



SECTOR BRIEF SENEGAL:

Solid Waste Management and Recycling



Introduction and Overview

Waste management and recycling is a key economic sector in Senegal. This Guide evaluates the sector's policy, legal and institutional frameworks, outlines strategic directions, presents the baseline situation and describes the sector's different streams, their potential for development and relevant local experiences. Investment potential, job creation and improving the quality of jobs are other key factors considered in this analysis, which provides a consolidated view of the business opportunities and challenges to be addressed.

Policy and strategy framework

Senegal has a policy framework that underpins the country's socio-economic development in line with **sustainable development principles** and an inclusive governance approach, with a focus firmly on citizen satisfaction. The country has developed a **National Strategy for Sustainable and Integrated Management of Solid Waste** that hinges on the principle 'think globally, act locally' and sets out a vision for promoting the economics of waste.

In 2013, the Senegalese Government launched the **National Waste Management Programme (PNGD)** as a mechanism to provide support and assistance at the municipal level. The PNGD, which drives the operational roll-out of the national strategy for integrated and

sustainable solid waste management, is implemented through two components: a scheme to provide municipal development investment and another to strengthen local governments' institutional, technical, organisational and financial capacities.

The objectives of the PNGD are to:

- contribute to improving public health by ensuring more than 75% of the population have access to public sanitation services;
- generate wealth by reducing and recycling waste, aiming to increase the sector's annual turnover to more than XOF 45 billion (EUR 68.43 million);
- create at least 15,000 jobs.

Situation analysis

Senegal, like most other countries in the Global South, is facing high population growth, accompanied by rapid urbanisation. These trends go hand in hand with changing consumption patterns, which lead to an increase in levels and types of waste.

In Senegal, the **average daily volume of urban solid waste is around 8,664.4 tonnes**, consisting mainly of fine materials (around 50%), particularly sand. Municipal solid waste per capita is around 0.5 kg a day. In the Dakar region, waste generation is estimated to be 2,684.5 tonnes a day, or 979,842 tonnes a year.



Domestic solid waste streams

In general, the processing of solid waste generated by households is not regulated. Primary waste collection is carried out using carts and tricycles. Throughout the country, **primary collection is an informal activity** and is not part of the official public service management system.

The different materials collected from households or recovered from dumps are sold to tradespeople who use them in their manufacturing processes (aluminium foundries, traditional blacksmiths and garment makers), or to intermediaries who stock them for resale. Part of the waste is sold directly to merchants: items that, after a quick clean, go straight back onto the market (jars, bottles, etc.) and waste used as animal feed (food scraps, paper, cardboard, etc.).

Waste collection and transportation services are only available in the regional capitals and in some departmental capitals and are provided by struggling municipal utilities supported by the **Solid Waste Management Coordinating Unit (UCG)**. All the solid waste collected or received is taken to uncontrolled dump sites located in old, abandoned quarries.

The variety in types of solid waste means that each stream has **significant potential**. The potential rate for organic recovery from putrescible waste is 12%, for resource recovery (mainly iron and other metals, plastics, paper and cardboard) it is 20%, and for energy recovery from textiles, wood and fuel it is 10%. However, 58% of solid waste is considered non-reusable, which means that sanitary landfill sites need to be constructed in compliance with applicable standards.

There is a local industry for each kind of waste although the level of recycling or reuse varies according to the type of waste:

- **Iron and other metals** are processed by Société Métallurgique d'Afrique (SOMETA), which uses the waste to make concrete reinforcing bars. Around 50,000 tonnes of metal are recycled each year resulting in an annual turnover of XOF 5 billion

(EUR 7.6 million). The mechanics company SELMEG recycles up to 6 tonnes of aluminium a year. The metal recycling market is well-established.

- The **plastics** stream is dominated by industrial plants that turn **plastics** into flakes and granules. The recycled plastic is used by a small core of plastics processors that are very dynamic and require significant investment. The plants currently collect and purchase around 8,000 tonnes of plastic a year although the actual demand for recycled plastic exceeds 15,000 tonnes. This market is showing strong growth and solid development potential.
- **Organic waste** is mainly retrieved during traditional collection operations for pig and cattle farmers and for vegetable growers who turn the waste into compost for their own use or for use on green spaces by private individuals or the hospitality industry. The organic waste reuse and recycling market is embryonic.
- **Waste electrical and electronic equipment (WEEE)** is repaired or recovered for disassembly. The materials that are recovered are sold and recycled. Although WEEE treatment is still an informal activity it is a major concern for the Economic Community of West African States. This is therefore an emerging market, which presents considerable opportunities in terms of setting up infrastructure networks for WEEE collection, disassembly, recycling and reuse. Outside of recovery operations, the disposal of hazardous components that cannot be recycled or reused poses a real challenge.
- PRONAT is the only plant operating in the **paper and cardboard** stream. It consumes 2 tonnes of paper a day, which is less than 1% of national recyclable waste (less than the potential demand of 7%), to make egg trays from recycled paper. The rate of recovery of organic matter, paper and cardboard remains very low in Senegal. The market is currently embryonic, and the development of these streams is clearly an interesting prospect.

Industrial solid waste streams

Manufacturers generate different types of waste. In each area of activity, they produce waste that is specific to their operations as well as **ordinary industrial waste (OIW)**, mainly plastics, paper and cardboard. These are either reused internally or transported to dedicated facilities or to a dump site.

There is a separate stream that deals with **special or hazardous industrial waste** given its specific characteristics and the danger it presents to the people handling it. It is treated using a well-defined process agreed by the companies concerned, generally in a memorandum of understanding between the two parties. The largest treatment facility for this kind of waste is the SOCOIM plant, which processes tyres, rags, solvents and, on occasion, paper and plastics.

As there are very few facilities authorised to treat OIW, health-care waste (HCW) and hazardous industrial waste, this market offers attractive prospects for investors interested in setting up a sorting and treatment system for special waste.

Investment potential

The solid waste recycling sector is made up of **informal businesses and small and medium-sized enterprises (SMEs)** with significant development potential and offering interesting business opportunities. They are in the process of forging partnerships to extend their operations, improve their plant and equipment and strengthen their capacities through financing and the sharing of expertise.

Creating a recyclables exchange, developing a network of standardised waste collection points and introducing authorised paid systems for specific streams (rubble, tyres, green waste, bulky waste, old vehicles, WEEE, etc.) all remain **priorities for the government** and offer interesting investment opportunities, while also contributing to the development of a circular and social economy that creates wealth and jobs.

Solid waste recycling in Senegal is clearly an engine that will drive socio-economic development. Various initiatives are being carried out across the country to exploit this potential and reap the benefits. **Professionalising the jobs involved in managing Senegal's solid waste** is a major challenge, particularly since most of them are in the informal sector. Achieving the target of consolidating and creating more than 15,000 jobs in the solid waste industry requires implementing a national training plan for jobs in solid waste management.

Overall, this is a **high-growth market with good development potential**. Despite the numerous semi-industrial operators in the sector, there is an unmet demand for recyclable raw materials and a need to develop finished products manufactured from recycled materials. Each link in the solid waste management and recovery chain offers business opportunities. However, it is crucial to ensure that regulations are strictly enforced and that an effective financing and cost recovery mechanism is put in place.



In response to strong public interest in sustainable environmental and socio-economic management and limited local capacities in this area, the Senegalese Government allocates funds from its annual budget to solid waste management programmes to support local authorities.

In January 2014, with the support of the Islamic Development Bank, which provided funding amounting to XOF 17.5 billion (EUR 26.67 million), the Senegalese Government also launched the Sustainable Solid Urban Waste Management Project (PGDSU), which aimed to improve the way solid waste management systems were run by local authorities in the Dakar region and in the communities of Tivaouane, Kaolack and Touba Mosquée. The project commissioned the construction of three solid waste treatment and disposal facilities and 32 standardised waste collection points, and light, heavy and mobile equipment was procured for road sweeping and to collect and transport the solid waste.

In March 2020, the government launched PROMOGED, a six-year project to promote solid waste management with support from the World Bank, the French Development Agency (AFD), the European Union and the Spanish Agency for International Development Cooperation (AECID). The provisional budget is more than XOF 170 billion (EUR 259.16 million).

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The following chart gives an overview over the different solid waste management and recycling subsectors.

| Subsectors | Competitive advantages | Business opportunities | Challenges |
|---|---|--|--|
| Waste generation | Ban on the use of plastic packaging, 150,000 tonnes of which is generated annually Commitment to reducing solid waste generation | Eco-design of consumer products Marketing of substitute products Cross-industry circular economy | Consumer awareness and reintegration of operators affected by the reform |
| Waste processing and storage | Senegal requires regulation bins for more than 400,000 households in urban areas each year Local authorities require more than 10,000 street litter bins and waste containers each year Waste managers require more than 5,000 wheeled bins for staff | Set up plants to manufacture litter bins and waste containers using recycled plastic | Need for strong political backing and commitment from central and municipal governments |
| Road sweeping and waste collection | Waste managers require personal protective equipment (PPE) and sweeping kits for more than 5,000 crew members Senegal has more than 1,000 km of roads to be swept and more than 6 million tonnes of waste to be collected | Set up plants to manufacture PPE and small items of cleaning equipment Emergence of professional enterprises to provide services | Commitment to upholding social standards Commitment to professionalising the sector |
| Solid waste collection and transportation | More than 700 primary waste handling vehicles, 750 waste containers and 850 waste collection vehicles are needed at municipal level | Establish a partnership with the government to supply vehicles and create assembly and maintenance facilities | Commitment to renewing logistics |
| Solid waste recycling, reuse and disposal | Senegal's infrastructure needs are as follows: <ul style="list-style-type: none"> ● standardised waste collection points: 200 ● recycling centres: 15 ● waste sorting and transfer facilities: 15 ● controlled dumps: 10 ● treatment and disposal facilities: 8 It also requires operating equipment; the investment required is estimated to be more than XOF 250 billion (EUR 381.12 million) | Mobilise, under a public private partnership to design, finance, construct and operate different solid waste treatment facilities | Ensuring technology is in line with socio-economic realities and the capacities of the contracting authorities |
| Rehabilitation of uncontrolled dump sites | Senegal has more than 40 uncontrolled dump sites that are harmful to the environment A programme has been launched to gradually rehabilitate dump sites at an estimated budget of more than XOF 50 billion (EUR 76.22 million) | Mobilise service providers to conduct technical, environmental and social studies and carry out the capping work required at uncontrolled dump sites | Choosing suitable future uses and affordable technologies |
| Capacity development | Senegal has developed a five-year training plan for waste management occupations targeting 15,000 beneficiaries | Set up training and incubation centres for the sector | Financing activities to meet capacity development needs |

| Subsectors | Competitive advantages | Business opportunities | Challenges |
|--|--|---|---|
| Ordinary industrial waste management | More than 150,000 tonnes of OIW generated in Dakar and no system for sorting, recycling, standardised bulking or recovery | Create a recyclables exchange and standardised OIW bulking facilities | Finding sites close to production sites |
| Health-care waste management | No HCW management systems; HCW disposal at municipal dumps | Establish HCW sorting and treatment facilities | Financing the services |
| Management of urban waste other than household and similar waste | No specific services available to manage this type of waste, which is the responsibility of those who generate it | Introduce authorised paid systems for specific streams: rubble, tyres, green waste, bulky waste, old vehicles, WEEE, etc. | Implementing control and deterrent measures against uncontrolled dump sites |
| Hazardous waste management | Significant quantities of hazardous industrial waste are stored because there is no system in place for it to be treated in accordance with applicable regulations | Set up authorised enterprises with the required technology | Enforcing the regulations |

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“New Markets – New Opportunities: A Guide for German Companies” is supported by the Federal Ministry for Economic Cooperation and Development (BMZ). All issues are published on the websites of GTAI and GIZ. You can find selected issues, for example on Senegal also at

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