Syctom l'agence métropolitaine des déchets ménagers

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# ACTIVITY REPORT

### SYCTOM'S ELECTED FFICIALS as on 31 December 2014

HERVÉ MARSEILLE Senator-Mayor of Meudon Chairman of Syctom

### Vice-Chairmen, members of the Bureau





LAURENT LAFON

Mayor of Boulogne-Billancourt 12th Vice-Chairman of Syctom

Paris councillor

JEAN-DIDIER BERTHAULT

CLAIRE de CLERMONT-

TONNERRE

Paris councillor

ALAIN DURANDEAU

Deputy Mayor of Tremblay-en-France

Mayor of Vincennes

7<sup>th</sup> Vice-Chairman of Syctom

PIERRE-CHRISTOPHE BAGUET

FRANÇOIS DAGNAUD KARINA KELLNER Mayor of 19th arr. Chairman of SITOM93 Municipal councillor of Stains Senator-Mayor of Garches Chairman of SITOM93 1st Vice-Chairman of Syctom  $2^{nd}$  Vice-Chairman of Syctom  $3^{rd}$  Vice-Chairman of Syctom

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WILLIAM DELANNOY Mayor of Saint-Ouen 6<sup>th</sup> Vice-Chairman of Syctom



ALAIN PÉRIÈS Deputy Mayor of Pantin 11<sup>th</sup> Vice-Chairman of Syctom

### Other members of the Bureau



CATHERINE BARATTI-ELBAZ Mayor of 12th arr.



JEAN-MARIE BRÉTILLON Mayor of Charenton-le-Pont



PHILIPPE DUCLOUX Paris councillo



ÉRIC HÉLARD Paris councillo

JEAN-PIERRE SCHOSTECK Mayor of Châtillon

Syctom is run by a syndicate committee of 68 local officials representing all member local authorities, renewed following municipal elections in March 2014.

- It defines the Syctom's policy, votes on its budget, decides on investments to be made and the management methods used.
- It gives its opinion on requests for members and departures of local authorities.
- It elects the 36 members of the Bureau, which prepares Syctom's deliberations, as well as the 5 members of the Commission for Tenders, which falls under the authority of Syctom's Chairman.



JACQUES GAUTIER

PIERRE GOSNAT\* Mayor of Ivry-sur-Seine

FLORENCE BERTHOUT

Mayor of 5th arr.

JÉRÔME COUMET

Mayor of 13th arr.

JEAN-CHRISTOPHE

of Neuilly-sur-Seine

FROMANTIN

LUDOVIC TORO

Mayor of Coubron

MP-Mayor

8<sup>th</sup> Vice-Chairman of Syctom



MAO PENINOU Deputy Mayor of Paris 5<sup>th</sup> Vice-Chairman of Syctom 4<sup>th</sup> Vice-Chairman of Syctom



ANNE SOUYRIS Councillor of Paris 9<sup>th</sup> Vice-Chairman of Syctom 10<sup>nd</sup> Vice-Chairman of Syctom



**OLIVIER MÉRIOT** Deputy Mayor of Gennevilliers 14th Vice-Chairman of Syctom 15th Vice-Chairman of Syctom



SAMUEL BESNARD Deputy Mayor of Cachan



FLORENCE CROCHETON 1<sup>st</sup> Deputy Mayor of Saint-Mandé



Deputy Mayor of Les Pavillons-sous-Bois



PATRICK TRÉMÈGE Paris councillor



HÉLÈNE BIDARD Deputy Mayor of Paris



VIRGINIE DASPET Paris councillor



NICOLE GOUETA

Mayor of Colombes

CHRISTINE GAUTHIER



STÉPHANE WEISSELBERG Deputy Mayor of Romainville

### 75 Representatives of the City of Paris





HERVÉ BÉGUÉ Paris councillor



Paris councillo



MARIE-LAURE HAREL Paris councillor



JEAN-LOUIS MISSIKA Deputy Mayor of Paris

Paris councillo

**DANIEL VAILLANT** Former Minister, MP Councillor of Paris

**78** Representatives of the local authorities of Yvelines



MAGALI ORDAS Deputy Mayor of Versailles

92 Representatives of SYELOM





JEAN-PIERRE AUFFRET 1st Deputy Mayor of Clichy



SOPHIE DESCHIENS Deputy Mayor of Levallois-Perret





ÉRIC FLAMAND Deputy Mayor

of Vaucresson

PIERRE CHEVALIER

JULIE BOILLOT

Paris councillor

HALIMA JEMNI

Paris councillor

ANNE-CONSTANCE

Paris councillor

ONGHENA



















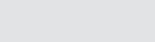


Deputy Mayor of Asnières-sur-Seine









 Full members of CAO (Commission of Tenders) \* Pierre GOSNAT passed away on 15 January 2015.

Mayor of 1<sup>st</sup> arr. Deputy Mayor 13<sup>th</sup> Vice-Chairman of Syctom of Rosny-sous-Bois

JEAN-PIERRE BOYER

PHILIPPE BRILLAULT

Mayor of Le Chesnay

JEAN-FRANÇOIS LEGARET

### **93** Representatives of SITOM93



BERNARD CACACE 1<sup>st</sup> Deputy Mayor of Raincy



JEAN-PHILIPPE MALAYEUDE Deputy Mayor of Neuilly-Plaisance



I AURENT RUSSIER Deputy Mayor of Saint-Denis



ANTHONY DAGUET Deputy Mayor of Aubervilliers



**OLIVIER MICONNET** Deputy Mayor of Livry-Gargan



**OLIVIER STERN** Municipal councillor of Montreuil

### **Q** Representatives of the local authorities of Val-de-Marne



JEAN-LUC CADEDDU Deputy Mayor of Maisons-Alfort



JEAN-JACQUES GRESSIER Deputy Mayor of Joinville-le-Pont



MONIQUE RAFFAELLI Municipal councillor of Le Kremlin-Bicêtre



BAMADI SANOKHO Deputy Mayor of Gentilly



JORGE CARVALHO Deputy Mayor of Villejuif



ALAIN GUETROT 1<sup>st</sup> Deputy Mayor of Saint-Maurice



PATRICK RATTER Deputy Mayor of Valenton



AGNÈS TEYSSERON Municipal councillor of Vitry-sur-Seine

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Each year, nearly 2.1 million tonnes of waste enter the public facilities of Syctom, the project owner; this organisation has no equivalent in Europe, with a total energy recovery capacity of 250 tonnes/hour, producing renewable energy in the form of steam, which is used in the district heating networks of Paris and inner suburbs, but also electricity for the needs of the processing.

Syctom draws its strength from this dense urban area, because it allows member public authorities to benefit from a technological showcase and a high performance industrial tool, with substantial financial leverage and resources. But its strength is also its weakness, giving rise to a number of challenges: an urban density that is among the highest in the world, highly scarce land availability, type of housing that hinders the development of efficient collection processes, notably packaging or biowaste.

In this dense urban area, public processing facilities still suffer from inadequate capacity. As a direct consequence, almost 10% of waste produced in Syctom's sphere is landfilled. To reverse this trend, Syctom has initiated an innovative metropolitan strategy, both in terms of governance and technical facilities to be implemented. This new milestone will bring all public stakeholders in the area closer together to more effectively tackle the problems posed by the management of all waste, in its entirety, whether produced by households or businesses, whether solid or liquid.

Given that all regional public processing capabilities are fairly adequate, and must be reinforced wherever possible, it becomes appropriate to network dedicated facilities beyond the administrative boundaries of each syndicate. Our reflection should focus on sharing all existing infrastructure, bolstered by efficient and sustainable transport logistics. The objective is to achieve a common and shared development, and create energy centres useful to the City of tomorrow.

As in all great metropolises worldwide, Syctom will thus contribute to the success of this "zero waste roadmap", by stopping the landfilling of recoverable waste. To this end, we must guarantee quantitative and qualitative inputs to each specialised processing channel, develop local heating networks supplied with renewable and recovered energy, which will minimise the landfilling of inert waste.

Finally, all topics related to this future governance and the pooling of resources will be discussed during the first metropolitan conference on waste organised by Syctom on 2 July 2015 in the morning at the Maison de la Chimie.

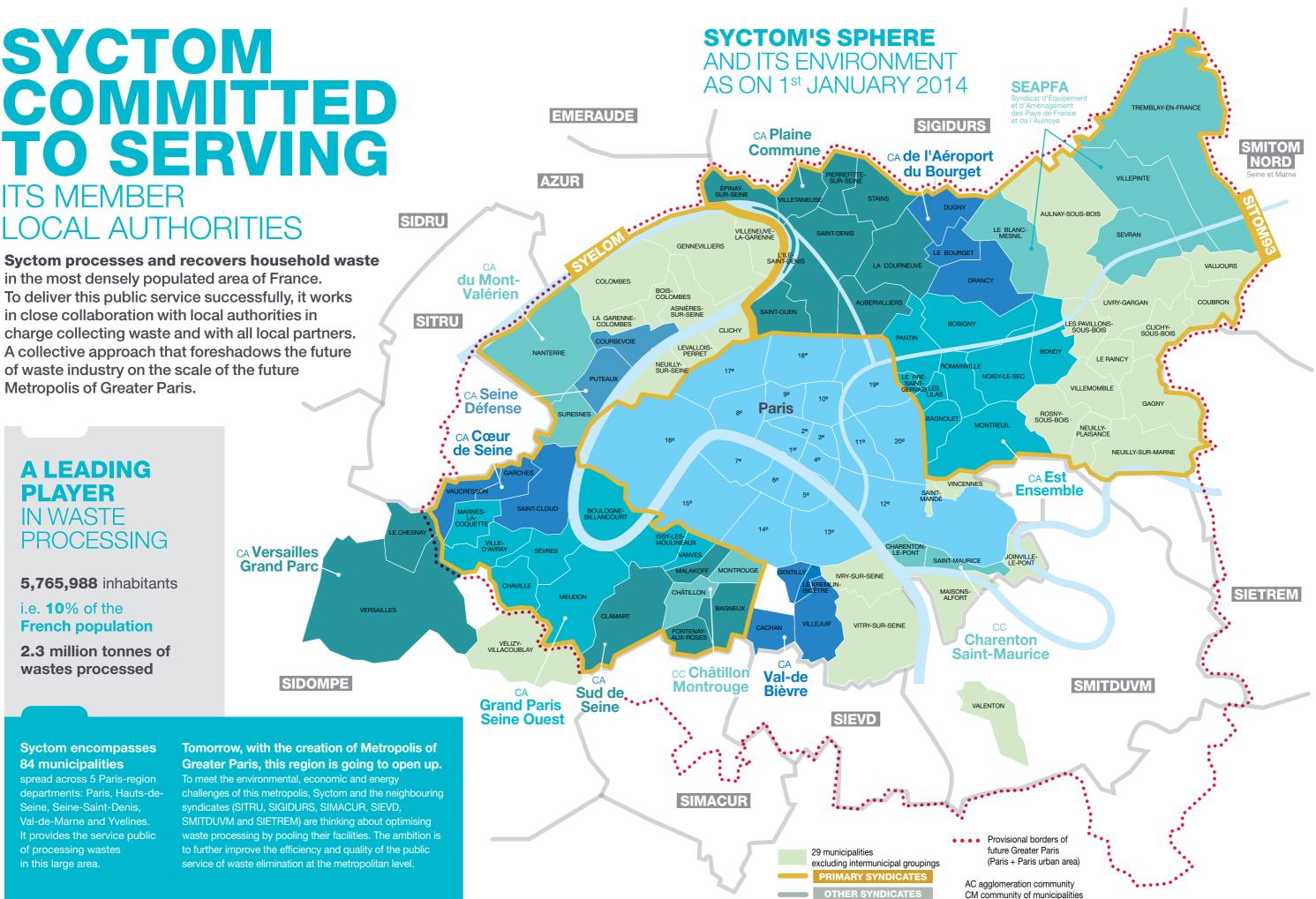
### HERVÉ MARSEILLE

Senator of Hauts-de-Seine Mayor of Meudon Chairman of Syctom, the metropolitan agency for household waste

Every day, for over 30 years, Syctom has been providing the public service of processing the household waste produced by 6 million inhabitants in the Paris central urban area.

# SYCTOM COMMITTED **TO SERVING ITS MEMBER** LOCAL AUTHORITIES

# AND ITS ENVIRONMENT



## charge collecting waste and with all local partners. A collective approach that foreshadows the future of waste industry on the scale of the future Metropolis of Greater Paris.

### **A LEADING PLAYER** IN WASTE PROCESSING

5,765,988 inhabitants

i.e. **10**% of the **French population** 

2.3 million tonnes of wastes processed

### Syctom encompasses 84 municipalities

spread across 5 Paris-region departments: Paris, Hauts-de-Seine, Seine-Saint-Denis, Val-de-Marne and Yvelines. It provides the service public of processing wastes in this large area.

### Tomorrow, with the creation of Metropolis of Greater Paris, this region is going to open up.

To meet the environmental, economic and energy challenges of this metropolis, Syctom and the neighbouring syndicates (SITRU, SIGIDURS, SIMACUR, SIEVD, SMITDUVM and SIETREM) are thinking about optimising waste processing by pooling their facilities. The ambition is to further improve the efficiency and quality of the public service of waste elimination at the metropolitan level.

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# SYCTOM'S INDUSTRIAL

To handle the amount and type of waste produced in the area as precisely as possible, Syctom has an efficient, constantly-evolving industrial park. Process improvement, integration of state-of-the art technologies, adaptation of capacity. Everything is done to increase waste recovery and limit the use of landfills.

### **12 PROCESSING** UNITS 7 SEVRAN 6 SAINT-OUEN **3** NANTERRI **5** ROMAINVILLE σ 70 8 PARIS XVII 3 incineration units with energy recovery 6 sorting centres for **4** PARIS XV **1**ISSÉANE **2** IVRY/PARIS XII A 1 transfer centre 2 waste for residual household reception centres waste **1 INSTALLATION** PROJECT **1** ISSÉANE 8 PARIS XVII 1.45 million 700,000 inhabitants inhabitants 459,985 24,029 30,000 tonnes tonnes incinerated received in 2014 in 2014

Operator:

TSI

Operator:

TSI

**2** IVRY/PARIS XIII **1.55** million **855,000** inhabitants inhabitants 692,678 31.125 tonnes tonnes incinerated received in 2014 in 2014 Operator: Operator: **IP13** SITA + 1 waste reception centre  $\mathbf{\Lambda}$ 





### **6** ROMAINVILLE



### **1.3** million inhabitants 35,285 tonnes received in 2014

Operator: Urbaser environnement

+ 1 transfer centre for residual reception household waste centre

+ 1 waste

A





### **6** SAINT-OUEN

4

1.45 million inhabitants 589,446 tonnes incinerated in 2014

Operator: TIRU





350,000 inhabitants 11,720 tonnes received in 2014

Operator: EHOL

# BECOMES RESOURCES

As we stand on the threshold of energy transition, waste processing forms more than ever an integral part of a rationale of circular economy. Faced with the depletion of natural resources, waste becomes a valuable alternative to the use of fossil fuels and raw materials. From this stems the Syctom's primary objective: recover ever more and ever better.

### WASTE PROCESSED BY SYCTOM

### 2,307,397t in 2014

₩.

Residual household waste 1,945,302t processed in incineration centres

with energy recovery or in landfill sites



Household paper packaging collected door-to-door or by voluntary drop-off **174,376**t processed in sorting centres



### **Bulky objects**

waste collected door-to-door or in waste reception centres, illegal dumps, and waste from technical services

### 170,504t

processed in sorting centres for bulky objects

Total amount of waste landfilled household waste and sorting rejects 211,102t Household waste and selective collection in the area are fully processed by Syctom.

However, only one part of bulky objects is processed by Syctom; the other part is managed directly by local authorities through contracts with external operators.

### INCREASED SELECTIVE COLLECTION

2013-2014

+**3.7**% selective collection

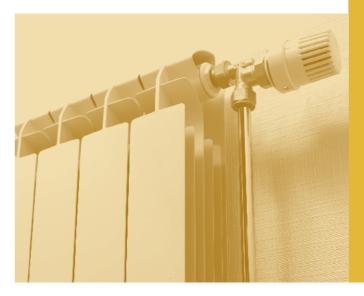
- **1.4% bulky objects** (with the implementation of furniture EPR)

+0.2% household waste

### NEW COMMITMENTS FOR 2020

-1%/year of household waste

+2%/year of selective collection



### REDUCED ENVIRONMENTAL FOOTPRINT

900,000t of CO<sub>2</sub> emissions avoided 300,000t oil equivalent avoided 31% non-road transport

WASTE RECOVERED BETTER AND BETTER

62% of waste recovered as steam or electricity

**300,000** 70m<sup>2</sup> housing equivalents heated

29.5% waste recycled into new raw materials (plastic, paper, steel, aluminium, glass, etc.) or clinkers i.e. **711,773**t

# A PRUDENT MANAGEMENT

In a challenging economic context and in the face of increasing regulatory requirements, Syctom strives constantly to control processing costs. This should be achieved while preserving its investment capacity, to meet the major challenges in processing household waste in the future Metropolis. The low increase in the budget contribution of member local authorities during the last mandate and a substantial reduction in debt testify to its stringent management.



### REASONABLE **USE** OF **DUES**

Tonnage share 104.80€/t Population share 6.80€/t

### Total contributions 2014 €285.9M

Use of the fees



Prospects 2015 **7% drop in fees** 





Landfill 103€/t

The processing costs fluctuate in line with the price of raw materials and energy.

# CONFIRMED **DEBT REDUCTION**

Debt in 2014 €**502**M

-25% since 2008

### SUPPORT TO LOCAL AUTHORITIES REAFFIRMED

**141€/t** Support for selective collection

i.e. **126**€/t **+ 15**€/t of new support

# €1,600,000

Budget for prevention and awareness-raising initiatives

Prospects 2015

INCREASING AID

for municipalities that house facilities

an overall budget of



# HIGHLIGHTS 2014

### **APRIL - MAY**

Modernisation of the sorting centre in Sevran with the installation of four optical sorters and a ballistic separator







### JUNE

4 JUNE Inaugural session of the new Syndicate committee and election of Hervé Marseille as the Chairman of Syctom

### 18 JUNE

Awards presentation during the 3rd edition of the "Zero Waste Design" competition at the Musée des Arts et Métiers

### JULY

4 JULY Establishment of a strategic committee made up of elected officials of the Syndicate committee

25 JULY

Award by CAO of the contract to reconstruct the centre at Ivry/Paris XIII



### **SEPTEMBER**

**18 SEPTEMBER** Seminar for newly elected officials with a presentation of Syctom and visit to Isséane



Launch of the Recup-ID site by Syctom in partnership with the Regional Council of Ile-de-France and the Regional Chamber of Trades and Crafts, and deployment of the campaign to promote re-use



### **OCTOBER**

OCTOBER 17 Authorisation from the Committee to sign the contract to design / construct / operate an organic and energy recovery centre in Ivry/Paris XIII with the joint-liability consortium IP13, a subsidiary of the SUEZ Environnement Group



### **INSTITUTIONAL MILESTONES**

23 - 30 MARCH Municipal elections

Presentation by the Prime Minister of the bill on the new territorial organisation of the Republic. Start of debates on the amendment of the MAPTAM Law.

4 JUNE Adoption by the joint committee of the law allowing the extension of the Oudin-Santini law on international cooperation to waste

### DECEMBER

Joint application by Syctom and six of its local authorities (Aulnay-sous-Bois, Clichy-la-Garenne, Est Ensemble, lvry-sur-Seine, Paris, Versailles Grand Parc) for the nationwide call for tender "Zero wastage, zero waste territories" launched by the Ministry for Ecology, Sustainable development and Energy

### 10 DECEMBER

Signing of the first membership agreement for the new experimental standard on small metal packages, with Eco-Emballages and the Nespresso Endowment Fund

AUGUST Adoption of the new National Waste Prevention Plan

SEPTEMBER Start of discussions at the Parliament relating to the law on energy transition for green growth

# PROCESSING AND RECOVERING WASTE

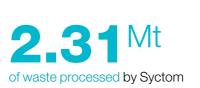
### RENEWING FACILITIES

to ensure the safety of goods and people, guarantee the continuity of the waste processing public service and constant improvement of its results.

### OPTIMISING RECOVERY PERFORMANCE

by enhancing the energy efficiency of facilities to supply steam to heating networks, by recycling materials from selective collection increasingly and ever more effectively, but also by exploring processing options for biowaste.

**Syctom's core business,** the industrial processing of waste, is today a high-potential sector. In a context of increasingly scarce raw materials and energy transition, waste must be considered as resources. Syctom has made this its primary challenge, by striving day after day to develop energy recovery and the recycling of waste. Or how to deal a final blow to landfill.





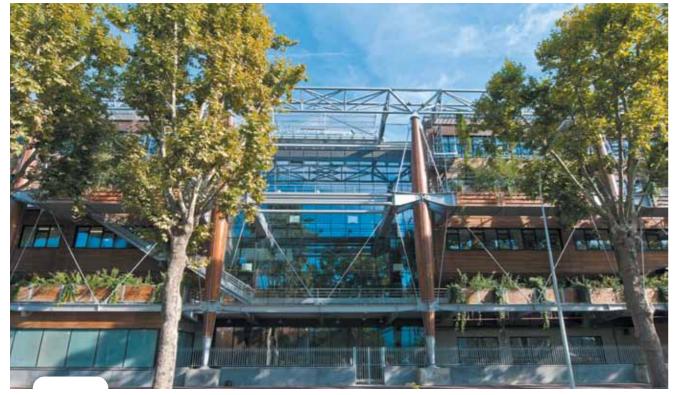
+ 0.2% Change in household waste between 2013 and 2014



### PRESERVING THE ENVIRONMENT

by controlling and minimising emissions, by promoting non-road transports and by ensuring good urban integration of existing and future facilities.

### PROCESSING AND RECOVERING WASTE IMPROVING THE PERFORMANCE OF OUR FACILITIES



# **IMPROVING THE** PERFORMANCE OF OUR FACILITIES



"The project to integrate the Saint-Ouen plant into the new Docks district, which will be home to 10,000 new residents over the next few years, demands a fundamental financial and architectural mobilisation. Land is scarce in the future Metropolis of Greater Paris; it must be exploited, whilst suring the quality of life of our new 

Mayor of Saint-Ouen and 6th Vice-Chairman of Syctom

### **CONSTANTLY-RENEWED FACILITIES**

### Safety first

Since 2013, Syctom has set up a safety coordination cell for the facilities in its centres. It manages a continuous quality improvement process through regular and preventive compliance audits on machine safety and fire safety. This process is a guarantee to prevent safety risks, maintain industrial heritage and respect current regulations, including the "Machinery" directive. Indeed, as the owner of its facilities, Syctom is responsible for the machine compliance

of the new sites. As regards external sites that it operates, it is required to ensure the compliance of these facilities. After the first training sessions on the responsibilities of everyone in terms of security, further training on fire safety was provided in 2014 for about forty people, on site.

### The machinery safety action plan

continued with the audits of sorting centres in Issy-les-Moulineaux, Romainville, Paris XV and Nanterre and in the Isséane incineration centre. A number of compliance works have already been scheduled for 2015. IN Isséane, for example, work is is planned for the clinkers handling equipment. The centres in Saint-Ouen and Ivry/Paris XIII, which are the oldest, will be audited in 2015.

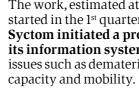
In terms of fire safety, the sorting centres in Sevran, Nanterre and Isséane were inspected. These audits will continue in the centres in Saint-Ouen, Ivry/Paris XIII, Paris XV and Romainville in 2015.

-23% between 2013 and 2014

€**85**M budget voted for developments at Saint-Ouen

### Modernisation work

Modernisation works were carried out in 2014 in the sorting centre in Sevran (see inset). At the Romainville sorting centre, audits highlighted the need to quickly renew the equipment dedicated to the sorting of waste from selective collection.





State-of-the-art facility As part of the new operating contract entrusted to the company EHOL, €3 million was invested to carry out major works on the sorting line in the Sevran centre. This modernisation, carried out from mid-April to late May 2014, enabled to recover more waste and improve working conditions. The "old generation" equipment was replaced by a process on the cutting edge of innovation. Four optical sorters and a ballistic separator were installed, which can sort all plastic packaging. Following these works, the sorting centre increased its sorting capacity from 4 to 6 tonnes per hour. 97% of waste is now recovered compared to 92% in 2013. The work of employees is changing to more of quality control. Four operators were requalified last year.

### DEMANDING ENVIRONMENTAL REQUIREMENTS

Syctom continues to pursue its proactive policy to measure and monitor the impacts of its energy recovery centres through inspections, in addition to those carried out by the operators. To do so, it appoints independent laboratories both for monitoring air emissions and for controlling impacts in the atmosphere or in the immediate vicinity of the facilities. Liquid releases are also controlled by the operators, at the output of each facility.

**Regarding atmospheric releases**, the results of these measurements show that emissions from each centre were well below the permitted levels in 2014 as well (see detailed results in the technical and financial report, page 15). The environmental impact of the emissions of dioxin-furans and heavy metals into the atmosphere is also the studied through a monitoring programme. It includes the readings of "Owen" gauge systems and ad hoc biomonitoring campaigns (measurements made on moss and lichen present in the vicinity). All this data is sent to municipalities hosting and bordering centres, to site monitoring commissions (CSS) and to the committees for monitoring

environmental quality guidelines. It is also provided in the public information dossier submitted annually to the prefecture.

In 2014, Airparif also released the results of a campaign to measure metals and particulate matter in ambient air around the household waste incineration plant in Ivry/Paris XIII, conducted from September 16 to October 27, 2013. They show that emissions from the plant have no impact on the level of particulate matter and metals. The results are consistent with those recorded in this part of the Paris urban area.

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360,000t of waste transported by water in 2014

The work, estimated at €25 million, was started in the 1st quarter of 2015. Finally, Syctom initiated a process to modernise its information system (IS) to address issues such as dematerialisation, storage

### Sorting centre at Sevran

### SYCTOM GIVES PRIORITY TO **ALTERNATIVE TRANSPORT FOR** TRANSPORTING ITS WASTE

- In 2014, about 360,000 tonnes of waste was transported by waterway.
- This significant increase compared to 2013 is due to the resumption of the disposal of clinkers from Isséane by waterway.
- This type of transport is also ideal for
- transporting paper, cardboard and plastic, once they have been recovered. In 2014, it represented 31% of Syctom's transport.



"Waste transport faces a dual challenge: we must find locations away from residential areas for factories, and non-polluting vehicles have increasingly shorter ranges. The idea ofusing the Sein therefore became an obvious option. with a first phase of partnership betwe . Svctom, SIAAP and Ports of Paris."

### **JEAN-FRANÇOIS** LEGARET

Mayor of Paris 1st arrondissement and 13th Vice-Chairman Syctom.

As regards liquid releases, work to improve the quality of releases into the Seine was undertaken by Syctom in 2013 and 2014. As the same time, work on new practices was conducted with the operator to reduce water consumption for different washing processes. These efforts have helped renew the waterway discharge agreement. Further work is

planned in 2018 to improve the processing of micro-pollutants in waste water.

### Measurements are made regularly

indoors to quantify the exposure of personnel working in Syctom facilities to noise, and outdoors to ensure that the centres comply with applicable regulations.

### WORKING TOWARDS URBAN INTEGRATION

Urban integration of the facilities is a key challenge for Syctom, whose facilities are located in dense urban areas. It goes a long way in gaining the acceptance of people and local authorities for a public waste processing facility in their neighbourhood.

In Saint-Ouen, the incineration centre located so far in an industrial zone, is now at the heart of the eco-district of the Docks. In view of the centre's new urban environment, a number of landscape and architectural improvements were voted by the Syndicate

committee last year for an estimated budget of €85 million. In 2014, Sequano, the developer of the Docks district, began to carry out work in the pneumatic collection terminal. Public tendering procedures were launched in late 2014 to appoint the architectural project management team in charge of these future developments, which are expected to start by the end of 2017. At the same time, the project manager in charge of the transition to the dry treatment of smoke was selected. The work is planned for 2017 and 2018.



"The construction of the lvry/Paris XIII centre represents a strong policy choice towards improving our living environment, a prerequisite for "living together". It is the ial that this centre is fully connected with the dynamics of urban development, environmenta improvement, social innovation and cultural enhancement, to which the city of lyry testifies every day, to better meet the needs of all the residents."

PHILIPPE BOUYSSOU Mayor of Ivry-sur-Seine



### Ivry/Paris XIII: a plant inside the city

After the IP13 consortium, a subsidiary of SUEZ Environnement, was awarded the design-buildoperate contract, much consideration was given to the urban integration of the future site. The group had to meet a number of landscape and architectural requirements: highlighting the industrial identity of this site, opening it up to the surrounding districts especially by creating new public spaces, working on the perception of the project from Paris as from lvry-sur-Seine, by partly revegetating it. The buildings meet the Building Environmental Quality (QEB) standard, which requires water- and energy-efficient buildings, optimal in acoustic and olfactory terms, optimised in terms of emissions (choice of materials, quality of air and water). All waste from the construction phase will be processed. Meanwhile, a High Artistic and Cultural Quality (HQAC) method is adopted to support the transformation of the plant. It seeks notably to mobilise residents and local stakeholders around workshops and meetings. This project was entrusted to the artist Stefan Shankland following a call for tenders, and will be unveiled by the summer of 2015.



# **RECYCLING MORE** AND BETTER

### SORTING CAPACITY RAMPED UP

In 2014, the operating capacity of Syctom's sorting centres grew after two applications for increase were accepted for Sevran (from 10,000 to 17,000 tonnes) and Paris XV (see inset opposite). At the Isséane site, the feasibility of requalifying the former area dedicated to bulky objects into a transfer area was confirmed. Finally, the construction of a second intramural sorting centre took shape (see inset below).



### Sorting centre project **Competitive dialogue underway** for the project at Paris XVII

In 2019, a second intramural sorting centre is expected to come up in northern Paris. Set in the future eco-district of Clichy-Batignolles, it will integrate the latest technological advances for an estimated budget of €67 million in 2013 (including design/ construction and operation of the centre for the first 2 years). In 2014, the competitive dialogue was launched among the five selected candidates. The advantage of this procedure is that it is possible to discuss the solutions proposed by the candidates so that the best project may be selected. The candidates presented their first offer during hearings held in autumn. The winner will be announced by the Syndicate Committee in the second guarter of 2015.

**SYCTOM** ANNUAL REPORT 2014

### THE SORTING CENTRE IN PARIS XV BEEFS **UP ITS OPERATIONAL CAPACITY**

To anticipate the increase in tonnage from selective collection, COVED, which operates the Paris XV sorting centre, obtained the permission to increase its operating capacity to 20,000 tonnes per year, an increase of 30%.



"We have designed the Batignolles sorting centre, the second largest in Paris, as a metropolitan public service: it will drive the growth of selective collections, from Paris arrondissements and municipalities of the Hauts-de-Seine and Seine-Saint-Denis Departments.

We are pursuing the diversification of processing method to achieve our environmenta bition: less waste but better sorted and better recovered."

### JEAN-FRANÇOIS LEGARET Mayor of the 19th arrondissement of Paris and 1st Vice-Chairman of Syctom







### **RECYCLING OF NEW STREAMS**



"Let's show that we can be capable of making a commitment to expand sorting to include all types of plastic and metal packaging. Let's show that we can be capable one day of harmonising sorting quidelines and the colour of collection bins. Let's simplify the habit of sorting to make the task easier for our fellow citizens, and we can safely bet that the tonnages collected will

JACQUES GAUTIER Senator-Mayor of Garches, Chairman of SYELOM and 3<sup>rd</sup> Vice-Chairman of Syctom

In 2014, the process of extending sorting to all plastic packaging in the catchment area of the Sevran sorting centre continued; new market opportunities were explored and the sorting system modernised (see page 17). Following these

works, five new municipalities joined the sorting centre's catchment area (Le Bourget, Drancy, Dugny, Les Pavillons-sous-Bois and Villemomble). In 2015, they will be able to take advantage of the extension of sorting to all plastic packaging, by applying for Eco-Emballages call for projects to stimulate sorting. In 2014, the eco-organisation initiated an "action plan for recycling" and plans to invest €90 million by the end of 2016, to technically and financially support local authorities in improving collection and sorting.

Since 2012, an experiment on the sorting of small metal packages, conducted jointly with the CELAA (Club for Aluminium and Steel Light Packaging) is underway in the Nanterre sorting centre. After developing the eddy current separator (magnetic field system for separating non-ferrous materials), the year 2014 was dedicated to securing the future of a reliable channel for taking up this mixed aluminium produced from small packaging (lids, coffee capsules, etc.) and from conventional rigid containers (cans, aerosols, etc.). The technique of recycling by pyrolysis of mixed aluminium seems to yield good results in terms of the quantity and quality of recycled aluminium. The year was also marked by the signing of the first membership agreement for the new experimental standard on small metal packages with Eco-Emballages and the Nespresso Endowment Fund (see inset).

Tests were also carried out on **rigid plastics** (garden furniture, tubes, boxes, etc.) from bulky objects. They represent 1.7% of this stream and have a recycling potential of 25 to 75%, mainly for the automotive industry. Given these positive results, Syctom plans to consult companies in 2015 for the take-back and recycling of these specific resins.



MEMBERSHIP AGREEMENT FOR THE NEW EXPERIMENTAL STANDARD **ON SMALL METAL PACKAGES:** A HIGH VALUE-ADDED STREAM

On 10<sup>th</sup> December, Syctom signed the first membership agreement for the new experimental standard on small metal packages, with Eco-Emballages and the Nespresso Endowment Fund. This three-year agreement will help benefit from the endowment und created by Nespresso (€300 / tonne) and support for an amount equivalent from Eco-Emballages, totalling nearly €600 for each recycled tonne (excluding sales price). These funds further consolidate Syctom's investment for operating this new high value-added stream.



# **PRODUCING ENERGY** AND OTHER RESOURCES

### WASTE, A SOURCE OF GREEN ENERGY

Waste, a renewable energy, now accounts for a considerableshareintheFrenchenergymix.In partnership with CPCU (Paris Urban Heating Company) and SIAAP (Greater Paris Inter-DepartmentalSanitationconsortium),Syctomis therefored eveloping solutions to recover the energy produced by incinerating household waste and to optimise it. Improving this energy recovery is at the core of Syctom's challenges.

In Syctom's three energy recovery centres, heat generated from waste incineration is recovered as steam and electricity. The latter primarily serves the needs of the factories, ensuring their energy self-sufficiency. The generated heat is used to supply CPCU's networks. In 2014, the units at Ivry/Paris XIII, Saint-Ouen and Issy-les-Moulineaux recovered more than 1.7 million tonnes of residual household waste and supplied urban heating to more than 300,000 housing equivalents of 70m<sup>2</sup> each. Syctom thus supplied 43% of the energy distributed by CPCU. By providing CPCU 50% of its energy in the near future, Syctom will allow its partner to increase the share of

### **UNDER CONTROL**

**SYCTOM** ANNUAL REPORT 2014

renewable energies in its energy mix. It thus paves the way for obtaining the European "green heating network" label.

### **ENERGY CONSUMPTION**

Syctom has participated in France's system of energy efficiency certificates (CEE) since 2014. This system allows public players to encourage providers to reduce energy consumption. Energy consumption reduction targets are set for three years. If they are not met at the end of this period, providers must pay a penalty of 2 cents per kWh of shortfall. This concerns sites that will undergo major maintenance or renewal but also the future high-performance centres, such as Paris XVII. Some specific operations may also come under this system, such as the proposed regualification of the processing of smoke at the Saint-Ouen centre.



"Committed to sustainable development for many years now, the City of Issy-les-Moulineaux is cooperating with Syctom to advance renewable energies. Thus, the CPCU network associated with geothermal energy, or even with ss. allows the City to pursue its efforts towards energy transition."

ANDRÉ SANTINI Former Minister, MP and Mayor of Issy-les-Moulineaux and 4<sup>th</sup> Vice-Chairman of



Transformation of the Ivry/Paris XIII centre

### **Reconstruction begins at lvry/Paris XIII: waste** recovery at the heart of the project

In July 2014, following a long process of competitive dialogue, Syctom's Commission for Tenders selected the IP13 consortium to lead the design, construction and operation of the lvry/ Paris XIII centre. The contract's firm phase includes operating the current household waste incineration unit and carrying out preliminary studies for the construction of the future facility. After this first phase, the Syndicate Committee will decide on the conditional phases and choose the processing and recovery method(s) to be adopted. The future centre could combine an energy recovery unit and an organic recovery unit. Although designed to process less waste (mainly waste produced by residents in the catchment area), this facility will improve the recovery of waste to generate new resources. With an estimated total amount of €1.8 billion over 23 years, half of which as investments, the reconstruction of the lvry/Paris XIII centre is the largest ongoing project on waste processing in France.

### **CLINKERS**

Clinkers, which are solid residues from the incineration of waste, are traditionally used as base layer in road construction. However, in recent years, markets have been on a downward trend, especially as a result of increased competition from construction waste, perceived as less dangerous. The legislation, more restrictive since 2011, has in fact worked against clinkers, even though it ensures a more stringent monitoring of their quality. Moreover, the drop in the number of construction projects due to the current economic crisis has further aggravated this trend.

To boost the recovery of clinkers and avoid the use of landfill, Syctom is striving to mobilise and promote their use among local authorities and project owners, and even more so in view of the construction of the Grand Paris Express.





### ANTICIPATING THE FUTURE IN THE PROCESSING OF BIOWASTE

Biowaste refers to all fermentable food waste that can be recovered from household garbage. Since 2012, the regulations require the largest producers of biowaste (canteens, restaurants, markets, etc.) to implement a special collection stream for this recoverable waste. The upcoming energy transition law tends to extend the selective collection and processing of organic waste to other producers.

Ultimately, biowaste could be directed towards a full-fledged recovery channel. In anticipation of this development, Syctom is fully involved in this issue by undertaking studies and conducting experiments, with its partners, to explore the potential of this new recovery channel.

The studies undertaken focus on existing deposits and the feasibility of setting up selective collection dedicated to bio-waste, particularly in three catchment areas: Blanc-Mesnil/Aulnay-sous-Bois, Ivry/ Paris XIII and Romainville (see inset).

# recovery solution.

Since 2010, Syctom has conducted deposit and feasibility studies for the collection of biowaste. The goal is to better understand existing deposits, identify solutions with member local authorities to optimise the management of these wastes, but also have a decision-making tool to project and size the processing systems. These studies continued in 2014 especially in the Romainville catchment area, including a diagnostics of the deposit, along with experimental operations and a sociological study launched in the second half of 2014, to gather the views and practices of certain target populations. In addition, several local studies on the feasibility of collecting biowaste were undertaken at the request of local authorities, in the Cities of Vitry, Paris, Villemomble, Neuilly-Plaisance and in the Agglomeration communities of Le Bourget Airport and Est Ensemble. These studies are specific to each area and must allow the technical and financial analysis of biowaste collection in order to identify all possible solutions, by board category of producers, and arrive at different scenarios.

€**48.4**M of income from energy recovery

### Experiments on collection and processing

of biowaste are also performed with the City of Paris in the Joinville and Ornano markets in the 18th and 19th arrondissements. Syctom also partners in the ongoing experiment with Parisian restaurateurs and their professional union, Synhorcat (National Union of Hotel, Restaurant and Café owners and Caterers).

### Syctom also worked with SIAAP to develop a common processing and

This solution involves receiving organic waste from Syctom by waterway on one of SIAAP's industrial sites, and processing it with sewage sludge. This project would pool the resources of both partners and the investments needed for a quality recovery, notably, to convert biogas produced by fermentation into biomethane. Feasibility studies will be conducted in the coming months to confirm the appropriateness of this joint project. A framework agreement is expected to be signed in 2015.



"Syctom's mission is providing support to promote the recovery of household waste, particularly food waste. which may result from various food service activities or simply food wastage. The conversion of wast into energy or into compost, has become a new priority for Syctom, through various dedicated processing sites "

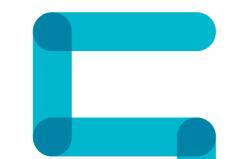
PHILIPPE BRILLAULT Mayor of Chesnay 9<sup>th</sup> Vice-Chairman of

### Diagnostics and feasibility studies

### **Collection of bio-waste under study**

# WORKING FOR THE BETTER OF OUR REGION

Backed by its expertise, Syctom is working towards a consistent and effective waste management in its sphere of operation, by supporting local authorities in their tasks of collecting waste, promoting sorting and reducing waste, by collaborating increasingly with all the stakeholders in the region. Consultation with elected representatives, pooling of resources between syndicates, mobilising public and private partners: this is how the future of the waste management industry is being built on the scale of the future Metropolis of Greater Paris.

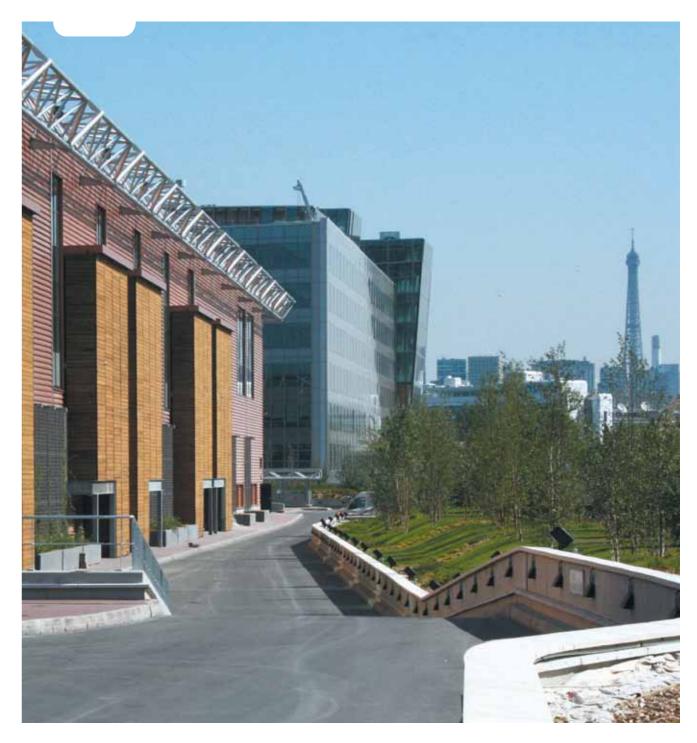


### **REDUCING WASTE** AT THE SOURCE

by technically and financially supporting local authorities in their preventive actions and for building awareness among residents.

### BRINGING **COLLECTION AND** PROCESSING **CLOSER**

with facilities located closer to the waste production sites and supporting collection systems, as part of a permanent dialogue with the local authorities.



7,855 visitors to Syctom's centres in 2014



worth of support for initiatives taken in the region in 2014 (High Potential Municipalities + Metropolitan Waste Prevention plan)

### WORKING TOWARDS A **METROPOLITAN-WIDE CIRCULAR ECONOMY**

through enhanced cooperation with all local stakeholders, for the emergence of innovative solutions in waste management, from upstream to downstream.

### WORKING FOR THE BETTER OF OUR REGION SUPPORTING LOCAL AUTHORITIES



# SUPPORTING **\_OCAL AUTHORITIES**



"In the last quarter of 2014, the City of Vincennes, a pioneer in sorting, replaced the blue bins, a legacy of the beginnings of selective collection in the 1990s, with bins with yellow lids. This was a complex logistics operation aimed at improving the adequacy and effectiveness of the waste collection method. Syctom supported us in this change, as it does also for collective composting, by training advisers in the buildings concerned.

**LAURENT LAFON** Mayor of Vincennes and 7<sup>th</sup> Vice-Chairman of Syctom

### FINANCIAL SUPPORT FOR COLLECTION

Syctom'sfinancialaids.suchasthe"Highpotential municipalities"scheme.areintendedtosupport localauthoritiesinoptimisingselectivecollection. Each vear.an amount of €500.000 is devoted to measures to increase the quality and

quantity of sorted waste. In 2014, two local authorities received support to homogenise their recycling bins: the Agglomeration Community of Plaine Commune and the City Vincennes (see inset page 27). Syctom also provides financial support to cities in which its facilities are located (see inset opposite).

### **INCREASED AID TO MUNICIPALITIES** WHERE SYCTOM CENTRES ARE LOCATED

The 2015 budget adopted in late 2014 increased the subsidy paid to municipalities hosting a facility by €3.1 million. Until then, aid to municipalities was €0.3 per tonne received. The subsidy is now raised to €1.5 per tonne, with a floor of €50,000 and a ceiling of €1 million. However, the support arrangements for remoteness of a Syctom centre remained unchanged at €0.13 / tonne of household waste and €0.46 / tonne for selective collection and bulky objects.

households practising home composting through the "50,000 composters' scheme

facilitation kits distributed in 2014, addressing all themes, to build awareness among local authorities

### High potential municipality

### Vincennes turns yellow

Following the Mont-Valérien agglomeration

community last year, the City of Vincennes and the agglomeration community Plaine Commune also adopted sorting bins with yellow lids in 2014, as most cities in the region. The City of Vincennes received a grant of €144,662 from Syctom to replace the 4,750 blue bins and deploy all the communication tools necessary to change the instructions (sorting memo, stickers on the bins, press articles and events in schools). By harmonising guidelines in this manner, the City hopes to increase its selective collection performance by 5% compared to 2013. As on 31 December 2014, 93% of the bins in the city had been changed.

### SUPPORT FOR PREVENTION ACTIONS

### Metropolitan Waste Prevention 2010-2014

Reducing waste at the source: this is one of the priorities that Syctom has set. Among the guidelines selected, its "Metropolitan Waste Prevention 2010-2014" plan provides support to local authorities in implementing their local prevention

programmes (LPPs). Syctom's support takes the form of methodological support and financial aid to field initiatives: organising awareness-buildingactionsandevents, deploying communication campaigns, providing aid in creating reuse structures, etc. In 2014, Syctom supported 14 actions implemented by local authorities or **associations,** for a total budget of €170,000.

elected officials.

Moreover, Syctom renewed its **partnership** with Emmaüs Liberté and SITA Île-de-**France for the second year**, for processing reusable objects at the Ivry/Paris XIII waste reception centre. In 2014, 3 tonnes of objects were deposited in the dedicated box. mainly books, toys, furniture, clothing and trinkets.

### "Neighbourhood composting" flourishes in Montreuil

To give an impetus to composting in its area, the Est Ensemble Agglomeration community is planning to develop five "neighbourhood composting" sites by 2016. This is one way of expanding the scale of collective composting from a building (as is most often the case) to a district, in an open public space. On 9th May 2014, a first site came into existence in the district of the Montreuil town hall. Four bins, with a total capacity of 3,800 litres, were installed and 60 volunteer residents were trained by the Sens de l'Humus association, in charge of the operation. After this first experiment, four other sites will follow suit (two in Montreuil, one in Pantin and one in Les Lilacs). This initiative is supported by Syctom with a €10,000 grant for developing the sites and producing a methodological guide "How to create a collective neighbourhood composting site?".





initiatives supported in 2014 as part of the Metropolitan Waste Prevention plan



As a follow-up to the "Metropolitan Waste Prevention 2010-2014" plan, a new support plan, under preparation, will be submitted to a working group composed of Syctom's

### Collective composting

### Composting in practice

Syctom also endeavours to promote home composting practices within its sphere. Launched in 2011, the "50,000 composters" operation continued with growing success. In 2014, 8,470 new composters were ordered by the local authorities. This brings the number of devices delivered in Syctom's sphere to 19,454, with 32,500 households practising home composting using this device.

To date, 33 out of Syctom's 48 member local authorities are involved in this programme. The aim is not simply to distribute equipment, but to encourage local authorities to develop quality composting programmes, by providing them dedicated communication tools, customised training and annual monitoring. In 2014, more than 90 people (agents of local authorities, residents, association members, etc.) participated in training sessions and 29 programme evaluations were carried out by the consultancy Composterre.

### **PROVIDING METHODOLOGY TO CREATE AWARENESS**

### Training and coaching

Since 2010, Syctom has been playing the role of a facilitator of prevention in its **sphere** and helping local authorities to raise public awareness about waste reduction. As part of its coaching and initiatives to support its local authorities about issues of prevention, 16 local authorities benefited from this methodological support in 2014. A total of 56 programmes were carried out within this framework, with a budget of €45,500.

Moreover, the training programme for new sorting ambassadors, launched in late 2013, was continued in 2014, with three new sessions in April and May.

### Campaigns and facilitation kits

Apart from the provision of expertise, Syctom also initiated new awarenessbuilding campaigns Two operations were

conducted in April, during the Sustainable Development Week. One was in partnership with Monoprix and member local authorities, to encourage the public to recycle used batteries and lamps and small waste electrical and electronic equipment (WEEE). Events were organised in 13 Monoprix stores in the Paris region and practical memos were distributed. The other operation was deployed in a dozen member local authorities to organise a "Composting **Day**". To this end, a complete communication tool, inspired from Syctom Green Tour (an event conducted in 2013) was provided to them: décor, stand, posters, fun flags and booklets to be distributed, without forgetting the gardening clothes and the choreography. Last highlight in awareness-raising: a campaign on reuse was organised in November 2014, during the European Week for Waste Reduction (see inset).



### Promoting reuse

### **Reuse on a campaign**

To promote reuse, Syctom and the Île-de-France region launched the website Recup-ID. fr in September. This site caters to recovery centres, self-help associations, second hand shops, rental companies, repairers, antique dealers, etc. The tool identifies and promotes the local reuse offer, with the assistance of the Regional Chamber of Trades and Crafts of Île-de France (CRMA). To promote this initiative, a multi-media campaign was deployed, featuring three acts: donate, repair and create objects. In addition, a facilitation kit helped members to conduct field operations. More than 9,000 posters, 59 stands and 30 reuse wheels were distributed to the local authorities.



# **MOBILISING** ENERGIES

### **DEVELOPING PARTNERSHIPS** WITH MAJOR SYNDICATES

Ahead of the creation of Metropolis of Greater Parison1stJanuary2016,theleadingplayersin theregionareexaminingtheappropriatescalefor carryingouttheirpublicservicemissionsSyctom, whoseoperational ready coversal argearea, has since 2014 turned to other metropolitan syndicates in the fields of water, gas, electricity and sanitation to discuss possible pooling and joint projects.

In 2014, Syctom endeavoured to work closer with major urban syndicates in Île-de-France such as SIAAP, SEDIF, SIGEIF, SIFUREP, SIPPEREC and EPTB Seine Grands Lacs. Meeting at an inter-syndicate conference, they expressed their intention to pool their expertise, their knowledge of the issues at hand and share them as part of a preparatory task ahead of the Metropolis of Greater Paris.

Syctom also forged partnerships with other waste processing syndicates present in the

region, within the framework of cooperation agreements. A partnership agreement was reached with SIGIDURSforimplementingprojectsofcommon interestsuchaswastepreventionandreduction and the pooling of sorting and processing facilities. Similarly, astudy was initiated with SIEVD to anticipated evelopments in wasteproduction, to take into account the territorial regulatory environment and to renew facilities.

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"Conventional partnerships should be . set up between Syctom and all interested regional waste processing syndicates, but also with all major urban syndicates in Île-de-France, whether in the field of water. sanitation, gas or electricity; these public players have indeed demonstrated great expertise for several decades now.

HERVÉ MARSEILLE Senator-Mayor of Meudon and Chairman of Syctom

waste reception centres equipped with a Éco-mobilier collection bin in the area



restaurants engaged in the experiment to recycle their biowaste with Synhorcat



### ENCOURAGING A NEW ECONOMY

As a major player in waste processing, Syctom is at the heart of this new economy where waste is becoming a resource. To facilitate recycling, Syctom continued its partnerships with eco-organisations in 2014. It also supported ecodesign through the Zero Waste Design Competition (see *inset*) and the initiatives of local players.

Regarding eco-organisations, Syctom initially worked very closely with Ecofolio, by identifying three lines of work to revitalise the sorting and recycling of paper among local authorities: implementing ad-hoc collections (document destruction, events, etc.); encouraging member local authorities to respond to calls for project from the eco-organisation; encouraging sorting their own office paper. In this respect, the City of Aulnay-sous-Bois launched a pilot project to collect the paper at the source from 10 volunteer depart-

ments of the municipality. Syctom intends to support other cities, but also to initiate projects to modernise its sorting facilities for a better recycling of paper.

At the same time, Syctom contributed to the growth of a system for collecting used furniture in partnership with Écomobilier. At the end of 2014, 29 of the 37 waste reception centres and collection points in Syctom's sphere were equipped a dedicated bin. 12,387 tonnes of waste furniture were thus collected.

Lastly, Syctom assisted the communication of the eco-organisation DASTRI by providing local authorities in its sphere with ready-to-use articles and illustrations on the sorting and management of health-care waste with infectious risks (syringes, etc.) to allow them to relay the information to residents.

### **ZERO WASTE DESIGN COMPETITION, 3rd EDITION**

To educate tomorrow's businesses and designers about eco-design, Syctom once again invited students in the Paris region to imagine innovative products or services around two themes: fight against food wastage and prevention of waste in events. Out the 49 projects received, 4 were recognised by a jury of professionals during an awards ceremony on 18th June in Paris:

- 1<sup>st</sup> prize, "Messalons.com": Louise de Beauvais and Roxane Oberti (LISAA)
- 2<sup>nd</sup> prize, "Gourmet" doggy bag: Pauline Papon (BTS, Lycée François Mansart)
- 3rd prize, "Calcite Project": Sanam Viseux (ENSCI)
- Syctom's special prize, "Com'Born": Aurélie Danglades and Cheyenne Mombongo Yoka (BTS, Lycée François Mansart)

The prize money of €13,000 was shared among the winners' schools.





New system

### **Pneumatic collection operational** in Batignolles

As part of the programme to develop the new Clichy-Batignolles district in 17th arrondissement, the City of Paris has set up a fixed pneumatic collection system for household and similar waste. A duct system vacuums up household waste and selectively collected waste, from several collection points up to a terminal, where the waste is stored before removal. This TCPOM (Pneumatic Household Waste Collection Terminal), commissioned on 15th January 2014, includes a technical building, developed on 5 levels, and an educational room from which the public can follow the whole process live. Eventually, 6,500 residents will benefit from this collection system. 3,500 tonnes of waste will thus be collected every year, including 350 tonnes of recyclable materials, which will reach the future neighbouring sorting centre in Paris in the Clichy-Batignolles commercial zone.

### **PROMOTING COLLECTION/PROCESSING SYNERGY**

To ensure efficient management and an optimal recovery of household waste, Syctom works closely with local authorities in its sphere to optimise collection.

### Several pneumatic collection systems

have been implemented in the region, such as Romainville in 2012 and Grand Paris Seine Ouest and the Batignolles district in the 17th arrondissement of Paris in 2014 (see inset). In the Saint-Ouen Docks district, the pneumatic collection network has been installed and will be commissioned in 2015. Using a vacuum system, the waste is transported through an underground network up to Syctom centres (Isséane, Saint-Ouen). These innovative systems require close collaboration between Syctom and the local authorities, from project definition to implementation, to optimise the manner in which waste is received in the centres and to define a waste characterisation programme, notably for selective

collection. This is one way for the local authority to have facts to adapt its communication to residents and correct any problems with the collection operator.

The pneumatic collection project of the City Vitry-sur-Seine is also the result of such joint work. Syctom and the City's departments will be present during the first dumping of waste in the sorting centre and the household waste incineration unit (HWIU) in Ivry/Paris XIII, for a planned start-up in July, 2015.

At the same time, Syctom is also striving to develop new types of collection within its waste reception centres. At the Ivry/Paris XIII waste reception centre, the pilot operation for collecting cooking oil from individuals, initiated in late 2013, was renewed in 2014. The company Ecologic Oil recovers increasing more oil to recycle it into bio-fuel.

WORKING FOR THE BETTER OF OUR REGION SETTING A GOOD EXAMPLE



# SETTING A GOOD EXAMPLE

### COMMITTED TO A COLLECTIVE APPROACH TO INNOVATION

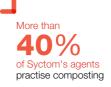
### "Zero wastage, zero waste" project

In response to the nationwide call for "Zero wastage, zero waste municipalities" projects issued by the French Ministry of Ecology, Sustainable **Development and Energy in August** 2014, new processes and a new way of working were initiated in Syctom's sphere. Syctom and six local authorities agglomeration communities of Est Ensemble, Versailles Grand Parc, Villes d'Aulnay-sous-Bois, Clichy-la-Garenne, Ivry-sur-Seine and Paris decided to respond collectively to this call. All of them are now committed to an exemplary approach towards a common goal - "zero waste" - by pooling their resources to achieve it. "Zero waste" here means "zero non-recovered waste". This ambition requires them to address the issues of collection and processing together, and consistently. This is the true import of the single application made by Syctom and its partner local authorities, which examined their ongoing actions from all angles, by scrutinising all stages of waste management. For each,

areas for improvement were identified: focus on prevention, developing source separation of biowaste and improving collection, energy recovery, establishing incentive pricing or special fees, specific actions for the construction sector, which a major waste generator, etc.

The joint reflection, encompassing all the various themes, resulted in a common roadmap. A shared project, led by new governance, with Syctom as the lead partner. The approach is intended to be participatory and iterative, by also involving economic players, associations and citizens in a spirit of co-construction. This project aims to demonstrate the relevance of a comprehensive and integrated waste management policy, across the region. The ultimate goal extends beyond the six applicant local authorities, to serve Syctom's entire sphere, by reproducing experiments that prove to be successful.

oreian delegations received by Syctom in 2014



### ENHANCING AND SHARING OUR EXPERTISE

Syctom continues its policy of educating

and informing its public, through publications, information campaigns, communication tools, exhibitions, and site visits. In 2014, six open days (2,000 visitors) and 377 group visits (5,855 visitors) were organised in its facilities. This was an opportunity to show what happens to waste, while explaining the things that we should do every day. The open day in Isséane, on 24th May, attracted 655 visitors, including 174 young participants in the City Raid Andros, a civic orientation programme that was visiting Issy-les-Moulineaux that day. Moreover, Syctom hosted 18 foreign delegations interested in the French model of waste management, funded by the public service and located in the heart of the city.

Driven by this same concern for transparency, Syctom monitors environmental quality charters with the cities where its industrial facilities are located and their operators. These charters set out Syctom's commitments to limit nuisance, protect the environment, inform or consult with the public. Finally, Syctom continues to work with Sentinelles, which are groups of residents



large syndicates in the area (including Syctom) partnered in 2014 to pool their expertise in the fields of water, energy, waste

and local volunteer employees to monitor the impact of the activities of processing centres. In September 2014, a call for applications was launched with the City of Issy-les-Moulineaux and the Grand Paris Seine Ouest agglomeration community, to increase the number of participants and revitalise the system on the Isséane site.

### **EXPORTING OUR KNOW-HOW**

### In late 2014, Syctom decided to sign

a framework partnership agreement in the field of international cooperation with the major urban syndicates of Ile-de-France (SIAAP, SEDIF, SIGEIF, SIPPEREC, EPTB Seine Grands Lacs) The objective of these six institutions is as follows: pool their different expertise energy, sanitation, water, waste - for the benefit of other local authorities and NGOs around the world. This approach falls in line with the extension of the Oudin-Santini law to the waste sector, following the Orientation and Programming Law on development and international solidarity policy of 8 July 2014



"The challenge of waste processing as a basic right of people around the world, in order to improve access to this right and its conditions calls upon the responsibility of a great public service like ours. Committee membe paved the way for this concrete commitment which represents a valuable asset to meet environmental challenges and to spread the values of solidarity and equality at an international evel."

### KARINA KELLNER

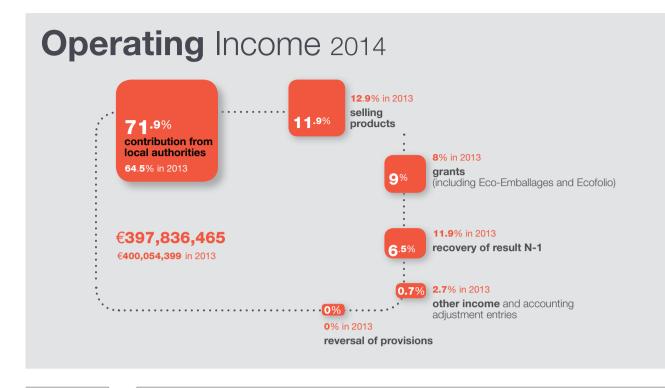
Chairman of SITOM93 and 2<sup>nd</sup> Vice-Chairman of Syctom

### Exemplary approach

### **Teams that lead** by example

Syctom pursued its eco-exemplary approach in 2014, by renewing internal operations such as optimised management of office paper or the promotion of home composting. 51 composters were distributed and 29 people trained in composting. New initiatives, chosen by the agents themselves during a survey conducted in 2013, were launched. Besides setting up a system for donating computers to the staff, collectors of used batteries and bulbs were progressively installed in Syctom's headquarters. Furthermore, concerning the sorting and recycling of used batteries and lamps, 25 Syctom agents volunteered to participate in a flash mob during the Sustainable Development Week, in the heart of Paris.

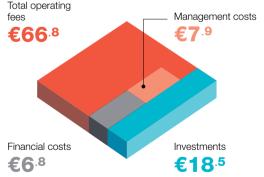




### FEES UNDER CONTROL

In 2014, pending guidance from the mandate, the fee was maintained at a level close to that of 2012. Note that in 2013, Syctom had reduced it significantly (about -10%), taking into account savings made and the spreading of the equipment programme. This, together with a slight increase in tonnages, explains the higher level of fees in 2014.





### CHANGE IN THE FEE AMOUNT

Calculated pro rata from the quantity of waste these fees bring to Syctom and from the population of each municipality or inter-municipal grouping.



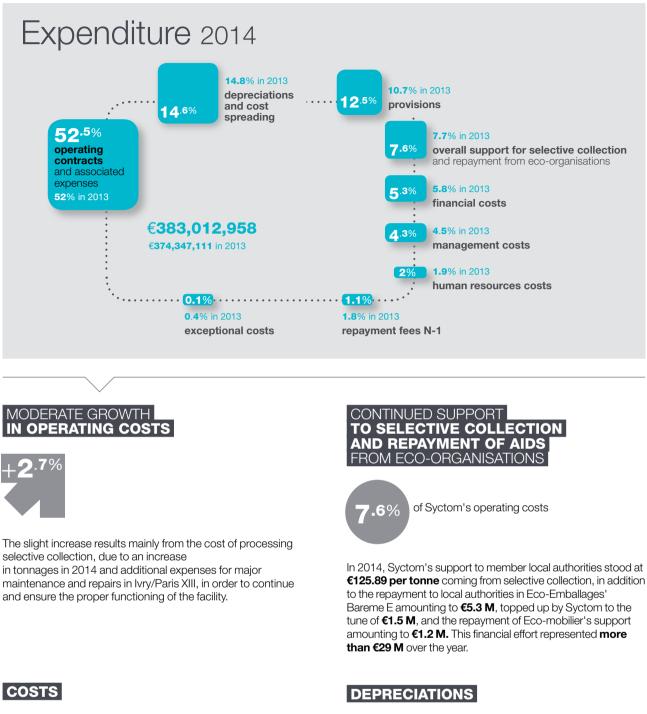
CHANGE IN LOCAL AUTHORITIES' CONTRIBUTIONS in €M





The products sold recover steam and electricity from energy recovery centres and the various materials from selective collection, bulky objects and the incineration of household waste. The drop in income from the sale of these products between 2013 and 2014 resulted from a lower production of electricity, due to the failure of turbine-generator units in Isséane (spring of 2014) and in Ivry/Paris XIII (summer of 2014).

Another reason is the decline in the sales price of certain materials. On the other hand, aid from eco-organisations increased sharply. Given the good performance in recovery, Eco-Emballages' support increased by €2.6 M. Éco-mobilier's aid (recognised for the entire year 2014, and not over a half-year as in 2013, the year when the ERP channel was introduced) grew by €2.5 M.



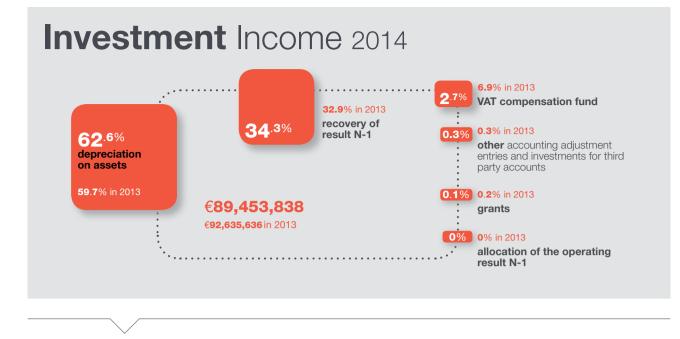
With a workforce of 115 agents as of 31 December 2013,

human resources costs still make up 2% of Syctom's

operating expenditure, i.e. €7.4 M in 2014.

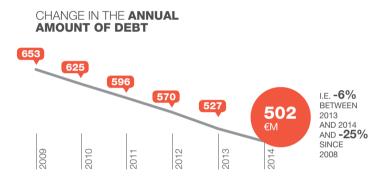


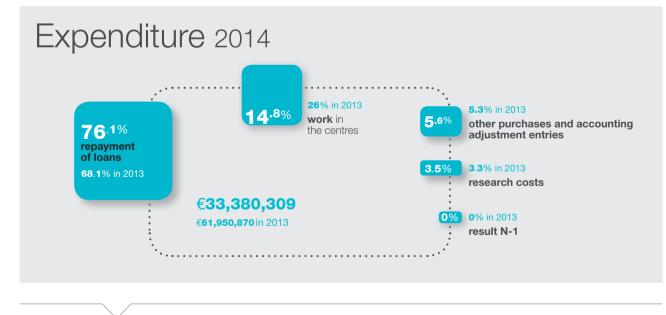
Depreciations amounted to around €56 M in 2014, which is only a very minor change compared to 2013. Their significant level means that the investment sector is guaranteed strong self-financing capacities, which is important to limit Syctom's future debts.



### CONTINUING DEBT REDUCTION

For the 5th consecutive year, Syctom reduced its debt, with a reduction of €25.4M in its stock of debt in 2014. On 31 December 2013, the average interest rate on Syctom's debts was 3.98%, compared to 3.98% in 2013. This relative stability is explained by the share of loans made at a fixed rate (65%). Syctom's financial costs went from €21.7M in 2013 to €20.4M in 2014, a reduction of €1.3M (-6%) due to the reduction in the outstanding debt and the historically low variable rates in 2014.







The further decline in capital expenditure (€6.6 million in 2014 against €18 million in 2013 and 2012) is explained by the temporary interruption of some projects (multi-channel centre in Romainville and biowaste and sludge recovery centre in Blanc-Mesnil/Aulnay-sous-Bois). It also results from continuing procedures mobilising

little funding on other projects (sorting centre in Paris XVII, treatment of flue gases and urban integration of the incineration centre in Saint-Ouen). The year 2014 was nevertheless marked by the award of the contract to reconstruct the lvry/Paris XIII centre to IP13 consortium, during the Syndicate Committee meeting on 17 October.

## **Investment programme per site**

CONTINUOUS IMPROVEMENT AND MAIN	NTENANCE OF STANDARDS
in €M excl. tax SITES	WORK FINANCED IN 2014
ISSÉANE	1.06
IVRY/PARIS XIII	0.08
NANTERRE	0.27
PARIS XV	0.05
SAINT-OUEN	1.17
SEVRAN	0.15
TOTAL	2.78

n €M excl. tax SITES	NATURE O PROGRAM		OPERATING PERIOD	WORK FINANCED IN 2014	TOTAL INVESTMENT
SSÉANE	Щ.,	construction of the incineration unit with energy recovery (balance of payment)	1998-2013	0.14	593.00
VRY/PARIS XIII	Щ.,	work on extending the operating life of the centre	2008-2013	0.00	62.33
PARIS XV		construction of the sorting centre (balance of payment)	2003-2012	0.32	30.65
SAINT-OUEN	Щ.,	project to integrate the centre into the urban area - landscaping and architectural work and smoke- scrubbing	2012-2019	0.11	141.00
BLANC-MESNIL/ AULNAY-SOUS-BOIS	ĨĨ	project for a recovery centre for biowaste and sludge	2006-2018	0.28	9.00
VRY/PARIS XIII	ĨĨ	project for a recovery centre for organic waste and energy	2007-2026	0.46	860.00*
PARIS XVII		project for a sorting centre for selective collections	2010-2019	0.07	70.50
ROMAINVILLE/BOBIGNY		project for a sorting- methanisation centre (multi-channel processing centre)	2005-2017	0.59	60.60
TOTAL				1.97	

### Annual report on the price and quality of the public service for eliminating waste

in application of decree no. 2000-404 of 11 May 2000. Technical and financial indicators for 2014 This document will be submitted to a vote by the Syctom syndicate committee, the metropolitan agency for household waste, during its meeting on 19 June 2015.

SYCTOM PROCESSING UNITS
AND TONNAGE PROCESSED

in tonnes

H.,			
3 INCINERATION CENTRES WITH ENERGY RECOVERY	AUTHORISED CAPACITY	TECHNICAL CAPACITY	QUANTITIES INCINERATED
ISSÉANE	460,000	460,000	459,985
IVRY/PARIS XIII	730,000	700,000	692,678
SAINT-OUEN	650,000	600,000	589,446

6 SORTING CENTRES			QUANTITIES
ISSÉANE	30,000	24,000	24,029
IVRY/PARIS XIII	36,000	30,000	31,129
NANTERRE	40,000	40,000	37,240
PARIS XV	20,000	20,000	15,257
ROMAINVILLE	45,000	35,000	35,288
SEVRAN	17,000*	17,000	11,720

\* Operating capacity modification request under consideration

$\mathbf{\Phi}$	
2 WASTE RECEPTION CENTRES	QUANTITIES RECEIVED
IVRY/PARIS XIII	6,279
ROMAINVILLE	10,901

### OVERALL ANNUAL SUMMARY

NUMBER OF INHABITANTS IN SYCTOM'S SCOPE	
Figures taken from the general population census for 2012 with an estimated change for 2014	5,765,988
GROSS TONNAGES OF WASTE	
Household waste, sweepings and green waste (in tonnes) Bulky objects (in tonnes) Requisitions (in €/tonne)	1,945,302 170,504 192
SELECTIVE COLLECTION (in tonnes)	
Newspapers and magazines, multimaterials, paper, cardboard Glass	174,376 0
Waste reception centres	17,180
FEES (in Euros)	
Tonnage share Population share	104.8 6.8

SYCTOM AND TONNAGE PROCESSED			
<b>4</b>	OUANTITIES		
INCINERATION CENTRES	INCINERATED		
ARGENTEUIL (NOVERGIE)	30,787		
CARRIÈRES/SEINE (NOVERGIE)	16,637		
SAINT-THIBAULT-DES-VIGNES (NOVERGIE)	31,808		
SARCELLES (SAREN VÉOLIA)	42,010		
CARRIÈRES SOUS POISSY	1,333		

SORTING CENTRES	QUANTITIES RECEIVED
LE BLANC-MESNIL (PAPREC)	<b>4,512</b> SC
CHELLES (GÉNÉRIS)	5,415 SC
GENNEVILLIERS (SITA)	15,391 SC
BUC (NICOLLIN)	<b>10,151</b> BO
CHATILLON	<b>8,342</b> BO
LA COURNEUVE (PAPREC)	<b>38,440</b> BO
GENNEVILLIERS (SITA)	<b>32,943</b> BO
GENNEVILLIERS (REP)	<b>218</b> BO
IVRY (DERICHEBOURG)	6,721 BO
IVRY (SOFRAT)	<b>21,785</b> BO
NOISY (DRT)	<b>33,049</b> BO
PIERREFITTE (CDIF)	<b>3,563</b> BO
VILLENEUVE-LE-ROI (PAPREC)	<b>3,524</b> BO
GENNEVILLIERS (PAPREC) A15	6,604 BO worksite
IVRY (CEMEX)	5,113 BO worksite
SC: selec	ctive collection BO: bulky objects

STORAGE FACILITIES FOR HAZARDOUS C NON-HAZARDOUS WASTE (ISDND)	QUANTITIES
ISDD VILLEPARISS (SITA)	Refiom: 41,409
ISDND BOUQUEVAL (REP)	76,048
ISDND CLAYE-SOUILLY (REP)	53,131
ISDI CLAYE-SOUILLY (REP)	6,838
ISDI (PRIVATE BO CONTRACTS)	20,407
OTHER ISDND (PRIVATE CONTRACTS)	79,161

### EXPENDITURE AND INCOME 2014

TERMS OF OPERATION OF THE DISPOSAL SERVICE AWARDED TO SYCTOM, THE METROPOLITA AGENCY FOR HOUSEHOLD WASTE

Annual amount of expenditure for processing waste by Syctom (total real expenditure sec of operation of 2013 administrative account - excluding provisions)

Terms and conditions for financing the general treatment service

Terms and conditions for setting the special fee for the disposal of assimilated products Annual total of main contracted and paid services

Overall cost per tonne of waste picked up from the bulky object disposal service (processing or storage) including transport and landfilling of sorting rejects Overall cost of processing selective collections

Overall cost of incineration with energy recovery

Cost of landfill

Income from access rights to processing and storage centres at which the local authority is the project owner for assimilated waste

Repayments for selective collection

Itemised amount of aid received from certified bodies

### RECOVERY

Electricity (in MWh)

Clinkers (in tonnes)

Ferrous (in tonnes)

Non-ferrous (in tonnes)

Steam (in MWh)

### INCOME

**FNFRGY** AND MATERIALS RECOVERY

FROM INCINERATION

ENERGY AND MATERIALS

115.034

332.959

35,403

2,866

2,788,107

FROM MATERIALS RECOVERY in €M excl. tax



FROM SORTING OF SELECTIVE COLLECTION AND BULKY OBJECTS

COLLECTION AND DOLLET OBOLOTO		
Newspapers/magazines	4.5	
Plastic packaging	2.5	
Cardboard and recovered household packaging	3.2	
Paper mix	0.8	
Steel	0.4	
Non-ferrous scrap metal from BO	1.1	
Glass	2.6	
Wood	0.4	
TOTAL	15.5	



Plastics, paper, cardboard, steel and 120,807 aluminium small electrical appliances

BO RECYCLING OF BULKY
OBJECTS (in tonnes) Wood, scrap metal, 96.740



WASTE RECEPTION CENTRES (in tonnes) 9,054

(in tonnes)

STORAGE

(in tonnes)

211,102

LANDFILL

COMPOSTING



FROM INCINERATION

Aluminium from incineration

Scrap metal

TOTAL

INCOME FROM ENERGY RECOVERY in €M excl. tax

2.2

2.0

4.2

19.7



Sale of steam and electricity (Isséane and Ivry/Paris XIII)	28.5
Sale of steam and electricity (Saint-Ouen)	19.9
TOTAL	48.4

AN	PUBLIC CONTRACTS
ction	€279.1M
	Contribution from local authorities, aid from Eco-Emballage for selective collection and from other eco-organisations, selling products
	not applicable
	€177.1M incl. tax
	98€/t
	<b>248€/t</b>
	89€/t
	<b>103</b> €/t
	not applicable
	Syctom support and Bareme E repayments (excluding glass) € <b>25.5M</b> Repayments for glass € <b>3.3 M</b>
	Eco-Emballages <b>€27.9M</b> Ecofolio <b>€4.5M</b> OCAD3E <b>€0.1M</b> Éco-mobilier <b>€2.5M</b>

MEASURES TAKEN DURING THE YEAR TO **PREVENT OR REDUCE HARMFUL EFFECTS** ON HUMAN HEALTH AND THE **ENVIRONMENT** 

### Continuous improvement and security on Syctom facilities

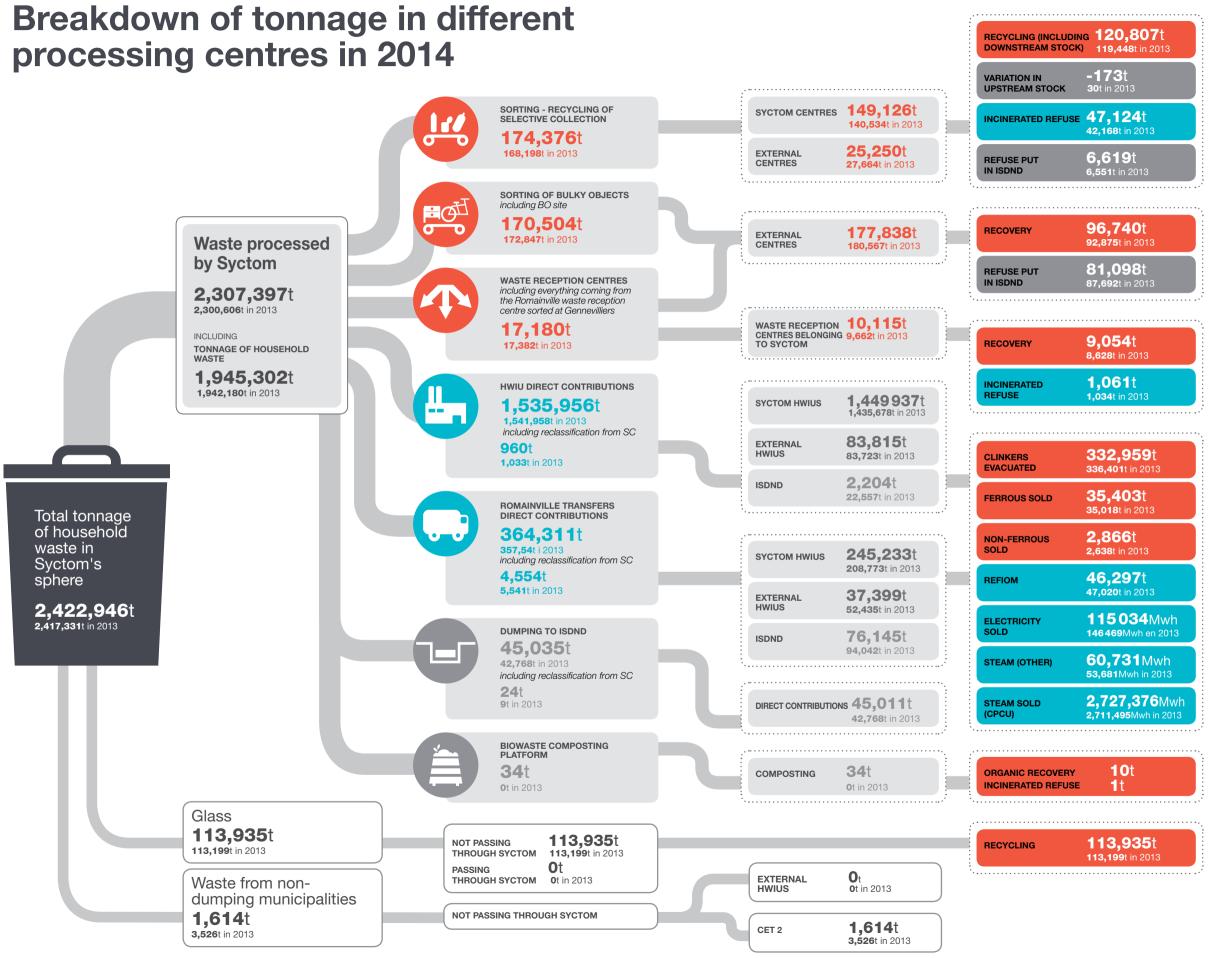
An open call for tender issued for technical inspections and measures to ensure compliance with regulations on machine safety in the lvry/Paris XIII and Saint-Ouen centres (February 2014). Contract awarded for the diagnostics and development of a safety master plan for transferring household waste and sorting of waste from multi-material selection collection at Romainville (February 2014).

An open call for tender issued for various minor works as part of the continuous improvement of Syctom centres.

### Control of air emissions

An open call for tender issued for physico-chemical measurements of air emissions from Syctom facilities (February 2014).

An open call for tender issued for the measurement of atmospheric deposition by precipitation samples in the vicinity of centres recovering energy from household waste (November 2014).





\* Clinkers, ferrous and non-ferrous are subject to materials recovery. To avoid a double count, this percentage was calculated by subtracting these materials from the total energy recovery tonnage. All percentages are calculated including glass.

8.7% of waste

## **Processing costs**

### SELECTIVE COLLECTION

TONNAGE PROCESSED **174,376**t **168,198**t in 2013

EXPENDITU	RE Operating costs	€39,951,539	€38,382,476
	Depreciation and financial costs	€6,729,660	€7,489,924
	TOTAL PROCESSING COST	€46,681,199	€45,872,400
INCOME	Income from Syctom materials	€11,567,849	€11,337,035
	Syctom eco-organisations support	€16,405,567	€15,890,351
	TOTAL INCOME	€27,973,416	€27,227,386
	T OF PROCESSING*	€18,707,783	<b>€18,645,014</b> in 2013

# their waste.

\* The net cost of processing

corresponds to

for processing

the sum invoiced by Syctom to local authorities



**111€**/t in 2013

**141**€/t in 2013

**252**€/t in 2013

248

EXPENDITU	RE Syctom support and repayment for local authorities	€29,281,412	€28,430,232
INCOME	Eco-Emballages income and glass income earned by Syctom on behalf of its member local authorities (repayment Euro for Euro) €4,779,490 €		
COST OF PO	DLICY OF SUPPORT	€24,501,922	€23,770,604 in 2013
	Y COST RE Processing costs + support and repayment	€75,965,612	€74,302,632
BUDGETAR EXPENDITU INCOME		€75,965,612 €32,752,906	€74,302,632 €31,887,014



### **INCINERATION WITH ENERGY RECOVERY**

TONNAGE PROCESSED **1,864,570**t **1,823,811**t in 2013

RE Operating costs	€163,994,458	€155,554,779
Depreciation and financial costs	€68,024,311	€67,491,431
TOTAL PROCESSING COST	€232,018,769	€223,046,210
Income from Syctom materials	€4,067,197	€4,083,962
Syctom eco-organisations support	€12,524,948	€12,534,592
Energy income	€49,428,075	€49,783,691
TOTAL INCOME	€66,020,221	€66,402,245
T OF PROCESSING*	€165,998,548	€156,643,965 in 2013
	TOTAL PROCESSING COST     Income from Syctom materials     Syctom eco-organisations support     Energy income	Depreciation and financial costs     €68,024,311       TOTAL PROCESSING COST     €232,018,769       Income from Syctom materials     €4,067,197       Syctom eco-organisations support     €12,524,948       Energy income     €49,428,075       TOTAL INCOME     €66,020,221



98



**NET COST OF PROCESSING\*** 

€17,431,372 €18,840,864 in 2013

€16,278,144



**EXPENDITURE** Operating costs (including transfer)

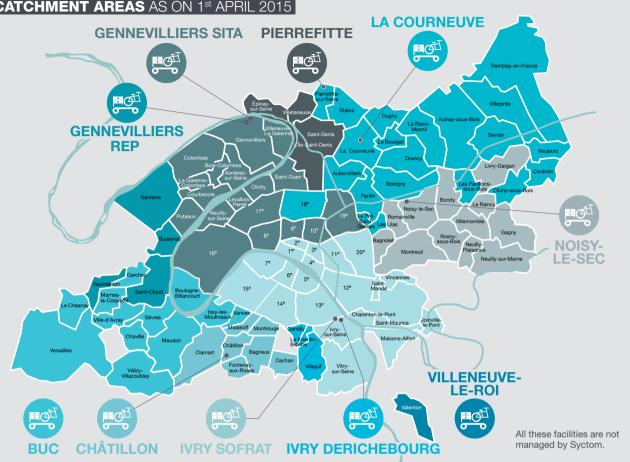




**104**€/t in 2013

# **Bulky objects**





### BREAKDOWN OF TONNAGE 2014

<b>₽</b> Ø <u>₽</u>			
SORTING CENTRES FOR BULKY OBJECTS	TONNAGES RECEIVED	TONNAGES RECOVERED	OPERATORS
BUC	10,151		Nicollin
GENNEVILLIERS	219 154 transferred	9,613*	Nicollin EPR
CHÂTILLON	<b>8,342</b> 8,334 transferred	•	VEOLIA Nicollin
LA COURNEUVE	38,441	23,094	PAPREC
GENNEVILLIERS SITA	32,943	15,806	SITA
GENNEVILLIERS PAPI	REC 7,385	4,152	PAPREC
IVRY DERICHEBOURG	6,721 6,689 transferred		Derichebourg CDIF
NOISY DRT	<b>33,049</b> 31,672 transferred	21,076*	DRT CDIF
PIERREFITTE	3,563	· · · ·	CDIF
IVRY	<b>21,785</b> 21,819 transferred	12,582*	SOFRAT PAPREC
VILLENEUVE-LE-ROI	3,524		PAPREC
TOTAL	166,123	86,322	

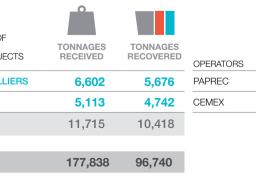
SORTING OF WORKSITE BULKY OBJECTS

GENNEVILLIERS IVRY

TOTAL

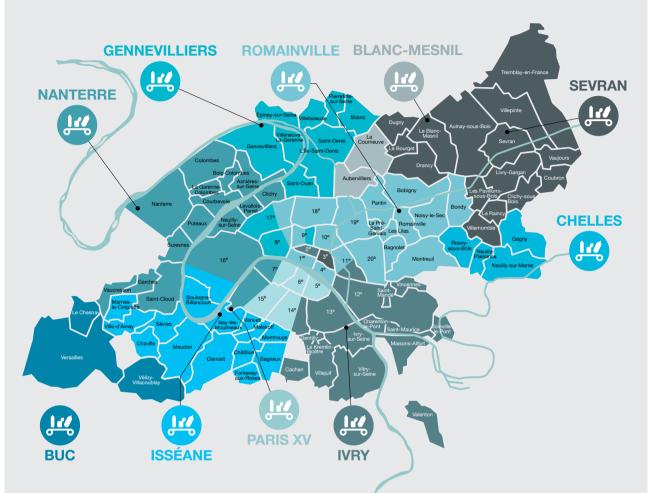
TOTAL

\* Recovered tonnages come from bulky objects as direct contributions and as transfers from other sites



## **Selective collection**

### CATCHMENT AREAS JANUARY 2015



### BREAKDOWN OF TONNAGE 2014

	TONNAGI	ES				
	Â		Variation	s in stock	TONNAGES	
SORTING CENTRES	RECEIVED (including reclassifications	SORTED	upstream	downstream	RECOVERED	OPERATORS
IVRY/PARIS XIII	31,129	30,880	35	-65	19,516	SITA
ISSÉANE	24,029	23,824	170	0	17,247	TSI
NANTERRE	37,240	36,751	-150	0	26,829	Véolia Propreté
PARIS XV	15,257	15,387	-200	0	12,260	COVED
ROMAINVILLE	35,288	30,734	0	0	17,683	Urbaser environnement
SEVRAN	11,720	11,696	0	140	8,353	EHOL
LE BLANC-MESNIL	4,512	4,512	0	0	4,219	PAPREC / SITA
BUC (TRANSFER)	17	0	-28	0	0	NICOLLIN
CHELLES	5,415	5,378	0	0	3,943	GÉNÉRIS
GENNEVILLIERS	15,391	15,389	0	0	10,757	SITA
TOTAL	179,998	174,550	-173	75	120,807	

<b>RECYC</b> in tonnes	LABLE MATER	IALS REC	OVERY CHANNELS	
in tornes				
		TONNAGES SYCTOM 2014	DESTINATION	FUTU
	NEWSPAPERS REVIEWS MAGAZINES	50,617	Paper mills UPM-Chapelle Darblay at Grand-Couronne 76	NEW
	<b>EMR</b> (brown cardboard + thin cardboard packaging)	39,934	Paper mills Europac 76 Saica 02 Emin Leydier 10	BRO
	PAPER MIX	15,619	Cardboard mills of Gondardennes or RenoDiMedici 62	COR CAR
	LIGHT FOOD PACKAGING (LFP)	1,171	Paper mill Georgia Pacific 45 Nova Tissue 88	toil Pape
ÔÔÔ	PLASTIC PET BOTTLES	6,981	FPR Limay factory 78	gra Mak
	PLASTIC HDPE BOTTLES	2,796	Neufchâteau factories 88 Lunen D	HDP (clear
	PLASTIC POTS AND CONTAINERS (Sevran experiment)	79	Germany	VARI PRO
	LDPE FILMS AND COVERS	374	Paprec 31	PRO
	ALUMINIUM FROM SELECTIVE COLLECTION	220	Regeal-Affimet factory at Compiègne 60	ALUI VARI autor
	ALUMINIUM FROM CLINKERS	2,866	GALLOO factory at Halluin Belgium	ALUI VARI autor
	STEEL FROM SELECTIVE COLLECTION	2,485	Arcelor factory at Dunkerque 59	STEE
	STEEL FROM		Large scrap metal: recovered by GALLOO ldf at Bonneuil s/Marne 94	
	CLINKERS	35,403	Small scrap metal: recovered by GALLOO Metal or or other subcontractors Belgium and 59	STEE

\* SRF = Solid Recovered Fuel

### WASTE RECEPTION CENTRES

$\mathbf{T}$			
WASTE RECEPTION CENTRES	TONNAGES RECEIVED	TONNAGES RECOVERED	OPERATORS
IVRY/PARIS XIII	6,279	5,218	SITA
ROMAINVILLE	10,901	3,836*	Urbaser environnement
TOTAL	17,180	9,054	

URE

WSPAPER

OWN CARDBOARD

RRUGATED OR FLAT RDBOARD

LET AND HOUSEHOLD PER

ANULES USED TO

PE PRODUCTS aning pipes, watering cans, etc.)

RIOUS PLASTIC ODUCTS

TRANSPORT

River (barge or container)

40% of river transport (barge), the rest by road

Road

Road

River transport (barge) after regrouping of streams at Gennevilliers

Road

Road

Road

Road

**ODUCTION OF SRF\*** 

UMINIUM USED TO CAST RIOUS PARTS (particularly in the omotive sector)

JMINIUM USED TO CAST **RIOUS PARTS** (particularly in the comotive sector)

EEL PRODUCTS

Road

Road

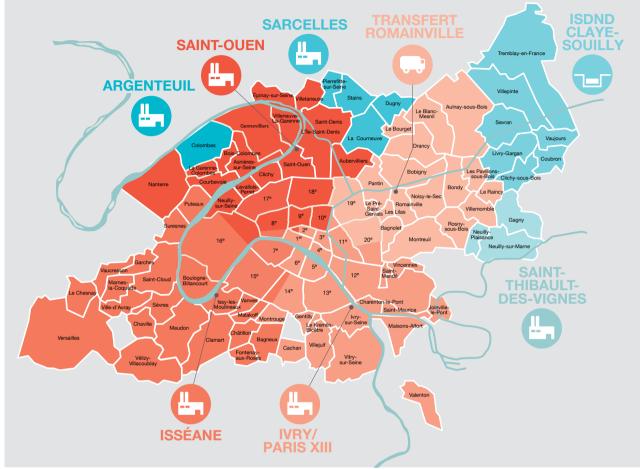
### EEL PRODUCTS

Road + sharp increase in river transport between Bonneuil and Halluin (large scrap metal)

\* Everything coming from the Romainville waste reception centre is then sorted in a BO centre. Tonnages recovered from this sorting are not included here.

# **Residual household waste**

### CATCHMENT AREAS JANUARY 2015



### BREAKDOWN OF TONNAGE 2014

				RECOVERT			
			4				
INCINERATION UNITS	TONNAGES INCINERATED	Steam sold (in MWh)	Electricity sold (in MWh)	Clinkers (in tonnes)	Ferrous (in tonnes)	Non-ferrous (in tonnes)	OPERATORS
ISSÉANE	459,985	685,244	9,559	80,194	6,789	792	TSI
IVRY/PARIS XIII	692,678	869,864	58,797	121,855	12,551	714	IP13
SAINT-OUEN	589,446	1,172,268	10,877	108,008	13,620	1148	TIRU
ARGENTEUIL*	30,787	15,051	13,506	6,154	584	30	Novergie
CARRIÈRES-SOUS-POISSY	1,333	0	411	267	0	0	
CARRIÈRES- SUR-SEINE*	16,637	6,622	1,339	3,092	336	46	Novergie
ST-THIBAULT-DES VIGNES*	31,808	0	13,954	6,179	655	81	Novergie
SARCELLES*	42,010	39,058	6,591	7,210	868	55	SAREN (Véolia)
TOTAL	1,864,684**	2,788,107	115,034	332,959	35,403	2,866	

DECOVEDV

\* For external HWIUs, the tonnage given corresponds with the tonnage incinerated on Syctom's behalf

\*\* This tonnage includes actually incinerated waste, excluding variations in Syctom's HWIUs' tank level.

# **Control of air emissions**

of Syctom's incineration centres with energy recovery

ш	NATURE OF DISCHARGES Concentrations in mg/Nm <sup>3</sup> at 11%			Antimony + arsenic + lead + chrome + cobalt + copper +		Dioxins			
	Particles	Hydrochloric acid	Hydrofluoric acid	Sulphur dioxide	Nitrogen oxide	Cadmium + thallium	Mercury	manganese + nickel + vanadium	and furans (in ng/Nm³)
MAXIMUM EMISSION VALUES APPLICABLE SINCE 28 DEC. 2005 Ministerial order of 20 Sept. 2002	10	10	1	50	200 (80)*	0.05	0.05	0.50	0.10
IVRY/PARIS XIII									
FEBRUARY	0.3	0.9	0.19	9	56	0.003	0.001	0.08	0.013
MAY (Syctom)	1.3	0.9	0.09	17	53	0.003	0.0004	0.04	0.007
SEPTEMBER	3.2	0.8	0.05	23	45	0.002	0.001	0.04	0.007
NOVEMBER (Syctom)	3.5	1.5	0.07	25	59	0.003	0.001	0.06	0.008
SAINT-OUEN									
FEBRUARY	0.9	1.0	0.1	8	60	0.001	0.005	0.12	0.003
JUNE (Syctom)	0.6	0.9	0.03	7	60	0.002	0.010	0.03	0.016
AUGUST	1.1	1.3	0.1	15	56	0.002	0.001	**	0.007
OCTOBER (Syctom)	4.2	2.0	0.03	14	50	0.005	0.007	0.07	0.015
ISSÉANE									
MARCH	2.0	1.6	0.07	0.6	23	0.0004	0.001	0.03	0.004
MAY	0.5	1.5	0.04	1.8	26	0.0003	0.002	0.02	0.005
JUNE (Syctom)	0.2	3.5	0.02	1.9	28	0.001	0.004	0.01	0.002
JULY	0.4	2.9	0.11	1.8	31	0.0004	0.022	0.31	0.001
OCTOBER	0.3	3.9	0.03	1.8	30	0.0004	0.0006	0.09	0.005
OCTOBER (Syctom)	1.2	6.3	0.02	2.6	32	0.001	0.023	0.01	0.003

\* The Paris region plan for the protection of the atmosphere has set the maximum emission value at 80 mg/Nm<sup>3</sup> (the threshold set by the European directive is 200 mg/Nm<sup>3</sup>). This threshold is reiterated in the authorisation order to operate in lvry-Paris XIII and Saint-Ouen At Isséane, the authorisation order delivered by the Prefect of Hauts-de-Seine sets the threshold for emission of nitrogen oxides at 70 mg/Nm<sup>3</sup>.

\*\* As the manganese measurements made during the campaign in August in Saint-Ouen were invalidated, the sum of metals could not be calculated.

Note: when the measured concentration is below the limit of quantification (LOQ), the concentration value considered is then equal to LOQ/2.

### Waste dumped in storage facilities in tonnes

REFIOM SENT TO ISDDS		NON-HAZARDOUS WAST	E SE
VILLEPARISIS (Syctom contract)		BOUQUEVAL (Syctom contract)	
	10.050	HW from Romainville Centre	7
HWIU in Ivry/Paris XIII	16,659	TOTAL	7
HWIU in Isséane	11,214		
HWIU in Saint-Ouen	13,536	CLAYE-SOUILLY (Syctom contract)	
TOTAL ISDD	41,409		
		HW from direction contributions	4
INERT WASTE		HW from Romainville Centre	
SENT TO ISDIS		HW from Ivry/Paris XIII HWIU	
CLAYE-SOUILLY (Syctom contract)		HW from Saint-Ouen HWIU	
Construction debris from lvry/Paris XIII waste reception centre	3,680	SC rejects and reclassifications from the sorting centre at Sevran	
Construction debris from Romainville waste reception centre	3,158	TOTAL	5
TOTAL	6,838		40
Centre excluding Syctom contract		TOTAL ISDND (Syctom contract)	12
BO private market construction debris	9,989		
BO worksite construction debris	10,418		
TOTAL	20,407		
TOTAL ISDI	27,244		

These tonnages correspond to waste that is actually sent to storage centres. They do not take stock variations into account.



ng/Nm<sup>3</sup>: nanogram (billionth of a gram) per Normal cubic metre (amount of gas enclosed in 1 m<sup>3</sup> for standard temperature and pressure conditions).

mg/Nm<sup>3</sup>: milligram (one thousandth of a gram) per Normal cubic metre

SENT	<b>REFIOM:</b> Residu purification of sm household waste	noke from
	ISDD: Hazardous facility	s waste storage
76,048	ISDI: Inert waste	storage facility
76,048	ISDND: Non-haz storage facility	ardous waste
45,011		
2,867		
1,432	Centre excluding Syctom contract	t
772	SC sorting rejects from private	000
3.048	contracts	662
3,040	Sorting rejects from BO	78,498
53,131	TOTAL ISDND (excluding Syctom contract)	79,161
129,179	TOTAL ISDND	208,340

TOTAL WASTE	276,993
dumped in storage centre	210,330

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