

 The Natural Step

# CHANGES IN WASTE MANAGEMENT LEGISLATION IN RUSSIA

Case: Saint Petersburg, Russia

February 2017

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## CASE: SAINT PETERSBURG, RUSSIA

According to Greenpeace, in Russia 4% of waste is recycled, and more than 90% is landfilled. In comparison, average recycling rate in Europe is above 40%, and in some countries, it is up to 65%.

Starting from January 1, 2017 landfilling solid municipal waste, which has valuable fractions or components, becomes prohibited in Russia. The Production and Consumption Waste legislation ("*Об отходах производства и потребления*") has changed so that if waste has recyclable materials, it ought to be recycled.

Following changes on the federal level, each region was recommended to provide own territorial scheme for management of waste by 26<sup>th</sup> of September 2016 (Img. 1). The scheme was supposed to show how much waste and from what sources it is generated (average for the region), who is taking care of the waste management logistics, how it is treated and disposed of (landfilled, recycled or incinerated). In the scheme it was required to show waste management targets of the region, location of key infrastructure, plans for building any new landfills and importing waste from other regions.

### FACTS

56,6 million tons of municipal solid waste was generated in Russia in 2014.

Saint Petersburg and Leningrad Oblast generate 10 million tons/year of industrial and municipal waste

In Russia 4% of waste is recycled and more than 90% is landfilled.

### IMPORTANT DATES

Jan. 1<sup>st</sup> 2017

New Federal Law on Production and Consumption Waste

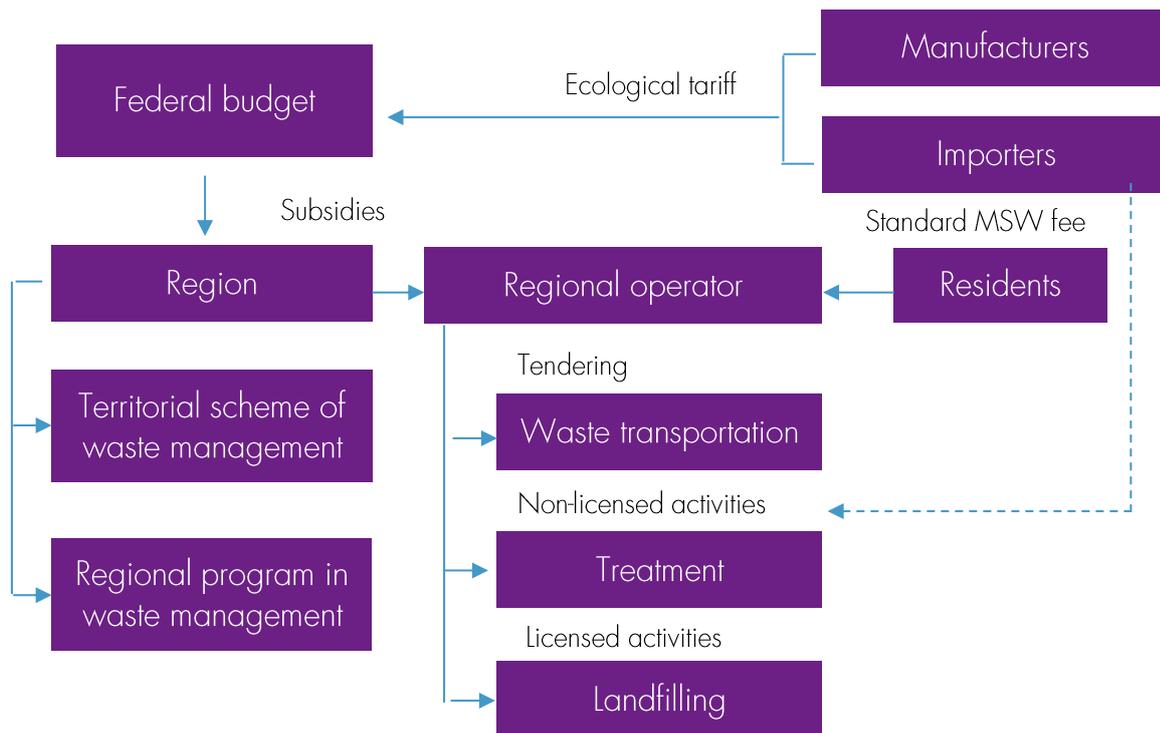
Oct. 6<sup>th</sup> 2016

Saint-Petersburg has developed its scheme for management of municipal solid waste.

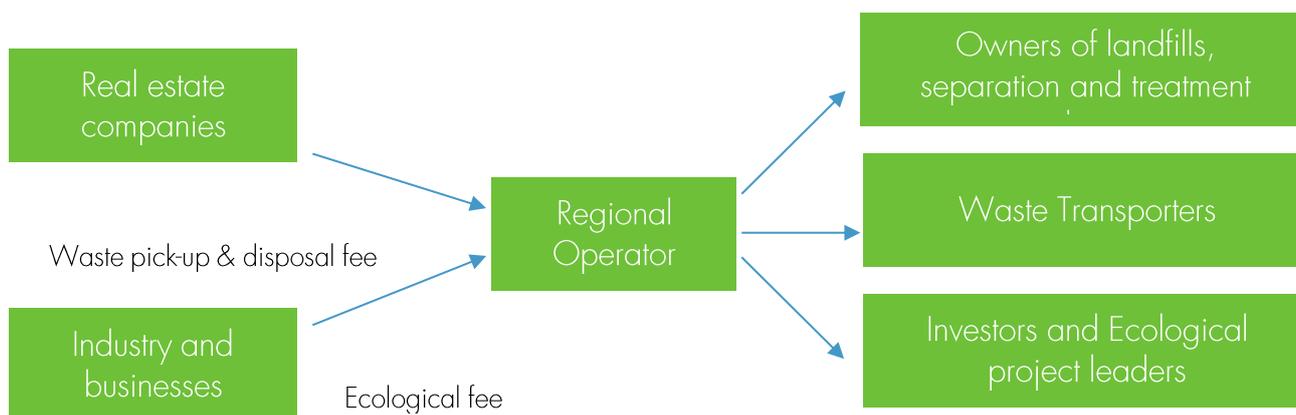
On time, only 7 regions have provided their territorial schemes: Moscow, Voronezh, Rostov, Samara, Omsk and Tyumen oblasts, as well as Stavropol. Other regions have either completely failed to provide territorial schemes, or are planning to complete them by the end of 2016 year.

As an example, in Voronezh and Rostov oblasts the preference is given to recycling and separate waste collection. Moscow is planning to use 3 incineration plants, but it is unclear what transfer stations are going to be used, and where waste will be recycled. Saint Petersburg, which scheme was announced on October 6<sup>th</sup>

2016, plans to use landfilling. That means the city will need even more land for waste. Saint Petersburg is also working on developing criteria for selection of a regional waste management operator (Img. 2). A public tender will be announced once the Government of Russia will approve a Decree about Solid Municipal Waste Collection (*"Постановление о Порядке сбора твердых коммунальных отходов"*). The contract with an operator will be signed for a period of 10 years. Prior to the selection of a regional operator, waste management will be executed in the same way as it has been earlier.



Img 1 A new scheme of handling MSW



Img. 2 The role of a Regional Operator in a new scheme for MSW

Those regions that have not provided their territorial schemes, will not receive subsidies from the federal budget for funding waste management in the region, choosing a company operator responsible for collection, transportation and disposal of waste.

Technically, starting from January 1, 2017, their work with waste management will become illegal. In reality, it means that those regions will not have any development in the area of waste management.

	2007	2010	2011	2012	2013	2014
<b>Waste per year</b>	3899,3	3734,7	4303,3	5007,9	5152,8	5168,3
Agriculture	26,6	24,1	27,5	26,2	40,3	43,1
Mining	2785,2	3334,6	3818,7	4629,3	4701,2	4807,3
Manufacturing	243,9	280,1	280,2	291	253,7	243,1
Construction	62,8	11,1	14,1	14,6	16,7	17,6
Energy, gas and water production and transportation	70,8	68	58	28,4	24,1	28,3
Other types of economical activities	710	16,9	104,7	18,3	116,8	28,9
Dangerous waste	287,6528	114,368	120,162	113,665	116,666	124,335
MSW	n/a	n/a	n/a	10,071	14,55	56,6

Img. 3 The amount of waste generated in Russia, million tonns. (Source: State report "State and Protection of the Environment in 2014")

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- “IN RUSSIA  
PEOPLE ARE  
DIVIDED AND  
WASTE IS  
MIXED”  
- DENIS STARK

## CASE: SAINT PETERSBURG, RUSSIA

In Russia, 5168,3 million tons of waste was generated in 2014. Together Saint Petersburg and Leningrad Oblast generate 10 million tons/year of industrial and municipal waste. MSW of St. Petersburg alone is estimated at 2,3 million tons/year, with 75% of waste coming from households, and 25% - from commercial sector.

According to Tekes, the official amount of waste generation is 298 kg per capita. 95% of MSW generated in Saint Petersburg is landfilled. There are 17 landfills on the territory of Leningrad region, with 7 of them being used specifically for Saint Petersburg. By 2014 most landfills reached the end of its operational lifetime.

According to Greenpeace, Saint Petersburg has not mentioned separate collection of waste in their scheme. The region is conducting experiments of turning waste into RDF fuel (refused derived fuel). Plans for building incineration plant are not clear at the moment. Earlier, however, Saint Petersburg in its regional program for municipal waste management for the period of 2012-2020, announced having plans to introduce waste into energy processing (Img 5). According to the program 2012-2020, Saint Petersburg has been planning to build two new, where there would be introduced technology of turning industrial and municipal waste into alternative fuel, and update two existing waste treatment plants (MPBO-1 and MPBO-2 on Volkhonskoye highway and in Yanino, which is currently treating approximately 8-10% of the region's MSW (more at <http://en.mpbo2.ru/>).

New plant project was intended for the area Levashevo, based on the partnership with a Greek company group Helector S.A. – Aktor Concessions S.A. – Aktor S.A. In 2015, however, the project was put on hold.



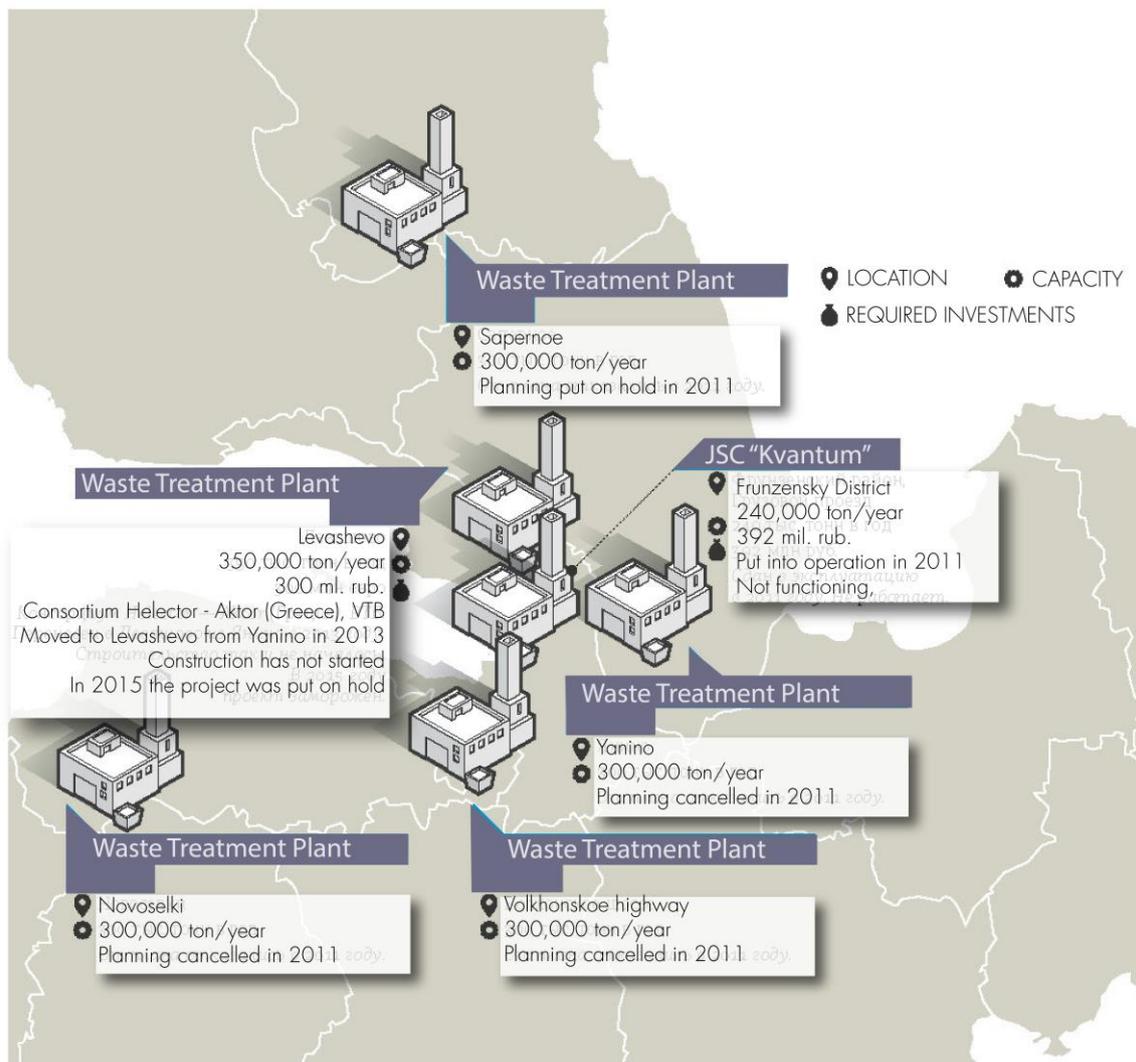
Img. 4 MSW generation forecast for St. Petersburg, million tons. Source: Sources: Long-term Targeted Investment Program on Municipal Solid Waste and Industrial Waste Management in St. Petersburg for 2012-2020.

Main reason why waste treatment plant projects have either been put on hold or ended up to be non-viable financially, is the cost of waste treatment. In Saint Petersburg, for example, landfill gate fee is 350 rubles/ton, and waste treatment plant fee is 1300 rubles/ton.

Previously, Saint Petersburg analyzed the costs and benefits of separate waste collection prior to recycling, and came to the conclusion that it would not be a financially viable option. Transportation costs of the separately collected waste fractions would be much higher than transportation of mixed waste. Separate waste collection would also require higher number of waste containers and their maintenance. It would also require specially equipped waste disposal trucks and their maintenance. According to the government of Saint Petersburg, introduction of a separate waste collection would require not only new waste containers, but also modernization of the all waste collection vehicles. Another reason why separate

waste collection was not favored by the government of Saint Petersburg was the decision to finance improvement by means of private investments. Private investors would require separate waste collection to be licensed, in order to prevent illegal sourcing of waste fractions.

The government of Saint Petersburg also came to conclusion that composting would be not only an inefficient waste treatment method, but also not beneficial for the environment.



Img. 5 Waste management factory projects in Saint Petersburg and Leningrad Oblast.

Since 2011 Saint Petersburg has been using a mechanical waste sorting factory, operated by Autopark "Spectrans #1". Its actual capacity 100,000 tonnes/year. Factory recycles 70% of waste and sends 30% to landfill. It is equipped with laser scanners,

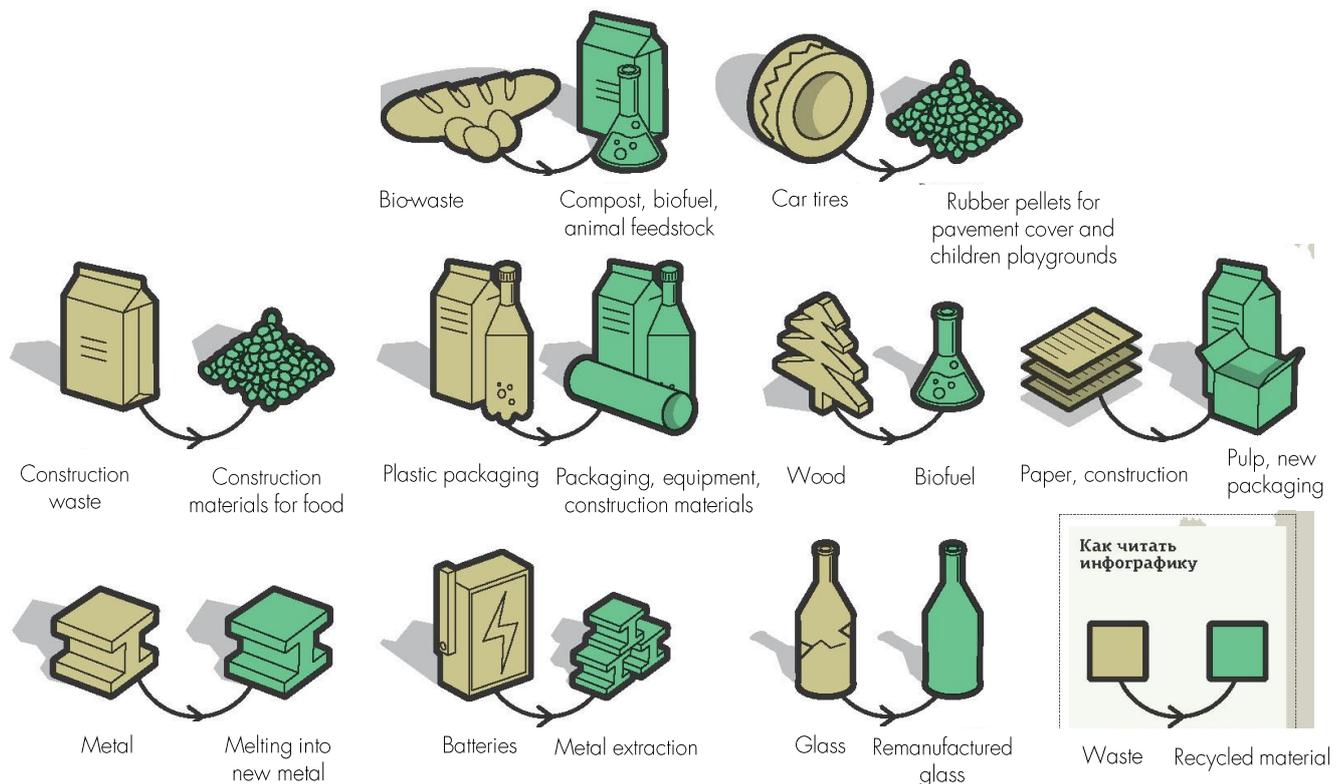
which can recognize plastic by colour, and identify carton, paper and metal. A large percentage of waste is grinded and used for generation of RDF, which is sent to cement factories, and is used as an addition for fuel generation.

Description	Implementation schedule
New Program on Solid Waste Management for 2012 – 2020 adopted in May 2012 by St. Petersburg Administration	<b>2012 – 2020</b>
Construction of waste recycling plant with a capacity of 350000 t: a land development plan has been already done and an investor has started to implement engineering and environmental survey and to elaboration of design documentation.	<b>2014 &gt;</b>
Construction of waste recycling plant with capacity 700 000 t a year: a concept of construction project has been prepared in 2012.	<b>2014 &gt;</b>
Modernization of two existing waste recycling plants.	<b>2013 &gt;</b>
Pilot project on MWS recycling in Moskovskiy, Kolpinskiy and Krasnogvardeyskiy districts of the city	<b>September 2013 &gt;</b>
Waste sorting plants to be built in Leningrad Oblast in 2013-2014 in Sosnovy Bor, Lomonosov, Gatchina, Tosno, Vsevolozhsk and Kingisepp districts; investment for one sorting plant is 1.2-1.3 MEUR. Partly these sorting plants will sort waste from St. Petersburg. It is planned that 70% of MSW will be sorted by 2018.	<b>2013 - 2018</b>
Reclamation of waste landfill PTO-3	<b>2012-2014</b>
Two new industrial complexes for waste processing and waste disposal	<b>by 2015</b>
All retail estate management companies have to sign direct contracts with waste recycling plants before 2015.	<b>by 2015</b>
New state-owned waste transportation company being established	<b>2013 &gt;</b>
Development of a regional waste register (data base) and State Information System on waste management. Waste trucks will be equipped with navigation system (GLONASS - Global Navigation Satellite System).	<b>2013 &gt;</b>
Pilot plant on hazardous waste treatment in Krasny Bor	<b>2014 &gt;</b>

Img. 6 Past waste management projects and initiatives in St. Petersburg (Source:Tekes)

In 2015 Finnish company Set Group together with Technoresource company in Saint Petersburg, which is already recycling tires and car batteries, announced it plans to build in Gatchina area a techno park for waste treatment. Total amount of estimated investments is \$300 million. Technoresource will be a local operator, and Set Group – project investor.

It was estimated that construction would happen in 2016, and in 2017 the park would start functioning at its full capacity. Bio waste and packaging were intended to be collected from local producers and retailers (Img. 7).



Img. 7 Possibilities for recycling of different waste fractions

Territorial waste management scheme for Saint Petersburg has been approved by the Ministry of Natural Resources and has gone through final revisions by the City Improvements Committee of St. Petersburg City Administration

(<http://gov.spb.ru/gov/otrasl/blago/information>) in January 2017. Territorial waste management scheme consists of 1000 pages in format A3, and is subdivided into 7 parts:

1. Location of waste generation sources
2. Amount of generated waste
3. Indicators for safe waste management, disposal and transportation
4. Locations for waste storage
5. Locations for safe waste management, disposal and transportation
6. Balanced system of waste generation, management, transportation, including dangerous waste, and final disposal
7. Scheme of waste material flows

More information:

Waste management SE500 project <https://sites.google.com/site/projectse500/>

Waste awareness W.A.S.T.E.

<http://sykli.fi/Kehitt%C3%A4mishankkeetjajulkaisut/Projektihallinta/tabid/625/ArticleID/90/W-A-S-T-E.aspx>

Waste management portal <http://waste-exchange.iac.spb.ru/en/>

Waste sorting facility <http://www.solidwaste.ru/news/view/9852.html>

# CONTACT INFORMATION

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