



**BAT/BEP CENTER FOR  
ENVIRONMENTALLY SAFE DISPOSAL  
OF POTENTIALLY HAZARDOUS  
CONSUMER PRODUCTS AND  
INDUSTRIAL WASTES**

**PROJECT OVERVIEW**



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**UNIDO CENTRE FOR INTERNATIONAL INDUSTRIAL COOPERATION  
IN THE RUSSIAN FEDERATION, INVESTMENT AND TECHNOLOGY PROMOTION OFFICE  
(ITPO RUSSIA)**

**OVERVIEW OF THE PROJECT  
« BAT/BEP CENTER FOR ENVIRONMENTALLY SAFE DISPOSAL OF POTENTIALLY HAZARDOUS  
CONSUMER PRODUCTS AND INDUSTRIAL WASTES »**



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Disposal and recycling of hazardous consumer products and industrial wastes is an urgent problem in the Russian economy. The growth in industrial and domestic wastes exceeds the national potential for their collection, recycling and disposal. The significance of solving the problem of waste recycling has been taken into consideration by the global community, which emphasizes a particular importance of seeking additional ways of international cooperation in the field of waste management.

Since the beginning of the 90-s the UNIDO Centre for International Industrial Cooperation in the Russian Federation (UNIDO CIIC in Russia) has considerably contributed to the implementation of various environmental projects involving foreign technology and investment.

Our work, aimed at the formation of the environmentally sound Waste Electrical and Electronic Equipment (WEEE) management system, was conducted within the framework of the Project «BAT/ BEP Centre for environmentally safe disposal of potentially hazardous consumer products and industrial wastes», initiated by the Ministry of Natural Resources and Environment of the Russian Federation and supported by the President of the Republic of Tatarstan on the basis of the Memorandum on cooperation between the UNIDO and the Republic of Tatarstan, signed in December 2009.



Using UNIDO methodology and tools, the Centre provides assistance to the relevant federal and regional ministries and agencies in the development of industrial strategy and administrative capacity building through application of best available technologies and best environmental practices (BAT/BEP) in order to create an efficient system of waste collection and recycling of electronic scrap and used tires, thus creating the conditions for promotion of innovative technologies in Russia and the EurAsEC countries.

**Sergey Korotkov**  
**UNIDO CIIC Director**





Reference from: Chamber of Commerce and Industry of the Russian Federation, Committee for Natural Resources Management and Ecology

UNIDO Center for  
International Industrial  
Cooperation in Russia

## REFERENCE

The UNIDO Center for International Industrial Cooperation in the Russian Federation (hereinafter – the Center) plays an important role in enhancing the development of a waste management system in Russia, and specifically through the Project «BAT/BEP Centre for environmentally safe disposal of potentially hazardous consumer products and industrial wastes» implemented in 2010-2015.

The Center worked in close cooperation with the Chamber of Commerce and Industry of the Russian Federation (CCI) Committee for Natural Resources Management and Ecology. The roundtables and meetings on selected areas of management of hazardous wastes held by the Committee with the participation of UNIDO experts played an important role in the development of a waste recycling industry in Russia. A number of legislative and subordinate regulatory legal acts were developed with consideration of the proposals prepared and submitted by the Committee to the Government of the Russian Federation and federal executive bodies.

Joint conferences and seminars on the management of waste tires, electronic and electrical household appliances served as an effective platform for the collaboration within the expert community, providing an opportunity to the business community to convey its position on the measures required for the development of the waste management industry to the relevant government authorities.

International conferences, seminars, roundtable discussions held within the UNIDO project, including on the site of the CCI of Russia had a significant educational impact. During these events, representatives of commercial structures, federal and regional executive authorities received first-hand information about international experience in the field of waste management of rubber products, electronic and electrical equipment. In addition, the information presented expanded the opportunities of business diversification.

As a result of the joint efforts of the UNIDO Center and the Committee, a sectoral Association of Recyclers of Waste Electrical and Electronic Equipment (WEEE) was established, the work of the Shinoecology Association was further considerably improved.

The national coordinator of the UNIDO project Vladimir Maryev chairs the subcommittee on waste of the Committee for Natural Resources Management and Ecology. The national expert of UNIDO, the director of the Association of WEEE Recyclers, Vladimir Komissarov is a member of the Committee. The subject of industrial processing, utilization and disposal of waste is one of the priority areas of the Committee.

Sergey Alekseev  
Chairman



Reference from: Ministry of Natural Resources and Environment of the Russian Federation

UNIDO Center for  
International Industrial  
Cooperation in Russia

#### REFERENCE

The Project «BAT/BEP Centre for environmentally safe disposal of potentially hazardous consumer products and industrial wastes» has made a significant contribution to the practical implementation of measures to improve the collection and processing of hazardous wastes in Russia.

UNIDO national experts took part in development of legislative and normative acts, in particular, Federal law «On wastes of production and consumption» № 458-FZ, and were involved in addressing environmentally sound processing of wastes, application of advanced practices and environmental technologies while utilizing potentially dangerous wastes.

Of particular importance was the study and application of foreign experience through organizing international conferences, seminars and other events within the Project.

Given the above, and taking into account the urgency of development of international cooperation with foreign partners at bilateral and multilateral levels, in terms of exchange of experience in the field of legal regulation and enforcement, and best practices in the field of environmental protection, Ministry of Natural Resources of Russia highly appreciates the outcomes of the UNIDO CIIC Project.

Nuritdin Inamov  
Director of the Department  
of international cooperation



Reference from: Analytical Center for the Government of the Russian Federation

UNIDO Center for  
International Industrial  
Cooperation in Russia

## REFERENCE

The Analytical Centre for the Government of the Russian Federation in cooperation with the Autonomous nonprofit organization «International Center for Best Environmental Technologies», established for the purpose of implementing the UNIDO Project «BAT/BEP Centre for environmentally safe disposal of potentially hazardous consumer products and industrial wastes» (hereinafter – the Project), has realized a number of joint activities since 2011.

As part of the cooperation, more than 15 conferences and round-table meetings were conducted having gathered over 600 experts from the area of environmental protection. At the end of each event, proposals on the fulfillment of environmental policy in Russia were formulated and submitted to the relevant federal and regional executive authorities of Russia and to the Administration of the President of the Russian Federation.

The key conferences, organized by the experts of the Project and by the Analytical Center at the international level, have attracted significant attention from the expert community of Russia and the CIS countries. Proposals on the introduction and implementation of the producer responsibility principle, which is a cornerstone for the harmonization of the Russian and international environmental legislation, were formulated and submitted to the government of the Russian Federation. Particularly noteworthy is the initiative of the UNIDO Center to design a project on the establishment of a regional system of electrical and electronic equipment waste management in the countries of the Customs Union with the prospect of spreading it to the CIS countries.

With regard to the above-mentioned reasons, as well as to the fact that by the end of the present year the environmental legislation of the Russian Federation is planned to be significantly modified, including the development of a normative legal framework for the implementation of the Federal Law «On wastes of production and consumption», the Analytical Center kindly requests you to assist in the prolongation of the Project.

Vladislav Onishchenko  
First Deputy Director



Reference from: Federal Service for Supervision of Natural Resources (Rosprirodnadzor)

UNIDO Center for  
International Industrial  
Cooperation in Russia

#### REFERENCE

The Federal Service for Supervision of Natural Resources (Rosprirodnadzor) expresses its deep appreciation and gratitude for the high involvement and active work in the direction of environmental education, improvement of environmental legislation and the implementation of projects aimed at improving environmental technologies for utilization of potentially dangerous wastes of production and consumption currently one of the main principles and priority directions of the state policy of the Russian Federation.

All the international conferences and seminars organized by the Centre for international industrial cooperation UNIDO in the Russian Federation (hereinafter – the Center) were devoted to various aspects of rubber, electrical and electronic equipment waste problems and were attended by representatives of Federal and regional authorities, commercial structures, and foreign experts. Along with getting acquainted with the modern technologies, experience of organization of waste collection, these events become an important platform for discussions and proposals concerning industry development.

In addition, the expansion of international cooperation in the field of waste management with the CIS countries played an important role in the development of a competitive economy and environmental sustainability. The implementation of the Project «BAT/BEP Centre for environmentally safe disposal of potentially hazardous consumer products and industrial wastes» allowed to make important steps towards further collaboration.

Dear Sergey, we would appreciate if you continue to support the initiatives of the Ministry of natural resources and Rosprirodnadzor in the development of environmental education and improvement of environmental legislation in the Russian Federation. We hope that the UNIDO Centre for international industrial cooperation in Russia will continue to be a platform for discussions and proposals concerning improvement and sustainable development of environmental and related industries.

Amirkhan Amirkhanov  
Deputy Head

# PROJECT «BAT/BEP CENTER FOR ENVIRONMENTALLY SAFE DISPOSAL OF POTENTIALLY HAZARDOUS CONSUMER PRODUCTS AND INDUSTRIAL WASTES»

TERMS OF IMPLEMENTATION: PHASE I – 2010 – 2013; PHASE II – 2014; PHASE III – 2015

## Background:

- Lack of the state strategy in the waste management including waste prevention and drawing of wastes into economic circulation;
- Inconsistency of Russian regulatory and legal framework in the field of waste management with international law;
- Incompatibility of the Russian Waste Classification System with the classification adopted in EU and OECD;
- Lack of the effective accounting of wastes and secondary raw materials;
- Non-coordination of public authorities' actions in the absence of the centralized government body responsible for the state regulation in the field of waste and second raw materials management;
- Low efficiency of the public administration, control and supervision in the waste management sphere;
- Lack of the complex approach to the decision of the problems related to the usage of the secondary raw materials;
- Lack of the long-term target programs in the field of waste treatment including programs on the construction of landfills for waste disposal and the remediation of illegal dumpsites;
- Lack of the public procurement system for the secondary raw materials products;
- Lack of modern technologies aimed at forming waste processing chains.

## Key activities:

- ➔ Improvement of Russian environmental legislation, including harmonization with international environmental legislation with a view to its application on the territory of the Russian Federation;
- ➔ Assistance in construction of waste processing facilities and establishment of the industry using the best technologies and taking into account best international practices;
- ➔ Educational work on the subject of the Project;
- ➔ Consolidation of industry community;
- ➔ Assistance in the implementation of pilot projects on processing of potentially hazardous and other wastes on the territory of the Russian Federation.

The UNIDO national experts, in accordance with the requirements of the Project document, took efforts to improve practical measures related to the collection and processing of **waste rubber products, waste tires and waste electronic and electrical equipment (WEEE)**.

## Key achievements of the Project:

### 1) Legislative aspects:

In 2014 new environmental legislation was adopted (significant amendments to the Law «On production and consumption wastes», № 89-FZ), which introduced the «Extended producer responsibility» (EPR) principle from January 1, 2015 and set standards for the utilization of products and ecological tax rates.

The possibility of independent implementation of the EPR principle by producers and importers of products was determined and became an impetus for the creation of the production and consumption waste processing industry. A ban on the disposal of wastes that can be recycled using modern technologies has been defined since January 1, 2017.

The main normative legal acts that determine the implementation of the provisions of the Law have been developed with the participation of the UNIDO Project experts.

### 2) Construction of new enterprises within creation of the waste recycling industry:

On the request of the Ministry of Industry and Trade, the experts elaborated the proposals that marked the beginning of the establishment of the industry dealing with the collection and processing of waste tires and use of secondary products based on rubber crumbs, in particular, as a modifier for road construction.

On behalf of the State Company «Avtodor» the enterprise standard on the use of rubber modifiers was developed, which allowed to increase the amount of rubber crumbs used for road construction. At the Chekhov Regeneration Plant in the Moscow Region, an import substitution technology for the production of composite road slabs utilizing rubber crumbs was introduced, aiming at being used in off-road conditions, which is especially vital in the Far North when pipe laying.

In the Republic of Tatarstan, the company «Koltec-Kama» was built to recycle worn-out tires and use rubber crumbs for production of various construction materials. The enterprise is expected to become the main processor of waste tires for the manufacturer of automobile tires «Nizhnekamskshina» within the framework of the EPR. The Koltec-Kama project was elaborated with the participation of the UNIDO experts and supported by the Agency for Strategic Initiatives and the President of the Republic of Tatarstan. The Project has entered an active phase of its development.

In the Moscow region, the «Environmental Management Center» increased the volume of collected tires by 5 times. The company was the first to conclude a contract for the collection and recycling of waste tires with the international company NOKIAN TYRES. The company developed the Technical Conditions for the creation of the first business entity in the Moscow region that will collect computer equipment from specialized organizations which are obliged to destroy memory chips.

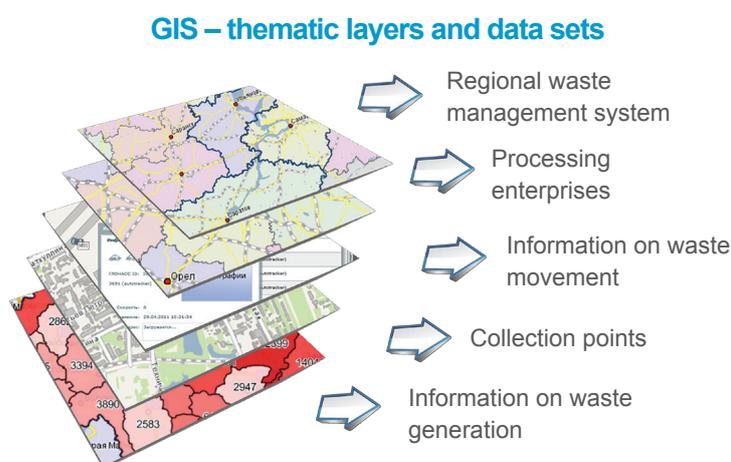
The first enterprise to recycle waste refrigeration equipment was built in the Dmytrovsky district, Moscow region, in order to provide recycling facilities for manufactures and importers of the refrigerating equipment. The enterprise was put into operation as a part of the complex waste management system for disposal of large-scale electrical household appliances.



### 3) Educational activities:

Within the framework of the Project, assistance was rendered to the Associations of the processors of various types of waste in developing the necessary documents to ensure regulations on the collection and disposal of homogeneous wastes. Autonomous non-commercial organization «International Center for the Best Environmental Technologies» has developed the Geoinformation System «Otkhodopererabotka» (Waste recycling), which allows to monitor the enterprises engaged in the collection and processing of wastes and secondary resources in the Russian Federation.

GIS assists in the implementation of regional and territorial programs on waste management, including solid municipal wastes. This system is designed to provide serious assistance to the Federal Service for Supervision of Natural Resource Management (Rosprirodnadzor) in assessing the situation related to waste processing in Russia.



A number of international conferences and seminars on the management of waste rubber products, waste electronic and electrical equipment were organized with the participation of representatives of federal and regional agencies and commercial structures. At these events leading foreign experts shared their experience in the field of waste management. At the conferences and seminars, the participant not only have a chance to obtain information about new technologies and share expertise in organization of waste collection but also, they have an opportunity to discuss the most pressing problems and ways of solving them.

On the request of the Ministry of Industry and Trade of the Russian Federation, proposals have been developed for the Strategy of the industry for processing of production and consumer wastes. In cooperation with the Federal Center for Project Finance (the structure of Vnesheconombank) and the Association of the Central Federal Okrug (CFO), a Waste Management Model was developed following the pattern of the Central Federal Okrug. The model is based on the principle of eco-industrial parks (EIP), world eco-technical parks are taken as an example. The Project experts coined the term «eco-technopark» for the Russian Federation as a place where integrated wastes and secondary resources deep processing plants work in close cooperation with the training centers for waste management industry specialists. Within the framework of the Project, an economic and technological program on creation of a network of such eco-technoparks in Russia has been developed.

Currently, the Project experts are providing consulting support to companies that have started design work to create eco-technoparks in different regions of Russia. The first integrated enterprise will be an eco-technopark «Volchiya Griva» in the Krasnoyarsk Krai.

The Project has been developed with the participation of the UNIDO experts and has already received approval at the initial stage. The Project experts will accompany the construction of the first eco-technopark in Russia at all stages of its implementation, aiming at spreading positive experience over the territory of Russia.

An essential trend of the UNIDO CIIC Project's activities is the expansion and development of international cooperation in the field of waste management, primarily, with the CIS countries. The representatives of the CIS countries were invited to participate in the international conferences and seminars prepared and held within



the framework of the UNIDO Project in Bishkek, Yerevan and Minsk where UNIDO national experts made presentations on various aspects of hazardous waste collection and processing.

Study tours for experts from the CIS countries to Germany and France were organized. UNIDO experts developed the Project on the establishment of a coordinated WEEE management system in the CIS countries, which was approved by the CIS Executive Committee and representatives of the Customs Union countries. Its implementation will make it possible to take a next step in organizing the joint work of the environmental authorities in the CIS countries.

As a continuation of the UNIDO Project, the UNIDO CIIC in Russia has initiated an educational course E-waste Academy Managers Edition for employees of relevant departments of the CIS countries to be held in Moscow in May 2017.

At present, together with the United Nations University, the international organization StEP Initiative, the UNIDO CIIC in Russia is carrying out intense activities related to the preparation and organization of the E-Waste Academy for the CIS countries. Financial support for this course is provided by the German Environmental Protection Agency (UBA) and the international corporation Dell. The training course in such a format will be held in the CIS countries for the first time.

During the implementation of the Project, new working contacts have been established with a number of leading international organizations working in the field of hazardous waste management: the WEEE Forum, StEP Initiative, WEEELABEX, the Asphalt Rubber Association, IPLA (International Partnership of Local Authorities for the Exchange of Experience in Waste Management) and others. The experience of these organizations is worthless especially in the context of new environmental legislation adoption in Russia.

While implementing the Project the UNIDO CIIC in Russia has been in constant contact with the Ministry of Natural Resources and Environment of the Russian Federation. The experts of the UNIDO Center participated in meetings at the Ministry, dedicated to the discussion of draft normative documents in the field of waste management.

The analytical reviews prepared by the UNIDO experts during the Project implementation have been used in the Ministry's practical activities, including identification of BAT.

The UNIDO CIIC experts' publications in specialized journals on waste collection and processing allowed Russian specialists get acquainted with foreign experience in the field of the potentially hazardous waste management. The experts took part in the meetings at the Ministry of Natural Resources and Environment related to the discussion of draft normative acts related to waste management.

### **Coordination with other UNIDO projects in Russia**

Environmentally Sound Management and Final Disposal of PCBs at the Russian Railroad Network and Other PCB Owners;

Phase Out HCFCs and Promotion of HFC-free Energy Efficient Refrigeration and Air-Conditioning Systems in the Russian Federation Through Technology Transfer;

UNIDO Project to enhance the industrial integration of EurAsEC countries.

## INTERNATIONAL EXPERIENCE IN WEEE MANAGEMENT



**Kristine Sperlich**  
*Expert of UBA (German  
Federal Agency for  
Environmental Protection)*

There is no relevant scheme of WEEE collection and processing in Germany. The manufacturer has to register the quantity of products placed on the market and provide financial guarantees. To implement a number of operations in the waste management system, a coordination center has been established. This is a private entity. The manufacturer must ensure the availability of containers at collection points. Responsibility for the WEEE collection is not borne by the producers, the municipal authorities are responsible for it.

The WEEE collection point is fixed by the coordination center which determines who of manufacturers bears physical and financial responsibility for the filled container. Then the manufacturer, who is recognized as responsible, must transport the waste to the point of primary processing. We have 212 such recycling points, all of them are certified

We comply with the requirements of the previous version of EU Directive on waste collection. However, there are a number of things that have to be improved to achieve new targets for electronic waste collection. Regarding the extraction of useful materials, we fully comply with the Directive requirements.

I would like to say a few words about the problems we are facing in the process of e-waste management. One of the problems concerns illegal export and theft from municipal public collection points. The other problem is fire accidents in warehouses or at points of collection and processing of equipment containing lithium batteries. To minimize the possibility of spontaneous combustion of the battery, we discuss how to change the system of collection or group collection at expert panels. Another issue is rare metals recycling. If precious metals are recovered sufficiently well, some metals such as, for example, tantalum, are extracted with low yield because of technical limitations, and we are now working on how to achieve high recovery rates.



**Stephen Rodgers**  
*Director of environmental  
Department, Ericsson  
(Sweden)*

The Ericsson Company operates in 180 countries and makes a significant contribution to the mobile communication industry. When developing our products, we pay great attention to its life cycle. Our designers are trying to develop a device that will work not less than 80 years. After the original product has served the customers, it is recycled, and the resulting secondary resources are used to produce new products. We set ourselves the task to increase the rate of return up to 98% by 2020.

In 2005, based on the requirements of the EU Directive on waste, the Ericsson Company prepared a corporate directive and extended its operation to all 180 countries in which we operate. We assume the extended responsibility of producers.

Currently, there are 4 processors working with our products, which are capable of very fine processing, and there are not many such enterprises for electronic waste in the world. In order to process our electronic waste from all 180 countries safely, we have to transport them, while meeting the requirements of the Basel Convention, which is very difficult.

So far, in Russia we have collected 385 radio base stations (65 tons in Siberia and 320 tons in Moscow) and we are ready to sign a contract with an authorized recycler. Due to the high transportation costs, we have decided to focus on major cities, such as Moscow and St. Petersburg.



**Olga Volkova**

*Chief specialist of the Department for coordination of activities in the field of secondary material resources of the Republic of Belarus*

In the Republic of Belarus the principle of extended producer responsibility and importer responsibility (EPR), particularly, in respect of electronic products was introduced by the decree № 313 in 2012. Previously, an environmental tax related to packaging waste and the principle of extended liability in respect of rubber waste had been applied.

Currently, EPR application is extended to a larger group of products, including sophisticated household appliances. In order to coordinate the secondary material resources management system and the implementation of EPR, a non-profit organization, State institution «Operator of secondary material resources», was established. It is a kind of analytical and advisory center, which accumulates funds but is not engaged in any business activities related to waste.

After the introduction of Decree 313, producers / importers could fulfill their obligations with respect to the RRP in two ways: either by paying a tax and entering into a contract with the operator for collection, processing, organization, information, etc., or by establishing their own system of products and transport boxes waste disposal. But this requirement applies only to the collection and recycling of consumer waste because in the field of industrial waste management there is a separate, well-structured, rigid legislation.

«Operator of secondary material resources» registers and maintains a record of waste collection points for sophisticated household appliances. Basically, for the needs of the population a Republican map was made with addresses of all cities and towns where waste collection points exist. Due to the Decree adoption and the introduction of a system for handling secondary material resources on the basis of the EPR, positive tendencies in this area are visible in the Republic of Belarus.



**Ekaterina Rodionova**

*Commercial Director of Closed joint-stock company «Petromaks»*

First of all, I would like to confirm that enterprises that have already started processing or ready to process WEEE do exist in the Russian Federation. And I represent one of them, namely the Russian subdivision of the Finnish Kuusakoski recycling ZAO Petromaks.

Now the company has offices in more than 10 countries and more than 100 industrial sites. The total number of the employed personnel amounts to more than 2000 people, and the amount of recycling of the input materials per year exceeds 2.5 million tons. The company specializes in the supply of raw materials for industrial enterprises (ferrous; non-ferrous metals: aluminum and copper; various plastics; structural materials; energy materials). We provide environmentally sound services in WEEE utilization, including the dismantling of large constructions, safe transportation, storage, inspection of incoming raw materials, full technological cycle of waste processing: crushing, sorting, several stages of separation and other operations.

In Finland the company has its own foundry-aluminium plant; lead glass processing plant has been launched in the UK. All processes are certified according to the environmental management standard. In its own eco-park the company has a laboratory whose tasks, among others, are development of new and validation of existing technologies, development of know-how and adaptation of these technologies to a particular market.



There are different approaches to the development of e-waste management systems but there is no single template to be applied. Though, there are basic elements of the system, that must be identified. First, you need to assign the responsibilities to each member of the system. Second, operating and maintenance mechanisms should be identified in the management of WEEE. Third element of the system is selection of financing method. The fourth element, as I've highlighted, is transboundary product flows, legal and illegal.

Various approaches are used in the division of responsibility in the WEEE management. There are countries in which public authorities control the system (USA). There are options when third parties are involved, as in Switzerland. There are hybrid systems when responsibility is shared between the public and private sectors and it creates an efficient management system (Britain, Italy, Japan). The selection of specific scheme will depend on what kind of infrastructure is already in place and what mechanisms to control the system are provided for.

When distributing the functions I distinguish three most important players: producers, local authorities and recyclers. In Europe producer's responsibility for the full life cycle of their products can be individual (IPR) and extended (EPR). The difference between the two approaches is that in the first case the individual responsibility of the specific producer for his product is realized, and in the second – the collective responsibility, when the producers (or the industry) are responsible for certain groups of products. The case of assuming collective responsibility is more popular in the world.

Funding is also an important aspect of the electronic waste recycling system. There are several options how and where to find funding. First, it is possible to charge the manufacturers (suppliers) when their products appear on the market. Second, there are financing options based on the market share of products. The main thing is to choose the one that will suit your particular system.

**Duncan McCann**

*The President of the company WEEEHelp,  
coordinator of the targeted programme «Politics»  
global public-private partnership Solving the  
E-Waste Problem (StEP) (UK)*



## PROJECT EXPERTS

### **Vladimir Maryev**

National project coordinator,  
Deputy director on international cooperation  
of the «Russian Technical Society»

### **Valentin Ishchenko**

UNIDO senior consultant (Austria)

### **Vladimir Komissarov**

UNIDO national expert (WEEE),  
Director of the Association of recyclers of  
electronic and electrical equipment

### **Ruben Mkhitarov**

UNIDO national expert,  
Director general of the OOO «Ekosorber»,  
Deputy Director on scientific work of  
the Federal state institute «Scientific  
Research Centre for Resource and Waste  
Management»

### **Jeanne Perlina**

UNIDO national expert,  
Director of the Association «Shinoecologia»

### **Tatyana Smirnova**

UNIDO national expert (WEEE),  
Associate Professor of the Gubkin State  
University of Oil and Gas

### **Yuri Shuvalov**

UNIDO national expert

## PHASE I (2010-2013)

### Key objectives:

- ➔ Conduct an analysis of the current situation in the field of potentially hazardous waste in Russia (such as electrical and electronic waste – EEW and worn tires);
- ➔ Introduce changes in the law to encourage and support the implementation of safe methods of disposal and recycling;
- ➔ Conduct a comparative analysis of the Russian, EU, US and Japanese legislation related to the management of hazardous waste allowed us to determine the necessary improvements of the legislation and prepare recommendations for the government on amendments to national waste management legislation, in particular on the principle of «extended producer responsibility».

The UNIDO Project aimed to create two systems in Russia: handling worn-out tires and managing electronic waste. In the first direction, good results were achieved: the Association «Shinoecologhia» was created (in 2010), the Agency for Strategic Initiatives (ASI) approved the financing of a complex project for worn-out tires, 3 enterprises for the production of road modifiers and other products were built. The complex project envisaged the creation of a complete chain of utilization of worn-out tires from collection to production of new products from them.

The same scheme was applied for electronic scrap. Some time ago, the branch Association of Electronic Scrap Recyclers was created. The possibility of financing the Project on Recycling of electronic waste through UNIDO from the Global Environment Facility (GEF) fund was explored. In addition, we announced this project for the CIS countries to unite the laws of Russia, Armenia, Belarus and Kazakhstan in this area. Within the Project framework we actively worked with the Chamber of Commerce and Industry of the Russian Federation, the State Duma, Analytical Center for the Government of the Russian Federation, realizing that it is the direct way to address the Government of the Russian Federation.

October 1, 2010 the Autonomous non-profit organization (ANO) «International centre for best environmental technologies» (ICBET) was established within the UNIDO CIIC Project «BAT/ BEP Centre for environmentally safe disposal of potentially hazardous consumer products and industrial wastes».



ICBET is IPLA Sub-regional secretariat for the Russian Federation and other EurAsEC countries since 2012. Web site: <http://www.icbet.ru/>



**Vladimir Maryev**  
National project coordinator,  
Deputy director on international  
cooperation of the «Russian  
Technical Society»

*The main objective of the Project implemented under the auspices of UNIDO, apart from the ICBET establishment is the practical solution to the problem of creation of an effective system of electronic waste disposal in Russia. We have created two pilot projects in Tatarstan and the Moscow region in order to further spread the positive experience throughout Russia.*

*The electronic news site has been created to share experience and disseminate operational information. The main objective of the ANO is to promote research, to formulate proposals on the application of the latest environmental technologies to be included in federal and regional normative legal acts.*

## Products created by ICBET within the framework of the Project



Atlas of the best available technologies (BAT/BEP)



WEEE training course



Geographic information system «Rubber waste generation monitoring»

## ICBET objectives:

- **Establish** business contacts and develop cooperation with International organizations working in the field of best environmental technologies;
- **Promote** the development and dissemination of best environmental technologies and environmental practices;
- **Involve** research institutions, experts and specialists to analyze and evaluate innovative environmental technologies;
- **Promote** research and development in the field of environmental technologies;
- **Promote** proposals for the use of new technologies for inclusion in regulatory legal acts;
- **Organize** an electronic information platform for collecting information on the best available technologies;
- **Participate** in legislative working groups of federal and regional authorities in order to develop legislative initiatives.

## Key directions of the ICBET cooperation with organizations and companies engaged in WEEE collection and recycling:

- **Development** of federal and regional programs on turnover of WEEE and RTG in the Russian Federation;
- **Promotion and transfer** of the Best Available Technologies and Best Environmental Practices to Russia;
- **Implementation** of the education programs for employees of waste collection and recycling organizations;
- **Establishment** of a system for deep processing of secondary raw materials in Russia;
- **Assistance** in establishing legal market for recovered electronic equipment;
- **Integration** into the established system of WEEE and RTG complex management.

## ICBET activities within the framework of the Project:

1. Implementation of a pilot project for the complex utilization of waste tires in the Republic of Tatarstan;
2. Creation of a model of worn tires regional circulation In conjunction with the Association «Shinoecologia» for the promotion of waste tire recovery and recycling;
3. Establishment of the WEEE Recyclers Association;
4. Obtaining the status of sub-regional Secretariat of IPLA (International partnership for expanding services to local authorities of waste management in Russia and other EurAsEC countries).



**Vladimir Komissarov**

UNIDO national expert (WEEE), Director of the Association of recyclers of electronic and electrical equipment

*According to UNEP's data, the total volume of WEEE generated annually worldwide amounts for approximately 50 million tons per year. WEEE is among the fastest growing type of waste. Various estimates predict that the volume of WEEE in Europe and the US will grow at a rate of over 4.5% annually in the next decade. The amount of WEEE generated annually in Russia is around*

*According to the estimates about 1.48 million tons provided by the international initiative for e-waste recycling (there is no statistics on the amount of WEEE in Russia, as this type of waste is not officially documented). Only 5% of this amount of WEEE is recycled.*

*In Moscow, some 120 million tons of WEEE are generated every year, only around 4.000 tons is subject to collection and recycling. Less than 25% of it is covered by contracts on recycling by third-parties and is removed; 70% is used without any official arrangements. However, the volumes and growth rate of WEEE are not the only reason why this kind of waste deserves special attention. On the one hand, due to its composition this type of waste is highly hazardous for human health and for the environment. On the other hand, WEEE contain a lot of valuable secondary materials which can be recovered and re-used in various economic activities.*

*In 2014, upon the initiative of the Chamber of Commerce and Industry of Russia and UNIDO, a sectoral WEEE Recyclers Association was established. The key goal of the Associations is to mobilize efforts and expertise of professionals working in the field of e-goods recycling, to convey its agenda on WEEE management to the executive and legislative authorities, ensure that this agenda is given due account in the development of relevant legislative and normative acts, establish a WEEE recycling industry, etc.*

*As a response to the growing volumes of WEEE and the threat it poses for the environment, many countries have been developing various instruments for WEEE management. The legislation of Russia has yet no independent law on certain types of waste, which seems inappropriate. To help the community realize the severity of the problem of WEEE generation and recycling, serious efforts on raising awareness and educating on the matter shall be taken. Russian mass media could play a considerable role in this task, as well as conducting seminars and conferences on the issue.*

## WEEE Recyclers Association functions:

- Formulate and communicate to executive and legislative power the collective viewpoint of the members of the Association on legislative and technical regulation issues in the field of WEEE management;
- Provide the opportunity to offer the regional authorities in Russia a consolidated concept of creation of regional systems of WEEE management;
- Create conditions for sharing experience and relevant information.

The WEEE Recyclers Association established contacts with non-profit organizations in Belarus and Kazakhstan, as well as working contacts with the European initiative StEP and the Association speaking for e-waste producer responsibility – WEEE Forum.

## What is IPLA?

International partnership for expanding services to local authorities on the waste management (IPLA) was established in 2011 to share knowledge, communicate across national boundaries, and work towards the dissemination of best practices to accelerate implementation of waste-related infrastructure and services at various stages of waste management such as avoidance, prevention, minimization, sorting, collection, transportation, recycling, recovery, reuse and disposal.



The main goal of the IPLA is to provide assistance to local authorities, businesses and the public to develop public-private partnerships, to address the problems of waste generation in the world, to search the best environmental technologies and successful projects that have already resulted in the reduction of environmental burden in different countries, to combat environmental pollution from industrial and household waste.

Today IPLA unites more than 240 members from more than 75 countries.

ICBET has been a member of the IPLA since January 2012.

In September 2012 ICBET became IPLA sub-regional Secretariat for Russia and other EurAsEC countries.

## ICBET Successful Projects

№	Project Name	Main results	Execution period	Customer
1	«WEEE regional management system concept in Moscow region».	The concept for WEEE regional management system was successfully developed for implementation in Moscow region.	2010-2013	UNIDO, Vienna.
2	«Rubber waste regional management system concept in Moscow region».	The concept for Rubber waste regional management system was successfully developed for implementation in Moscow region.	2010-2013	UNIDO, Vienna.
3	International and national experience analysis in the field of used tires recycling and utilization to be included in State Contract for Scientific-Research work «Development of proposals on updating and creating regulatory legal framework in the field of used tires recycling and utilization in the Russian Federation» between the Ministry of Industry and Trade of the Russian Federation and NIC «NIISHP» Ltd.	Section of Consolidated report «International and national experience analysis in the field of used tires recycling and utilization» was prepared.	2011	NIC «NIISHP» Ltd.

4	Development of the proposals on application of technologies for cleaning territories from waste in the conditions of negative temperatures to be included in the Programme and Project on conduction of works to eliminate the sources of negative impact on contaminated territories of the Archipelago Franz – Joseph islands. Contract between Ministry of Natural resources and Ecology of the Russian Federation and the Study Council of the productive forces (SOPS).	Analysis and synthesis of foreign waste management experience in polar conditions, including packaging waste from oil, bulky waste, household waste.	2011	Study Council of the productive forces (SOPS).
5	Proposals for production and consumption waste management technologies application in Primorsky Krai (Maritime Territory) for the State Programme «Environmental Protection of the Primorsky Krai for the period from 2013 to 2017».	Proposals for production and consumption waste management technologies application in Primorsky Krai (Maritime Territory) are developed and included to the State Programme.	2012	International Center for Regional Development (MCRR).
6	Assessment of the environmental effectiveness of the measures for socio-economic development of the Kuril Islands implementation, including the description of environmental impacts for Scientific-Research work «The main directions of socio-economic development of the Kuril Islands (Sakhalin Region)».	Assessment of the environmental effectiveness of the measures for socio-economic development of the Kuril Islands implementation, including the description of environmental impacts for the period up to 2025, was conducted.	2013	Agency for the development of the Kuril Islands and investment programmes of the Sakhalin region; International Center for Regional Development (MCRR).
7	Development of the Model for the implementation of the integrated projects in the field of solid waste management on the example of the Central Federal District: environmental, technological and logistical aspects.	Environmental, Technological and Logistical analysis of the current state of the waste management in the Russian Federation was conducted and the Model for the implementation of the integrated projects in the field of solid waste management on the example of the Central Federal District was developed.	2014	OJSC «Federal Center of Project Financing» (FCPF) .
8	Expert evaluation of Municipal Solid Waste (MSW) recycling technologies, proposed for the application on the specific territory of the Russian Federation.	Analysis and conclusions on the proposed by Customer MSW recycling technologies; Analysis of existing or planned for the implementation MSW recycling technologies, used on the territory of the Central Federal District.	2014	Regional public organization committed to assisting the promotion of interests of engineering and technical community «Russian Technical Society».

9	State Contract for the Scientific Research work: «Development of proposals for the establishment of environmental, resource-saving collection and recycling of electronic and computer equipment system, and technical and economic analysis of the system functioning on the territory of Moscow».	Scientifically grounded proposals for the establishment of environmental, resource-saving collection and recycling of electronic and computer equipment system, and the technical and economic analysis of the system functioning on the territory of the city of Moscow were developed; Economic, legal, organizational, resource and technical measures to establish an effective system of collection, accumulation, transportation and recycling of electronic and electrical equipment and computer waste were determined.	2015	Department of Natural Resources and Environmental Protection of the city of Moscow.
10	State Contract aimed at Industrial policy implementation in the Ministry of Industry and Trade of the Russian Federation: «Development of waste recycling industry» to be included in the sub-programme «Development of traditional and new materials production» of the State programme of the Russian Federation «Development of the industry and increasing its competitiveness».	Analysis of world experience and evaluation of Russian market current state for the implementation of Eco-technological parks and circular economy. Proposals on state support measures and its legal framework. Financial and economic justification of state support measures to be included in the Draft Federal Budget for 2018-2020.	2016	Ministry of Industry and Trade of the Russian Federation.

## *Key achievements of the first phase*

### 2010

- In 2010 The experts of the Project focused their work on analyzing the state of the waste management system in Russia and in the EurAsEC countries, and assessing the possibilities for amending environmental legislation with the aim to develop a waste recycling industry.
- An international research conference «Modern approaches to the challenges of recycling waste electrical and electronic equipment» was prepared and held in Moscow. The conference was attended by experts from Belarus, Hungary, Denmark, Poland, the United States, the Czech Republic, France and Japan. A resolution was adopted outlining a framework for cooperation with the Russian government and the State Duma for the implementation of the Project's objectives.
- An Autonomous Non-commercial Organization «International Center for Best Environmental Technologies» (ANO ICBET) was established to facilitate the Project's implementation.

### 2011

- Considerable legislative efforts were undertaken aimed at amending the legislation of the Russian Federation in the field of waste management, especially of potentially hazardous waste, in order to tighten the regulations for waste management, introduce the producer (importer) responsibility for the disposal of products at the end of their life cycle, and facilitate the activity of waste recyclers. Representatives of the ANO ICNRT joined the Working Group of the Council of Federation on the preparation of the relevant bills. The key emphasis was placed on promoting the use of Best Available Technologies and Best Environmental Practices (BAT / BEP) and the harmonization of Russian and international standards and regulation. Significant results were achieved by the national experts through their participation in the Working Groups of the State Duma, the Federation Council and the Public Chamber of the Russian Federation. The most significant achievement of the year 2011 was the adoption in the first reading of the amendments calling for the introduction of the extended producer responsibility to the legislation of the Russian Federation.
- Pre-project documentation, including the presentation of the Project, the structure of the atlas and technical specifications, was prepared for the establishment of the International Information System «Atlas of the Best Available Environmental Technologies».
- In cooperation with the Analytical Center for the Government of the Russian Federation, a program on establishment of an expert panel was developed. The panel was intended to provide evaluation of regional environmental projects, in collaboration with regional experts develop programs on improving environmental conditions, and produce options of advanced equipment for the enterprises engaged in waste disposal.
- ANO ICNT became a member of the Association of Assistance to Restoration and Recycling of Used Tires «Shinoecologia».
- Efforts were undertaken to engage the members of the Association of Trading Companies and Producers of Electrical and



Computer Equipment and of the Association of Manufacturers of Electronic Equipment and Devices in the implementation of the UNIDO project on WEEE management in the Russian Federation.

- An analysis of the state of the environment of the islands like the Land of Alexandra, Graham Bell, and Hoffmann was conducted. Major pollutants and their volumes in the islands were identified. UNIDO experts reviewed the Russian and international practices of elimination and recycling of the identified variety of pollutants, used equipment and technologies. As part of the implementation of the program of clean-up of the Franz Josef Land archipelago, practical proposals on remedying the environmental damage to the Arctic lands were developed.
- In collaboration with the Association «Shinoecologia» and the Research Institute of the Tire Industry, following the request of the Ministry of Industry and Trade of the Russian

Federation, proposals have been developed for the adjustment and establishment of a regulatory and legal framework for the recycling and disposal of waste tires in the Russian Federation.

- The database of the geo-information system «Monitoring of electronic, electrical and rubber waste» has been further extended. The database helps to monitor online the formation and recycling of key waste included in the Project registry – waste industrial rubber, electronic and electrical scrap.
- Within the Project, a training course on electronic and electrical waste recycling was developed.

## 2012

- In terms of lawmaking activities, significant efforts were undertaken to ensure the adoption of a bill in the second and third readings, which would considerably amend the environmental legislation of the Russian Federation. The Project experts and the staff of the ANO ICNT participated in the Working Group of the Federation Council, cooperated with the Higher Environmental Expert Council of the State Duma and the Working Group working on the amendments to the law on production and consumption wastes (89-FZ). In addition, they participated in the hearings on the bills in the Public Chamber of the Russian Federation, and in the Chamber of Commerce and Industry of the Russian Federation. A special emphasis was placed on the harmonization of Russian and international legislative standards and regulations. First steps were taken towards the unification of terminology in environmental legislation of the Russian Federation, bringing it into line with the current European legislation,

including in the interests of partners in the EurAsEC countries.

- Pre-project documentation has been prepared for the establishment of the UNIDO Joint Information and Analytical System «Atlas of the Best Available Environmental Technologies», including the presentation of the Project, the structure of the atlas and technical documentation. Terms of reference were developed for the application for a funding from the relevant ministries of the Russian Federation. The Atlas is continuously expanding with relevant information.
- In collaboration with the International Center for Regional Development, UNIDO has been promoting the incorporation of the Project results in regional programs of socio-economic development and management of production and consumption wastes (Primorsky Krai, Moscow region). The Ministry of Regional Development of the Russian Federation

proposed to include UNIDO experts in the Commission for the Integrated Programs of Regional Social and Economic Development to contribute to environmental issues.

- UNIDO continued cooperation with the Association «Shinoecologhia» and the Social Movement «Doing It Together» to establish a national operator for the recycling of worn-out tires in Russia. At the same time, there has been continuing work on the development of standard normative documents for regional, complex programs for tire recycling, harmonized with the European legislation, and on the introduction of the best environmental technologies continued. Work was underway to study and apply international experience of the use of waste rubber products and of rubber chips for road construction in Russia. Preparation the International Conference «Actual Issues of Recycling of Waste Tires and the Use of Rubble Crumbs in Road Construction» in St. Petersburg has begun.
- UNIDO continued on research the international practices and technologies for the WEEE recycling. The cooperation with the Association of Electronic Equipment Manufacturers «RATEK» continues to prepare the documentation necessary for the establishment in the Russian Federation of an Industry Operator – recycler of electronic and electrical equipment. At the same time, there have been continuing efforts to coordinate with the partners from the EurAsEC countries (Armenia, Belarus, Kazakhstan) the implementation of a joint project on establishing an integrated system for e-waste collection and recycling within a single custom area. It is planned that the Project shall be funded by the GEF.
- Work continues on facilitating the dissemination of the Project results to other EurAsEC countries through the IPLA (International Partnership for Expanding Waste Management Services of Local Authorities) channels.
- Together with the National Association of Current Sources, efforts to harmonize Russian and international legislative and regulatory documents on the recycling of batteries and

accumulators were initiated.

- Work continues on developing a concept for establishing a system of eco-technoparks in the regions of Russia; the concept envisages the use of the results of the Project for this purpose. A site in the Moscow region was selected for the construction of a pilot eco-technopark. The Project may be interregional. The Concept for submission to the Governor of the Moscow region was prepared. Following the meeting in the Moscow Region Government, the concept of Eco-technoparks was adopted as a foundation of a waste management system.
- Geo-information system databases have been expanding to include more data. «Monitoring of electronic, electrical and rubber waste» (<http://mero.unido.ru/unido3/>), which helps to conduct an on-line monitoring of the formation and recycling of key wastes within the Project - waste industrial rubber and waste electronic and electrical scrap. Together with the Analytical Center for the Government of the Russian Federation, UNIDO experts have been working on a project that shall enable the establishment of a recycling industry in the Russian Federation. It is planned that the monitoring of the Project implementation will proceed within a GIS-project.
- A website of the International Center of Best Environmental Practices was developed and filled with relevant information on the Project progress and results.
- A Memorandum on cooperation between the UNIDO Center and the Government of the Ulyanovsk region was prepared and signed during the Environmental Week in the Volga region
- Preparation of the presentation of the Project of the association «Shinoecologhia» - UNIDO in Bashkortostan (the event in Ufa was planned for February 26, 2013) has begun; work is underway to prepare a program of socioeconomic development of the Republic of Bashkortostan to be presented within the SCO and BRICS summits in Ufa, 2015. The work is conducted jointly with the International Center

for Regional Development within the framework of the current Cooperation Agreement.

- A decision on the Draft Concept for Reforming the Industry for Solid Household Waste Management has been prepared. The decision was submitted to the Federal Service for Supervision of Natural Resource Management (Rosprirodnadzor) of the Russian Federation.
- The International Center for Best Environmental Technologies became the subregional

secretariat for the International Partnership for Extending Waste Management Services of Local Authorities (IPLA), which consists of 75 member-countries.

## 2013

- With the support of ANO «The International Center for Best Environmental Technologies», the Association «Shinoecologia» has considerably developed, uniting 40 key waste-recycling companies. Its scope of activities included monthly meetings of the Council of the Association, preparation of new projects for implementation, incl. for the Agency of Strategic Initiatives of the Russian Federation.
- The experts of the Project worked in close cooperation with the Chamber of Commerce and Industry of the Russian Federation, the Committee on Ecology and Natural Resources, which also hosted joint meetings for the stakeholders of the waste management industry, representatives of relevant ministries and departments, manufacturers.
- UNIDO experts actively participated in the work of the Committee on Ecology and Natural Resources of the CCI of Russia; meetings devoted to the adoption of amendments to the Law «On Production and Consumption

Wastes» were duly prepared. Through joint efforts of the Association «Shinoecologia», the Association of Manufacturers and Importers of Electronic Equipment and Electrical Equipment «RATEK» and the Association of European Businesses (AEB) practical proposals were outlined for developing normative regulatory documentation defining the Extended Producer Responsibility principle as of top priority for waste management policies. As a result, proposals were submitted to the Ministry of Natural Resources, the Ministry of Industry and Trade of the Russian Federation, the Ministry of Innovation and Investment of the Moscow Region. UNIDO experts were invited to participate in the working group of the Ministry of Innovation and Investment of the Moscow Region responsible for the development of an Integrated Waste Management System in the Moscow Region.

- The Association of Electronic and Electrical Appliance Recyclers (APET) was established.

## PHASE II (2014)

### Key objectives:

- ➔ Conduct a comparative analysis of the legislation in the EurAsEC countries: facilitate harmonization of the legislative acts to enable cooperation in the field of waste management and use of secondary resources; facilitate the dissemination of the advanced practices of waste management to other countries of the region;
- ➔ Develop an integrated Information and analytical system, including databases on BAT/BEP and an integrated system of waste and secondary resource management in Russia and in the EurAsEC countries;
- ➔ Promote cooperation with the IPLA to establish an integrated waste management system for cities and regions based on the 3R and «Zero Waste» principles;
- ➔ Develop a regional project on WEEE management with the participation of Russia, Belarus, Kazakhstan and Armenia to assist the countries in reducing the generation of persistent organic pollutants, ozone-depleting substance and greenhouse gases;
- ➔ Provide professional trainings and educational seminars on various practices of waste management, in particular, management of WEEE and waste tires, and on the implementation of the strategy of eco-technoparks;
- ➔ Establish centers for the management of potentially hazardous waste in two countries of EurAsEC.
- ➔ Promote the use of advanced methods of waste management in the EurAsEC countries through the UNIDO ITPO office in Belarus, Armenia, and Kazakhstan;
- ➔ Develop a specialized dictionary of terms used in the field of environmental protection and waste recycling (in the languages of the EurAsEC countries).

### Dissemination of experience to other EurAsEC countries

In 2012 UNIDO national experts from Armenia and Kazakhstan joined the Project to expand its activities. The analysis of the current legislation on waste management and the existing systems of waste collection and utilization, particularly of WEEE and rubber products, was carried out in the Republic of Armenia. Recommendations for improving the relevant legislative and regulatory framework were developed.

Consultations were held to explore concernment of these countries in establishing cooperation with the Russian Federation in waste management, implementation of relevant regional projects. Agreements with various organizations in Belarus and Kazakhstan were signed and implemented.

Proposals for regional projects were discussed at a meeting of the corresponding Council in the CIS Executive Committee and at the meeting of the environment ministers of the EurAsEC countries.



# EURASIAN ECONOMIC COMMUNITY

## UNIDO Regional project to establish the WEEE management system for the EurAsEC countries

### Key objectives:

- Establishment of a sustainable WEEE management system for the EurAsEC countries on the basis of harmonization of national legislation, technical regulation and economic efficiency for recycling of this type of waste having in regard waste distribution in this region;
- Reduction of persistent organic pollutants and persistent toxic substances in the EurAsEC countries as a result of the establishment of WEEE management system;
- Provision of conditions for the use of BAT/BEP in the WEEE management.

### Project phases:

1. Inventory of WEEE in the participating countries.
2. Selection of the most appropriate systems for the collection of various types of WEEE.
3. Proposals preparation for adoption of amendments to the existing legislation, draft regulations, recommendations for measures to stimulate participation in the WEEE recycling process, recommendations for the use of the best available technologies to handle this type of waste.
4. Creation of two or three pilot sites for the complex processing of various types of WEEE on the basis of state-private partnership.

### Countries that have expressed their interest in the Project:

- Russian Federation;
- Republic of Belarus;
- Republic of Kazakhstan;

- Republic of Armenia;
- Republic of Kyrgyzstan.

### Project development process:

Initially, the Project was launched for the CIS countries during the Council on industrial policy in March 2014. It was presented as a project to the EurAsEC during the Meeting of the EurAsEC Ministers of environment in September 2014, Kyrgyzstan.

The Project was presented and received support at the conference «St. Petersburg initiative» for the Baltic sea basin countries in October 2014.

Consultations with potential project partners were held during the international conference «Organization of waste management of electrical and electronic equipment in Russia: situation in the industry and prospects for its development» organized by the UNIDO CIIC in the Russian Federation, Sectoral Association of recyclers of electronic and electrical equipment, Analytical center for the Government of the Russian Federation in May 2014, Moscow.

Consultations were continued during the UNIDO expert mission to Belarus in August 2014 and during the workshop on Building regional (CIS) capacity in developing programs for mitigation of global environmental problems in Vienna, October 2014.

During a study trip to Germany in November 2014, the Project received consulting support from the Federal environment Agency (UBA) of Germany that provides funding and expert support to a group of Russian, Belarusian and Kazakh experts from governmental and non-governmental institutions and business to

explore the German experience in the development and implementation of the WEEE management system.

An introductory seminar, devoted to discussion of the concept of regional WEEE management system and establishment of an international working group, was organized in Minsk in February 2015.

### UNIDO Regional project to establish the rubber waste management system for the EurAsEC countries

#### **The Project achievements within the framework of cooperation with the Association «Shinoecologia» for the promotion of tire recovery and recycling:**

- Based on the analysis of scientific and technical documentation on rubber modifiers, proposals for the documents development ensuring the use of rubber modifiers in road construction were made. Technical recommendations for the use of high quality rubberized asphalt concrete (RAC) in road construction and repair were prepared. The Draft of GOST «Roads and highways. Asphaltic concrete mixes and asphalt concrete containing rubber modifier. Technical specifications» was developed.

- Recommendations for harmonization of the Russian and other EurAsEC countries legislation on recycling were prepared.

- The analysis of the existing collection schemes, practices and technologies for waste tires processing used by companies in regions of Russia and the EurAsEC was carried out.

- Proposals for the development of the legislative base and implementation of complex waste tires utilization schemes in two regions in Russia were prepared.

- Databases were created for:

- tire processing enterprises;
- enterprises using the products of tire recycling;
- enterprises manufacturing the equipment for tires processing.

- Participation in conducting the Round table on the issue: «Collection, processing of waste tires and realization of commercial products». The following

results were achieved:

- a draft decision containing the analysis of the state with tires processing and previous work done in this direction at the regional level was prepared;
- the main guidelines for the development of a regional tire recycling system were identified, including legislation, responsibility of producers of products for its disposal at the end of the life cycle;
- the list of normative legal documents to be developed for ensuring the functioning of tires recycling system in the Moscow region was presented;
- the principal scheme for the waste tires recycling in the Moscow Region was presented;
- a working group on development and implementation of the system for the «Collection, processing of used tires and realization of commercial products in the Moscow region» was formed.

All the decisions taken were coordinated with tire manufacturers and importers.

- Participation in the meeting with the Deputy Ministers of industry and trade of the Republic of Tatarstan D. Safiullin and A. Khusainov on the problems of the tire industry in the Republic of Tatarstan.

EurAsEC operated until 2015 when the Eurasian Economic Union was formed.

## Key achievements of the second phase

### 2014

- On December 23, 2014, a new version of the Waste Law (№ 89-FZ) was adopted, introducing the principle of Producer Responsibility and a number of other amendments, which together had a crucial impact on the waste recycling industry in the Russian Federation. Work is in progress on developing a standard law on secondary material resources for the countries of the Customs Union.
- Proposals on regulation of treatment of waste, including potentially hazardous waste, were prepared and submitted to the Government of the Russian Federation and regional governments in Russia.
- Upon the request of the Federal Center for Project Financing (a structure of the Vnesheconombank), a model of integrated waste management was developed based on the practice of the Central Federal Okrug (CFO). As a result, a model was developed, which was intended to become the National Project for the Russian Federation. The model defined a system of «eco-technoparks» as a priority approach to waste management in the Central Federal Okrug.
- A proposal was developed and submitted to the Government of Russia to introduce a Directory of Programmes on Waste Management as based on the practice of the CFO.
- An analysis of existing programs on waste management was conducted; recommendations on developing interregional waste management facilities were produced.
- The geoinformation system «Otkhodopererabotka» (Waste recycling) was established following the practice of the Central Federal Okrug.
- A project for integrated recycling of waste tires of the JSC «Nizhnekamskshina» was developed and is currently implemented in the Republic of Tatarstan. The Project received support from the Agency of Strategic Initiatives.
- A database of best available technologies and best environmental practices of recycling of potentially hazardous waste was developed.
- The training course «Basic aspects of recycling of waste electronic and electrical equipment» was prepared. The course was organized for the students of the Moscow Institute of State and Municipal Management, the Institute of State and Municipal Management of the Higher School of Economics (HSE), the Academy of National Economy, the Moscow State University of Engineering Ecology (MSUEE), the Russian State University of Oil and Gas. Representatives of the EurAsEC countries (Armenia, Belarus and Kazakhstan) expressed their interest in conducting the training course for their specialists.
- The 5-day seminar «The main aspects of the use of industrial waste as secondary material resources in road construction» was developed.
- In the Republic of Tatarstan, a project on integrated recycling of waste tires is currently under implementation. Total funds attracted: 3 billion rubles.
- Together with the Association for the Retreading and Recycling of Tires «Shinoecologia», a model for the regional management of waste tires was developed based on the practice of the Moscow Region.
- In cooperation with the WEEE Recyclers Association, a Regional Project on the establishment of a WEEE management system for the EurAsEC countries was developed. The initial presentation of the Project for the CIS countries took place at the session of the Council on Industrial Policy of the CIS in March 2014.

- The professional technological platform «Secondary material resources» was established under the aegis of the Analytical Center for the Government of the Russian Federation. The platform can be used by industry professionals to share and exchange experience and information on innovations in the industry.
- A framework for a regional integrated management system for managing worn-out tires in the Moscow Region was developed. A report on the current practice of waste tires and waste rubber management and the framework description were submitted to the Minister of Transport of the Moscow Region Alexander Zaitsev on September 24, 2014.
- Recommendations on harmonization of the legislation of Russia and EurAsEC countries in on waste tires management were developed. The recommendations were submitted to the relevant ministries of Russia, Armenia and Kazakhstan.
- There were developed the guidelines for the establishment of a system of waste tires management within the context of the introduction of the Producer Responsibility principle in the Russian legislation. An explanatory note on the federal-level significance of the Leading Project of the Agency of Strategic Initiatives and the LLC. Koltec-Kama «Developing the Production of high-tech composite, construction, rubber-polymer materials with the use of derivative products» was submitted to the President of the Republic of Tatarstan. The Project in Tatarstan is under implementation since 2014. The Experts of the UNIDO Project carried out a research «Development of an implementation model for integrated projects in the field of solid waste management based on the practice of the Central Federal Okrug: environmental, technological and logistical aspects», commissioned by the OJSC Federal Center for Project Funding (JSC «FCPF»).
- The experts of the UNIDO Project conducted a research «Expert evaluation of the technologies for processing solid domestic waste, proposed for the use in a particular territory in the Russian Federation», commissioned by the Regional Public Organization «Russian Technological Society» that promotes the agenda of the engineering community in Russia.
- At the request of the State Company «Avtodor», in cooperation with the Moscow Automobile and Road Construction State technical University (MADI), the Standard of the organization «Technical conditions for asphalt-concrete mixtures and asphalt-concrete containing rubber modifier» was developed.
- Together with Professor Amirkhanyan (USA), the text of the «Technical requirements for rubberized asphalt concrete and rubber bituminous binders in the US states» was translated. The work is ready for publication.
- A cooperation agreement was signed between the International Center for Best Environmental Technologies and the Operator of Secondary Material Resources (Belarus).
- A cooperation agreement was signed between the International Center for Best Environmental Technologies and the non-commercial partnership ARSO.

## PHASE III (2015)

### Key objectives :

- ➔ Form a working group on the management of hazardous waste in the countries of the Customs Union with the aim to initiate the development of a harmonized environmental legislation for the countries of the Customs Union;
- ➔ Introduce regulations on the use of crumb rubber, which had been prepared and translated by the UNIDO experts. Outline improvements for the draft national standards for crumb rubber prepared by the UNIDO experts. The final version of the standards is to be submitted to the Federal Agency for Regulation and Metrology (Rosstandart) for adoption;
- ➔ Continue to support the Project Koltech-Kama in Tatarstan by providing consulting services. On demand, analyze new technologies of the use of crumb rubber in different types of designs;
- ➔ In collaboration with the WEEE Recyclers Association and other Project partners continue the work on establishing a system of WEEE management in Russia, regions of Russia, and in the countries of the Customs Union. The system shall include legislation, technical regulations and directives, the establishment of pilot facilities for the processing of WEEE, the establishment of sub-regional centers for deep processing of WEEE and their distribution in the countries of the Customs Union;
- ➔ In collaboration with the Moscow government, represented by the Department of natural resources and environmental protection, promote a practical implementation of the technologies in the field of municipal solid waste, particularly in the management of WEEE and IRA from the database developed by the Project experts. Key goal: reduce waste landfilling in the Moscow region and disseminate successful practices in the countries of the Customs Union;
- ➔ In collaboration with the Institute of GIS technology, continue the development of geo- informational systems for waste processing increasing the number of analytical layers for further implementation in the EurAsEC countries (Belarus, Armenia, Kazakhstan) aiming to facilitate the transfer of technology and exchange of experience and information on waste management;
- ➔ Expand the use of the opportunities of the IPLA to build an integrated waste management system for municipalities and regions based on the principles of 3R and Zero Waste, and on the use of GIS system. Organize the Global Forum IPLA 2015 in Russia;
- ➔ In collaboration with the Project partners - Association «Shinoecologhia» and Koltek LLC continue the development of integrated system of management of worn tires in the Central Federal Okrug of the Russian Federation;
- ➔ Develop training and educational programs for the sectoral managers and professionals in the field of hazardous waste management, and for the national and regional environmental agencies at various levels;
- ➔ Develop educational programs for schools, as well as develop key materials for environmental activists to assist early environmental education and in raising public awareness on the need of separate waste collection.

## Key achievements of the third phase

### 2015

- During the meeting in the Ministry of Ecology and Nature Resource Management of the Moscow Region, it was decided to implement a pilot project on collection and processing of electronic scrap waste in the Moscow Region, developed by the Ministry of Ecology and Nature Resource Management of the Moscow Region in cooperation with the WEEE Recyclers Association. As part of the pilot project, a number of municipal entities located in the northern part of the Moscow Region will organize stationary drop-off points for e-waste to be recycled afterwards. The participants of the Project will be residents of the cities in which the Project will be carried out, as well as manufacturing enterprises, trade networks, enterprises engaged in the processing of mercury-containing waste, municipal authorities.
  - Within the Global Forum IPLA-2015, the Declaration of the IPLA Forum in Moscow on Interregional Cooperation on Waste Management and Resource Recovery to promote circular economic development was adopted.
  - A tripartite Memorandum of Cooperation was signed between the International Center for Best Environmental Technologies, representing the interests of the UNIDO Center for International Industrial Cooperation in the Russian Federation, the National Center for Environmental Management and Cleaner Production for the Oil and Gas Industry, established on the basis of the Russian State University of Oil and Gas and the Wuhan Technological Institute. The main goal of the Memorandum is to create a regulatory framework for cooperation within the scope of common interests of the parties, primarily, in the area of use of rubber chips in materials for road and bridge construction in the Russian Federation and China.
  - By the order of Sergey Donskoy, Minister of Natural Resources and Environment of the Russian Federation, on establishing a Working Group under the Ministry of Natural Resources to prepare the acts of the Government of the Russian Federation necessary for the implementation of the provisions of Federal Law № 458-FZ of December 29, 2014 «On Amendments to the Federal Law «On Production and Consumption Wastes», certain legislative acts of the Russian Federation and the invalidation of certain legislative acts (provisions of legislative acts) of the Russian Federation», on January 30, 2015, such a working group was established and its composition was approved. As a representative of the expert community, Vladimir Maryev, National Coordinator of the UNIDO project, Director of the ANO ICSTI, was chosen to be the member of the Working group.
- In 2015-2016, the UNIDO experts took part in the development and consideration within the Ministry of Natural Resources and Environment and the Ministry of Industry and Trade of the Russian Federation of draft normative documents related to the introduction in Russia of the extended producer responsibility in regard to rubber-technical products (tires), as well as electronic and electrical equipment.
- UNIDO experts are members of the working groups of the expert councils in the Ministry of Industry and Trade of the Russian Federation, the Ministry of Natural Resources and Environment of the Moscow Region, and the Association for Social and Economic Cooperation of the Central Federal Okrug.



## EVENTS

### Conferences, meetings, seminars, workshops – organized by and/or involving the participation of the UNIDO CIIC in Russia

<b>September, 7-10 2010</b>	In collaboration with the UNIDO Headquarters, the experts of the Project organized a travel mission to Japan to learn about Eco-Towns, which the country's integrated waste management and recycling system is based upon. Establishing an Eco-town system in Russia has become one of the main objectives of the UNIDO Project in the country.
<b>November, 11-12, 2010</b>	A research conference «Modern Approaches to Recycling of E-waste» was held in Moscow. The conference was attended by experts from the following countries: Belorussia, Hungary, Denmark, Poland, the USA, Czech Republic, France, and Japan.
<b>January, 25, 2011</b>	The Project's national experts participated in the working group of the Experts Council on the improvement of resource management within land-use planning in the Federation Council of the Russian Federal. The event was organized by the Federation Council of Russia. During the session, major steps of implementation of the UNIDO Project in Russia were negotiated and approved. The Project received the status of a pilot project.
<b>February, 15, 2011</b>	Participation in the preparations for Conference on establishing an integrated waste management system on the pilot territories. The conference was organized by the Ministry of Natural Resources and Environment of Russia. The participants discussed the strategy and practical implementation of the Project.
<b>March, 22, 2011</b>	 <p>Seminar «Waste Recycling: current situation, international practices, future projects, and new technologies». The event was organized by the Analytical Center for the Government of the Russian Federation.</p> <p>The Heads of the Permanent Delegations to the President and the Government of the Russian Federation of Russia's territorial entities attended the seminar. The participants discussed the intermediate results of the Project, set further goals for the regions of Russia; the Situation Centers of the Analytical Center for the Government of Russia were encouraged to participate in the Project in order to monitor waste management situation and work out a managerial decisions.</p>
<b>June, 01-02, 2011</b>	<p>Conference «Modern Approaches to the Waste Industrial Rubber and Waste Tire Management»</p> <p>The conference was organized by the UNIDO office in Moscow in collaboration with Gubkin Russian State University of Oil and Gas, the Chamber of Commerce and Industry of Russia, and the Ministry of Natural Resources and Environment of Russia. The event was attended by around 120 people representing: foreign tiremaker companies (Michelin, Goodyear, Yokohama, Bridgestone; European Tyre and Rubber Manufacturers' Association), tire- and industrial rubber recycling companies in Portugal, Belgium, the USA, Turkey, Japan, Russia, and CIS; federal and regional legislative institutions of the Russian Federation; UNIDO experts.</p> <p>The conference and the round table discussion were moderated by Dr. Jorge B. Sousa, Deputy CEO of the Rubber Pavements Association company, the USA.</p>

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The event achieved the following goals:

- The strategy and the intermediate results of the implementation were discussed and new partners were engaged;
- The final documentation package was prepared (a resolution on the conference results, press-releases, CDs, photo- and video-record);
- A Memorandum on Cooperation between the UNIDO Center for International Cooperation in the Russian Federation, Moscow Automobile and Road Construction State Technical University (MADI) and the Rubber Pavements Association, was developed and signed.

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**October, 03-10,  
2011**

Conference on E-Waste, Orlando, FL, USA. During the conference: the Project was presented; international practices of implementing an electronic system of waste management were discussed. Negotiations with partners took place.

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**October, 18,  
2011**

Advisory Meeting on the «Current Situation of and Approaches to Establishing a System of Sustainable Management and Recycling of Waste Tires».

Organizers: UNIDO Headquarters; UNIDO CIIC in Russia; Association for the Promotion of Tires Retreading and Recycling «Shinoecologhia»; ANO «International Centre for the Best Environmental Technologies» (ICBET).

The meeting was attended by the representatives of the Ministry of Natural Resources and Environment of the Russian Federation; the Chamber of Commerce and Industry of the Russian Federation; more than 40 representatives of importers and tire manufacturers such as Michelin, Goodyear, Nokian Tires, Bridgestone, Continental, SIBUR – Russian Tires, Tatneftkhim, as well as the heads of the largest companies specializing in waste tires recycling in Russia.

The participants agreed to work in collaboration with the Chamber of Trade and Commerce of Russia in compliance of the national legislation of the Russian Federation on industrial and consumer wastes. They expressed their willingness to participate in the working groups on the preparation of regulatory legal acts of the Ministry of Natural Resources and Environment of the Russian on the management waste tires.

In order to enhance the implementation of the manufacturer's/importer's liability model, it was suggested to establish an asset management company with the participation of importers, producers and processors of waste tires in the form of a non-profit organization, which would be responsible for managing a system of collecting, transporting, sorting and recycling of tires in Russia.

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**October, 20,  
2011**

Round-table discussion on «Advanced Waste Management. Use of recycled materials in production. Technologies and investment» within the 8th International Specialized Exhibition of Equipment and Technologies for Waste Collecting, Recycling and Utilization WASMA-2011 (Moscow, Russia).

The discussion was organized with the participation of the representatives of state authorities, heads of companies working in the field of management of industrial and consumer wastes, representatives of research institutions and NGOs working in the area of environmental protection.

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<b>November, 07-10, 2011</b>	<p>Assessment of the pollution level of Franz Josef Land. Within the initiative experts conducted an analysis of environmental conditions of Alexandra Land, Graham-Bell Island, Hofmann Island, and identified major pollutants of the islands and the amount of their pollution. The initiative studied Russian and international practices of the disposal and utilization of the identified pollutants, used equipment and technologies.</p> <p>Within the implementation of the program on remediation of environmental damage to Franz Josef Land practical proposals on the environmental remediation of the Arctic lands were developed.</p>
<b>November, 10-11, 2011</b>	<p>International Conference «Waste Management: Technologies and Investment».</p> <p>The event was organized by the Analytical Center for the Government of the Russian Federation in collaboration with the UNIDO Center for international industrial cooperation in Russia.</p> <p>The conference was attended by Regional Officers of the constituent territories of the Russian Federation, foreign representatives (Germany, the United States); Federal state institutions of the Russian Federation.</p> <p>On conclusion of the conference, a draft resolution was developed. In addition, the parties reached an agreement with the Analytical Center for the Government of the Russian Federation to jointly monitor the development of a recycling industry in Russia under the assistance of the regional Situation Centers of the Analytical Center under the Government of the Russian Federation.</p>
<b>December, 15, 2011</b>	<p>Round-table discussion «Establishment of a System of Collection and Recycling of Industrial Rubber and Waste Tires in Russia», organized under the support of the Chamber of Commerce and Industry of Russia.</p> <p>The participants included representatives of the Russian Ministry of Industry and Trade; Ministry of Natural Resources and Environment; Chamber of Commerce and Industry of Russia; State corporation «Russian Technologies»; major foreign tiremaker companies (Michelin Russian Tyres, Goodyear Russia LLC, Yokohama Russia, Bridgestone C.I.S. LLC, Continental Tires Rus LLC, Nokian Tyres, Pirelli Tyre Russia, JSC Sibur Russian Tyres, Nizhnekamskshina, Association for Promotion of Tyres Retreading and Recycling «Shinoecologhia»); heads of companies specializing in waste tires disposal. Decisions of the Conference were forwarded to the Russian Government for consideration.</p>
<b>March, 01, 2012</b>	<p>International round-table discussion «Coordination of actions of the legislative, executive branches and business communities on the implementation of the Stockholm Convention on Persistent Organic Pollutants (POPs)».</p> <p>The final resolution was adopted to ensure further cooperation between the Russian Government, the Federation Council, the State Duma, and the UNIDO Center in Russia aimed at implementation of the provisions of the Stockholm Convention ratified by Russia in 2011 within its territory.</p>
<b>March, 01, 2012</b>	<p>Annual meeting of the Association for Promotion of Tyre Retreading and Recycling «Shinoecologhia». Members of the Association took a decision to act as the sector's operator controlling the process of collecting, retreading and recycling of waste tyres.</p>



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<b>March, 16, 2012</b>	<p>UNIDO Expert team's meeting with the Head of the related Department of Ministry of Industry and Trade.</p> <p>The parties discussed the issues of practical implementation of the proposals formulated by UNIDO experts on the establishment in Russia of a system for the collecting and disposal of waste tires.</p>
<b>April, 03, 2012</b>	<p>Alignment meeting on E-Recycling, organized upon the initiative of the Analytical Center under the Government of the Russian Federation and UNIDO Centre for International Industrial Cooperation in the Russian Federation, with the support of the company Kuusakoski Oy (Finland).</p> <p>More than 100 participants took part in the event: manufacturers of recycling equipment, including the largest international corporations operating in the Russian Federation; a number of major retail chains selling electronic and electrotechnical household appliances in Russia; heads of companies-recyclers of large household appliances; government representatives from 37 regions of the Russian Federation; businessmen from Finland, Sweden, and Kazakhstan.</p> <p>The participants adopted a resolution which proposes to establish a working group «Project on E-Waste Recycling in Russia» on the basis of Analytical Center under the Government of the Russian Federation. The group was designed to develop practical suggestions for the Government of Russia and State Duma on establishing an instrument for recycling e-waste based on best international practices.</p>
<b>April - May, 2012</b>	<p>Five meetings with the management of the Association of trading companies and manufacturers of consumer electronic and computer equipment (RATEK), Association of manufacturers of electronics and electrical devices (APEAP), KuusakoskiOy company focusing on developing a system of e-waste management in Russia.</p>
<b>May, 21, 2012</b>	<p>Round-table discussion «Environmental Innovations in Environmental Projects in Russia within the framework of cooperation with UNIDO», organized in the Chamber of Commerce and Industry of Russia.</p> <p>The participants discussed the progress, key results and scenarios of further implementation of the Projects implemented in Russia within the framework of cooperation with UNIDO.</p> <p>The parties adopted a resolution containing the decision to continue the cooperation with the CCI of Russia, expressed their support for the concept of creating an e-forum of experts aimed to discuss issues of waste recycling in Russia.</p>
<b>June, 08, 2012</b>	<p>Ecology Week of the Povolzhie Region.</p> <p>A memorandum on cooperation between the UNIDO Center for international industrial cooperation in Russia and the Ulyanovsk oblast was signed.</p>
<b>June, 18, 2012</b>	<p>Meeting of the working group of the State Duma Committee on Natural Resources, Environmental Management and Ecology to discuss the draft law on Industrial and Consumer Wastes.</p> <p>Members of the working group presented the proposals of amendments to the draft. It was decided to finalize the law with account of the discussion and proposals submitted.</p>

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<b>June, 27, 2012</b>	<p>Round-table discussion «Assessment of the Environmental Risks and their legislative management as illustrated by legal acts adopted and those under development» in the Chamber of Commerce and Industry of Russia.</p> <p>The event was organized by the Chamber of Commerce and Industry of Russia in collaboration with the UNIDO Center for international industrial cooperation in Russia.</p> <p>The participants developed proposals for amendments to the draft law on Industrial and Consumer Waste with account of the opinion of the expert community.</p>
<b>August, 14, 2012</b>	<p>Public hearing at the Public Chamber of the Russian Federation focusing on the variants of a bill amending legislation on industrial and consumer waste management.</p> <p>The Industrial and Consumer Waste Management Bills were submitted for finalization to the working group of the State Duma Committee on Natural Resources, Nature Management and Ecology, with a view to develop an agreed solution.</p>
<b>September, 05-06, 2012</b>	<p>The national project coordinator participated in the Global Forum of the International Initiative for Waste Management Services (IPLA) in Korea.</p> <p>International Centre for the Best Environmental Technologies (ICBET) became the sub-regional secretariat of this organization for Russia and other CIS countries.</p>
<b>September, 24, 2012</b>	<p>Meeting of the subcommittee of the State Duma Committee on Natural Resources Nature Management and Ecology on municipal waste management system and introduction of advanced and efficient technologies in the regions of the Russian Federation.</p> <p>The participants expressed their support for the proposal to develop a recycling sector based on international practices and the most advanced environmental technologies.</p>
<b>October, 30-31, 2012</b>	<p>Alignment meeting on medical waste recycling, organized in collaboration with the Committee of Russia's Federation Council.</p> <p>An agreement on cooperation with German partners in this area was achieved.</p>
<b>November, 22, 2012</b>	<p>State Duma round-table discussion on amendments to Law on Waste.</p> <p>A UNIDO National expert addressed the meeting with a number of proposals for the bill. The adjusted proposals were submitted to the State Duma.</p>
<b>November, 28, 2012</b>	<p>Meeting of the Association «Shinoecologia».</p> <p>An address to the President of the Russian Federation on establishing a federal operator for managing waste tires was prepared and discussed.</p>
<b>December, 03, 2012</b>	<p>Participation in the session of the Committee on Natural Resources Management and Ecology of the Chamber of Commerce and Industry of Moscow.</p> <p>Proposals for the resolution of the meeting of the Committee for Cooperation with the Moscow Government were prepared and discussed.</p>



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<b>December, 07, 2012</b>	<p>Round-table discussion «Innovation-driven Development of the Road Industry» within the 6th International Forum «Transport of Russia», held under the participation of the Federal Road Agency. Vladimir Maryev, the national project coordinator, took part in the event.</p> <p>As a result, a letter to the Head of the Federal Road Agency was drafted with a proposal on joint efforts to promote the use of modifiers based on rubber chips in road construction.</p>
<b>January, 24; March, 18; May, 15; September, 28; November, 17, 2013</b>	<p>The sessions of the working group of the Association of tyre manufacturers and importers and of the Association «Shinoecologhia». Participants developed legislative initiatives for Russia's environmental legislation dealing with the introduction of manufacturer's liability principle, and creating economic incentive to eco-friendly enterprises.</p> <p>The amendments to the Federal Law № 89-FZ on Waste were submitted to the Russian State Duma Committee on Natural Resources Management and Ecology through parliamentary initiatives.</p>
<b>April, 11-12, 2013</b>	<p>International Conference «Current Issues in Waste Tires Recycling and Use of Rubber Crumbs in Road Construction», Saint-Petersburg.</p> <p>The conference presented a venue for sharing experiences and practices among 140 specialists from 16 regions of Russia. It provided the participants an opportunity to establish business ties with the representatives of business circles dealing with worn-out tires from 12 countries.</p> <p>At the event, actions to ensure a wider use of rubber crumbs in road construction in Russia were determined.</p> <p>The Conference's resolution stresses the need for interaction between relevant ministries and departments, research and for-profit road institutions dealing with waste tires recycling and the use of rubber crumbs in road construction.</p> <p>A particular emphasis was placed on the need to apply rubber crumbs in road construction in the context of the legally extended producer responsibility.</p> <p>The event resulted in establishing ties with the Association of Road Construction of the North-West Region of Russia, as well as in preparing the technical materials of the conference, which were submitted to the Ministry of Transport of Russia, the Federal Road Transport Agency («Rosavtodor»), and the state company «Russian highways» («Avtodor»).</p>
<b>April, 18, 2013</b>	<p>The Analytical Center for the Government of the Russian Federation held a round table discussion «Current Changes in Russia's Environmental Regulation; realization of Manufacturer's Responsibility principle as a Major Force Driving the Creation of Recycling Industry in Russia».</p> <p>Among the participants there were representatives of Russia's Federal Service for Supervision of Natural Resources Management (RosPrirodNadzor), representatives of the Association of tire manufacturers and importers, representatives of electronic and white goods manufacturers and importers, management of the Association of trading companies and manufacturers of consumer electronic and computer equipment, recyclers of various types of waste, representatives of the National Waste and Recycling Association.</p>

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The participants discuss proposals to amend the environmental legislation of Russia. As a result, an expert analytical note stipulating proposals for the Bill № 89- FZ on Wastes was prepared and submitted to the Russian Government by the Analytical Center.

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**May, 14,  
2013**

A project on establishing an enterprise for integrated disposal of waste tires in Tatarstan was presented at the meeting of the Agency for Strategic Initiatives (ASI) Supervisory Board.

Together with Koltex LLC. UNIDO experts completed the preparation of the defence of a business plan for the Project 'Integrated recycling of waste tires with the production of high-tech, rubber-crumb-based materials' Total cost of the Project: 3.5 billion rouble.

The Project was endorsed by the ASI and identified for development as top-priority.

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**May, 28-30,  
2013**

Within the Wastetech-2013 International Conference the experts of the Project conducted three round-table discussions:

- Round-table discussion «Coordinated Actions of the Legislative and Executive Branches and Business Community on ensuring the implementation of the Stockholm Convention on POPs».
- Round-table discussion «Establishment of a system for collecting and recycling of worn-out tires on the principles of expanded producer responsibility».
- Round-table discussion «Current Issues of Oil Sludge Recycling in Russia».

Organizers: International Centre for the Best Environmental Technologies (ICBET) in collaboration with SIBIKO Company.

The roundtable discussions gathered 200 participants: representatives of regional authorities, waste-recycling companies, manufacturers of equipment for waste recycling, representatives of manufacturers of equipment to be recycled.

Federal authorities were represented by Deputies of the State Duma of the Russian Federation (Committee for Nature Management and Ecology), representatives of the Ministry of Natural Resources and Environment (Department for International Cooperation, Federal Service for Supervision of Natural Resource Management), Ministry of Industry and Trade of the Russian Federation, representatives of the Ministry of Environmental Protection of the Republic of Belarus.

The round-table discussion on oil sludge recycling was attended by the representatives of environmental authorities of the oil-producing regions (Khanty-Mansiysk, Tyumen, Surgut, Republic of Tatarstan, Republic of Bashkortostan).

Based on the proposals by the participants, resolutions proposing improvements in environmental legislation in the area of producer responsibility and economic incentives for eco-friendly waste-recycling companies were prepared. The resolutions were submitted to the relevant executive authorities and the State Duma of the Russian Federation.

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**August, 01,  
2013**

The experts of the Project participated in the work of the Association for Interregional Socio-Economic Collaboration «Central Federal Okrug» on creating the framework

for a Coordinating Council for the development of the waste management industry.

The event was organized by the Association for Interregional Socio-Economic Collaboration «Central Federal Okrug» and the Russian State Committee for Construction. It was decided to establish a Coordinating Council for the development of a recycling sector.

Six Committees were formed including Science Committee, Hi-Tech and Innovation Committees dealing with recycling and waste energy whose members will mainly UNIDO experts.

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**August, 24,  
2013**

Within a session of the Coordinating Council for the development of a recycling sector of the Association for Interregional Socio-Economic Collaboration «Central Federal Okrug» a report «Establishment of a unified waste monitoring and management system; Research in waste management» was presented.

The amendments to the Federal Bill № 584399-5 «On amendments to the Federal Law on Industrial and Consumer Waste and other legal acts dealing with economic incentives in waste management» were discussed.

Proposals were developed to be submitted to the Government of Russia.

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**September, 09-11,  
2013**

Vladimir Maryev, the National Coordinator of the Project, and Vladimir Komissarov, the UNIDO National Expert, participated in the IPLA Global Forum in Sweden.

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**September, 16,  
2013**

Meeting of the Supervisory Board of the Agency for Strategic Initiatives considered a possibility of funding the Koltek LLC Project. UNIDO experts provided a documentary support in regard of the best available technologies and best environmental practice (BAT and BEP).

It was decided to provide 100-million-rouble funding for the first stage of Koltek LLC Project under the expert assistance of the UNIDO Center in Russia.

The Project is of regional scope; relevant successful practices will be disseminated at the federal level.

The implementation of the Project is to be facilitated by the UNIDO experts. UNIDO experts are expected to contribute to the implementation of the Project.

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**November, 15,  
2013**

International Conference 'Oil Waste Recycling and Oil-contaminated Land Remediation: challenges and solutions'.

The conference was organized by the Analytical Center under the Government of Russia, the Fund 'National Center for Eco-Management and Cleaner Production for the Oil and Gas Industry', and International Centre for the Best Environmental Technologies (ICBET).

The participants included representatives of the key oil and gas producing companies of Russia, representatives of federal and regional legislative and executive authorities, of the fuel and energy sector of Russia, leading institutions and organizations working in the field of hazardous industrial waste disposal, as well as representatives of specialized expert, public and international organizations and industrial mass media.

On conclusion of the conference, an analytical note was prepared and later submitted to the Government of Russia for consideration.

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<b>December, 05, 2013</b>	<p>Meeting at the Chamber of Commerce and Industry of Russia on the establishment of a WEEE Recyclers Association.</p> <p>The meeting was attended by Sergey Alekseev, the Head of the Russian CCI's Committee on Natural Resources, Environmental Management and Ecology; heads of e-waste recycling companies.</p> <p>As a result of the meeting, a WEEE Recyclers Association was established.</p>
<b>December, 25, 2013</b>	<p>Meeting of the Working Group of the Government of the Moscow Region on developing an Integrated Waste Management programme in the Moscow Region (Moscow Oblast).</p> <p>The meeting was organized by the Ministry of Investment and Innovations of the Moscow Region.</p> <p>It was decided to develop a Regional Programme on waste management on the sectoral principle. The programme will be formulated in collaboration with the Association Shinoecologia, WEEE Recyclers Association, Association of tyre- manufacturers and importers, and Association of trading companies and manufacturers of consumer electronic and computer equipments (RATEK).</p> <p>It is planned that successful practices of the programme will be used in other regions of the Russian Federation.</p>
<b>March, 26, 2014</b>	<p>Meeting of the Council on Industrial Policy of the CIS, Moscow.</p> <p>At the meeting, Vladimir Komissarov, UNIDO National Expert, presented a UNIDO project on WEEE management in the EEC countries. Member-countries of the EEC pre-approved the Project.</p>
<b>May, 07-08, 2014</b>	<p>IPLA Europe Forum on Creating Favorable Conditions for the Development of Effective Business models and PPPs in the waste management sector in developing countries, Munich. The Forum was held on IFAT-2014 exhibition venue.</p> <p>Vladimir Maryev, the Project Coordinator, visited the international exhibition in order to learn about new efficient technologies in the field of e-waste and general mechanical rubber goods recycling. He also took part in the Forum where he presented UNIDO Project's achievements and attended a number of meetings to find possible ways of cooperation to develop an environmentally sound e-waste and general mechanical rubber goods' waste management system in Russia and EEC countries.</p> <p>As a result, it was decided to hold an IPLA 2015 Global Forum in Russia. The initiative was proposed by the International Centre for the Best Environmental Technologies (ICBET), functioning within the UNIDO Project.</p>
<b>May, 28-29, 2014</b>	<p>The Analytical Center for the Russian Government held an International Conference on Organization of E-Waste Management in Russia: current state and scenarios of its development.</p> <p>The Analytical Center for the Russian Government held an International Conference on Organization of E-Waste Management in Russia: current state and scenarios of its development.</p>

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The conference was organized with the assistance of the UNIDO Center in Russia and the WEEE Recyclers Association. More than 120 representatives of environmental departments of Russian regions, electronic equipment manufacturers, WEEE processors, as well as representatives of Armenia, Belarus, Kazakhstan and Germany took part in the conference.

Speakers included StEPInitiative experts from Germany, the US, Great Britain, representatives of WEEE Forum from Czech Republic, and of the Federal Environmental Agency of Germany.

The conference resulted in adopting a final document and submitting it to the relevant agencies of the Russian Federation.

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**July, 02,  
2014**

The Ministry of Transport of the Moscow Region conducted a round-table discussion on Collecting, Recycling of worn-out tyres and Sale of Marketable Products, within the Moscow Region Environment and Ecology in 2014-2018 State Program.

Participants included representatives of the Ministries and agencies of the Moscow Region, the Moscow Region Duma, UNIDO Center in Russia, Association of Tire Manufacturers and Importers, and Association «Shinoecologia», representatives of municipalities and heads of enterprises of the Moscow Region dealing with worn-out tyre management.

The event resulted in adopting a resolution and submitting it to the Minister of Transport of the Moscow Region.

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**September, 11,  
2014**

Vladimir Maryev, national coordinator of the UNIDO Project, held a seminar in the Moscow State University of Civil Engineering (MSUCE or MGSU) for 25 students on the Use of Rubber Asphalt Modifier in the Design and Repair of Carpets and Road Surfaces.

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**September, 26,  
2014**

The 6th session of the Environmental Protection Council under the EEC Integration Committee in Bishkek. The session was held in the Executive Committee of the CIS within the EEC Environment Ministers' meeting. Vladimir Maryev, National Project Coordinator, participated in the meeting and submitted a proposal on UNIDO Regional Project to Organize a System of E-Waste Management in EEC Countries.

The Project was approved by the participants, while Armenia, Belarus, Kazakhstan and Kyrgyzstan expressed their interest in participating in the Project.

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**October, 09,  
2014**

Andrei Rudensky, the UNIDO National Expert, held a seminar on the Use of rubber chips in road construction in the Moscow Automobile and Road Construction State Technical University (MADI).

30 listeners participated in the seminar.

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**November, 12,  
2014**

The 4th Scientific and Practical Conference on Environmental Problems of the Moscow Region.

The conference was organized by the Department of Natural resources Management and Ecology of the City of Moscow.

Speakers: Vladimir Maryev, the Project Coordinator ('Problems of waste management of rubber goods'); Vladimir Komissarov ('Issues related to the WEEE').

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<b>November, 23-27, 2014</b>	<p>Experts from Russia, Belarus, and Kazakhstan made a working trip to Germany to learn about the management of WEEE there.</p> <p>The trip was organized by the UNIDO Center in Russia under the assistance of the WEEE Recyclers Association.</p> <p>In addition to field visits to various enterprises, UNIDO experts attended a meeting at the German Environment Agency (UBA), where they presented a project on establishing a regional system for E-Waste management for the EurAsEC countries.</p>
<b>December, 03-05, 2014</b>	<p>The 16th Scientific Conference on Waste Recycling held in Saint Petersburg's Okryabrskaya hotel.</p> <p>The conference was organized by the Journal «Waste Recycling» in collaboration with a number of other organizations and was dedicated to the issues of waste management, efficient use of resources, and waste recycling.</p> <p>Vladimir Komissarov, the UNIDO National Expert, reported on the UNIDO Project focusing in particular on the plans to establish a regional system for E-Waste management in EurAsEC countries.</p>
<b>December, 05, 2014</b>	<p>The 11th Conference of the RATEK Association 'Electronics: manufacturing and trade' held the Zolotoye Koltso Hotel in Moscow.</p> <p>The conference was organized by the RATEK Association in collaboration with its partner Intel Company.</p> <p>The conference was dedicated to the issues related to the Russian market of general electronic and consumer electronic devices in the context of the changes in the Russian legislation and the current economic situation.</p> <p>Vladimir Maryev, UNIDO Project Coordinator, took part in the section on e-waste management and suggested that manufacturers and recyclers of e-goods join efforts to create a system for e-waste management within the new legislation.</p>
<b>January, 10, 2015</b>	<p>High-level symposium on sustainable urban development 'Interaction of People, Environment and Technology', Toyota, Japan. Vladimir Komissarov, «ICBET» Deputy Director, was invited to the symposium to report on Russian and other EAEU countries' practices of sustainable waste management.</p> <p>200 participants attended the symposium, including mayors, government officials, civil society representatives, as well as experts, academia, and the UN officials.</p> <p>During the Symposium, participants were informed about IPLA Global Forum 2015 which was to be held in Moscow in early October. Preliminary agreement to participate in the Forum was expressed by representatives of cities' administrations from a number of countries of Asia, experts on sustainable urban and waste management.</p>
<b>February, 10, 2015</b>	<p>The Ministry of Natural Resources and Environment in Moscow organized the first session of the Working group on the preparation of the Government Acts necessary for the implementation of the provisions of Federal Law № 458-FZ (dd 29.12.2014) on Amending Federal Law on Industrial and Consumer Wastes as well as other legislative acts of the Russian Federation, and repeal of particular legislation acts and their provisions.</p>



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**February, 27,  
2015**

Round-table discussion within the 12th Economic Forum 'KEF-2015' in Krasnoyarsk devoted to the organization of an integrated system of waste management.

The event was attended by more than 100 participants: representatives of supervisory bodies, commercial and non-commercial organizations working in the field of waste management.

Vladimir Maryev, Director of the «International Center of Best Environmental Practices» and UNIDO Project's National Coordinator, took part in the event. Upon his initiative, it was decided to establish an expert council on the development of a recycling sector in the Siberian Region under the President's Plenipotentiary Representative in the Siberian Federal District (SFD).

On conclusion of the discussion, a number of agreements on interregional cooperation between the SFD non-profit organizations, such as Ecoresource LLC, Utilitservis LLC, Kuzbasspererabotka SRO were signed.

After the event, the guests made a field visit to a modern production site for the disposal of hazardous waste established by a company from Krasnoyarsk «Ecoresource LLC».

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**April, 22-23,  
2015**

Representatives of the UNIDO Centre for International Industrial Cooperation in the Russian Federation and the WEEE Recyclers Association took part in a regional seminar on developing a system of e-waste management in Minsk.

The Head of the Association spoke about the current state of the e-waste management industry, the joint intentions of the Association, the UNIDO Centre in Russia, as well as specialized agencies of EurAsEC countries to initiate a regional project on establishing a coherent legislative regulatory system of WEEE management.

The system should help optimize the logistics of waste movements, and facilitate the use of the best available technologies.

The Russian participants of the seminar had a chance to learn about the organization of the WEEE management in Minsk, and visit the refrigeration equipment (as well as other WEEE) recycling plant.

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**June, 10,  
2015**

Vladimir Komissarov, Head of the WEEE Recyclers Association, addressed a meeting of the Economic Commission of the CIS Economic Council with a report on the implementation of the Project on enabling international cooperation for efficient e-waste recycling.

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**June, 23,  
2015**

Vladimir Komissarov, the Head of the WEEE Recyclers Association addressed a UNIDO Seminar in Astana with a report on the state of e-waste recycling in Russia. In addition, Mr Komissarov put forward a proposal to develop a regional system of WEEE management within the EurAsEC, based on a harmonized regulatory framework, and aimed at improving e-waste recycling and optimizing the use of existing recycling capacities.

The seminar also addressed the current state of e-waste recycling in Kazakhstan, and the issues of cooperation between Russia and Kazakhstan in the area of WEEE recycling.

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**August, 16- 19,  
2015**

Vladimir Maryev, the Head of International Centre for the Best Environmental Technologies (ICBET) and Natalya Sokolova, the Head of the Government Environmental Oversight of the Federal Service for Supervision of Natural Resources Management, took part in the 6th Regional 3R Forum, within the preparation for IPLA-2015 Global Forum in Moscow.

The 6th Regional 3R Forum - Reduce, Reuse and Recycle - in Asia, and Asia-Pacific took place in Maldive Republic's capital, Male, on August 16-19, 2015. The theme of the Forum was 3R as an industry, and 3R solutions for a resource-efficient society and sustainable tourism in Asia and Asia-Pacific.

The Forum was organized by UNCRD (UN Center for Regional Development), Ministry of Environmental Protection of Japan, Ministry of Environment and Energy and Ministry of Tourism of the Maldive Republic.

The 6th Forum was devoted to such topics as water safety, tourism, waste management and sustainable urban development.

More than 300 representatives from 33 countries of the Asia-Pacific region took part in the Forum. It also served as a venue for dialogue on 3R policy between high-level representatives of the governments from the Asia-Pacific region, mayors, and city administrations and other specialists.

On conclusion of the Forum, 77 resorts signed the Male 3R Declaration and pledged their commitment to promote the 3R principles and resource efficiency.

- Male Councils and 20 island groups signed the SaafuRaajje initiative promoting sustainable waste management.
- A resolution was adopted. The resolutions calls for improvements in trade, waste reduction and low-carbon development; establishing certification and labeling systems; establishing a regional scientific and public advisory commission; abolishing the subsidies which hinder an efficient use of resources and the improvement of training of specialists. The resolution also stipulates the promotion of the 3R principles to achieve the Sustainable Development Goals and the development programme after 2015.

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**September, 17,  
2015**

The Committee on Natural Resources Management of the Chamber of Commerce and Trade of Russia held a round-table discussion on Improving E-Waste Collecting and Recycling System, with the participation of the UNIDO Centre for International Industrial Cooperation in the Russian Federation and the WEEE Recyclers Association.

The meeting was attended by the representatives of the State Duma, the Ministry of Natural Resources and Environment, the Ministry of Economic Development, the Ministry of Industry and Trade of the Russian Federation, the Federal Service for Supervision of Nature Resources Management; Moscow Department of Natural Resources Management and Environmental Protection; Association for Interregional Socio-Economic Collaboration of the Central Federal Okrug; Association of trading companies and manufacturers of consumer electronic and computer equipment; Non-profit Association of mercury waste recyclers NP ARSO; National Association of Producers of Current Sources (RUSBAT); Companies engaged in manufacturing,

import and sale of electronic equipment; companies engaged in WEEE collecting and recycling.

The representative of ASEKOL Czech organization introduced the participants to the organization of the WEEE management in the Czech Republic.

The participants of the event emphasized the opportunity of creating an e-waste recycling system in Russia that arose after the adoption of the bill №458-FZ in December, 2014. It was stressed that an active participation of local authorities was necessary in organizing WEEE collection, as well as in informing the public about the need for separate waste collection.

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**October, 06-08,  
2015**

The Global Forum for International Partnership for Expanding Waste Management Services of Local Authorities (IPLA) gathered over 800 participants in Moscow. The participants included representatives of federal and regional authorities, more than 50 representatives of the international expert community; representatives of state and municipal authorities from abroad responsible for waste management and environmental protection.

The Forum addressed issues related to the establishment of a recycling industry in Russia, as well as to the harmonization of the environmental legislation of the membercountries of the Customs Union, practical and economic aspects of the implementation of the principle of “Extended producer responsibility” under the new legislation.

Within 2 days 14 round-table discussions and theme sections took place. The Forum was attended by representatives from 21 countries, including regionals and contry authorities.

As a result of the Forum, – It was decided to initiate establishment of a permanent expert platform IPLA-Rusia, which would help the stakeholders of the waste management sector formulate proposals, and convey these proposals to the relevant authorities with a view to include them in various industry programmes; – IPLA Forum Declaration on interregional cooperation in the field of waste management and the recovery of resources to promote circular economic development was adopted.

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**October, 08-09,  
2015**

UNIDO Seminar on Building Regional Capacity to Develop Programmes to Mitigate Global Environmental Problems took place in Erevan. One of the main issues discussed was the management of e-waste.

Vladimir Komissarov, Head of WEEE Recyclers Association, UNIDO National Expert, presented a report at the seminar.

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**October, 29-30,  
2015**

Vladimir Maryev, National Project Coordinator, assisted the preparation of and took part in a round-table discussion on waste management within 9th International Environmental Forum «Nature without Borders» in Vladivostok.

The Forum «Nature without Borders» is one of the major international communication platforms established in the Primorsk Territory (Krai). It usually gathers business and government representatives, academia and civil society to discuss key environmental issues and those related to environmental security of the Russian Far East and Asia Pacific.

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**November, 05,  
2015**

The Project experts prepared and conducted a meeting on the implementation of the extended producer responsibility principle in accordance with the new environmental legislation at the Public Chamber of the Russian Federation.

The meeting was attended by the representatives of the Association for Interregional Socio-Economic Collaboration of the Central Federal Okrug; manufacturers and importers of products, in particular, Association «Rusecoshina» and Association of trading companies and manufacturers of consumer electronic and computer equipment, as well as management of the WEEE Recyclers Association.

The participants of the public hearings addressed the issues related to the development of an integrated waste management system in the Russian Federation, the status of legal acts regulating the recycling industry, the role of public organizations and the public in undertaking measures for environmental protection, as well as international practices of waste management.

One of the main issues addressed at the meeting were the rates of the Environmental fee and recycling standards, which at the time of the meeting had not been submitted to the Government of the Russian Federation. Electronics manufacturers' stance remained unchanged – they support the introduction of the moratorium for three years, as regulatory acts under the Law № 458-FZ have not been adopted by the Government yet. Waste recyclers stated that it was necessary to gradually develop a system for waste collection and recycling starting in 2016 and without zero rates. However, their stance was rejected by electronics manufacturers after the hearings in the Public Chamber.

Valery Serov, the Representative of the Commission on Ecology and Environmental Protection of the Public Chamber of Russia summarized the results of the hearings. He stated that only after relevant regulatory legal acts had been adopted by the Government, the issues discussed within the meeting can be submitted for further consideration in the Public Chamber.

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**December, 07-08,  
2015**

UNIDO organized a Seminar on Regional Environmental Projects in the CIS countries.

Vladimir Komissarov, Head of the WEEE Recyclers Association, reported on the preparation of a project to establish a regional system for WEEE management. Armenia, Belarus, Kazakhstan, and Kyrgyzstan expressed their willingness to participate in the Project. The working group will include representatives of relevant ministries, associations of manufacturers and recyclers, and international experts.

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**December, 22,  
2015**

A Conference on the Organization of E-Recycling in Belarus took place in Minsk. In 2012-2015, a Dutch fund sponsored the research on various forms of e-waste collection; at the same time, possible ways and methods of community outreach were developed and tested.

Vladimir Komissarov, Head of the WEEE Recyclers Association, addressed the Conference with a report on the current state of e-waste recycling in the EEA countries including Russia. He presented the preliminary results reached within the cooperation of the WEEE Recyclers Association with the CIS Executive Committee and UNIDO on establishing a regional management WEEE system in the EEA countries.

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# POST-PROJECT ACTIVITIES (2015 – 2017)

## 1. Conferences and Seminars

- **September, 17th, 2015:** the roundtable discussion «Electric and electronic wastes recycling in Russia: the prospects in the context of the introduction of the producer responsibility principle» organized by the Russian Chamber of Commerce and Industry (CCI) Committee for Natural Resource Management and Environment. A resolution was adopted with a number of proposals to improve the current legislation submitted to the Government of the Russian Federation. The event was prepared with the participation of a UNIDO Expert who addressed the meeting.

- **May, 19th, 2016:** the Russian CCI Committee for Natural Resource Management and Environment meeting on e-waste management problems. The meeting was prepared with the participation of a UNIDO Expert, who addressed the meeting and took part in the discussion.

- **April, 26th, 2016:** the International Investment Forum of the Organization of the Black Sea Economic Cooperation (BSEC) was held. The UNIDO Expert reported on the UNIDO Regional Project for CIS countries and invited the countries of the Black Sea basin to join it.

- **October, 2015:** the Congress of the International Partnership for Expanding Waste Management Services of Local Authorities (IPLA) was held in Moscow. The UNIDO Center Experts took an active part in its preparation and implementation.

- **December, 2015:** a Seminar was held to summarize the results of activities in Belarus on the grant issued by a Dutch non-governmental organization to conduct research on various methods of waste collection in the country. The UNIDO Expert addressed the audience with a report on «Regional Cooperation between the Countries of the Customs Union in the WEEE Management: Current Situation and Prospects».

- **March, 2015 – September, 2016:** a number of regional seminars on «Building the Regional Capacity to Develop Programmes for Mitigating Global Environmental Problems» was held in the CIS countries (Belarus, Kazakhstan, Kyrgyzstan, Armenia, Russia). These activities were sponsored beyond the financing of the Project on the establishment of

a Center for hazardous waste management and BAT – best available technologies. One of the key topics addressed on the seminars was dedicated to WEEE management. Within the seminars, the experts of the Project reported on the state of WEEE management in the CIS countries, and the main global trends.

- **March, 2016:** the first two-day Eurasian Congress on WEEE Solutions was organized and held with the participation of the UNIDO Experts. The Director of the UNIDO Center in the Russian Federation delivered a welcome speech. The Congress was attended by representatives from more than 14 countries.

- **May, 25th, 2016:** a UNIDO Expert made a report at a seminar on WEEE recycling and extraction of precious metals from e-wastes organized by NPO RUSLOM.COM, the largest national processor of ferrous and non-ferrous scrap and wastes.

- **2-3rd of June, 2016:** the regional forum «Ural market of scrap and industrial waste» was held in Ekaterinburg. The UNIDO Expert moderated a panel discussion on the problems of e-waste management. He came forward with the analysis of the overall situation in the country and reviewed the prospects for further development of the sector.

- **July, 2016:** the two-day regional seminar on electronic waste for EECCA countries, organized by the Secretariat of the Basel Convention, was held in Bishkek (Kyrgyzstan). The UNIDO expert spoke at the seminar on the current situation in the EECCA countries and the legislative and regulatory framework for the WEEE management in Russia.

- **September, 8-9, 2016:** the final seminar with the participation of representatives of several CIS countries was held in Moscow. The sessions on September 8 focused solely on electrical and electronic wastes management.

- **October, 2016:** the UNIDO Expert participated in an International Congress «GREEN ENERGY & WASTE RECYCLING FORUM GEWR'16» in Astana, the first open Eurasian business forum on waste recycling and renewable energy. The expert made a report on the issues related to managing WEEE in the CIS countries.



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Sustainable Cycles Programme

## The announcement of the Academy of electronic waste

On May 15-19, 2017, a training of the E-Waste Academy for the representatives of the related ministries, institutions and private agencies of the Commonwealth of Independent States, including Russia, took place in Moscow. The course is organized by the United Nations University in cooperation with the UNIDO Centre for International Industrial Cooperation in the Russian Federation, financial support of the Federal Environmental Agency of Germany, DELL Corporation, and assistance of the international organization StEP Initiative and the WEEE Recyclers Association.

During the course, the participants learned about international practices of WEEE management, including legal and normative framework, recycling methods, forms and methods of running a business in the area.

Leading international experts conducted lectures and seminars while participants from the CIS talked about the current situation in WEEE management in their countries.

## 2. Preparation of normative documents

- **June, 2015:** the meeting of the Economic Affairs Commission (EAC) at the CIS Economic Council was held, addressing the implementation of the regional e-waste project. A presentation was made by the UNIDO expert. Following the meeting, a written proposal for setting up a project working group was disseminated among the specialized agencies of the CIS countries. The group was set up in 2016.

- **September, 2016:** the UNIDO CIIC Director proposed to develop an agreement on establishment of a regional WEEE management system. The draft agreement was developed by the UNIDO Experts.

- **January, 26th, 2017:** the CIS Executive Committee held a meeting of the working group for the member countries expected to participate in the regional project. At the meeting, the draft agreement was thoroughly discussed.

- **March, 28-29, 2017:** the 2nd Eurasian Congress «Solutions for Waste Electrical and Electronic Equipment (WEEE)» took place in Moscow.

The Congress acted as an effective platform to discuss new opportunities, solutions and challenges in WEEE management, as well as to establish and develop fruitful economic ties with the authorities, manufacturers, recyclers, researchers, associations, public organizations and mass media working in the field of WEEE management. Waste electrical and electronic equipment makes a significant part of solid municipal waste and is a source of precious metals (gold, silver, copper, aluminium, iron), as well as heavy toxic metals.

The Eurasian Economic Commission is a new rapidly growing market for waste recycling, which generates around 1.5 million tons of WEEE and amounts to 400 million euro annually (according to the data of StEP Initiative 2015).

## PARTNERS

### Cooperation with state authorities and public organizations

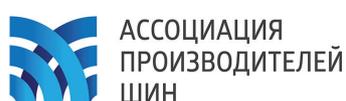
- The State Duma of the Russian Federation: cooperation with the Committee on transport (there was established a Subcommittee on the use of secondary material resources in road construction). Cooperation with the Committee on Natural Resource Management and Ecology and with the High Environmental Council on the introduction and revision of the proposals concerning the introduction of the principle of «Extended producer responsibility» to the Law on Waste (№ 89-FZ);
- The Centre is actively cooperating with the Ministry of Natural Resources and Environment of the Russian Federation, the Ministry of Industry and Trade of the Russian Federation, Federal Service for Supervision of Natural Resource Management (Rosprirodnadzor). UNIDO National experts are involved in the development and discussion of draft laws and draft normative documents within these agencies. They are also members of the Scientific-technical Council of the Ministry of Industry and Trade of the Russian Federation, and of the the expert council of the Ministry of ecology and natural resource management of Moscow region.
- The Chamber of Commerce and Industry of the Russian Federation: development and implementation of the Project «Green» economy in Russia». There was established a Subcommittee on hazardous wastes and secondary material resources within the Committee on environment and natural resource management of the CCI.
- The Analytical Centre for the Government of the Russian Federation: assistance to the development of a waste management sector in the Russian Federation.
- The Coordination Council for the development of a waste management industry within the Association of interregional socio-economic interaction «Central Federal Okrug»: development of a programme of interregional cooperation in the Central Federal Orkug in the field of waste management.

### International cooperation

- ITPO UNIDO Japan
- Federal Environmental Agency of Germany (UBA)
- Autonomous Non-commercial Organization «Japan Centre»
- CONSULPAV Int. (USA)
- IPLA – International Partnership for Expanding Waste Management Services of Local Authorities;
- «Valorpneu» (Portugal)
- Steinbeis Hochschule (German)
- SET-Group (Finland)
- International organization StEP Initiative
- WEEELABEX
- Smart Resources (Switzerland)
- Kuusakoski Oy (Finland)
- State institution «Operator for secondary material resources»
- OJSC «BeIVTI»
- Non-commercial organization «Center for Environmental Solutions»
- Centre for sustainable production and consumption
- «KazWaste» Association

## General partners

- Association of interregional socio-economic interaction «Central Federal Okrug»
- Association «Shinoecologia»
- WEEE Recyclers Association
- Association of manufacturers and importers of tyres
- Association of trading companies and manufacturers of consumer electronic and computer equipment (RATEK)
- Association of enterprises for managing mercury-containing and other types of hazardous waste, Non-commercial partnership «ARSO»
- EcoCom LLC
- Koltech Group
- Journal «Municipal Solid Waste»
- Journal «Waste Recycling»
- Journal «Environmental Herald of Russia»
- International Centre for Regional Development



## PUBLICATIONS

### Articles prepared and published:

1. Journal «UNIDO in Russia» (article «International research conference «Modern approaches to the problems of recycling rubber products and tires», Issue № 3).
2. Journal «Municipal solid waste», Issue № 5 May, «Waste tires management: establishing a national system».
3. Journal «Ecology and Industry», Issue № 9, «On the establishment of a joint information and analytic system of the best available technologies».
4. Journal «UNIDO in Russia», Issue № 8 «Waste as part of environmental processes».
5. Journal «Ecological Herald of Russia», Issue № 12, December 2012 «On battery recycling».
6. Journal «Waste recycling», Issue №6, November – December 2012: interview with the Project coordinator Vladimir Maryev «Someone has to take care of the planet Earth»; article «IPLA can assist local authorities in developing waste management system».
7. Journal «Municipal solid waste», Issue №12, December 2012: «Recycling of used tires: international experience».
8. Journal «Municipal solid waste», Issues №3, 7, 8, 2013. «Is it necessary to establish a WEEE management system in Russia?»; «Assistance to local authorities in waste management (IPLA)», «Waste problem – infrastructural limitations for the development of the Moscow region.».
9. Journal «Waste recycling», Issue №1, 2, 2013. Article «What to do with used batteries?».
10. Journal «Waste recycling» Issue №3 (51), Vladimir Komissarov, article «Producer Responsibility and registration as an important element of its implementation».
11. Journal «Waste recycling» Issue №4 (52), 6 (54), Vladimir Mariev, Vladimir Komissarov, Tatyana Smirnova, article «Implementing the principle of producer responsibility for waste electrical and electronic

equipment in Asian countries».

12. Journal «Municipal solid waste», Issue №2 (February 2014), article «Sustainable waste management in the cities of the XXI century».
  13. Journal «Municipal solid waste», Issue №3 (March 2014), article «Old tires: introducing the principle of producer responsibility».
  14. Journal «Municipal solid waste», Issue №6 (June 2014), the article «IFAT sets records».
  15. Journal «Municipal solid waste», Issue №2 (February 2015), Vladimir Komissarov, Igor Timoshin, article «WEEE Management in Germany».
  16. Journal «Municipal solid waste», Issue №2 (February 2015), Vladimir Komissarov, Vladimir Maryev, Tatyana Smirnova, article «Extended producer responsibility as a new paradigm in waste management».
  17. Journal «Municipal solid waste», Issue №7-9 (July-September 2015), Tatyana Smirnova, article «Ecological aspects of WEEE management».
  18. Journal «Business in Russia», Issue №1 (January 2015), Vladimir Komissarov, interview «We need to create a waste recycling industry in Russia».
  19. Journal «Municipal solid waste», Issue №2 (February 2015), «The Swiss model for WEEE management».
  20. Journal «Municipal solid waste», Issue №2 (February 2015), «Implementation of producer responsibility in Germany».
- ### Analytical reports:
21. «Development of a framework of a regional waste management system and implementation of the 3R and «Zero Waste» principles», Stage «Conducting the analysis of documents on establishing ecological technoparks».
  22. Joint information and analytical system «Atlas of the best environmental technologies» of UNIDO. Stage 1 «Development of an assessment methodology for environmental technologies».
  23. Joint information and analytical

system «Atlas of the best environmental technologies» of UNIDO, Section 1 «Technologies for processing batteries and current sources».

24. «Comparative analysis of the terminology used in the environmental legislation of the Russian Federation and of other countries».

25. «Problem or failure – a critical review of gasification and pyrolysis methods for waste heat treatment».

### Materials prepared for submission to the authorities:

26. Analytical materials on the environmental protection programme of the Federal Environmental Agency of Germany «Goals 2020» and materials on waste management in Germany.
27. Materials for the meeting of the working group of the Committee on Agrarian and Food Policy and Environmental Management of the Federation Council Federal Assembly of the Russian Federation on the draft law «On secondary material resources».
28. Materials for the meeting of the working group of the Committee on Natural Resources, Nature Management and Ecology of the State Duma of the Federal Assembly of the Russian Federation.
29. An address from the UNIDO Center in the Russian Federation to the Governor of the Ulyanovskaya Oblast with proposals for developing regional normative documents on the management of production and consumption wastes.
30. Materials on the initiation of the Sectoral program for waste tires and electrical equipment (Ministry of Innovations and Ministry of Ecology) were prepared and submitted to the Government of the Moscow Region.
31. Four amendments to the draft Federal Law № 584399-5 «On Amendments to the Federal Law «On Production and Consumption Wastes» and other legislative acts of the Russian Federation regarding economic incentives in the field of waste management» were prepared

and submitted to the Chamber of Commerce and Trade of Russia, the Ministry of Natural Resources and Environment.

32. Proposals to develop integrated closed systems for management of waste tires within the company and to establish a facility for the production of rubber crumb products for the needs of the company (anti-noise screens, rail chairs, waterproof mastic) were prepared and submitted to the President of the Russian Railways.

**Information releases were prepared and published on the following websites:**

33. Website of the Federal Service for Supervision of Natural Resource Management: the Global IPLA Forum 2015 was held in Moscow on October 6-7, 2015

<http://rpn.gov.ru/node/15819>

34. «Website of «RIAMO» - Regional information agency of the Moscow region: the IPLA-2015 forum in Moscow gathered more than 800 people

<https://riamo.ru/article/85808/bole-800-chelovek-sobral-forum-ipla-2015-v-moskve.xl>

35. The Moscow City Portal reported that the Global Forum IPLA-2015 (the International Partnership for the Expansion of Local Government Waste Management Services) was held in Moscow

<http://gorodskoyportal.ru/moskva/news/society/18724080/>

36. Website of the federal journal «National capital»: Governor of the Oryol Oblast Vadim Potomsky took part in the Global Forum IPLA 2015 [http://kapital-rus.ru/uznai/news/gubernator\\_orlovskoj\\_oblasti\\_vadim\\_potomskij\\_prinial\\_uchastie\\_v\\_globalnom\\_forume\\_ipla\\_2015/](http://kapital-rus.ru/uznai/news/gubernator_orlovskoj_oblasti_vadim_potomskij_prinial_uchastie_v_globalnom_forume_ipla_2015/)

37. Website of the Association of Housing and Communal Services «Development»: On October 6-8, the Global Forum on Waste Management of IPLA 2015 was held

<http://gkhrazvitie.ru/tape/news/2015/10/710/>

38. Planet-today.ru: The Public Chamber of Russia took part in the

Global Forum on Best Technologies of Waste Management

<http://planet-today.ru/novosti/obshchestvo/ekologiya/item/22393-op-rf-prinyala-uchastie-v-globalnom-forume-po-nailuchshim-tehnologiyam-v-sfere-obrashcheniya-s-otkhodami>

39. Website of the Administration of the Vladimir oblast: IPLA-2015 Global Forum: a new word in the waste-processing industry

<http://ekogradmoscow.ru/novosti/ekologicheskoe-prosveshchenie-regiony-delyatsya-opytom>

40. Web Portal «Evening Moscow»: Global Forum IPLA

<http://www.vm.ru/news/2015/10/06/sobrat-i-razdelit-ekologiyu-uluchshit-pererabotka-musora-299350.html>

41. Kaluga-poisk.ru: Delegation of the Kaluga oblast will take part in the Global Environmental Forum IPLA - 2015

<http://www.kaluga-poisk.ru/novosti-kaluga/ekologiya/delegatsiya-kaluzhskoy-oblasti-primet-uchastie-v-rabote-globalnogo-ekologicheskogo-foruma-ipla-2015>

42. Online journal «Recycle»

<http://recyclemag.ru/news/v-podmoskove-zapustili-proekt-po-sboru-elektroloma>

43. Website of the Ministry of Ecology and Natural Resource Management of the Moscow Region

<http://mep.mosreg.ru/multimedia/novosti/glavnie/15-01-2016-11-54-30-pilotnyy-proekt-po-organizatsii-sbora-i-pererabotki>

44. Website of the Newspaper «Kommersant»

<http://www.kommersant.ru/doc/2873591>

45. Website of the TV channel «360° Moscow region»

<http://360tv.ru/news/perspektivy-sortirovki-i-pererabotki-musora-v-podmoskove-41506/>

46. Website of the Agency of Social Information

<http://www.asi.org.ru/announcement/obshhestvennye-slushaniya-problemy-pererabotki-otkhodov-elektronnogo-i-elektricheskogo-oborudovaniya-i-shin-v-moskve-i-drugih-regionah-rossii/>

47. Online journal Primgazeta.ru

<http://primgazeta.ru/news/forum-nature-without-borders-to-obtain-the-status-of-federal>

48. Online magazine «UlanMedia

News Agency»

<http://ulanmedia.ru/news/society/03.11.2015/470911/sohranenie-blagopriyatnoy-sredi-obitaniya-cheloveka-obsudili-na-forume-vo-vladivost.html>

49. Website of the Information Agency «Vostok-Media»

<http://www.vostokmedia.com/n261323.html>





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