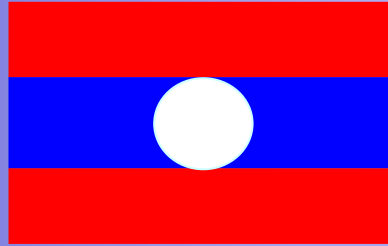


Lao People's Democratic republic

Peace Independence Democracy Unity Prosperity



**Country Report on
Waste Working Group Session at WGIA 4
14 - 15 Feb 2007, Jakarta, INDONESIA.**

By

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Country Profile

Lao People's Democratic Republic (Lao PDR)

- Landlocked Country in South-East Asia.
- Total area: 236,800 km².
- Population 5.9 million (2005).
- Population Density 24 people per square meter.
- Population growth of 2.3%.
- Ethnicity: 3 Main Groups, such as 80% Lao Loum, 10% Lao Theung, and 10% Lao Soung
- Borders: Cambodia, China, Myanmar, Thailand and Vietnam
- Capital: Vientiane.
- Official Language: Lao (English and French is also widely used).
- Climate: Rainy and Dry seasons (Each lasts 6 months).



Strengthening solid waste management

Government Policy:

- Promote the integration and development national policy, strategy, legislation and framework
- Increase institutional capacity in planning and monitoring and management
- Improve human resources and building awareness of government staff and publics
- Increase the coordination between line agencies
- Seeking technical cooperation and fund Establishing network and database system

Applicable Laws

- Environment Protection Law-1999.
- The Land Law - 1997
- Industrial Manufacturing Law-1999
- Decree of the Council of Minister on the Management of the City and Public Places, 1991
- The Minister's Agreement on the Rules and Regulation for Town Planing, 1996
- Prime Minister's Decree on the Organization of Urban Development and Administration Authorities, 1997
- Industrial Wastewater Discharge Regulations, 1994.

Ministries Concerned to Environmental (Wastewater and Solid Waste) Management such as :

- ❑ Ministry of Agriculture and Forestry(MAF).**
- ❑ Ministry of Health(MH).**
- ❑ Ministry of Communication, Transportation; Post and Construction (MCTPC).**
- ❑ Science Technology and Environment Agency (STEA)**
- ❑ Ministry of Electricity and Mine**
- ❑ Ministry of Industry and Commerce (MIC).**

Number of Industrial Manufacturing Sector

The statistic show in 1994 to 2004:

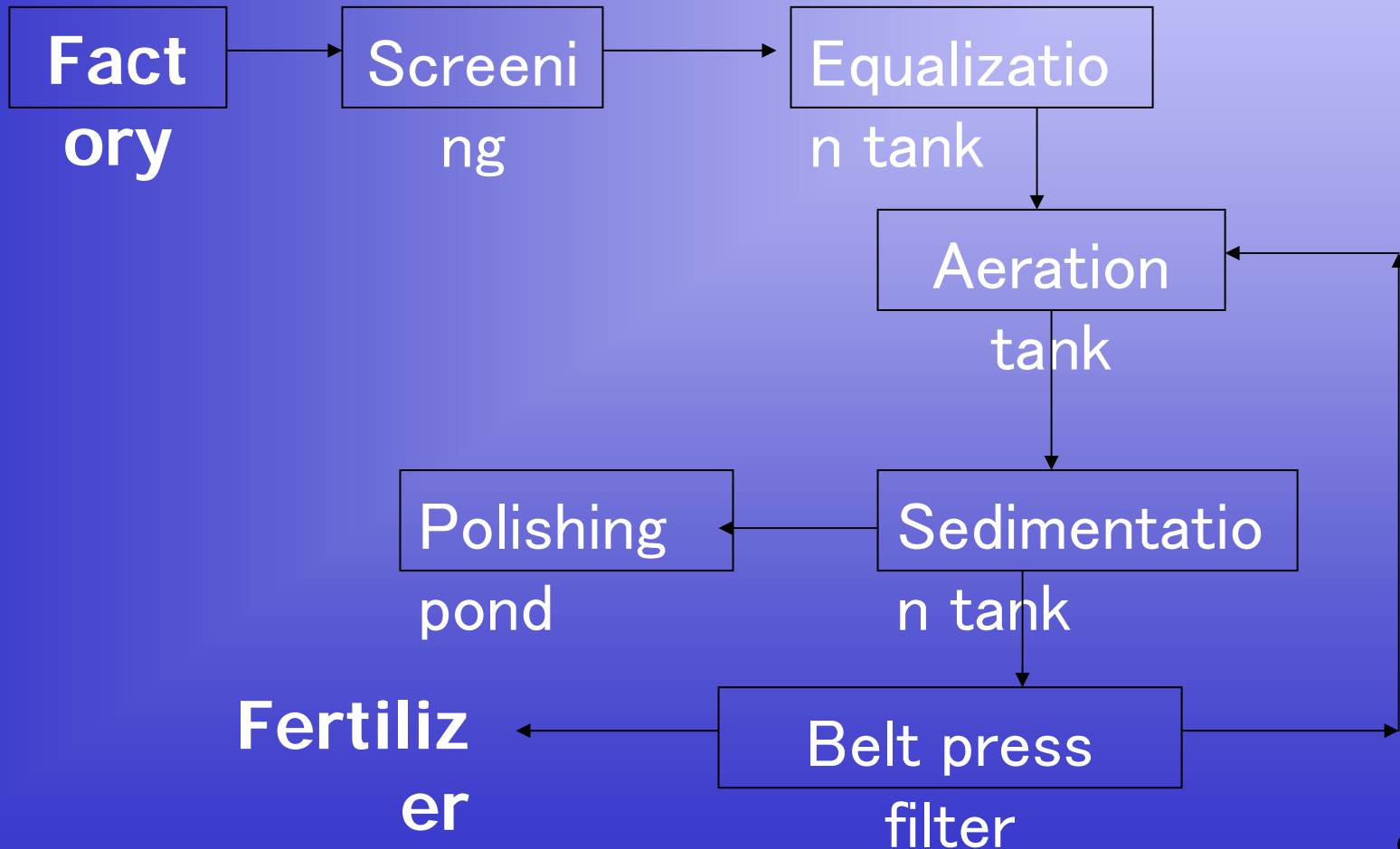
- In 1994 : 5,946 units.
- In 2000 : 21,000 units.
- In 2004 : 26.200 units.

Capital and Industrial Wastewater

- Every industries should be wastewater treatment system before discharge to river.
- Total of industrial wastewater in Vientiane capital in 2002 about 8,224,000 m³/y
- Composition (sources) of wastewater

Sources	Mass	% Share
Pulp and paper manufacturing	201,932	2.46
Meat processing	116,640	1.42
Alcohol, beer production	461,209	5.60
Textiles	7,444,221	90.52
Total	8,224,000	100 %

Industrial Wastewater Flow



Capital and Industrial Waste

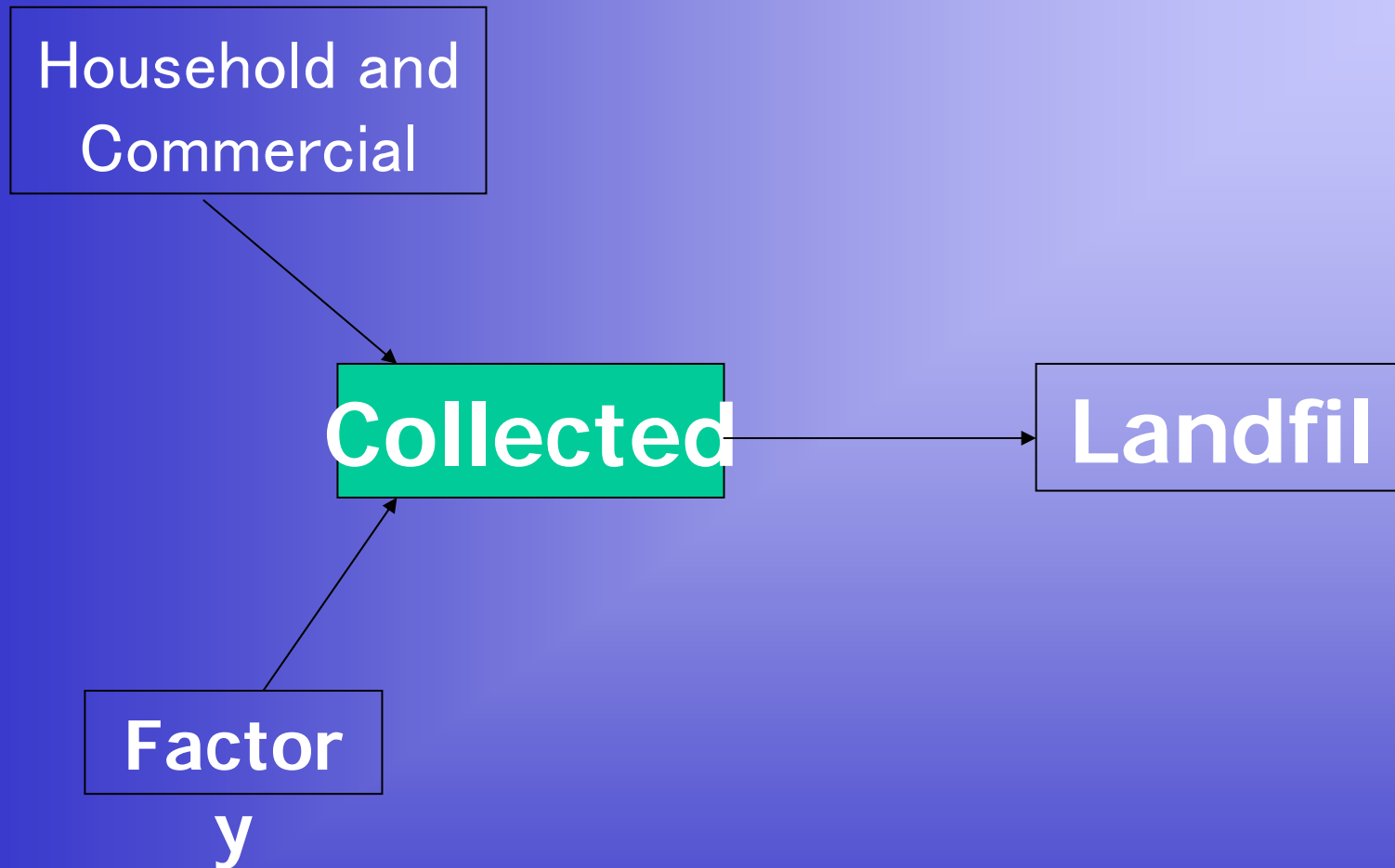
- Only 5 major town has was collection systems
- Disposal Method:
 - Disposal at the land field sites
 - Burning in open areas
 - Dumping on selected spots or water body
- Waste Production in urban areas 0.75 kg per capita per day.

Composition of Solid Waste:

- Organic Material (Compost) - 60 %
- Reuse waste (Glass,can...) - 10-15 %
- Recycle Waste (Plastic , Paper, Steel...) - 10-15 %
- Hazardous Waste - 10 %

(Urban and Commercial Waste has the same composition)

Capital and Industrial Waste Flow



Case Study on Solid Waste in Vientiane Capital (2002)

- In Vientiane capital has 9 districts
- The Population is 636,493 belong to 108,083 families
- The amount of solid waste about 400-500 tone/day
- Solid waste collection and disposal ability to Landfill is about 50% from 4 districts and amount 120-130 tone/day and the rest 50% has been separated for recycling: Paper, Bottles, Metal, Iron, Plastic and etc

Key Issues and Barriers

- Lack of capacity in planning and management
- Insufficient technical knowledge, fund and equipment
- Low awareness of public on the impact of solid waste

The Pupils and waste economic in the future

At the present many primary and lower secondary schools in Vientiane municipality have the waste bank mean that:

Teachers in every school urged their students bring the waste that could recycle especially the paper, the waste papers and others... to sell at their school. 30% of the profit is put into the fund of school administration and 70% of the rest is used in capital to buy waste from pupils.

Now a day comprise of four Schools that involved the project and in the future will have 15 Schools.

With good methodology positive impact are as followed:

- The pupils learn about the value of the waste.
- The pupils learn about making income for the, decreased their parents' payment.
- Country will be cleaned.
- The pupils will spend with great economy because they know they find it hard to earn money.

A large, multi-tiered waterfall cascading over mossy rocks in a lush forest. The water is white and frothy as it falls, creating a misty atmosphere. The surrounding area is filled with green foliage and trees.

**Thank you very much
for your attention**

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