



“Green Lead – The Pilots Take Off”

**Mick Roche
Green Lead Working Group**



**11 ABC- HCMC Vietnam 9th Sept
2005**

The Green Lead Initiative

**11th Asian Battery Conference
Ho Chi Min City
Vietnam**

9th September 2005

Green Lead Working Group

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- Gerhard Goliash (Berzelius)
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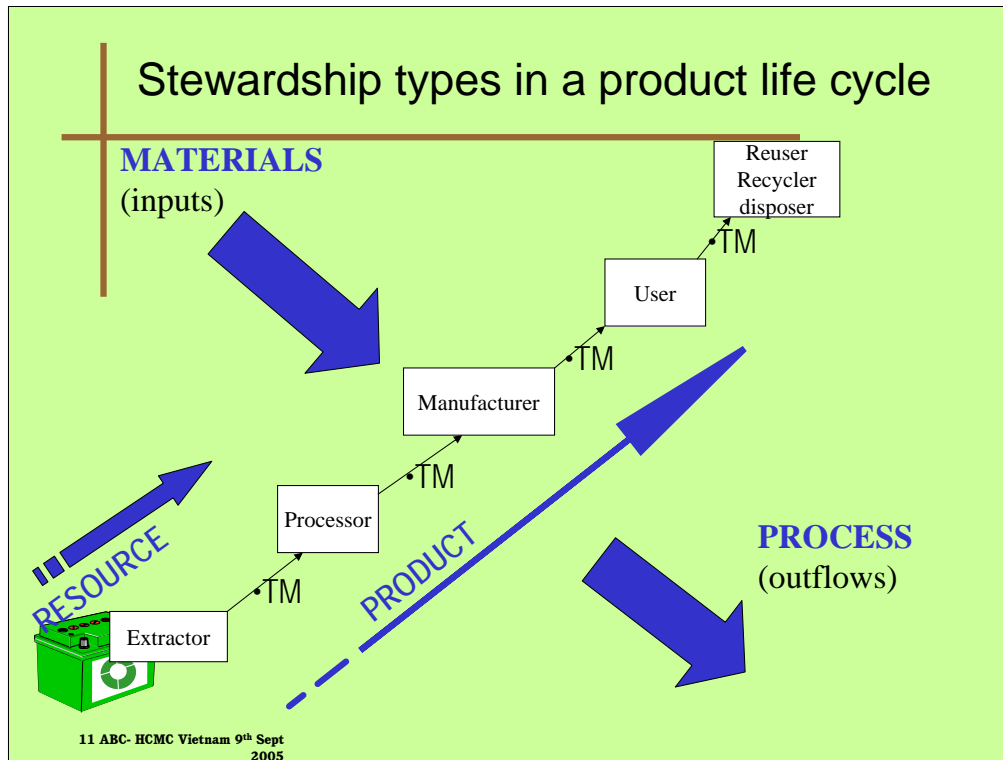
“Green Lead” - oxymoron or sustainable development for the lead-acid battery industry?

Presented
by

Mick Roche
BHP Billiton Cannington

10th Asian Battery Conference, Bangkok
3rd September 2003





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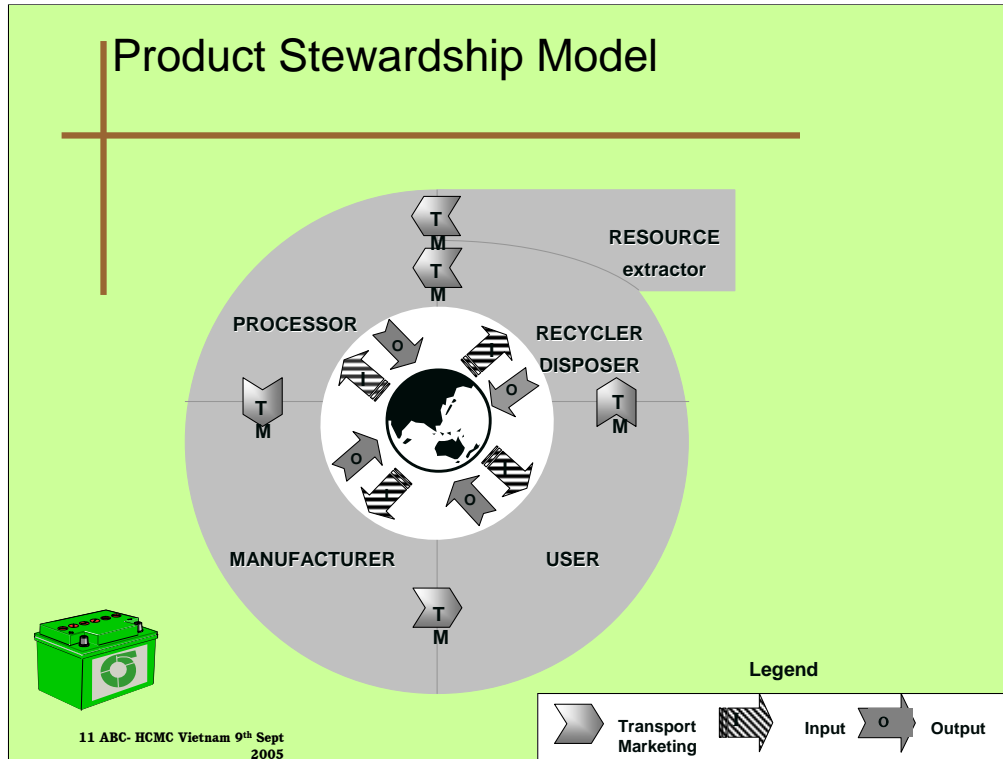
PRODUCT STEWARDSHIP model development looks at how the resource extraction is conducted (Resource Stewardship), identifying all the inputs (Materials Stewardship), the outflows (Process Stewardship) as well as the product flow (Product stewardship).

Some of the inputs and outflows are identified in life cycle assessments

What is Product Stewardship?

- an approach that recognises that resource extractors, processors, manufacturers, importers, governments and users have a shared responsibility for the health and environmental impacts of a product throughout its full life cycle
- “the more its shared around the more effective is the stewardship” (USEPA 5/5/05)
- Not a surrogate for sustainable development

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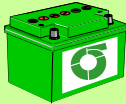


In order to assist in the engagement of stakeholders into the concept of product stewardship, the following model is proposed. The key components of the model, include:

- The major sectors in the life cycle of products (note that not all sectors are necessary present for every BHP Billiton product) are shown. Each sector is responsible for the stewardship of its own sector and is concerned about the stewardship of the product as it moves through the lifecycle.
- Each sector is connected by a transport link. The chain of custody between the sectors needs to be incorporated into the product stewardship agenda. Initial discussions have been conducted with some transport providers (rail and road) as well as with Rightship – the dedicated ship vetting specialists whose clear focus is on safety of crews, ships, cargoes and the environment.
- Each sector has its own (possibly unique) potential interaction with and from people and planet and at the same time is part of a common link with the other sectors in the product life cycle.
- The outputs at and between (ie transport/handover) each sector of the life cycle can also be identified as ‘product leaks in the system’. Product stewardship involves identifying those ‘leaks’, being aware if they have a potential to harm people and/or planet and if they do, then to ‘plug’ the leaks.

The Green Lead journey

- ❖ Idea
- ❖ Concept
- ❖ Initiative
- ❖ Work-in-progress
- ❖ Reality??



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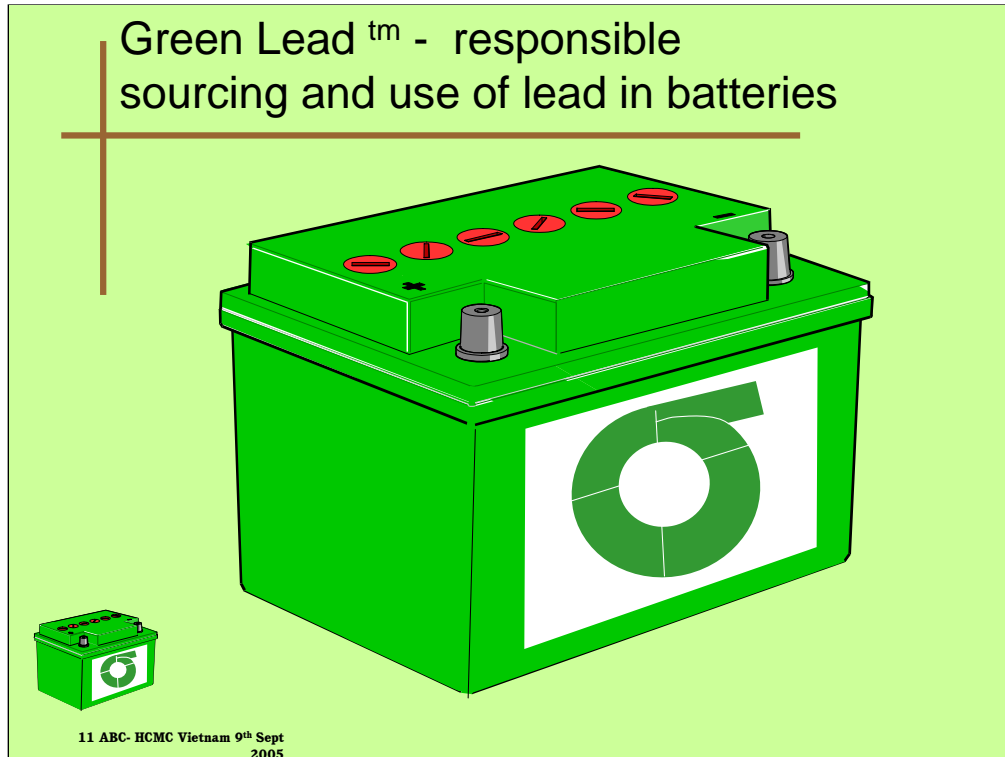
Metamorphosis of Green Lead

Green Lead tm

- developing a standard/guidelines and audit system
- third party certification of facilities
- lead acid battery lifecycle
- production, use and recycling of lead in batteries can be achieved under conditions that ensure the highest levels of safety to people and the environment.



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The Green Lead Initiative

As lead acid batteries account for about 75% of lead consumption, it seemed logical to initially focus on the stewardship of lead acid batteries.

Traditional environmental management focuses upon minimising environmental impacts within a particular company or at a specific site. Product Stewardship seeks to extend the responsibility for a product throughout the product chain. For example, a producer may assume responsibility for the facilitation of product take-back and recycling in cooperation with a recycler, or a miner may change reagents used in the flotation process to reduce carbon disulfide (CS₂) emissions from the smelter downstream.

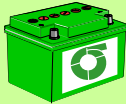
In principle, this means that a Green Lead Program would direct all sectors in the life cycle of a Lead Acid Battery, that is, the Mines, the Smelters, the Battery manufacturers, Consumers and the Recyclers in practices and procedures that minimize or negate any potential adverse impacts on either the environment or the population.

Such a Program on a global scale would be a huge undertaking and beyond current resources. However, a couple of well chosen Pilot schemes to roll out the initiative would be a real test of the scheme and provide valuable feedback for the development of Green Lead.

Nonetheless, such an undertaking would require the participation of the relevant industry sectors, certain government agencies, international non governmental bodies, consumer groups and environmental NGOs.

Green Lead Project timeline

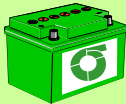
- 2000 – concept
- 2004 – workshop I
- 2005 – workshop II
- 2006 – pilot
- 2007 – finalise
- 2010 - implementation



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Workshop II Details

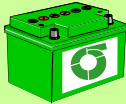
- CFC funding
- Full life cycle participation
- Substantial non-OECD country delegate representation (which emphasised informal sector activities)
- Possible name change?
- Adoption of draft pilot guidelines
- Strategy for funding next phase
- Pilot programmes (regional and sector distribution)



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The draft guidelines

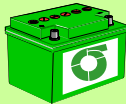
1. Medical surveillance – Blood Leads
2. Solid Waste Management
3. Effluent treatment and discharges
4. Emission Control Systems
5. ULAB Collection, transport and shipping
6. Battery Labels
7. Public Communications and awareness
8. Site Sustainability
9. Community Outreach
10. Safety



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To Gain Commitment: need

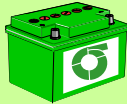
1. **Business Case**
2. Multi-Stakeholder Support
3. Track Record
4. Independent Audit



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Business case for Green Lead

1. Improved risk management
2. Enhanced reputation with both regulators and local populations
3. Improved health and safety outcomes for employees and local communities
4. Potential for cost savings as a result of deploying cleaner technology
5. Direct input to ensure the design of a certification scheme for the lead battery cycle



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Business case for Green Lead (cont'd)

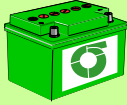
6. Green Lead provides a long term and sustainable future for lead– in the face of otherwise tighter restrictions on its use by governments.
7. Green Lead will be a statement of commitment to HSE responsibility and contribute to Sustainable Development.
8. Potential mechanism to allow flexible transboundary movement of lead between processors
9. Green Lead is a valuable model for Product Stewardship, Life Cycle Analysis and for Health, Safety and the Environment.



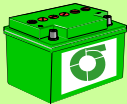
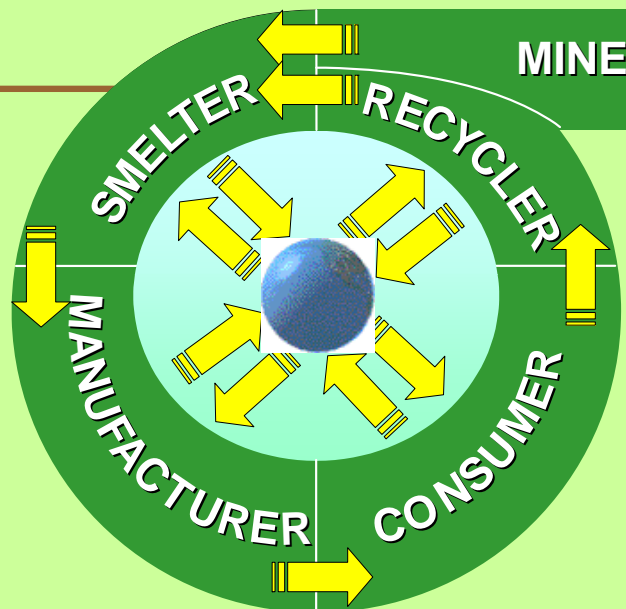
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To Gain Commitment: need

1. Business Case
2. **Multi-Stakeholder Support**
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4. Independent Audit



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To Gain Credibility:

Pilot Programs to test guidelines:

- Miners
- Primary Smelters
- Battery manufacturers
- Customers
- Recyclers



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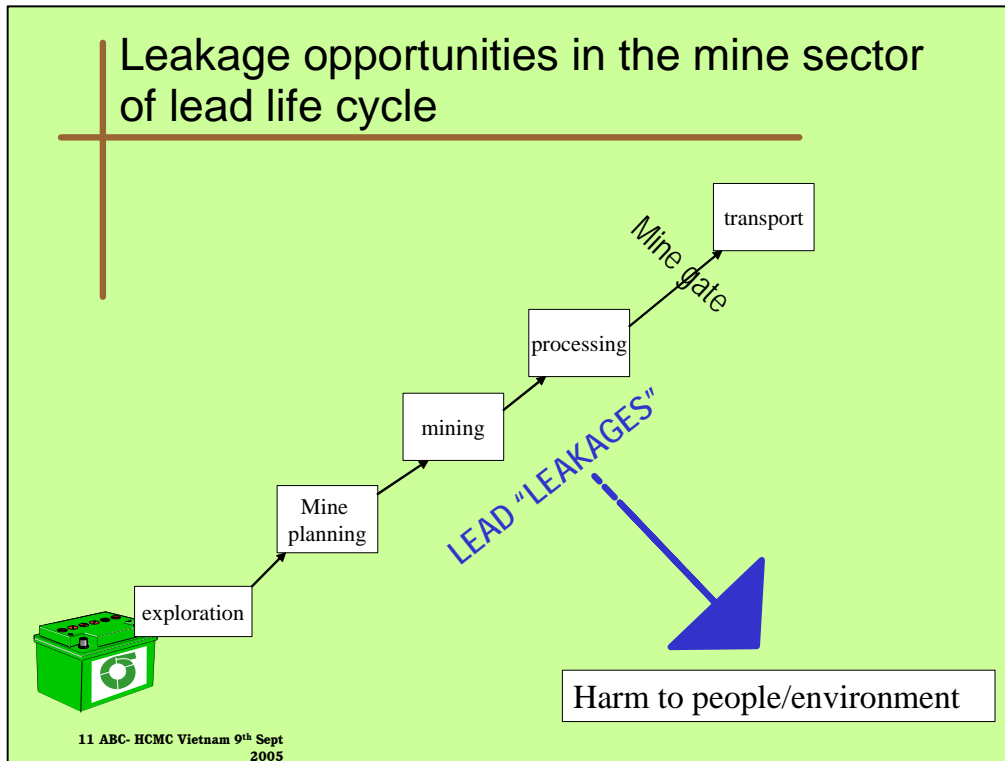
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Green Lead and the Developed World

Amongst the OECD countries, the BHP Billiton Lead Mine at Cannington in Queensland, Australia has asked to participate in the Pilot scheme to represent the mining sector, but the Green Lead Working Group are still looking for a Primary Smelter and a major battery user such as one of the multi-national car manufacturers.

We are optimistic that we will find the additional partners we seek and complete the life cycle for the Pilot Programs.

Green Lead and the Developing World

Two Companies that have been working on environmental improvement projects over the last few years with the International Lead Management Center (ILMC) in conjunction with the United Nations Conference on Trade and Development (UNCTAD) and the Secretariat of the Basel Convention (SBC) have agreed to participate in the Green Lead Pilot Program. They are:

RAMCAR, in the Republic of the Philippines:

The RAMCAR Group is a fully integrated organization with ISO 14001 at the core of its environmental management systems. Philippine Recyclers (PRI) is the company's secondary lead smelter and is the largest in the Republic. PRI supplies all the refined lead for the Group's Oriental and Motolite Battery Manufacturing Company.

The Record Group in El Salvador

Although the Record Group is not ISO 14001 Certified, it has a comprehensive environmental management policy and is fully integrated with the Record Battery Manufacturing Plant on the same site as the company's battery recycler, Baterias de El Salvador.

Note: The photograph of the car assembly plant is reproduced with the permission of the European Commission (Epa Photo/Ctk/Libor Zavoral)

What's next?

- Pilots haven't taken off yet – flight plans are still being finalised !!
- Need stronger involvement from battery manufacturers that “believe” in the principle of product stewardship
- BE in rather than BUY IN
- Good stewardship practices can save money – not cost money

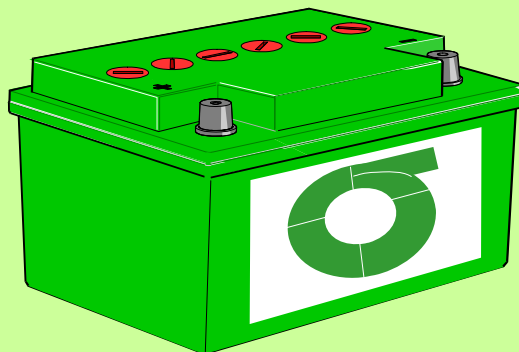


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Further information see...

www.greenlead.com

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