



ACTIVITY REPORT

2015

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As the main public player in household waste treatment not only in France but also in Europe, Syctom, along with member local authorities, fully assumes all responsibilities related to its activities and its status. It is first and foremost a partner involved in implementing the objectives of the Energy Transition Law. This law, passed in August 2015, has strengthened the local authorities which, like Syctom, had already grasped the magnitude of the challenges and the task at hand. It guides us in combining the fight against climate change - particularly through prevention - with industrial performance.

Waste processing and the production of secondary materials are more than ever an opportunity for

the French industry. Syctom has chosen to use public procurement to provide a massive support to studies and investments aimed to maintain, renovate and develop industrial facilities by committing to almost two billion euros in 2015. Waste, which has become a resource, represents a rich potential for efficient energy recovery at an acceptable cost. The amendment of our statutes encourages us to pursue this approach by giving us the means to further develop this activity and build the necessary partnerships.

This is our duty as a responsible public actor. Producing clean energy contributes to environmental protection. This commitment is the guarantee for the acceptability of our facilities. By supporting the creation of new recycling channels, by preparing us for the separate treatment of bio-waste and the extension of sorting instructions to all packaging, we are forging ahead towards our goal of no longer burying waste. In December 2015, our partnership with COP21 enshrined this determination and our ability to voice two positive messages, namely, prevention and recovery. The virtuous approach to waste cycle implies endorsing the objective of reducing waste and Syctom supports this movement through very concrete actions. The increased support to member local authorities and setting up eco-facilitator brigades at the disposal of the cities are steps in the right direction. The change made to make our pricing more incentive-based is also a strong signal to member local authorities to stimulate and support their efforts.

In terms of research and development, Syctom strives to conceive innovative projects such as capturing CO₂ from incineration flue gas and manufacturing of bioplastics. In this quest to provide the best service for residents, Syctom is not alone. Major urban syndicates in Ile-de-France share these goals of efficiency and exemplary performance. Joint projects around international cooperation

and the pooling of facilities and networks crossed a new milestone in 2015. I would like to mention in particular our association with SIAAP for the co-methanisation of fermentable household waste and sewage sludge.

The immense prospects that are opening up before us will further strengthen Syctom's capacity to meet all the requirements expected of it. To this end, it will process and recover all types of waste entrusted to us and anticipate the advances and changes ahead. At the same time, it will always endeavour to work harmoniously in the dense urban environment that characterises our metropolitan region. It will also contribute the best industrial and logistical choices to the public debate to promote the general public interest.

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

Syctom's elected officials

as on 24 March 2016

Syctom is run by a syndicate committee of 67 local officials representing all member local authorities, renewed following the creation of the Metropolis of Greater Paris and its 12 regions on 1st January 2016.

- It defines the Syctom's policy, votes on its budget, decides on investments 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 Board, which prepares Syctom's deliberations, and the 5 members of the Commission for Tenders.



HERVÉ MARSEILLE
Senator-Mayor of Meudon (T3)
Chairman of Syctom

Vice-Chairmen, Board members



MAO PENINOU
Deputy Mayor of Paris (T1)
1st Vice-Chairman of Syctom



KARINA KELLNER
Chairperson of SITOM93 (T6)
Municipal councillor of Stains
2nd Vice-Chairman of Syctom



JACQUES GAUTIER
Chairman of SYELOM (T4)
Senator-Mayor of Garches
3rd Vice-Chairman of Syctom



ANDRÉ SANTINI
Former Minister, MP-Mayor
of Issy-les-Moulineaux (T3)
4th Vice-Chairman of Syctom



FRANÇOIS DAGNAUD
Mayor of 19th arr. (T1)
5th Vice-Chairman of Syctom



WILLIAM DELANNOY
Mayor of Saint-Ouen (T6)
6th Vice-Chairman of Syctom



LAURENT LAFON
Mayor of Vincennes (T10)
7th Vice-Chairman of Syctom



PHILIPPE BOUYSSOU
Mayor of Ivry-sur-Seine (T12)
8th Vice-Chairman of Syctom



PHILIPPE BRILLAUD
Mayor of Le Chesnay
9th Vice-Chairman of Syctom



ANNE SOUYRIS
Councillor of Paris (T1)
10th Vice-Chairman of Syctom



ALAIN PÉRIÈS
Deputy Mayor of Pantin
(T8)
11th Vice-Chairman of Syctom



PIERRE-CHRISTOPHE BAGUET
Mayor of Boulogne-Billancourt
(T3)
12th Vice-Chairman of Syctom



JEAN-FRANÇOIS LEGARET
Mayor of 1th arr. of Paris (T1)
13th Vice-Chairman of Syctom



JEAN-PIERRE BOYER
Deputy Mayor of Rosny-sous-Bois
(T9)
14th Vice-Chairman of Syctom



OLIVIER MÉRIOT
Deputy Mayor
of Gennevilliers (T5)
15th Vice-Chairman of Syctom

Other Board members



CATHERINE BARATTI-ELBAZ
Mayor of the 12th arr. of Paris
(T1)



JEAN-DIDIER BERTHAULT
Councillor of Paris (T1)



FLORENCE BERTHOUT
Mayor of the 5th arr. of Paris
(T1)



SAMUEL BESNARD
Deputy Mayor of Cachan
(T12)



HÉLÈNE BIDARD
Deputy Mayor of Paris (T1)



CAROLINE CAMPOS-BRÉTILLON
Deputy Mayor of Charenton-le-Pont (T10) ⁽¹⁾



CLAIRE de CLERMONT-TONNERRE
Councillor of Paris (T1)



JÉRÔME COUMET
Mayor of the 13th arr. of Paris
(T1)



FLORENCE CROCHETON
1st Deputy Mayor
of Saint-Mandé (T10)



VIRGINIE DASPÉT
Councillor of Paris (T1)



PHILIPPE DUCLOUX
Councillor of Paris (T1)



ALAIN DURANDEAU
Deputy Mayor
of Tremblay-en-France (T7)



JEAN-CHRISTOPHE FROMANTIN
MP-Mayor
of Neuilly-sur-Seine (T4)



CHRISTINE GAUTHIER
Deputy Mayor
of Les Pavillons-sous-Bois (T9)



NICOLE GOUETA
Mayor of Colombes (T5)



ÉRIC HÉLARD
Councillor of Paris (T1)



JEAN-PIERRE SCHOSTECK
Mayor of Châtillon (T2)



LUDOVIC TORO
Mayor of Coubron (T9)



PATRICK TRÉMÈGE
Councillor of Paris (T1)



STÉPHANE WEISSELBERG
Deputy Mayor
of Romainville (T8)

⁽¹⁾ In place of Jean-Marie Brétillon

75 Representatives of the City of Paris



PIERRE AURIACOMBE
Councillor of Paris (T1)



HERVÉ BÉGUÉ
Councillor of Paris (T1)



JULIE BOILLOT
Councillor of Paris (T1)



ANTOINETTE GUHL
Deputy Mayor
of Paris (T1)



MARIE-LAURE HAREL
Councillor of Paris (T1)



HALIMA JEMNI
Councillor of Paris (T1)



VÉRONIQUE LEVIEUX
Councillor of Paris (T1)



JEAN-LOUIS MISSIKA
Deputy Mayor
of Paris (T1)



ANNE-CONSTANCE ONGHENA
Councillor of Paris (T1)



DANIEL VAILLANT
Former Minister, MP
Councillor of Paris (T1)

78 Representative of the Agglomeration community of Versailles Grand Parc



MAGALI ORDAS
Deputy Mayor
of Versailles

92 Representatives of SYELOM



MARIE-DO AESCHLIMANN
Deputy Mayor
of Asnières-sur-Seine (T5)



PIERRE CHEVALIER
Municipal councillor
of Ville-d'Avray (T3)



BERNADETTE DAVID
Deputy Mayor
of Bagneux (T2)



SOPHIE DESCHIENS
Deputy Mayor
of Levallois-Perret (T4)



ÉRIC FLAMAND
Deputy Mayor
of Vaucresson (T4)



PASCAL PELAIN
Deputy Mayor of Villeneuve-la-Garenne
(T5)

93 Representatives of SITOM93



BERNARD CACACE
1st Deputy
Mayor of Raincy (T9)



ANTHONY DAGUET
Deputy Mayor
of Aubervilliers (T6)



GUILLAUME FOURNIER
Deputy Mayor
of Gagny (T9) ⁽²⁾



OLIVIER MICONNET
Deputy Mayor
of Livry-Gargan (T9)



LAURENT RUSSIER
Deputy Mayor
of Saint-Denis (T6)



OLIVIER STERN
Municipal councillor
of Montreuil (T8)

94 Representatives of the regional public institution (EPT) of Val-de-Marne



JEAN-LUC CADEDDU
Deputy Mayor
of Maisons-Alfort (T10)



JORGE CARVALHO
Deputy Mayor
of Villejuif (T12)



JEAN-JACQUES GRESSIER
Deputy Mayor
of Joinville-le-Pont (T10)



ALAIN GUETROT
1st Deputy Mayor
of Saint-Maurice (T10)



MONIQUE RAFFAELLI
Municipal councillor
of Le Kremlin-Bicêtre (T12)



PATRICK RATTER
Deputy Mayor
of Valenton (T12)



BAMADI SANOKHO
Deputy Mayor
of Gentilly (T12)



AGNÈS TEYSSERON
Municipal councillor
of Vitry-sur-Seine (T12)

Regions of the Metropolis of Greater Paris

T1: Paris
T2: EPT Vallée Sud Grand Paris
T3: EPT Grand Paris Seine Ouest
T4: EPT Paris Ouest La Défense
T5: EPT Boucle Nord de Seine
T6: EPT Plaine Commune

T7: EPT Paris Terres d'Envol
T8: EPT Est Ensemble
T9: EPT Grand Paris Grand Est
T10: EPT Paris - Est-Marne et Bois
T12: EPT Grand Orly-Val de Bièvre-Seine Amont

● Full members of CAO (Commission of Tenders)

⁽²⁾ In place of Jean-Philippe Malayeude

Syctom and local authorities in stride with Greater Paris

For over 30 years, Syctom has been processing and recovering household waste in the most densely populated area of France. Tasked with a demanding public service, Syctom works together with the local authorities in charge of waste collection and all players involved in waste management. Our approach is one of cooperation, further strengthened today to take on the challenges of the newly created Metropolis of Greater Paris.

CHANGES STEMMING FROM THE LAW ON THE NEW TERRITORIAL ORGANISATION OF THE REPUBLIC (NOTRE)

The 12 territorial public institutions (EPT) of the Metropolis of Greater Paris, created on 1 January 2016, are being entrusted with the task of waste management. Henceforth, they are members of Syctom for all or part of the municipalities within their territory. The statutes of the metropolitan agency have therefore been adapted and its missions clarified. Apart from affirming its competence as an energy producer, it can now take part in any cooperation institution, such as a semi-public company, in issues concerning waste. This means we have all the resources to meet the territorial and energy challenges of the coming years.

A MAJOR PLAYER IN WASTE PROCESSING

5,777,444

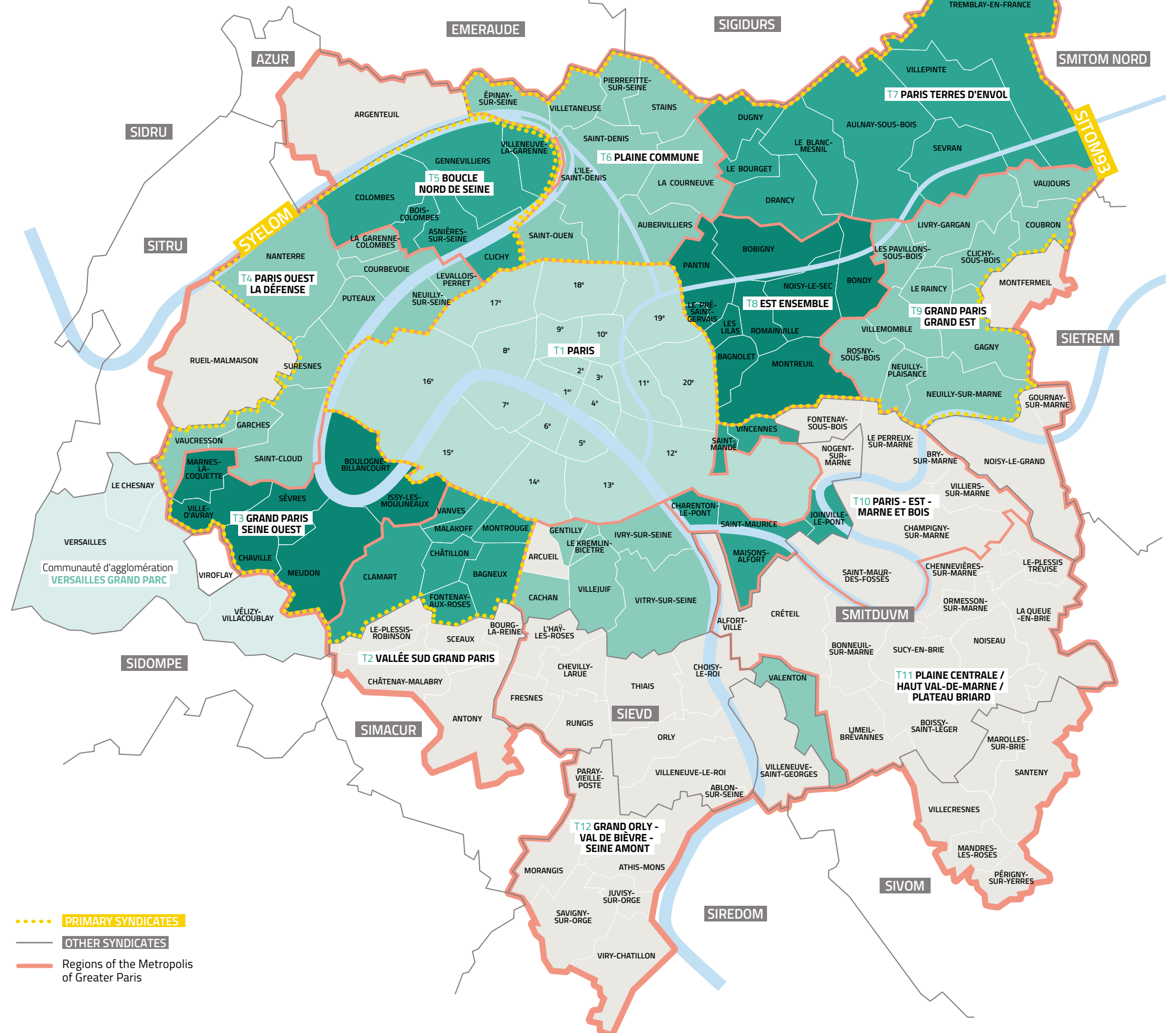
inhabitants i.e. nearly 9% of the French population

Estimation based on the last census.

2.27 Mt

of waste processed in 2015

SYCTOM'S REGION AND ITS ENVIRONMENT AS ON 1ST JANUARY 2016




Waste processed by Syctom

 **RESIDUAL HOUSEHOLD WASTE**
1,900,413 t **-2.3 %**
processed in incineration centres with energy recovery or in landfill sites BETWEEN 2014 AND 2015

 **HOUSEHOLD PACKAGING AND PAPER**
COLLECTED DOOR-TO-DOOR OR BY VOLUNTARY DROP-OFF
179,581 t **+3 %**
processed in sorting centres BETWEEN 2014 AND 2015


 **BULKY OBJECTS**
WASTE COLLECTED DOOR-TO-DOOR OR IN WASTE RECEPTION CENTRES, ILLEGAL DUMPS, AND WASTE FROM TECHNICAL SERVICES
179,200 t **+5.1 %**
processed in sorting centres for bulky objects BETWEEN 2014 AND 2015

 **TOTAL WASTE LANDFILLED**
HOUSEHOLD WASTE AND SORTING REJECTS
212,910t **+0.9 %**
BETWEEN 2014 AND 2015

Household waste and selectively collected waste in the region are fully processed by Syctom. However, only one part of bulky objects is processed by Syctom; the other part is managed directly by the local authorities through contracts with external operators.

On the move towards energy transition

Less landfilling and less incineration capacity for the coming years imply more efficient energy recovery and more recycled materials. This commitment underpins Syctom's entire development policy.

 **Green energy to provide heat and light**

61 %
waste recovered as steam and electricity

300,000
70 m² housing equivalents heated

47 %
of the heat in the CPCU network supplied by Syctom

 **More and more recycled materials**

30 %
waste recycled into new materials (plastic, paper, steel, aluminium, glass, etc.) or clinkers

2012
sorting of all plastic packaging launched at the Sevrans sorting centre

2015
sorting centre in Romainville modernised to recover all packaging

 **Sorting capacity ramped up**

+13 %
increased capacity of Syctom centres in 2014-2015

2019
new sorting centre commissioned in Paris XVII

3
centres fitted out for the extended sorting instructions (all plastic packaging and/or all metal packaging)

2020
adaptation of all Syctom sorting centres

 **New waste to be recovered**

2
experiments for separate collection of biowaste by the City of Paris

2
operational processing sites made available to member local authorities to process biowaste (composting or methanisation)

109 t
biowaste from food markets and administrative restaurants diverted from incineration in 2015

1
innovative partnership with SIAAP for a joint project to treat sewage sludge and residual organic fraction of waste

Commitments for exemplary environmental performance

Not only does Syctom strive on a daily basis to preserve natural resources, it also seeks to minimise the impact of its activity on the environment. Control and reduction of discharges from its facilities, innovative approach to climate action, high environmental quality projects, development of alternatives to road transport, and much more: all these commitments pursue the same goal of exemplary environmental performance.



CO₂ emissions declining steadily

1,131,088 t of CO₂ -17 %

avoided (compared to 793,240 t of CO₂ emitted) through Syctom's activities in 2014, including:

CO₂ emissions between 2004 and 2014 (national target of -14 % by 2020 achieved compared to 2005)

172,330 t of CO₂

through the recycling of materials

957,448 t of CO₂

through energy recovery (steam and electricity)

31%

of non-road transport

360,000 t

of waste transported by water

6

research teams mobilised as part of the international research consortium for recycling CO₂ flue gases into bioplastics at the Saint-Ouen centre

2020 TARGETS FOR CO₂ REDUCTION

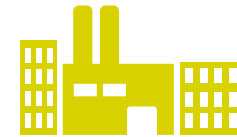
- 50%

of tonnage landfilled

+10,000 t

of selective collection at least

+ energy optimisation at Saint-Ouen



Factories integrated into the city

€190 M

invested for urban integration and transition to the dry treatment of flue gas from the HWIP in Saint-Ouen

2

facilities in the heart of eco-districts: Saint-Ouen Docks and Clichy-Batignolles in Paris

365 days

of continuous monitoring of air emissions from HWIPs

9

campaigns to measure atmospheric deposition by Owen gauge and biomonitoring (mosses and lichens)



Resources preserved

700,000 t

of new raw materials produced through recycling

300,000

housing equivalents heated with renewable energy

102,535 MWh

of electricity produced by household waste incineration plants (HWIPs) for their energy self-sufficiency and supply to EDF networks

300,000 t

of oil equivalent avoided



A worldwide commitment

600,000 €/year

devoted to waste management improvement projects in developing countries, as part of the "1% solidarity" initiative

0 wastage

100% recovery

at COP 21, a world first.

69%


of waste recycled and reused

31%

recovered as energy with the contribution of Syctom, official partner of the event

60

recycling guys mobilised for COP21

 **PREPARING A CARBON BALANCE SHEET 2004 - 2014**

A constantly evolving industrial tool

Each year more than 2 million tonnes of waste come into Sycotom's facilities. Such contributions keep changing in an increasingly demanding regulatory environment, and require us to adapt and renew the facilities continuously for maximised performance.

12 PROCESSING UNITS



3 incineration units with energy recovery



6 sorting centres for selective collection



2 waste reception centres



1 transfer centre for residual household waste



1 FACILITY UNDER CONSTRUCTION

* PARIS XVII



Commissioning planned in 2019

Operating capacity: 45,000 t
Centre adapted to the extension of sorting instructions to all plastic packaging and metal packaging

1 ISSÉANE



1.45 million inhabitants
459,973 tonnes incinerated in 2015
Permitted capacity: 460,000 t

OPERATOR: TSI



700,000 inhabitants
23,085 tonnes received in 2015

Operating capacity: 22,500 t

OPERATOR: TSI

2 IVRY / PARIS XIII



1.55 million inhabitants
659,809 tonnes incinerated in 2015
Permitted capacity: 730,000 t
(350,000 t for the new project, i.e. -50%)

OPERATOR: IP13



855,000 inhabitants
29,894 tonnes received in 2015

Operating capacity: 30,000 t

OPERATOR: SITA

Reconstruction by 2023

3 SAINT-OUEN



1.45 million inhabitants
563,231 tonnes incinerated in 2015
Permitted capacity: 650,000 t

OPERATOR: TIRU

Modernisation and urban integration work by 2020



4 ROMAINVILLE



1. million inhabitants
36,423 tonnes received in 2015
Operating capacity: 45,000 t

Adaptation to the extension of sorting instructions to all plastic packaging and metal packaging in 2015

OPERATOR: URBASER ENVIRONNEMENT



+ 1 residual household waste transfer centre
URBASER ENVIRONNEMENT
(GENERIS FROM 01/03/2016)



+ 1 waste reception centre

Planned redevelopment of the centre by 2024

5 NANTERRE



1.25 million inhabitants
35,795 tonnes received in 2015
Operating capacity: 40,000 t

Sorting of small metal packaging since 2015

OPERATOR: VÉOLIA PROPRIÉTÉ

6 PARIS XV



550,000 inhabitants
17,764 tonnes received in 2015
Operating capacity: 15,000 t + 5,000 t in 2015

Adaptation to the extension of sorting instructions to all plastic packaging and metal packaging by 2018

OPERATOR: COVED

7 SEVRAN



350,000 inhabitants
17,533 tonnes received in 2015
Operating capacity: 17,000 t

Adaptation to the extension of sorting instructions to all plastic packaging in 2012

Modernisation in 2014

Optimisation project in 2016

OPERATOR: IHOL

An ambitious management

In 2015, Syctom's financial situation was further strengthened, despite a particularly challenging economic and regulatory environment. This is the outcome of a rigorous management that allows it to prepare for the future, while controlling processing costs. With growing investments for an increasingly efficient industrial park, but also increased support to its member local authorities to promote prevention and sorting, Syctom now has the means to achieve its ambitions, for an exemplary service in the waste industry.

Processing costs in 2015

 **140 €/t**
SELECTIVE COLLECTION

 **98 €/t**
BULKY OBJECTS

 **92 €/t**
INCINERATION

 **96 €/t**
LANDFILL

Technical costs including amortisation, major maintenance and repair, taxes ... minus industrial revenue (sale of energy and material) and support funds from producer responsibility organisations retained by Syctom.



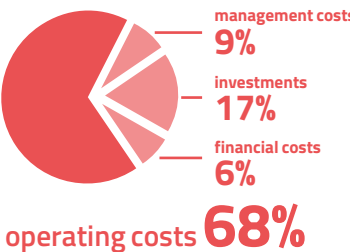
Drop in fees

97.46 €/t
tonnage share

6.37 €/pers.
population share

€261.8 M
total contributions 2015

Breakdown of their use:



-7% in 2015
drop in fees



continuous reduction in debt

€467.4 M
debt in 2015

-€24.6 M
compared to 2014, i.e. **-7%**

-29%
since 2008, i.e. **-€190 M**



Increasing support to local authorities



€2.8 M

of support for prevention, selective collection and biowaste as part of the new 2015-2020 support plan
€6 M planned in 2016

€4.3 M
of aid to municipalities that house facilities

Prospects for 2016





REDUCED PRICING: - 12% COMPARED TO 2014

POPULATION SHARE	HOUSEHOLD WASTE AND BULKY OBJECTS
 5.6 €/pers. COMPARED TO 6.8 €/pers. IN 2014	 94 €/t COMPARED TO 105 €/t IN 2014

MORE INCENTIVE PRICING

SELECTIVE COLLECTION

Sliding scale for cost per tonnage depending on the sorting performance

<p>Less than 25 kg/pers./year</p> <p></p> <p>30€/t</p> <p>COMPARED TO 105 €/t IN 2014</p>	<p>from 25 to 35 kg/pers./year</p> <p></p> <p>15€/t</p>	<p>More than 35 kg/pers./year</p> <p></p> <p>5€/t</p>	<p>For tonnages greater than those registered in 2015*</p> <p></p> <p>FREE</p> <p><i>*Regardless of the sorting performance</i></p>
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MORE SUPPORT TO MOBILISE RESIDENTS

For tonnages greater than those registered in 2015, the bonus that applies depends on the sorting performance:

from 20 €/t, above 25 kg/pers./year, to 50 €/t, above 55 kg/pers./year

BIOWASTE

(Excluding garden waste)



5€/t

COMPARED TO 105 €/t IN 2014

30 €/t for a 3-year trial period (2016-2018) or collection cost borne by Syctom.



Highlights 2015

21 JANUARY

The project management contract for redevelopment and dry treatment of flue gas at the Saint-Ouen centre awarded to the SETEC Environnement / INGEVALOR consortium.

2 FEBRUARY

Contract for the design/ construction/operation of the Ivry/ Paris XIII centre signed with the winning consortium comprised of IP13 (authorised representative), subsidiary of the Suez Environnement Group, Eiffage TP, Chantiers Modernes BTP, Inova, Hitachi Zosen Inoca, Vinci Environnement, Vinci Energies, Satelec, BG Ingénieurs Conseils and AIA Architectes Associés.

MARCH

Project launched to modernise the Romainville sorting centre so as to commission a new latest generation sorting line after 10 months of work.

14 APRIL

The framework agreement of major urban syndicates in the field of decentralised cooperation signed during the "Salon des Maires d'Ile-de-France" (Meeting of the Mayors of Ile-de-France) between SEDIF, SIAAP, SIPPAREC, SIGEIF, EBTP Seine Grands Lacs and Syctom.

19 JUNE

New support plan 2015-2020 launched for prevention and sorting operations for the benefit of local authorities and public institutions in three areas: waste prevention, biowaste prevention and management, sorting of packaging and graphic paper.



2 JULY

First Metropolitan Conference on Waste

organised by Syctom at the Maison de la Chimie in Paris, with more than 200 regional actors mobilised on issues such as organising waste management and pooling structural facilities within the territory of the future metropolis.



8 OCTOBER

Contract for the design/construction/operation of the Paris XVII centre signed with the consortium comprising CNIM/Ateliers Monique LABBÉ/URBAINE DE TRAVAUX/ARVAL/INGEROP Conseil et ingénierie/SEGIC Ingénierie, with the goal to commission this state-of-the-art centre in March 2019.

TERRITOIRE
ZÉRO DÉCHET



13 NOVEMBER

Syctom selected for "Zero waste, zero wastage region" with five of its member local authorities (Paris, Est Ensemble, Versailles Grand Parc, Ivry-sur-Seine and Clichy-la-Garenne) as part of the 2nd call for projects issued by the French Ministry of Environment, Energy and the Sea.



30 NOVEMBER - 11 DECEMBER

Syctom at COP21, with three *side events*, a booth shared with the urban public services of Greater Paris (SIAAP, SIPPAREC, SEDIF, SIGEIF, EPTB Seine Grands Lacs) and 60 *recycling guys* provided, as the official partner of this "Zero waste, 100% recovery" event.

// INSTITUTIONAL MILESTONES

7 AUGUST 2015

NOTRe Law on the new territorial organisation of the Republic was passed, with the establishment of the Metropolis of Greater Paris and its 12 territorial public institutions (EPT) on 1 January

2016 and the compulsory transfer of waste management authority to these institutions (collection and processing).

17 AUGUST 2015

Adoption of the Energy Transition for Green Growth Law and its section dedicated to waste management: "Tackling waste and promoting the circular economy, from product design to recycling" (Title IV). While confirming the waste management hierarchy laid down in the Framework

Directive 2008/98/EC, it sets out several key objectives:

- reducing the amount of waste processed (-10% of household waste produced by 2020)
- increasing recycling targets (55% by 2020 and 65% by 2025)

- decreasing waste disposed of in landfill sites (-50% by 2025)
- focussing energy recovery on the Solid Recovered Fuel (SRF) channel
- implementing the separate collection of biowaste



2.27 Mt

of waste processed
by Syctom

+3%

Growth in separate
collection between
2014 and 2015

-2.3%

Decrease in household
waste between
2014 and 2015

WORKING TOWARDS ENERGY TRANSITION

WASTE: A RESOURCE

Putting an end to the landfilling of waste and recovering it ever more and ever better in the form of green energy or materials. Syctom's strategy contributes to the emergence of a new virtuous and sustainable economy, where waste becomes a resource.

RECOVERING EVER MORE AND EVER BETTER

Increase the energy efficiency of household waste incineration plants (HWIPs), continuously modernise the facilities, expand recycling capacities and adapt sorting centres to the extended sorting instructions.

PROMOTING CIRCULAR ECONOMY

Increase recycling of waste, to limit the wastage of resources and environmental impacts, and make it a new lever for economic growth.

ANTICIPATING THE SHARP RISE IN BIOWASTE

Support experiments in separate collection in the region and find new processing solutions, in an exemplary approach that promotes the emergence of a sustainable channel.



Producing more energy



With this win-win agreement, CPCU will boost the share of recovery energy delivered to its heating system, and consolidate its contract with the City of Paris until 2024. For its part, Syctom guarantees an outlet for the steam from its HWIPs and a revaluated selling price. Increasing the price per tonne of steam from €11.4 to €16.4 will bring it an additional resource, valued at €18 million.

Martial Lorenzo
GENERAL MANAGER
OF SYCTOM SERVICES

INCREASING ENERGY RECOVERY PERFORMANCE

// Optimising the performance of facilities

Reduce landfill waste to a minimum and produce maximum steam. With this two-fold objective, Syctom intends to boost the performance of its incineration centres. The heat generated is used to produce electricity, but more importantly, to supply steam to CPCU networks (Paris Urban Heating Company) to a tune of 47%. In 2015, this partnership was further strengthened. Objective: ensuring that the CPCU achieves the 50% renewable energy threshold for obtaining the European label “Green heat network”.

Optimising energy recovery is also at the heart of the **dry flue gas treatment project implemented at the HWIP in Saint-Ouen**. The project management studies were initiated in 2015 for work expected to be completed by mid 2018. At stake: a 30% increase in energy efficiency. From 2016, the plant capacity will be further improved, after exchangers on the flue gas treatment lines are replaced by late 2015.

Syctom also focuses on the **production of Solid Recovered Fuel (SRF) from residual household waste**, in accordance with the objectives of the Energy Transition Law. The project to reconstruct the Ivry/Paris XIII centre aims to promote this fuel with high calorific value to feed the furnaces, by discarding in advance the wet fraction treated separately. While the project plans to halve the incinerator capacity, the performance per tonne will be substantially optimised.

// Processing capacity consolidated

Syctom strives at the same time to consolidate its incineration capacity, to minimise the amount of waste landfilled. It envisages in particular **increasing the permitted capacity at Isséane** from 460,000 to 510,000 tonnes per year. After discussions with the Regional and Interdepartmental Directorate for the Environment and Energy of Ile-de-France (DRIEE), an application file was sent to the Government services in early 2016.

47% OF CPCU'S ENERGY
SUPPLIED BY SYCTOM IN
2015

NEARLY **300,000**
HOUSING EQUIVALENTS
HEATED

€46.3 M IN REVENUE
FROM ENERGY RECOVERY

Syctom also seeks to **pool the processing means at the Ile-de-France level**, by strengthening its partnerships with neighbouring waste processing syndicates. This dynamic must be accompanied by continuous improvement of the planning and

management of residual household waste collected for recovery. This is the thrust of the call for expressions of interest issued in 2015 concerning urban waste logistics (*see page 33*).



I am delighted that Paris, and especially the 12th arrondissement, will be the first region to experiment the collection of household biowaste on such a large scale, in a dense urban environment as early as 2017. The Parisians are ready to take on this challenge, as is evidenced by the success of our neighbourhood composters. The conversion of waste into compost and biogas is a strong argument to convince them to sort their green and food waste.

Catherine Baratti-Elbaz
MAYOR OF 12TH ARRONDISSEMENT OF PARIS, SYCTOM BOARD MEMBER

TOWARDS A “BIOWASTE” PROJECT

// Inventing new organisations with local authorities

Proximity composting is already encouraged by Syctom, through subsidies, training or the provision of equipment at attractive prices. 13,000 tonnes were thus diverted from incineration in 2015. At the same time, to anticipate the separate collection of biowaste, another source separation solution, Syctom has been conducting technical and economic analyses of *management scenarios* within its region since 2010. It also supports experiments such as those conducted by the City of Paris on two food markets and administrative restaurants in the 2nd and 12th arrondissements.

The 2012 Grenelle Law, which imposes source separation and organic recovery of biowaste on large producers, was supplemented by the Energy Transition Law in 2015. This Law requires the development of source separation of organic waste from households, so that every citizen has a recovery solution at his disposal. Therefore, Syctom is committed to encouraging **new experiments on a significant scale** as part of its new support plan (*see page 30*).

// Treatment solutions under study

In 2015, Syctom provided its member local authorities **two biowaste treatment sites**. One site carries out the composting of biowaste from food markets while the other processes biowaste produced by catering establishments by methanisation. To ensure the continuity of this service and in view of a rise in biowaste collection in the regions, a call for proposals will be issued in the second half of 2016.

At the same time, Syctom is continuing to reflect **on its own recovery solutions**, following the permanent abandonment of the planned methanisation units in Blanc-Mesnil/Aulnay-sous-Bois and Romainville. As part of the transformation of the Ivry/Paris XIII centre, the organic recovery unit initially planned is being adapted, with the possible externalisation of the methanisation process and an increased reception of biowaste. One solution could be the project for the co-methanisation of wastewater sewage sludge and residual organic fraction of waste, initiated by Syctom and SIAAP (*see box*).



SIAAP/SYCTOM PARTNERSHIP

Towards a joint treatment of sewage sludge and of the residual organic fraction of waste

The foundations for the cooperation between the SIAAP and Syctom were laid down in 2015 to recover the organic products inherent to their activities. The proposed project aims to jointly treat sewage sludge and the organic fraction from the sorting-preparation of residual household waste planned at Ivry/Paris XIII. This treatment on an existing SIAAP site will allow the production of biogas, which will then be injected into the natural gas network. By promoting the pooling of resources, this approach is fully

consistent with the objectives of Energy Transition Law for Green Growth. To study the conditions in which the future centre will operate, the two syndicates decided in late 2015 to sign a framework agreement including a research and development component. In addition, the Syndicate Committee approved a partnership protocol with the Caisse des Dépôts, and a pre-membership with the Federation of EPLs (Local Public Enterprises), for a possible SemOp project (semi-public company with a single purpose).

It is our responsibility to successfully meet the energy transition and climate mitigation challenges. The framework agreement and the synergies we are building between SIAAP and Syctom are paving the way to build tailored and innovative solutions, for environmental balance in the Ile-de-France region and its people. By sharing our expertise, we are laying the groundwork for the efficiency and relevance of new cooperative efforts. This is also the duty of our major public services.

Belaïde Bedreddine
CHAIRPERSON OF SIAAP
(PUBLIC SANITATION UTILITY OF GREATER PARIS)



+15,000t OF SORTING
CAPACITY IN THE ROMAIN-
VILLE CENTRE

179,581 t OF SELECTIVELY
COLLECTED WASTE SORTED

72.3% RECYCLING RATE FROM SELEC-
TIVE COLLECTION



MODERNISATION WORK AT ROMAINVILLE

The sorting centre under transformation

On 18 February 2016, the sorting centre in Romainville inaugurated its new sorting line: the result of an exceptionally fast-paced project since March 2015.

In just ten months of work, this historic facility was revamped into a cutting-edge sorting centre. The work was entrusted to Valoram, a subsidiary of Urbaser Environ-ment, the current operator. The company was supported by many partners. The project also included

renovating the sorting hall roof and upgrading the fire safety system. The outcome is a state-of-the-art facility with more 200 machines, including 13 optical sorters capable of separating all waste streams, and two balers to ensure the continuity of the process. This will allow an optimal use of materials, including small metal packaging and all plastic packaging, as part of the extension of sorting instructions.

Intensifying recycling



Receiving a sorting centre in their region is not an obvious choice for elected officials. It is therefore no coincidence that Paris has for a long time opted to process its waste outside its walls. But that time is over. The proof: the future sorting centre will process not only the waste selectively collected from the Clichy-Batignolles district and from several arrondissements, but also from Saint-Ouen and Clichy-la-Garenne.

Jean-Didier Berthault
DEPUTY MAYOR OF THE 17TH
ARRONDISSEMENT OF PARIS,
SYCTOM BOARD MEMBER

SORTING CAPACITY OPTIMISED

In 2015, Syctom further strengthened the operating capacity of its sorting centres with two flagship projects. First, the **modernisation of the sorting line at the Romainville centre** (see box), now capable of processing up to 45,000 tonnes of selectively collected waste per year, compared to 30,000 previously. Second, the **signing of the contract for constructing a sorting centre in Paris XVII** (see box), with an annual capacity of 45,000 tonnes.

Furthermore, the sorting centre in Paris XV was permitted to process up to 20,000 tonnes per year and the Isséane site began the redevelopment of the former area dedicated to bulky objects. This work, covered by an agreement with the producer responsibility organisation, Ecofolio, provides for setting up a transfer area for receiving an additional 7,500 tonnes, notably cardboard and paper.



The Paris XVII project on track

The project for the second intramural sorting centre is officially launched. On 8 October 2015, Syctom signed the contract to design, build and operate the future centre with the consortium comprising CNIM / Ateliers Monique LABBÉ / URBAINE DE TRAVAUX / ARVAL / INGEROP Conseil et ingénierie / SEGIC ingénierie, for a budget estimated at €67 million exclusive of VAT. The centre will be located in

the eco-district of Clichy-Batignolles. Limited energy consumption, vegetated areas, extensive use of wood: these are some of the features of this project, characterised by an architecture fully integrated into the district and by the proposed technologies. Ultimately, this highly automated facility will recover the waste of more than 900,000 residents. Commissioning planned in March 2019.

EXTENSION OF SORTING INSTRUCTIONS

The Energy Transition Law reaffirmed it in 2015: by 2022, the sorting of all plastic packaging will be extended to the whole of France. This compels Syctom to adapt its centres to the extended instructions. **Objective: to be ready for Paris in 2018, and for other regions by 2022.**

The Sevran sorting centre, a pilot experimental site, has already been receiving all plastic packaging from its catchment area since 2012 and was modernised in 2014. To optimise the recycling of such waste and better meet the requirements of buyers, Syctom entrusted IHOL in 2015 with completing the modernisation process. Objective: improve the sorting of flexible plastic films and the packaging

of waste intended for incineration.

In late 2015, the Sevran site was joined by the Romainville site, which now processes all plastic packaging from the Est Ensemble region. At the same time, Syctom signed an agreement with Eco-Emballages, as part of its recovery plan, for extending “all plastics” to the Est Ensemble region and to the municipalities of Le Bourget, Drancy, Dugny, Villemomble and Les Pavillons-sous-Bois. Nearly 900,000 residents will be involved by early 2016. And to adapt its other centres in Paris XV, Isséane and Nanterre, Syctom initiated feasibility studies as part of an agreement signed in 2016 with Eco-Emballages.

NEW STREAMS TRIALLED FOR RECYCLING

The Nanterre sorting centre is the first in Ile-de-France to sort **small metal packaging**, with the support of Eco-Emballages and the endowment fund created by Nespresso. To support the expansion of the system, Syctom launched an awareness campaign in 2015 with the 14 municipalities concerned. 32 tonnes of aluminium were thus collected to join the recycling channels. In autumn, the modernised sorting centre in Romainville also joined the “metal” project. What is at stake is a simplified sorting practice for residents and an increase in the quantities of aluminium and steel sorted.

Given the increase in construction waste tonnages, Syctom renewed its dedicated contract by awarding it to PAPREC with the objective of better recovering bulky objects separately.

Measures were also continued on certain **specific streams produced by bulky objects**. To ensure the collection and recycling of **rigid plastics** (garden furniture, tubes, flower pots, crates, etc.), Syctom awarded a contract comprising two work packages to PAPREC and SITA in early 2016. Regarding **mattresses**, also included among bulky objects despite the specific collection set up by Eco-mobilier, a new call for tenders was issued in November 2015 to promote their recycling.



Nespresso and Syctom have been working together for 4 years for sorting small aluminium and steel packaging as part of the Metal Project. We are delighted that after Nanterre, the Romainville sorting centre joined the Metal Project in early 2016. We hope that all the sorting centres in Ile-de-France will be part of our project in the coming months.

Arnaud Deschamps
GENERAL MANAGER
OF NESPRESSO FRANCE



Facilities equal to the challenges

A CONSTANTLY EVOLVING TOOL

// Always safer

Syctom pursues a continuous quality improvement approach to maintain its facilities, avert any safety risk and comply with applicable regulations. In 2015, **machine compliance audits** were performed on most sites. Work was undertaken in Nanterre, Sevran and Isséane. In Isséane, it is planned to modify the operation of the clinker handling line to optimise the sorting of scrap and improve working conditions.

Fire safety audits will be completed in 2016. Already carried out in the centres in Sevran, Nanterre and Isséane, they will follow a new procedure in Paris XV and Saint-Ouen. At Ivry/Paris XIII, a technical assistance contract will be concluded to renovate the fire network. Meanwhile, monitoring has been strengthened as from 1 July

2015 in all sorting centres to protect them from fire hazards. In addition to remote monitoring systems, security is now provided at night and on weekends, outside the operating times.

Moreover, Syctom is **reflecting on safety in a broad sense**. Apart from setting up a Hygiene, safety and working conditions committee (CHSCT) in 2015, safety was defined as a structural pillar of the newly engaged corporate social responsibility (CSR) process. In 2015, emphasis was placed on improving the safety of unloading docks in the centres, in close collaboration with the local authorities and operators. In the household waste incineration plant in Saint-Ouen, preliminary steps were taken (installing barriers, building facilities for easy unloading of waste).

2023

A NEW ENERGY RECOVERY UNIT
AT IVRY/PARIS XIII

// Modernisation on all fronts

The year 2015 was marked by the **replacement of the entire sorting process in Romainville**. The **reflection on the future of the site** continues, after the biogas plant project was permanently abandoned. A forward-looking approach has been entrusted to Ylios to hear the actors within the region and propose *scenarios*. In consultation with local elected officials, a new centre will be planned by 2024. To this end, a call for tenders was issued in November for technical and legal project

2024

A REDEVELOPED CENTRE
AT ROMAINVILLE

management assistance. Another highlight was the launch of the **project to transform the Ivry/Paris XIII centre**. One of the requirements of this project is to replace the incinerator which has come to the end of its life by 2023 (*see box*).

At the same time, the modernisation of the information system (IS) led to an **overhaul of the weighing software** across all the centres. This will guarantee the traceability of data and the tracking and billing of waste treatment services.



In a constantly changing territorial and regulatory environment, our industrial park must be scalable. Therefore, Syctom seeks to integrate the best available technologies but also to anticipate changes in the nature of the waste to be processed. This is one way to ensure the continuity of the public service and the ongoing improvement of recovery performance.

Pierre Hirtzberger
GENERAL MANAGER
OF SYCTOM
TECHNICAL SERVICES



IVRY/PARIS XIII

Reconstruction in full swing

After the contract to design / build / operate the new centre was signed on 2 February with the IP13 consortium, the year 2015 was devoted to preliminary studies. The project arising from the competitive dialogue consists of successively building an energy recovery unit (ERU), with half the capacity of the current unit, and an organic recovery unit (ORU). Regarding this last point, in

response to the wishes of the City of Ivry-sur-Seine to externalise the methanisation process and within the framework of the Energy Transition for Green Growth Law, an additional study was undertaken. The goal was to find alternative solutions and adapt the project over time. At the same time, Syctom refuelled the dialogue around the project. A monitoring committee composed

of elected officials, institutions and associations was set up and the National Commission for Public Debate (CNDP) was requested to designate a guarantor. By 2017, the Syctom's elected officials will be in a position to make their decisions and become more actively involved in this innovative project, which is one of the largest in France today.

EXEMPLARY ENVIRONMENTAL PERFORMANCE

Syctom's facilities, mainly located in dense urban areas, have a duty to minimise their environmental impacts. COP21 provided a remarkable opportunity for reiterating the exemplary performance of Syctom in this area.



// A carbon footprint to set the course ahead

Under the European Climate-Energy Package, France has committed to reducing its greenhouse gas emissions from waste management by 14% between 2005 and 2020. It is in this context that Syctom conducted a carbon audit, presented at COP21. It demonstrates that this goal was achieved over the period of 2004-2014, with a reduction of 17%. It also helped to set strategic guidelines for 2020 to further limit greenhouse gas emissions:

- halve the tonnage landfilled through prevention;
- increase selectively collected waste by at least 10,000 tonnes, particularly by extending the sorting instructions to all plastic packaging;
- optimise the incineration plant in Saint-Ouen in terms of energy.

The use of alternative transport is another lever: rail transport will be incorporated into the Paris XVII sorting centre project and river transport capacity will be strengthened in Ivry/Paris XIII.

// Control of environmental impacts

In 2015, Syctom continued its **proactive policy to carry out measurements and strictly monitor its facilities**, in addition to the obligations imposed on its operators. As every year, campaigns to measure atmospheric deposition were conducted in the vicinity of HWIPs by means of Owen gauges and analyses of mosses and lichens. The results, which are well below regulatory limits, demonstrate that the waste processing activity is under perfect control. A partnership was also concluded with Airparif to improve our knowledge of dioxins and furans around HWIPs. Syctom thus takes part in monitoring air quality in Ile-de-France, as enshrined in the guidelines of the Ile-de-France Regional Climate-Air-Energy Plan.

// Facilities to reduce nuisance

Attention is also paid to other sources of potential nuisance. At Ivry, a **noise barrier** is under consideration. Major redevelopment work is also underway in the Saint-Ouen centre (*see box*). Finally, Syctom has concluded a contract to **measure odour emissions** in its facilities and carry out any work, if necessary (sealing of buildings, treatment of exhaust air, etc.).

In Saint-Ouen: innovation and environmental performance

// More efficient, simpler, more virtuous, the energy recovery centre will move on to the dry flue gas treatment in 2017. The project management contract was awarded in early 2015 to the SETEC Environnement/Ingevalor consortium. The studies and the technical choices were validated during the year. To optimise the energy performance of the facility, heat recovery from flue gas will be carried out by condensation with the replacement of chimneys.

An ORC (Organic Rankine Cycle) machine will generate additional electricity. Finally, the work will increase the site's energy performance by 30% and reduce the amount of water discharged. The plume from the chimney will be significantly limited, for better acceptance by the residents. In addition, the redevelopment of the plant is accompanied by an innovative research and development programme to capture and recover CO₂ from flue gas (*see page 35*).

2019

2ND INTRAMURAL SORTING CENTRE IN PARIS
IN THE ECO-DISTRICT OF CLICHY-BATIGNOLLES

1.5 €/t

SUBSIDY TO MUNICIPALITIES HOSTING
A SYCTOM CENTRE

FACILITIES FULLY INTEGRATED INTO THE CITY

// Ambitious architectural projects

The year 2015 was marked by significant advances in three flagship Syctom projects: reconstruction of the centre in Ivry/Paris XIII, construction of a sorting centre in Paris XVII and urban integration of the incineration centre in Saint-Ouen. They all share the common goal: to be consistent with their location and convey an image of a plant integrated into the urban environment.

Two of them (Paris XVII and Saint-Ouen) are located in eco-districts. Therefore, they have to comply with stringent environmental requirements and coexist with housing units in the vicinity (*see box*). Priority is also given to vegetated surfaces and the use of "natural" materials.

// An ongoing dialogue with local authorities and residents

Acceptability also requires regular exchanges between Syctom and the local authorities, but also with Sentinels (resident groups) and members of the environmental quality charter monitoring committees. The year 2015 also witnessed the start of a new phase of consultation on the Ivry/Paris XIII project.

The Ivry/Paris XIII site, a source of inspiration

// To accompany the transformation of the plant, a High Artistic Quality and Cultural approach (HQAC) was launched. The principle consists in making this site a resource and research centre for artistic and cultural practices.

In the summer of 2015, the first outcome of this multidisciplinary approach was unveiled, initiated by the visual artist Stephan Shankland combining the arts and human sciences: "Musée du Monde en Mutation" (The Changing World Museum).



INCINERATION PLANT IN SAINT-OUEN

An urban integration model

"The green island". This is the name that Syctom has given to the project undertaken by the team of architects from Reichen et Robert & Associés, selected in late 2015 for the urban integration of the Saint-Ouen incineration centre. This project gives pride of place to vegetation, with cypress-planted roofs, green façades vis-à-vis new buildings. Whether through the

natural materials used or the "skin" that envelops some buildings, everything is designed to integrate this industrial facility into its new urban setting and preserve the quality of life of the residents. For the particularity of this incineration plant is the radical transformation of its environment. Formerly an industrial area, Les Docks de Saint-Ouen is now a 100-hectare

eco-district with its housing, its shops, its public transport, its park and its exemplary environmental quality. Last summer, the City set up a single window to inform residents and answer their questions. It thus allows Syctom to explain the developments that the facility will undergo in the coming years.



The Syctom centre in Saint-Ouen can be understood in three different ways: an industrial location, an urban location and an ecological theme. The project combines these three visions around the same imagination: the "Green Island". This is in no way a cover-up for the activity. It is a radical architectural response accompanying the transformation of the district and meeting the needs of urban society today.

Bernard Reichen

ARCHITECT PLANNER, CHAIRMAN
OF REICHEN ET ROBERT &
ASSOCIÉS



€2.8^M

of total support to initiatives
carried out in the region

31%

non-road
transport

FUTURE-READY NOW

UNITING TO WORK TOGETHER

Going beyond an efficient treatment of waste, the “zero non-recovered waste” objective implies mobilising and activating all the dynamic forces of the metropolitan region to share, optimise, and innovate. And make energy transition a reality.

ENCOURAGE THE REDUCTION AND SORTING OF WASTE

Strengthen technical, methodological and financial support to local authorities in charge of collection.

DEVELOP SYNERGIES OF SKILLS AND MEANS

An ongoing dialogue with local authorities, pooling of treatment facilities at the metropolitan level, and stronger collaborations with Greater Paris urban public services.

INNOVATE ON ALL FRONTS

An exemplary approach internally and externally, dynamic sharing of expertise and research and development projects, for sustainable progress in mainland France and abroad.



Supporting the action of local authorities



At Vanves, Syctom's financial support enabled to develop the practice of composting. Today, 6 residences (143 housing units) are equipped with a collective composter and 20 homes have an individual composter, besides the involvement of the municipal services themselves. In addition, new applications are being processed by Greater Paris Seine Ouest Region, thanks to a large-scale communication campaign backed by the City.

Bernard Gauducheau
MAYOR OF VANVES,
VICE-CHAIRMAN OF GREATER
PARIS SEINE OUEST,

REGIONAL COUNCILLOR OF
ILE-DE-FRANCE

A NEW SUPPORT PLAN FOR 2015-2020

// A global system

As follow-up to the 2010-2014 Metropolitan Waste Prevention Plan, Syctom approved a new scheme for the period 2015-2020 on 19 June 2015. This plan is no longer restricted to prevention but also **integrates sorting**, with two specific components: source separation of biowaste and improving the selective collection of packaging and graphic paper. While sustaining the approaches of the previous plan, it falls in line with the new legislative framework to promote the circular economy. With this comprehensive approach, Syctom wishes to propel the entire regional dynamics. Three types of intervention are planned: a shared support under Syctom's management, financial support in the context of calls for projects and a call for ideas to bring out innovative solutions.

// A stronger methodological support

With coaching, contributions of consulting firms and more, Syctom's technical and methodological support to local authorities has been further strengthened. Thus, regarding **composting**, in addition to the aids for purchasing equipment and training, two calls for tenders were issued by the end of 2015 to carry out an annual review of the

programmes and set up collective composting sites. The other innovation relates to **the source separation of biowaste**: Syctom decided to conduct preliminary studies for carrying out experiments in collecting and processing this type of waste. The aim is to focus on organisational synergies between collection from households and collection from large producers (canteens, markets, etc.).

// Awareness initiatives deployed

To foster awareness-raising among residents, Syctom offers local authorities a wide range of materials. About twenty anti-waste kits, 15 fun flags (all themes combined) and 3,600 anti-waste cooking tip sheets were distributed in 2015. This year Syctom strove in particular to **raise awareness about extended sorting instructions** among residents in the catchment areas of its Sevran and Nanterre centres. In Nanterre, nearly 72,000 memos were circulated. **The website www.recup-ID.fr, an online reuse directory** developed in late 2014 in partnership with the Ile-de-France Region and the Regional Chamber of Trades and Crafts (CRMA), was enriched and reached 677 registered professionals. 9,700 "Recup-ID" buttons were also distributed to traders and associations.

72,000 SORTING MEMOS
DISTRIBUTED TO RESIDENTS IN THE
NANTERRE AND SEVRAN
CATCHMENT AREAS

21 PROJECTS SUPPORTED
UNDER THE NEW SUPPORT PLAN

€5 M PARTNERSHIP AMOUNT
TO BUILD ECO-FACILITATOR TEAMS

Syctom's last strong commitment: **eco-facilitator teams** will be specially created in 2016 to carry out door-to-door awareness campaigns, special events and surveys. To this end, partnerships have been

signed to the tune of €5 with EcoGESTIK, Verdicité and the association e-graine (with the support of Pik-Pik Environnement).

LOCAL PROJECTS TAKE OFF

If the new aid system fuelled the rise of local initiatives (*see box*), several projects were supported during the first half of 2015 as part of the old plan, for a total amount of €82,000:

- the departmental Council of Val-de-Marne acquired an electro-mechanical composter, at the Valenton site;
- the Atmospheres Festival was held from 16 to 20 September 2015 in Courbevoie/La Défense;

- educational brochures on the topic of composting were circulated by the association Passerelles.info;
- awareness campaigns in Seine-Saint-Denis were conducted by SITOM93;
- the 2nd edition of Tritabroc, organised by La Collecterie, based in Montreuil;
- investment support was provided for the "Tous pour un Vélo" Recovery centre (Les Lilas, 93).



CALL FOR PROJECTS Initiatives "boosted" by the new aid package

Soon after the new system was set up, applications poured in from local authorities, beyond all expectations. Following the decision of the Syndicate Committee at the meetings of 5 November and 17 December 2015, a number of projects were funded for a total amount of €1,442,800:

- events organised by the Mont-Valérien agglomeration community and the City of Colombes during the European Week for Waste Reduction (EWWR);
- the Ecozone public festival, in Nanterre and Suresnes, on environmental awareness;
- diagnosis and proposals by a consultancy firm for the biowaste management project at the Châtillon market;

- initiatives undertaken by Paris Habitat's temporary recovery centres;
- the project to purchase a green waste disposer by the City of Ivry-sur-Seine;
- improvement of sorting operations in schools in the City of Saint-Denis;
- projects implemented by the Agglomeration community of Est Ensemble for composting, reuse and fight against food waste. In addition, three waste reception centre projects were supported in Neuilly-sur-Marne, Paris-Porte de Pantin and Paris-Ménilmontant along with two recovery centre projects: the Créative recovery centre, supported by the City of Paris, and that of Neuilly-sur-Marne.



The new clearer pricing will encourage member local authorities to do better, by reducing their costs and increasing support. Syctom thus intends to boost selective collection by applying a sliding scale of fees linked to the sorting performance and by providing services free of charge when the tonnage from selective collection exceeds that of 2015. Setting up of biowaste collection is also encouraged.

Nejma Monkachi
DEPUTY GENERAL MANAGER
FOR FINANCE AND GENERAL
ADMINISTRATION IN SYCTOM

NEW PRICING ANNOUNCED

Improving sorting performance also requires fair and incentive pricing. In 2015, Syctom donated a financial aid of 125.90€/t of selectively collected waste for an invoiced processing cost of 97.40€/t. But the year 2015 also marked a significant turning point, with **the decision to completely revamp waste processing fees**, in the interest of transparency and fairness. Thus, to reward local authorities and residents whose sorting performance

is improving, Syctom innovatively processes, free of charge, tonnages from selective collection exceeding those recorded in 2015. The new pricing, applied from 2016 onwards, also provides for a sliding scale of fees depending on the sorting performance, an attractive price for biowaste (5€/t) and a household waste processing cost equivalent to cost price.



Uniting for improved performance



In its regional development project, Est Ensemble plans to beef up the recovery waste in a logic of circular economy. I therefore hope that the extension of sorting instructions will achieve this goal, but also facilitate sorting practices for residents. To succeed in this endeavour, we are working in close partnership with Syctom to raise awareness among the people.

Gérard Cosme
CHAIRMAN OF EST ENSEMBLE
REGIONAL PUBLIC INSTITUTION

BRIDGING THE GAP BETWEEN COLLECTION AND PROCESSING

// Expand collection to new waste streams

The strategy to progressively extend the sorting instruction to all plastic packaging (pots, trays, blisters and films in addition to bottles) and modernise sorting centres is still underway. In September 2015, Eco-Emballages selected Syctom's application with 14 municipalities in the region* to prepare a new deployment phase. It will be implemented in 2016 in the catchment areas of its centres in Sevran and Romainville. Also effective in the Nanterre sorting centre, the extension of the sorting instruction to small metal packaging now affects 746,000 residents in Les Hauts-de-Seine (see page 23).

Meanwhile, to support the new biowaste stream, Syctom is committed to encourage new experiments on a significant scale, as part of its new support plan 2015-2020. A call for tenders was issued in late 2015 for preliminary studies. Eventually, a sector will be defined for each

department. Willing local authorities will be supported in implementing this approach among households and professionals, defining pre-collection and collection equipment, and monitoring the actions over a 9-month period and evaluating them. This support will help to assess their reproducibility, the conditions for success, but also the possible synergies in terms of organisation and resources, especially with large producers (hospitals, distributors, etc.).

Improving the supply of processing centres by the different streams collected is also a major concern. A call for expressions of interest for urban waste logistics was issued in this direction to ensure optimal use of HWIPs and increase energy recovery from residual household waste (see box).

* Le Bourget, Drancy, Dugny, Bagnolet, Bobigny, Bondy, Le Pré-Saint-Gervais, Les Lilas, Les Pavillons-sous-Bois, Montreuil, Noisy-Le-Sec, Pantin, Romainville, Villemomble.

746,000 RESIDENTS IN LES HAUTS-DE-SEINE AFFECTED BY THE SORTING OF SMALL METAL PACKAGING

+ 20% OF FINANCIAL SUPPORT PAID BY PRODUCER RESPONSIBILITY ORGANISATIONS, ECOLOGIC AND ECO-SYSTÈMES

CALL FOR EXPRESSIONS OF INTEREST FOR URBAN WASTE LOGISTICS

Non-stop green energy

In late 2015, Syctom launched a call for expressions of interest from associations, professionals and consulting firms to optimise energy supply and production at its energy recovery units (ERUs). These units supply energy to the CPCU's heating network (300,000 housing equivalents). They must therefore guarantee the required steam supply. Maintenance obligations, possible incidents or seasonal variations in CPCU's heat requirements are all disruptive factors. How can the supply of waste to the centres be optimised? What type of pooling is possible?

How can the calorific value of incinerated waste be improved? The contributions of the participants will be known in mid-2016. The best three,

rewarded with a €50,000 prize, will then be used to develop a set of specifications.



WITH PRODUCER RESPONSIBILITY ORGANISATIONS, FOR A CIRCULAR ECONOMY

The year 2015 enshrined calls for projects as our new mode of operation, now preferred by producer responsibility organisations to encourage the initiatives of local authorities to promote sorting.

// Packaging and graphic paper streams

The Eco-Emballages recovery plan includes a "collection improvement plan" component, in addition to the "extension of sorting instructions" component. Seventeen member local authorities, whose performance was less than 40 kg/person/year, were selected to implement 57 projects at an estimated cost of around €11 M exclusive of VAT. Further, Syctom will receive a €234,000 grant from Ecofolio, a producer responsibility organisation in charge of graphic paper EPR (Extended Producer Responsibility), for its project to redevelop the Bulky Objects sorting line at Isséane into a transfer area, especially for paper and cardboard. At the same time, Syctom signed a contract with CDIF (Ile-de-France Industrial Waste Centre) to test the resumption of specific paper collection at voluntary drop-off points or during exceptional destocking or document destruction. Finally, Syctom's new support plan 2015-2020 also provides for incentives to improve the selective collection of packaging and paper.

// Furniture waste stream

The stream continues to be deployed. In total, 32 of the 37 waste collection centres present in the Syctom region have a bin for the household waste collected and treated by the producer responsibility organisation. The first campaign of the declaration of activity (for the second half of 2013) was also validated in 2015 and the initial support funds to local authorities were paid, directly or indirectly. Syctom thus received support funds of €2 million, of which €1.1 million was donated to the member local authorities.

// Waste electrical and electronic equipment stream (WEEE)

The approval of the coordinating producer responsibility organisation OCAD3E was renewed for the period from 1 January 2015 to 31 December 2020. It provides the interface between Syctom and the two producer responsibility organisations: Ecologic and Eco-systèmes. This new agreement contributes on the whole to an increase of about 20% in financial support paid by producer responsibility organisations, which will continue to ensure the removal, decontamination and recycling of electrical and electronic waste.



Fostering a circular economy strategy implies bringing all the stakeholders together and creating synergies and innovation. It is also means investing in the deployment of sorting, collection, recovery and awareness-building systems, to make our local authorities the major players of circular economy. This is the driving force behind the partnership between Syctom and producer responsibility organisations.

Antoinette Guhl
DEPUTY MAYOR OF PARIS

MORE THAN **200** REGIONAL PLAYERS
PRESENT AT THE FIRST METROPOLITAN WASTE
CONFERENCE

6 LARGE TECHNICAL SYNDICATES
ASSOCIATED IN VARIOUS PROJECTS

DEVELOPING PARTNERSHIPS AND SHARING RESOURCES

/// Synergies with Greater Paris urban public services

In 2015, the major syndicates in Ile-de-France developed closer ties. These include SEDIF (Ile-de-France Water Syndicate), SIAAP (Interdepartmental Sanitation Syndicate for the Paris Region), SIPPEREC (Intermunicipal Syndicate of Suburban Paris for Electricity and Communication Networks), SIGEIF (Syndicate for gas and electricity in Ile-de-France), EBTP Seine Grands Lacs (Local Public Basin Establishment) and Syctom. On 14 April, at the Meeting of Ile-de-France Mayors, all of them signed a **framework cooperation agreement for international solidarity**. In December, they worked together at COP21 in a shared booth and during side events. One of these side events was devoted to the SIAAP/Syctom partnership for a project to jointly process bio-waste and sewage sludge (see page 21), while another focussed on complementary action on international cooperation projects.

/// Pooling facilities among processing syndicates

After the **First metropolitan conference on waste in July** (see box) and the **Conference of the Chairpersons of waste processing syndicates in Ile-de-France in October**, ties with neighbouring waste processing syndicates were strengthened. In December, the signing of an amendment to the agreement between Syctom and **SIEVD** marked a new step towards pooling their respective facilities. A part of the waste from the communities located in Syctom's territory will thus be processed in SIEVD's facilities. A joint project to modernise the sorting centre in Rungis is also in the pipeline.

Furthermore, an agreement for the mutual use of the Nanterre sorting centre and the energy recovery unit CRISTAL in Carrières-sur-Seine was signed between Syctom and **SITRU**. Finally, Syctom signed with **SIREDOM** a memorandum of intent to study the appropriateness of feeding waste to their future intensive sorting centre.



The first Metropolitan Conference on Waste fostered the sharing a future vision in terms of waste management policies and opened up a constructive dialogue on the challenges ahead. Harnessing energies to serve the people and achieving ambitions for sustainable development, circular economy, reducing waste and enhancing its treatment call for new synergies that transcend regional approaches. The strength lies in sharing Syctom's common goals with this Conference.

Karina Kellner
VICE-CHAIRPERSON OF SYCTOM,
CHAIRPERSON OF SITOM93



FIRST METROPOLITAN CONFERENCE ON WASTE

Stakeholders in the field of waste respond to the call of Greater Paris

In early July, Syctom brought together some 200 local elected representatives, parliamentarians, government representatives, partners and operators at the Maison de la Chimie in Paris to discuss waste management at the metropolitan level. What type of organisation for the new region?

Why pool facilities and how? This event, held a few weeks before the adoption of the NOTRe Law, was an opportunity for everyone to consider the impacts of this institutional reform. It above all reaffirmed the importance of greater cooperation and sharing between regions and between

syndicates. With 2.3 million tonnes to be processed per year for Syctom, the obligation to reduce landfilling and recover increasingly more, the solutions for tomorrow necessarily imply exchanging best practices and developing innovative collaborations.



Innovating and sharing our expertise

PURSUE A DYNAMIC OF INNOVATION

/// Exemplary performance and innovation

In October 2015, Syctom decided to **engage in CSR** (Corporate Social Responsibility). With the support of a project management assistant, it intends to enhance its exemplary role and encourage better acceptance of its facilities by the civil society. After pre-diagnosis and benchmarking, three strategic axes were planned: safety in the facilities for the social aspect, developing relevant indicators to ensure transparency, for the environmental component, and measuring the leverage effect in terms of activities and jobs, for the social component.

This exemplary and innovative approach is also reflected in several **research and development projects**, presented at COP21. In addition to its innovative partnership with SIAAP, Syctom is exploring a unique solution for capturing CO₂ contained in incineration flue gases at Saint-Ouen (see box).

Flue gas, a future resource?

/// **Producing bioplastic through CO₂ from waste incineration flue gases.** This project could become a European first thanks to the R&D programme launched by Syctom. Its principle: the CO₂ in the flue gas from the Saint-Ouen centre would "feed" micro-algae in photobioreactors. Algal material recovered would be converted into biomaterial. What is at stake are reduced environmental impact and a new source of

raw material. To explore this avenue, an R&D programme coordinated by SETEC Environnement will be conducted for four years. It will bring together the bio-refining engineering research centre at the École Polytechnique of Montreal, Centre for Energy efficiency of Systems at MINES Paris Tech, the industrial ecology department of the Royal Institute of Technology in Stockholm (KTH) and Sveriges Tekniska Forskningsinstitut (SP).



The resources that the research centre will contribute for the project's success are unlimited: human resources, our expertise, globally unique measurement techniques that we have developed to ensure that this gas responsible for greenhouse effect becomes a resource, once captured.

Dr Jamal Chaouki
MEMBER OF THE BIO-REFINING
ENGINEERING RESEARCH
CONSORTIUM
AT THE ÉCOLE POLYTECHNIQUE DE
MONTRÉAL

89,000 PARTICIPANTS AND VISITORS
AT THE COP21 CLIMATE GENERATION AREAS
IN WHICH SYCTOM WAS PRESENT

1,209 VISITORS
TO SYCTOM CENTRES
(INTERNATIONAL DELEGATIONS)

60 RECYCLING GUYS MOBILISED
FOR COP21



A “zero waste, zero wastage municipality” is primarily a regional development project with a common goal and pooled resources to achieve it. This dynamic that we are initiating gives momentum all the regional players, including businesses. Moreover, “zero waste” is understood not merely through the prism of prevention. It means “zero non-recovered waste”.

Catherine Boux
DEPUTY GENERAL MANAGER
OF OPERATIONS
AND WASTE PREVENTION
AT SYCTOM

// New modes of organisation

In line with the guidelines set out following the change in governance in 2014, Syctom adopted a **new project-based internal organisation in 2015**. The goal is to better mobilise teams based on needs, for the sake of efficiency, cost control and lead-times. A new organisation chart was drawn up to strengthen ties between the departments and instil a sense of cross-functionality in the services. To support this reorganisation, a methodology and project management tools were developed with the help of a service provider, and then distributed to all staff during a seminar and various workshops. In addition, the **eco-exemplary approach** within teams was pursued. Seven new composters were distributed to agents and a delivery service for fruit and vegetables from organic or sustainable

agriculture was set up. In addition, 43 computers were donated to renew the computer equipment. Another highlight of 2015: **the application of Syctom and five of its member local authorities (Paris, Est Ensemble, Versailles Grand Parc, Ivry-sur-Seine and Clichy-la-Garenne) as part of the second call for “Zero waste, zero wastage municipalities” projects** was selected on 13 November. The possibilities for contracting and implementation with the local authorities and ADEME will be studied in 2016. This approach has already introduced a new dynamics and a new way of working with the region, based on resource pooling and experience feedback. Forging closer ties between economic players, associations and citizens, it will benefit the entire region, by reproducing the most convincing experiments.

ENHANCING OUR EXPERTISE

Showing what waste is turned into, explaining how it is recovered, promoting best practices, introducing innovations, and much more: this is how Syctom strives to inform, share and disseminate its knowledge among a wider audience, including internationally. Thus **foreign delegations** from ten different countries came to discover its facilities in 2015. Representatives of the Global Sustainable Cities Network from the United Arab Emirates, Sweden and Denmark visited Isséane in particular. In total, there were 1,209 visitors. However, no open house was held this year because of the Vigipirate plan implemented in January.

At the same time, Syctom deployed **new communications media**. COP21 in particular provided an opportunity to produce films, events, a web documentary or even a dedicated website, which prefigured the revamp of Syctom's official site in 2016. The partnership with the Pavillon de l'Arsenal was also renewed. It will help to provide information on Syctom facilities present on the “Paris Metropolis 2020” digital model developed with Google. All these exemplary initiatives contribute to Syctom's complete transparency about its activities.



COP21 AT PARIS-LE BOURGET

Syctom mobilised for COP21

On 12 December 2015, COP21 closed successfully with the signing of a unique agreement. This success applies to the very organisation of the event which, for the first time incorporated a “zero waste, 100% recovery” scheme. Objective: an exemplary way to manage waste generated by COP21 and its 130,000 participants and visitors. As an official partner, Syctom was particularly involved. It recruited and coached 60 recycling guys, who were then deployed on Le Bourget site to educate visitors about good sorting practices

and explain to them the waste management method adopted for COP21 at Le Bourget. This international event was also an opportunity to strengthen the dynamics of cooperation and innovation adopted by Syctom, through a booth shared with other urban public services of Greater Paris (SIAAP, SIPPEREC, SEDIF, SIGEIF, EPTB Seine Grands Lacs). Finally, three side events allowed Syctom to showcase its most innovative projects. All these actions testify to the involvement of the Syndicate in the fight against global warming.

ENGAGING IN INTERNATIONAL SOLIDARITY ACTION

The international solidarity programme launched in November 2015 gives a concrete expression to Syctom's commitment in the field of external actions. In line with the “1% waste” initiative introduced by the extension of the Oudin-Santini Law of 7 July 2014, it allows the Syndicate to contribute to controlling the increasing production of waste, in the interest of public health and environmental preservation.

// Participating in community development in developing countries

Transcending the desire for solidarity and sharing of know-how, the support provided by Syctom aims to sustainably improve the living conditions of people in developing countries, promote citizenship education and reduce landfilling. To meet needs as best as possible, Syctom has defined **three types of aid**: mobilising human and financial resources, subsidies to associations or communities and emergency assistance in the event of natural disasters. It will be especially directed towards countries with priority for French development aid. Beginning in 2015, several projects that meet the eligibility conditions received Syctom's support amounting to €60,000. A progressive increase has been announced, with a budget of €600,000 in 2016.

// An opportunity for Ile-de-France syndicates to work together

Syctom's solidarity programme is also an opportunity to **innovate in waste processing and build partnerships** with major Ile-de-France syndicates, particularly in the areas of water and sanitation. The framework agreement signed on 14 April 2015 at the Meeting of Ile-de-France Mayors now brings together Syctom, SIAAP, SIPPEREC, SEDIF SIGEIF, and EPTB Seine Grands Lacs around international cooperation projects to strengthen their synergies.

Projects supported in 2015

// The support funds granted by Syctom generally vary from €15,000 to €100,000

MADAGASCAR
■ Mahajanga: waste management and recovery project
■ Ambodifotatra: awareness film on waste management
■ Antananarivo: innovative urban sanitation
TOGO
■ Dapaong: improving access to safe water and sanitation

CAMEROON
■ Dschang: waste management and recovery project
MAURITANIA
■ Kiffa: support for structuring the solid waste management system
VIETNAM
■ Vinh Phuc: professional and optimised waste management
HAITI
■ Municipalities in the “Le Marien” corridor: construction of a sorting and composting centre



In a world that has become indivisible and crippled with inequalities, it is natural that our syndicate participates in solidarity with the most disadvantaged populations. Because access to drinking water and waste treatment are closely linked, Syctom will finance waste collection and recovery projects, in regions in Africa, Asia or the Middle East, to ensure continuity with the action of SEDIF, the Ile-de-France Water Syndicate.

Stéphane Weisselberg

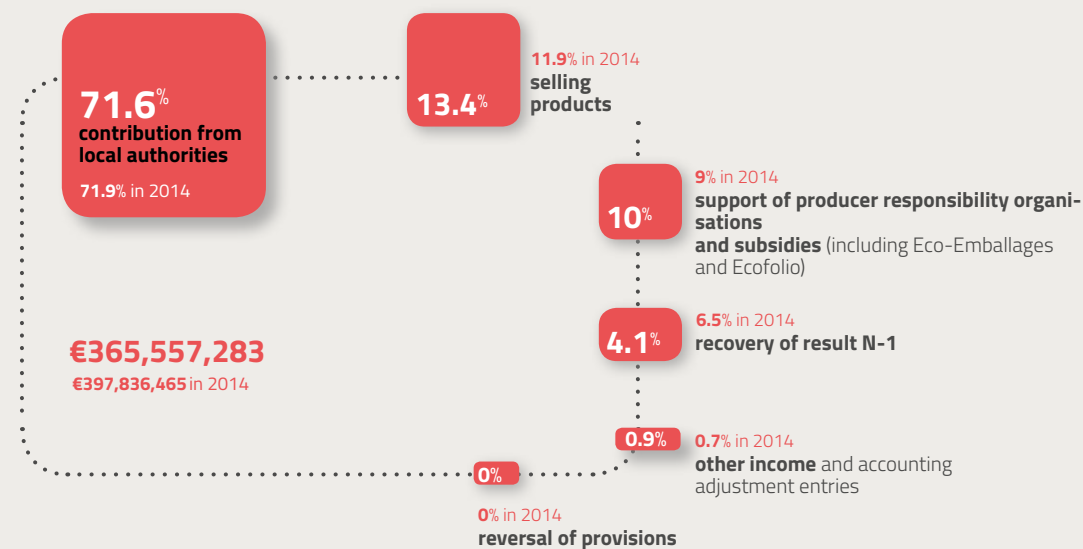
DEPUTY MAYOR OF
ROMAINVILLE,
REGIONAL COUNCILLOR OF EST
ENSEMBLE,
SYCTOM BOARD MEMBER,
CHAIRMAN OF THE “SOLIDARITY
AND INTERNATIONAL
COOPERATION” COMMITTEE



TECHNICAL AND FINANCIAL REPORT

2015

Operating Income 2015

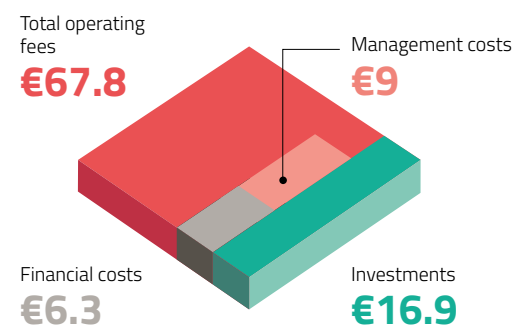


DROP IN FEES

Following the decision of the Syndicate Committee, the fees were significantly cut down in 2015, by **-7%**. The price thus dropped to €6.37 per person and to €97.46 per tonne dumped. The contribution of each local authority was calculated pro rata based on its population and the amount of waste brought to Syctom. Due to the combined effect of decreased prices and the decline in tonnages in 2015, the income from fees was €261.8 million compared to €285.9 million in 2014, i.e. a decrease of **8.3%**.

USE OF THE FEES

for €100

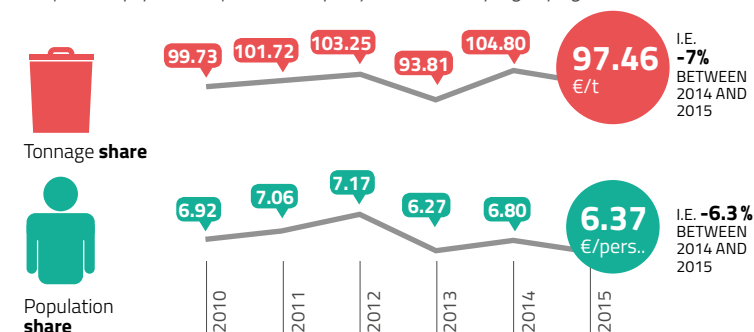


INCOME FROM PRODUCER RESPONSIBILITY ORGANISATIONS

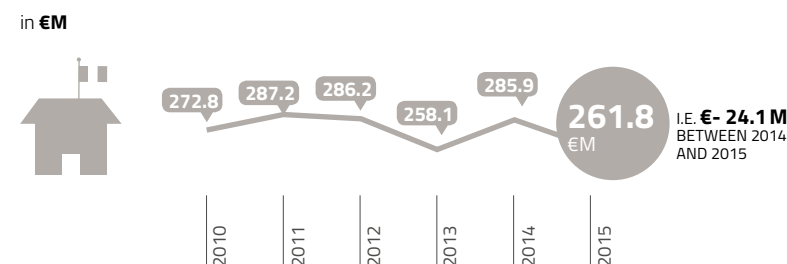
The products sold include steam and electricity from energy recovery and materials from selective collection, bulky objects and the incineration of household waste. Aid from producer responsibility organisations refers to funds paid by Eco-Emballages, Ecofolio, Éco-mobilier and OCAD3E. Between 2014 and 2015, the incomes generated in this manner grew by **+€2.7 million** (€85.8 million

CHANGE IN THE FEE AMOUNT

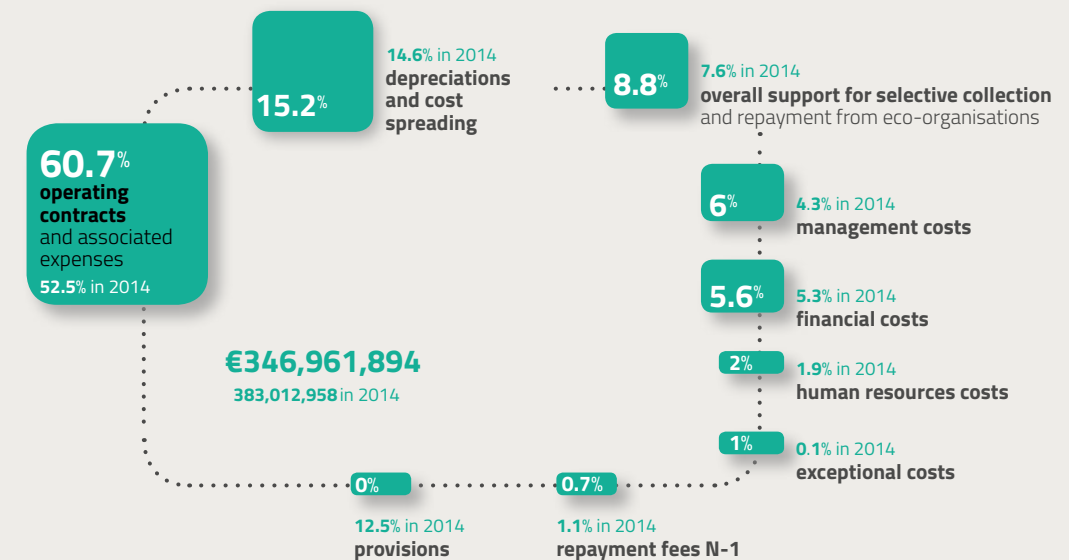
Calculated pro rata based on the quantity of waste these fees bring to Syctom and from the population of each municipality or inter-municipal grouping.



CHANGE IN LOCAL AUTHORITIES' CONTRIBUTIONS



Expenditure 2015



OPERATING COSTS UNDER CONTROL



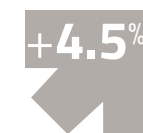
In 2015, operating contracts represent 61% of the operating expenses and amounted to approximately €211 million, compared to €201 million in 2014. The **increase of €10 million** is mainly due to the additional costs (€6.7 million) generated by the treatment of selectively collected waste in external centres when modernisation work was underway in the sorting line in Romainville.

HUMAN RESOURCES COSTS STABLE



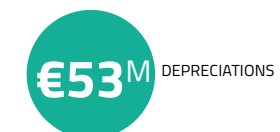
With a workforce of 113 agents as of 31 December 2015, human resources costs still make up 2% of Syctom's operating expenditure, i.e. **€7 million** in 2015.

SUPPORT TO SELECTIVE COLLECTION ON THE RISE



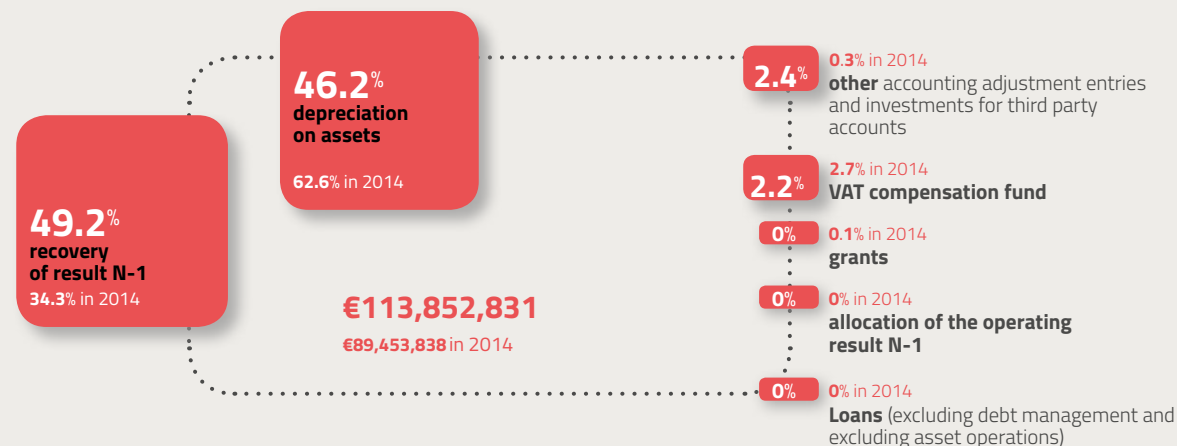
These supports include Syctom's historic aid of €125.89 per tonne of selective collection, the repayment of income from glass, support from producer responsibility organisations (Eco-Emballages, Ecofolio, Éco-mobilier) and the additional aid set up under the new Syctom 2015-2020 support system. In 2015, the amount of this item grew from €29.1 million to €30.4 million. This growth comes mainly from increased tonnages from selective collection and a more substantial support from Éco-mobilier than originally expected.

SELF-FINANCING GUARANTEED



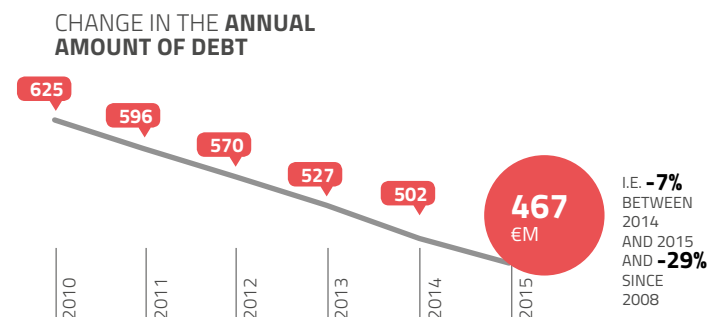
Depreciations amounted to around €53 million in 2015, marking a very slight change compared to 2014 (€56 million). Their high level (15% of operating expenditure in 2015) means that the investment sector is guaranteed strong self-financing capacities, which paves the way for limiting Syctom's future debts.

Investment Income 2015

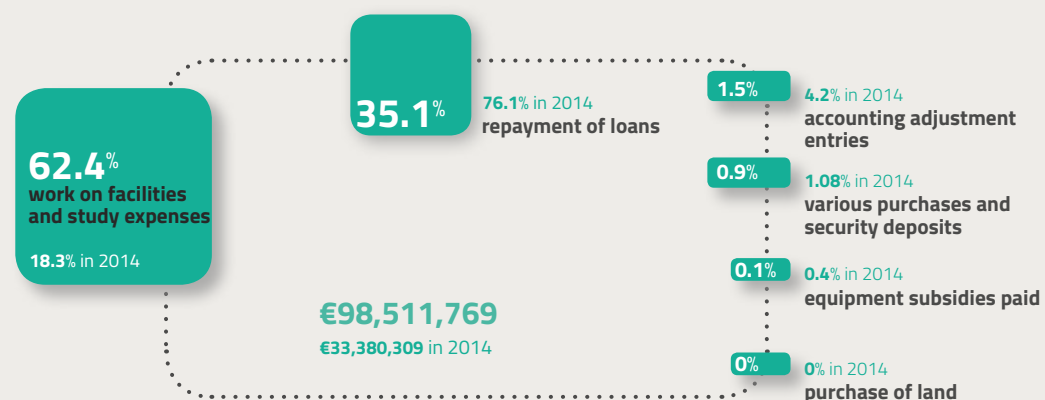


DEBT REDUCTION CONFIRMED

Syctom's debt reduction gained momentum in 2015, with the annual repayment of the capital (€25.4 million), but also the early repayment of three loans (€9.2 million). Syctom's financial costs went from €20.4 million in 2014 to €19.4 million in 2015, i.e. a **reduction of €1.3 million (-5%)** due to the reduction in the outstanding debt and historically low variable rates in 2015.



Expenditure 2015



INVESTMENTS ON THE RISE WITH THE RECOVERY OF CAPITAL EXPENDITURE

Capital expenditures grew considerably in 2015: they stood at €62 million, compared to €6 million in 2014. Syctom implemented major operations early in the year:

- modernisation of the sorting line in the Romainville centre,
- launch of the study phase for the project to reconstruct the Ivry / Paris XIII centre,

- continued studies for urban integration and treatment of flue gases from the Saint-Ouen centre,
- the start of feasibility studies for the sorting centre in Paris XVII, after the award of the contract to design/build/operate it.

Investment programme per site

CONTINUOUS IMPROVEMENT AND MAINTENANCE OF STANDARDS IN SYCTOM FACILITIES

in €M excl. tax

SITES	WORK FINANCED IN 2015
ISSÉANE	0.33
IVRY/PARIS XIII	0.11
NANTERRE	0.11
PARIS XV	0.02
SAINT-OUEN	1.88
SEVRAN	0.15
TOTAL	2.60

WORK RELATED TO EXISTING FACILITIES OR TO NEW PROJECTS

in €M excl. tax

SITES	NATURE OF THE PROGRAMME	OPERATING PERIOD	WORK FINANCED IN 2015	TOTAL INVESTMENT
ROMAINVILLE	project to renovate the selective collection sorting line	2015	19.74	29.90
SAINT-OUEN	project to integrate the centre into the urban area - landscaping and architectural work and flue gas treatment	2012-2019	1.60	201.61
BALANCES OF OPERATIONS (ISSÉANE, PARIS XV, WORK ON EXTENDING THE OPERATING LIFE OF IVRY/PARIS XIII)			0.27	0.81
IVRY/PARIS XIII	project for a energy recovery centre	2007-2026	25.62	587.39
PARIS XVII	project for a sorting centre for selective collection	2010-2019	1.09	74.54
OTHER PROJECTS (METHANISATION IN ROMAINVILLE AND BLANC-MESNIL/AULNAY-SOUS-BOIS)			0.01	
TOTAL			48.33	

GENERAL TOTAL OF INVESTMENTS

50.93

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 2015

This document will be submitted to a vote by the Syctom syndicate committee, the metropolitan agency for household waste, during its meeting on 27 June 2016.

SYCTOM PROCESSING UNITS AND TONNAGE PROCESSED

in tonnes



3 INCINERATION CENTRES WITH ENERGY RECOVERY

AUTHORISED CAPACITY

TECHNICAL CAPACITY



QUANTITIES INCINERATED

ISSÉANE	460,000	460,000	459,973
IVRY/PARIS XIII	730,000	700,000	659,809
SAINT-OUEN	650,000	600,000	563,231



6 SORTING CENTRES



QUANTITIES RECEIVED

ISSÉANE	22,500	23,000	23,085
IVRY/PARIS XIII	36,000	30,000	29,894
NANTERRE	40,000	40,000	35,795
PARIS XV	20,000	20,000	17,764
ROMAINVILLE	45,000	45,000	36,423
SEVRAN	17,000	17,000	17,533

* The work carried out in 2015 increased the technical capacity of the centre. During the work, the tonnages were sorted by PAPREC.

** Authorisation application under examination.



2 WASTE RECEPTION CENTRES



QUANTITIES RECEIVED

IVRY/PARIS XIII	6,673
ROMAINVILLE	8,904

OVERALL ANNUAL SUMMARY

NUMBER OF MUNICIPALITIES IN SYCTOM'S SCOPE	84
NUMBER OF INHABITANTS IN SYCTOM'S SCOPE	5,777,444
Figures taken from the general population census for 2012 with an estimated change for 2015	
GROSS TONNAGES OF WASTE	
Household waste, sweepings and green waste (in tonnes)	1,899,496
Bulky objects (in tonnes)	179,200
Requisitions (in €/tonne)	194
SELECTIVE COLLECTION (in tonnes)	
Newspapers and magazines, multimaterials, paper, cardboard	179,581
Glass	0
Waste reception centres	15,577
Biowaste	117
FEES	
Tonnage share (in €/tonne)	97.46
Population share (in € / pers.)	6.37

EXTERNAL UNITS USED BY SYCTOM AND TONNAGE PROCESSED

in tonnes



INCINERATION CENTRES



QUANTITIES INCINERATED

ARGENTEUIL (NOVERGIE)	32,374
CARRIÈRE SOUS POISSY (NOVERGIE)	4,328
CARRIÈRES-SUR-SEINE (NOVERGIE)	10,719
MASSY (NOVERGIE)	2,587
SAINT-THIBAUT-DES-VIGNES (NOVERGIE)	35,260
SARCELLES (SAREN VÉOLIA)	38,762
BACKUP CENTRES	1,056



SC SORTING CENTRES



QUANTITIES RECEIVED

LE BLANC-MESNIL (PAPREC)	4,030
CHELLES (GÉNÉRIS)	4,161
GENNEVILLIERS (SITA)	12213

SC: selective collection



BO SORTING CENTRES



QUANTITIES RECEIVED

BONNEUIL (TAÏS)	2,827
BUC (NICOLLIN)	10,542
CHÂTILLON (TAÏS)	6,710
LA COURNEUVE (PAPREC)	32,900
GENNEVILLIERS (SITA)	27,719
GENNEVILLIERS (REP)	3,984
IVRY (REVIVAL)	1,171
IVRY (SOFRAT)	17,607
IVRY (CEMEX)	9,072
NOISY (REVIVAL)	38,276
PIERREFITTE (CDIF)	3,565
VILLENEUVE-LE-ROI (PAPREC)	3,767
GENNEVILLIERS (PAPREC)	Worksite BO: 18,697
IVRY (CEMEX)	Worksite BO: 7,706

BO: bulky objects



STORAGE FACILITIES FOR HAZARDOUS OR NON-HAZARDOUS WASTE (ISDND)



QUANTITIES

ISDD VILLEPARISIS (SITA)	Refiom: 41,596
ISDND BOUQUEVAL (EPR)	68,340
ISDND CLAYE-SOUILLY (EPR)	62,221
ISDI CLAYE-SOUILLY (EPR)	6,837
ISDI (PRIVATE BO CONTRACTS)	30,269
OTHER ISDND (PRIVATE CONTRACTS)	81,050

EXPENDITURE AND INCOME 2015

TERMS OF OPERATION OF THE DISPOSAL SERVICE AWARDED TO SYCTOM, THE METROPOLITAN AGENCY FOR HOUSEHOLD WASTE	PUBLIC CONTRACTS
Annual amount of expenditure for processing waste by Syctom (total real expenditure section of operation of 2015 and 2014 administrative account - excluding provisions)	€294.3 M
Terms and conditions for financing the general treatment service	Contribution from local authorities, aid from Eco-Emballage for selective collection and from other eco-organisations, selling products
Terms and conditions for setting the special fee for the disposal of assimilated products	not applicable
Annual total of main contracted processing services (excluding GER)	€163.9 million incl. tax
Overall cost per tonne of waste picked up from the bulky object disposal service (processing or storage) including transport and landfilling of sorting rejects	98 €/t
Overall cost of processing selective collections	276 €/t
Overall cost of incineration with energy recovery	92 €/t
Cost of landfill	96 €/t
Income from access rights to processing and storage centres at which the local authority is the project owner for assimilated waste	not applicable
Repayments for selective collection	Syctom support and Bareme E repayments (excluding glass) €26 M Repayments for glass €3.2 M
Itemised amount of aid received from certified bodies	Eco-Emballages €29.1 M Ecofolio €4.1 M OCAD3E €0.1 M Éco-mobilier €2.8 M

RECOVERY

ENERGY AND MATERIALS RECOVERY



ENERGY AND MATERIALS FROM INCINERATION

Electricity (in MWh)	46,215
Steam (in MWh)	2,807,845
Clinkers (in tonnes)	320,180
Ferrous (in tonnes)	32,625
Non-ferrous (in tonnes)	2,751



RECYCLING OF MULTI-MATERIALS (in tonnes)

Plastics, paper, cardboard, steel and aluminium, small electrical appliances	129,909
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RECYCLING OF BULKY OBJECTS (in tonnes)

Wood, scrap metal, cardboard boxes	107,997
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WASTE RECEPTION CENTRES (in tonnes)

	9,121
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COMPOSTING (in tonnes)

	19
--	----

LANDFILL



STORAGE (in tonnes)

	211,610
--	---------

INCOME FROM MATERIALS RECOVERY in €M excl. tax



FROM SORTING OF SELECTIVE COLLECTION AND BULKY OBJECTS

Newspapers/magazines	4.3
Plastic packaging	2.4
Cardboard and recovered household packaging	4.5
Paper mix	1.3
Steel	0.3
Non-ferrous scrap metal from BO	0.8
Glass	2.7
Wood	0.4
TOTAL	16.7



FROM INCINERATION

Scrap metal	1.5
Aluminium from incineration	2.0
TOTAL	3.5

TOTAL	20.2
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INCOME FROM ENERGY RECOVERY in €M excl. tax



FROM INCINERATION

Sale of steam and electricity (Isséane and Ivry/Paris XIII)	27.6
Sale of steam and electricity (Saint-Ouen)	18.7
TOTAL	46.3

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

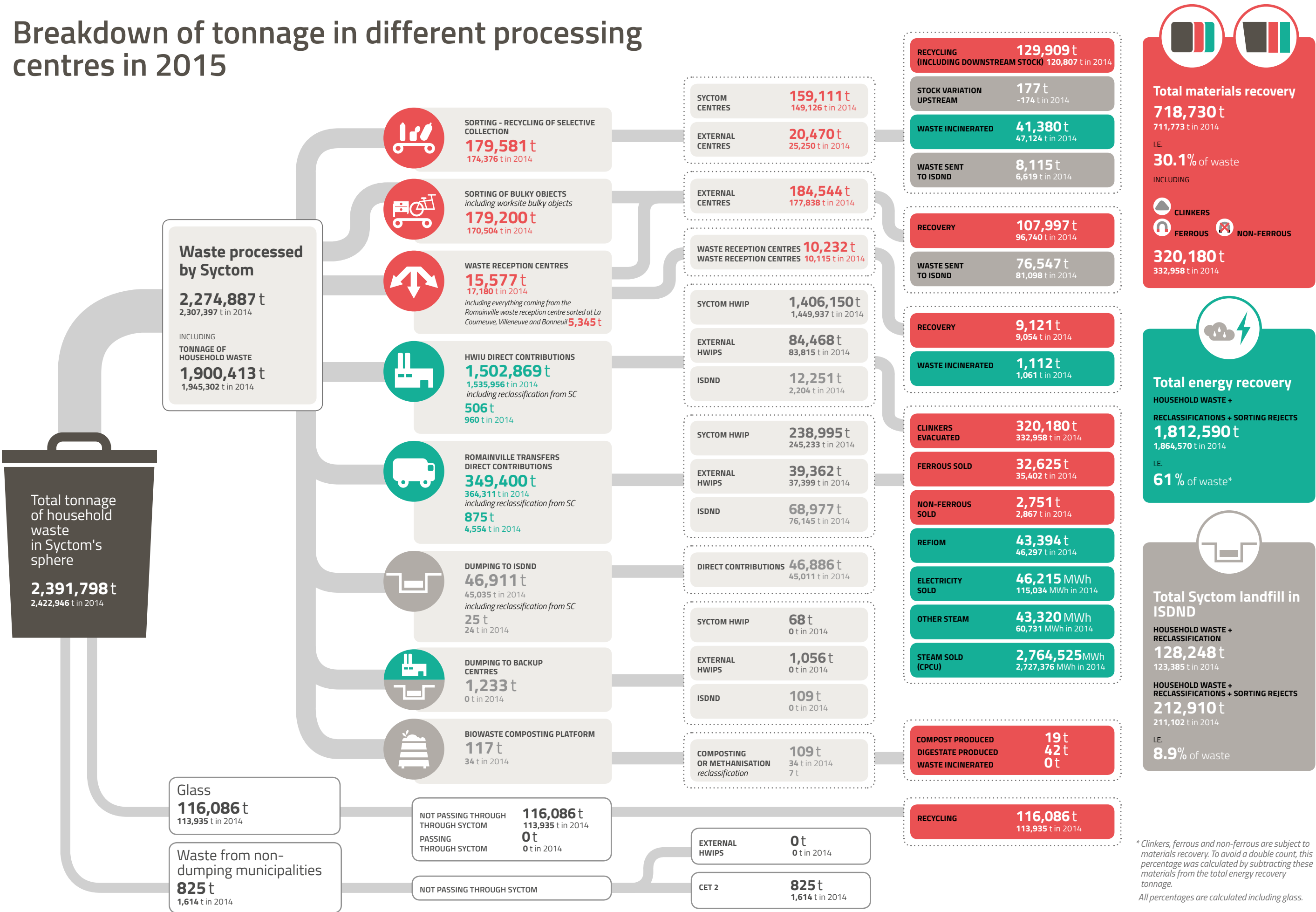
Continuous improvement and security on Syctom facilities

- Launch of a multi-supplier framework agreement relating to a SPS mission (Safety and Health Protection) for all Syctom sites (Jan. 2015).
- Launch of an open call for tenders for improvement works on sorting and conveying on the clinker line at the Isséane centre (June 2015).
- Amendments to contracts with various sorting centre operators for enhanced surveillance for fire risk protection (June 2015).
- Launch of an open call for tenders for the diagnostics of fire safety, ISS and safety mission in Syctom centres (Sept. 2015).
- Launch of an open call for tenders for a framework agreement on technical assistance and project management, particularly as part of the continuous improvement of centres (Sept. 2015).
- Amendment to the contract with the Nanterre sorting centre operator for carrying out work to ensure the compliance of ventilation and air treatment and to improve the heating of sorting cabins (Dec. 2015).

Control of air emissions

- Launch of an open call for tenders for carrying out physicochemical measurements on liquid discharges from Syctom facilities (Jan. 2015).
- Launch of an open call for tenders for the olfactometric and sensory measurements in and around Syctom facilities (Sept. 2015).
- Airparif agreement on surveillance and monitoring of impacts of metals and air pollution (Sept. 2015).
- Launch of an open call for tenders to carry out atmospheric dispersion studies of emissions and assessment of health risks in the environment and in the premises of Syctom centres (Dec. 2015).

Breakdown of tonnage in different processing centres in 2015



Processing costs



SELECTIVE COLLECTION

TONNAGES PROCESSED **179,581 t** 174,376 t in 2014

EXPENDITURE	Operating costs	€48,228,953	€39,951,539
	Depreciation and financial costs	€7,257,070	€6,729,660
	TOTAL PROCESSING COST	€55,486,023	€46,681,199
INCOME	Income from Syctom materials	€12,663,654	€11,567,849
	Support from producer responsibility organisations to Syctom	€17,760,503	€16,405,567
	TOTAL INCOME	€30,424,157	€27,973,416

NET COST OF PROCESSING*		€18,645,014	€18,707,783 in 2014
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POLICY OF SUPPORT AND REPAYMENT

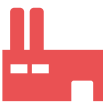
EXPENDITURE	Syctom support and repayment for local authorities	€29,505,304	€29,281,412
INCOME	Eco-Emballages income and glass income earned by Syctom on behalf of its member local authorities (repayment Euro for Euro)	€5,005,817	€4,779,490

COST OF POLICY OF SUPPORT		€24,499,487	€24,501,922 in 2014
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BUDGETARY COST

EXPENDITURE	Processing costs + support and repayment	€84,991,328	€75,965,612
INCOME	Syctom's income + income received on behalf of local authorities	€35,429,974	€32,752,906

BALANCE TO BE FINANCED BY CONTRIBUTIONS OF LOCAL AUTHORITIES <i>NET PROCESSING COST + POLICY OF SUPPORT</i>		€49,561,353	€43,212,706 in 2014
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INCINERATION WITH ENERGY RECOVERY

TONNAGE PROCESSED **1,808,099 t** 1,864,570 t in 2014

EXPENDITURE	Operating costs	€165,072,537	€163,994,458
	Depreciation and financial costs	€62,960,840	€68,024,311
	TOTAL PROCESSING COST	€228,033,377	€232,018,769
INCOME	Income from Syctom materials	€3,371,166	€4,067,197
	Syctom producer responsibility organisation support	€11,225,937	€12,524,948
	Energy income	€46,307,207	€49,428,075
	TOTAL INCOME	€60,904,310	€66,020,221

NET COST OF PROCESSING*		€167,129,067	€165,998,548 in 2014
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BULKY OBJECTS

TONNAGES PROCESSED **184,544 t** 177,838 t in 2014

NET COST OF PROCESSING*		€18,050,987	€17,431,372 in 2014
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LANDFILL

TONNAGES PROCESSED **130,560 t** 129,179 t in 2014

NET COST OF PROCESSING*		€12,547,271	€13,319,593 in 2014
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* The net cost of processing corresponds to the sum invoiced by Syctom to local authorities for processing their waste.

I.E.
140
€/t
107 €/t in 2014

I.E.
136
€/t
141 €/t in 2014

I.E.
276
€/t
248 €/t in 2014

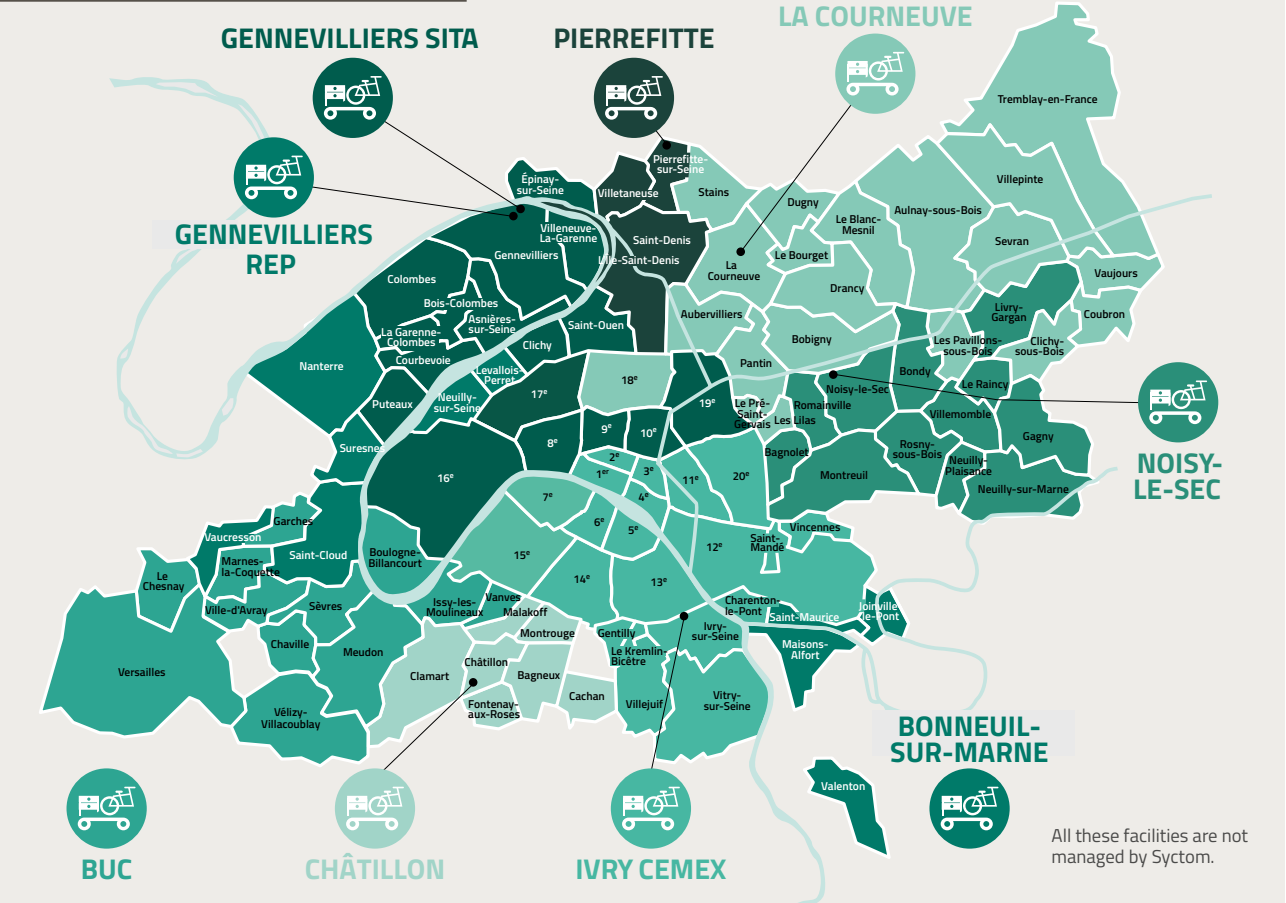
I.E.
92
€/t
89 €/t in 2014

I.E.
98
€/t
98 €/t in 2014

I.E.
96
€/t
103 €/t in 2014

Bulky objects

CATCHMENT AREAS JANUARY 2016



All these facilities are not managed by Syctom.

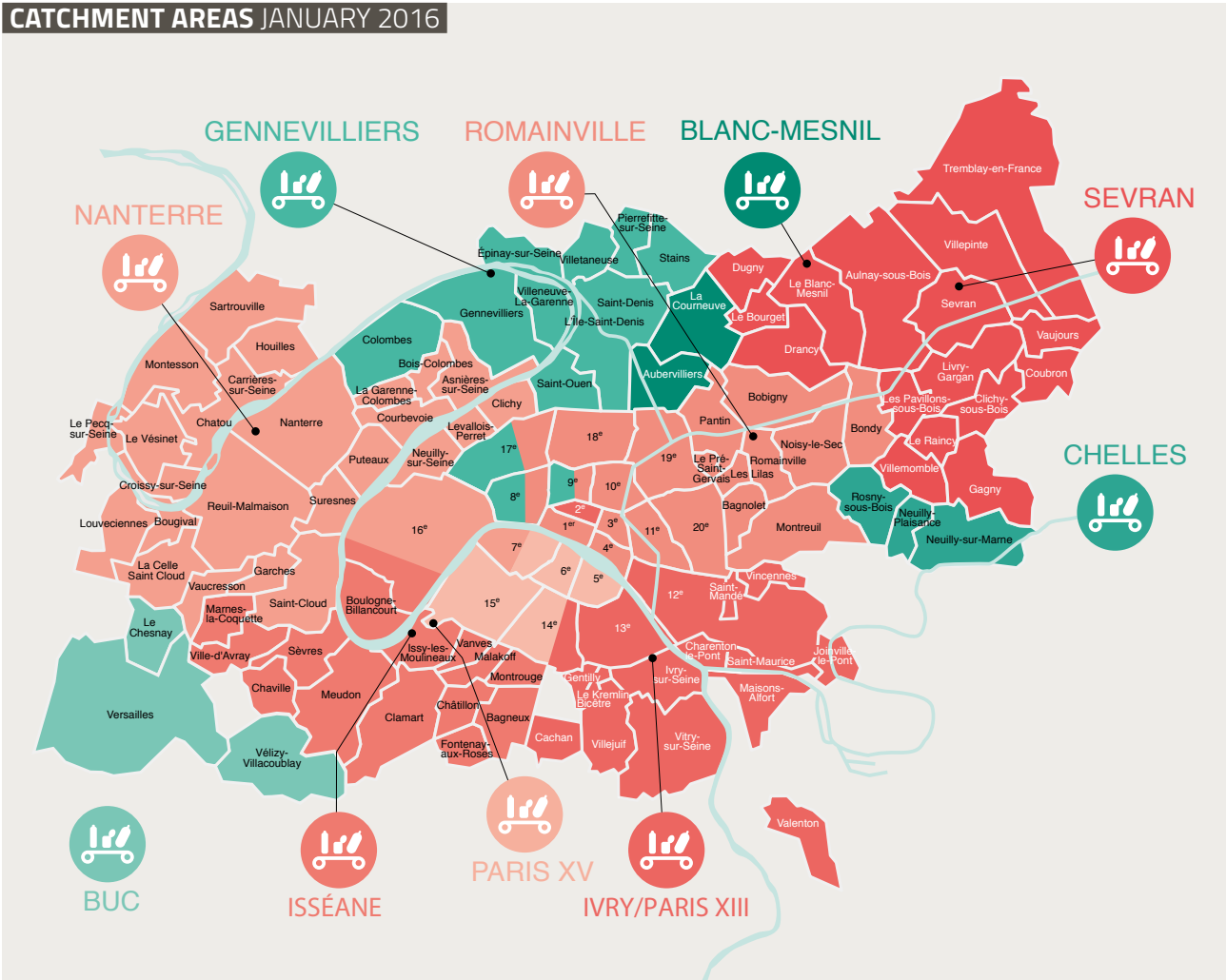
BREAKDOWN OF TONNAGE 2015

SORTING CENTRES FOR BULKY OBJECTS	TONNAGES RECEIVED	TONNAGES RECOVERED		OPERATORS
BUC	10542			NICOLLIN
GENNEVILLIERS	3984 <i>3,712 transferred</i>	10192		EPR
CHÂTILLON	6710 <i>6,724 transferred</i>			TAÏS
LA COURNEUVE	32,900	18,567		PAPREC
GENNEVILLIERS SITA	27,719	14,954		SITA
IVRY (REVIVAL)	1171 <i>1,191 transferred</i>			REVIVAL
NOISY REVIVAL	38,276 <i>37,059 transferred</i>	23,583*		REVIVAL
PIERREFITTE	3,565			CDIF
IVRY	17,607 <i>17,607 transferred</i>	9,344*		PAPREC
VILLENEUVE-LE-ROI	3,767			PAPREC
IVRY CEMEX	9,072 <i>transferred</i>	5,398*		CEMEX
BONNEUIL	2,827			TAIS
TOTAL	158,141	82,038		

SORTING OF WORKSITE BULKY OBJECTS	TONNAGES RECEIVED	TONNAGES RECOVERED		OPERATORS
GENNEVILLIERS	18,697	18,341		PAPREC
IVRY	7,706	7,618		CEMEX
TOTAL	26,404	25,959		
TOTAL	184,544	107,997		

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

Selective collection



BREAKDOWN OF TONNAGE 2015

SORTING CENTRES	TONNAGES		Variations in stock upstreamdownstream		TONNAGE RECOVERED	OPERATORS
	RECEIVED (including reclassifications)	SORTED				
ISSÉANE	23,085	23,042	0	0	16,295	TSI
IVRY/PARIS XIII	29,894	29,666	0	0	18,970	SITA
NANTERRE	35,795	35,594	30	68	26,375	Véolia Propreté
PARIS XV	17,764	17,753	0	0	13,835	COVED
ROMAINVILLE	36,423	35,548	0	0	27,090	Urbaser
SEVRAN	17,533	17,508	0	0	12,605	IHOL
LE BLANC-MESNIL	4,030	4,030	19	77	2,925	PAPREC
BUC (TRANSFER)	89	0	72	0	0	NICOLLIN
CHELLES	4,161	4,161	0	0	3,065	Véolia Propreté
GENNEVILLIERS	12,213	12,207	56	230	8,745	SITA
TOTAL	180,987	179,581	177	374	129,905	

RECYCLABLE MATERIALS RECOVERY CHANNELS

in tonnes

	TONNAGES SYCTOM 2015	DESTINATION	FUTURE	TRANSPORT
NEWSPAPERS REVIEWS MAGAZINES	51,892	Paper mills UPM-Chapelle Darblay at Grand-Couronne 76	NEWSPAPER	River (barge or container)
EMR (brown cardboard + thin cardboard packaging)	45,665	Paper mills Europac 76 Saica 02 Emin Leydier 10	BROWN CARDBOARD	40% of river transport (barge), the rest by road
PAPER MIX	15,248	Cardboard mills of Gondardennes or RenoDiMedici 62	CORRUGATED OR FLAT CARDBOARD	Road
LIGHT FOOD PACKAGING (LFP)	1,262	Paper mill Georgia Pacific 45 Nova Tissue 88	TOILET AND HOUSEHOLD PAPER	Road
PLASTIC PET BOTTLES	8,292	FPR Limay factory 78	GRANULES USED TO MAKE MILK BOTTLES	River transport (barge) after regrouping of streams at Gennevilliers
PLASTIC HDPE BOTTLES	3,155	Neufchâteau factories 88 MPB 71 Lunen Germany	HDPE PRODUCTS (cleaning pipes, watering cans, etc.)	Road
PLASTIC POTS AND CONTAINERS (PE, PP, PS)	201	Plastic materials from Bourgogne 71	VARIOUS PLASTIC PRODUCTS	Road
LDPE FILMS AND COVERS	201	Various recyclers, sometimes after intensive sorting by Paprec in Blanc-Mesnil	PLASTIC FILMS PRODUCTION OF CSR* (testing)	Road
ALUMINIUM FROM SELECTIVE COLLECTION	321	Regeal-Affimet factory at Compiègne 60 Alunova factory Germany (for small aluminium sorted in Nanterre)	ALUMINIUM USED TO CAST VARIOUS PARTS (particularly in the automotive sector)	Road
ALUMINIUM FROM CLINKERS	2,751	GALLOO factory at Halluin Belgium	ALUMINIUM USED TO CAST VARIOUS PARTS (particularly in the automotive sector)	Road
STEEL FROM SELECTIVE COLLECTION	2,834	Arcelor factory at Dunkerque 59	STEEL PRODUCTS	Road
STEEL FROM CLINKERS	32,625	Large scrap metal: recovered by GALLOO Idf at Bonneuil s/ Marne 94 Small scrap metal: recovered by GALLOO Metal or other subcontractors Belgium and 59	STEEL PRODUCTS	Road + sharp increase in river transport between Bonneuil and Halluin (large scrap metal)

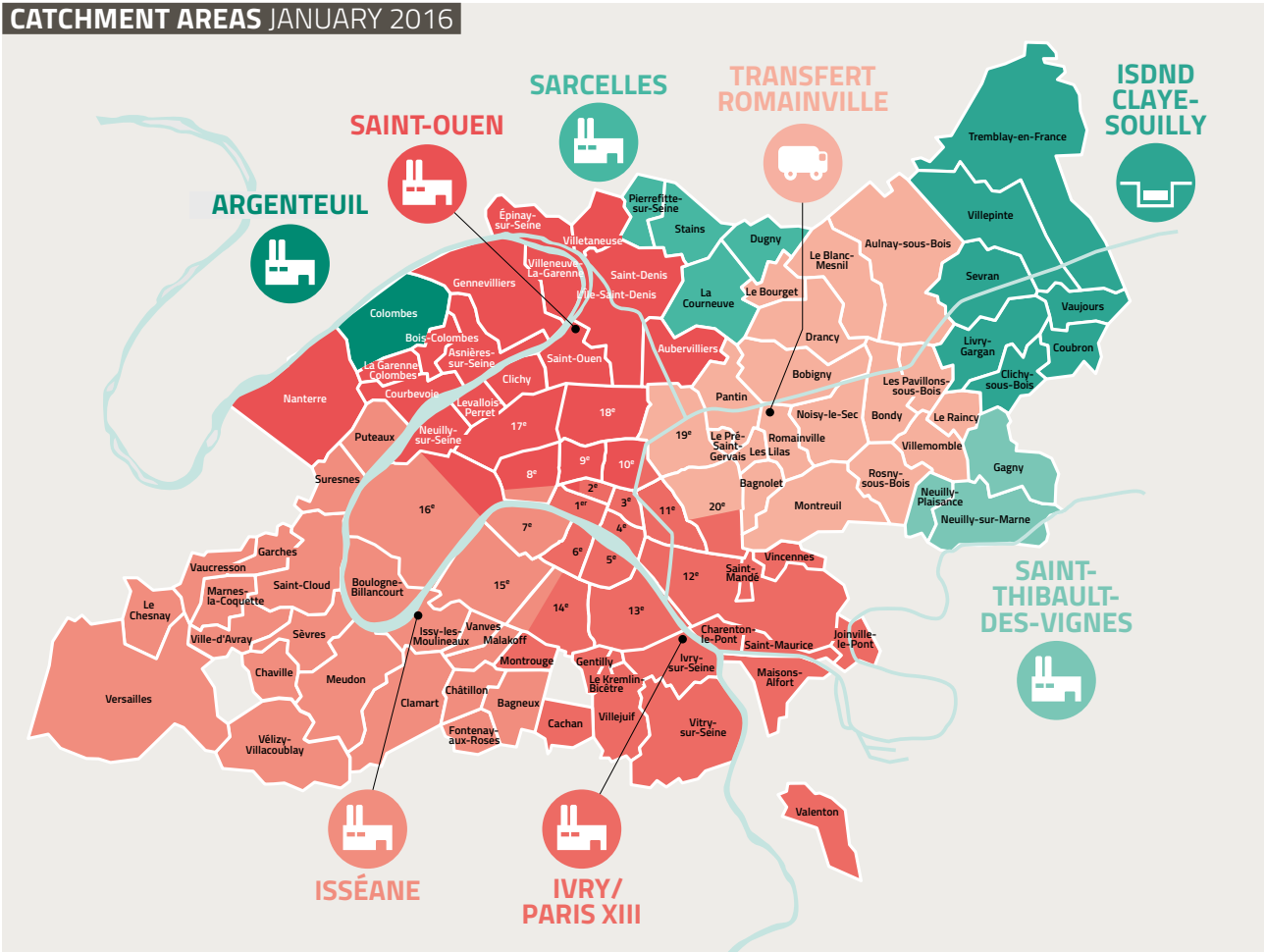
* SRF = Solid Recovered Fuel

WASTE RECEPTION CENTRES

WASTE RECEPTION CENTRES	TONNAGES RECEIVED	TONNAGES RECOVERED	OPERATORS
IVRY/PARIS XIII	6,673	5,562	SITA
ROMAINVILLE	8,904	3,559*	Urbaser environnement
TOTAL	15,577	9,121	

* 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



BREAKDOWN OF TONNAGE 2015

INCINERATION UNITS	TONNAGES INCINERATED	RECOVERY					OPERATORS
		Steam sold (in MWh)	Electricity sold (in MWh)	Clinkers (in tonnes)	Ferrous (in tonnes)	Non-ferrous (in tonnes)	
ISSÉANE	459,973	704,906	0	79,316	6,441	792	TSI
IVRY/PARIS XIII	659,809	978,373	8,387	115,853	12,175	399	IP13
SAINT-OUEN	563,231	1,081,246	8,539	98,876	11,455	1,129	TIRU
ARGENTEUIL*	32,374	1,688	8,718	8,093	545	59	Novergie
CARRIÈRE-SOUS-POISSY	4,328	0	1,053	620	96	14	Novergie
CARRIÈRES-SUR-SEINE*	10,719	2,110	947	2,153	259	27	Novergie
SAINT-THIBAUT-DES VIGNES*	35,260	0	13,239	7,539	719	82	Novergie
SARCELLES*	38,762	39,522	5,332	6,802	901	248	SAREN (Véolia)
MASSY	2,587	0	0	928	27	0	Novergie
BACKUP CENTRES	1,056	0	0	0	7	1	
TOTAL	1,808,099**	2,807,845	46,215	320,180	32,625	2,751	

* 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

	NATURE OF DISCHARGES								
	Particles	Hydrochloric acid	Hydrofluoric acid	Sulphur dioxide	Nitrogen oxide	Cadmium + thallium	Mercury	Antimony + arsenic + lead + chrome + cobalt + copper + manganese + nickel + vanadium	Dioxins and furans (in ng/Nm³ at 11 % O₂)**
MAXIMUM EMISSION VALUES									
APPLICABLE SINCE 28/12/2005 Ministerial order of 20 Sept. 2002	10	10	1	50	200*	0.05	0.05	0.50	0.10
IVRY/PARIS XIII									
MARCH	3.4	0.6	0.02	30	44	0.002	0.003	0.25	0.004
MAY (Syctom)	2.2	1.0	-	19	45	0.002	0.004	0.04	0.001
SEPTEMBER	4.1	0.6	0.08	22	50	0.002	0.001	0.04	0.004
OCTOBER/JANUAR 16 (Syctom)	2.9	1.3	-	30	59	0.004	0.002	0.09	0.007
SAINT-OUEN									
APRIL	2.6	0.7	0.01	17	64	0.001	0.007	0.09	0.003
JUNE (Syctom)	1.6	0.8	0.10	13	57	0.001	0.003	0.14	0.002
AUGUST	1.4	1.3	0	11	58	0.001	0.001	0.06	0.006
NOVEMBER (Syctom)	1.7	0.4	0.01	8	50	0.001	0.008	0.02	0.002
ISSÉANE									
FEBRUARY	1.1	2.3	0.03	1.8	26	0.0008	0.001	0.05	0.001
JUNE	1.5	1.0	0.003	2.1	35	0.0001	0.002	0.07	0.002
JULY (Syctom)	0.4	2.7	-	2.9	28	0.001	0.003	0.10	0.009
AUGUST	0.4	2.6	0.01	3.0	43	0.00004	0.001	0.02	0.024
OCTOBER	1.0	3.3	-	3.2	36	0.0005	0.0004	0.06	0.033
NOVEMBER (Syctom)	0.5	0.2	0.004	2.7	34	0.0002	0.001	0.08	0.003

* The Paris region plan for the protection of the atmosphere has set the maximum emission value at 80 mg/Nm³. This threshold is reiterated in the authorisation order to operate in Ivry-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/Nm³.
** ng/Nm³ : nanogram (billionth of a gram) per Normal cubic metre (amount of gas enclosed in 1 m³ for standard temperature and pressure conditions).

Waste dumped in storage facilities

REFIOM SENT TO ISDDs		NON-HAZARDOUS WASTE SENT TO ISDNDs		REFIOM: Residues from purification of smoke from household waste incineration ISDD: Hazardous waste storage facility ISDI: Inert waste storage facility ISDND: Non-hazardous waste storage facility
VILLEPARISIS (SYCTOM CONTRACT) from		BOUQUEVAL (SYCTOM CONTRACT)		
HWIU in Ivry/Paris XIII	15,412	HW from direction contributions	1,027	
HWIU in Isséane	13,587	HW from Romainville Centre	67,313	
HWIU in Saint-Ouen	12,597	TOTAL	68,340	
TOTAL ISDD	41,596			
INERT WASTE SENT TO ISDIs		CENTRE EXCLUDING SYCTOM CONTRACT		
CLAYE-SOUILLY (SYCTOM CONTRACT)		SC sorting rejects from private contracts to EPR	599	
Construction debris from Ivry/Paris XIII waste reception centre	3,857	SC sorting rejects from private contracts to other ISDNDs	3,045	
Construction debris from Romainville waste reception centre	2,980	Sorting rejects from BO	75,074	
TOTAL	6,837	Put in ISDND from private HWIPs	2,332	
CENTRE EXCLUDING SYCTOM CONTRACT		TOTAL ISDND (excluding Syctom contract)	81,050	
BO private market construction debris	5,994			
BO worksite construction debris	24,275	TOTAL ISDND	211,610	
TOTAL	30,269	TOTAL WASTE dumped in storage centre	290,313	
TOTAL ISDI	37,106			

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

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