

WASTE MANAGEMENT IN TIMOR-LESTE

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TIMOR-LESTE



A. Timor-Leste (an overview)

- Half island and independent country in 2002 after foreign occupation almost 474 years. It includes the eastern end of Island of Timor, the enclave of Oecusse and the islands of Atauro and Jaco;
- The area of Timor-Leste is approximately 14,874 sq kilometers. To the North lies the Banda Sea and the South lies the Timor Sea and also bordering with the Republic of Indonesia and Australia;

Continuation (overview)

- Currently more than 70% of 1 million people in Timor-Leste live under the US\$1 per person per day; more than 40% live under the national poverty line of US\$0.55 per person.
- Seventy percent of its people live in rural areas with small landholdings and livestock, in areas that are prone to flooding, soil erosion and droughts.

B. Environmental condition and its impacts to Timorese people in urban areas

- Timor-Leste is vulnerable to changes in climate as it evidenced by existing sensitiveness to climate events (droughts and food shortages in the western highlands and floods in most part of the country);
- Water is a critical resource in Timor-Leste. Water supply, and its particular lack of water in the dry season , is the most important environmental constraint for the whole country for agriculture and public consumption.

Continuation

Some other deficiencies

- In urban centre's pollution is a key environmental issue;
- No effective waste management systems in place which could become major problem in the highly populated areas and in several coastal areas;
- Lack of facilities to support in managing the waste;
- Solid and liquid waste management and e-waste are also a problem that country is facing recently;
- Lack/minimum financial support from the state or other donors.

C. Facts projects for waste management in Timor-Leste

Existing facilities for liquid and solid waste management

C.1. Solid waste management

- Tibar land fill site constructed under the Indonesian rule is only remaining site that is used as final disposal of Dili, the capital of Timor-Leste;
- However, open dumping has been applied without any treatment, facility nor equipment;
- Only two compactor machines are operated from the Directorate of Water and Sanitation and also equipped with operator house, access road, warehouse for the compact machines and other materials.

Continuation (solid waste)

- Presently the government has not any system of collection and transportation of solid waste except for the management contractor such as private company or under the management contractors;
- The only site that the government has thorough the Ministry of Infrastructure is the Tibar landfill that also accepts hospital waste (medical waste) into 2 categories that are non hazardous waste and medical waste.

C.2. Liquid waste

- Liquid waste for instance used oil is the main problem in Timor-Leste because it affects ground water contamination and eventually can damage also other terrestrial and aquatic living micro-organisms;
- Examples are illustrated in the following pictures:

Pic 1. A common habit for depositing used oil in small workshop in Timor-



2. Picture of each filled drums with used oil



Pic 3. Underground storage of used oil



Tasitolu Waste Water Background

- It is located in the western part of Dili about 13 km;
- ***Executing Ministries***
 1. Directorate Water Supply and Sanitation (Ministry of Public Works)
 2. Directorate of Environment (Ministry of Economy and Development)

Design of Waste Water Ponds

- Actually has three treatment pond
 1. Facultative pond;
 2. Maturation pond 1 and 2 as shown in the pic.
- It has the connection to connected a hauling tanker hose. Each of the second and third pond is installed overflow pipe made of plastics at the end. These pond are fulfilled with sedimentation, then scum and sludge are floating around each over flow pipe part of sludge is flown to the channel.

Waste water ponds in Tasitolu



C.3. Adaptive government program for liquid waste management

- Trough the Secretariat of State of Environment construct/build a facility of storage of used oil across the country with 5 tanks with the capacity of 100,000 liters each plush one collection truck that is ready to do the work every day;
- The plan for future recycling process for these used oil stored in those tanks;
- Following are some picture of the used tanks at Tibar Village:

Photos 1 and 2 are the Oil Tanks prepared by the Government (1)



(2)



C.4. E-Waste

Electronic waste is also a concern in Timor-Leste:

1. There are import of some used electronic equipments to Timor-Leste such as computers, TVs, Radios etc.
2. Since 1999 of UN transitional administration there was a significant E-waste and there is no recycling or another finishing systems such as destruction of these E-wastes;
3. PDTOL is the only Australian company that has been working on collection for the E-waste in Timor-Leste.

C.5. Intuitional capacity and human Resources

- Relevant Ministries at the government that are in charge of the waste management are Ministry of Economy and Development, Ministry of Infrastructure, Ministry of Health and District Administration;
- Limited human resources is also a problem for the government to manage and limit in equipments to support the program.

D. Achievement and future plan

- Since the independence through the Secretariat of State for Environment has the program for environmental education throughout the territory on the protection of the Environment;
- Also through the Ministry of Health a campaign on Environmental Health;
- Secretariat of State of Infrastructure, Water and Sanitation on the use of water and its sustainability.

D.1. Environmental Policy of the Government of Timor-Leste

- Promotion of environmental governance is a vital to secure the sustainable development of the country and its people as environmental degradation compromises the health and livelihood for current and of the future generation by:
 1. Setting a principles for environmental management for Timor-Leste;
 2. Establishing environmental performance standards to be applied in managing the Natural resources of Timor-Leste;
 3. Establishing principles for integrating environmental programs and projects across all government key departments of Timor-Leste;
 4. Establishing principles of educating people of Timor-Leste about environmental protection and management.

D.2. Other relevant Government Decrees

- Environmental licensing that cover pollution control law and Environmental Impact Assessment Law have been passed through the Council of Ministers;
- Government Decree on waste management has been drafted for the discussion at the Council of Ministers level.

Conclusions:

- As a New country, Timor Leste has various environmental problems and need more attention by investing money, technology;
- Public awareness seems to be helpful in addressing environmental issues, particularly waste management;
- Limitation or even lacking state budget will aggravate the situation which in turn public health will be affect a lot;
- Private sector involvement would be necessary and urgent to address this issue;
- Poverty alleviation as a new country is important; however if it not considering also the protection of the environment will be disastrous for the country;
- International assistance on one hand would also help in addressing this important issue and Timor-Leste has to have good will to cooperate.

E. Recommendations

- Recommend to the private sector to be involve fully in the process of waste management; it is investing also in waste management;
- Public awareness on waste management remain the main issue so that the public understand the importance of the protection of environment and its impacts to the health;

Continuation (Recommendations)

- The government has to prioritize environmental issues while developing the country;
- More state budget on the waste management in the country;
- Need International agencies assistance at regional or global level.

Thanks you very much