

### **1ST PART: BASIC DATA**

Title of the experience: Waste Management Reform			
Name of the city/region: Kazan City			
Country: Russian Federation			
Institution presenting the candidacy: Kazan City Hall			
Start date of the experience: August 1, 2018			
End date of the experience: ongoing			
Type of candidacy	New experience	+	
	Innovation on an existing experience		
Type of experience	Participatory budgeting	+	
	Urban planning		
	Council		
	Workshop/meeting for diagnose, monitoring,		
	etc.		
	Audience/forum		
	Poll/referendum		
	Citizen jury		
	E-government/open government		
	Citizen initiative		
	Others (say which one):		
Objective of the	To achieve higher levels of equality in terms of		
experience	participation and to incorporate diversity as a		
	criteria for inclusion		
	Community empowerment		
	To empower non-organised citizens		
	To increase citizen's rights in terms of political		
	participation		
	To connect different tools of participation within	+	
	a participatory democracy "ecosystem"		
	To improve the effectiveness and efficiency of the mechanisms of participatory democracy		
	To improve the quality of public decision making through the mechanisms of participatory democracy		
	To improve the evaluation and accountability of the mechanisms of participatory democracy		
Territorial area	All the territory	+	



	District	
	Neighbourhood	
Thematic area	Governance	
	Education	
	Transport	
	Urban management	
	Health	+
	Security	
	Environment and/or urban agriculture	+
	New social movements and associationism	
	Culture	
	Housing	
	Job creation	+
	Decentralization	
	Local development	
	Training/learning	
	Economy and/or finances	
	Legal regulations	
	Social inclusion	+
	All	
	Others	

### 2ND PART:DESCRIPTION OF THE EXPERIENCE (4 pages maximum)

### **Objectives**

### Main objective of the innovative experience:

Choose one of the objectives mentioned in part 1, the one that you think is the most important

1. To connect different tools of participation within a participatory democracy "ecosystem".



Local authorities of Kazan City that fully acknowledge the need to move towards a more circular economy actively implement new approaches and innovative ideas to improve efficiency and effectiveness of waste collection and treatment. Kazan became a pilot city for several modern solid waste management projects in Russian Federation. The strategy of the city of Kazan until 2030 confirms the city's commitment to a "zero waste" philosophy that implies no trash to be sent to landfills in the near future.

The main objective of the project that is implemented in Kazan is the termination of the landfilling practices, the use of secondary raw materials, the reduction of the environmental stress, the improvement of the citizens' quality of life.

The main objective of separate waste collection is to reduce the negative impact on the environment through a gradual transition to "zero waste disposal".

The transition to the model of "zero waste disposal" that will be implemented in Kazan which, if successful, can be extended to other cities of Russia. This model involves the use of all methods of solid municipal waste management, including recycling and thermal disinfection, which corresponds to the best and well-known world practices (Switzerland, Germany and Japan). The Strategy and the Master plan of the city of Kazan envisages ensuring the safety of ecosystems of large rivers and coastal areas through purification of harmful emissions from industrial enterprises, industrial and domestic wastewaters, as well as new technologies for processing municipal solid waste. A necessary component of eco-zones should be a system for monitoring the state of the environment, cleaning up harmful emissions and recycling industrial waste.

#### How have you achieved this objective?

Now, according to the approved plan, Kazan is finishing the preparations to the general transition to waste sorting.

Environmental issues have always been one of the priority areas on city agenda. By the time the decision on the need for reform in this area at the federal level, Kazan has already been prepared for the smooth implementation of separate solid waste collection. The following activities were undertaken in Kazan:

- waste sorting and waste reloading stations were built;
- a modern municipal solid waste landfill was built;
- · waste storage sites and container sites were created;
- containers and bins for waste storage were purchased;
- containers for the collection of waste mercury-containing lamps were installed

Moreover local authorities of Kazan conduct information and education campaigns in order to raise an awareness of residents about the importance of separate waste collection. The environmental education is introduced in schools and pre-schools. Environmental education is one of the main directions of the city educational policy. It helps to engrain in children an ability to realize consequences of the actions when it comes to environment. The target activities are scheduled in city program of ecological education. These initiatives form an ecological consciousness of children.

Eco-education activities are conducted in all educational institutions in order to preserve the principle of continuity. Children's eco biological center carries out coordination of work on environmental education. In Kazan schools, children are now taught to an environmentally friendly way of life. All schools in the city are equipped with special bins for collecting plastic, paper and food waste. There are ecological classes in which students receive environmental education, knowledge and practical skills in the field of ecology and environmental protection.

### To what extent has this objective been achieved?

"Hand Over Batteries - Save Nature" environmental campaign draws attention to the problem of battery disposal. 100 schools and 60 kindergartens have eco-boxes to collect batteries for their further disposal. The participants of the campaign are not only children and the teaching staff, but



also parents and residents of the city.

Schoolchildren are actively involved in a charitable action to collect plastic caps. It is called the Caps of Kindness and is organized by the First Step Charity Foundation. Save the Tree, Extend Life campaign resulted in collecting more than 900 thousand tons of waste paper.

By reducing the negative impact on the environment, this strategy positively influences the demographic situation, increases life expectancy, and decreases the morbidity rates. It also contributes to the creation of new jobs as new enterprises that will be engaged in the processing of secondary raw materials.

Reducing the negative impact on the environment will lead to a decrease in the morbidity rates (cancer, respiratory diseases, psycho-emotional disorders) and, as a result, to an increase in life expectancy.

The economic sector begins to have new market niches in the field of waste recycling, which will further increase vacancies for the unemployed able-bodied population, as well as for refugees and immigrants.

A child makes his or her first acquaintance with the world at preschool age. To achieve efficient perception, kindergartens are provided with vegetable and flower gardens, rockworks, and ecological paths. The teachers make ecological tours, organize nature observations, ecological holidays. The methodologists of the institutions have developed environmental programs that train over 60 thousand children of the city.

In schools and institutions of additional education, more than 16 thousand students of the city receive additional knowledge on ecology. More than 2 thousand students have joined the Green Country Children's Organization. The participants of this movement act as volunteers, initiate environment protection measures and actively promote them.

### **Dimensions of the experience**

#### Which is the most innovative aspect of the experience?

In 2018, Kazan launched a new waste sorting program focused on the process of its accumulation, collection and disposal. One of the districts of the city was fully equipped with sorted waste containers where garbage is sorted according to the so-called "dual" principle into recyclable and non-recyclable fractions. Containers differ from each other by color. Each container has an image depicting the type of the waste, with inscriptions in Russian and Tatar languages (national languages of Republic). These containers are transported by different vehicles to a waste sorting station for more thorough sorting, where, thanks to the sorting of waste, the quality of recycles has improved.

The strategic mission of waste sorting is the extraction of recyclable fractions that can be used in various fields. Currently, we are considering a newest technology aimed at obtaining fuel and lubricants from recycled waste without using natural resources. Creation of new types of fuel and lubricants thanks to waste processing is necessary to preserve natural resources, to decrease the levels of petroleum products extraction, and consequently, to minimize the negative impact on the environment.

The technology is based on the thermal destruction method (plastic waste is heated in a closed container without air access), thanks to which gases pass through a catalyst system, resulting in plastic waste being converted into a range of useful, sulfur-free and ready-to-use fuel and lubricant fractions. They are more environmentally friendly than most of the current types of fossil energy resources.

Recycled waste is used as anti-trauma coverage of children's playgrounds in the city.

#### To what extent is the procedure transferable?

Replication of this project will be useful for other cities facing acute problems of unauthorized dumps, identification of waste disposal sites; for cities with high mortality and morbidity rates. It is also useful for cities where the tourist flow is reduced, for cities creating new recreational



places (sanitary-resort areas, recreation and children's leisure camps).

The above described project corresponds to multiple Sustainable Development Goals and the New Urban Agenda, such as:

- Making cities and human settlements more inclusive, safe, resilient and sustainable;
- Ensure healthy lives and promote well-being for all ages;
- Ensure sustainable consumption and production patterns;
- Take urgent action to combat climate change and its impacts;
- Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss;
- Promoting peaceful and inclusive societies for sustainable development for all.

Thus, we are glad to share with the lessons that can be drawn from the city's recent initiative for the benefit of other cities, regions, and countries. We are glad to provide technical support to cities across the world that would like to embark on the same journey. And of course, we look forward to learn lessons from the experience of other cities IOPD 2019.

#### Why do you consider that the experience is feasible?

Currently, Russia undergoes a national-wide reform towards a centralized municipal solid waste management system that rationalizes the number of garbage collection service providers (so called "regional operators") in the cities and encourages new investment using long-term contracts and public-private partnership initiatives. The most important goals of the "Clean Country" Federal Project are to put the industry in order, to create the necessary infrastructure, and to provide conditions for environmentally efficient and safe waste accumulation, collection, disposal, processing and burial.

However, many large Russian cities have encountered challenges in implementing the new regulations. Kazan was among few cities that managed to effectively adopt the new solid waste management system without shortages in providing in garbage collection services to their citizens. As early as in 2008, the city introduced the municipal waste management scheme. More than 2,000 container sites were equipped with modern plastic containers. The efficient modern garbage trucks were purchased to transport the waste to sorting and reloading stations, where garbage is sorted and the station extracts more than 10 fractions of secondary raw materials. Unsorted residues are pressed and taken out of the city to environmentally safe landfills.

Large number of houses equipped with old-style garbage chutes. It has slowed down the implementation of separate garbage collection in some apartment houses. Explanatory meetings were held with residents of such houses, with subsequent voting for those who were absent. Many residents agreed that termination of garbage chutes should obligatorily be accompanied by the construction of new container sites for separate garbage collection.

The organization of new container sites in some cases is difficult due to the requirements of supervisory or regulatory authorities. On standards, they should be located at a distance not closer than 20m and not further than 100m away from the house. Therefore, new container sites are equipped by European containers with closed covers to avoid the smell and for better sanitation.

Lack of environmental education and, in this regard, the unwillingness of the population to separate waste collection at home is another challenge. For example, not everyone is able to respond whether glossy paper is a recycling waste.

Due to the reason that there is no ecology as a subject in the curriculum of schools, schools in Kazan had to implement the module of environmental education through the integration of such subjects as physics, biology, chemistry, geography.

## How has the experience been coordinated with other actors and processes?

There are local authorities, public organizations, regional providers, volunteer ecological movements along with city residents who have been equally involved in Strategy implementation.



#### Which has been the level of co-responsibility?

Our project involves the active participation of all actors.

City authorities and business companies conclude contracts for the purchase and installation of new equipment for separate waste collection.

Environmental organizations and volunteers conduct educational classes and lectures on the importance of transition to separate waste collection among the population.

And city residents themselves are the executing actors of this program. They are the crucial link of the city waste management.

The regional service provider, housing management company along with district administrations control and assess the results of the separate waste collection.

#### Which evaluation and accountability mechanisms were used?

As of today, about 50% of the residential areas in Kazan has already been transferred to separate collection of waste. In total, 900 container sites are equipped with more than 3000 containers with yellow and gray stickers for dual garbage collection: dry recyclable fractions and wet non-recyclable. During this summer 2019, it is planned to modernize the remaining container sites along with increasing motivation among citizens over the issue of separate collection of waste.

The total volume of PET bottles collected by entrepreneurs in 2018 equals the volume of garbage exported from the entire territory of Kazan to landfills for 12 days. Last year, in Kazan 2.7 thousand tons of waste paper was collected. This made it possible to save 47 thousand trees. The created infrastructure allows reducing unauthorized dumps. In this way, the city maintains a beautiful environment increasing tourist flow. The area adjacent to the city will be used for creating conditions for active recreation of citizens.

One of the ways to improve the quality of waste sorting is to sort waste at the place of its accumulation that is, directly in the residential areas, in schools, institutions, enterprises. However, it is impossible to change the mentality of citizens overnight. Environmental education needs to be ingrained from a very early age. The waste sorting cannot be introduced in the city by mere infrastructure. We need to change people's consciousness, starting from ourselves and our children.