**BRUNEI DARUSSALAM** 

#### PRESENTATION OUTLINE

- INTRODUCTION
- Management of Hazardous Wastes in Brunei Darussalam
- CURRENT ACTIVITIES
- Import statistics under the Basel Convention
- Export statistics under the Basel Convention
- Illegal import and export cases
- Other activities conducted in the year of 2007
- FUTURE ACTIVITIES
- Updates on newly introduced regulations and regulation under discussion
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## Management of Hazardous Wastes in Brunei Darussalam

- Definition of Hazardous Wastes
- Regulations for Hazardous Wastes Management
- Generation of Hazardous Wastes
- Disposal Practices
- Recommendations

#### **Definition of Hazardous Wastes**

(Brunei Darussalam)

Toxic, Hazardous and Difficult Wastes is defined in the Negara Brunei Darussalam Master Plan: Part 11 – Solid Wastes Management as "wastes requiring special measures for storage, transport and disposal because of the potential risks they present to public health and the environment". Hence, hazardous waste can be in the form of solids, liquids, or sludge that is generated by industrial, commercial, agricultural and domestic activities.

### Regulations for Hazardous Wastes Management

- Currently No Law in Brunei Darussalam
  - Pollution Control Guidelines on Industrial Development
  - Draft Environmental Order in final stages with Attorney General
- Based only on Poison Act Regulation (Ministry of Health)

#### **Generations of Hazardous Wastes**

Table 1 provides some illustrative examples of hazardous waste generated by various activities, of which some of them can be found in Brunei Darussalam.

BASE	
CONVENTIO	N

Sector	Source	Hazardous Waste	
Commerce and Agriculture	Vehicle servicing	Waste oils	
	Airports	Oils, hydraulic fluids etc.	
	Dry cleaning	Halogenated Solvents	
	Electrical transformers	Polychlorinated Biphenyls (PCBs)	
	Hospitals	Pathogenic/infectious wastes	
	Farms/golf courses/parks	Unused pesticides, "empty" containers	
Small-scale industry	Metal treating (electroplating, etching, anodizing, galvanizing)	Acids, heavy metals	
	Photofinishing	Solvents, acids, silver	
	Textile processing	Cadmium, mineral acids	
	Printing	Solvents, inks and dyes	
	Leather tanning	Solvents, chromium	
Large-scale industry	Bauxite processing	Red muds	
	Oil refining / LNG processing	Spent catalysts	
	Petrochemical manufacture	Oily wastes	
	Chemical/pharmaceutical manufacture	Tarry residues, solvents	
	Chlorine production	Mercury	

#### **Disposal Practices**

- Direct disposal/no treatment/improper disposal
- Co-disposal with domestic waste
- Incineration (Hospital)
- Burying
- Injection into abandoned wells
- Recycling
- Out of Country Disposal

#### Recommendation

A national control system for hazardous waste management is required having the four important components:

- Legislation and Regulations
- Proper implementation and enforcement procedures
- Provision of adequate facilities for hazardous waste recycling, treatment, disposal and measures to encourage their use
- Adequate training for enforcement officers, plant operators and public awareness educational programs

## CURRENT ACTIVITES

#### **HAZARDOUS SUBSTANCE CONTROL**

- Approval from relevant authority to import, store, use and transport hazardous substances
- Storage and handling in accordance to Material Safety Data Sheet
- Emergency Response Plan to deal with accidental release

#### **HAZARDOUS WASTE CONTROL**

- Requirement to treat and dispose hazardous wastes in an environmentally sound manner
- Engagement of approved wastes management operator
- Proper record of hazardous wastes store and disposed

## CONTROL OF TOXIC CHEMICALS / SUBSTANCES

- Poison Act: Regulates pharmaceuticals and pesticides (deemed poisons under the Act) through a regulatory system under which import, sale, dispensing/application etc are licensed
- The Ports Act (applies to port areas only): Regulate transport of dangerous goods and wastes

#### **Import statistics**

Currently, No known import statistics under Basel Convention

#### **Export Statistics**

List of Hazardous Wastes Exported under the Basel Convention on the Transboundary Movement of Hazardous Waste in Brunei Darussalam

No.	Notification No.	Type of Waste	Quantity of Waste (Kg)	Waste Generator	Waste Exporter	Country Destination	Remarks
1	GB005263	Motor Fuel Antiknock Sludge (Y31)	30,224.7	Brunei Shell Co. Sdn. Bhd.	P&O Neollotd Ltd. (London)	United Kingdom (via Singapore)	
2	CMB/GB005263	Tetra Ethyl Lead (TEL)	13,601.1 (45% OF Antiknock Mixture)	Brunei Shell Co. Sdn. Bhd.	P&O Neollotd. (London)	United Kingdom (via Egypt and Singapore)	
3	TFS DE 2774 / 021338	Discarded Organic Chemicals	350,000	Aniq Haziq Bio-Solutions Sdn. Bhd.	Environmental Solutions (B) Sdn. Bhd.	Germany (via Singapore)	Did not proceed as intended
4	TFS DE 2774 / 021337	Discarded Inorganic Chemicals	200,000	Aniq Haziq Bio-Solutions Sdn. Bhd.	Environmental Solutions (B) Sdn. Bhd.	Germany (via Singapore)	Did not proceed as intended
5	TFS No. DE 1350 / 149323	Mixed Batteries and Accumulators (Y23, Y26, Y31, Y34, Y35)	70,000	Brunei Shell Co. Sdn. Bhd	Environmental Solutions (B) Sdn. Bhd.	Germany (via Singapore)	Proceeded to ACCUREC RECYCLING GMBH, Germany
6	TFS No. DE 1350 / 151206	Activated Carbon contaminated with mercury (Y29)	50,000	Total E&P Borneo B.V.	Environmental Solutions (B) Sdn. Bhd.	Germany (via Singapore)	Proceeded to DELA GMBH, Essen Germany
7	TFS No. DE 1600 / 105193	Activated Carbon contaminated with mercury	50,000 2006 - 30,000 2007 - 20,000	Brunei Liquified Natural Gas (BLNG)	Environmental Solutions (B) Sdn. Bhd.	Germany (via Singapore)	Proceeded to DELA GMBH, Essen Germany

- Illegal Import and Export Cases
- Currently, No Report Cases for both Illegal Import and Export for Brunei Darussalam
- Activities in 2007
- No known activities were conducted in the year 2007

## FUTURE ACTIVITIES

- Control on Schedule Industrial Premises
- Control on Air Pollution
- Control on Water Pollution
- Control on Land Pollution
- Noise Pollution Control
- Hazardous Substances Control
- Environmental Impacts Assessment on Prescribe Activities
- Environmental Audit
- Compensation on Pollution and Damages

Note: All these schedules listed above are in Final Draft with Attorney General

# CHALLENGES AND DIFFICULTIES

 Control Procedure of the Transboundary Movement of Waste

#### Language Problems

- Translation are not provided for non-English language forms

#### THANK YOU.