

# The Minamata Treaty / Protocol: Potential Implications for South Africa

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In 2009 the United Nations Environment Programme (UNEP) was mandated by its Governing Council to develop a global legally binding instrument for mercury. An Intergovernmental Negotiating Committee (INC) was established to prepare the instrument before the 27<sup>th</sup> UNEP Governing Council Meeting in February 2013. This instrument will have significant and far-reaching effects for South Africa, due to our economy's reliance on fossil fuels, in particular coal fired power generation. South Africa is currently rated as the 6<sup>th</sup> largest emitter of mercury in the world with annual emissions estimated at around 50 tons. This paper will look at the draft text of the instrument after the 4<sup>th</sup> round of negotiations and highlight some of the potential implications for South Africa. It must be highlighted that the text of the instrument is still under negotiations and the observations and remarks made in this paper are not the official position of the Government of South Africa.

**Keywords:** Minamata, global, multi-lateral environmental agreement, mercury, emissions, United Nations Environment Programme

## 1. Introduction

The 25<sup>th</sup> session of the United Nations Environment Programme (UNEP) Governing Council took place in Nairobi, Kenya, from 16 – 20 February 2009. During this meeting the participating governments, including South Africa, agreed to develop a global legally binding instrument on mercury. The instrument was to be prepared by an Intergovernmental Negotiating Committee (INC) before the 27<sup>th</sup> session of the UNEP Governing Council in February 2013. The negotiations for the instrument have been progressing over the past two years and the most recent INC meeting, INC4, was hosted in Punta del Este, Uruguay from 27 June – 2 July 2012. The final INC meeting is scheduled for January 2013 in Geneva, Switzerland. The negotiations have progressed to a point where the draft text of the instrument is under consideration. This paper will provide a broad overview of the draft text with specific emphasis on the sections of the instrument that have implications for South Africa. It must be noted that the text of the instrument is still under negotiation and the observations and remarks made in this paper are not the official position of the Government of South Africa.

### 1.1 Mercury Emissions in South Africa

There has been limited research in South Africa regarding mercury emissions. Pacyna *et al.* (2006) published a global anthropogenic mercury emissions inventory. This inventory placed South Africa as the second largest emitter of mercury in the world, behind China. Local scientists challenged the findings of this research and thus initiated the South African Mercury Assessment (SAMA). The SAMA drew together scientists from academia, research institutions, industry and non-governmental organisations. Work from this group helped to inform subsequent global inventory research published by Pacyna *et al.* (2009). Following the publication of the revised inventory South Africa was rated as the 6<sup>th</sup> largest emitter in the world. Masekoameng *et al.* (2010) showed that approximately 80% of the South African emissions are derived from coal fired power generation, with the

balance of the emissions coming from the cement, ferrous, non-ferrous, domestic fuel burning and petrochemical sectors.

### 1.2 Draft Text of the Mercury Instrument

The INC has been working on a draft text of the global legally binding instrument for mercury since its second meeting in Japan (January 2011). Key factors covered by the draft text include supply, trade, products and processes, emissions and releases, storage, waste, contaminated lands, financial and technical assistance, awareness raising and institutional arrangements. The work on the draft text has progressed well and some sections of the text have been agreed and referred to the Legal Review team for final vetting. Other sections of the text remain under negotiation. Four sections of the draft text have been selected for further elaboration in this paper, with specific reference to how these provisions of the instrument could affect South Africa, should they be implemented in their current form. These sections include products and processes, emissions and releases, storage waste and contaminated lands and financial and technical assistance.

## 2. Discussion

### 2.1 Mercury Products and Services

This part of the instrument covers the manufacture or production of any mercury added-products. This includes products such as batteries, measuring devices, electric switches and relays, mercury containing lamps, dental amalgam, soaps and cosmetics, paints, pesticides, topical antiseptics and pharmaceutical products. In each case the instrument may make provision for an allowable-use exemption as an interim measure until a specific product is phased out of production. An example provided in the draft text, makes provision for the allowable-use exemption for alkaline manganese button cell batteries until a specific date.

This section of the instrument has significant implications for South Africa. South Africa's health sector still relies heavily on measuring devices containing mercury (i.e. thermometers and sphygmomanometers). Projects are underway in the country to phase out the use of mercury containing devices, but this is a costly and time consuming exercise. Significant financial support will be required to fully transition this sector away from mercury containing devices.

South Africa is currently in an energy crisis, with electricity generating capacity running very close to demand. One of the demand side management projects undertaken by Eskom is the distribution of energy efficient compact fluorescent bulbs (CFBs). Each of these bulbs contains a small amount of mercury. Hence this instrument will seek to limit the amount of mercury used in the manufacture of these bulbs and secondly the environmentally responsible disposal of these bulbs.

Mercury is a common ingredient in skin lightening cosmetics and this has significant implications for South Africa and Africa at large. Cosmetics which use mercury as an ingredient will need to seek alternatives under the current provisions of the instrument. The use of dental amalgam is a contentious issue, with strong local and international lobby groups seeking the outright banning of this substance on health grounds. This debate is countered by the cost and availability of alternatives. Mercury is commonly used as a preservative in vaccines for human and veterinary uses. While the health risks of these preservatives has been highlighted in the international literature (Geier *et al.*, 2010), this debate is once again countered by the cost and availability of alternatives.

## 2.2 Emissions and Releases

This part of the instrument requires Parties to take steps to reduce and where feasible eliminate atmospheric emissions of mercury. The draft instrument currently targets eight major sources of mercury emissions i.e., coal fired power plants, non-ferrous metal production facilities, waste incineration facilities, cement production facilities, iron and steel manufacturing facilities, artisanal and small scale gold mining, oil and gas production and processing facilities and residential coal combustion.

The instrument will encourage the use of best available techniques and best environmental practices in the sectors identified above. The draft instrument makes reference to Parties with "significant aggregate mercury emissions". Currently the draft text has indicated that 10 tons of emissions will constitute significant aggregate mercury emissions. This number is the subject of intense debate and is one of the more controversial negotiating sticking points. Large emitters such as China and India are seeking to have this text removed for the instrument, pushing rather for a voluntary

National Action Plan for reducing mercury emissions in the key source categories.

This part of the instrument has significant implications for South Africa. As a significant emitter of mercury, it seems inevitable that South Africa will be required to take actions under this part of the instrument. However, this action will be subject to the financial and technical assistance provisions of the instrument, due to South Africa's developing country status. While this instrument is not currently binding on South Africa, it highlights the importance of developing a comprehensive national emissions inventory for mercury.

## 2.3 Storage, Waste and Contaminated Lands

This part of the instrument covers the environmentally sound storage of mercury and mercury waste and the development of appropriate strategies for identifying and assessing sites contaminated by mercury and mercury compounds. The international transport of mercury waste is currently regulated in terms of the Basel Convention on the Control of Transboundary Movements of Hazardous Waste and their Disposal. This instrument seeks to strengthen the management of the transport and disposal of mercury waste.

South Africa stands to benefit from this aspect of the draft instrument, as it relates to the identification, assessment and management of contaminated sites. There is a high degree of uncertainty regarding the potential mercury contamination caused by historical gold tailings dumps. This aspect of the instrument could be used in the future to assist South Africa in the management of the potential risk. Other contaminated areas could include industrial sites (eg. Thor Chemicals) and artisanal and small scale gold mining areas.

## 2.4 Financial and Technical Assistance

This is another contentious part of the draft instrument, which seeks to ensure that the developed country Parties provide the necessary financial, technical and implementation assistance to successfully achieve the objectives of the instrument. There are a number of funding mechanisms being debated as part of the negotiations. Some Parties wish to use existing funding structures and mechanisms eg. The Global Environment Facility (GEF), while other are seeking to establish a stand-alone mechanism. Irrespective of the final structure and mechanism, South Africa will be heavily dependent on any financial, technical and implementation assistance that will be provided to developing countries and countries with economies in transition.

### 3. Conclusions and Way Forward

#### 3.1 Conclusions

The Minamata Treaty / Convention will have far reaching implications for South Africa. As one of the largest emitters of mercury in the world we have a vested interest in the outcome of the INC negotiations. South Africa is an active participant in the negotiations, as a stand-alone country and as a senior member of the Africa Group. The fifth and final meeting of the INC will take place in Switzerland in January 2013, and this is likely to be the last opportunity for Parties to influence the outcomes of the negotiations. At the conclusion of the negotiations the Diplomatic Conference will be hosted in Japan in mid-2013, where the text of the instrument will be open for signature.

In the interim period, South Africa needs to continue the work started by the SAMA which will include the development and verification of a national mercury emissions inventory. Some preliminary work has been undertaken by the Department of Environmental Affairs in collaboration with UNEP (Scott, 2011, AJUA Environmental Consultants, 2011).

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