

# Status of Hazardous Waste Management in Laos

Siem Riep, Cambodia.

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Water Resources and Environment Administration

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# Back Ground

In Lao PDR have very little information about the existence, use, emission and disposal of hazardous waste, However, we have done some preliminary inventories of specific chemicals such POPs and heavy metals,

Recently, due to the rapidly economic growth we have import a lot of goods from our neighboring country, in Vientiane Capital City about 300 ton/day and 50% of them was collected,

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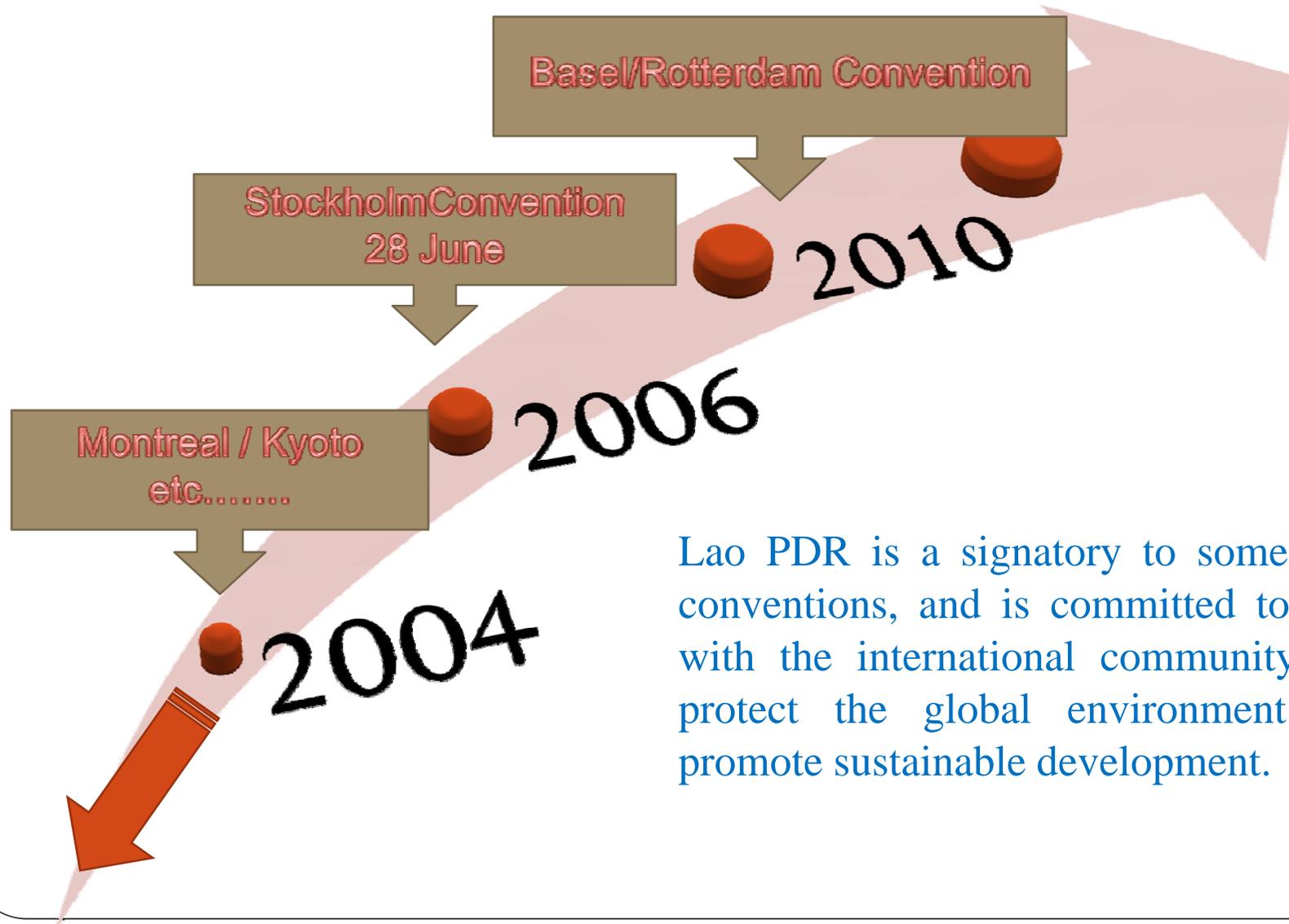


# Waste segregation in Land field

- More than 100 people/day
- Sent to the shop,
- 50 000 Àêl/xèl



# International Convention



Lao PDR is a signatory to some of these conventions, and is committed to working with the international community to help protect the global environment and to promote sustainable development.

# Laws and Regulations

- By 3 April 1999 the “Environmental Protection Law” (EPL) was approved by the National Assembly, and signed by the president of Lao PDR on 26. April 1999, and thereby it went into force.

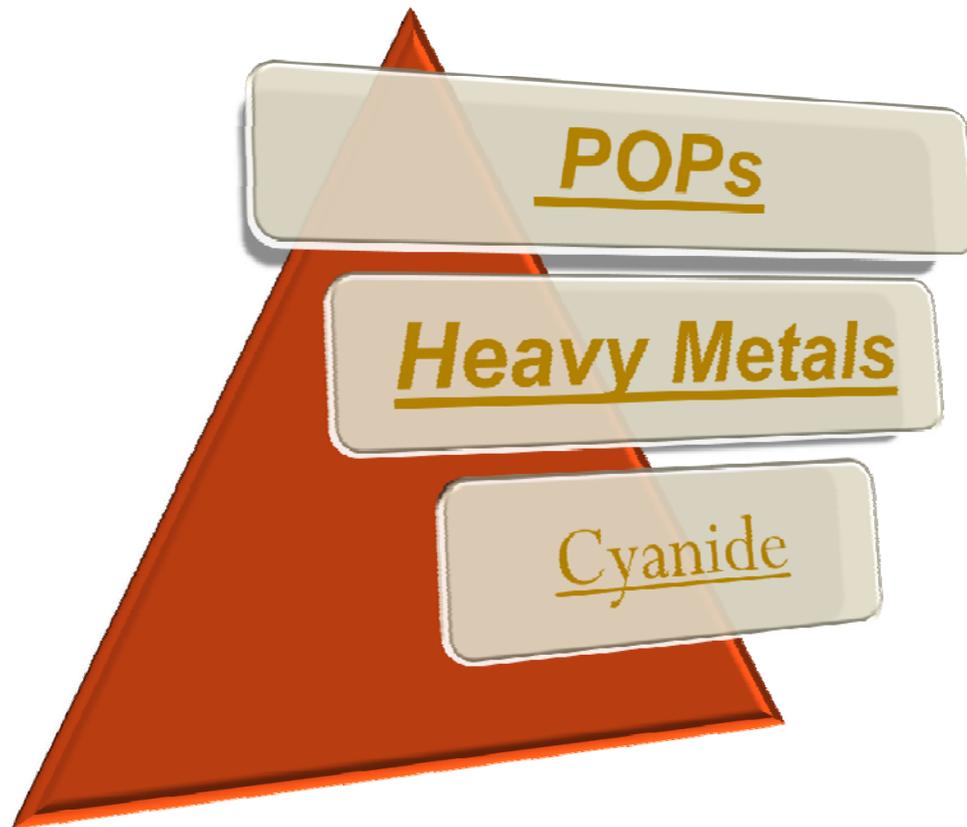
(Most of the regulation that relates to hazardous waste and Hazardous chemicals is implemented through the “Decree on the Implementation of the Environmental Protection Law”, which was signed by the Prime Minister 2002, and thereby put into force)

(EPL on the processing revising and will approve by Laos Government this year 2010)

# Laws and Regulations

- *Regulation for the management and usage of pesticides in Lao PDR” no. 0886/MAF, dated 10 March 2000).*
- 2010 government of Laos has adapted the regulation for the management and usage of pesticides which included POPs pesticide;
- Regulation for the hazardous waste management from industries
- Mining law; and
- Other legislation
- There are no specific Regulation/Law Related to the management of PCBs, equipment contaminated with PCBs, whether in the form of products or wastes.

# Hazardous Chemicals Inventory



# Persistent Organic Pollutant ( POPs )

**Pesticides**

- Aldrin
- Chlordane
- Dieldrin
- Endrin,
- Heptachlor,
- /  Hexachlorobenzene,
- Mirex and toxaphene (pesticides);
- DDT

**PCB**

- Polychlorinated  biphenyls

**Dioxin/Furan**

- PCDDs/PCDF 

COP4 on 9 May 2009 added 9 POPs to the SC

- **Chlordecone**
- **Lindane**
-  **Alpha hexachlorocyclohexane**
-  **Beta hexachlorocyclohexane**

-  **Hexabromobiphenyl**
-  **Tetrabromodiphenyl ether and pentabromodiphenyl ether**
-  **Hexabromodiphenyl ether and heptabromodiphenyl ether**
-  **Perfluorooctane sulfonic acid ( its salts and perfluorooctane sulfonyl fluoride**

-  /  **Pentachlorobenzene**

# Dioxin

## Findings:

- Dioxin is most probably generated and emitted from millions of open fires where household and industrial waste is burned;
- Traces of dioxins remains still from the spraying of Agent Orange during the Indochina War; and
- There is not information available about other POPs.



Sector	Source category	Annual Releases (g TEQ/a)					
		Air	Water	Land	Product	Residue	Total/sector
1	Waste Incineration	0.448	0.000	0.000	0.000	0.001	0.449
2	Ferrous and non-ferrous Metal production	1.324	0.016	0.000	0.000	0.031	1.371
3	Power generation and Heating	5.116	0.000	0.000	0.000	0.376	5.492
4	Production of Mineral Products	1.339	0.000	0.000	0.000	0.263	1.602
5	Transport	0.047	0.000	0.000	0.000	0.000	0.047
6	Uncontrolled Combustion Processes	35.990	0.000	18.752	0.000	36.000	90.742
7	Production and Use of Chemicals and Consumer Goods	0.000	0.000	0.000	0.321	0.013	0.334
8	Miscellaneous	2.162	0.000	0.000	0.000	0.000	2.162
9	Disposal	?	?	?	?	?	
10	Identification of Potential Hot Spots	?	?	*	?	?	
	<b>TOTAL</b>	<b>46.426</b>	<b>0.016</b>	<b>18.752</b>	<b>0.321</b>	<b>36.684</b>	<b>102.199</b>

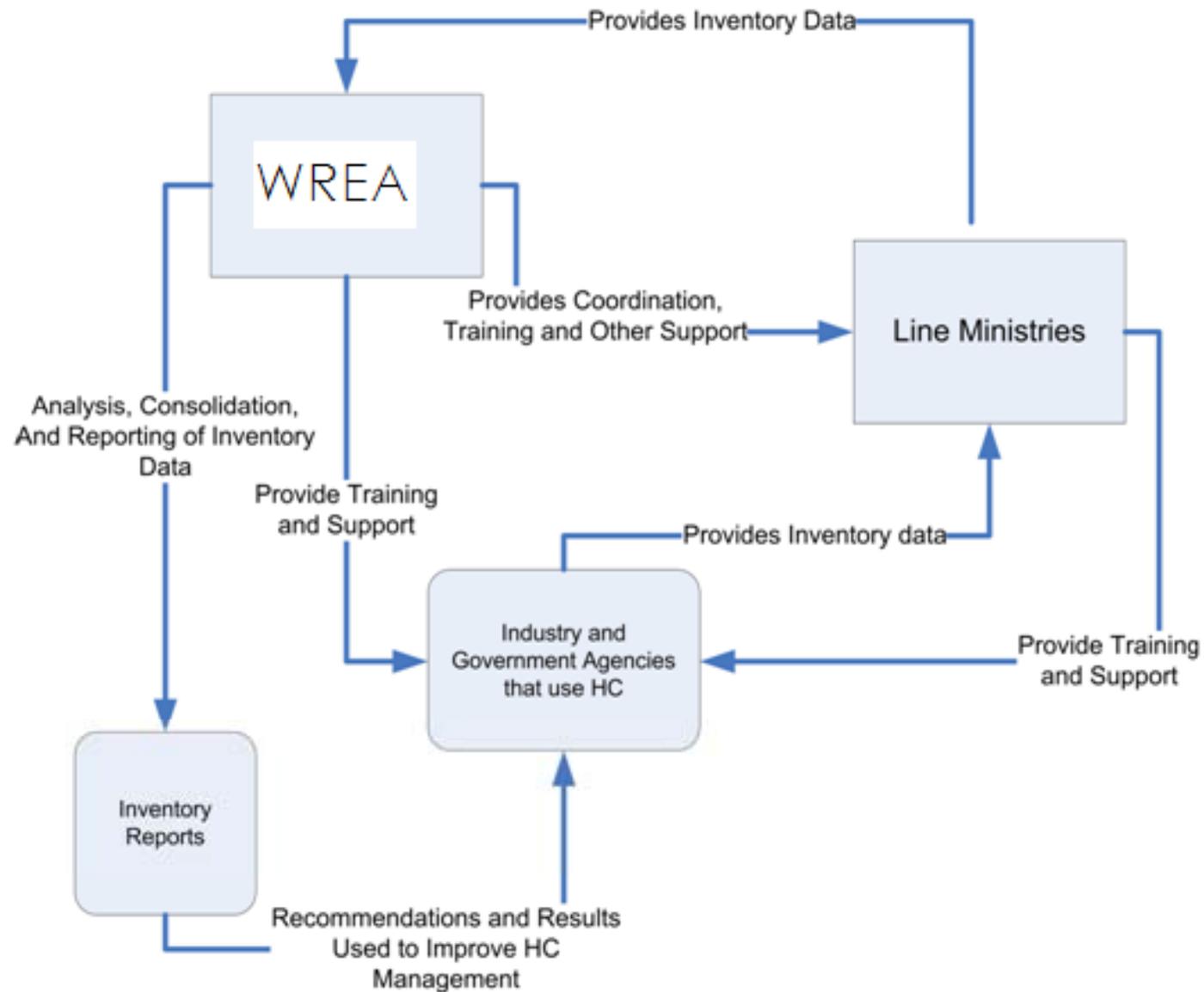
**Hazardous Chemical Management Strategy  
and Action Plan 2011-2015**

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Siem Riep December 2010

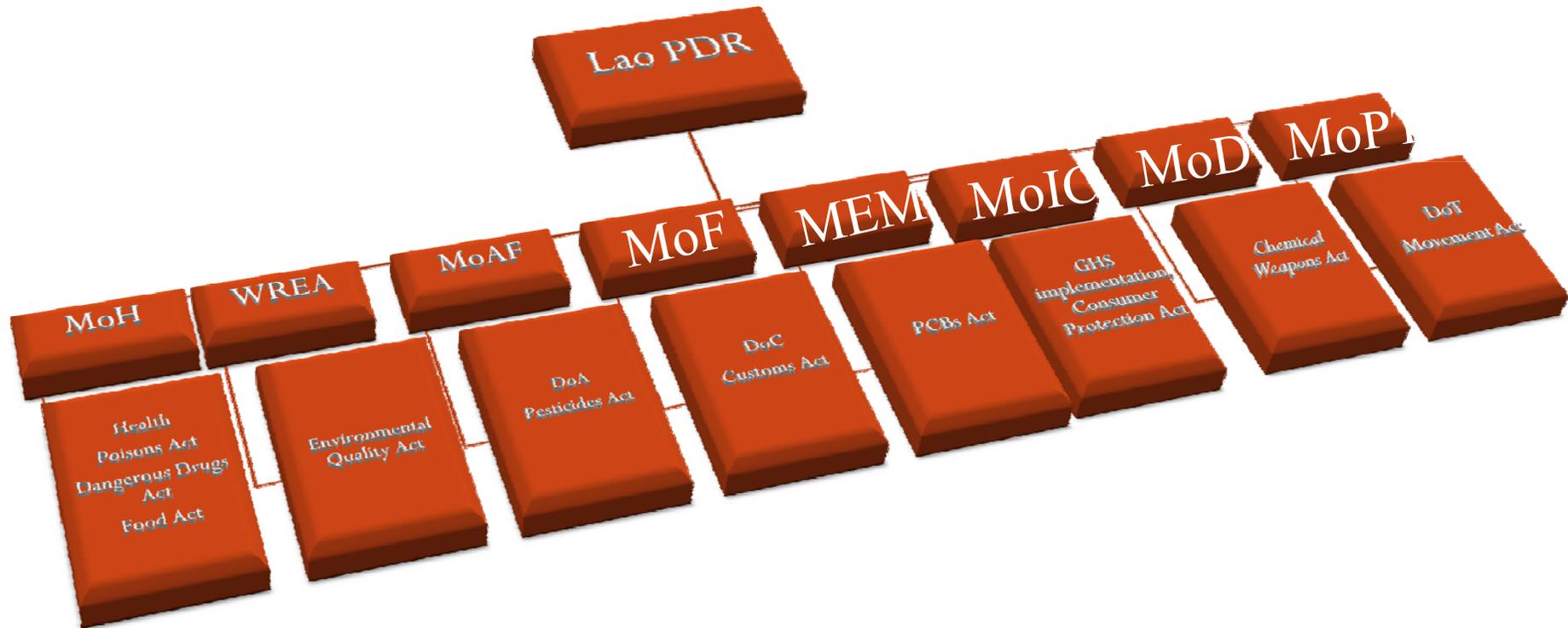
# ACTION PLAN

- ✓ Hazardous Chemical Inventories;
- ✓ Strengthen HC Management and Coordination System at the National Level;
- ✓ Development and Implementation of HC Legislation;
- ✓ Capacity Building and Institutional Strengthening;
- ✓ Establishment of Collection System for Special Waste Fractions;
- ✓ Promote the Use of Cleaner Technology Solutions;
- ✓ Implementation of Cleaner Products Solutions;
- ✓ Awareness Raising and Public Consultation ; and
- ✓ Create curriculum on chemical engineering.

# Organizational Setup for the Implementation of the HCSAP



# Key Agencies involved in chemical management



# Challenges

- Many activities need to be done after we Ratifies the Basel Convention with our little capacities
- We need strengthened our collaboration on hazardous waste management at regional and global levels, as well as adequate technical and financial support
- Build the capacity of relevant staff at the central government also local staff to undertake hazardous waste management to do reporting , monitoring still needed

- Formulate and enforce relevant legislation, while taking into account our economic, social and cultural situation;
- Acquire adequate technical and financial support to implement our strategy in order to eventually free our country from hazard-waste .

Moreover, we would need to strengthening the capacities and skills of our national institutions to assist line ministries related to hazardous waste management , as we have committed as Parties to the Basel, Rotterdam and Stockholm Convention.

# Identification of information barriers, implementation and data gaps

## **Policy Barrier**

- *Lack of Specific Regulation to control of these issues  
(Act, Regulation, Standards, guidelines, etc)*
- *Lack of Awareness of different sectors on this issues*
- *Lack Specific expert or technical staff*
- *Lack Budget*



**Thank you for your attention**

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