claudia de Windt, Legal Specialist, Department of Sustainable Development, OAS		
2:20-2:40 p.m	Trade and transboundary movement of PTS and other hazardous wastes in the Caribbean	Dr. Ronnie Sookhoo, Regional Director Basel Convention Regional

		Center for the Caribbean region (T&T)
2.40- 3:00 p.m	The role and requirements of the Rotterdam Convention in chemical management	Hyacinth Chin-Sue Walters, Registrar Pesticide Control Authority, Ministry of Health, Jamaica
3.00 – 3.20 p.m	The role and requirements of the Stockholm Convention regarding the management of Persistent Toxic Substances	Donna Lynn Charles, Sustainable Development and Environment Section, Ministry of Economic Affairs, Economic Planning, National Development and Public Service
3.20 – 3.45 p.m.	<i>COFFEE BREAK</i>	
3.45 – 5.00 p.m	Discussion	

Wednesday, October 31, 2007

TECHNICAL SESSION 4 Stakeholder experiences and cross cutting issues		
Chair: Cletus Springer, Chief Caribbean Coordinator, Department of Sustainable Development, OAS		
9.00 – 9.15 a. m	The Role of the Private sector in the management and disposal of pesticides and other hazardous wastes	Dave Jacob, Managing Director, Green Engineering (T&T)
9.15 -9.30 a. m	The role and experience of pesticide exporters in pesticide management	Decosta C. Pierre, Assistant Manager, Renwick and Company Ltd, Saint Lucia
9.30 -9.45a.m	The role of te private sector in Costa Rica in pesticide management	Marielos Alfaro, Director, Environmental Commission of the Private Sector, Costa Rica
9.45 – 10.00 a.m.	The sound management of chemicals and disaster preparedness	Earl Arthurs, Team Leader, Preparedness and Response, Caribbean Disaster Emergency Response Agency
10.00 – 10.15 a.m.	COFFEE BREAK	
TECHNICAL SESSION 5 Moving Forward in Strengthening Sound Management of Chemicals and Obsolete Pesticides in the Region Chair: Cletus Springer, Chief Caribbean Coordinator, Department of Sustainable Development, OAS		
10.15 – 10:20 a. m	Tools for information sharing and exchange	Michela Miletto, Senior Environmental Specialist, Department of Sustainable Development, OAS
10.20 -12:30 p. m	Discussion on the Structure of a Regional Action Plan for the management of stockpiled PTSS - Identification of priorities/needs - National policy vs regional policy - Regional project opportunities	
12.30 – 1.30 p.m.	<i>LUNCH</i>	
1.30 -2:30p.m	Discussion	
2:30 – 3:30 p. m.	WORKSHOP CONCLUSION • Summary of workshop activities and outcomes • Recommendations for future activities and time frame	
3.30 – 3.40p.m	CLOSURE	