



The situation of Used Lead Acid Batteries (ULAB) in Cambodia

- A country located in the southern portion of the Indochina Peninsula in Southeast Asia.
- Its total landmass is 181,035 square kilometres (1 sq mm), bordered by Thailand to the northwest, Laos to the northeast, Vietnam to the east, and the Gulf of Thailand to the southwest.
- Population: 15,408,270
- GNI per capita (US\$): 1,010

Lead Acid Batteries (LAB)

- ▶ LAB are consumed for use as the power source after electricity
- ▶ LAB consumption has increased because electricity supply has not met the demand of people living in the city suburbs and rural areas for radios/Tvs, household lighting and pumping water
- ▶ LAB are also used starting vehicle engines, torching wild animal/birds at night time, and marine fishing.



LAB



- ▶ All LAB and related raw materials are imported from various countries in the region, for example, Vietnam, Thailand, Japan, South Korea and Malaysia
- ▶ The useful life of a battery varies from eight months to twenty four months, based on quality, price and use.
- ▶ There are no any technical education from Government institutions, International Organizations or NGOs that adequately explain the correct procedures for LAB recharging, servicing or ULAB recycling.



ULAB



- ▶ In the Kingdom of Cambodia, used lead acid batteries (ULAB) are not normally managed in an environmentally sound manner and there is no specific government institution responsible for ULAB management.
- ▶ There is no formal information or data that specifically addresses the correct procedures for ULAB collection, transportation, recycling and related environmental and health impacts

ULAB

- ▶ Detailed legislations specifically targeting the management and recycling of ULAB do not exist:
 - ▶ Law on Environmental Protection and Natural Resources Management
 - ▶ Sub-Decree on Solid Waste Management
 - ▶ Sub-Decree on Water Pollution Control; and
 - ▶ Sub-Decree on Air Pollution Control and Noise Disturbance

ULAB

- ▶ The Kingdom of Cambodia was awarded a support project in 2003 from the Secretariat of Basel Convention (SBC), namely “The Environmentally Sound Management of ULAB in Cambodia”. It was anticipated that this project would be implemented over a period of 9 months (01 December 2003 to 31 August 2004) under the close cooperation and assistance of the International Lead Management Center (ILMC).

ULAB, the major objectives of the studies are to identify:

- ▶ 1) The importation and consumption of LAB in various sectors and the future trends in ULAB, including the ULAB trade flow.
- ▶ 2) The evaluation of local management practices for ULAB recycling and the disposal of any smelting residues.
- ▶ 3) Environmental, occupational and population health risks, and hazards resulting from the disposal and/or recycling of ULAB.
- ▶ 4) The shortcomings in ULAB management and recycling, and especially, requirements for legal instruments, capacity building, and future action plans, based on the recommendations from stakeholders.

ULAB, the survey targeted sources such as:

- ▶ (i) battery retail shops;
- ▶ (ii) computer shops;
- ▶ (iii) battery recharging/reconditioning shops;
- ▶ (iv) scrap yards; and
- ▶ (v) telecommunication stations, local communities and schools

ULAB

- ▶ ULAB in Cambodia are not disposed of through the public waste collection system or waste dumping sites, because ULAB still has a value for waste pickers or scavengers. They can sell the ULAB to recyclers and/or ULAB merchants for export to other countries.
- ▶ Low recycling technology with inappropriate facilities is being used in some areas of Cambodia and these operations threaten the environment and public health.

ULAB

- ▶ Generally, the people working in these sources of pollution are generally limited in their awareness and knowledge of environmental protection and health care.
- ▶ There were no access restrictions to anybody, especially children in the working areas of battery recharging shops, battery storage facilities and so on.
- ▶ people could do any thing they wished and the children were free to play and run about the operational areas with their friends as they wished.

ULAB



- ▶ Cambodian people have never considered or been concerned with the adverse health impacts resulted from the way they operate, eat, drink or smoke when at work.
- ▶ At least 20 percent of workers and those people involved in the industry recognized some negative consequences which are caused directly or indirectly by related LAB/ULAB occupations
- ▶ The awareness and knowledge of workers and those people involved in the industry toward the negative health impacts is still very limited.

The ULAB recycling in Cambodia has shown many negative aspects as follows:

- ▶ The location of the site for ULAB recycling and its unsound practices is on open ground close to residential areas and villages.
- ▶ The smells associated with the gaseous acid fumes arising from the ULAB recycling process causes harmful effects to the local communities. This negative aspect of the operation was a source of complaint by communities and some of them were taken up and resolved by the local authority and government institutions.
- ▶ Residue management is generally not in compliance with any environmentally sound practice.

ULAB

- ▶ Not surprisingly, residue occurring from this recycling process is being disposed improperly on the ground adjacent to the operational site, and of course, this disposal practice causes soil/water source pollution and has also killed some adjacent plants.
- ▶ There is no safety hazardous landfills.
- ▶ There are not enough skilled people on LAB management and ULAB management and recycling

Conclusion

The preparation of Guidelines for the environmentally sound management of ULAB should be developed and implemented at the national level and the capacity building should be promoted, especially, technological transfer through exchange visits between some countries where similar projects or problems were resolved successfully with beneficial outcomes.

Recommendations

To promote good occupational health practices; a transparent policy together with a sound regulatory framework and specific guidelines for ULAB management should be developed in a scientific manner that mitigates and eliminates the serious potential risks and hazards to the environment and public health. To achieve this task, there is an urgent need to establish a National Policy for ULAB management and recycling. The future National Policy should:

Recommendations

- ▶ 1-Identify the environmental and human health impacts based on the analysis of collected data and information
- ▶ 2-Protect the environment and promote sustainability through legislation that secures sound ULAB recovery operations, defines responsibilities and accountability, surveillance and enforcement.
- ▶ 3-Institutional arrangements and social participation, including the formation of administrative systems, public participation and information, stakeholder involvement, a role for the private sector and non-government organizations and voluntary initiatives.

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Recommendations

- ▶ 4-Building and strengthening the capacity of staff in the various Government institutions that are involved with LAB/ULAB management, and any agency that reports to the SBC/UNEP as required.
- ▶ 5-To achieve these aims it is essential that a National Action Plan is devised and agreed by all interested parties.



Thank you for your attentions

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