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## The International POPs Elimination Project

*Fostering Active and Effective Civil Society Participation in  
Preparations for Implementation of the Stockholm Convention*

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# Incineration and POPs Release in South Africa



**groundWork**

**South Africa  
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## **About the International POPs Elimination Project**

On May 1, 2004, the International POPs Elimination Network (IPEN <http://www.ipen.org> ) began a global NGO project called the International POPs Elimination Project (IPEP) in partnership with the United Nations Industrial Development Organization (UNIDO) and the United Nations Environment Program (UNEP). The Global Environment Facility (GEF) provided core funding for the project.

IPEP has three principal objectives:

- Encourage and enable NGOs in 40 developing and transitional countries to engage in activities that provide concrete and immediate contributions to country efforts in preparing for the implementation of the Stockholm Convention;
- Enhance the skills and knowledge of NGOs to help build their capacity as effective stakeholders in the Convention implementation process;
- Help establish regional and national NGO coordination and capacity in all regions of the world in support of longer-term efforts to achieve chemical safety.

IPEP will support preparation of reports on country situation, hotspots, policy briefs, and regional activities. Three principal types of activities will be supported by IPEP: participation in the National Implementation Plan, training and awareness workshops, and public information and awareness campaigns.

For more information, please see <http://www.ipen.org>

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The views expressed in this report are those of the authors and not necessarily the views of the institutions providing management and/or financial support.

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# Incineration and POPs Release in South Africa

## TABLE OF CONTENTS

About the International POPs Elimination Project .....	i
LIST OF FIGURES .....	iii
LIST OF ABBREVIATIONS.....	iii
ACKNOWLEDGEMENT .....	iv
INTRODUCTION .....	1
1. ACTIVITY AND HOW IT GENERATES POPs .....	2
1.1 Hazardous waste incineration .....	2
1.1.1 Cement kiln incineration.....	2
1.1.2 Mondi, Biotrace incineration .....	2
1.1.3 Thor Chemicals incineration.....	2
1.2 Medical Waste incineration .....	3
1.2.1 Shongweni incinerator .....	3
1.2.2 Newcastle medical waste incinerator.....	3
2. HISTORY OF ACTIVITY IN COUNTRY.....	4
2.1 Introduction.....	4
2.2 Hazardous waste incineration .....	4
2.2.1 Cement kilns .....	4
2.2.2 Mondi Biotrace .....	5
2.2.3 Thor Chemicals.....	6
2.2.4 Medical waste incineration .....	6
2.2.4.1 Shongweni incinerator .....	6
2.2.4.2 Newcastle incinerator.....	7
3. MECHANISTIC DESCRIPTION OF HOW THE ACTIVITIES GENERATE POPs.....	9
4. ENVIRONMENTAL, SOCIOECONOMIC AND HEALTH CONSEQUENCES	11
5. RESPONSIBLE PARTIES: USE OF INCINERATION .....	15
6. ALTERNATIVE PRACTICES .....	16
7. RECOMMENDATIONS OF NGO .....	17
7.1 POPS elimination: National Action.....	17

7.2 Purchasing practices.....	17
7.3 Waste minimization – no incineration .....	17
7.3.1 Segregation .....	17
7.3.2 Source Reduction .....	18
7.3.3 Resource Recovery and Recycling .....	18
7.3.4 Governments to walk the talk .....	18
REFERENCES .....	19
APPENDICES .....	20
APPENDIX 1: The Isipingo Declaration.....	20
APPENDIX 2: Press Release.....	24
APPENDIX 3: The Glenmore Declaration.....	27

## LIST OF FIGURES

Figure A: Cement kiln (Holcim cement) that will be used to burn hazardous waste next to a farming area in Lichtenburg, North West Province .....	12
Figure B: Grain storage facilities and community homes located next to Holcim cement in Lichtenburg .....	13
Figure C: Grain storage facilities located next to Holcim cement in Lichtenburg .....	13
Figure D: Holcim cement located next to community and agricultural lands .....	14

## LIST OF ABBREVIATIONS

ASP	Africa Stockpiles Programme
CKD	Cement kiln dust
CSO	Civil society organization
DAEA	Department of Agriculture and Environmental Affairs
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DEAT	Department of Environmental Affairs and Tourism
DEHP	Di (2-ethylhexyl) phthalate
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
FDA	Food and Drug Administration
GAIA	Global Alliance for Incineration Alternatives
GPCR	Gas-Phase Chemical Reduction
H:h	General waste landfill site
HCWH	Health Care Without Harm

KZN	KwaZulu-Natal
NIPs	National Implementation Plans
NPC	Natal Portland Cement
NWMS	National Waste Management Strategy
PBES	Peacock Bay Environmental Services
POPs	Persistent Organic Pollutants
PPC	Pretoria Portland Cement
PVC	polyvinyl chloride
SA	South Africa
SAICM	Strategic Approach to International Chemicals Management
TCH	Thor Chemical Holdings
tpd	tons per day
UK	United Kingdom
UN	United Nation
US	United States (of America)
WHO	World Health Organization
WSSD	World Summit on Sustainable Development

## **ACKNOWLEDGEMENT**

## INTRODUCTION

For years outdated polluting technologies such as incinerators which have been rejected in the global North have been pushed to developing countries. Following reported health effects and public pressure, since 1995, dirty incineration technologies in the United States have been rapidly phased out. Dirty incineration technology has also been phased out in other countries such as Greece, Germany, Japan and Malaysia to name a few. In response to this rejection in their own countries, incinerator manufacturers are pushing their deadly wares into developing countries in Africa, where health and environmental regulations are less stringent with minimal capacity to monitor and enforce.

To date the United States (US) has been the power dog in the globalisation arena. The US government has even facilitated exports of incinerators under the guise of "technology transfers" and "environmental exchanges." A number of proposals for incinerators have taken place and are currently on the table in various African countries, which are being pushed and funded by the United States. Projects in South Africa include those of Rainbow Millennium Power Company in Richards Bay, the previously successfully defeated Peacock Bay Environmental Services (PBES) proposal to build a hazardous waste facility Sasolburg, and, the US proposal, for Mondi Paper in South Durban for the construction of a fluidised bed incinerator. A hazardous waste incinerator was also proposed for Thor Chemicals based in Cato Ridge and there is currently a nationwide push by the cement industry including companies such as Holcim NPC, and PPC cement to burn 'alternate' hazardous waste in their cement kilns. All these processes are known to release persistent organic pollutants (POPs) into the environment and have the potential to harm human health and the environment.

This research explores proposed activities in South Africa (SA) that will potentially result in the release of POPs into the environment. Such activities include hazardous waste and medical waste incineration. Furthermore this work aims to explore these activities and how they might generate POPs, including the history of activity in the country, mechanistic description of how the activity generates POPs, environmental, socioeconomic and health consequences as well as recommendations by civil society. It is hoped that the report will help to provide inputs into the South African government National Implementation Plan (NIP) under the Stockholm Convention on POPs.

## **1. ACTIVITY AND HOW IT GENERATES POPs**

In South Africa, there are various incineration proposals underway and related activities which might release persistent organic pollutants (POPs) as outlined below:

### **1.1 Hazardous waste incineration**

#### **1.1.1 Cement kiln incineration**

There is currently a nationwide push by the cement industries in South Africa to burn hazardous waste (including obsolete chemicals) in cement kilns (incinerators) in South and Southern Africa. The disposal of hazardous waste by incineration is known to result in the release of toxic emissions including by-products of POPs such as dioxin and furan, and heavy metals into the air, water and land leading to contamination of the environment.

Some of the types of hazardous waste currently proposed to be burnt in cement kilns include industrial solid, liquid and sludge waste, solvents, oily sludge, varnishes, carbon black, plastic and rubber waste, textile waste, contaminated packaging materials and plastic drums, waste oils, paint sludge, glues, sewage sludge's, tars, tyres, paper waste, wood waste, paper sludge, plastics and spent solvents, solvents and waste containing solvents, waste from petroleum refinery, oily liquid waste, waste paint, varnish, glue, mastik, ink, machining sludge with hydrocarbons, grease and lubricants, waste from synthesising or other organic chemical operations and rejects and spoils of plastic materials, rubber, textiles, wood shavings and sawdust.

#### **1.1.2 Mondi, Biotrace incineration**

Mondi are proposing to construct and operate a 90-ton multi-fuel boiler (incinerator) at the Mondi Paper mill in Merebank, Durban to burn hazardous waste. As stated previously, the disposal by incineration will result in the release of toxic emissions of POPs by-products and heavy metals into the air, water and land potentially leading to the contamination of the environment.

#### **1.1.3 Thor Chemicals incineration**

Thor Chemicals, Inc of Great Britain was accused and found guilty between 1987-1992 of poisoning workers and putting surrounding communities at risk from hazardous waste mercury exposure. Thor received mercury-waste shipments from other countries at their plant in Cato-Ridge for recycling and disposal.

In 2003, government handed over a directive to clean up to the management of Thor. Should Thor fail to execute this directive, the SA government can take over all clean up and rehabilitation activities, and then seek to recoup these costs from Thor. However, there remains concern amongst civil society that incineration will be used to dispose of the mercury which will potentially result in POPs and other persistent toxic substances releases into the environment.

## **1.2 Medical Waste incineration**

### **1.2.1 Shongweni incinerator**

EnviroServ are presently conducting an EIA/scoping process for the development of a medical waste incinerator at their H:h landfill site in Shongweni, KwaZulu- Natal (KZN).

Medical waste is known to contain materials such as PVC, mercury from broken thermometers as well as many other potential POPs materials. POPs such as dioxins and furans can also potentially be formed during the manufacture of PVC, and during the incineration or burning of PVC products.

Following public pressure EnviroServ announced that they will be switching to non-burn technology instead of incineration. South Africans have yet to see if this promise materializes.

### **1.2.2 Newcastle medical waste incinerator**

A private waste company in KwaZulu-Natal is presently conducting an EIA process for the development of a medical waste incinerator in the town of Newcastle.

### **1.2.3 Compass Waste and Ixopo medical waste incinerator**

Compass is a private waste company that operated a domestic waste incinerator for burning medical waste in the Ixopo area in the province of KwaZulu-Natal. Despite various violations of the operating permit since the 1990's they continued to operate until February 2006, when after a protracted legal challenge by groundWork, government finally ordered their closure, using the new National Environmental Management: Air Quality Act.



## **2. HISTORY OF ACTIVITY IN COUNTRY**

### **2.1 Introduction**

Southern African civil society has recently begun uniting to take a stand against the harmful practices of waste incineration which is a perpetuating practice of environmental injustice. In April 2002 *groundWork*, in collaboration with the GAIA and HCWH, held a National CSO Strategy Workshop on Healthcare Waste and Incineration. The workshop was attended by about 30 civil society organisations from South Africa, Swaziland and Zimbabwe as well as the Philippines where incineration is banned. The gathering led to the adoption of the Isipingo Declaration on Eliminating the Harmful Impacts of Healthcare Waste and Incinerators in Southern African communities (*Appendix 1: Isipingo Declaration on the eliminating the harmful impacts of Health Care Waste and Incinerators in Southern African communities*).

### **2.2 Hazardous waste incineration**

#### **2.2.1 Cement kilns**

Firstly, cement kilns are not designed, constructed, operated, or intended to burn hazardous waste. They are permitted and regulated by government as cement manufacturing facilities. Cement kilns do not have to meet the same stringent standards of performance and emission limits as incinerators. When a cement kiln burns hazardous waste it becomes an incinerator. To 'incinerate' means to burn waste (within a confined furnace and at specific high temperatures) until only ashes are left over.

In South Africa in particular, many cement industries (from 2002) such as Natal Portland Cement (NPC), and Holcim Cement, are seeking DAEA approval to incinerate hazardous waste. The KwaZulu-Natal DAEA officials have requested NPC to burn agricultural chemicals, which could include obsolete stockpiles of pesticides and herbicides. In January 2006, Pretoria Portland Cement commenced with environmental impact assessments (EIA) on six proposals to burn hazardous waste in cement kilns. The lack of communication between government departments is apparent, considering the DEAT held a workshop early in 2004 concerning the development of the National Implementation Plan (NIP) for the management of POPs and strategies to clean up and prevent future accumulation of unwanted stocks of pesticides under the Africa Stockpiles Programme (ASP).

Moreover, regarding the enactment of the National Environmental Management: Air Quality Bill; proposed amendments to the Bill were a result of civil society organisations requesting the Portfolio Committee on Environment and Tourism in February 2004, to hold back the Bill and request the DEAT to amend the Bill. On Thursday 12 August 2004, DEAT presented the amendments to the Portfolio Committee on Environment and Tourism as requested. However, the DEAT included additional clauses 26-28, without input from civil society that would allow for the incineration of hazardous waste. South African government does not have a policy on hazardous waste being used as 'alternate fuels' nor a policy on the process of combusting. There is also no mention made of "controlled fuels or alternative fuels" in the White Paper on Integrated Pollution and Waste Management of March 2000. This policy informs the air quality legislation. So the additional clause by government was

unlawful.

The cement industry has been lobbying the government vigorously to allow them to burn hazardous waste in their cement kilns. Civil society organisations such as groundWork have addressed in writing community concerns to the various persons in government since 3 October 2002 to 19 February 2004. There has been neither substantive reply nor response to any of the requests to work with government on policy for alternative fuels including tyres, hazardous waste, government's position on cement kiln incineration; nor government position on hazardous waste incineration. The inclusion in the legislation of a process allowing (for the setting of emissions standards) for the use of controlled fuels in a combustion process effectively pre-empts debate on whether such fuels and combustion processes are appropriate, necessary and without negative environmental and health impacts.

There is a fear amongst civil society that, if the SA government allows the burning of hazardous waste in cement kilns, there will be an increase in the burning of hazardous waste in cement plants in the rest of Africa. Another fear is that the stockpiled hazardous waste (including pesticide waste) from African countries may be exported and disposed of in cement kilns in South Africa. This would go against one of the SAICM objectives, which relates to the banning of international trafficking in chemical wastes. No community should be used as a dumping ground for hazardous wastes from industries that are increasing profits by practicing cheap and unsafe waste disposal practices. There is a need to move away from a focus on waste disposal to a cradle-to-grave and cradle-to-cradle waste management paradigm. And chemicals that cannot be safely disposed of should not be manufactured or used in the first place.

The good news is that since the outcry amongst civil society organizations in Africa regarding this process, in November 2005, civil society organisations have welcomed the decision by the North West Province to deny Holcim Cement permission to burn hazardous waste in their cement kiln in Dudfield, outside Lichtenberg (Ditsobotla Local Municipality District) in the North West Province. The decision is an important precedent (*Appendix 2: Press Release*).

Despite this victory, Pretoria Portland Cement in late 2005, registered six Environmental Impact Assessments to burn hazardous waste in their kilns around South Africa. There has been a civil society outcry on against this<sup>1</sup>.

### **2.2.2 Mondi Biotrace**

Biotrace (PTY) Ltd made an application in 2003 to DAEA for the construction of a fluidized bed incinerator to burn 70 tons per day (tpd). Mondi Paper contracted the international Biotrace to burn waste material to produce steam-based electricity. About 200,000 tons of sludge, ash, bark and wood shavings would be burnt every year if the proposal goes ahead. In 2004, the DAEA issued authorization for the project. However, the authorization outraged civil society as it was not informed by a full EIA and defies the global accord towards eliminating toxic substances. Mondi made a new application for the 70 tpd incinerator. Residents are strongly opposed to the incinerator in their area. Mondi has also strategically made a second application for a 90 tpd incinerator in

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<sup>1</sup> See [www.groundwork.org.za](http://www.groundwork.org.za) for more information on this.

case the 70 tpd does not go ahead. Public interested groups from around the world have called on the SA government to not approve these dirty technologies.

### **2.2.3 Thor Chemicals**

Thor Chemicals, Inc of Great Britain, which was established in 1963, was accused in 1987 of poisoning workers and putting surrounding communities at risk from mercury exposure. Thor SA was a subsidiary of the Thor group originally controlled by TCH in the UK. Thor engaged in the manufacture and marketing of biocides, textile auxiliaries and metallic organic soaps.

The location of the damage was situated in the Umgeni catchment at Cato Ridge in the Eastern province of KwaZulu-Natal. A mercury processing plant (Thor) was previously established in the late 1970s in Pinetown. In 1987 TCH relocated its UK mercury recycling operation to Cato Ridge. The company activity included the production of a range of mercury-based products for local and export markets, which included mercuric compounds.

Thor received mercury-waste shipments from other countries at their plant in Cato-Ridge. As one of the only facilities in the world to form a large-scale mercury reclaiming process, Thor quickly became a target for many international companies facing the dilemma of what to do with mercury waste. These exports and pollution caused by Thor had been disclosed as part of an investigation of toxic waste trafficking. A commission of enquiry had been set up to look into the company's history and background of its mercury recovery process as well as the stockpiles of hazardous waste on its property. Thor was receiving shipments as part of their mercury recovery (recycling) program, which included the importation of mercury waste to recover mercury. The amount of mercury waste that Thor accumulated was as a result of increased production of mercuric compounds and spent catalyst waste returned by its customers after use.

In March 2003, the Deputy Minister of Environmental Affairs handed over a directive to clean up to the management of Thor. Should Thor fail to execute this directive, the SA government can move in and take over all clean up and rehabilitation, and then seek to recoup its costs from Thor.

### **2.2.4 Medical waste incineration**

#### **2.2.4.1 Shongweni incinerator**

EnviroServ are presently conducting an EIA/ scoping process for the development of a medical waste incinerator at their H:h landfill site in Shongweni, KZN. Government (DAEA) has approved the nature of the facility. However, residents are up in arms over the proposal to place an incinerator in their area and have strongly opposed the project thus far.

Civil society is also opposed to the proposal by waste disposal company EnviroServ to build a medical waste incinerator at Shongweni outside Durban. South Africa ratified the Stockholm Convention, an agreement to reduce the emission of the pollutants emitted by incinerators. The World Health Organisation (WHO) also recommends against the burning of medical waste.

Civil society claim that a draft Environmental Impact Report (EIR) of an incinerator at Shongweni is flawed and misleading, that the incinerator will release deadly chemicals into the environment. NGOs such as Earthlife Africa and groundWork had requested Dr. Mark Chernaik, staff scientist at the US office of the Environmental Law Alliance Worldwide, to conduct a critical evaluation of the draft EIR and Air Quality Impact Study. He concluded that Enviroserv's justification for building an incinerator to treat pharmaceutical and chemical wastes could be likened to justifying the use of a gun to kill a mosquito.

More than 5,600 objection letters have been sent to NGOs and the Provincial Department of Agriculture and Environmental Affairs. Chernaik said the draft EIR wrongly concludes that incineration is the preferred method for the disposal of pharmaceutical and chemical wastes, as opposed to autoclaving. He also said the Air Quality Impact Assessment shows that the incinerator will emit carcinogenic levels of chromium and arsenic.

"The draft EIR fails to describe how Enviroserv will monitor stack emissions of toxic pollutants and to investigate the impacts of toxic pollutant emissions on future development plans for Shongweni," he said, adding that ex-national Environmental Affairs and Tourism Minister Valli Moosa stated that SA does not have the capability to monitor incinerator emissions adequately.

Earthlife's research has revealed that medical waste incinerators of the type Enviroserv proposes to be built in Shongweni would release 525 to 3,000 micrograms of dioxin per metric ton of waste incinerated. These rates are 100 to 500 times higher than those estimated by Enviroserv proposal.

Earthlife and groundWork point out that if dioxin emission rates are 500 times higher than Enviroserv assumes, then the predicted cancer risk from exposure to dioxins of persons living nearby the incinerator will be 1:42,000, not 1:21,000,000 as Enviroserv claims.

Following public pressure Enviroserv recently announced that they will be switching to non-burn technology (autoclaving) instead of incineration. CSOs are yet to see if this promise materializes and will be monitoring the process.

#### 2.2.4.2 Newcastle incinerator

A private company is presently conducting an EIA/scoping process for the development of a medical waste incinerator at Newcastle. Government (DAEA) has in the past approved the nature of such facilities. Residents in the area have no idea of the proposal or of the potential for health effects that the proposed incinerator would have, and therefore have not voiced concern. groundWork has however been visiting the area in an effort to inform residents and conduct education and awareness activities.

Currently, the consultants are looking for an alternative site for the incinerator and have not released any documents for comment as yet.

#### 2.2.4.3 Compass Waste and Ixopo medical waste incinerator

Compass is a private waste company that operated a domestic waste incinerator for burning medical waste in the Ixopo area in the province of KwaZulu-Natal. Despite

various violations of the operating permit since the 1990's they continued to operate until February 2006, when after a protracted legal challenge by groundWork, government finally ordered their closure, using the new National Environmental Management: Air Quality Act.

This case highlighted the serious governance challenge South Africa has with dealing with environmental governance issues. Despite the Department of Environmental Affairs and Tourism being aware of these violations, repeated operating licenses were granted to the company.

### 3. MECHANISTIC DESCRIPTION OF HOW THE ACTIVITIES GENERATE POPs

This section draws on studies in scientific literature; company reports; and government reports.

During medical waste incineration containing PVC, or poly vinyl chloride plastic, (the most widely used plastic in medical devices) can release substances which can be harmful to patients, the environment and public health generally. There are two key problems associated with PVC:

[Dioxin](#), a known human carcinogen, can be formed during the manufacture of PVC, and also during the incineration or burning of PVC products. DEHP, a phthalate used to soften PVC plastic that can leach from PVC medical devices, and has been linked to reproductive birth defects and other illnesses, according to animal studies.

Some patients may be at risk of harm from certain DEHP-containing medical devices, according to several [government agencies](#) such as the US FDA, the Swedish Chemicals Inspectorate, the Japanese Ministry of Health and a Health Canada expert panel.

Incinerators do not make waste disappear - they reduce it to ash and to atmospheric emissions, both of which are potentially hazardous. Incineration liberates toxic chemicals from otherwise stable matrices (e.g. plastics) and it creates and concentrates toxic by-products like dioxins and furans from chlorinated plastics. It generates toxic ash or toxic effluent which also contains POPs such as dioxin and furans. Fly ash from scrubbers is particularly high in toxins.

Opposition to the burning of hazardous waste in cement kilns and incineration generally has increased as people have learnt of its dangers. In the United States, hazardous waste was being burned in cement kilns for many years until they were required under regulations of 1991 to inform communities about this practice. Since then, opposition has been fierce. Other community opposition to burning hazardous waste in cement kilns were in Texas, Montana, Dundee, Mexico and Mozambique to name a few.

Hazardous wastes (such as obsolete chemicals) may be persistent in the environment and have been linked to an array of very serious and potentially fatal-health problems and environmental destruction. It is now widely accepted that burning these chemicals does not destroy them but releases them and other chemical compounds into the environment in a gaseous form - a form that is more readily inhaled, ingested and absorbed. The burning of hazardous waste in cement kilns also produces POPs such as dioxin, into the air.

An environmental pollution study around a large industrial area in Egypt found that cement factories contributed substantially to environmental pollution. Around 2.4 million tons of cement kiln dust was released into the atmosphere per year. The data obtained indicated that the pollution was hazardous to people living in and around the area surveyed (Abdel-Halim *et al*, 2003).

According to the EPA, the products that do not burn completely are released in the stack gases and are estimated to range in the thousands. For toxic chemicals, they cannot be destroyed completely (EPA, 1989). Cement kilns that burn hazardous waste produce up to 104% more Cement kiln dust (CKD) than cement kilns that do not burn hazardous waste (EPA, 1993).

#### 4. ENVIRONMENTAL, SOCIOECONOMIC AND HEALTH CONSEQUENCES

The disposal by incineration of hazardous waste will most probably result in the release of toxic emissions into the air, water and land leading to contamination of the environment.

In 2001, Greenpeace launched an explosive new international report (Incineration and Human Health) that linked waste incinerators to deaths from cancers, and a higher incidence of lung disease, sarcoma, congenital malformations and immune system depression. The report consolidated over 300 research papers and concluded that people living in the vicinity of incinerators had a greater chance of dying from lung and liver cancer. The reality is that “*incinerators pollute and are a threat to society*”. Concerns include the ineffective control of emissions of dioxins and mercury ([www.greenpeace.org/~toxics/reports/euincin.pdf](http://www.greenpeace.org/~toxics/reports/euincin.pdf)).

Pregnant mothers transfer some of their body burden of these chemicals to the foetus before birth and during breastfeeding. The developing foetus and the breastfeeding infant are then exposed to these chemicals at the highest levels during vulnerable developmental phases.

The creation of toxic chemicals like dioxins stated in the previous section is dangerous to human health and the environment. Once in the air dioxin can settle on the land and get into the rivers and lakes. In lakes, rivers, streams and ponds, dioxins tend to settle to the bottom and cling to solid materials such as mud or clay (sediment). Workers such as cement workers may be exposed to dioxins during the burning of hazardous waste in cement kilns.

Dioxins can enter the body by eating or drinking contaminated food, through the air we breathe or by skin contact. Most people are exposed to dioxins by eating contaminated fish, meat and dairy products. When dioxin settles on the grazing lands, animals such as cows feed on these lands and contaminate the milk they produce. Fish may ingest sediments containing dioxins and retain the dioxin in their body fat, and tend to have the highest dioxin levels. As dioxins move up the food chain it gets stronger and bio-accumulates. Dust contaminated with dioxins from burning may be found on the outer surfaces of fruits and vegetables.

Exposure to dioxins is linked to a variety of health effects, including low sperm counts, immunotoxicity, reproductive and developmental effects, and cancer. The burden of illness can be greater in socially disadvantaged communities because, money in the poor community goes towards high medical bills and thus fuels a continuous cycle of poverty.

According to the EPA, cement kilns are the third largest source of dioxin emissions and the second largest source of mercury emissions in the United States (ref). Mercury causes damage to the nervous system and birth defects. A study regarding *Mercury emissions to the atmosphere from natural and anthropogenic sources in the Mediterranean region*, showed that the emission from cement production was one of three processes that contributed to 82% of the regional anthropogenic sources total (Pirrone et al, 2001).



Exposure to cement dust causes interstitial lung disease, pleural thickening and chronic bronchitis (*Meo, 2003*).

There is good evidence for cement dust exposure acting as a tobacco, alcohol and asbestos independent risk factor for laryngeal carcinoma (*Dietz et al, 2004*). Heavy metals are amongst the most relevant substances emitted during the processes of cement manufacture, especially known are the toxic effects of arsenic, cadmium, lead, mercury and thallium (*Schuhmacher et al, 2000*).

Example:

The Holcim Cement plant located in Dudfield, Lichtenburg, in the North West Province, is just one of the many process proposals to replace its existing coal fuel stock with hazardous waste. In addition to Holcim Cement, other cement industries such as PPC, NPC and Lafarge Cement are also operating in the area. There is the concern that, since this is largely an agricultural region, POPs pollution arising from the burning of hazardous waste in cement kilns will have a detrimental affect on this sector, since the release of dioxins and other chemicals could contaminate crops and livestock and subsequently people when they consume the crops and animal products from that area.



**Figure A: Cement kiln (Holcim cement) that will be used to burn hazardous waste next to a farming area in Lichtenburg, North West Province**



**Figure B: Grain storage facilities and community homes located next to Holcim cement in Lichtenburg**



**Figure C: Grain storage facilities located next to Holcim cement in Lichtenburg**



**Figure D: Holcim cement located next to community and agricultural lands**

## **5. RESPONSIBLE PARTIES: USE OF INCINERATION**

It is confusing that the SA government could even consider and encourage incineration in South Africa, particularly regarding the burning of hazardous waste in cement kilns. This virtually undermines the SAICM objectives, as well as other international processes and treaties such as the Stockholm Convention and the ASP.

South Africa ratified the Stockholm Convention on POPs prior to the World Summit on Sustainable Development (WSSD) held from 26 August - 4 September 2002 in Johannesburg; it is therefore alarming that government is considering the use of a dangerously polluting technology whose operation will virtually undermine the objectives of the POPs treaty. The Stockholm Convention also gives preferential treatment for the use of non combustion-based approaches to the management of waste, including the disposal of stockpiles of hazardous waste.

Obsolete pesticides being one group of chemicals have recently been receiving particular attention at an inter-governmental level, in such initiatives as the global SAICM. The aim of the SAICM is to get governments to commit to internationally recognized chemical safety objectives, and the DEAT is a stakeholder in such a process. SAICM aims that by 2020; chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment.

The South African government also does not have a policy on the use of hazardous waste as an alternative fuel source for industries. There is no mention made of “controlled fuels” or alternative fuels in the White Paper on Integrated Pollution and Waste Management of March 2000. This policy informs the air quality legislation.

Industries, such as the cement industry, have been calling for the “alternative fuels”/“controlled fuels” and have lobbied government extensively, going as far as taking the Deputy Minister of Environment to Europe to view this technology - a technology which we have neither agreed to nor debated in the context of policy formulation and strategy yet South Africans now find it included in the legislation!

Government responsibility is to live to its commitments to the Stockholm Convention and review legislation, policies and enforce them in the process of the convention’s implementation.

Industries must have the responsibility to search and or adopt clean technologies – Best Available Technologies (BAT) and Best Environmental Practices (BEP) for life entire cycle of products.

Public interest groups (NGOs/CSOs) are mainly watch dogs and campaign for all stakeholders’ commitment to the Convention, awareness-raising on the POPs, their effects and best available options.

## 6. ALTERNATIVE PRACTICES

Firstly, any technology employed for destroying POPs stockpiles must effectively destroy 100% of the POPs feed into it. That is, no detectable levels of POPs must be present in any emissions or residues from the process employed.

The alternative to burning hazardous waste in cement kilns is for cement companies to continue using fuel oils or a better option, natural gas, the cleanest fuel for cement production. A non-burn technology that can be used for the destruction of hazardous waste is the Gas-Phase Chemical Reduction (GPCR), which is being used in countries such as the Philippines, Australia, Japan, America and Canada. Hazardous waste is chemically reduced to other substances that are safe for reuse, e.g. methane and hydrogen chloride. These substances can be further broken down to produce other products such as hydrogen, which can be reused. The gas produced can be reused as fuel.

According to Costner (1998), due to the interest in evaluating non-incineration destruction technologies around the world, it can be argued that the destruction efficiencies of non-incineration technologies are generally far better characterized than those of incinerators. In a regulatory trial in Japan for dioxin treatment by the GPCR process, all potential waste streams were analyzed which enabled the evaluation of the destruction efficiency of POPs to be at least 99.9999%.

Any technology intended to dispose of POPs stockpiles or remediate contaminated sites must be capable of effectively destroying 100% of the POPs feed into it. The appropriate measure of the effectiveness of any given POPs destruction technology is the true destruction efficiency of the system, as determined by analysis of all potential waste streams and emissions.

## **7. RECOMMENDATIONS OF NGO**

### **7.1 POPs elimination: National Action**

Elimination of POPs such as dioxins needs to be the focus for national action. Additionally the economic activities, technologies, materials that are in effect and dioxin sources must be identified. Priority should then be given to preventative measures through which these dioxin sources are either avoided, or if already present, changed or replaced with alternative activities, technologies and materials so that dioxins are neither created or released. In October 2005, groundWork held a CSO workshop on mercury pollution. Mercury is a neurotoxic POPs released by many processes such as medical waste incinerators as well as mining. CSOs came up with a declaration on elimination mercury as a POPs in Southern African communities (*Appendix 3*). Some of the recommendation by civil society included the promotion of the development of mercury consumption and release inventories, and associated action plans, in the various provinces, including the product inventories, by providing technical and financial assistance that includes guidance for the development of such inventories and action plans, and maintaining an electronic clearinghouse containing a compilation of completed national or regional inventories or action plans.

### **7.2 Purchasing practices**

Materials that produce POPs should be substituted for safer alternatives, e.g. phase out PVC/DEHP with alternatives in the health care setting, including medical devices, office supplies, building materials and furnishings. PVC-free intravenous and blood bags are used in many countries such as in Europe and the U.S and need to be explored by government. PVC-free bags are cost-effective and technically competitive with PVC bags. PVC-free or DEHP-free tubing is on the market for most medical applications as well as alternatives for disposable PVC gloves are readily available.

In addition to medical devices, PVC-free construction and furnishing products are widely available and are often cost-competitive. PVC-free mattress covers and shower curtains are an easy example.

Construction materials, furnishings, and furniture products account for approximately 75% of all PVC use.

### **7.3 Waste minimization – no incineration**

Minimizing waste not only protects people and the environment, but it can save facilities substantial amounts of money. The idea is for governments to stop incineration and employ systems that help South Africans understand that waste is a valuable resource. By moving away from waste incineration and implementing waste minimization techniques will help create less if not no pollution. Waste minimization should include:

#### **7.3.1 Segregation**

Separating different types of waste at the point of generation and keeping them isolated from each other. By doing this, appropriate resource recovery and recycling techniques



can be applied to each separate waste stream. The amounts of infectious waste, hazardous waste and low-level radioactive waste that must be treated according to special (and usually costly) requirements are minimized.

### **7.3.2 Source Reduction**

Minimizing or eliminating the generation of waste at the source itself through techniques such as product substitution, technology change and good operating practices. Through purchasing and product substitution, toxicity of waste can also be reduced.

### **7.3.3 Resource Recovery and Recycling**

Recovery and reuse of materials from the waste stream is an important approach towards waste minimization. The majority of waste from healthcare facilities is surprisingly similar to that of an office building or hotel paper, cardboard and food waste. Governments and other stakeholders can implement fairly simple programs that divert these materials from the solid waste stream, lowering disposal costs.

The South African National Waste Management Strategy (NWMS) Strategic Options Discussion Document (3 August 1998) promotes the strategy of waste recycling, the objectives of which would be:

- “1. to save resources and reduce the environmental impact by reducing the amount of waste disposed at landfills*
- 2. To make recycling viable as a form of job creation” (p42)*

The document also states that:

*“Waste separation at source is proposed... Appropriate legislation must be promulgated which promotes recycling by introducing economic subsidies to recycle. The establishment of full-scale recycling centres that implement labour intensive practices will create employment in the communities and will minimise salvaging at landfill sites.” (p43)*

### **7.3.4 Governments to walk the talk**

The choice of elimination as the primary focus for action will assist a nation in stopping the introduction of POPs-producing industries and materials, leading to genuine reductions in national and global burdens of dioxins and other by-product POPs. The choice of reduction as a primary aim on the other hand, will only encourage the further spread of those industries, which have already been identified as sources of POPs.

The desired outcome at the national, regional and global level must be programs of action and agreements such as the SAICM and the Stockholm Convention among others that will minimize levels of dioxins and other by-product POPs in the environment, in food and in humans to the lowest possible levels as recommended by the WHO.

## REFERENCES

Abdel-Halim. A. Metwally, E, El-Dessouky, M, (2003) Environmental pollution study around a large industrial area near Cairo, Egypt.

Pat Costner (1998), Human health and incineration, United States.

Dietz , Ramroth, H, Urban, T, Ahrens, W, Becher, H, (2004), Exposure to cement dust, related occupational groups and laryngeal cancer risk: results of a population based case-control study. Int J Cancer.

EPA (October, 1989), Background Document for the Development of PIC.

groundWork (December 2002), Crimes against communities: The tales corporates tell, Pietermaritzburg, South Africa.

groundWork (December 2002), Sanctioning the Stockholm Convention in Africa, Pietermaritzburg, South Africa

groundWork (December, 2002), Hazardous waste incineration proposal defeated, Pietermaritzburg, South Africa

groundwork (June, 2002), Enough is enough, Pietermaritzburg, South Africa.

groundWork (March, 2003), Dealing with Obsolete Pesticides in Africa, Pietermaritzburg, South Africa.

Meo, S, Azeem, M, Arian, S, Subhan, M, (2002). Hematological changes in cement mill workers, Saudi Med. J.

Meo. S (2003), Chest radiological findings in Pakistani cement mill workers, Pakistan.

Meo. S, Azeem. M, Ghori. M, Subhan. M, (2002), Lung function and surface electromyography of intercostal muscles in cement mill workers, Int. J. Occup. Med. Environ. Health 15.

National Waste Management Strategy Policy Document (1998), Strategic Options Discussion Document, South Africa.

Pirrone, N, Costa, P, Pacyna, J, Ferrara, R, (2001), Mercury emissions to the atmosphere from natural and anthropogenic sources in the Mediterranean region, Atmospheric Environment 35

Schuhmacher, M, Bocio, A, Agramunt, M, Domingo, J, de Kok, H, (2002), PCDD/F and metal concentrations in soil and herbage.

[www.greenpeace.org/~toxics/reports/euincin.pdf](http://www.greenpeace.org/~toxics/reports/euincin.pdf)

[www.hcwh.org](http://www.hcwh.org)

[www.no-burn.org](http://www.no-burn.org)



## **APPENDICES**

### **APPENDIX 1: The Isipingo Declaration**

#### **The Isipingo Declaration on eliminating the harmful impacts of Health Care Waste and Incinerators in Southern African communities**

**Monday, April 8, 2002**

We, the under-mentioned Southern African organisations represented at the National Civil Society Workshop on Health Care Waste and Incineration held in Isipingo, South Durban, South Africa, from April 5-8, 2002 make this declaration:

#### **Noting the following challenges to the safer management of health care waste:**

- The large percentage of health care waste which goes unaccounted for;
- The frequency of illegal dumping of health care waste on general landfill sites, unregistered dumps and open plots of land, exposing the public and especially children to harmful health threatening diseases;
- The lack of separation occurring in SA health care facilities leading to infectious waste, pharmaceutical waste and general waste being mixed together;
- The amount of state money which hospitals pay to private companies to remove and incinerate the hospital waste which can be excessive;
- The continued use of mercury in health care facilities, e.g. in thermometers, blood pressure cuffs, dental procedures and medicines;
- The use of IV bags containing PVC and other PVC containing products in health care facilities;
- The inadequate contracts which exist between the relevant government departments responsible for health care waste and private waste contractors;

#### **And noting the following challenges to waste incineration:**

- That our governments' have signed the United Nations Stockholm Convention on Persistent Organic Pollutants (POPs) which seeks to eliminate certain pollutants including those which are formed during waste incineration processes;
- That the Stockholm Convention names incineration processes as one of the processes which leads to the formation of new POPs;
- That the more than 130 countries who have signed the Stockholm Convention recognise the need to investigate and promote safer, non-combustion processes for decontaminating waste;

- That there is a growing move in both Northern and Southern countries towards the banning of incineration;
- That ALL incinerators are polluting – no incinerator is able to achieve 100% Destruction Reduction Efficiency;
- That waste incinerators emit over 100 different chemical pollutants including dioxins, furans, mercury and other heavy metals;
- That very serious health effects are associated with exposure to incineration pollution, including cancers, birth defects, lowered sperm count, compromised immune systems, still births, learning problems and even death;
- That dioxins have been described as “the most toxic chemical known”, and that there is no safe exposure limit for dioxins – exposure to even miniscule amounts of dioxins can have adverse health effects;
- That the US EPA has found that as many as 1 in 5 cancers in the USA could be attributed to dioxin exposure;
- That the USA EPA has found that waste incineration is the main source of dioxin pollution;
- That incineration competes and undermines waste minimisation and waste reduction practices;
- That incinerators require vast capital investment and other resources but do not lead to significant sustainable job creation or significant revenue for local economies;

**We call on our Governments to:**

- Fulfil their obligations to the Stockholm Convention by taking the necessary steps to ratify the Convention, by putting in place action plans and time frames for the phasing out and eventual elimination of dioxins and furans, and by compiling an inventory of all POPs sources and stockpiles;
- Seek to implement integrated waste management systems which promote waste minimisation followed by waste prevention, recycling and re-use;
- By 2006, to have closed down and dismantled all waste incinerators and replaced them with alternative, non-combustion technology, such as autoclaves and sterilizers;
- Ban the construction of new waste incinerators;
- Introduce legally enforceable standards for the safe establishment, operation and decommissioning of treatment facilities.
- Establish effective monitoring and enforcement mechanisms for waste regulations.

- By 2006 to have phased out the use of mercury and PVC in all health care institutions;
- Develop national guidelines for the safe management of health care waste;
- Allocate increased funding to the relevant departments of health for the purposes of implementing these guidelines, education and awareness;
- Provide education and awareness for all health care workers on safe health care waste management, particularly on the need to sort and separate;
- Develop and maintain strict tracking systems of health care waste from point of generation to final disposal;
- Be proactive in the resolution of health care waste problems that health care institutions face;
- Prescribe procurement practices for health care facilities that would ensure that unnecessary pollutants do not enter the facilities (e.g. Excess plastic packaging, mercury-containing products etc);
- Review and reassess contracts between private waste contractors and government departments responsible for dealing with health care waste;
- Develop mechanisms to ensure that private practitioners, small health care operators and rural health care facilities are registered and are following the necessary legal requirement in dealing with health care waste;
- Establish regional (district) advisory forums to deal with health care waste, particularly for rural facilities;
- Develop an independent standards and authorities directorate/agency to monitor the procurement of health care waste equipment and resources.
- Governments to work together to establish common standards and norms to deal with health care waste.
- Government will not import and/or export waste and damaging technologies to deal with waste.

**Adopted by:**

Anti Incineration Alliance (AIA)  
 Earthlife Africa (Johannesburg)  
 Edendale Hospital  
 Environmental Justice Networking Forum (Western Cape and KwaZulu-Natal)  
 Fairest Cape Association  
 Global Anti Incineration Alliance (GAIA)  
*groundWork*  
 Livaningo (Mozambique)

Ngwelezane Hospital  
Sasolburg Environmental Committee (SEC)  
South Durban Community Environmental Alliance (SDCEA)  
Wentworth Hospital  
Wildlife and Environment Society of South Africa (WESSA)  
Yonge Nawe (Swaziland)

## **APPENDIX 2: Press Release**

**November 2005**

### **Victory for environmental justice movement: Positive precedent against incineration of hazardous waste!**

Civil society organisations have welcomed the decision by the North West Province to deny Holcim Cement permission to burn hazardous waste in their cement kiln in Dudfield, outside Lichtenberg (Ditsobotla Local Municipality District) in the North West Province. The decision is an important precedent.

Earthlife Africa Johannesburg [1], with legal representation from the Legal Resources Centre (LRC) [2] office in Pretoria, submitted comment during the Environmental Impact Assessment and raised various concerns about the project. These concerns were considered favourable by government and the reasons for rejecting the Environmental Impact Report are as follows:

- Cumulative impacts were not considered;
  - Reference to waste materials that would be burnt is “vague and wide”;
  - The Stockholm Convention on Persistent Organic Pollutants (POPs) identifies cement kilns firing hazardous waste as a potential source of dioxins, furans and heavy metals;
  - No alternatives including the “no-go” option is discussed; and
  - The emission inventory was not based emission measurements or mass balance.
- [3]

Louise du Plessis, of the LRC who acted on behalf of Earthlife Africa Johannesburg indicates that it is encouraging to see that the provincial department considered the matter so carefully and had the good judgement to implement the precautionary principle.

Earthlife Africa Johannesburg spokesperson on this issue, Richard Worthington, indicates that, “Holcim’s project is a classic case of opportunism dressed up as altruism: turning a blind eye to toxic emissions such as organochlorines (dioxins and furans), fudging the details of proposed “fuels” and claiming environmental benefits. Such projects seek to turn the polluter pays principle on its head - instead of industries accepting the costs of redesigning processes or products to avoid hazardous wastes, they now market their wastes as a commodity, which is presented as a “clean fuel” on the basis of avoiding one or more of the pollutants associated with coal (traditionally the dirtiest fuel). It is encouraging that such attempted slight-of-hand has been rejected by authorities.”

Llewellyn Leonard, groundWork’s [4] Waste Coordinator, visited the local municipality in Lichtenberg in 2004, and in an address to the Mayor Mr. J. Bogatsu and his officials presented the health and environmental concerns of burning hazardous waste in cement kilns. This was followed up with a similar meeting with the National Union of Mineworkers who organise in the cement industry nationally. “It is only through careful and systematic building of our knowledge base on the dangers of hazardous waste incineration, that these proposals will be halted”, stressed Leonard.

Various civil society organisations, including groundWork, Earthlife Africa, Wildlife and Environment Society of South Africa, the South Durban Community Environmental Alliance and Injiya ya Uri have consistently addressed their concerns on the burning of hazardous waste in cement kilns to the Ministry of Environment and Tourism, calling on the Ministry to develop clear policy guidelines through a consultative process to determine how hazardous waste is treated in South Africa. These organisations have worked together to challenge various proposals on the burning of hazardous waste [5].

Bashiru Abdul officer from AGENDA, an environmental justice NGO based in Dar es Salaam, Tanzania, who is presently in South Africa, stated that they were delighted at the victory news since this precedent set in South Africa would not allow for cement companies to set up similar processes in other African countries.

There has been an international focus on these proposed developments by the Global Anti Incineration Alliance [6] Manny Calonso, of Global Anti Incineration Alliance, welcomed the decision by government, and maintains that “the South African government’s decision puts them in a leadership position in ensuring that hazardous waste is not treated inappropriately.”

Find attached record of decision.

End:

For more information call:

Llewellyn Leonard: groundWork – 082 4641383

Louise du Plessis: Legal Resources Centre – 082 3460744

Richard Worthington: Earthlife Africa – 082 4466392

Footnotes:

[1] Earthlife Africa (ELA) is a membership driven organization of environmental and social justice activists, founded to mobilize civil society around environmental issues in relation to people. ELA Johannesburg (Jhb) branch was established in August 1988 as the first branch of the organization, which grew too many branches in the early nineties and is currently concentrated in three branches in South Africa and one in Namibia ([www.earthlife.org.za](http://www.earthlife.org.za))

[2] The Legal Resources Centre is an independent, client-based, non-profit public interest law centre which uses law as an instrument of justice. It works for the development of a fully democratic society based on the principle of substantive equality, by providing legal services for the vulnerable and marginalised, including the poor, homeless, and landless people and communities of South Africa who suffer discrimination by reason of race, class, gender, disability or by reason of social, economic, and historical circumstances. ([www.lrc.org.za](http://www.lrc.org.za))

[3] Some of the core issues questioned by the LRC on the process:

- Statements made by Holcim were seriously in dispute namely that the development they proposes is sustainable and at the least cost for future

generations, the burning of waste is a renewable fuel source, the use of waste-derived fuels in a cement kiln instead of fossil fuel does not change emission levels etc.

- The wastes to be used were not identified but only vaguely refer to. To analyse the impact of waste used as fuel in cement kiln it is crucial to identify the components of the waste stream.
- The air pollution control measures.
- Fabric filters are not effective for controlling emissions of dioxins.
- Quench cooling of flue gas is effective for controlling emissions of dioxins, but Holcim is not employing this control measure.
- Holcim underestimates the impact of dioxin emissions by ignoring the prevailing pathway for human intake which is through incorporation into the food chain, inhalation, which is the prevailing pathway for human intake of dioxin.
- The presence of extensive crop cultivation in the vicinity of Holcim warrants a risk assessment of dioxin incorporation into South Africa's food supply.
- Holcim USA conducted a risk assessment of how its emissions of dioxin would incorporate into the local food supply.
- Holcim provides inadequate information about how it would handle liquid wastes.
- Holcim's South Africa's Air quality impact predictions are based on inappropriate assumptions about emission rates.
- Holcim fails to provide an adequate basis for its assumptions about dioxin emission rates.
- Holcim was wrong with statements that the potential for dioxin formation is not related to the type of fuel used.

[4] groundWork is an environmental justice organisation working focusing on air pollution, waste and corporate abuse and works with community organisations living adjacent to petro-chemical facilities in south Durban, Sasolburg, Secunda and Cape Town. ([www.groundwork.org.za](http://www.groundwork.org.za))

[5]

<http://www.groundwork.org.za/Press%20Releases/07Oct2005.asp>

<http://www.groundwork.org.za/Press%20Releases/06May05.asp>

[http://www.groundwork.org.za/HCW%20and%20Incineration/HCWI\\_workshop-pressrelease.asp](http://www.groundwork.org.za/HCW%20and%20Incineration/HCWI_workshop-pressrelease.asp)

<http://www.groundwork.org.za/Press%20Releases/POPs.asp>

[6] GAIA is an expanding international alliance of individuals, non-governmental organization, community-based organizations, academics and others working to end the incineration of all forms of waste and to promote sustainable waste prevention and discard management practices. Since GAIA members are committed both to ending incineration and to promoting alternative safe, economical and just discard management systems, the name GAIA represents both a Global Anti-Incinerator Alliance and a Global Alliance for Incinerator Alternatives. ([www.no-harm.org](http://www.no-harm.org))

## **APPENDIX 3: The Glenmore Declaration**

### **The Glenmore Declaration on the Elimination of mercury and mercury pollution in Southern Africa communities**

We, the under-mentioned Southern African organisations represented at the National Civil Society Workshop on Mercury held at the Glenmore Pastoral Centre, in Durban, South Africa, on October 12, 2005 make this declaration:

#### **Noting the following international government commitments:**

Emphasizing that South Africa is a party to the Stockholm Convention on Persistent Organic Pollutants (POPs), the Rotterdam Convention on Prior Informed Consent (PIC) on chemicals, and the Basel Convention on the Trans-boundary movement of hazardous substances.

Reiterate the lead role that South Africa has played in the Strategic Approach to International Chemicals Management (SAICM).

Recall paragraph 22 (g) of the Plan of Implementation of the World Summit on Sustainable Development, in which it was agreed by governments that the risks posed by heavy metals that are harmful to human health and the environment should be reduced.

Reiterate the conclusion of the UNEP Global Mercury Assessment that releases of mercury and mercury compounds constitute a global threat that warrants action at an international level;

- that national, regional and global actions, both immediate and long-term, should be initiated as soon as possible to protect human health and the environment through measures that will reduce or eliminate releases of mercury and its compounds to the environment;
- that immediate and longer-term actions should be developed and implemented on simultaneous parallel tracks, that the longer-term actions should be incorporated into a binding international instrument, and that the immediate actions should be initiated in advance of this instrument;
- urging all countries to adopt goals and accelerate national, bilateral, and multi-lateral actions, as appropriate, consistent with this decision and the global goals of achieving a 50% reduction in mercury consumption by 2010 and 80% reduction by 2015 versus 2000 levels

#### **Noting the following challenges to the continued use of mercury in South Africa:**

The continued emission of mercury from various polluting sources that has a detrimental effect on the communities and the environment;

The continued use of mercury in health care facilities, e.g. in thermometers, blood pressure cuffs, dental procedures and medicines;



The large percentage of health care waste containing mercury as a result of broken mercury containing devices which goes unaccounted for;

The frequency of illegal dumping of health care waste containing mercury on general landfill sites, unregistered dumps and open plots of land, exposing the public and especially children to harmful effects of mercury;

The incineration of enormous amounts of health care waste containing mercury in South Africa, thereby dispersing mercury back into the environment;

The further incineration of hazardous waste containing mercury and the release into the atmosphere;

The continued use of mercury in soaps, dermatological and topical applications, vaccines and other cosmetics;

The continued use of mercury in batteries, paints, switches, relays, and potentially other products and processes;

The establishment of mercury chlor-alkali plants in South Africa;

The establishment and operation of mercury mining sites;

The use of inappropriate technologies such as cement kilns to burn hazardous waste containing mercury;

The lack of appropriate hazardous waste disposal facilities;

The lack of technical expertise and contractors to contain and treat hazardous spills;

**We hereby call upon the South African government to:**

Give affect to our constitutional right to a clean, safe and healthy environment and to ensure the protection of present and future generations;

Immediately develop a policy on hazardous waste and develop a position on mercury;

Immediately implement a policy that will lead to the global agreements on the phasing out of mercury by 2010;

Review legislation that is in conflict with global agreements and processes on the phasing out of mercury;

Promote the development of mercury consumption and release inventories, and associated action plans, in the various provinces, including the product inventories, by providing technical and financial assistance that includes guidance for the development of such inventories and action plans, and maintaining an electronic clearinghouse containing a compilation of completed national or regional inventories or action plans;

Initiate an expeditious, open, transparent and inclusive process with all stakeholders to undertake such an assessment of mercury and its compounds and processing/operational facilities;

Establish an inter-ministerial mercury programme to facilitate and conduct technical assistance and capacity-building activities to support the efforts to take action regarding mercury pollution by the United Nations Environmental Programme (UNEP) and the global community;

Identify locations where large amounts of mercury, mercury products, mercury compounds or wastes containing high concentrations of mercury have been abandoned that may require assistance to address these sites, and estimate the cost of measures that should be taken to ensure this mercury will be managed in a manner minimizing future mercury releases;

To halt the reintroduction of mercury into the global market by;

- Immediately terminating subsidies to primary mercury mines and phasing-out primary mercury production by 2010; and
- Storing excess mercury from decommissioned mercury chlor-alkali plants and potentially other sources instead of allowing such mercury to re-enter commerce.

Reduce global demand in the chlor-alkali sector by publicly benchmarking the relationship between mercury consumption and chlorine production at all facilities to encourage short-term improvements in operating practices, and by phasing out mercury use in the chlor-alkali sector by 2010.

To end the manufacture, sale, and export of soaps, dermatological and topical applications and other cosmetics containing mercury; and requests government to promote policies and activities aimed at terminating the manufacture, sale, and export of such products, and the education of health professionals and populations at risk about the adverse human health effects attributable to use of these products;

Promote the phase-out of mercury use in batteries, paints, switches, relays, measuring devices, and potentially other products and processes where non-mercury alternatives exist or become available by 2010, and by researching information on alternative technologies and developing non-mercury alternatives.

Develop and implement a national strategy to promote the use of non-mercury and lower mercury use technologies in small-scale gold mining.

Control the largest global source of mercury emissions by employing best available technology on the larger coal-fired power plants by 2012 and all coal-fired power plants by 2017.

Implement the installation of scrubbers on existing coal fired power plants and boilers;

On a parallel track, support and adopt the global legally binding instrument to ensure coordinated international commitments and cooperation to minimize mercury production, trade, releases and consumption.

Adopted by:

Wildlife and Environment of South Africa (Durban – South Africa)  
Wildlife and Environment of South Africa (Port Elizabeth – South Africa)  
South Durban Community Environmental Alliance (South Durban – South Africa)  
Edendale Hospital (Pietermaritzburg – South Africa)  
Ngwelezane Hospital (Empangeni – South Africa)  
groundWork (Pietermaritzburg – South Africa)  
Earthlife Africa (Johannesburg – South Africa)  
Earthlife Africa (Cape Town – South Africa)  
Earthlife Africa (Durban – South Africa)  
Third World Investment Gateway (Cape Town – South Africa)  
University of Cape Town (Cape Town, South Africa)