



IPLA Global Forum 2012

on

Empowering Municipalities in Building Zero Waste Society
- A Vision for the post - Rio+20 Sustainable Urban Development
Seoul, Republic of Korea, 5 - 6 September 2012

Main Aspects of the Tunisian Waste Management Strategies

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TUNISIA



Introduction



- Tunisia located in **North Africa** and is part of the **Maghreb region**.
- It is bordered to the **North** and the **East** by the **Mediterranean Sea**.

DJERBA

🇹🇳 The island of Djerba is located in the south of Tunisia

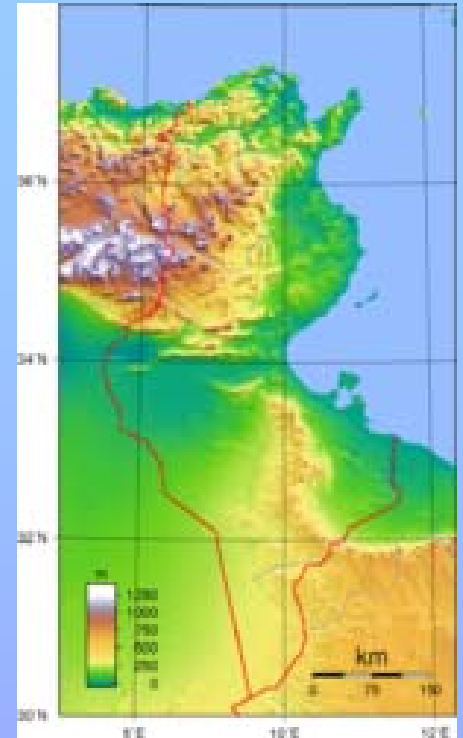
🇹🇳 Djerba covers an area of nearly 500 km².

🇹🇳 The 140000 (2004) inhabitants of Djerba are spread over three municipalities

🇹🇳 Djerba is a touristic island, there were 135 hotels in 2009, and 49000 beds for nine million nights

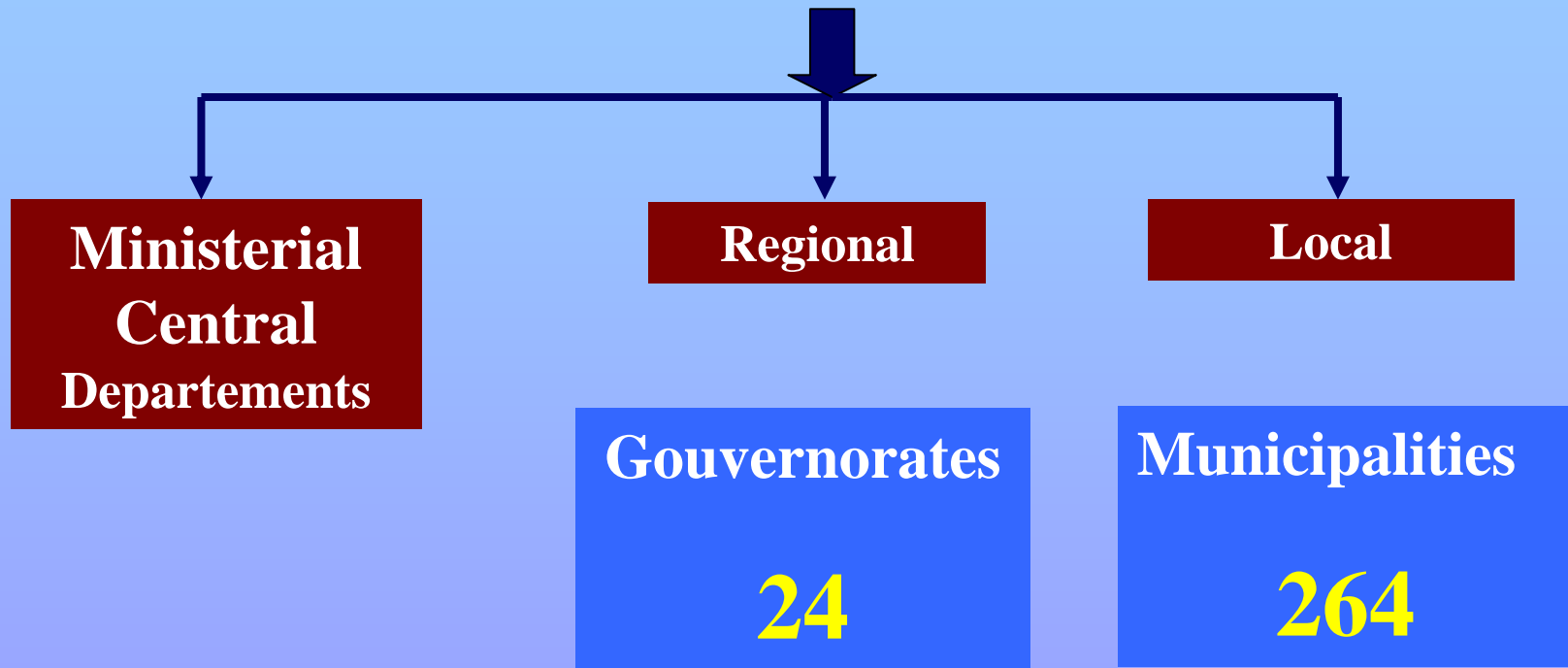
🇹🇳 The annual rainfall varies between 200 and 300 mm

🇹🇳 Average annual temperatures range from 12 °C in December to 30 °C in July. Sometimes peaking at 40 or 45 °C



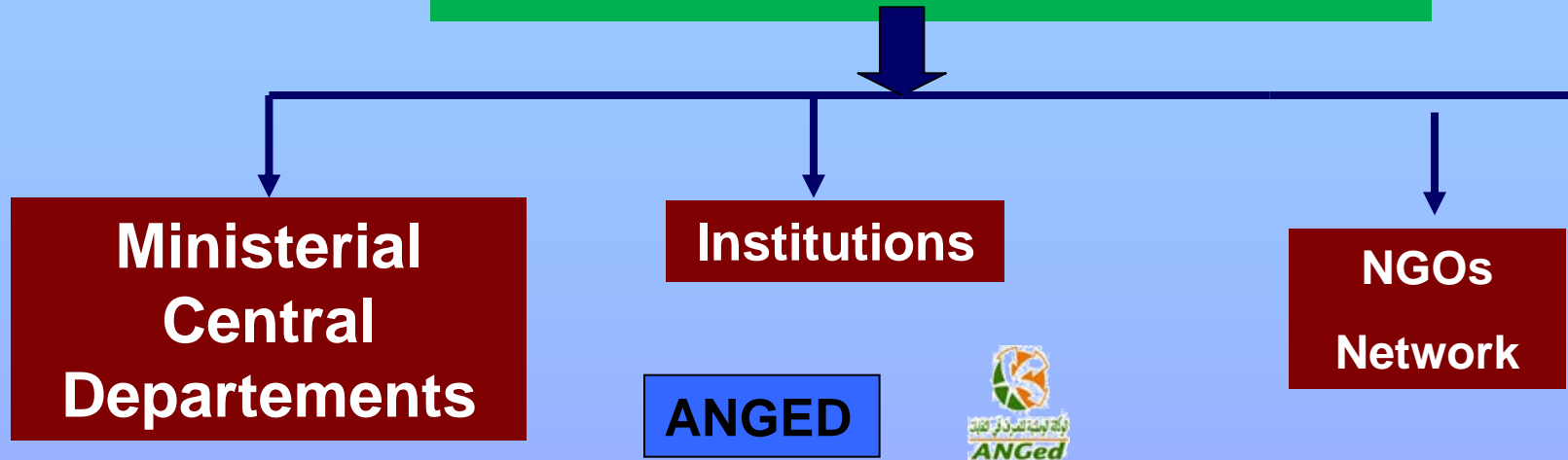
Responsibility for Waste Management

Ministry of Interior



Governorates and municipalities are responsible for environmental protection and solid waste collection and its transportation to landfills and transfer centers.

Ministry of Environment



-The National Agency of Waste Management (ANGEd) provides the treatment (*after collection*).

The Tunisian Approach

Tunisia opted for step-by-step-based institutional framework:

- Municipalities collect solid waste
- The National Agency of waste management (ANGED) provides the treatment (after collection).
- Municipalities are involved in the implementation of PRONAGDES
- Providing or acquiring the landfill site.
- Participating in the construction of financing-controlled-landfills.
- Payment of operating expenses.

Main Objectives of the Environmental Strategy

- Improve the quality of life.
- Prevent and eradicate industrial pollution.
- Contribute to the improvement Tunisian industry competitiveness.
- Develop a regional initiative (decentralization), increase environmental awareness and community participation.

The National Strategy of Waste Management is mainly based on:

Construction of controlled landfills



Management of hospitals and hazardous waste



Closure and rehabilitation of non-controlled landfills



Systems for the management of rubble, construction and green wastes, etc.

Recycling and Reutilisation

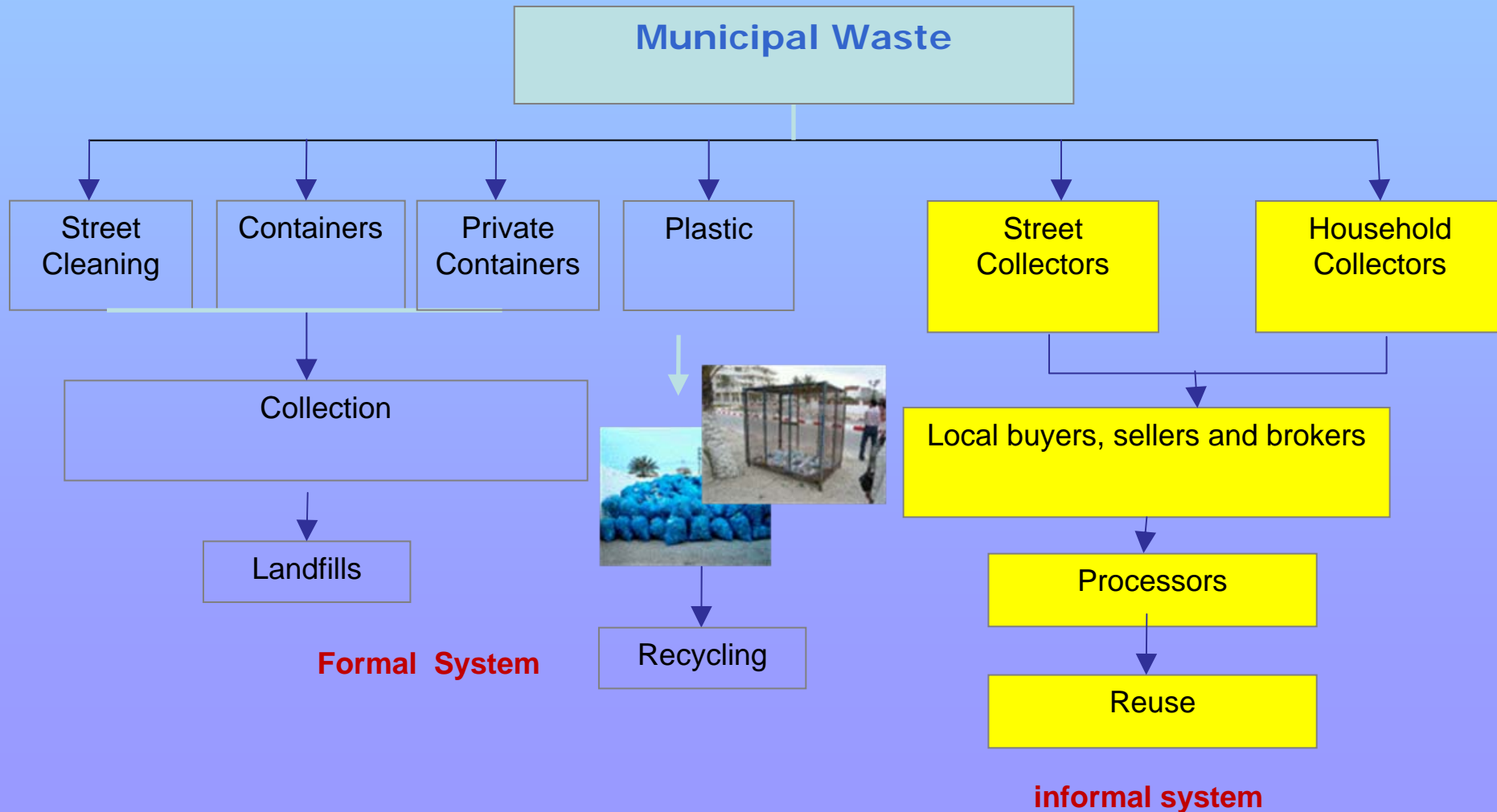
National Programme for Solid Waste Management

- Prevention and reduction of waste generation
- Recovery of waste through reuse and recycling
- Discipline the development of recycling
- Promote new technologies in the field of waste management
- Involving the private sector in waste management process (collection, recycling, treatment, ...).

Situation of Solid Waste Management in Djerba

- The situation of solid waste management in Djerba is summarized as follows:
 - Dump trucks with a capacity of 7-9 tons collect and transport solid waste from streets in touristic and residential areas.
 - In rural areas, solid waste is collected and transported by tractors.

The Municipal Waste Management Scheme of Djerba



Background Information on Djerba

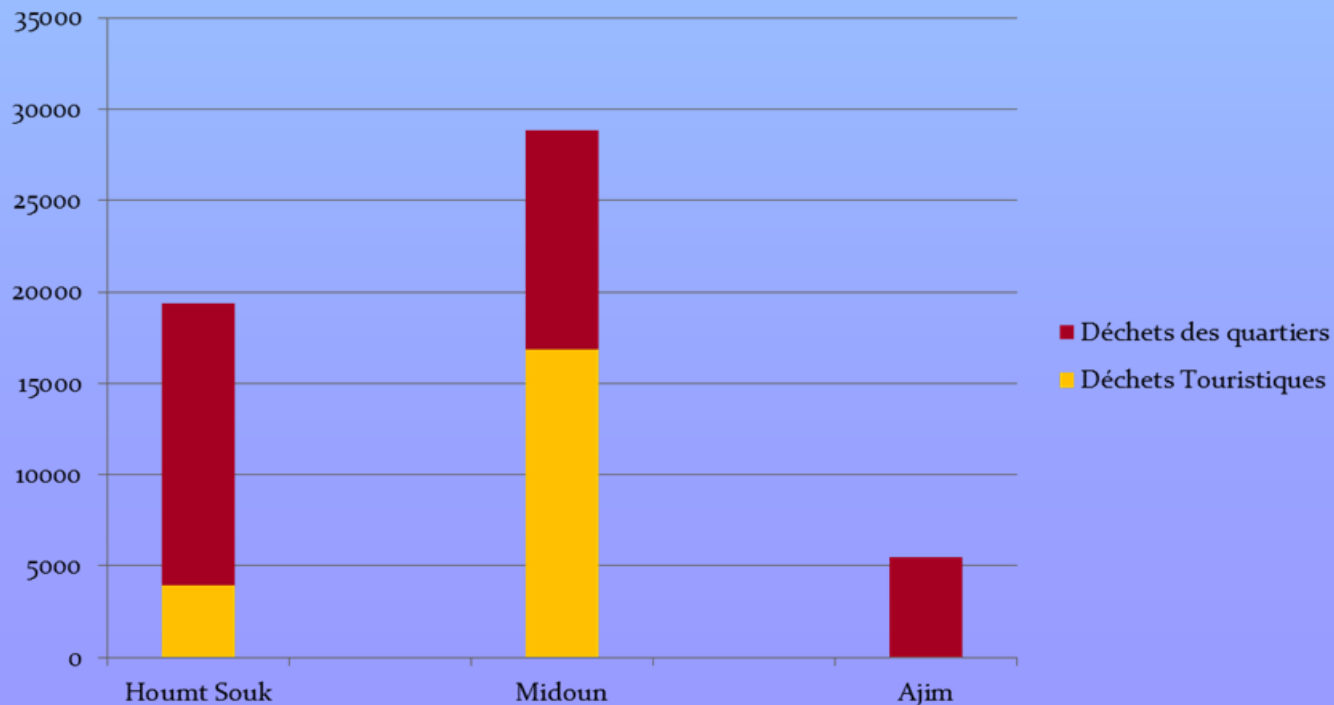
Household Waste Generation: 53000T/year

Green Waste Generation: 18000 m³/year

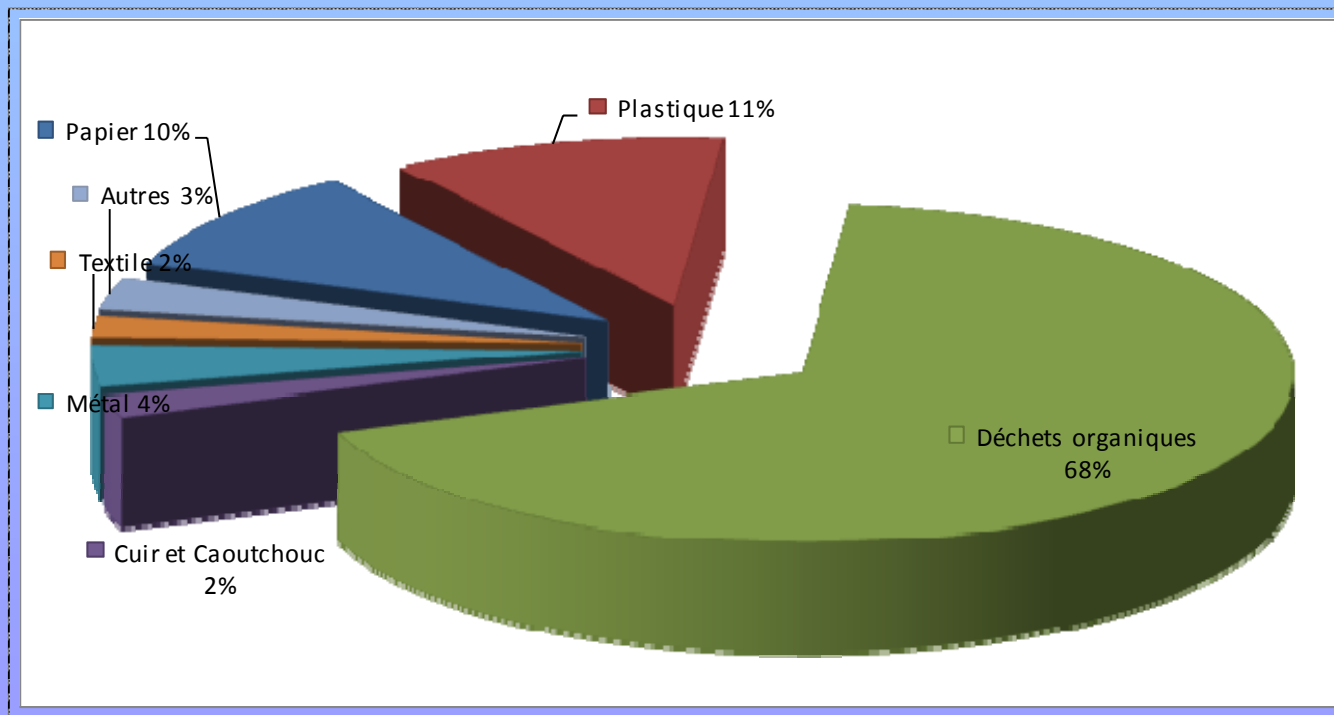
Rubble, Construction Waste Generation: 4000T/year

Amount Of Waste Collected

- The following graph shows the amount of waste collected from three communes in Djerba



Waste Composition



Transfer Centers

- Djerba has three transfer centers managed by private companies.
- Waste is emptied into bins.



Landfilling

- Waste is disposed of in a sanitary landfill equipped with cells (to prevent leachate infiltration and eliminate methane from waste decomposition)



Problem of Solid Waste In Djerba

- Residents dispose of their waste (green, construction waste mixed with domestic waste) with domestic waste near the container.
- This situation causes pollution and has an impact on the aesthetic view of community streets
- The waste is wet and very high in organic matter, disposal of this waste in a landfill causes odor emission and leachate problems.



- The landfill in Djerba began operation in April 2007 and has since caused a lot of nuisance for local residents; especially bad odor release.

Perspective of Waste Management In Djerba

- Introduce a waste management policy specifically tailored for the tourism sector and ensures environmental protection.
- Priority action will be given to the creation of a **organic/green waste compost**
- that's why we are working on a project to implement a **platform to compost organic waste** and create designated **waste disposal sites** in areas of the city

Objectives of the Project

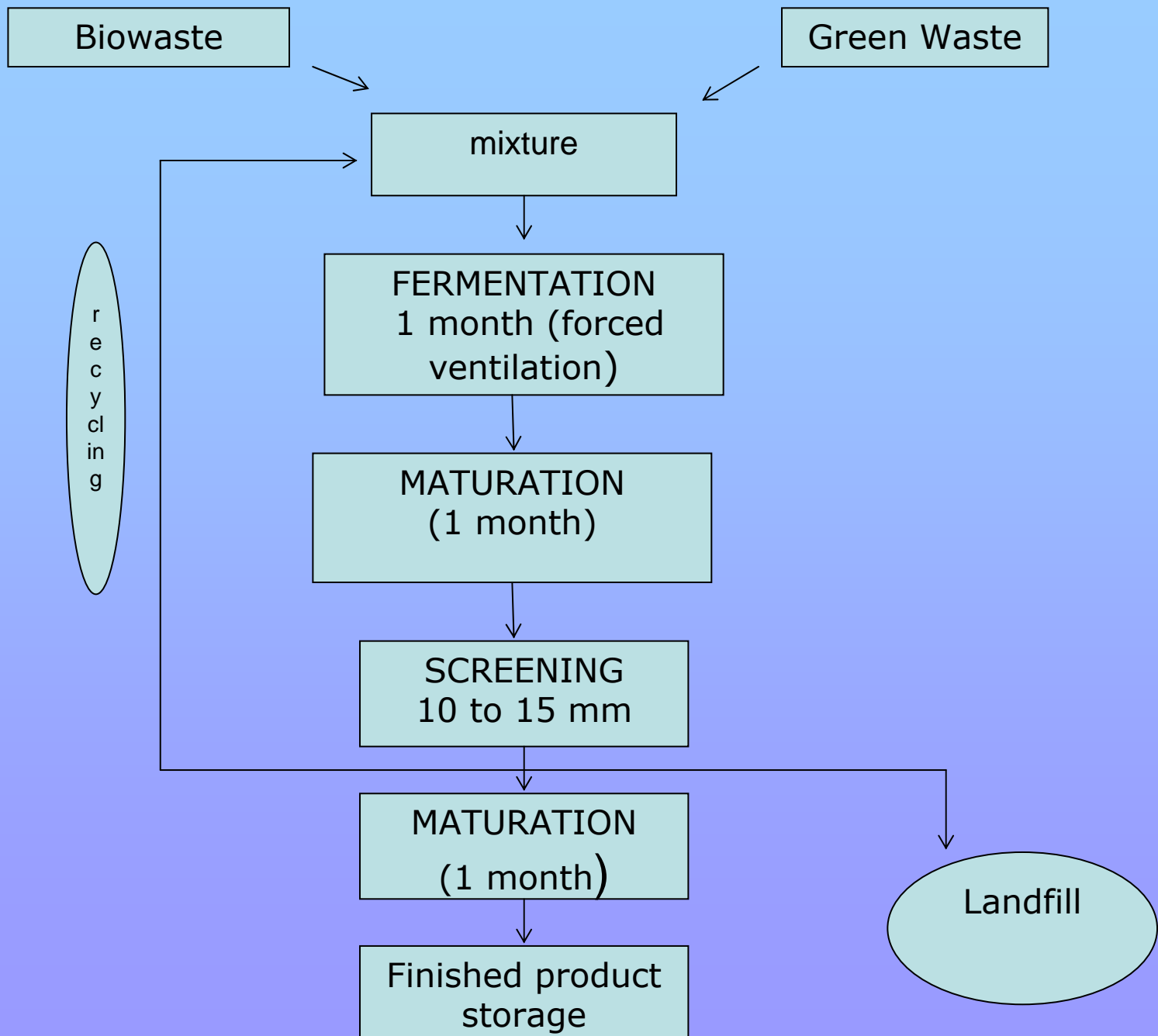
- Reduce pollution from organic waste disposal
- Valorization of organic matter and development of recycling programmes on the island
- Producing an organic soil amendment
- Outdoor composting, with forced ventilation compartments to mitigate nuisances to the neighborhood

COST of PROJECT

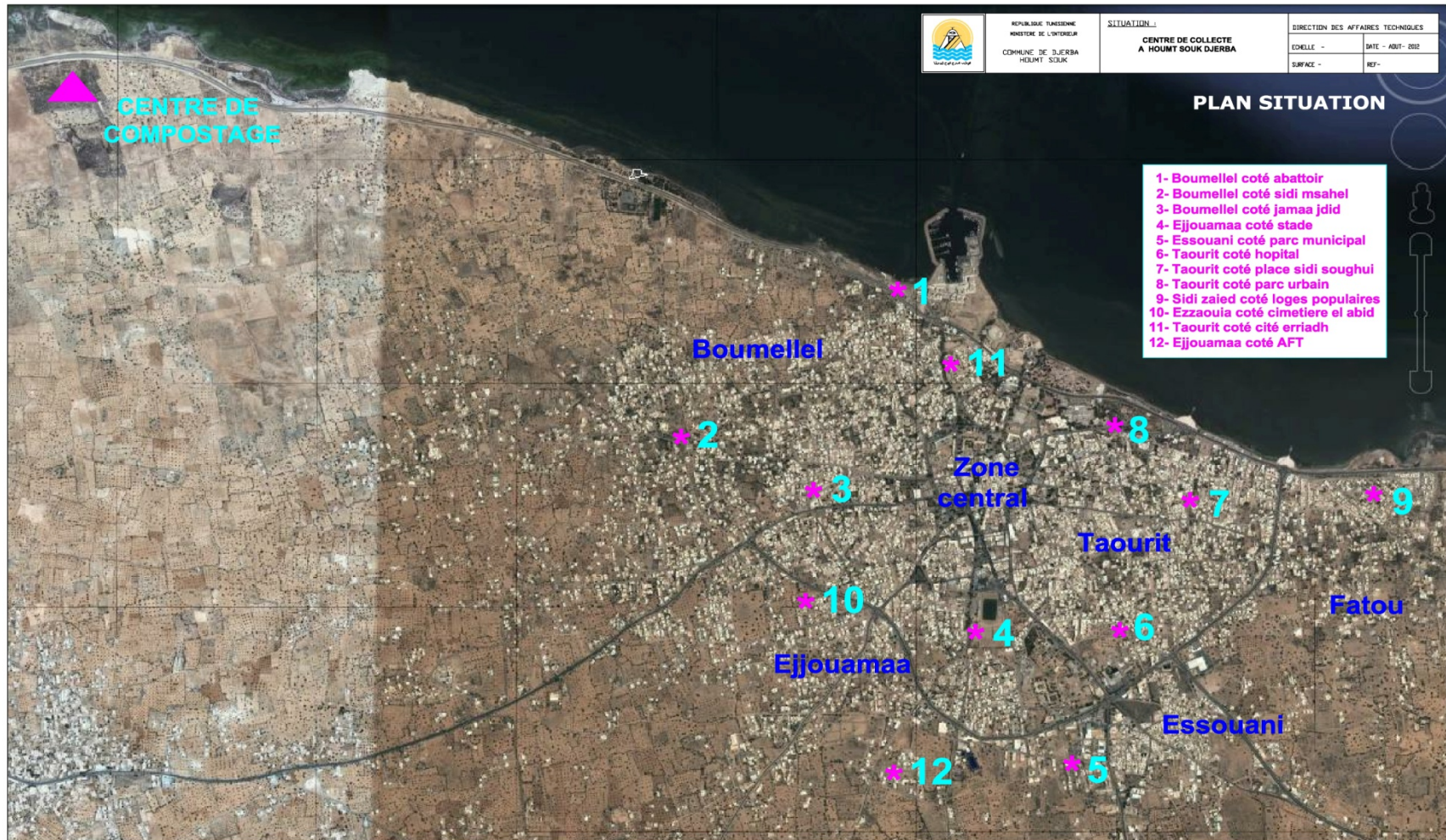
150,000 USD

Steps of Biowaste and Green Waste Composting

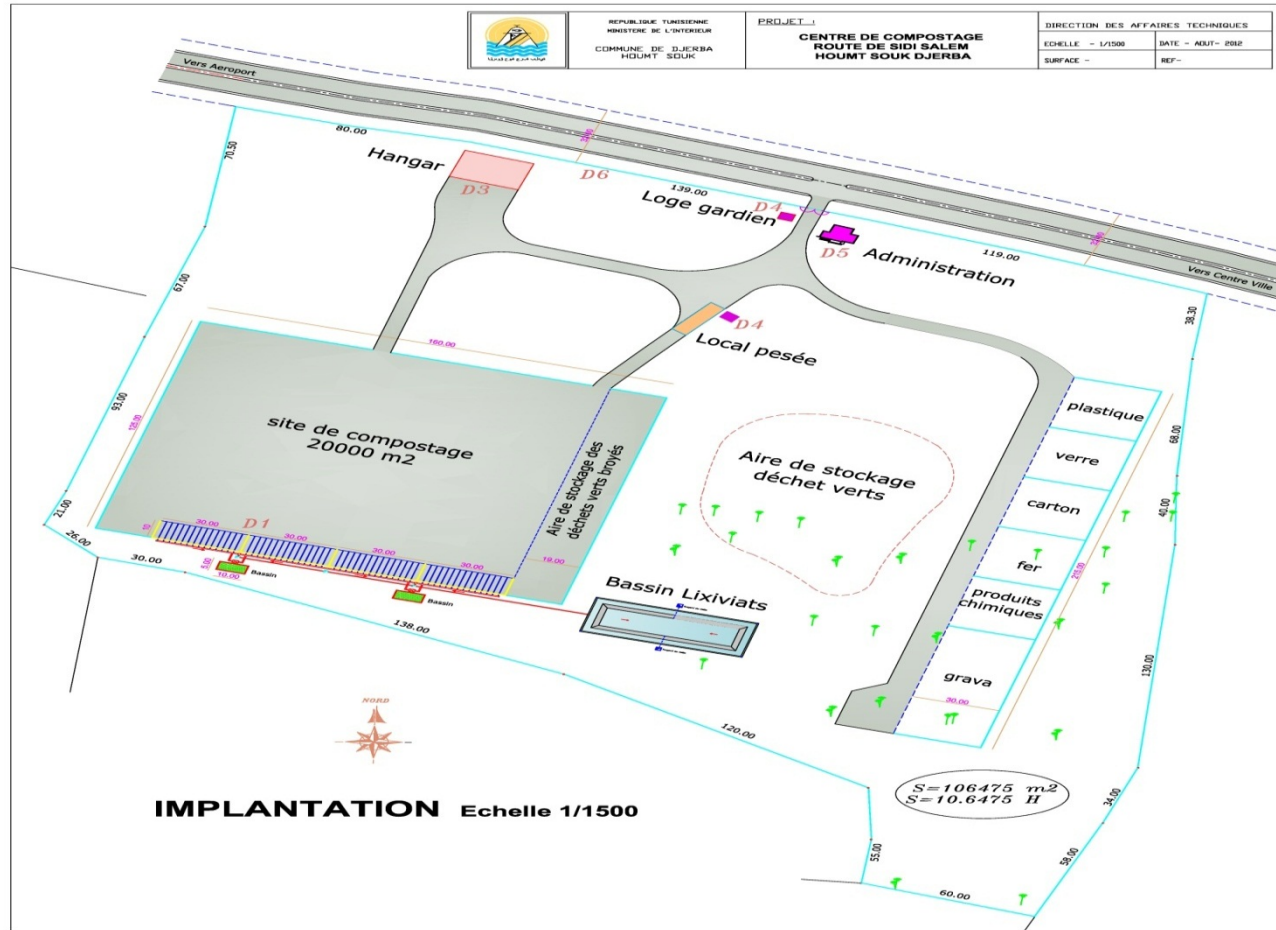
- Disposal of waste in appropriate areas
- Manual sorting of undesirables, if necessary.
- Grinding green waste
- Mixing with organic waste and composting
- Reversals and humidification as required.
- Screening, maturation of compost, recycling or refuse disposal.
- Finished product storage



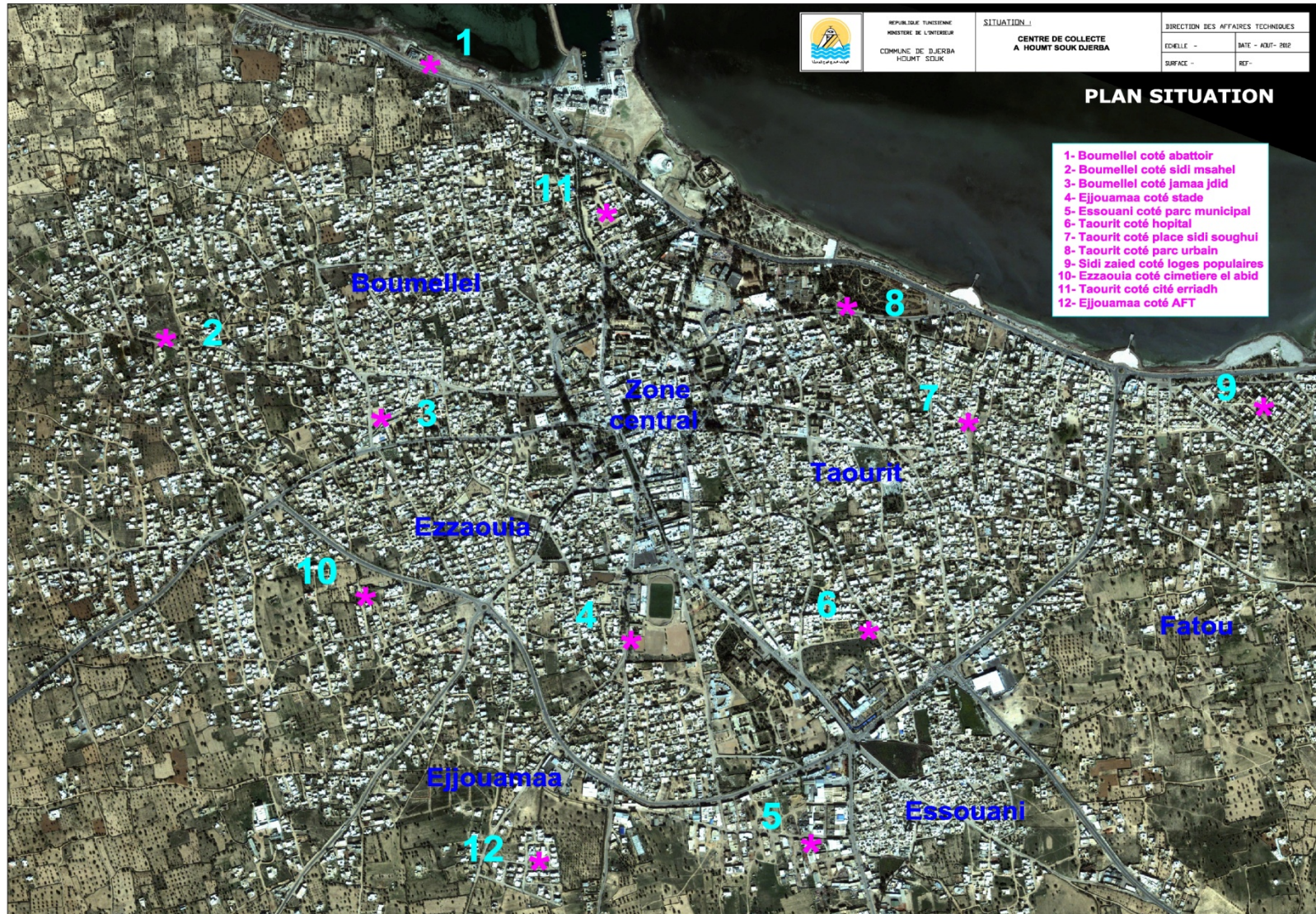
Situation of waste composting platform



Map of the platform



Situation of waste disposal





REPUBLIQUE TUNISIENNE
MINISTRE DE L'INTERIEUR
COMMUNE DE DJERBA
HOUMT SOUK

SITUATION :

**CENTRE DE COLLECTE
A HOUMT SOUK DJERBA**

DIRECTION DES AFFAIRES TECHNIQUES

ECHELLE -

DATE - AOÛT - 2012

SURFACE -

REF -

PLAN SITUATION

Mezreya

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Conclusion

- Despite new initiatives and programs, Tunisia aims to keep building on improving the national environmental situation.
- Specific focus on institutional, legislative and educational levels.

A lot still needs to be done to preserve the environment and meet the objectives of sustainable development.

- Recycling and composting
- Eradicating pollution
- inter-communality and privatisation .

**THANK YOU FOR
YOUR ATTENTION**