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## 7 Information on Effects on Health/Environment

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### All Regions/Countries, Parties of the Basel Convention

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#### UN Region: Africa

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##### **Egypt**

- 2009 There are difficulties to have a validated and accredited data in terms of effect of hazardous waste on human health, at the national level there are many institutions involved in studying and analyzing this effect, some of them are listed below:
- 1.Higher Institute for public health – Alexandria University.
  - 2.Industrial Medicine Department, Faculty of Medicine – Cairo University.
  - 3.Ministry of health.

##### **Guinea-Bissau**

- 2009 Deficient waste management has bad effects in Human Health and Environment, specifically cyclic epidemics of cholera, water quality is not better, permanent risk of underground water contamination, Suspected existence of PCB.

There is no adequate waste treatment. Also, there is no separation of hospital waste and the common waste.

##### **Kenya**

- 2009 Not available.

##### **Madagascar**

- 2009 Les statistiques, études épidémiologiques concernant les effets en matière de santé professionnelle n'est pas encore disponible car les données s'éparpillent sur les institutions ci-dessous:
- Ministère de la Recherche Scientifique
  - CNRE: Centre National de Recherche sur l'Environnement, Antananarivo-Madagascar.
  - INSTN : Institut National des Sciences et Techniques Nucléaires, Université d'Antananarivo-Madagascar.

Ministère de la Santé

-CHU/HJRA: Centre Hospitalo-Universitaire/Joseph Ravoahangy Andrianavalona, Antananarivo-Madagascar.

##### **Mozambique**

- 2009 The hazardous waste exported up to date included waste generated from Aluminum Smelter which are spent pot lining (SPL) and other refractory materials contaminated with fluoride, cyanide and other contaminants, alkali liquid waste from natural gas project and Lead Acid Batteries and metal scrub from a battery factory. According to the EIA presented and available in Ministry for the Coordination of Environmental Affairs the negative effect of fluoride and cyanide are well known. However, neither from a smelter nor from other industries there is information about any damage caused by these harmful materials.

##### **Nigeria**

- 2009 Detailed statistics yet to be compiled.

##### **Rwanda**

- 2009 Information is not available.

**South Africa**

2009 There is no information. There could be incident as some times reported by media, but there is no formal consolidation of this information.

**Togo**

2009 Pas de statistiques pour le moment.

**Tunisia**

2009 None.

**Uganda**

2009 No information.

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***UN Region: Asia and Pacific***

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**Azerbaijan**

2009 State Statistical Committee of Azerbaijan collects data on generation, neutralization, transportation, recovery of toxic wastes and published this information in annual bulletins.

**Bahrain**

2009

**China**

2009

**Cyprus**

2009 Information is not readily available. Further information can be obtained from the Focal Point.

**Japan**

2009 Information is not available.

**Kazakhstan**

- 2009 Please provide information (e.g. activities, effects, regions, period covered and the sources of data/information) on any available statistics, studies, monitoring reports, etc. which have been compiled on the effects of the generation, transportation and disposal of hazardous wastes and other wastes on human health and the environment or alternatively provide contact information on where this could be found:

Exposure to adverse environmental factors, including industrial and household have a significant impact on the health of the population.

In 2009, a number of leading research institutes of Kazakhstan jointly with the Institute for the Study of sulfur Alberta (Canada) continued research on the impact of open storage of sulfur at Tengiz. Associated components of natural gas produced at the Tengiz field are sulfur compounds, mainly in the form of hydrogen sulfide. Lump sulfur formed in the process gas treatment complex Tengizchevroil and stored in open storage.

It was established that the storage of sulfur in the blocks has a locally constant technological impact on soil, given the small number and composition of incoming chemical pollutants, geochemical features of the territory, stability, and buffering of soils, the intensity of the impact will be insignificant

According to the research of the Institute of Public Health, the hygienic quality of the components of the environment in the surveyed villages located within the sanitary-hygienic requirements for populated areas. Realization of the comparative sanitary - hygienic and medical research can not be judged on the direct impact of the open storage of sulfur on the health of the population of Atyrau region.

In 2009 the state budget program conducted research projects: "Development of long-term regional systems of solid waste management in Kazakhstan (LLP National Scientific Research Center of the Air)," Substantiation of parameters and development of technological processes of processing of solid domestic and liquid industrial waste, "" Scientific substantiation of ecological perspectives introduction of breakthrough technologies and projects "(LLP Centre for health and eco-design)", "Scientific and technical assessment of the ecological status of the area of oil and gas deposits in the Republic of Kazakhstan" (RSE IAC EP) , "Study of the state of preservation and storage of radioactive waste, as well as their impact on the environment in the Republic of Kazakhstan" - "Environmental assessment of areas contaminated by PCBs" and "Studies of environmentally sound expansion of waste containing polychlorinated biphenyls (LLP Ecoservice C).

## **Kyrgyzstan**

- 2009 Protection and Forestry of Kyrgyz Republic  
адрес: 720082 Ministry of Health of Kyrgyz Republic  
Address: 720 040  
Bishkek city, Moskovskaya street 148  
tel.: +996312622680

State Agency on Environment  
Bishkek city, Toctogul street 228, tel.: +996312352727

## **Malaysia**

- 2009 There is no studies or report being carried out in Malaysia on the impact of hazardous wastes on human health and environment.

## **Nepal**

- 2009 Effects of Pesticides on human health and environment are mentioned in NIP 2006 The information available after that period.

## **Pakistan**

2009 Although number of studies have been under taken to assess the impacts of particular components of hazardous waste on human health and the environment by Universities and Research Organizations, however these studies are not centrally collected. However, a study was conducted with the collaboration of UNEP Chemicals Branch, Geneva to monitor the mercury exposure level in the hairs of the workers in Chlor-alkali and health sectors.

## **Singapore**

2009 Information is not available.

## **Sri Lanka**

2009 Some of the walk through audits conducted by the National Cleaner Production Center are based on occupational health aspects.

A joint cabinet memorandum has been prepared on the use and disposal of used tyres. Sri Lanka has prepared the National Implementation Plan(NIP) on Persistent Organic Pollutants (POPs) under the Stockholm Convention and the initial inventories on POPs pesticides, PCBs, Dioxin & Furans.

National Policy on health care waste management prepared by the Ministry of Health, Nutrition and Welfare: Provisions are made for the management of hazardous waste in an environmentally sound manner.

Several pilot scale projects are being implemented by the Ministry of Health, for the hazardous medical waste collection, treatment and disposal and their effects on human health and on environment.

## **Thailand**

2009 Not reported.

## **United Arab Emirates**

2009

## **Uzbekistan**

2009 National Plan of Environmental Sanitary of the Republic of Uzbekistan was developed and adopted in December 1999.

Statistic data are existing of consequence to people's health, working in dumps. Manufactures that remove the wastes where emulous hazardous wastes.

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## ***UN Region: Western Europe and Others***

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## **Andorra**

2009

## **Australia**

2009 Information may be obtained from the following websites:

<http://www.environment.gov.au/>  
<http://www.tams.act.gov.au/live/environment>  
<http://www.epa.nsw.gov.au/>  
<http://www.nreta.nt.gov.au/>  
<http://www.epa.qld.gov.au/>  
<http://www.epa.sa.gov.au/>  
<http://www.dtae.tas.gov.au/>  
<http://www.epa.vic.gov.au/>  
<http://www.dec.wa.gov.au/>

### **Austria**

2009 No specific information is available. General information can be obtained from the Federal Environment Agency via the Internet:  
<http://www.ubavie.gv.at/umweltregister/toc.htm>

### **Belgium**

2009 BRUSSELS

- In the 4th Waste Prevention and Management Plan, a chapter is dedicated on the impact on human health of the elimination/valorisation of the waste (incineration, biological degradation, recycling, transport, ...), with special emphasis on the effects of hazardous waste in general and of PCB-containing waste and asbestos waste in particular.
- The interface health-environment keeps up to date the information available on illness, their symptoms and possible links with the environment, direct or indirect exposure to wastes and toxic substances (i.e. saturnism, lung diseases, micronutrient deficiencies, fertility problems etc.). Data available on <http://www.ibgebim.be>.
- Statistical results concerning heavy metal intoxication, endocrine disturbance, fetal disease, chemical effects on the respiratory apparatus are only available with formal permission.- A report concerning PCB related topics was published, ("PCB's, a model for thinking and action"
- Cahiers de L'IBGE 18, 195 pp, 2001).
- Info concerning the 'green ambulance' is available on <http://www.ibgebim.be>.

### **Canada**

2009 Information on the relationship to hazardous wastes on human health and the environment can be found within recent Canadian statistics and studies including:

Hazardous Waste and Hazardous Recyclable Material Management in Canada 2005 Annual Statistics on their Exports and Imports: <http://www.ec.gc.ca/lcpe-cepa/eng/regulations/detailReg.cfm?intReg=84>

The Priority Substances List Assessment Reports contain waste information: <http://www.ec.gc.ca/substances/ese/eng/psap/final/main.cfm>

The National Pollutant Release Inventory provides substance information containing on-site releases and transfers for disposal and recovery: [http://www.ec.gc.ca/pdb/npri/npri\\_si\\_e.cfm](http://www.ec.gc.ca/pdb/npri/npri_si_e.cfm)

Under the Chemicals Management Plan, information on the properties and uses of the approximately 200 chemical substances identified through the categorization process as high priorities for action is collected including the information on human health and environmental effects of and risks posed by these chemicals: <http://www.chemicalsubstanceschimiques.gc.ca/challenge-defi/index-eng.php>

### **Denmark**

2009 The Danish policy is based on prevention of exposure and the use of limit values.

Among other things, the policy is based on risk assessments on chemicals and material stream analysis.

The mass flow analysis on numerous substances can be found on the Danish EPA homepage ([www.mst/homepage.dk](http://www.mst/homepage.dk)) but unfortunately most of them are in Danish but all of them will have an English summary.

### **Finland**

2009 The requirements for the monitoring of e.g. the emissions and effects of industrial facilities (including waste disposal and recovery facilities) are specified case-by-case in the environmental permits granted for such facilities. With regard to landfills, for example, the monitoring shall include at least monitoring of quantity and quality of landfill water and surface water, quality and level of groundwater, and accumulation and migration of landfill gas. The monitoring reports are provided to the supervisory authorities.

There are no specific national statistics etc. available on the effects of hazardous wastes on human health and the environment. However, in the Finnish environmental administration, there are some 40 national environmental monitoring programmes in operation concerning, for example, emissions and discharges to the environment, state of the environment (air, water courses, groundwater, soil), generation and management of wastes and hazardous wastes, use of chemicals, natural resources, and biodiversity. The health of the Finnish population is also regularly monitored by the health authorities (see e.g. [www.ktl.fi](http://www.ktl.fi)).

### **Germany**

2009 There is a great variety of environmental monitoring in Germany which covers all environmental media (air, soil, sea, inland waters) and many different types of monitoring (e.g. Environmental Specimen Bank, integrated environmental monitoring, population studies). There is also a huge amount of waste analyzes data which have been collected in a waste analyzes database ([www.abanda.org](http://www.abanda.org)).

Data about all environmental issues are published in “Data on the environment” which is available in German (ISBN 3-503-09057-6) and English.

## **Ireland**

- 2009 -Report of the Investigation into the Presence and Influence of Lead in the Silvermines Area of County Tipperary. Department of Agriculture, Food and Rural Development, 2000. Available from [www.agriculture.gov.ie](http://www.agriculture.gov.ie)
- National Hazardous Waste Management Plan 2008-2012 – Available from [www.epa.ie](http://www.epa.ie)
- Final Report of Expert Group for Silvermines, Co. Tipperary: Lead and Other Relevant Metals (2002) – Available from [www.epa.ie](http://www.epa.ie)
- Report of the Investigation into the presence of Lead and Other Heavy Metals in the Tynagh Mines Area – Available from [www.epa.ie](http://www.epa.ie)
- Irish EPA ERTDI Research programme. Methodology for the assessment of hazardous waste disposal sites
- [http://www.epa.ie/downloads/pubs/research/waste/EPA\\_hazardous\\_waste\\_sites\\_ERDT116synthesis.pdf](http://www.epa.ie/downloads/pubs/research/waste/EPA_hazardous_waste_sites_ERDT116synthesis.pdf)
- Irish EPA ERDTI Research Programme. Procedure for the identification of hazardous components of waste.
- [http://www.epa.ie/downloads/pubs/research/waste/EPA\\_hazardous\\_waste\\_ERDTI12\\_main.pdf](http://www.epa.ie/downloads/pubs/research/waste/EPA_hazardous_waste_ERDTI12_main.pdf)
- Irish EPA Current Research Programme (STRIVE). See theme B at attached link, <http://www.epa.ie/downloads/pubs/research/STRIVE-%20low%20res%%20version%20for%20web%2009.10.071.pdf>
- A householders guide to Hazardous Waste Prevention (2010)  
<http://www.epa.ie/downloads/pubs/waste/wastepreventionprojectoutputs/name,30195,en.html>
- National Large PCB Holdings Inventory (2010)  
<http://www.epa.ie/downloads/pubs/waste/haz/name,27748,en.html>
- National Small PCH Holdings Inventory (2010)  
<http://www.epa.ie/downloads/pubs/waste/haz/name,27749,en.html>
- National Hazardous (Difficult) Waste Facility Study  
<http://www.epa.ie/downloads/pubs/waste/haz/name,30331,en.html>
- Economic Study of Solvent Recycling & Treatment in Ireland (2010)  
<http://www.epa.ie/downloads/pubs/waste/haz/name,30635,en.html>
- Garages Final Study Report (2010)  
<http://www.epa.ie/downloads/pubs/waste/haz/name,30636,en.html>
- Smart Garages Guide (2010)  
<http://www.epa.ie/downloads/pubs/waste/wastepreventionprojectoutputs/name,30512,en.html>
- Farming & the Environment (2008)  
<http://www.epa.ie/downloads/pubs/waste/wastepreventionprojectoutputs/name,28072,en.html>
- National Waste Report for year 2009

- <http://www.epa.ie/downloads/pubs/waste/stats/name,30613,en.html>
- Municipal Waste Characterisation (2008/09)  
<http://www.epa.ie/downloads/pubs/waste/plans/name,11659,en.html>
  - Guidance Note on Waste Ionisation Chamber Smoke Detectors (2010)  
<http://www.epa.ie/downloads/advice/waste/weee/name,30190,en.html>
  - Guidance on X-Ray units at end of Life (2010)  
<http://www.epa.ie/downloads/advice/waste/weee/name,30191,en.html>
  - ODS Questionnaire (2009): Refrigeration & Air Conditioning Sector  
<http://www.epa.ie/downloads/forms/ods/name,24108,en.html>
  - WEEE Waste Management Plan Report Template (2011)  
<http://www.epa.ie/downloads/forms/weee/name,27639,en.html>
  - WEEE Waste Management Plan Guidance (2011)  
<http://www.epa.ie/downloads/forms/weee/name,13512,en.html>
  - EPA PCB Information Leaflet  
<http://www.epa.ie/downloads/forms/surveys/PCB%20Information%20Leaflet.pdf>
  - Depollution and Shredder trial for End of Life Vehicles 2010  
<http://www.epa.ie/downloads/pubs/waste/stats/name,30314,en.html>
  - Irish Government Battery Scoping Decision Tree (2010)  
<http://www.epa.ie/downloads/advice/waste/weee/name,30257,en.html>
  - Focus on landfilling in Ireland (2010)  
<http://www.epa.ie/downloads/pubs/waste/stats/name,30262,en.html>
  - Occurrence and fate of pharmaceuticals and personal care products within sewage sludge and sludge-enriched soils  
<http://www.epa.ie/downloads/pubs/research/waste/name,27737,en.html>
  - Guidance note for the storage of materials at IPPC facilities  
<http://www.epa.ie/downloads/advice/licensee/name,14237,en.html>
- For further information, documents and reports please see [www.epa.ie](http://www.epa.ie).

**Israel**

2009

**Italy**

2009

**Luxembourg**

2009 Information is not available.

**Malta**

2009 N/A

**Monaco**

2009 Information is not available.

### **Norway**

2009 not available.

### **Portugal**

2009 Monitoring environmental, epidemiological and psychosocial programs are being implemented since 1999 by LIPOR (in the metropolitan area of Oporto) and VALORSUL (in the metropolitan area of Lisbon) regarding the impacts of municipal solid waste incineration facilities on human health.

Portuguese Environment and Health Action Plan, is a partnership between Agência Portuguesa de Ambiente and Direcção-Geral da Saúde, to improve the prevention, control and risk reduction strategies in environment and health with integration of knowledge and innovation in economic and social development. This programme has as objectives:

- Act at environmental factors levels promoting health for all;
- Increase awareness-raising, training and education of professionals and general public;
- Adjust policies and improve risk communication;
- Enhance and information network increasing knowledge on environment and health relationships.

### **Sweden**

2009 Not available.

### **United Kingdom of Great Britain and Northern Ireland**

2009 The UK made a commitment in 2002 to commission a review of the relative health and environmental effects of all the different waste management options.

This was a two stage process. The first stage assessed the scientific evidence of the physical health and environmental effects of options to manage municipal solid waste and similar wastes, and a report was published in May 2004.

An economic study completed the second stage. This report provided an assessment of the external costs and benefits to health and the environment of waste management options valued in monetary terms. Both studies are available at:  
<http://webarchive.nationalarchives.gov.uk/20081105144808/http://www.defra.gov.uk/environment/waste/research/health/index.htm>

Small Area Health Statistics Unit (SAHSU) epidemiological study on health effects in human populations living close to landfill sites in the UK – this looks at the rates of birth defects, low birth weight, stillbirths and of certain cancers in populations living within 2km of landfill sites in operation between 1982 and 1997. The report was published in 2001 and can be found at  
[http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_4120607](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4120607);

Statement by the Committee on Carcinogenicity of Chemicals and Food, Consumer Products and the Environment (COC) entitled ‘Cancer incidence near municipal solid waste incinerators in Great Britain’. This is a review of a SAHSU epidemiology study investigating cancer incidence or mortality amongst individuals living in proximity to municipal solid waste incinerators in Great Britain. More information on this and other relevant studies can be obtained from  
<http://www.advisorybodies.doh.gov.uk/coc/statements.htm>

The Environment Agency has funded work to measure the emissions of airborne chemicals, dusts and micro-organisms from two landfill sites. The draft report and the results are being reviewed by the Committee on Toxicology, who asked for further data. The Committee expects to publish a statement on landfill sites and health impacts when it has completed its review. The Environment Agency work will not be published until then.

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***UN Region: Central and Eastern Europe***

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**Armenia**

According to the available data in Armenia there are 48 urban and 274 rural landfills/dumps. Among them 11 urban waste dumps have no official permission and 178 community waste dumps are functioning illegally. Landfills are situated at a distance of 2-18 km from the towns; they have been constructed without special planning permission or environmental impact assessment.

There is no available data on monitoring, statistics, studies on the effects of the generation, transportation and disposal of hazardous wastes, as well other wastes on human health and the environment.

In the Republic of Armenia there are no special facilities for wastes recovery and disposal. According to the Chapter I “General provisions”, article 6 “Main principles and directions of the state policy in waste management area” of the National “Law on Wastes” one of the main principles is to protect human health and environment from wastes adverse effect.

In accordance with the Chapter IV “Rights and obligations of individuals/subjects in waste management area” article 20 “Obligations of legal persons, individuals and natural persons in waste management area” of the National “Law on Wastes” legal persons, individuals and natural persons are obliged to inform about emergency situation that threaten to human health and environment occurred during waste management and response measures shall be applied.

In order to protect human health and environment from adverse effect of hazardous wastes and in accordance with the Basel Convention requirements the following documents and actions were done:

The “Enabling activities to facilitate early action on the implementation of the Stockholm Convention on Persistent Organic Pollutants (POPs) in the Republic of Armenia” (POPs Project) has been implemented to develop the National Implementation Plan (NIP) addressed on reduction and elimination of POPs releases and POPs-containing wastes generation in Armenia.

To prevent the harmful effect of obsolete pesticides on environment and human health the Decision of the Government of the Republic of Armenia “On approval of measures ensuring security of obsolete pesticides burial and on assigning funds from Republic of Armenia state budget for FY 2004” (No. 526-A dated April 22, 2004) was prepared, as well as the “List of actions implemented within the frames of the “National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants in the Republic of Armenia during 2005-2010” was approved by the Protocol Decision of the Government of the Republic of Armenia” (No. 1 of January 13, 2005).

To assist state policy and strategy implementation on waste issues and to provide wastes environmentally sound management within the Ministry of Nature Protection the State non-commercial organization “Waste Research Center” was established by the Decision of the Government of the Republic of Armenia No. 670-N of May 19, 2005. “Waste Research Center” will be engaged in research of landfills adverse impact on environment and human health, in issues on wastes inventory, classification by hazard classes, development of normative documents on wastes management, collection and analysis of information on BAT and BEP.

For further strengthening cooperation in the field of chemicals and waste management between various state structures at the Ministry of Nature Protection jointly with the UN Institute for Training and Research (UNITAR) the Programme “Strengthening the Integrated National Programme of Chemicals and Waste Environmentally Sound Management in the Republic of Armenia” was completed (2004-2006). This Programme was aimed at ensuring the sustainable basis for efficient and coordinated actions on key issues, creation of the harmonized system on chemicals and waste management, enhancing the skills of decision-makers for risk evaluation and risk management of first-priority chemicals and waste (PCB-containing oils and equipment, obsolete pesticides, contaminated areas, etc.), awareness raising in concern of hazards and risks of chemicals

and waste; as well as strengthening the capacity and the national legislative basis. With the aim to facilitate development of the policy for efficient approaches and to fulfill complex measures targeted at improvement of environmentally sound management of wastes in Armenia jointly with the UNDP Country Office (Armenia) and with coordination of the Ministry of Nature Protection the project “Strengthening waste integrated management in Armenia” was implemented (2006). In the frame of this project an inventory was taken at existing legal and illegal dumps in 45 towns and 869 communities. In addition, data was obtained on existing industrial capacity for waste processing. An analysis was performed on the state of both legal and illegal dumps, the content and volumes of accumulated waste, and the surrounding ecological situation, as well as the existing capacity on processing, reuse, treatment and utilization of waste on the territory of Armenia. Risk assessment was done in concern of waste impact to the environment and human health. As a Project output, the “Waste Generation Directory (Catalogue) of the Republic of Armenia” was prepared summarizing available information on waste generation in Armenia.

The following projects were also implemented:

- “Development and Implementation of the National Cleaner Production Programme in the Republic of Armenia” (2006-2008) UNIDO;
- Design of a National PRTR System to Strengthen Capacity Building Activities for the implementation of Stockholm Convention on POPs in Armenia” Project: (2007-2009) (UNITAR);
- “Inventory, Monitoring and Analysis of Obsolete Pesticides in Armenia for Environmentally Sound Disposal” (NATO SfP – Armenia Pesticides) Project is implemented in the framework of NATO Science for Peace Programme) (2008- 2011);
- “Armenia and UNEP Partnership Initiative for Sound Management of Chemicals and Implementation of SAICM in Armenia” under the framework of the Quick Start Programme (QSP) of the Strategic Approach to International Chemicals Management (SAICM) (UNEP) (2009-2010);
- “Technical assistance for environmentally sustainable management of PCBs and other POPs waste in the Republic of Armenia” (GF/ARM/08/002) Project (2008- 2010).

### **Bosnia & Herzegovina**

- 2009 Study on "Environmental Protection Assessment of Industrial, Medical and other hazardous wastes in Bosnia and Herzegovina" which contains three thechnical reports:
- Industrial and other Hazardous wastes (IHW and OHW);
  - Medical hazardous wastes; and
  - Executive summary.

### **Bulgaria**

- 2009 Such kind of information can be obtained from  
Executive Environment Agency  
Waste Monitoring Department  
136, "Tsar Boris III" Blvd., Sofia 1618;  
e-mail: ncesd@eea.government.bg;  
tel.: (+3592) 955 90 11, (+3592) 940 64 15;  
fax: (+3592) 955 90 15  
Web: <http://eea.government.bg/>

### **Croatia**

- 2009 Information can be obtained from the Ministry of Health, Ksaver 200/a, 10000 Zagreb.

### **Czech Republic**

2009 There are no special statistics on the effects of hazardous wastes and other wastes on human health and the environment.

Contact information: National Institute of Public Health, Srobarova 48, CZ-10042 Prague 10

### **Estonia**

2009 National Waste Management Plan, Yearly statistics, Health Care Waste Management Strategy.

### **Georgia**

2009 Not available.

### **Hungary**

2009 On the basis of the material balance and other documents, waste producers/holders (with exception of waste carriers) and treatment facilities shall submit a quarterly and annual report, to the regional environmental protection authority.

The quarterly and annual reports are collected and registered in the database which is operated by the Ministry of Rural Development.

All information on waste generation, transportation and disposal of hazardous and other wastes can be found via the Hungarian focal point and competent authority.

### **Latvia**

2009 Information is not available.

### **Poland**

2009 The programme of environment and health actions in Poland is implemented within the framework of basic strategy setting priorities for national health policy, namely the National Health Programme (NHP).

The first NHP was adopted by the Government of Poland for the years 1996-2005. The second NHP was prepared for years 2007 - 2015.

The programme covers the following implementation actions:

- consequent realization of programmes concerning air and water quality and waste disposal (with special view to hazardous waste)
- development and implementation of a modern system for identification and assessment of occupational hazards;
- development of methodology for early diagnosis and prevention of occupational diseases and health promotion at workplace;
- development or up-dating of educational systems essential for national social policy in relation to occupational safety and hygiene as well as ergonomics.

### **Republic of Moldova**

2009 Information not available.

### **Romania**

2009 Information is not available.

### **Serbia**

2009 All activities, effort, regions, period covered and the sources of data information can we see on the web site of Ministry <http://www.ekoplan.gov.rs/en/Saopstenja-24-p1-list.htm> , there is and other links close with environmental protection and effect on human health and the environment.

## **Slovakia**

- 2009 Special statistics on the effects of hazardous wastes and other wastes on human health and the environment do not exist in Slovakia. The following information sources regarding wastes are available:
- Statistical Yearbook of the Slovak Republic, national, annual, Statistical Office of the Slovak Republic;
  - Report on the state of the environment of the Slovak Republic, national, annual, Ministry of Environment of the Slovak Republic;
  - Wastes in the Slovak Republic, national, annual, Statistical Office of the Slovak Republic;
  - Waste Management Programme of the Slovak Republic for the time period 2006-2010, national, Ministry of Environment of the Slovak Republic
  - [www.enviro.gov.sk](http://www.enviro.gov.sk)
  - [www.sizp.sk](http://www.sizp.sk)
  - [www.enviroportal.sk](http://www.enviroportal.sk)
  - [www.recfond.sk](http://www.recfond.sk)
  - [www.sazp.sk/COH](http://www.sazp.sk/COH)
  - [www.nczisk.sk](http://www.nczisk.sk)
  - Office for public relations established at the Ministry of Environment of the Slovak Republic – a public service.

## **Slovenia**

- 2009 Information is not available.

## **Ukraine**

- 2009 This information can be found in the National Report on the State of Environment in Ukraine (for years 1999-2007). By now a draft National Report on the State of Environment in Ukraine for 2009 is in preparation.

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## ***UN Region: Latin America and the Caribbean***

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## **Argentina**

- 2009 There are no statistics on waste generation. However, there is a register of generators, operators and transporters subject to National Jurisdiction (this information can be found on Web Page: [www.medioambiente.gov.ar](http://www.medioambiente.gov.ar)).

In general most of the Argentine Provinces have no statistics or register, so there are no data for the whole country. However, there is a National Profile on human health elaborated by Ministry of Health and Social Action for OPS. Project (INTOX - OMS/OIT/PNUMA). Country additional data can be found in the Red Argentina de Toxicología (REDARTOX) (Argentine Toxicology Network).

## **Barbados**

- 2009 None.

## **Bolivia**

2009 No se cuenta con estadísticas de este tipo.

Sin embargo se puede indicar que se ha encontrado desechos peligrosos y algunos posibles efectos:

En relación a Plaguicidas y otros productos contaminados:

Bolivia con apoyo de la FAO, realizó un relevamiento de información de plaguicidas obsoletos (POs), encontrando 479 toneladas, a la fecha se esta realizando una actualización de información.

En relación a PCB's, se ha encontrado:

peso total (carcaza y aceite contaminado con PCB's) (kg) 409.194,00  
Cantidad de aceite contaminado existente (lt)\* 71.514,00

Todas estas existencias deben ser eliminadas y/o tratadas.

| Sustancia | Número de Muestras | Valor Promedio ng/g | Rango ng/g |
|-----------|--------------------|---------------------|------------|
| DDT       | 5                  | <30                 | 30-30      |
| DDD       | 5                  | 44                  | -7         |
| DDE       | 5                  | 72.488              | -131       |
| Mirex     | 5                  | <1111               | -11        |
| Clordano  | 5                  | <1111               | -11        |

Problemática encontrada en el área de salud:

Muestreos aleatorios y los resultados muestran concentraciones de COP's en sangre de personas.

En el hospital oncológico de Santa Cruz de la Sierra se informo que se cuenta con varios casos y en aumento de Cáncer en zonas agrícolas.

Asimismo en la ciudad de Tarija se nos informo de muchos casos de Cáncer.

## **Brazil**

2009 a) In depth studies considering the contamination of soil, water, air and human exposure to hexachlorocyclohexane (lindane - HCH) due to environmentally unsound disposal of HCH wastes: Department of Science and Technology in Health (DECIT)/ Health Policy Secretariat (SPS) of the Health Ministry (MS).  
Phones: + 55 (61) 3315-2852, 3315-2273, 3224-4692; Fax: + 55 (61) 3225-1167;  
e-mail: ciencia@saude.gov.br

b) Contamination of lead, cadmium, zinc, copper in Santo Amaro da Purificação city/Bahia:

Health Secretariat of the State of Bahia

Phone: 0800 2840011; site: www.saude.ba.gov.br

AVICCA - Association of contaminated victims of lead, cadmium, zinc, copper and other chemicals elements.

Phone: + 55 (75) 3241-2920; e-mails: avicca@uol.com.br / avicca@bol.com.br

CRA - Environmental Resources Center of the State of Bahia

Phone: + 55 (71) 3117-1200; site: www.cra.ba.gov.br

Federal University of the State of Bahia

Phone: + 55 (71) 3263-7072; site: www.ufba.br .

c) Mantovani Landfill- disposal of industrial wastes (oil, sewage sludge, etc)

CETESB - Company of Technology and Environmental Sanitation

Phones: + 55 (11) 3030-6000 and (19) 3772-6600; site:www.cetesb.sp.gov.br

## **Costa Rica**

2009 At present there are two research centres on state universities, such as CICA (Centro de Investigación en Contaminación Ambiental) at the Universidad de Costa Rica and IRET (Instituto Regional para el Estudio de Sustancias Tóxicas) at the Universidad Nacional (UNA), which can provide information on this topic.

The Ministry of Health is starting the process of preparing a database related to all the wastes produced by the industrial and agro-industrial sectors that will reveal the current situation of Costa Rica.

## **Cuba**

2009 Not available.

## **Ecuador**

2009 Research about the effects of the generation, transportation and disposal of clinical wastes human health and the environment by Fundacion Natura, Av. Republica 481 y Almagro, Quito-Ecuador. (593-2)503391, mail: natura@fnautra.org.ec

## **Guatemala**

2009 In 1998, a social conflict arose between the people of a community living near a factory making accumulators and the factory, which was accused of being responsible for neighborhood health problems. A lengthy health investigation ensued, entailing measurements of the levels of lead in children's and adults' blood and water and soil measurements. Those analyses showed high levels of lead, and the factory was closed down and told it could not continue to operate in such circumstances. The owners made a substantial investment in order to rehabilitate the plant in respect of production equipment, pollution control and industrial safety, and the factory is operating again, and presents quarterly reports as requested by the Ministry of Environment of Guatemala.

## Honduras

### 2009 Honduran Lead and Cadmium Exam

#### Abstract

The review on lead and cadmium, promoted by the United Nations Environment Program (UNEP) Chemicals' Programme, is a very important initiative to know the situation of those chemical substances and the environment and health risks that involve, at the global, regional or national levels. Honduras, like State member of the United Nations, has been added to that noble effort, through the search, identification, selection, compilation and analysis of technical and scientific information generated by governmental, nongovernmental organizations and national and international academic institutions related to these chemical substances object of examination and evaluation.

This first review of the scientific information on lead and cadmium is of extreme importance to the country, because it has allowed to integrate information that was spread, forgotten or simply was not considered a source of useful consultation for relating to economical, social and environmental aspects in which finally the management of those chemical substances converges.

Although it is certain, much of the compiled and analyzed information is not systematic, nor has criteria of scientific rigor necessary to determine risk for human health and the environment; at least has been useful to establish a base line of the current national situation on lead and cadmium and additionally it has allowed to identify political, technological, scientific and information aspects, that must be strengthened to improve the knowledge of those substances and to understand the life cycle, in order to promote its environmental sound management.

In the different sections in which the review was organized according to UNEP's guidelines, will be found information generated by governmental and nongovernmental organizations related to mining, which exports lead and other metals that contributes with an important percentage of the gross domestic product. Also, are shown a series of studies published in different periods by governmental organizations, such as national and international academic institutions, whose intention has been to evaluate and to try to demonstrate the environment and health risks caused by lead in the different environmental components, to say, air, water, ground, ecosystems, foods and in addition to evaluate the general and occupational health effects. Also, some precise studies appear, that denote the effort of the governmental organizations to know the magnitude of the anthropogenic sources that release lead to the environment, especially in urban areas of the country, where an important industrial and commercial activity is concentrated. In an analogous way current actions and strategies and future plans are shown for preventing or controlling releases of lead.

Finally, it is important to mention that Honduras Government signed the Basel Convention on March 22, 1989 and ratified it on October 28, 1995 (Decree 31 - 95), which can be considered the main legally binding instrument to prevent or to control releases and to limit the use and exposures to lead and cadmium. This Review can be accessed in the following address:

[http://www.chem.unep.ch/Pb\\_and\\_Cd/SR/Files/Submission%20GOV/Submis\\_GOV\\_HN D.pdf](http://www.chem.unep.ch/Pb_and_Cd/SR/Files/Submission%20GOV/Submis_GOV_HN D.pdf)

## Mexico

2009 The Federal Commission for the Protection against sanitary risks (COFEPRIS) from the Secretary of Health has national vulnerability map of exposure to hazardous wastes, specifically heavy metals.

Likewise, COFEPRIS carries out risk evaluation in contaminated sites with hazardous wastes in different federal entities of the country, for example: State of Mexico by chromium waste exposure; Coahuila and Morelos for exposure to lead wastes and San Luis Potosi by wastes of hydrocarbons.

The COFEPRIS collaborated with the Secretary of Environment and Natural Resources (SEMARNAT) in the making of the "Official Mexican Regulation for the restoration of polluted grounds", through the development of the basic guidelines for Risk Evaluation to human health by exposure to wastes.

Contact point for health Information:  
Rocío Alatorre Eden-Wynter  
Executive Direction of Risks Management  
COFEPRIS- Office of the Secretary of Health  
Tel: (52 55) 55 14 8573  
Fax: (52 55) 55 14 8574  
E-mail: rocioal@salud.gob.mx

## **Nicaragua**

2009 En 1998 se exportaron a Finlandia aproximadamente 105 toneladas de desechos de plaguicidas organoclorados (DDT, Toxafeno, Dieldrín, Heptacloro, otros) para ser eliminadas mediante el proceso de incineración en la empresa EKOKEM. Así mismo, en 1999 se exportaron 320 toneladas de desechos de varios plaguicidas vencidos, tratados también en EKOKEM.

En 1999 se exportaron aproximadamente 10 toneladas de desechos de plaguicidas organoclorados de la empresa privada de forma voluntaria, proceso que se llevó a cabo en AVR- Holanda.

En el 2003, un Banco Centroamericano cubrió la exportación y la eliminación de 105 toneladas de Toxafeno, enviado a Holanda a ser destruida por incineración en AVR.

En el 2008, la empresa privada realizó una remediación en un sitio contaminado por plaguicidas COP y otros y nuevamente realizó la exportación de aproximadamente 1500 toneladas de suelo contaminado y extraído del sitio y cerca de 10 toneladas de residuos químicos de laboratorios y de algunos organoclorados localizados en el lugar, para ser incinerados respectivamente. Los suelos fueron enviados a VEOLIA - Inglaterra y los residuos químicos a VEOLIA – Holanda.

En 2007- 2008 se solicitó no objeción a la importación de BAPU a El Salvador y a Guatemala con fines de reciclaje de plomo en procesos industriales.

Lo anterior indicado ha contribuido de disminuir focos de contaminación ambiental, así como eliminar fuentes de efectos a la salud humana y animal por exposición directa e indirecta a los desechos eliminados.

## **Saint Lucia**

2009 None.

## **Venezuela**

2009 CONTACTOS:  
MINISTERIO DEL PODER POPULAR PARA EL AMBIENTE

Dirección General de Calidad Ambiental  
Tel: (58-212) 806-4082157/1116  
Fax: (58-212) 408-1118.  
Dirección de Manejo de Residuos y Desechos  
Tel: (58-212) 4081126-/1125/1126/1122.

MINISTERIO DEL PODER POPULAR PARA LA SALUD  
Dirección General de Salud Ambiental  
Tel: (58-243) 2412989.  
[www.mpps.gob.ve](http://www.mpps.gob.ve)

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