

**Country**

France (Réunion Island)

Client

CLINIFUTUR

Date

2007

Sogreah's services

- ▶ Inspection of the study sites, site audits and collection of data relating to the waste
- ▶ Interpretation and analysis of data
- ▶ Conclusion, recommendations and action plan

Context

CLINIFUTUR is one of the most important private healthcare groups on the island of Réunion. As such, it operates 6 sites throughout the island: Sainte Clotilde, Saint-Vincent, Jeanne d'Arc, Les Orchidées and Médicale de l'Est clinics, and the "Stock Central" (logistical supplies to the clinics).

In the framework of its activities and the context of waste management in Réunion, the production of waste from the CLINIFUTUR clinics is tending to represent a serious financial and environmental challenge.

Sogreah therefore carried out waste assessments for the various sites in order to characterise the waste arisings in question and the manner in which they are exploited, with the ultimate aim of optimising the waste management systems from the environmental and financial points of view.

Aims

Optimisation of the waste management systems used at the CLINIFUTUR sites (recommendations, action plans), following the qualitative and quantitative characterisation of the waste arisings and the waste

management systems (internal management, external processes, management costs).

Sogreah's role

- Presentation of the sites, internal waste management methods, stakeholders, containers and waste streams: presentation in the form of mimic diagrams, organisation charts and maps.
- Statutory context: classification of waste with respect to decree 2002-540 of 18 April 2002 (nomenclature codes) and checking of statutory compliance for the internal waste management system.



- Qualitative estimation of waste arisings: listing of waste in order to determine the types of waste involved, along with the corresponding characteristics (composition, nomenclature code, status, density, etc.).
- Quantitative estimation of waste arisings: presentation of waste quantities generated (in tonnes/month) over one or more reference years depending on quantitative data available (weighing slips, waste monitoring records, service-providers' invoices).
- Presentation of external waste treatment systems used by CLINIFUTUR and its waste service-providers depending on the categories of waste identified.
This involved in particular identifying the methods used to collect, transport, treat or recycle waste.
- Presentation of the cost of waste management: internal costs (on the basis of waste handling times and the hourly costs of operators); external costs (on the basis of waste service-providers' invoices, for identifying the cost of renting containers, and of waste removal and treatment/ recycling).
- Analysis of waste management systems:
 - Analysis of waste arisings: tonnages, ventilation, ratios, seasonal variations, recycling rate.
 - Critical analysis of the internal organisational system: handling methods, physical streams of waste on site.
 - Analysis of the cost of managing waste: estimation of financial ratios (€/tonne) for each category of waste.
- Conclusion and recommended action plan:
 - Optimisation of internal human resources allocated to waste management.
 - Possibility of reducing waste at source.
 - Optimisation of physical streams of waste.
 Statutory compliance of waste management.
 - Optimisation of waste sorting procedures and methods.
 - Optimisation of collection equipment.
 - Optimisation of round frequencies.
 - Optimisation of treatment processes.
 - Optimisation of internal and external costs.
 - Example of internal communication relating to waste management.
 - Economic assessment of the recommended action plan.