

MARE CHICOSE SANITARY LANDFILL

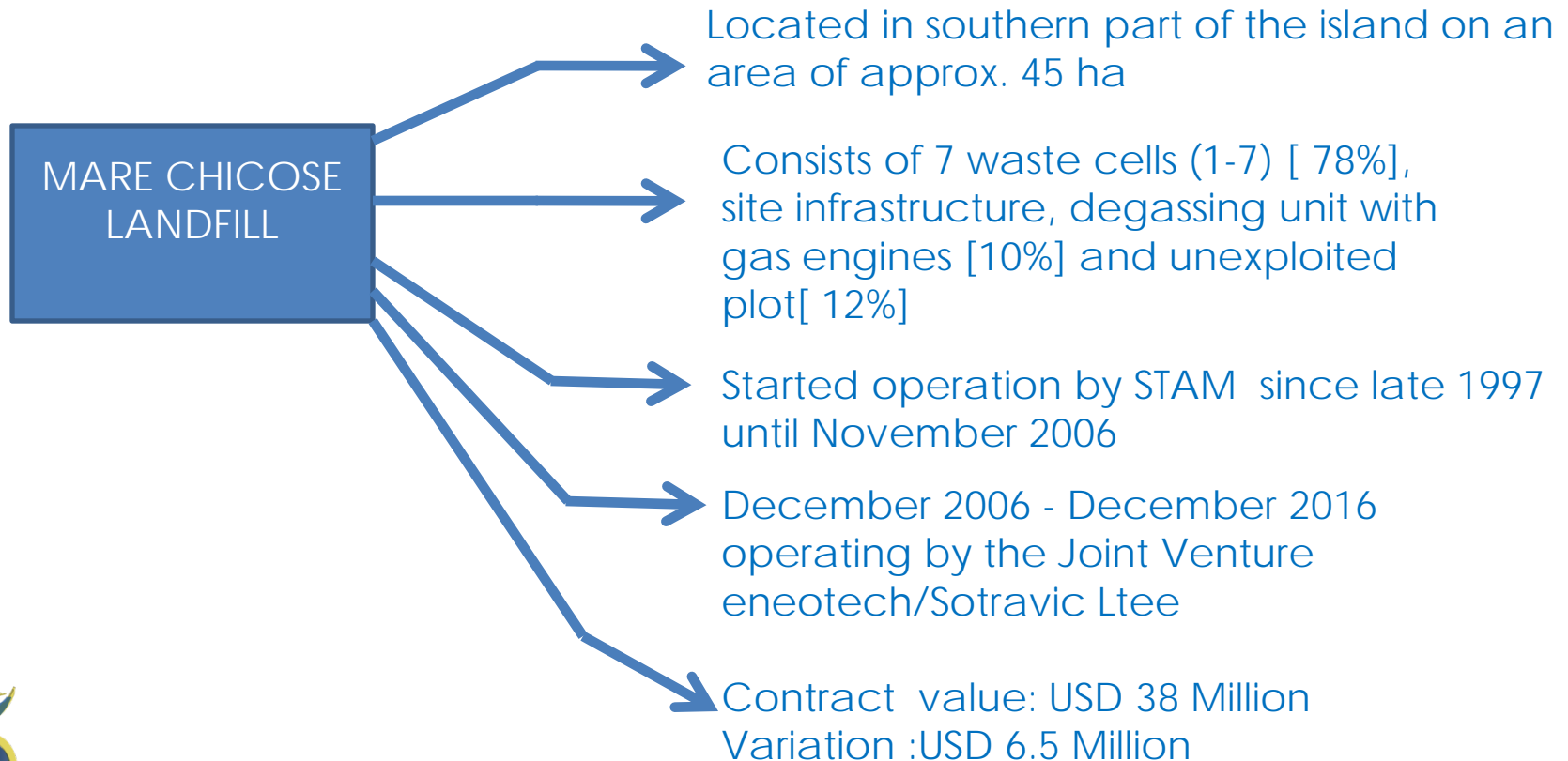
- Brief history of Mare Chicose Landfill Site
- Site operation activities
- Construction works
- Environmental monitoring
- Health and Safety

25
years

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LIMITÉE

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Brief history of Mare Chicose Landfill Site



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Site Activities:

- Construction of waste cells
- Waste reception
- Leachate management
- Gas management
- Capping



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Construction works - Construction of cells



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Site Operation Activities - Waste Reception

1. Weighing of waste trucks [Approx. 1,100T of wastes received per day. Out of this 95% is domestic wastes and The remaining are wastes like tyres, sludge, poultry wastes and condemned products



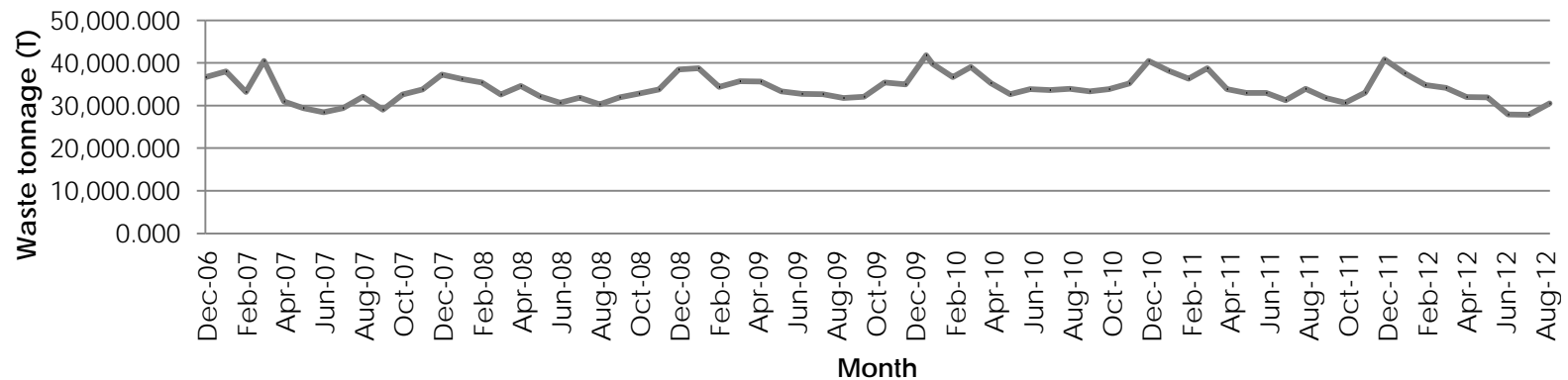
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Site Operation Activities - Waste Reception

Incoming wastes are from:

- the 5 transfer stations [80% to 85% of the total wastes]
- the south or private generators [15% to 20 %]
- Since 1997 until August 2012 – 5,084,974.32T of wastes received

Waste trend



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Site Operation Activities - Waste Reception

2. Tipping/Levelling/Compaction of wastes



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Site Operation Activities - Waste Reception

3. Daily cover [Biodegradable synthetic cover Or Soil cover]



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Site Operation Activities - Leachate Management

- Average annual rainfall – 2400 to 3000mm
- Raw leachate is stored in leachate ponds [3nos] and carted away in tankers to Roche Bois Treatment Plant. Average distance covered per trip – 96km

YEAR	TOTAL RAINFALL (mm)	TOTAL VOLUME (m3)
2007	2622	110,878
2008	2955	161,248
2009	2776	165,378
2010	2643	160,366
2011	2481	168,285



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Site Operation Activities - Leachate Management



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Site Operation Activities - Gas Management

1. Drilling of vertical gas wells (65)



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Site Operation Activities - Gas Management

2. Construction of horizontal gas wells (35)



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Site Operation Activities - Gas Management

- Gas wells connected individually to a manifold
- Manifold to the degassing unit through a main gas pipe [End of line system]



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Site Operation Activities - Gas Management

- Captured methane gas is used to generate electricity and/or flaring



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Site Operation Activities - Gas Management

- Gas Monitoring at manifold using a mobile gas analyser (GEM 2000 and GA 2000)



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Construction works – Capping

1. Temporary capping – Using 0.75mm LDPE geomembrane



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Construction works – Capping

2. Permanent Capping – [1.5mm LDPE geomembrane, geotextiles, drainage layer, soil and grassing]



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Environmental Monitoring

- Leachate analyses – Monthly
- Ground water and Surface water analyses – Quarterly
[Jointly with CWA and MoE]
- Gas Migration monitoring – Monthly
- Dust Control – through water spraying/low speed -
Monthly
- Installation of flies traps - Weekly
- Fogging - Weekly
- Larviciding - Weekly



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Health and Safety

- Vaccination of all people working on site
- Provision and Ensuring that people are wearing their PPE
- Fire Drill twice yearly
- Health and Safety committee every month



THANK YOU

25
years

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