



**International Lead Management Center**

**Cooperation and Partnership**

**“The ILMC Experience”**

**Sixth Session Intergovernmental Forum on Chemical Safety**

***Global Partnerships for Chemical Safety***

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**Brian Wilson**

# International Lead Management



## The Formation of the ILMC

In 1996 the Environment Ministers of the Organization for Economic Cooperation and Development (OECD) issued a Declaration on Lead Risk Reduction seeking to voluntarily develop and strengthen national and cooperative efforts considered necessary to reduce risks from exposure to lead.

In the build up to the OECD Declaration the International Lead Industry, through the Offices of the Lead Development Association International (LDAI) and the International Lead Zinc Research Organization (ILZRO), lobbied strongly for a voluntary approach to Lead Risk Management on the basis that restricting lead product production throughout the OECD, as originally proposed under a draft Council Act, would not necessarily restrict the availability of those products amongst member countries under prevailing World Trade Organization (WTO) rules. Indeed, the likely consequence was that it might even export any environmental threats and occupational exposure to the developing world if production moved to countries outside the OECD.

# International Lead Management

## What is the ILMC?

### Lead Risk Reduction Program

- Created in 1996
- OECD Ministerial Declaration
  - *Pilot Projects*
  - *Information Data Base*
  - *Outreach Program*
  - *Inquiries Desk*



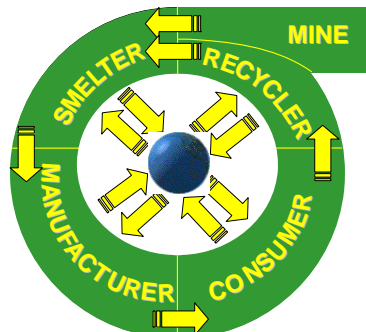
### What is the ILMC?

The acceptance of these arguments by the OECD Ministers lead to an innovative approach to the management of lead risk and the creation of the International Lead Management Center, the ILMC, in the summer of 1996.

It was also agreed that the objectives of the lead risk reduction program could be achieved by:

- Introducing specifically designed Lead Risk Management Pilot Programs that encompass all the phases of the lead product life cycle from mining, through smelting, manufacturing, use, recovery and recycling.

### Sigma Life Cycle for Lead



- Sharing risk management procedures through an information data base.
- Outreach programs enabling the ILMC to work with Government and International Agencies, and
- Opening an inquiry desk to facilitate the free transfer of risk reduction strategies.



### Pilot Programs – Country Projects

In 1997 the ILMC embarked on a series of Pilot Programs dealing with a variety of Lead risk management issues:

**Philippines:** In the Philippines the ILMC worked with the major secondary lead recycler to explore and implement environmental and occupational health improvement strategies to facilitate ISO 14001 Certification.

**Russian Federation:** There were three projects in the Russian Federation. In St. Petersburg the focus was on setting up an atmospheric monitoring system and establishing a correlation with occupational exposure. In the Rudnya Valley, the main issues to be resolved were soil contamination and population exposure around the town's lead smelter. At the Kursk secondary lead smelter and battery manufacturing plant the Company wanted to introduce medical surveillance for its employees and training programs were set up to teach the laboratory technicians lead in blood analysis.

**Mexico:** In Mexico the ILMC were asked to assist with the preparation of a Reference Manual in Spanish to assist small and medium sized businesses in the Mexican Lead Industry to conform to the prevailing national environmental and occupational health legislation.

**Peru:** Specialist advice on materials handling and storage were required of the ILMC to resolve a childhood lead exposure issue at the Port of Callao in Peru.

**Zambia:** In Zambia the ILMC was asked to examine the remediation options to deal with the legacy of population exposure and contaminated land following the sudden closure of the lead mines at Kabwe.

ILMC Lead Risk Reduction Programs - <http://www.ilmc.org/rra.html>

Mexican Reference Manual:-

<http://www.ilmc.org/spanish/Manual%20para%20el%20Manejo%20Ambientalmente%20Responsable%20del%20Plomo.pdf>



### **Pilot Programs – Information Exchange Projects**

In addition to the Country based Pilot Programs, the ILMC was also engaged in two Information Projects for worldwide distribution.

#### **Ceramic Foodware:**

An Information Handbook detailing best practice for the safe production, use and disposal of Lead Glazed Ceramicware was made available in hard copy and electronically on the ILMC web site.

Ceramics Handbook – <http://www.ilmc.org/Publications/ILMCFinalCombo8-02B.pdf>

#### **The introduction of unleaded gasoline:**

Clearing house reference materials and case studies detailing the experience of individual countries in the phase out of leaded gasoline were compiled, collated and uploaded into the public domain via the ILMC web site.

ILMC Clearing House - <http://www.ilmc.org/chouse.html>

#### **Environmentally Sound Management:**

When it comes to explaining “Environmentally Sound Operating Procedures”, a site visit is always better than a thousand words. In this respect, supporters of the ILMC have been demonstrating “Best Practice” with site visits, work place secondments and “on the job” training for Managers and Technicians from Pilot Program partners.



### Pilot Programs – Project Partners

From the outset of the formation of the ILMC it was clear that the Lead Industry alone could not resource or fund a comprehensive series of Lead Risk Reduction Pilot Programs required under the terms of the OECD Ministerial Declaration.

Funding and Resource partnerships have therefore been a key element in the delivery of Pilot Programs.

In the Philippines, the ILMC worked with the Geneva based United Nations Conference on Trade and Development and the Environmental Management Bureau in Manila.

In the Russian Federation, the Lead Industry is represented by Electroziariad, and they were a key partner together with the Regional Offices of the Department of the Environment and Natural Resources.

However, certain legacy issues such as those in the Rudnya Valley and Kabwe required the assistance of the Blacksmith Institute to mobilise local community groups and leverage remediation funds from International Agencies.

In Mexico the ILMC worked through the Mexican Chamber of Mines, CAMIMEX (Cámara Minera de México) and with the Government's Health Ministry, the INE (Instituto Nacional de Ecología), to initiate, resource and implement the Pilot Program.

Funding in Peru came through the US AID Program and implementation of the Project was undertaken in cooperation with the for the Government Ministry for Health and the Environment, DIGESA (Dirección General de Salud Ambiental).

The Ceramic Handbook was part funded by the International Crystal Federation and prepared in Cooperation with Rutgers University.

The Clearing House Database for the introduction of unleaded Gasoline was undertaken in partnership with the Paris Bureau of the United Nations Environment Program, UNEP.

# Key Success Factors

<u><b>P</b></u> <b>artners</b>	- <i>Identified &amp; Engaged</i>
<u><b>R</b></u> <b>esponsibilities</b>	- <i>Defined &amp; Owned</i>
<u><b>E</b></u> <b>nvironment</b>	- <i>Sound &amp; Sustainable</i>
<u><b>C</b></u> <b>ommunication</b>	- <i>Honest &amp; Open</i>
<u><b>I</b></u> <b>mplementation</b>	- <i>Multi-Stakeholder</i>
<u><b>O</b></u> <b>bjectives</b>	- <i>Agreed &amp; Focused</i>
<u><b>U</b></u> <b>nderstand</b>	- <i>Key Issues</i>
<u><b>S</b></u> <b>takeholders</b>	- <i>Committed</i>



## Key Success Factors

Those who have been working with ILMC on the various lead risk reduction Pilot Programs have identified a number of key factors that are common to successful project implementation, and these are PRECIOUS:

1. It is hard to work alone in the International arena, so identify and engage with potential partners that can assist with project resourcing, such as the Ministries of the Environment and Health
2. Individual and collective responsibilities for each aspect of the program are clearly defined and ownership of the Project is with the local plant managers.
3. Environmental goals are based on sound environmental management and sustainable development principles so that achievements made during the risk reduction program will be maintained long after any project has finished.
4. Ensure that all communications are honest, open, frank and frequent, even though on occasions certain statement may be uncomfortable.
5. Ensure that there is a multi-stakeholder approach, including local NGOs
6. Objectives are realistic and agreed by all the stakeholders with action focused firmly on achieving the aims of the program
7. Understand the key issues. - The problems, the root causes and their resolution.
8. Ensure that stakeholders are fully committed to work together to achieve the objectives.

# Lessons Learned

## Lead Risk Reduction:

- ✓ Does not have to be expensive
- ✓ Communicate good practice
- ✓ Infrastructure is important
- ✓ Similar issues in many countries
- ✓ Restrict informal sector activities
- ✓ “Fair Pricing” converts the “informals”
- ✓ Consider Regional solutions



## Lessons Learned

But we also discovered that:

Achieving significant reductions in lead exposure does not have to be an expensive exercise. Very often marked improvements were made by simply modifying operating procedures. A good example was in Peru, where the installation of a vehicle wheel wash reduced the amount of leaded contamination on the streets of Callao by a massive 40 tons per month.

Communicating how to achieve sound environmental management and implementing best working practices results in significant improvements. In particular, persuading ULAB collectors not to discard electrolyte into rivers and local sanitation systems has a significant effect on local eco-systems.

Infrastructure is important, especially when introducing biological and environmental monitoring, because specialist sampling and testing techniques are essential to obtain accurate data.

Many lead exposure issues are similar and so exchanging case study information is a valuable way to extend risk reduction methodologies.

Restricting “informal sector” activities dramatically reduces the adverse environmental impact created by their poor recovery practices.

“Fair Pricing” for ULAB by the Formal Recycling Sector brings the “informal recyclers” into the legitimate regulated sector without the need for enforcement.

Where it is uneconomic for a country to recycle ULAB, then regional solutions based on local synergies should be considered as a viable and sustainable option. This scenario applies to the Caribbean Islands where ULAB are typically shipped to South America.

## Lessons Learned



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Regional solutions based on local synergies can be considered as a viable and sustainable option.



# Mission Continues.....

## Secretariat to the Basel Convention:

### ▪ Technical Guidelines for ULAB - 2000

- Brazil – DENR with the ILMC
- TWG Approval May 2002
- COP Adoption December 2002
- Published 2003 in six UN languages



### Mission Continues

In 2003 the OECD accepted that the Lead Industry had met its obligations and fulfilled the commitments made as a result of the Ministerial Declaration. However, the Industry did not want to find itself under threat again by the International Community and decided to extend the risk reduction activities of the ILMC beyond the Country Based Pilot Programs and use the experiences gained on regional and global projects.

To an extent, Global Outreach activities had already begun in 2000 when the ILMC were invited by the Basel Convention Secretariat to provide expertise in the preparation of Technical Guidelines for the Environmentally Sound Recovery of Used Lead Acid Batteries.

The country selected to lead the project was Brazil and the ILMC worked with the Brazilian Department of the Environment and Natural Resources to produce a comprehensive set of Guidelines.

The Guidelines were approved by the Basel Technical Working Group in May 2002 and adopted unanimously by the Conference of the Parties in 2002.

Subsequently, the Guidelines were published in the six UN languages in 2003 and to this day remain the best guidance document for the sound recycling of used lead acid batteries.

Basel Technical Guidelines:

English: <http://www.basel.int/pub/techguid/tech-wasteacid.pdf>

French: <http://www.basel.int/pub/techguid/waste-f.pdf>

Spanish: <http://www.basel.int/pub/techguid/wasteacid-s.pdf>

# Mission Continues.....

## Secretariat to the Basel Convention:

### ▪ Regional Project for the ESM of ULAB

- DENR
- BCRC - El Salvador and Trinidad
- UNCTAD
- ILMC



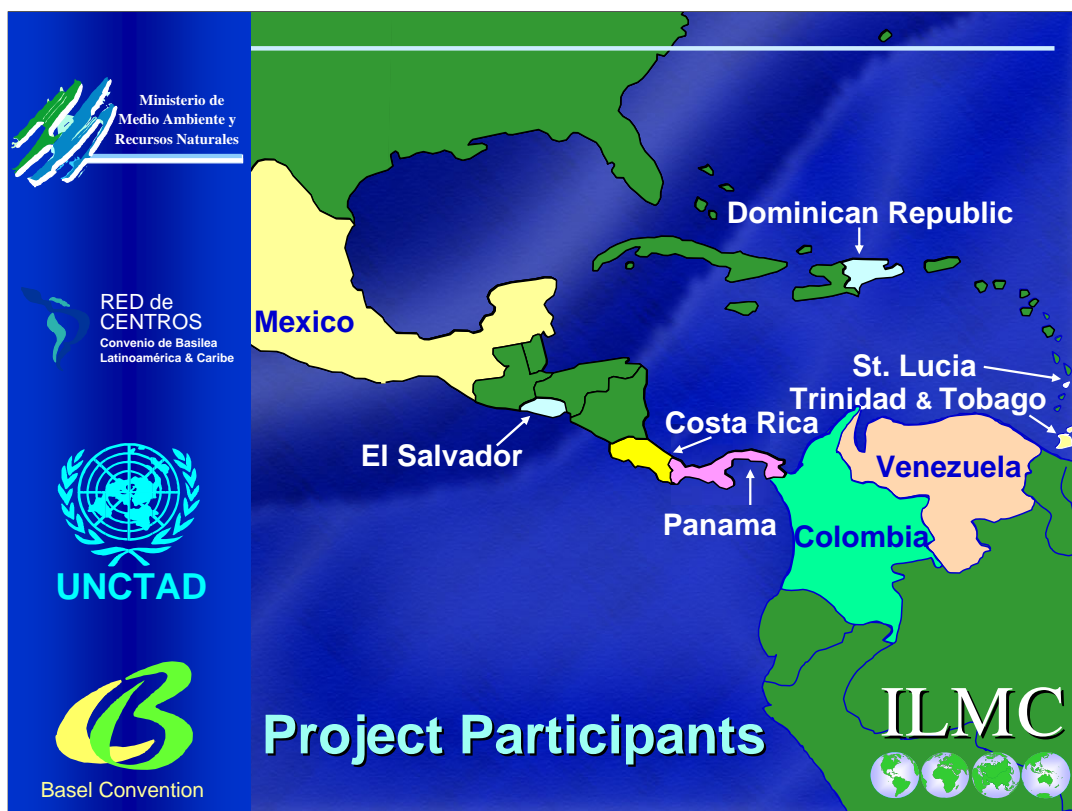
### Mission Continues – SBC ULAB Project

Once the Basel Technical Guidelines were adopted by the Parties to the Convention, the Basel Secretariat invited the ILMC to provide technical support for a sponsored Regional Project for the Environmentally Sound Management of Used Lead Acid Batteries in four countries in Central America, Colombia, Venezuela and three of the Caribbean Island States.

This invitation to be involved in a Regional Battery Recycling Project was a welcome extension of the Center's risk reduction activities.

Furthermore, it afforded the opportunity for the ILMC to work with the Departments of the Environment and Natural Resources from nine countries and two of the Basel Convention Resource Centers in Trinidad and El Salvador.

The United Nations Conference on Trade and Development also assisted the Basel Secretariat and shared some of their experiences gained in the Philippines ULAB Recovery Project when they were also in partnership with the ILMC.



### SBC ULAB Project - Participating Countries

The nine Countries participating in the Regional Used Lead Acid Battery (ULAB) Project were:

México, El Salvador, Costa Rica, Panama, Colombia, Venezuela, Trinidad and Tobago, St Lucia and the Dominican Republic.

Project activities were coordinated by the Basel Convention Regional Centers in San Salvador and Trinidad and Tobago.



The slide features a dark blue background with white text and logos. On the left side, there is a vertical column of logos: the top one is for the 'Ministerio de Medio Ambiente y Recursos Naturales' with a green and white graphic; the second is 'RED de CENTROS Convenio de Basilea Latinoamérica & Caribe' with a green graphic; the third is the 'UNCTAD' logo with a globe; and the bottom one is the 'Basel Convention' logo with a green 'B' and globe. The main content area on the right contains the title 'SBC Regional Project' in large white font, followed by the heading 'Outcomes:' in white. Below this, four bullet points are listed, each starting with a white checkmark. At the bottom right of the main content area, the 'ILMC' logo is displayed, consisting of the letters 'ILMC' in white above four small globe icons.

**Ministerio de Medio Ambiente y Recursos Naturales**

**RED de CENTROS**  
Convenio de Basilea  
Latinoamérica & Caribe

**UNCTAD**

**Basel Convention**

# SBC Regional Project

**Outcomes:**


- ✓ A Model 7 Step Approach to ESM
- ✓ A strategy restricting “*Informals*”
- ✓ The Development of a Training Manual for the ESM of ULAB
- ✓ A Regional Recycling Strategy

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### SBC ULAB Project – Outcomes

The outcomes from this project were:

1. A Model seven step process to achieve Environmentally Sound Management (ESM) of Used Lead Acid Batteries (ULAB).
2. A strategy to restrict the illicit activities of the “*informal sector*”, whilst providing them opportunities to work in the “*formal sector*” collecting ULAB for shipment to a licensed smelter.
3. A comprehensive Training Manual that covers all the requirements of the Technical Guidelines and the Model seven step approach to achieving environmentally sound management of used lead acid batteries at a National Level.
4. A Regional Strategy agreed by all nine Countries in the Pilot Project for the Environmentally Sound Recovery of Used Lead Acid Batteries in accordance with the Basel Technical Guidelines.



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# Model 7 Step Process

1. Inventory –
  - **ULAB & Recyclers**
2. Public education/awareness
3. Policy development
  - **Regulations/instruments**
4. Consolidation of “informals”
5. Collection & storage
6. Transport & shipping
7. Recycling



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### A Seven Step process for achieving ESM

1. The first stage is to complete an inventory of likely ULAB sources.
2. Public education and awareness campaigns targeting populations most at risk.
3. Current policies/regulations need to be critically reviewed and strengthened where necessary.
4. Unlicensed ULAB reconditioners and smelters need to “formalized” and adopt environmentally sound recovery procedures.
5. ULAB collection and storage should conform to the Basel Technical Guidelines.
6. As does ULAB transport and shipping, but transport and shipping may also have to comply with the Transboundary regulations for hazardous waste.
7. For countries without smelting capacity the model ends at step number 6 and ULAB are exported to a country with an approved smelter in accordance with the Basel Convention. For those countries with environmentally sound smelting capacity ULAB are recycled domestically.



Ministerio de  
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Recursos Naturales



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# ULAB - Training Manual

1. Assessment of ESM
2. Collection, Storage – Shipping
3. Formal Sector Strategies
4. Informal Sector Controls
5. Communication and Information
6. Site Remediation
7. Occupational Health and Safety
8. Transboundary Regulations.



## SBC ULAB Project – Training Manual

Chapter 1 that explains precisely how to conduct an accurate national inventory of used lead acid batteries.

Chapter 2 provides a range of illustrations, graphics and interactive examples of best practice for Used Lead Acid Battery collection, storage, transport and shipping.

Chapters 3 & 4 deal with the different strategies required to control the environmental performance of the formal sector and restrict the undesirable activities of the “informals”.

Communication, information and education issues, including public awareness and community engagement are covered in Chapter 5.

Of concern to nearly all the regional governments in the pilot project was Site Remediation and cost effective options are outlined in Chapter 6.

Chapter 7 covers the essential elements of occupational health and safety at every stage to the Used Lead Acid Battery recovery process.

And finally, Chapter 8 provides a step by step explanation of the Basel Convention’s requirements and obligations concerning the control of Transboundary Movements of used lead acid batteries.

Basel Training Manual for the ESM of ULAB:

English: <http://www.basel.int/meetings/sbc/workdoc/tm-ulab/techdocs.html>

Spanish: [http://www.basel.int/meetings/sbc/workdoc/tm-ulab/tm\\_ulead-s.doc](http://www.basel.int/meetings/sbc/workdoc/tm-ulab/tm_ulead-s.doc)



### SBC ULAB Training Manual – Cambodian Project

Whilst most of the contributions made by the ILMC to the chapters in the Training Manual was based on knowledge gained in the initial Pilot Programs, certain elements were prepared during the later stages of the Central American and Caribbean Project as a consequence of the experiences gained during the field work related to the Technical Guidelines.

So, the final draft of the Training Manual was, in certain respects, untested as a resource. It needed to be tested in the field prior to submission to the Parties and to remedy this shortcoming, the SBC asked the ILMC to use the Manual to train staff at the Cambodian Ministry of the Environment in order to prepare a national inventory of used lead acid batteries and formulate a strategy for the environmentally sound management of the recovery process.

Four population centers, typical of the different economies found in Cambodia were used for the surveys. The Capital Phnom Penh with its financial center, the fishing port of Sihanoukville, the farming community around Battambang and the border trading town of Svay Rieng.

Needless to say, the Government of Cambodia were able to undertake a National ULAB Inventory and prepare a National Action Plan (NAP) for the Environmentally Sound Management (ESM) of ULAB.

Government of Cambodia - NAP for the ESM of ULAB:

Terminal Report - [http://www.basel.int/centers/proj\\_activ/stp\\_projects/03-01.doc](http://www.basel.int/centers/proj_activ/stp_projects/03-01.doc)

Technical Report - [http://www.basel.int/centers/proj\\_activ/stp\\_projects/03-04.pdf](http://www.basel.int/centers/proj_activ/stp_projects/03-04.pdf)

# Dakar - Senegal



*Thiaroye Sur Mer*



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## The Management of ULAB – Senegal

And if you thought the ILMC was only here for the conference, we are also working with the Government of Senegal, the Ministries of the Environment, Health and Transport together with the University of Dakar, the Basel Secretariat and the Blacksmith institute, to assist with the introduction of sound environmental management practices for the collection, storage and recycling of ULAB.

Thank you.

For more information please go to:

International Lead Management Center – [www.ilmc.org](http://www.ilmc.org)

International Lead Association – [www.ila-lead.org](http://www.ila-lead.org)

Basel Convention – [www.basel.int](http://www.basel.int)

Blacksmith Institute – [www.blacksmithinstitute.org](http://www.blacksmithinstitute.org)

United Nations Conference on Trade and Development – [www.unctad.org](http://www.unctad.org)