

3rd PROGRESS REPORT

Project "Survey of Capacity for the Destruction of Obsolete Pesticides and Remediation of Contaminated sites in Latin America and the Caribbean"

06/03/2005

1.- BRIEF DESCRIPTION

As it was explained in the last progress reports, most of the countries do not have a national register system for hazardous waste management suppliers, so it is difficult for the authorities to know if the country has or not relevant capabilities. Therefore, in an attempt to identify suppliers, another strategies were tried: internet and technical bibliography research, as well as communication with local (state or province) authorities. As a result of this, all the process get slower and potential suppliers identification actually turned into such a time consuming task.

Generally each country have a survey of obsolete pesticides stocks or they are working in the inventory of POPs obsolete pesticides on the frame of National Implementation Plan projects (Stockholm Convention). However, some authorities advised that countries in the region do not have economic and technical resources for the management of this stocks, specially for their disposal. There are some interesting experiences in handling, re-packaging, storage and disposal of obsolete pesticides, and where these operations were developed by national authorities, some kind of economic/financial aid were provided by international organisations. On the other hand, when the origin of the obsolete stocks could be precisely charged to the pesticide manufacturer, the parent company afforded all handling and disposal costs.

1.1.- DIFFICULTIES

In order to identify some difficulties that were found during the survey, and take them into account for the next surveyed regions, they are summarized:

- Identification:

In general government or institutions do not have suppliers registry.

Environment and hazardous waste is a considerable developing sector in the region, so data from suppliers directories need to be updated or it is completely useless.

- Communications:

Some companies do not properly use the e-mail

Questionnaires are sent to sales division but needs to be filled by the technical division of the company, making slower the process

2.- RESULTS

During the survey national and local authorities were contacted, environmental and scientific institutions, and trade and commerce associations from **50** countries. Up to now, it were received responses from **34** of these countries.

Were identified and contacted **244** potential suppliers in **14** countries of the region¹ (Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Martinique, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Trinidad & Tobago and Venezuela) by e-mail, fax and telephone, and obtained some kind of reply from **42** companies. However, only **22** of these have relevant capabilities.

The countries where no response from the government or other institutions were attained are the following **16**: Ascension Islands, British Virgin Islands, Cayman Islands, Falkland Islands, French Guyana,

¹ At 7th March, its not finished information compilation from Mexico, so this number will be increased.

Grenada, Guadeloupe, Guatemala, Guyana, Netherlands Antilles, Puerto Rico, Suriname, Trinidad y Tobago, Tristan da Cunha, Turks and Caicos, U.S. Virgin Islands.

For each country, it follows a brief description of their capabilities, experience and state of the art in the field of obsolete pesticide management. Also, a summary table is presented.

2.1.- ANGUILLA

Mrs. Ambrell Richardson (Environmental Health Unit, Ministry of Health), explained that Anguilla does not have the human, financial or laboratory capacities to provide facilities to facilitate the destruction of obsolete pesticides or for the remediation of contaminated sites. Nowadays there are no regulations or licensing process to operate such facilities.

Potential Suppliers contacted: none identified

Reply: 0

Suppliers: none identified

2.2.- ANTIGUA & BARBUDA

Mr. Lionel Michael, Minister of the Ministry of Health and Social Improvement, replied he will process and send the available information, but the answer did not come yet, even after contacting his office by telephone.

Potential Suppliers contacted: none identified

Replies: 0

Suppliers: none identified

2.3.- ARGENTINA

Throughout communication with the National Direction of Management of the Environment, Substances and Chemical Products Unit (Lic. Pablo Issaly), in Argentina exists some facilities licensed to incinerate hazardous waste (Y4 class , according to Basel Convention)².

Through the researches in internet, we identify two experiences of contaminated site with pesticides that had been remedied in Santiago del Estero and Rio Negro, in both cases the residues were exported to Europe for final disposal.

Potential Suppliers contacted: 27

Replies: 11

Suppliers: 4 (waiting for more replies)

2.4.- ARUBA

Mr. Casper Vredereg, Acting Head Department of Agriculture, responded that they does not have knowledge of any supplier in this area (other than the Government Landfill Management) and suggested to consult the Department of Public Health to get more information. Same request was sent to this department and others e-mails but did not receive any response.

Potential Suppliers contacted: none identified

Replies: 0

Suppliers: none identified

² Corriente Y4: Desechos resultantes de la producción, la preparación y utilización de biocidas y productos fitosanitarios.

2.5.- ASCENCION ISLAND

No information was sent by Ascension Islands Administrator, and no suppliers were identified by bibliography and internet research.

Potential Suppliers contacted: none identified

Replies: 0

Suppliers: none identified

2.6.- BAHAMAS

The government of Bahamas, through the Permanent Secretary of the Bahamas Environment, Science and Technology Commission (BEST), sent an official note communicating that the country does not have suppliers to handle, treat, dispose or remediation of contaminated sites with obsolete pesticides or other Persistent Organic Pollutants.

Potential Suppliers contacted: none identified

Replies: 0

Suppliers: none identified

2.7.- BARBADOS

Therese Yarde from the Environmental Protection Department (Ministry of Housing, Lands and the Environment) recognised that there are not facilities for the destruction of pesticides or POPs and contaminated materials, the destruction or decontamination of material of containers and packaging, as well as, facilities for the remediation of soil contaminated with pesticides or POPs. She informed that officers from various government departments have been involved in the repackaging of hazardous substances in the past, but there are no formal providers of Field Teams to carry out this task, nor the task of remediating sites. Furthermore, there is none consultants with expertise in disposal technologies, soil cleaning and remediation techniques, or with expertise in waste logistics.

Potential Suppliers contacted: none identified

Replies: 0

Suppliers: none identified

2.8.- BELIZE

After quite a lot communications with the Department of Environment, Mr. Ismael Fabro (Chief Environmental Officer), the response was that Belize doesn't have capabilities for contaminated sites remediation or destruction of obsolete pesticides. This information was confirmed by searching environmental directories in internet.

Details of communications: by e-mail (9/dic/04 - 26/ene/05), telephone calls (11/feb/05 – 18/feb/05), response 1/mar/2005.

Potential Suppliers contacted: none identified

Replies: 0

Suppliers: none identified

2.9.- BERMUDA

After no response to e-mails sent to the Ministry of Health and the Ministry of Environment, Mr. Thomas Sleeter of the Ministry of Environment was contacted by telephone. According to Mr. Sleeter, there is a local capacity to perform clean-up of sites and to handle POPs wastes, but no one to destroy those types of wastes. Therefore, hazardous wastes are packaged and exported to USA, in the framework of a governmental program. Capacity is provided by local consultants and a team work from the government,

which has been trained in USA. Questionnaires were sent now to Mr. Sleeter, but they have not been returned yet.

Potential Suppliers contacted: none identified (information that could be)

Replies: 0

Suppliers: none identified

2.10.- BOLIVIA

The Viceministerio de Medio Ambiente, Recursos Naturales y Desarrollo Forestal, through Ing. María Galarza Coca (national co-ordinator of the POPs Project in Bolivia), sent us useful information. There are some fairly small companies working in the field of hazardous waste, but this ministry does not have an inventory of them, even though the national regulations compel to do it ("Reglamentación de la Ley N°1333 del Medio Ambiente. Reglamento para las actividades con Sustancias Peligrosas"). Galarza explained that the ministry lost all the information on 2003, so they are working now on a new inventory.

In the field of pesticides stocks management, FAO Mission in Bolivia finished an inventory some years ago. Lic. Tania Santivañez from this institution, has organised training courses for 15 bombers and storekeepers of Bolivia on making inventories and repackaging of obsolete pesticides. Until now, this group has been working on the inventory, repackaging, cleaning and storage in six pesticides stock sites of Bolivia. Therefore, Bolivia has capabilities as human resources for in-field job, but there are none supplier for this kind of job. Finally, Santivañez confirmed that there are none capability in Bolivia for the destruction of obsolete pesticides and remediation of pesticide contaminated sites.

Potential Suppliers contacted: none identified

Replies: 0

Suppliers: none identified

2.11.- BRASIL

Although a considerable effort was made to achieve information from the government (national authorities IBAMA and the Ministerio de Meio Ambiente, and each state environmental protection agency and ministry of the environment), few answers were obtained by this way. Therefore, almost all the suppliers identification work was made through an internet research, the contact with experts and with the aid of the brazilian environmental companies directory of 1999. Dr. Andreas Marker, working on

Brazil do have an interesting experience in the field of pesticide contaminated sites and management of this kind of waste (mostly HCH), probably related to the considerable production of organochloride pesticides for national and regional consumption in the past decades. Thus, since the mid 90's near some tens for companies with capabilities in the field of remediation and hazardous waste destruction and disposal have arisen³. For instance, in terms of technological development and economical significance the most relevant activities for the management of hazardous waste in Brazil probably are near the 20 incinerators (that is an unusual technology in the rest of the region), but their authorised type of waste is very narrow, and there are not too much licenses for the destruction of organochlorines.

Anyway, it has been a poor reply from the potential suppliers contacted, and it has to be made an special effort by telephone communication so as to get more information from this companies (even talking with them does not guarantee to get an answer).

Potential Suppliers contacted: 132

Replies: 9

Suppliers: 6 (waiting for much more replies)

³ Of course, not all this companies should have capabilities nor experience in the field of obsolete pesticides.

2.12.- BRITISH VIRGIN ISLANDS

No response was obtained from both the Environmental Health Division or from the Ministry of Natural Resources and Land, and no suppliers were identified through bibliographic and internet revision.

Potential Suppliers contacted: none identified

Replies: 0

Suppliers: none identified

2.13.- CAYMAN ISLANDS

No answer was sent by the Ministry of Tourism, Environment, Development and Commerce and no suppliers were identified by internet and bibliography research.

Potential Suppliers contacted: none identified

Reply: 0

Suppliers: none identified

2.14.- CHILE

According to the information sent by the National Commission of Environment (CONAMA), Mrs Paulina Saball -Executive Director-, and the Ministry of Health, Dr. Julio Monreal -Director of Health and Environment-, Chile does not have capabilities for the destruction of obsolete pesticides and remediation of contaminated sites. However, with the aid of environmental companies directories in internet were identified some potential suppliers.

Potential Suppliers contacted: 17

Replies: 7

Suppliers:3 (4 potential suppliers were discarded after further investigation)

2.15.- COLOMBIA

Were made several contacts with the Ministry of Environment of Colombia, where Mrs. Leydy Suárez help sending a list of potential suppliers. In order to enhance the investigation and get a better scope of the capabilities in all the country, the Regional Autonomous Corporations were contacted. Through this, was achieved a list of suppliers from the Government of Bogotá, and same additional information from the government of Antioquia and Valle del Cauca. At last, is a fact that Colombia have capabilities for both, destruction of obsolete pesticides and remediation of contaminated sites.

Potential Suppliers contacted: 12

Replies: 6

Suppliers: 4 (waiting for more replies, 2 potential suppliers were discarded after further investigation)

2.16.- COSTA RICA

The technical staff of Dirección de Protección al Ambiente Humano of the Ministerio de Salud of Costa Rica identified a pesticide industry with capabilities for the destruction (FORMUQUISA), and an expert in hazardous waste management (PhD Rodolfo Ardon Chaves)⁴.

Other potential suppliers were identified consulting environmental companies directories on internet (INOGEN, with expertise in remediation) and through the contact with other institutions (TRATAMIENTOS TECNOLOGICOS D&A S.A., with experience in hazardous waste consultancy). By this means, none obsolete stocks handling and management operations were detected in Costa Rica.

⁴ Until now, was not possible to contact Mr. Ardon Chaves, nor by telephone neither by fax. On the other hand, an e-mail with the questionnaires was delivered to FORMUQUISA.

Potential Suppliers contacted: 4
Reply: 0
Suppliers: none (waiting for replies)

2.17.- CUBA

The government of Cuba (Ministerio de Ciencia, Tecnología y Ambiente) explained that they don't have companies working in this matter, but they have governmental experts in bioremediation and international waste logistics. As in the case of Bolivia, there are national capabilities in terms of human resources, but no company working in the destruction of obsolete stocks or the remediation of contaminated sites.

Communications by e-mail (26/nov/04), response from the government (7/dic/04), contacts with experts (13/dic/04), response (15/dic/04).

Potential Suppliers contacted: none identified
Replies: 0
Suppliers: none identified

2.18.- DOMINICA

Dr. Colmore Christian, Permanent Secretary from the Minister of Agriculture and the Environment, replied he had to discuss the national capacities issue with the Minister before sending the requested information. The answer did not come yet, and he could not be contacted by telephone.

Potential Suppliers contacted: none identified
Replies: 0
Suppliers: none identified

2.19.- DOMINICAN REPUBLIC

By the revision of documents available at the Coordinating Centre, we found some information from the Secretary of Environment and Natural Resources in which they express that in 2002 they had an stock of DDT (40 Ton) in the warehouse of the National Control Centre of Tropical Illness, waiting for the proposal of elimination⁵.

M. Sc. Zoila González de Gutiérrez (Sub-secretary from the Secretary of Environment and Natural Resources) informed that the government does not have official registers of companies working in contaminated sites remediation or destruction of obsolete pesticides.

Communications by e-mail (26/nov/04 - 2/feb/05), telephone calls (18/feb/05), response (22/feb/05).

Potential Suppliers contacted: none identified
Replies: 0
Suppliers: none identified

2.20.- ECUADOR

Ing. Isabel Guerra from the Subsecretaría de Calidad Ambiental of the Ministerio del Ambiente is going to send the required information about capabilities in Ecuador. No potential suppliers were identified, other than HOLCIM (cement industry), through the query to national institutions and internet search. Furthermore, were not found any reference to pesticide stocks management in Ecuador in the bibliography consulted.

⁵ Fuente: "Informe de situación de los productos orgánicos persistentes en la República Dominicana".

Potential Suppliers contacted: 1
Reply: 0
Suppliers: none (waiting for the reply)

2.21.- EL SALVADOR

Emperatriz Mayorga from the Ministerio del Ambiente y los Recursos Naturales replied that the government of El Salvador has not authorised any company or consultant for any activity related to obsolete pesticides management.

However, there were identified two companies working on hazardous waste management as potential suppliers, by an internet research (other contacts did not replied the request):

Potential Suppliers contacted: 2
Replies: 0
Suppliers: none until now (waiting for the replies)

2.22.- FALKLAND ISLANDS

No reply was made to an on-line communication to the government of Falkland Islands. As no government institutions concerning environmental, health or agricultural issues were identified here, and taking into account a certainly low probability of having so specific capabilities in such small island, no further efforts were made here.

Potential Suppliers contacted: none identified
Reply: 0
Suppliers: none identified

2.23.- FRENCH GUYANA

No reply from French Guyana government was received, and none capabilities were found through internet and bibliographic research.

Potential Suppliers contacted: none identified
Replies: 0
Suppliers: none identified

2.24.- GRENADA

No response was obtained from Grenada government (the Ministry of Health, Social Security, the Environment and Ecclesiastical Relations was contacted twice), and no suppliers were identified through the bibliographic and internet research.

Potential Suppliers contacted: none identified
Reply: 0
Suppliers: none identified

2.25.- GUADELOUPE

No reply was sent for the Regional Direction of Environment, and no capabilities were identified through research.

Potential Suppliers contacted: none identified
Replies: 0
Suppliers: none identified

2.26.- GUATEMALA

No response was obtained by the Ministry of Environment and Natural Resources, and no suppliers were identified by internet and bibliographic research. It could not be contacted any authority by telephone.

Potential Suppliers contacted: none identified

Reply: 0

Suppliers: none identified

2.27.- GUYANA

After several e-mails sent to Environmental Protection Agency, no response was obtained from Guyana. No suppliers were identified through internet and bibliographic research.

Potential Suppliers contacted: none identified

Reply: 0

Suppliers: none identified

2.28.- HAITI

Through the contacts made with the government, the authorities explained that the country does not have capabilities for the destruction of obsolete pesticides or remediation of contaminated sites.

Potential Suppliers contacted: none identified

Reply: 0

Suppliers: none identified

2.29.- HONDURAS

During the revision of documents from Coordinating Centre, one handling operation and exportation of obsolete stocks was identified. This occurred after the Mitch Hurricane (December/1999), with financial aid from the World Bank, and consisted in the disposal abroad of 103,000 Kg of obsolete pesticides (Sabillón, 2002)⁶. Same information was found in some other public documents. Nevertheless, Mr. Elvin Rodas, Director of Dirección General de Gestión Ambiental (Secretary of Natural Resources and Environment) established that Honduras does not have capabilities for the destruction of obsolete pesticides or contaminated sites remediation.

Specifically questions about this handling and exportation operation (communication by e-mails 10/dic/04, 25/ene/2005 and some telephone calls) were not replied by the Secretary of Natural Resources and Environment. Moreover, the person in charge of this operation at the government could not be contacted by telephone. Finally, there is no more available information about this operation, and it had to be presumed that there were no participation of Honduras or other regional companies in handling, repackaging and similar tasks.

Potential Suppliers contacted: none identified

Reply: 0

Suppliers: none identified

2.30.- JAMAICA

During the revision of information in internet, was identified a project of "Repackaging of Obsolete Pesticides" in charge of the Pesticide Control Authority (PCA), a governmental office, and GTZ (German

⁶ Informe regional sobre sustancias tóxicas persistentes ,PNUMA- Productos Químicos, América Central y El Caribe.

Technical Cooperation Organisation). The management and repackaging in this operation was in charge of experts from the FMC Corporation U.S. (pesticide industry from United States, original manufacturer of a big part of this stock). According to the available information, the pesticides were packaged to be exported⁷.

Were consulted the following government institutions: National Environment and Planning Agency, Ministry of Land and Environment and Pesticides Control Authority, and these authorities response was that Jamaica does not have capabilities for the destruction of obsolete pesticides and remediation of contaminated sites. Were contacted one of the experts from GTZ project, but could not be achieved more information about the mentioned operation.

Communications by e-mail (9/12/04 and 13/1/05), response (31/1/05). Request for specific information about handling and management operation in the frame of GTZ-PCA project (2/2/05), and get a reply on 11/2/05.

Potential Suppliers contacted: none identified

Reply: 0

Suppliers: none identified

2.31.- MARTINIQUE

According to the Chef du Service Aménagement, Sites, Paysage and Nature, Mr. Gilles Perron, Martinique has companies that could provide Field Teams with capacities for repackaging of obsolete pesticides, remediation of contaminated sites, and consultants in technologies of remote and mobile final disposal. Some communications by e-mail (12/dic/04 – 3/feb/05) were made until have a response (25/feb/05).

Potential Suppliers contacted: 1

Replies: 0

Suppliers: none until now (waiting for the reply)

2.32.- MEXICO

Several e-mails were sent to different divisions of Semarnat, Secretaría de Medio Ambiente de Recursos Naturales (Natural Resources and Environmental Secretariat), as well as to other relevant governmental offices. No one replied to this first attempt, but with support of professional contacts in Mexico, Semarnat gave an official answer. According to Eng. Jesús Durón of Semarnat, up to now the government has not given any license to environmental companies for the remediation of soils contaminated with pesticides or other POPs. Moreover, there are still no regulations in this matter. However, Mr. Durón provided a list of cement plants authorized for recycling (i.e.: energy recovery) of triple-washed empty pesticide containers. Obviously, this does not mean that those plants are authorized to destroy obsolete pesticides stocks. Mr. Durón also answered the request of information about the ongoing project "Disposal of Pesticides" in the framework of the NAFTA Technical Working Group on Pesticides: up to now the activities were centered in the empty pesticide container program.

On the other hand, Semarnat gives licenses for different categories of waste management activities, which include PCBs treatment, PCBs storage, incineration, alternative fuel preparation, soil remediation, in-situ waste treatment and waste transportation. Licensed companies for each category are listed in Semarnat web page, including their capacity, type of waste handled and contact information. Efforts were focused in getting more information from companies in the first two categories, since even when other categories have an extensive list of companies, these do not handle POPs: incinerators burn either alternative fuels (mix of spent solvents, used oils) or medical wastes, while soil remediation is performed basically in fuel contaminated soils.

⁷ *FAO Pesticide Management, FAO/OECD Pesticide Risk Reduction Survey*

E-mails or faxes were sent to the following cement plants licensed by Semarnat: Cemex, Holcim Apasco, Cruz Azul, GCC and Lafarge. In this first attempt, only Holcim Apasco replied that they will return the questionnaire, something that still has not happened. Special efforts were made with Cemex, since it has 14 plants authorized by Semarnat. After several telephone communications, Cemex returned the questionnaire, the same which they have sent to FAO in a previous survey. In spite of telephone communications, the other cement companies have not returned yet the questionnaires.

Other service suppliers contacted, with known PCB handling capacity, were: Sem-Tredi, ABB Sistemas, Residuos Industriales Multiquim (Rimsa), Desechos Biológicos e Industriales (Debisa), SD Meyers de México, Chemel and Química Wimer. The latter answered that they decided not to continue their activities with PCBs due to delays of the government with their license renewal. ABB Sistemas replied that they will return the questionnaire, something that still has not happened. SD Meyers did not reply, but its information was already included in FAO database, so no further contacts were made. Sem-Tredi, Rimsa and Debisa were then contacted by telephone, but no one send back the questionnaires yet.

Besides the before mentioned companies, there are others listed by Semarnat with license to treat or store PCBs. However, many of them are not service suppliers, but rather industries that may have to handle PCBs in their processes (Compañía Mexicana de Impermeabilizantes, Grasas y Lubricantes Mexicanos, Comisión Federal de Electricidad, etc.).

Potential Suppliers contacted: various identified (processing the information)
Replies: some (processing the information)
Suppliers: none (waiting for replies)

2.33.- MONTSERRAT

Through the contact with Mrs. Elvina Farrel from the Ministry of Agriculture, Land, Housing and Environment, it could be known that Monserrat does not posses relevant capabilities for disposal, remediation of contaminated sites or consultancy in the field of obsolete pesticides.

Potential Suppliers contacted: none identified
Replies: 0
Suppliers: none identified

2.34.- NETHERLAND ANTILLES

No reply was obtained from the Department of Environment & Nature (Ministry of Public Health and Social Development of Netherland Antilles), and no suppliers were identified through bibliographic and internet research.

Potential Suppliers contacted: none identified
Replies: 0
Suppliers: none identified

2.35.- NICARAGUA

Throughout internet and bibliography research were found that Nicaragua has interesting experience in handling and management of obsolete pesticides as it were exported important volumes of obsolete pesticides to their disposal in Europe. This information was confirmed by Lic. Helio Zamora, Director of Hazardous Substances and Solid Waste Control (Ministry of Environment and Natural Resources).

This authority sent a list identifying 2 companies as potential suppliers, but only one of them could be contacted.

Potential Suppliers contacted: 1 (the other could not be contacted)

Reply: 1

Suppliers: 1

2.36.- PANAMA

The government throughout Luis Agredo from the Sección de Sustancias y Desechos Peligrosos (Ministerio de Salud), identified three possible suppliers:

- CEMEX Panamá, a cement kiln facility working on a project for the co-processing of empty pesticide containers,
- REA Consultores, a consultancy company with experience in remediation of POPs contaminated soil, and,
- ARGAR, a company with experience in chemical accidents and waste international logistics.

Although Agredo recognised that could it be others suppliers with relevant capabilities in Panama, they probably does not have substantial experience or skills for obsolete pesticides management. Also, there could be some work in this field developed by private companies with its own resources (i.e. pesticides factories).

At the Autoridad Nacional del Ambiente environmental consultants list (available on its web page) and other internet resources, were identified three other potential suppliers:

Potential Suppliers contacted: 6

Replies: 0

Suppliers: none until now (waiting after the 1st or 2nd contact)

2.37.- PARAGUAY

It was very difficult to obtain a response from the Secretary of Environment of Paraguay. It had to be made several communications by e-mail and telephone calls, and fortunately, this authority sent a reply by the Focal point of the Basel Convention in Paraguay (Ing. Quim. Maria Cristina Torres). Ms. Torres sent information about 2 potential suppliers with capacity for repackaging of obsolete pesticides, contaminated site remediation and field team coordination. Through an internet search no relevant information were found. Several contacts were made, by e-mail (26/nov/04 – 26/ene/05), through telephone calls (6/feb/05 – 18/feb/05), and we obtained a response at 21/feb/05.

Potential Suppliers contacted: 2

Replies: 1

Suppliers: 1 (waiting for the other potential supplier reply)

2.38.- PERU

In accordance to the official answer sent by Ing. Vilma Morales Quillama from Dir. Ejecutiva de Ecología y Protección del Ambiente (DIGESA, Ministerio de Salud) and Ing. Carmen Rosa Mora Donayre, Director of Dirección de Medio Ambiente (Ministerio de la Producción):

- There are not authorised mobile or fixed facilities for the destruction of pesticides or contaminated materials (and up to the government understanding, there are not anyone operating now in Peru). However, does exist an authorised mobile facility for the treatment of PCBs by sodium dechlorination (TRANSFORMER SERVICE S.A.C.), and a pesticide industry the license to operate an incinerator for obsolete pesticides and containers (FARMEX S.A.). Although the authorities observed that this facility does not match minimum technical conditions and is not probably that will get the licence, it was contacted to improve our knowledge about this facility, sending them the questionnaires.
- The government does not have information about contaminated sites with pesticides, and so, none information about suppliers of remediation services.
- Empty pesticide containers are disposed in security cells of the authorised sanitary landfills. The only authorised security landfill for industrial waste is BEFESA S.A. (licensed for the disposal of a wide range of industrial and hazardous waste, but for POPs), one of the companies that was contacted and still have not replied. Also the other authorised landfills were contacted, with no reply too.

- The government does not have information about field teams for pesticide packaging or remediation, nor experts in disposal technologies, soil cleaning and remediation techniques.
- The only potential supplier in the field of international waste logistics is ABB S.A., that is licensed for the temporal storage and export of PCBs and transformers.

Through the contact with other institutions and an internet search, did not arise any handling, treatment, disposal or exportation of pesticide stocks event, nor the remediation of pesticide contaminated sites. Nevertheless, through this investigation and with the aid of the DIGESA registry of licensed companies for the treatment and disposal of solid waste, were identified other potential suppliers.

Potential Suppliers contacted: 7

Reply: 1

Suppliers: 1 (waiting for more replies)

2.39.- PUERTO RICO

No response was achieved from any of the contacts with the governmental institutions, as well as other national and regional organisations. To solve this lack of information, the identification was made by searching on internet directories. As a result of this approach, there were identified 18 potential suppliers working in the field of remediation, hazardous waste management, and environmental assessment consultancy, but none actual obsolete stocks operations in Puerto Rico.

Potential Suppliers contacted: 18

Replies: 0

Suppliers: none (waiting for replies)

2.40.- ST. HELENA

The Ministry of Agricultural and Natural Resources responded that St. Helena does not have any suppliers qualified in the disposal, remediation or consultancy in the field of obsolete pesticides or other persistent organic pollutants.

Potential Suppliers contacted: none identified

Replies: 0

Suppliers: none identified

2.41.- ST. KITTS & NEVIS

The Director of the Environment of St. Kitts & Nevis government, communicated that this country has no facility for the destruction of obsolete pesticides and remediation of contaminated sites.

Potential Suppliers contacted: none identified

Replies: 0

Suppliers: none identified

2.42.- ST. LUCIA

Ms. Shirlene Simmons from the Ministry of Physical Development, Housing and Environment, and project coordinator of the Stockholm Convention National Implementation Plan (NIP) in St. Lucia, confirmed that this country does not have the capabilities in treatment and disposal, remediation of contaminated sites related to obsolete pesticides. On the other hand, like several countries in the region, they will soon be conducting a national survey and developing an inventory on POPs under the NIP activities, and also, under a FAO project, a survey to identify obsolete pesticides was conducted years ago. Finally, no obsolete stocks management experiences were identified by Ms. Simmons and all the other institutions consulted.

Potential Suppliers contacted: none identified
Replies: 0
Suppliers: none identified

2.43.- ST. VINCENT AND THE GRANADINES

Mr. Edmund Jackson (Environmental Services Coordinator of the Ministry of Health and the Environment) was contacted twice by e-mail, and the reply came on 17th of February, telling that St. Vincent and the Granadines does not have the capacity for the destruction of obsolete pesticides and remediation of contaminated sites.

Potential Suppliers contacted: none identified
Replies: 0
Suppliers: none identified

2.44.- SURINAME

No answer from the Ministry of Labour, Technological Development and Environment was obtained and no capabilities were identified through internet and bibliographic research.

Potential Suppliers contacted: none identified
Replies: 0
Suppliers: none identified

2.45.- TRINIDAD & TOBAGO

No response was achieved from any of the contacts with the governmental and regional institutions. In order to identify potential suppliers, some investigation was made by searching on internet directories. As a result of this approach, there were identified 7 potential suppliers working in the field of hazardous waste management, and environmental assessment consultancy, but none experience in obsolete stocks management in Trinidad and Tobago.

Potential Suppliers contacted: 7
Replies: 0
Suppliers: none (waiting for replies)

2.46.- TRISTAN DA CUNHA

No reply was received after on-line communications within the official website. As no government institutions concerning environmental, health or agricultural issues were identified in Tristan da Cunha, and taking into account a certainly low probability of having so specific capabilities in such small island (practically inhabited), no further efforts were made here.

Potential Suppliers contacted: none identified
Replies: 0
Suppliers: none identified

2.47.- TURKS & CAICOS

The request for information sent to the National Environmental Centre is being processed by the Department of Environmental and Coastal Resources to co-ordinate a response with Department of Health, but still there is no information.

Potential Suppliers contacted: none identified
Replies: 0
Suppliers: none identified

2.48.- URUGUAY

Through the contact with the Ministry of Housing, Land and Environment, a supplier in international waste logistic were identified. In accordance with this authority, there is no capabilities in Uruguay for the destruction of obsolete pesticides or contaminated sites remediation. However, 2 consultants were contacted: one of them expert in bio-remediation.

Potential Suppliers contacted: 2

Replies: 1

Suppliers: 0 (waiting for any response)

2.49.- U.S. VIRGIN ISLANDS

Neither the Division of Environmental Protection Agency nor the U.S. Environment Protection Agency replied the e-mail information request. No suppliers were identified by internet or bibliographic research.

Potential Suppliers contacted: none identified

Replies: 0

Suppliers: none identified

2.50.- VENEZUELA

There are a lot of documents in the Coordinating Centre about capabilities in Venezuela for handling and managing of obsolete pesticide stocks. Most of this information was shared by Venezuela government in an workshop made in Caracas in September of 2004, where many countries experts met to learn about Venezuela's experience.

Government of Venezuela, through Lic. Norberto Rebolledo (General Director of Environmental Quality), identified some companies with capabilities for stocks management. Although Lic. Rebolledo agreed to send a list of supplier, this information is not available yet, and an internet research had to be done.

We identified and contacted 5 companies and at this time we have 2 responses.

Potential Suppliers contacted: 5

Replies: 2

Suppliers: 2 (waiting for more replies)

Staff:

Ing. Quím. Pablo Gristo.

Ing. Quím. Ana Salvarrey.

MSc. Ing. Quím. Carlos Saizar.

Table: Resume of Suppliers at 07/03/2005

Country	Potential Suppliers	Replies	Suppliers
Anguilla	0	0	0
Antigua & Barbuda	0	0	0
Argentina	27	11	4
Aruba	0	0	0
Ascension Islands	0	0	0
Bahamas	0	0	0
Barbados	0	0	0
Belize	0	0	0
Bermuda	0	0	0
Bolivia	0	0	0
Brazil	132	12	6
British Virgin Islands	0	0	0
Cayman Islands	0	0	0
Chile	17	7	3
Colombia	12	6	4
Costa Rica	4	0	0
Cuba	0	0	0
Dominica	0	0	0
Dominican Republic	0	0	0
Ecuador	1	0	0
El Salvador	2	0	0
Falkland Islands	0	0	0
French Guyana	0	0	0
Grenada	0	0	0
Guadeloupe	0	0	0
Guatemala	0	0	0
Guyana	0	0	0
Haiti	0	0	0
Honduras	0	0	0
Jamaica	0	0	0
Martinique	1	0	0
Mexico	0	0	0
Montserrat	0	0	0
Netherlands Antilles	0	0	0
Nicaragua	1	1	1
Panama	6	0	0
Paraguay	2	1	1
Peru	8	1	1
Puerto Rico	18	0	0
St Helena	0	0	0
St Kitts & Nevis	0	0	0
St Lucia	0	0	0
St Vincent & Grenadine	0	0	0
Suriname	0	0	0
Trinidad & Tobago	6	0	0
Tristan Da Cunha	0	0	0
Turks & Caicos Islands	0	0	0
Uruguay	2	1	0
US. Virgin Islands	0	0	0
Venezuela	5	2	2
Total	244	42	22

Note: At 7/3/05 information from Mexico was not compiled (various potential suppliers were contacted)