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## **ANNUAL REPORT 2014**

UNIDO Centre for International Industrial  
Cooperation in the Russian Federation

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## ABOUT THE UNIDO CIIC IN RUSSIA

The UNIDO Centre for International Industrial Cooperation (CIIC) was established in 1989 within a framework of the Agreement between UNIDO and the Government of the Russian Federation. The UNIDO CIIC is an integral part of the UNIDO ITPO Network.

The main purpose of the UNIDO CIIC, defined by the Agreement, is to promote international cooperation in the economic, technological, industrial and scientific spheres between Russian enterprises, associations and organizations and firms from developed and developing countries.

The UNIDO Centre acts as a catalyst and source of technical expertise in the design, organization and implementation of key events related to investment promotion and technology transfer in the Russian Federation.

In the Russian Federation, UNIDO CIIC provides the following services:

- Access to investment information, government and private business institutions and contacts in other countries through the UNIDO worldwide network;
- Direct communication and access to entrepreneurs worldwide;
- Participation at UNIDO-sponsored and/or organized investment and technology promotion events;
- Upgrading skills of local staff of investment-related institutions by using UNIDO investment promotion methodologies and tools, e.g. project identification, screening, evaluation and promotion, building of strategic business alliances etc.

In the implementation of its activities, the Centre uses the programs, methodology, tools and software developed by UNIDO to promote investment and technology.

The UNIDO Centre gives special attention to environmental considerations, the development of SMEs and employment generation in line with UNIDO strategies and policies in these fields.

Major target beneficiaries of the UNIDO Centre are enterprises and organizations in the Russian Federation including industrial SMEs interested in cooperation with foreign partners.

The target beneficiaries are also private enterprises, institutions and governments in developing countries and countries with economies in transition, which will have increased possibilities to enter into different forms of partnerships with industrial enterprises in the Russian Federation.

In addition, the Center collaborates with institutions that are involved in technology promotion.

## 2014 CIIC HIGHLIGHTS

### CONSTRUCTION OF PLANT FOR FULL-CYCLE PRODUCTION OF DOUBLE-SIDED AND MULTILAYER PRINTED BOARDS IN INNOVATION SPECIAL ECONOMIC ZONE "DUBNA"

Construction of the plant was started in early 2014 as part of a project to support research and production complex "Svyaz engineering KB" in raising funds to establish pilot high-tech production for prototyping of printed circuit boards, development and adoption of advanced technologies using hardware materials to produce printed circuit boards of a new generation in SEZ "Dubna". The project is implemented in cooperation with UNIDO CIIC in Moscow, Russian Trade Representation in the Czech Republic, Russian-Czech Intergovernmental Commission and Ministry of Economic Development of Russia.

Planned production on 12500 sq. m. will be focused on the needs of manufacturers and developers of prototype and small-batch production. Estimated production capacity of the plant is 55000 sq. m. of printed circuit boards per year.

Competitive advantages over producers from Southeast Asia and Europe at the Russian market are short term order processing due to operational interaction with customers and developers of products, short time of production and transportation to the end user, ability to produce complex, high-tech and high-quality printed boards of higher accuracy class. Moreover, location of the plant in the Special Economic Zone "Dubna" provides additional benefits.

When starting the project the main challenge was to attract required funding while loans from Russian banks was not an option without sufficient collateral and due to high interest rates.

Experts of the UNIDO Centre conducted an extensive and successful work to find possible funding sources and prepare loan documents in accordance with requirements and procedures of foreign financial institutions. During the preparation of the loan agreement experts of the Centre provided continuous support to Svyaz engineering KB and took an active part in negotiations with suppliers of high-tech equipment by linking proposed technologies with financial model, marketing sales plans and conditions of delivery and installation of equipment. To address the lack required collateral, it was decided to use the scheme of export credit insurance.

As a result, the company signed a loan agreement for a long-term loan in amount of € 42 mln with big Czech bank under the



**Delivery of equipment to the plant**

guarantee of Czech state insurance company and started construction and purchase of equipment. Completion of construction of the plant is scheduled for 2Q of 2015.



## 10 APRIL 2014, UNIDO CIIC TOOK PART IN THE FORUM OF YOUNG GLOBAL LEADERS OF THE BRICS COUNTRIES AT MOSCOW STATE INSTITUTE OF INTERNATIONAL RELATIONS (MGIMO)

The Forum was opened by the rector of University Anatoly Torkunov, the special envoy of the Ministry of Foreign Affairs of Russia Vadim Lukov and Chairman of the Committee of the State Duma Vyacheslav Nikonov also held the speech.



**Forum of young global leaders of the BRICS countries**

Plenary discussion began with a presentation of the Ambassador of Brazil Mr. Antonio Guerreiro, also attended by the Minister Plenipotentiary of the Embassy of China Mr. S. Xiaoyun, Deputy head of the diplomatic mission of India Mr. Sandeep Arya, Ambassador extraordinary and Plenipotentiary of the Republic of South Africa in Russia Mr. Mandisi Mpahlwa.

The opening ceremony was attended by ambassadors and diplomats of the BRICS countries,

Russia's leading experts and scientists, directors of specialized institutes of the Russian Academy of Sciences, MGIMO professors. Many aspects of interaction and cooperation were discussed, from economic and financial to innovational and cultural. The following priority areas were identified:

1. Reforming the international monetary and financial;
2. Shared commitment to international law;
3. Economic development;
4. Modernization.

It was emphasized that all participants are equal members of the community who should work together to counter challenges of modernity. Director of the UNIDO CIIC Sergey Korotkov made a presentation. He underlined the importance of further cooperation in the framework of BRICS, and pointed on the most perspective forms of cooperation in the „green“ sector. This interaction is very



**Speech of the Director of the UNIDO CIIC Sergey Korotkov**

important because implementation of projects within the framework of BRICS contributes to promoting of UNIDO activities, strengthening of production base and enhancing knowledge flow both inside and beyond the Commonwealth.

## **PRESENTATION OF THE UNIDO PROJECT «ENVIRONMENTALLY SOUND MANAGEMENT AND FINAL DISPOSAL OF PCBs AT THE RUSSIAN RAILROAD NETWORK AND OTHER PCBs OWNERS»**

24 April 2014, An official presentation of the UNIDO/GEF project «Environmentally sound management and final disposal of PCBs at the Russian railroad network and other PCBs owners» was held at the Russian Railways exhibition center. Started in February 2014, it is a first full-scale project on implementation of provisions of Stockholm Convention on POPs in the Russian Federation. The project counterparts are OAO Russian Railways, SUE Vodokanal of Saint Petersburg and the Gubkin Russian State University of oil and gas.

More than 70 persons were invited to the meeting to discuss necessity of project implementation, planned activities and its possible difficulties. The meeting was attended by the representatives of UNIDO's Stockholm Convention Unit - Mr. Klaus Tyrkko, Mrs. Tamara Babayan and Mr. Valentin Ishchenko, representatives of the State Federal Institutions, i.e. Ministry of Natural resources and environment, Ministry of Trade, Ministry of Foreign Affairs, Federal Service for Supervision on natural resources usage, the State Duma, Chamber of Commerce and Industry.



**Presentation of the UNIDO/GEF project**

The project team presented activities that were carried out on preparatory stage, including inventory of 500 units of transformer equipment, prepared proposal for updating legislation basis, start of the creation of laboratory basis for PCBs analysis. During the presentation, it was noted that at the moment, the problem of dealing with substances and materials containing persistent organic pollutants (POPs) is one of the most pressing environmental issues worldwide. The Senior Vice-president of OAO Russian Railways, representatives of the Ministry of Natural Resources and Environment, Ministry of Foreign Affairs and State Duma expressed intent of comprehensive support of the project implementation.

## **MEETING WITH REPRESENTATIVES OF MINISTRY OF ENVIRONMENTAL PROTECTION OF CHINA AND UNIDO DIVISION OF THE STOCKHOLM CONVENTION**

22-26 September 2014, The UNIDO CIIC organized visit of delegation of the Ministry of

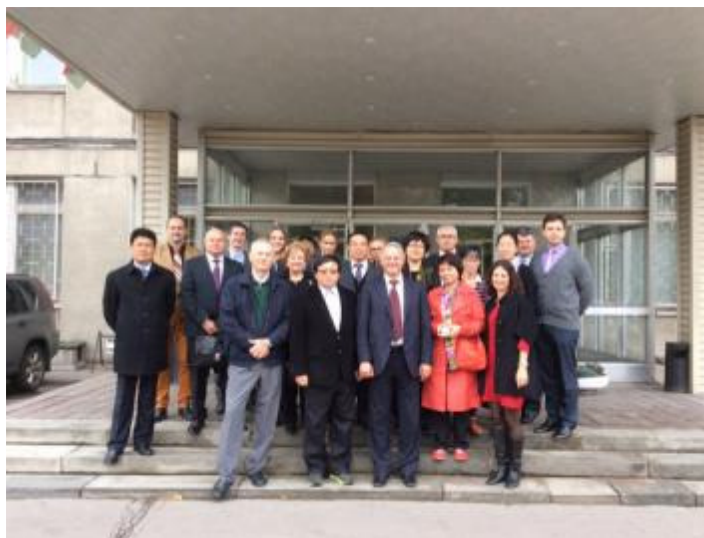


**The visit of Chinese delegation to Moscow**

Environmental Protection of China. The meetings were attended by representatives of the Foreign Economic Cooperation Office, Department of Science, Technology and Standards, Chinese Solid Waste and Chemicals Management Center of China, as well as UNIDO Stockholm Convention Unit – Mr. Zhengyou Peng, Mrs. Tamara Babayan and Mr. Yunrui Zhou.

The main purpose of the visit was to discuss prospects of future cooperation and sharing the experience of

implementation of POPs-related UNIDO projects. Several meetings were organized with representatives of Ministry of Education and Science, Ministry of Natural resources and environment, OAO Russian Railways and Moscow State Unitary Enterprise “Promothody”. At the meeting with the Ministry of Education and Science delegation members discussed R&D technologies in the field of waste management, especially PCBs disposal. Parties expressed intent to establish close cooperation between leading Russian and Chinese research organizations. Important issues related to PCBs management and hazardous wastes disposal were discussed during the meeting with Administration of Department of Industrial Cooperation of the Ministry of Natural resources and environment and Administration of the OAO Russian Railways. It was also noted that technology of hazardous wastes disposal through its burning in cement kilns has a great potential. Possible projects in the field of chemical management between Russian and Chinese institutions and business organizations were also discussed during the delegation visit.



**Visit to the UNIDO CIIC in Moscow**

## **THE UNIDO/BRICS PROJECT: MISSION OF UNIDO DELEGATION TO SOUTH AFRICA**

From 22 November to 3 December 2014 UNIDO CIIC organized the visit of UNIDO delegation to South Africa in the framework of the Project «Partnership between Russia and Brazil in technology and innovation for development of SMEs with expansion to other BRICS countries».

The delegation was headed by Director of the UNIDO Centre Sergey Korotkov. The delegation included representative of the UNIDO HQ in Vienna Anders Isaksson, national expert of the Project Igor Kulkov, representative of the UNIDO office in Pretoria Robert Novak.

The main purpose of the visit was to present the UNIDO/BRICS Project and BRICS Technological platform, to define main directions of technological and innovation cooperation in the priority industrial sectors of the National plan for the development of Africa 2030 and South Africa’s





**Mission of UNIDO delegation to South Africa**

The meetings that were held during the visit were aimed to discuss prospective projects, potential partners and ways of efficient cooperation, as well as methodology of technology transfer in the framework of Technological Platform of the Project.

Key point of the UNIDO Project is to promote development of small and medium business in BRICS countries. Main motive of the meetings was determined by position of the Declaration

adopted by the BRICS Heads on BRICS Summit 2013, held in South Africa (section 19):

„We recognize the fundamental role of small and medium enterprises in the economy of our countries. Small and medium business is the main Creator of jobs and wealth. We recognize the need to promote dialogue between ministries and agencies responsible for this subject, especially in order to promote international cooperation and support innovation, research and development“.

This framework defined composition of UNIDO delegation agenda in South Africa. Meetings were held in 6 cities in four provinces with more than 50 representatives of Ministries, Central and provincial development corporations, scientific, technological and innovation centres and agencies, universities and associations.

Meetings were organized at the Ministry of industry and trade, the Ministry of science and technology, provincial Ministries of economic development, state leading innovation centers, Technology innovation Agency of South Africa and the Council for scientific and industrial research, Industrial development Corporation of South Africa, Development Corporations in the provinces, representatives of Industrial development zones, Chambers of Commerce and Industry and municipal authorities.

During the visit, parties reached a preliminary agreement with the Industrial development Corporation of South Africa and the Technology innovation Agency of South Africa on the joint development of working documents for coordination of cooperation to promote and support the UNIDO Project and BRICS Technological Platform.

## **25TH ANNIVERSARY OF UNIDO CIIC IN MOSCOW**

The UNIDO Centre for International Industrial Cooperation in Moscow celebrated its 25th anniversary on December 23, 2014. The event was held at the Analytical Center for the Government of the Russian Federation.

The event was started by the opening speech of Director of the UNIDO CIIC Sergey Korotkov, who made a presentation on the history of the Centre, its objective and main activities, ongoing and pipeline projects in Russia.

A welcoming speech was made by President of the International Congress of Industrialists and Entrepreneurs (ICIE) Viktor Glukhikh, Deputy General Director of Russian Energy Agency Zukhra Galperina, Deputy Director of Department for International Organizations in Ministry of Foreign Affairs of Russia Viktor Zagrekov, Director of Department for International Cooperation in Ministry of Russia Nuritdin Inamov, Deputy Director for innovative



**25th anniversary of UNIDO CIIC in Moscow**

development of the Russian research center „Kurchatov Institute“ and Director of the UNIDO Centre in Russia in 2002—2005 Mikhail Rychev, Chairman of the Board of the Center for Global Strategies Yuri Seniuk, Deputy Head of Department for supervision in the sphere of environmental protection of Rosprirodnadzor Galina Evstigneeva, Deputy head of the Analytical Centre for the Government of the Russian Federation Galina Chinarihina, Head of the Russian environmental project RUSECOPRO Elena Grishina, Deputy Director of International education the Ministry of Education Boris Zhelezov, Head of the Department of labor protection, industrial safety and environmental control of OAO Russian Railways Dmitry Raenok.

The event was attended by representatives of the Business Council of the Shanghai Cooperation Organization, Rossotrudnichestvo, the Eurasian Economic Commission, Federal Service for Supervision of Natural Resource Usage, the North-Western International cleaner production Centre, as well as representatives of foreign embassies, universities, business partners and others.



**Opening speech of Director of the UNIDO CIIC Sergey Korotkov**

The President of the International Congress of Industrialists and Entrepreneurs Viktor Glukhikh awarded the UNIDO Centre with Honorary Diploma „For its significant contribution to the development of international economic cooperation“. Russian Ecological party „Green Party“ presented a Medal „For Contribution to Sustainable development of the Russian Federation“ to Sergey Korotkov.

The participants of the event

demonstrated a shared emphasis on positive achievements of the UNIDO Centre and their intent to deepen cooperation and expand existing projects in the country, and the potential to replicate these success stories in other countries.

## ONGOING PROJECTS IN THE RUSSIAN FEDERATION

In 2014 UNIDO Centre for International Industrial Cooperation in the Russian Federation continued implementation of the following projects:

1. Identification, evaluation and prioritization of pollution “hot-spots” in the basins of trans-border reservoirs and transfer of environmentally sound technologies;
2. Phase Out HCFCs and Promotion of HFC-free Energy Efficient Refrigeration and Air-Conditioning Systems in the Russian Federation Through Technology Transfer;
3. Market Transformation Programme on Energy Efficiency in GHG-Intensive Industries in Russia;
4. Partnership between Russia and Brazil in technology and innovation for development of SMEs with expansion to other BRICS countries;
5. BAT/BEP Center For Environmentally Safe Disposal Of Potentially Hazardous Consumer Products And Industrial Wastes;
6. Environmentally Sound Management and Final Disposal of PCBs at the Russian Railroad Network and Other PCB Owners.

More information on each of the projects is set out below.



# IDENTIFICATION, EVALUATION AND PRIORITIZATION OF POLLUTION “HOT-SPOTS” IN THE BASINS OF TRANS-BORDER RESERVOIRS AND TRANSFER OF ENVIRONMENTALLY SOUND TECHNOLOGIES

## DESCRIPTION OF THE PROJECT. PROJECT ADVANCEMENT

The aim of the project is to assist Russia in reducing anthropogenic industrial impact on transboundary water bodies. This is achieved through implementation of recommendations for development of environmental and industrial policies, guidelines for enterprises, adoption of best environmental technologies through execution of pilot projects.

The UNIDO Project consists of two components. The first component aims at identification, evaluation and prioritization of pollution hot-spots. Execution of the first component leads to the second one - implementation of UNIDO approach for Transfer of Environmentally Sound Technology (TEST) within the Volga River Basin.

The following activities are carried out under the first component:

- Identification, evaluation and prioritization of pollution hot-spots as main sources of pollution in the Middle and Low Volga regions;
- Evaluation of pollution impact (and forecasting future risks) on the environment and human health;
- Identification of projects to reduce pollution (preferably for new technologies and low-cost);
- Comparison and preliminary ranking of projects for human health protection, economic impact and environmental protection.

The second component represents a comprehensive UNIDO approach - TEST, and uses a number of implementation tools, including the following:

- Initial review;
- Environmental Management System;
- Assessment of possibilities for implementing cleaner production approach;
- Environmental audit;
- Assessment of possibilities for introduction of environmentally sound technologies;
- Strategy for sustainable development of enterprise.

The next step (after obtaining official permission to provide information to Lower Volga basin water management board) is to calculate the effective disposal mass and preliminary ranking and selection of "hot spots".

At the same time the work on creating an interactive geographic information system “Monitoring the impact of technogenic points on water resources, human health, biodiversity and economy in

the basins of the Middle and Lower Volga” and equipping laboratories of FSI SredVolgaVodhoz with modern equipment.

This software supplements the TEST methodology and can be then used by Ministry of Natural Resources and Federal Water Resources Agency for operational multi-level monitoring, processing information, forecasting the possible negative processes and management decision-making to address the impact of technogenic points on water resources, human health, biodiversity and economy in the basin of other water bodies in Russia. Market value of this software package is approximately ₺ 25 mln.

Based on the results of detailed assessment a selection of companies was made for implementation of the TEST program. Preliminary work on implementation of comprehensive approach to water pollution based on the TEST methodology was executed.

The main beneficiaries of the project are industries and, in particular, SMEs ("hot spots"), who will receive the following benefits:

- Determination of cost-effective environmentally friendly technological solutions and facilitating access to financial mechanisms and incentives.
- Reduction of investments and operating costs of treatment facilities.
- Avoiding fines and achieving better regulatory compliance.
- Conversion from losses to profits by reducing wastes and optimization of water and energy consumption in the process.
- Overall improvement in performance and environmental efficiency of polluting enterprises.

## **PARTNERS OF THE PROJECT**

The following government organizations and companies are among project partners:

- Ministry of Natural Resources and Environment of the Russian Federation
- Ministry of Ecology and Natural Resources of the Republic of Tatarstan
- Federal Government Agency for Water Management "Sredvolgavodhoz"
- OAO POZIS
- ZAO KVART
- OAO Mamadyshskiy syromaslodelniy kombinat

## **MAJOR ACHIEVEMENTS IN 2014**

The second phase of the project was approved in November 2013, but the actual work started in January 2014. The second phase is the logical continuation of successfully completed first phase and it is aimed at development and expert evaluation of modernization projects selected for implementation of best environmental technologies in three selected companies. Achieving these goals is the final stage of implementation of UNIDO TEST methodology, designed for resource

efficiency water saving. The project provides assistance to companies in obtaining funding of selected modernization projects, analysis and dissemination experience accumulated in the Russian Federation at federal and regional levels, as well as at the level of Russian companies and scientific community. The results obtained to date were highly appreciated by the Government of the Republic of Tatarstan and members of the Project Advisory Committee.

Currently selected 7 companies implemented a system for continuous improving of eco-efficiency, introduced a set of low-cost and no-cost measures, identified and assessed medium and large modernization projects. A list of recommendations to improve environmental and industrial policies was developed based on international experience.

A number of preparatory activities related to the re-establishment of working relationships and full involvement of the Government of the Republic of Tatarstan and selected industrial enterprises in the project were completed in 2014 in accordance with project work plan.

The Project team works in close cooperation with international experts and advises participating companies on implementation of the TEST methodology. Technical experts carry out work on detailed elaboration and verification of feasibility studies for modernization projects, updating plans of modernization of enterprises, finalizing business plans, adapting technical documentation to the requirements of funding organizations. Continuous support is provided in optimizing production, energy management, selecting projects of technical improvements of production, resource efficiency and “clean” production.

Furthermore, the Project team carries out the following activities under the Project:

- Expert assessment of selected modernization projects and development of project proposals portfolio for financial institutions;
- Search for Russian and international financial institutions interested in project funding;
- Collection and analysis of materials, development of technical reports and recommendations;
- Participation at national and international events related to the Project for its promotion, raising awareness, search for new partners and achieving additional results.

## EVENTS



**Seminar at the Peoples' Friendship University of Russia (RUDN)**

**1 July 2014**, UNIDO held a seminar at the Peoples' Friendship University of Russia (RUDN) in order to present the UNIDO TEST methodology. The target audience of the event was represented by scientists and students of Economic and Environmental Faculties of RUDN. People's Friendship University of Russia is a unique international university annually teaching students from 145-150 countries of the world.

**8 September 2014**, UNIDO TEST methodology was introduced in Petergof as part of the Saint Petersburg International Youth Environmental Forum 2014. The event was attended by representatives of the Ministry of Natural Resources and Environment, government authorities of Saint Petersburg and Leningrad region, heads of Russian and international associations of Ecology and Environmental Protection (The World Wide Fund for Nature, the All-Russian Society for Nature Conservation, etc.).

**22 October 2014**, UNIDO TEST methodology was presented in Moscow at 5th International Chemical Assembly "Green Chemistry 2014". Official support was provided by:

- International Union of Pure and Applied Chemistry (IUPAC);
- Ministry of Industry and Trade of the Russian Federation;
- Chamber of Commerce and Industry of the Russian Federation
- The Russian Chemists Union;
- The Moscow City Government;
- NIITEKHIM (Research Institute of feasibility studies in chemical industry);
- Mendeleev Russian Chemical Society;
- Faculty of Chemistry of Moscow State University.



**Presentation of UNIDO TEST at Saint Petersburg International Youth Environmental Forum**

The event was attended by more than 70 representatives of industrial companies and scientists from leading institutes.



## PLANNED PROJECT ACTIVITIES

The UNIDO Project “Identification, evaluation and prioritization of pollution “hot-spots” in the basins of trans-border reservoirs and transfer of environmentally sound technologies” is close to its completion. In the first half of 2015 the work will be focused on final processing of results, analysis of work done and preparation of final reports.

## MEDIA COVERAGE

- Magazine "UNIDO in Russia", Issue 9, Main results of the first phase of the project “Identification, evaluation and prioritization of pollution “hot-spots” in the basins of trans-border reservoirs and transfer of environmentally sound technologies” ([http://www.unido-russia.ru/archive/num9/art9\\_10/](http://www.unido-russia.ru/archive/num9/art9_10/));
- Magazine "UNIDO in Russia", Issue 11, UNIDO TEST methodology - the way to the best environmental technologies. Theory and Practice in Russia ([http://www.unido-russia.ru/archive/num11/art11\\_21/](http://www.unido-russia.ru/archive/num11/art11_21/)).

# PHASE OUT HCFCs AND PROMOTION OF HFC-FREE ENERGY EFFICIENT REFRIGERATION AND AIR-CONDITIONING SYSTEMS IN THE RUSSIAN FEDERATION THROUGH TECHNOLOGY TRANSFER

## DESCRIPTION OF THE PROJECT. PROJECT ADVANCEMENT

The UNIDO Project on HCFCs phase out and transition to use of environmentally friendly and energy efficient technologies was developed upon the initiative of the Ministry of Natural Resources and Environment of the Russian Federation (MNRE). The Global Environment Facility (GEF) furnishes a financial assistance to implement the Project.

The objective of the project is to implement the international obligations of the Russian Federation under the Montreal Protocol on Substances that Deplete the Ozone Layer (1987). To this end, the Project provides for measures on: building institutional capacity (development of draft legal norms and regulatory documents, programs and action plans as well as provision of necessary support to implementation of various components of the Project); phase out of HCFC consumption in the foam and HVAC&R equipment sectors; transfer to Russian enterprises of advanced environmentally friendly and energy-efficient technologies; raising public awareness on need to increase energy efficiency of current equipment and refusal to use ozone depleting substances (ODS).

The primary objective of this project is the direct phase out 600 metric tons of HCFCs in the foam and refrigeration manufacturing sectors in the Russian Federation to meet the 2015 Montreal Protocol target.

Project implementation phases are set out below.

## MANAGEMENT AND CONTROL TOOL FOR IMPLEMENTATION OF THE PROJECT

The following activities were carried out:

- Preparation of tender documentation in accordance with GEF and UNIDO procedures and selection of the National Executive for the Project;
- Holding a Project Coordination Committee working session;
- Holding of 5<sup>th</sup> and 6<sup>th</sup> Coordination Committee Meeting;
- Relocation of the Project office to the building of UN Information Centre (Moscow, 9 Leontievskiy per.), purchase of necessary office equipment and supplies, inventory of property;
- Preparation of Project progress reports for GEF.

## Institutional capacity building

### **Institutional support to the Ministry of Natural Resources and Environment to fulfill international commitments of the Russian Federation in the field of protection of the ozone layer**

The following changes took place in legal regulation in the field of ozone-depleting substances (ODS) in the Russian Federation during reporting period:

- Decree of the Government of the Russian Federation No. 228 dated March 24, 2014 “On measures of state regulation of consumption and circulation of substances that deplete the ozone layer”. The decree obliges legal entities and private entrepreneurs keep records of produced, used, transported, stored, recuperated, reclaimed, recirculated and disposed ODS and annually, starting from 2015, submit respective reports to the Ministry of Natural Resources and Environment Protection;
- Decree of the Government of the Russian Federation No. 1229 dated November 20, 2014 “On changes to Decree No. 228 dated March 24, 2014” that among other issues modifies reporting forms for produced, used, stored, recuperated, reclaimed, recirculated, and destroyed ODS;
- Direction of the Government of the Russian Federation No. 2327-p. dated November 20, 2014 that stipulates allowable ODS production and consumption volumes.

The above legal acts were prepared with due consideration of proposals made by UNIDO–Business working group that was created as part of implementation of the Project and Project Implementation group.

As part of institutional support to the Ministry of Natural Resources and Environment UNIDO Project team conducted the following activities:

- Consultations with Ministry of Natural Resources and Environment and Federal Space agency (Roscosmos) on the issues included in agenda of the 34th session of open-ended working group of the Montreal Protocol (14-18 July 2014, Paris) and the 10th joint meeting of parties of the Vienna Convention for the Protection of the Ozone Layer and the 26th meeting of parties of the Montreal Protocol (17-21 November 2014, Paris), prior to their trip to specified events.
- Preparation of the Draft Report of the Russian Federation “On essential use of ODS, besides laboratory and analytical use in 2013” and Draft Report “On production, consumption, export and import of ODS in Russia in 2013” (for submission to the Secretariat of the Vienna Convention and the Montreal Protocol).

- Preparation of the Draft Form for reporting on production, use, storage, recuperation, reclamation, recirculation, destruction, sale and purchase of substances that deplete ozone layer.
- Formulation of recommendations to define approaches for setting quotas for production and consumption of HCFCs in the Russian Federation, as well as an appropriate level of production, import and use in 2015.
- Consultations provided to MNRE on production and use of ODS and to the Russian Interior Ministry - on illegal ODS traffic.
- Formulation of proposals for potential funding of the Project for ODS phase-out in some CIS countries under the Multilateral Fund for Implementation of the Montreal Protocol.
- Formulation of proposals for potential funding of the Regional Project for Eastern Europe, Caucasus and Central Asia to accelerate the phase-out of HCFCs and switch to HFC-free substances and technologies, as well as to establish on the basis of the existing Ozone Center of the Republic of Armenia a Regional Center of best practices and professional development for phase-out of ODS and some of fluorinated greenhouse gases in Eastern Europe, Caucasus and Central Asia.
- Preparation and adaptation of business plan of the project for ODS disposal - a feasibility study of an industrial site for disposal of household refrigerators and freezers.
- Consultations provided to representatives of ozone offices and executive authorities of Belarus, Azerbaijan, Kazakhstan and the Kyrgyzstan on phase-out of HCFCs and HFCs, as well as fulfillment of the obligations under the Montreal Protocol.
- Assistance to MNRE in collecting information on the needs of legal entities and individual



**Awarding ceremony for operatives of GUEBiPK of Russian Interior Ministry and the Federal Customs Service of Russia**

entrepreneurs in ODS for 2015.

- Translation of legal documents of the European Union and the Republic of Turkey that regulate circulation and record-keeping of ODS and greenhouse gases.

- Preparation of Informational and Analytical Note "On regulation of production and consumption of HCFCs in the



Russian Federation in 2014 and in 2015-2019".

### **Institutional support to the Russian Interior Ministry and the Federal Customs Service on fulfillment of international obligations of the Russian Federation in the field of protection of the ozone layer**

UNIDO Project team assisted in recruitment of expert and hardware selection for the Main Directorate for Economic Safety and Counteracting Corruption (GUEBiPK) of Russian Interior Ministry. In January 2014 operatives of GUEBiPK suppressed trafficking of a large batch of illegal ODS to Russia.

UNIDO and UNEP jointly organized an awarding ceremony for operatives of GUEBiPK of Russian Interior Ministry and the Federal Customs Service of Russia for success in suppressing large smuggling channel of ODS into the territory of Russia.

### **HCFC phase-out in foam production sector and refrigeration sector**

The following activities were carried out under this component:

- Delivery and installation of technological equipment for production lines of medical and household refrigeration equipment at OAO POZIS (Zelenodolsk, Tatarstan) using ozone-friendly blowing agents.
- Certification of recognition of goods, works and services as technical assistance, completion of the delivery of purchased technological equipment for OOO SEPO-ZEM (Saratov) that produces household refrigeration equipment.
- Discussion of possible options to establish production of ozone-friendly refrigerants, blowing agents and solvents in Russia with representatives of OAO GaloPolymer.
- Organization of tender activities, signing of contract for delivery of technological equipment and methyl formate for OOO NVP Vladipur (Vladimir), and certification of recognition of goods, works and services as technical assistance. The developed technology for the use of methyl formate in polyurethane foam is considered by a number of Russian companies as the main alternative to currently used ozone-dangerous HCFC-141b.
- Procurement of ozone-friendly blowing agent based on hydrofluoroolefins to optimize recipes and test them on Russian enterprises that use polyurethane foam in technological operations.
- Preparation and submission of requests to OAO Gazprom and OAO NK Rosneft for establishing a pilot production of natural refrigerants and blowing agents. At the request of lead technology developer of OAO NK Rosneft - OOO United Research and Development Centre an additional information regarding the prospects for conversion of Russian

enterprises using polyurethane foam in its manufacturing operations to cyclopentane was provided.

### **Life cycle analysis of HCFC / HFC**

Implementation of the component as a whole was completed in 2013. In 2015, a revision of earlier prepared proposals under the demonstration projects for using energy-efficient and safe refrigerants and blowing agents will be carried out.

### **Development of ODS utilization schemes**

As a result of UNIDO–Business working group meeting (22 October 2014) proposals regarding recycling, regeneration, recirculation and destruction of ODS and ODS-contaminated products were prepared and submitted to MNRE.

Official requests were sent to potential enterprises - beneficiaries for provision of free technical assistance in order to create infrastructure for ODS destruction and ODS collection networks.

Tender procedure for selection of equipment supplier and executive to build infrastructure for ODS destruction and ODS collection network was initiated.

### **Public awareness activities, including development of the Project web site ([www.ozoneprogram.ru](http://www.ozoneprogram.ru)) and regular publication of "UNIDO in Russia" magazine**

In 2014 UNIDO continued to carry out public awareness activities, during which the Project team organized and participated in a number of events, including Worldskills competition, Scientific and practical Conference "Improving the reliability and efficiency of refrigeration and petrochemical equipment", celebration of the International Day for the Preservation of the Ozone Layer, Moscow City competition "Protect the Ozone Layer and the climate of the planet Earth" and others.

The Project team continued to develop the Project web site - [www.ozoneprogram.ru](http://www.ozoneprogram.ru), which is the first Russian specialized web site containing information about Russian legislation in the sphere of protection of the ozone layer, a library of documents and videos, a large number of translated materials describing the international experience of phasing-out of HCFCs, information about Project events, news, as well as separate sections for interested federal executive authorities and businesses, educational institutions and media.

The Project team conducted work on search, drafting and publishing of news and articles in "UNIDO in Russia" magazine (№ 13, №14 and № 15), "Climate World", "Refrigeration equipment" and others.

### **Organization of training for working with refrigeration installation, repair and maintenance**

The work on development of certification course for refrigeration installation, repair and maintenance technicians was completed. This course will help to create professional and educational standards in the Russian Federation and operate the certification system for

technicians needed to organize inventory of ODS, reduce ODS leaks and ensure their environmentally safe disposal.

In November - December 2014 a free online course "Legal regulation and technological aspects to reduce consumption of ozone-depleting substances in the Russian Federation" was organized. More than 130 people completed the course and 30 professionals were trained in distance learning technologies and specialized software used in refrigeration business.



**Online course «Legal regulation and technological aspects to reduce consumption of ozone-depleting substances in the Russian Federation»**

## **PARTNERS OF THE PROJECT**

Among the major project partners are:

- Federal executive bodies:
  - The Ministry of Ecology and Natural Resources of the Russian Federation
  - The Ministry of Internal Affairs of the Russian Federation
  - The Federal Customs Service of the Russian Federation
  - The Ministry of Internal Affairs of the Russian Federation
  - The Federal Agency for Technical Regulation and Metrology
  - The Ministry of Healthcare and Social Development
  - The Federal Service on Surveillance in Healthcare and Social Development
- Russian industrial plants:
  - FSUE Production Association Zavod imeni Sergo (POZIS), Zelenodolsk, Tatarstan
  - OAO Iceberg, Smolensk
  - OAO Polus, Yoshkar-Ola
  - OOO Vladipur, Vladimir
  - ZAO MosFlowline, Moscow
  - OOO SEPO-ZEM, Saratov
  - OOO Dow-Izolan, Vladimir
  - OOO Marikholodmash, Yoshkar-Ola

- OOO Orsk Refrigerator Plant, Orsk
- OAO Krasnoyarsk Refrigerator Plant Biryusa, Krasnoyarsk
- OOO Elastokam, Nizhnekamsk, Tatarstan
- Producers and manufacturers of halocarbons and HVAC&R equipment interested in development of “green” sectors of the Russian market:
  - Daikin
  - DuPont
  - Honeywell
  - Mitsubishi Electric
  - Panasonic
  - Samsung

## EVENTS AND MISSIONS

**21-27 January 2014**, A working trip to the United States to study the best practices on the use of ammonia as refrigerant and visit Honeywell enterprises and International exhibition AHR-expo-2014 (New York city, Buffalo, USA) was organized. The trip was attended by representatives of the Ministry of Natural Resources and Environment (MNRE), Project Management Unit, refrigeration industry; the heads of the NP ISZS-Montazh and the State training center - GAOU UTs Professional. A meeting with the leadership of the International Institute of Ammonia Refrigeration (IIAR) and a visit of the Honeywell research laboratories and experimental production were held during the trip. In the framework of the workshop, the Project Steering Committee discussed the interim report on the Project implementation, the draft work plan for 2014, the issues of initiating the development of the system of fluorinated gases regulation, the issues of initiating the creation of professional standards and cooperation between representatives of the refrigeration and air-conditioning industries, the MNRE and UNIDO.



**The Russian delegation in the Honeywell research laboratory**

**18-20 March 2014**, Participation in a meeting of the Contact group in Minsk. The group was composed of representatives of Customs Union countries (Russia, Belarus, Kazakhstan), countries considering the question of accession to the Customs Union (Armenia, Kyrgyzstan, Tajikistan) and Eurasian Economic Commission on discussion of the CU legislation in field of the ODS turnover regulation in view of its planned expansion.



**7-8 April 2014**, The 5<sup>th</sup> meeting of the Project Steering Committee was held in Vienna, Austria. In the framework of the event, the PMU Report on the work done in 2013 and the Project work Plan for 2014 were presented. The work of the PMU during the reporting period was found to be satisfactory, and the proposed work Plan was approved.

**18 April 2014**, Participation in organization of the qualifying WorldSkills competition in Moscow. Qualifying Competition for competence "Refrigeration and air-conditioning" was held in The Hospitality and Management College No. 23 under the aegis of the Center for climate, energy efficiency and building automation established with support of UNIDO.



**WorldSkills Qualifying Competition for competence  
"Refrigeration and air-conditioning"**

**29-30 April 2014**, A working meeting with the Ministry of environment and urbanization of the Republic of Turkey (MoEU) on the exchange of experience in operation of the national system of ODS accounting treatment was held in Istanbul.

**16 May 2014**, A meeting of the MNRE officials with members of UNIDO – business working group was held. The issues related to the regulation of ODS consumption and use were discussed.

**21-24 May 2014**, Participation in the annual meeting of the regional ozone network for Europe and Central Asia in Sarajevo, Bosnia and Herzegovina.

**17-18 June 2014**, GAOU UTs Professional placed UNIDO's workshop "Establishment of the certification and accreditation system for refrigerating, heat pump, and air-conditioning equipment technician". The presentation covered 4 levels of professional development programs for professionals engaged in current maintenance and servicing of refrigerating installations as well as management, training and knowledge assessment of staff.

**26-27 June 2014**, Participation in the scientific-practical conference "Improving the reliability and efficiency of refrigeration and petrochemical equipment" with a presentation on the topic "Refrigerants and problems of chemical and technological security of the Russian Federation" in Moscow.

**1 August - 30 September 2014**, The online exhibition of children's drawings and posters on issues of protecting the ozone layer was organized. The exhibition presents pictures and posters sent to representatives of the MNRE, UNIDO and the Federal children environmental and biological center in 2014. In September–October 2014, numerous events dedicated to protection of the ozone layer and climate of the Earth were held in Moscow and regions of Russia.

**17 September 2014**, Participation in the celebration of the International Day for the Preservation of the Ozone Layer.

**24 September 2014,** The Hospitality and Management College No. 23 hosted competition Protect the Ozone Layer and Earth Climate. It is remarkable that the competition was organized by students with support of college teaching staff and UNIDO specialists. At the event the children learned that leading industry associations with the support of the MNRE and UNIDO partnered to develop professional and educational standards and certification systems.



**The Competition “Protect the Ozone Layer and Earth Climate”**

**22-26 September 2014,** Participation in the session devoted to the presentation of UNIDO Projects in the Russian Federation and collaboration with China. In the framework of the session the Project of UNIDO/GEF-MNRE and proposals for cooperation between Russian and Chinese parties in the field of the ozone layer protection were presented.

**30 September - 2 October 2014,** Representatives of UNIDO, the UN Environment Programme (UNEP), the UN Development Program (UNDP) and the Committee on environmental protection under the government of the republic of Tajikistan held thematic meeting on the implementation of projects on HCFC phase-out under the Montreal Protocol. The meeting was also attended by experts in the field of refrigeration and air-conditioning equipment from Countries operating under article 5 – Armenia, Georgia, Moldova, Kyrgyzstan and Turkmenistan - and transition economy countries - Belarus, Russia, Tajikistan, Ukraine and Uzbekistan.

**1-4 October 2014,** Participation in the 15<sup>th</sup> seminar on the celebration of the Refrigeration Day, organized by Astrakhan State Technical University and the Group of companies "Fabricant" with the support of the Russian Union of Refrigeration Industry (Rossoyuhholodprom), with a presentation on the topic "Control system for ODS consumption in Russia" in Astrakhan. In the framework of the event, participants were informed about the changes in the Russian legislation in the field of ozone layer protection, green technologies in the refrigeration and air-conditioning industry and the Project UNIDO / GEF –MNRE.

**15 October 2014,** The UN information center held a meeting of the initiative group of developers of professional standard "Refrigerating, heat pump, and air-conditioning equipment technician" in Moscow. The working conference participants were representative of the Association of Professional in the Industry of Climate (APIC), Association of Engineers for Heating, Ventilation, Air-Conditioning, Heat Supply and Building Thermal Physics (ABOK), Russian Union of Refrigeration Industry (Rossoyuhholodprom), self-regulating associations NP ISZS-Montazh and NP ISZS-Proyekt, Professional training center—state independent educational institution of the city of Moscow, and PMU for the UNIDO/GEF-MNRE project on HCFC phase-out in the Russian Federation.

**15 October 2014,** Representatives of the PMU for the UNIDO/GEF-MNRE project on HCFC phase-

out in the Russian Federation took part in the Moscow competition "Protect the ozone layer and Earth climate". During the meeting, participants (mostly - students of secondary schools) demonstrated prepared competitive tasks, met with ozone-safe and energy efficient air-conditioning systems at the Center for climate, energy efficiency and building automation established with the support of UNIDO, answered the quiz questions and watched the information film on the protection of the ozone layer.

**22 October 2014**, A meeting of UNIDO-Business Working Group on disposal, regeneration, recycling and destruction of ODS and ODS-contaminated products was held in Moscow. The presentation "Possible approaches to the destruction of ODS in the Russian Federation" was made.

**18-19 December 2014**, The 6<sup>th</sup> meeting of the Project Steering Committee was held in Vienna. In the Framework of the event, the criteria for selection of a Russian organization to implement a pilot project for the ODS waste collection and disposal and The Work Plan for 2015 for the contractor were prepared.

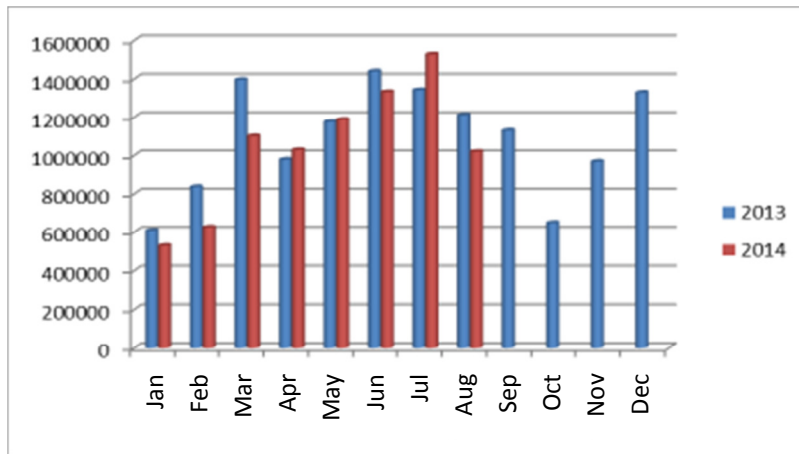
### DESCRIPTION OF THE PROJECT. PROJECT ADVANCEMENT

Rational use of energy resources is one of the priorities for modernization and technological development of economy and social sphere not only in Russian Federation, but in the whole world. For different stages of preparing and implementing energy efficiency measures and improving energy efficiency the government forms specific requirements aimed at stimulating the market, intensifying the professional community and increasing importance of energy savings among its consumers, generators and suppliers. That's why the project "Market transformation programme on energy efficiency in greenhouse gas-intensive industries in the Russian Federation" was initiated. The project is implemented by UNIDO in cooperation with the European Bank for Reconstruction and Development, with support from the Ministry of Energy of the Russian Federation in cooperation with the Russian Energy Agency.

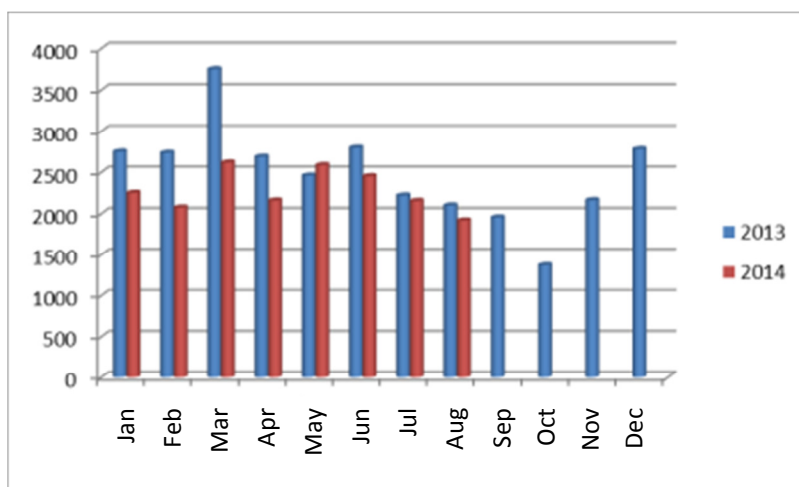
The main objective of the project - reduction of energy costs at enterprises (electricity, gas, etc.) through the introduction of the energy management system based on the international standard ISO 50001, program of optimization of large electrical systems, and the development and assistance in fundraising for modernization projects . The main target group of the project - Russian industrial enterprises.

During the project implementation at Russian industrial enterprises, the assessment of energy savings potential is conducted, modern energy management system are established, programs of energy conservation are developed and, if necessary, UNIDO experts help companies to find the financial institutions where they could obtain funds for the implementation of these programs. UNIDO attracts leading international experts on Energy Management Systems (EnMS) and optimization of large engineering systems for the staff training on energy saving best practices that has huge effect on the Russian industry.

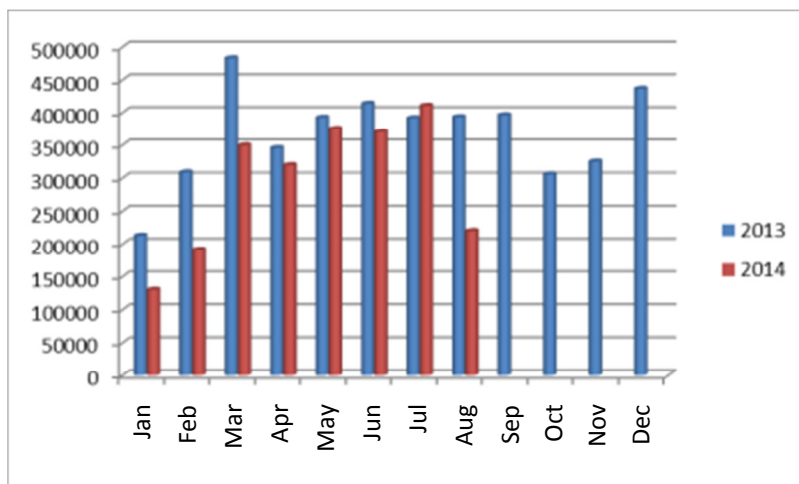
For example, one of the results of the project in 2014 was a significant energy saving, recorded at one of the project participants – "Baltika" company. Below are the dynamics of electricity, heat and water consumption in the production activity of the plant, taking into account UNIDO project energy saving measures.



**The dynamics of electricity consumption**



**The dynamics of heat consumption MW**



**The dynamics of water consumption**

The project activities are carried out in 4 directions:

- Component 1: Enhancing knowledge assets (methodical, information and human resources support)
- Component 2: Energy management system capacity building programme for large energy-intensive industries.



- Component 3: Energy management system capacity building and energy efficiency improvement in SMEs.
- Component 4: Government capacity building and support programme.

In the framework of the first component, during the reporting period, the UNIDO Centre for International Industrial Cooperation developed and adapted to Russian realities educational, methodological and information materials on energy efficiency and EnMS. In total more than 3,000 pages of various materials, including manuals, tutorials, presentations and others were prepared. Under the first and third components conducted close and active work with businesses, prepared Russian experts, conducted seminars with the participation of leading international experts, foreign energy auditors worked at enterprises. All funding is allocated as part of the project, so Russian industrial enterprises have access to best international practices for free.

In summary, under the third component enterprises will be given a package of services that includes:

- Energy management training and implementation;
- Systems optimization training;
  - Fans
  - Steam
  - Compressed air
  - Pumps
  - Motors
- Assistance for EnMS and benchmarking implementation to improve energy efficiency;
- Energy audit;
- Preparation of energy efficiency investment plans;
- Assistance for enterprises to obtain financing.

In the framework of the fourth component, representatives of federal and regional state bodies are provided with trainings and webinars on the issues of energy efficiency and EnMS, as well as work on improving legislation in the sphere of energy efficiency, adaptation of proven global tools to increase energy efficiency and development of Russian analogs.

## **PARTNERS OF THE PROJECT**

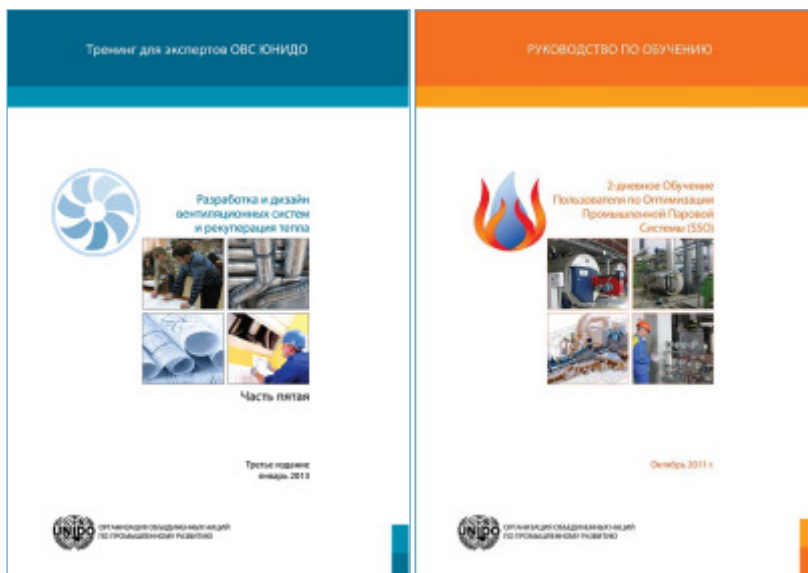
The main partners of the project are the European Bank for Reconstruction and Development, which carries out part of the work and functions within the overall project along with UNIDO, and Russian Energy Agency of the Ministry of Energy of the Russian Federation. The project is supported by the Ministry of Foreign Affairs of Russia. A number of other commercial companies performing work commissioned by UNIDO is involved in the project on a contract basis.

## MAJOR ACHIEVEMENTS IN 2014

During the reporting period a PR campaign was carried out, in the framework of the first component, aimed at raising brand awareness of the UNIDO project among Russian industrial enterprises, in particular team of the UNIDO Centre participated in a number of industrial events and held a discussion club devoted to white certificates and voluntary commitments at the Analytical Center under the Government of the Russian Federation. Along with this came a number of publications in the specialized electronic and printed media that has brought attention to the positive results achieved during the project implementation.

Two videos on the activities of UNIDO in Russia and the project "Market transformation programme on energy efficiency in greenhouse gas-intensive industries in the Russian Federation" with duration of 2.07 minutes and 1.03 minutes were shot, mastered and demonstrated to the vast audience. Concluded contracts for development and trial operation of the portal "Energy efficiency and energy conservation" and started work in this direction.

Under the third component were prepared for publication educational materials for industrial steam system optimization (User level) and for fan hardware (User and Expert levels).



**Educational materials for industrial steam system optimization and for fan hardware**

One of the main directions of the project – training of employees of industrial enterprises on Energy Management Systems and optimization of industrial systems (third component of the project). During the reporting period a set of training activities was conducted, including over 20 events in 6 regions of Russia, which were attended by major industrial partners of UNIDO in Russia on this project, companies "Baltika", "Ak Bars", "POZIS", UGMK and others. Trained over

200 people, who appraised highly the work of international experts and organizational support of UNIDO Centre in Russia.

Following seminars, trainings, energy audits and workshops were organized for mentioned enterprises within the UNIDO Project by the leading Russian and international experts.

Date	Event	Location
21-23.10.2013	EnMS training for 10 Baltika plants	Saint Petersburg
16-19.12.2013	EnMS training for 10 Baltika plants	Rostov
20-23.01.2014	EnMS training for 10 Baltika plants	Rostov

27-30.01.2014	EnMS training for 5 AkBars Holding plants and POZIS plant	Kazan
13-14.03.2014	Additional EnMS training for 10 Baltika plants	Rostov
11-17.04.2014	Training on Fan system optimization for 10 Baltika plants	Tula
28-30.04.2014	Additional EnMS training for 10 Baltika plants	Saint Petersburg
10-18.07.2014	Training on Steam system optimization for 10 Baltika plants	Saint Petersburg
25-29.08.2014	EnMS training for 10 Baltika plants	Saint Petersburg
22-25.09.2014	EnMS training for 5 AkBars Holding plants and POZIS plant	Kazan
06-10.10.2014	EnMS training for 10 UGMK plants and Red Barricades Shipyard (Astrakhan)	Ekaterinburg
24-25.10.2014	EnMS training for Red Barricades Shipyard	Astrakhan
24.11.2014	EnMS training for Kuzbassrazrezugol UGMK	Kemerovo
26.11.2014	EnMS training for Revda Metal Works UGMK	Revda
03.12.2014	EnMS training for top management of Baltika, AK Bars, UGMK and Red Barricades Shipyard (Astrakhan)	Vienna, Austria
04.12.2014	Study-tour for top management of Baltika, AK Bars, UGMK and Red Barricades Shipyard (Astrakhan) at UFH Recycling и WOZABAL companies	Enns, Austria

As part of the third component of the project was concluded a contract and conducted initial development of an automated knowledge testing for the students' of the industrial equipment optimization course.

Under the fourth component, together with the Russian Energy Agency, a program to increase the competence of government officials regarding industrial energy efficiency and energy management was developed and implemented.

Program Objective: to improve the ability of government officials to develop effective policies and programs to improve industrial energy efficiency, as well as measures for their implementation.

Objectives of the program:

1. To increase the competence of the federal government officials for development and implementation of effective public policies and programs on improvement of industrial energy efficiency and energy management.
2. To support the application of the Federal Law №261-FZ dated 23.11.2009 "On energy saving and energy efficiency improvements and on Amendments to Certain Legislative Acts of the Russian Federation" and programs of the Russian Federation on improvement of

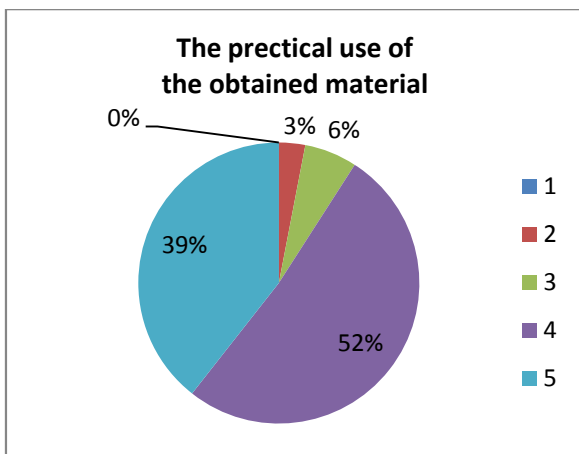
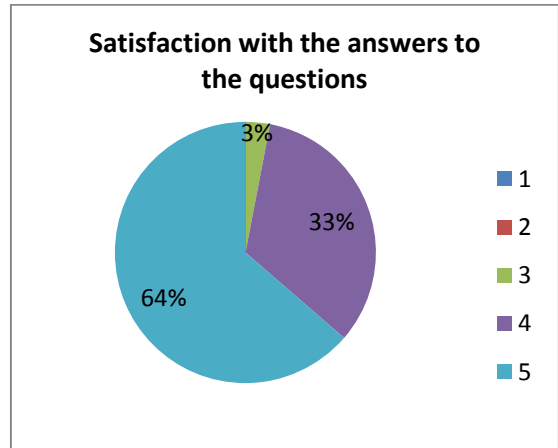
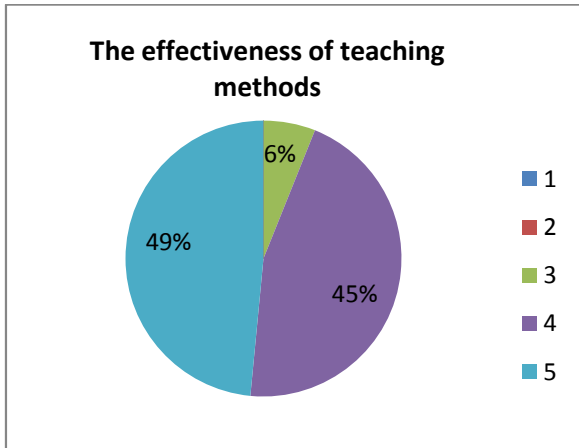
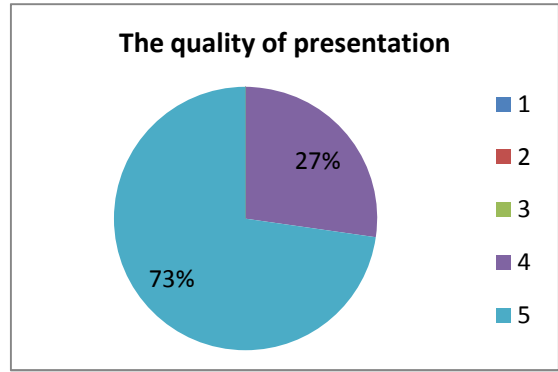
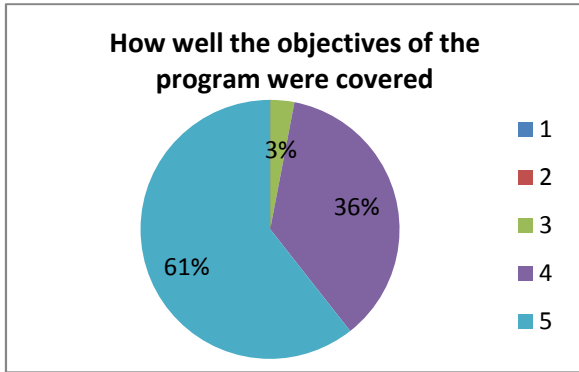
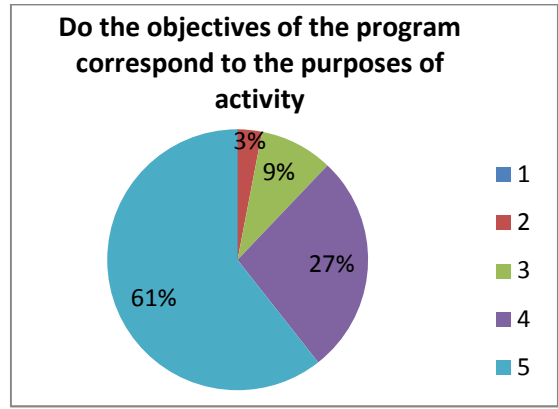
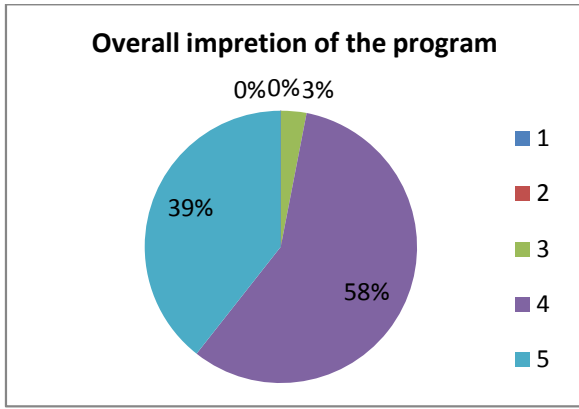
energy efficiency (Government Decree №321 dated 15.04.2014 "On approval of the state program of the Russian Federation "Energy efficiency and energy development") and strengthen the related governmental policy.

As part of this program was conducted a training sessions for representatives of federal and regional ministries and agencies operating or authorized to carry out activities to promote and maintain energy efficiency in the industry. Total number of participants (students) in the seminar - 141 people. The seminar was attended by representatives of federal and regional authorities, representing 15 regions of the Russian Federation: Moscow, Belgorod region, Bryansk region, Vladimir region, Voronezh region, Ivanovo region, Kaluga region, Kostroma region, Lipetsk region, Moscow region, Orel region, Ryazan region, Tver region, Tula region, Yaroslavl region.

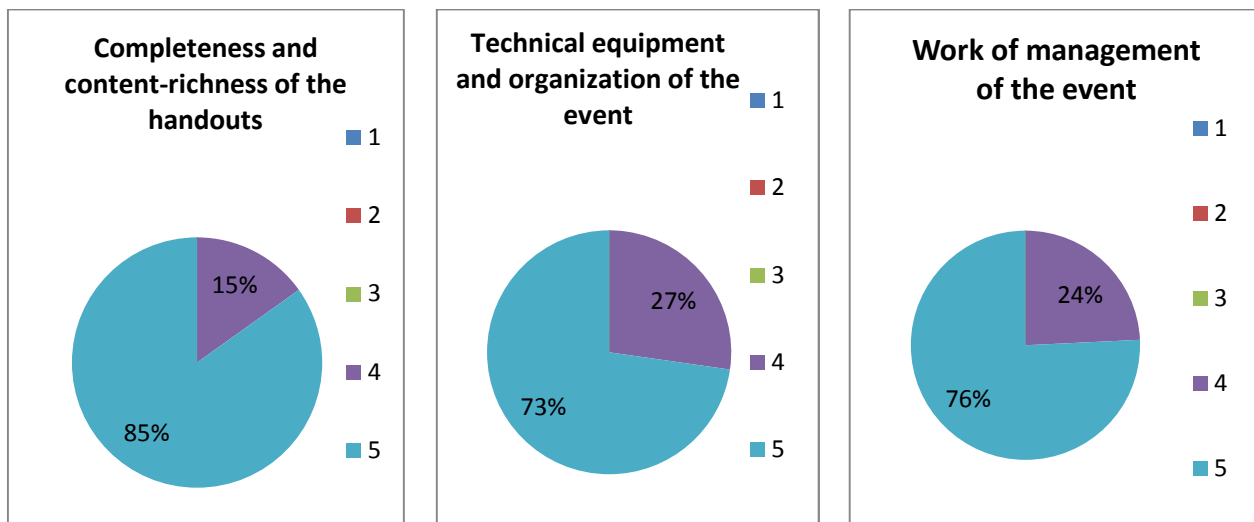
Given the topic of the seminar, the majority of listeners are working in regional executive bodies in charge of industry, fuel and energy complex. Officials of the federal and regional ministries and agencies responsible for energy efficiency in industry and implementing energy management in enterprises in their regions attended a series of lectures by leading experts in the field of energy efficiency and energy management. Among the main topics - energy management as an instrument of state policy, the national standard ISO 50001: 2012 "Energy Management Systems" in the industry, attracting extra-budgetary funding through energy service contracts. During the training seminar were considered practical examples of the application of energy efficient equipment in industry, as well as experience in implementation of energy-saving technologies in heating systems in apartment buildings and industrial plants.

The seminar was attended by representatives of national and international companies, suppliers of energy efficient equipment. The features of use of steam, compressed air, pumps, fans and other energy-saving technologies were presented by the experts of SKB Vzlet, Danfoss, Schneider Electric, Feniche RUS.

After the classroom seminars, the participants were surveyed in order to determine the most relevant topics, speakers and materials for the students.



**Evaluation of the content of the workshop activities (in % on a 5-point scale)**



**Evaluation of the level of event management (in % on a 5-point scale)**

Within the framework of the work under this component was developed educational and methodical complex for the program of improvement of the competence of regional government officials and government-sponsored regional institutions in terms of industrial energy efficiency and energy management. Educational and methodical complex for the program improvement of the competence of regional government officials and government-sponsored regional institutions in terms of industrial energy efficiency and energy management was developed under the component 3.1 and reviewed for new target audience. The training program and materials were developed in accordance with the Russian peculiarities and realities.

The program improvement of the competence of regional government officials and government-sponsored regional institutions in terms of industrial energy efficiency and energy management includes the following sections:

- Introduction;
- Section 1. Approved and future government policies on energy savings and associated tools, their purpose, practical application, criteria and conditions for effectiveness;
- Section 2. (Energy audit), preparation and registration of an energy passport of the organization;
- Section 3: Energy Management Systems. Development of energy-saving program for a budgetary institution;
- Section 4. Energy Service activities;
- Section 5. Promotion and popularization of energy saving;
- Section 6. Existing technologies for energy-efficient lighting;
- Section 7. Measures of government control in the field of energy saving and energy efficiency.

Section «A list of current terms and definitions in the field of energy saving in industrial organizations» contains commonly used terms and definitions in the field of energy saving and energy efficiency, which are applied in industry, transport, energy, constructions and others.



Section «List of the main normative legal acts of the Russian Federation in the field of energy saving and energy efficiency» consists of the following subsections:

- Strategic and guidance documents;
- Federal laws;
- Bylaws made in pursuance of the Federal Law of November 23, 2009 № 261-FZ;;
- Other legal acts regulating relations in the sphere of energy saving.

Section «Bibliography for self-study» contains literature on the following main issues:

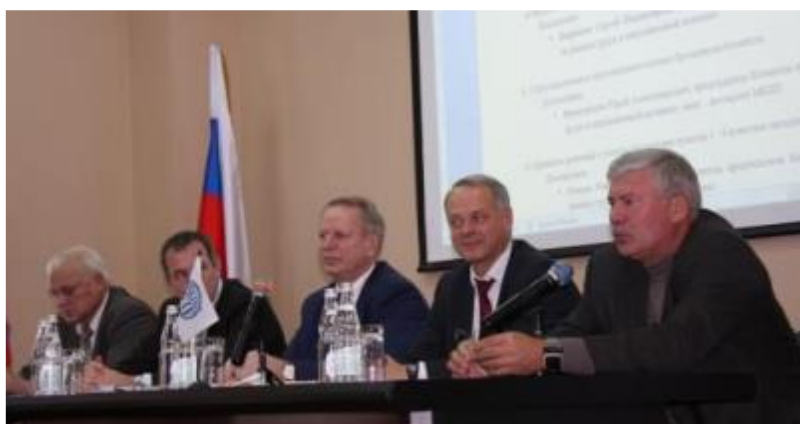
- basics of energy conservation;
- theory and practice of energy and resource conservation;
- energy saving technology;
- energy efficiency in industry;
- environmental problems of fuel use;
- creation and activities of energy service companies;
- energy saving management;
- renewable energy;
- energy-saving equipment;
- basics of energy management;
- basics of practical management;
- energy management in industrial enterprises;
- regulatory framework for natural monopolies in the energy sector and energy management;
- concept for creation of a system of sustainable consumption and energy efficiency in the enterprise;
- implementation of energy management in the enterprise, the method of "phase inputs";
- energy management of buildings;
- risk free energy management. Industrial enterprise in the electricity market;
- foreign experience of energy saving motivation

## **EVENTS**

**18-19 June 2014**, in Moscow was held an annual conference Xperience Efficiency 2014, dedicated to energy efficient and innovative technologies. The event was conducted with the support of the French company Schneider Electric, the Russian Union of Industrialists and Entrepreneurs and the Department of Foreign Economic and International Relations of Moscow. Within the conference the key issues addressed and discussed during two plenary meetings and numerous panel

discussions were: competitive growth of the Russian economy by means of implementation of the best available energy saving technologies; Western countries experience in the sphere of energy efficiency improvement; advanced Russian regions' achievements and unique projects completed in Russia; smart energy sector, modern trends and prospects for implementation of smart grids elements and solutions in Russian, and many more. Representatives of the Ministry of Economic Development, Ministry of Energy, Ministry of Industry and Trade, Government of Moscow, the Russian Union of Industrialists and Entrepreneurs (RSPP), other federal and regional government officials, leading experts and consultants in energy and energy saving, Russian biggest public and private companies' executives participated in the event.

Representatives of the UNIDO Centre in the Russian Federation took part in this conference. At the plenary session the Director of the Center Sergey Korotkov submitted a presentation on "UNIDO activities to improve energy efficiency in the Russian industry. Energy management systems implementation in accordance with ISO 50001".



**ICIE Council Meeting in Riga**

**16 October 2014**, ICIE Council Meeting has taken place in the city Riga. Representatives of the UNIDO Centre in the Russian Federation took part in this conference. The Director of the Center Sergey Korotkov submitted a presentation on "UNIDO activities in Russia" in which he spoke about the current and prospective projects, including the Project on improving energy

efficiency in the Russian industry.

**22-24 October 2014**, World Green Energy Forum was held in Korea. The purpose of this forum - is finding ways to proactively respond to global energy-related changes in the environment and climate, as well as building a global partnership for sustainable development of the world community in the concept of reorientation in an environmentally secure future. Director of the UNIDO Center for International Industrial Cooperation in the Russian Federation Sergey Korotkov participated in this forum and spoke on "Opportunities for cooperation of UNIDO and the private sector in the Russian Federation".



**World Green Energy Forum 2014**

**12 November 2014**, the UNIDO CIIC in Russia with the participation of the Russian Energy Agency

held a discussion club "Energy Efficiency in the Russian industry: white certificates and voluntary commitment to energy conservation" at the Analytical Center of the Government of the Russian Federation.

During the discussion topics of voluntary obligations on energy conservation and white certificates, as ways of reducing energy consumption in energy-intensive sectors of Russian industry were considered. Russian and international experts shared their experiences in the course of the event. The speakers were: Galina Chinarihina, Deputy Head of the Analytical Center under the Government of the Russian Federation; Sergey Korotkov, Director of the UNIDO Centre for



**A discussion club "Energy Efficiency in the Russian industry: white certificates and voluntary commitment to energy conservation"**

International Industrial Cooperation; Zuhra Galperina, Deputy Director General of the Russian Energy Agency; Alyssa Gilbert, Director of the Department of market mechanisms in the energy sector, ECOFYS; Marco Matteini, Industrial Development Officer, Industrial Energy Efficiency Unit, UNIDO HQ.

**20-22 November 2014**, in Moscow (Gostiniy Dvor, 4 Ilyinka str.) was held the 3<sup>rd</sup> International Forum on Energy Saving and Energy Efficiency ENES 2014 - the largest and most significant event in this area, which includes both a vast exposition part and more than 30 business events - meetings, discussions, plenary sessions, round tables. Organizers of ENES 2014 are the Ministry of Energy of Russia and the Moscow government. Facilitating agent: OAO "Exhibition hall "Electrification".



**The 3<sup>rd</sup> International Forum on Energy Saving and Energy Efficiency ENES 2014**

More than 10 thousand people were registered on the event, which is 2 times more than last year. Among the main speakers of the forum were the Minister of Energy of the Russian Federation Alexander Novak, Moscow Mayor Sergei Sobyanin, Chairman of the Board of OAO "Sberbank of Russia" German Gref, Chairman of the Supervisory Board of GK "Housing Reform Fund" Sergei Stepashin,

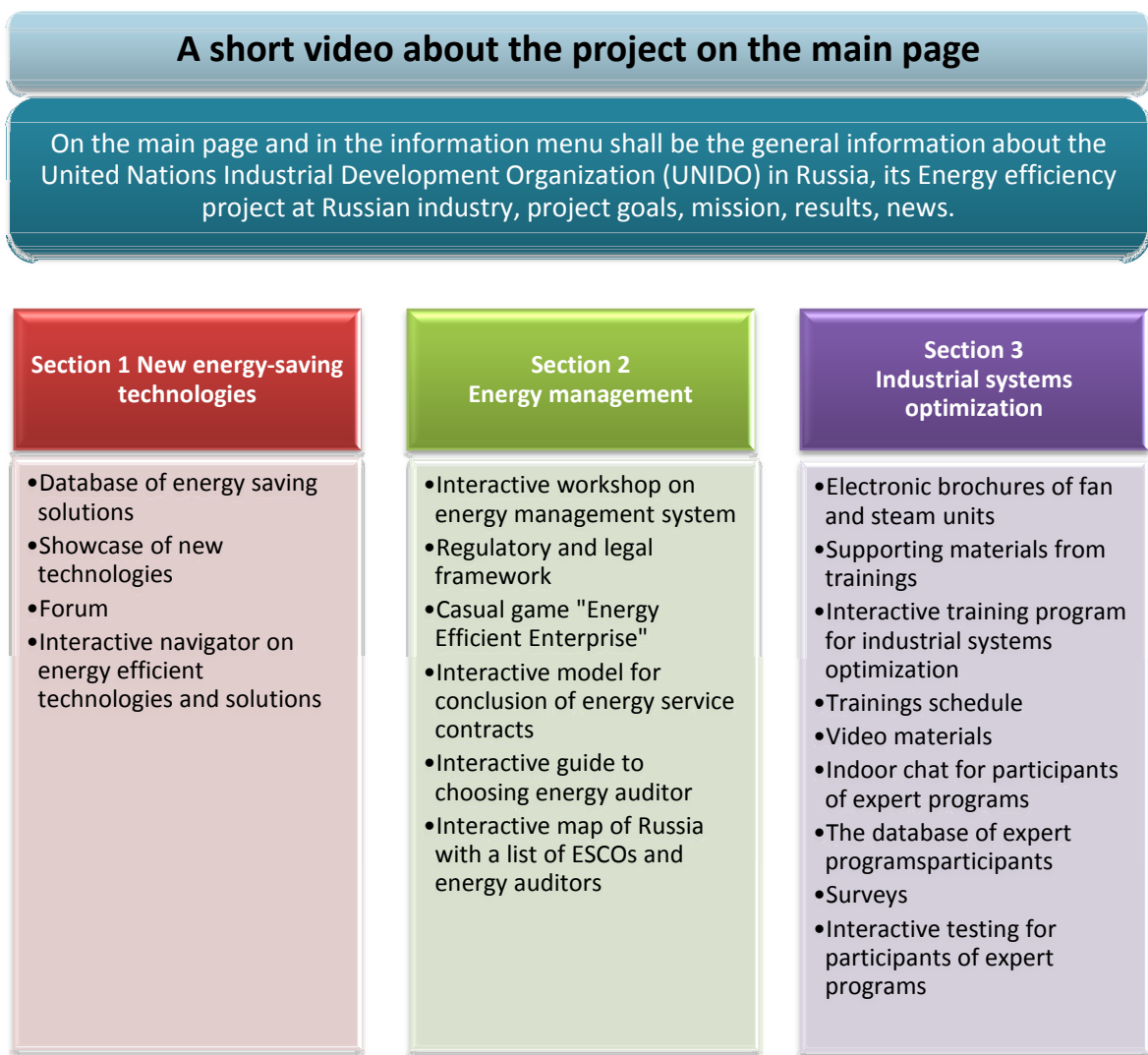
governors, heads of leading Russian and international companies and industry business structures.

UNIDO Centre took an active part in the business program of the forum, especially in the discussion of topical issues of reducing energy intensity in various industries, transport,

agriculture, housing as a condition for economic growth in the plenary session "Energy efficiency as a driver of competitiveness and economic growth" with the participation of the Minister of Energy of the Russian Federation Alexander Novak, Moscow Mayor Sergei Sobyenin, Chairman of the Board of OAO "Sberbank of Russia" German Gref, executive vice president of Schneider Electric Mike Hughes.

## PLANNED PROJECT ACTIVITIES

In 2015, the portal "Energy efficiency and energy saving" will be put into operation. It is designed to become an important resource for Russian industrial enterprises, combining information on the profile subjects from foreign and domestic sources. The portal will be filled with automated services and databases, allowing to quickly find the right equipment or get advice on optimization of industrial systems online. The structure of the portal assumes the following:



In 2015, an automated system for testing knowledge on industrial optimization for listeners of the seminars will be put into operation. Installed on the server, the system will work in the interests of UNIDO experts conducting training, providing access to data stored in its statistical data block only to authorized representatives of the Customer. Test results can serve as a basis for planning staff development, as well as other internal staffing needs. The test is a set of interactive tasks to check

the level of technical knowledge addressed during training. The questions for testing of knowledge included in the ATS, have the form of the test with the possibility to select one or more correct answers, as well as tasks to test skills with the possibility to enter the desired response. Execution time of one test is set in consultation with an expert, standard time is not more than 1 hour. At the request of the expert the user can be provided with a second attempt of passing the test. Number of questions in one test may also be different - in the standard version it is 60 questions. ATS provides automatic processing, storage and delivery of results in the form of a table and chart (percentage of correct / incorrect answers) for each connection and for each of the subjects of the education plan, as well as the final result (in percentage terms).

All test data are stored in a single database system on the server of the customer with the ability to sort by various parameters (Name of the user, % of correct answers, a structural unit, date of testing, passed - not passed and so forth.), export content in MS Excel (including for import in the internal personnel systems) and print personal users cards. The system should not have limits on the number of tests, the number of test subjects, the number of simultaneous connections to the testing system.

Work on the third component of the project will be pursued and extended - conducting trainings, seminars and audits at partner enterprises, and the fourth component of the project will be developed - cooperation with the authorities of the Russian Federation.

We tentatively planned participation in the following activities in 2015:

Date	Events	Location
Feb 4 2014	Discussion club «Regional industrial policy: towards energy efficient modernization» (UNIDO with Analytical Centre under the government of the Russian Federation)	Moscow
10-13 Feb 2014	The 21th international trade show "Power Engineering 2015"	Samara
17-19 Mar 2014	The 15th Russian-wide Exhibition "ELECTRO-2015. Energy efficiency"	Volgograd
26 Mar 2014	IX Annual Conference "Russian energy sector"	Moscow
1-3 Apr 2014	XV International Symposium "Energy and resource efficiency and energy conservation"	Kazan
15-16 Apr 2014	Russian-wide Forum "Energy efficiency technologies - 2015"	Ekaterinburg
19-22 May 2014	22nd International Specialized Exhibition "Energetics and electrical technology" 3rd Russian International Energy Forum (RIEF-2015)	Saint Petersburg
8-11 Jun 2014	ELEKTRO'2015	Moscow
18-20 Jun 2014	Vienna Energy Forum 2015	Vienna, Austria
6-9 Oct 2014	Power efficiency. Energy-saving. Innovative technologies and equipment. VII International Specialized Exhibition	Saint Petersburg
6-9 Oct 2014	15th St. Petersburg International Energy Forum	Saint Petersburg
19-22 Nov 2014	RUGrid-Electro	Moscow
Not confirmed	The future of renewable energy in Russia. V Annual Conference	Moscow
30 – 31 Dec	ICEM 2015: XIII International Conference on Energy	Paris, France



	Management	
Not confirmed	Xperience Efficiency 2015	Moscow
Not confirmed	ENES 2015	Moscow
Not confirmed	UPGRID 2015	Moscow
Not confirmed	German-Russian Conference "Energy dialog: through innovation towards energy efficiency"	Berlin, Germany
Not confirmed	Krasnodar Spring Forum: Energy Efficiency and Innovation	Krasnodar
Not confirmed	XV Russian Energy Forum, 12th International exhibition «Energy Saving - 2015»	Ufa
Not confirmed	Russian International Energy Forum and the International specialized exhibition "Power and Electrical Engineering"	Saint Petersburg
Not confirmed	International Exhibition and Conference on Sustainable Development of energy systems of the future "GridTec China 2014"	China

## MEDIA COVERAGE

During the reporting period, in print and electronic media, several publications devoted to the Project as a whole and its individual components were published:

1. Low Hanging Fruits Magazine, article "A brief overview of the United Nations Industrial Development Organization projects in the field of energy and resource efficiency in Russia";
2. UNIDO in Russia magazine, issue 14, article «The Project «Market transformation programme on energy efficiency in greenhouse gas-intensive industries in the Russian Federation»;
3. UNIDO in Russia magazine, issue 15, Interview with Evgeny Gennadyevich GASHO, Expert of the Analytical Centre under the Government of the Russian Federation;
4. UNIDO in Russia magazine, issue 15, Interview with A. A. Besschastnov, UNIDO expert;
5. Press release on Discussion Club "Energy Efficiency in the Russian industry: white certificates and voluntary obligations on energy efficiency" 12.11.2014 (<http://ac.gov.ru/events/04068.html>);
6. Series of press releases on the results of the Project events at unido.ru website ([http://www.unido.ru/news/forum\\_po\\_zelenoi\\_energetike\\_v\\_koree/](http://www.unido.ru/news/forum_po_zelenoi_energetike_v_koree/), [http://www.unido.ru/events/xperience\\_efficiency\\_2014/](http://www.unido.ru/events/xperience_efficiency_2014/), [http://www.unido.ru/news/diskussionnii\\_klub\\_energoehffektivnost/](http://www.unido.ru/news/diskussionnii_klub_energoehffektivnost/));
7. Update of the YouTube channel with the recording of the presentation by S. Korotkov, Director of the UNIDO Centre in Russia (<http://www.youtube.com/watch?v=PgZkqnlygGc>).



### DESCRIPTION OF THE PROJECT. PROJECT ADVANCEMENT

The UNIDO Project “Partnership between Russia and Brazil in technology and innovation for development of SMEs” is developed in support of BRICS Summit Declaration 2011 on cooperation in science, technology and innovation. The Project is funded by the Government of the Russian Federation (by a voluntary contribution of Russia in the UNIDO Industrial Development Fund) and coordinated by the Ministry of Education and Science of the Russian Federation. Participating countries besides Russia, the donor country, is Federative Republic of Brazil.

The aim of the Project – is to promote innovative technologies in the activities of small and medium-sized enterprises in order to ensure sustainable economic growth in Russia and Brazil by creating conditions for the formation of technology partnerships between interested organizations in the countries participating in the Project with UNIDO support as a broker of East-South cooperation and UN instrument for further of the Project to other BRICS countries.

During the implementation of Project it is intended to develop innovative infrastructure tools for effective dissemination of technological information, training of personnel of organizations integrated into the Project, to assist SMEs in obtaining funding from organizations such as the Global Environment Facility, development banks, etc.

Project implementation began in June 2012. Since 1 January 2013 the Project activities were frozen due to the suspension of funding. The developments on the formation of base technology partnerships made in 2012 could not be restored fully. The main project partner from the Brazilian side - Innovation Agency at the University of Sao Paulo (USP) lost interest in further cooperation due to work stoppages. Specific projects to promote innovative technologies in Brazil, which were elaborated in 2012 with the Russian company OOO "Nanotech", OOO "Tsaqrtol", OOO "RADA-Pharma", "MedCo Alliance", ZAO "METTEM Technology" didn't received further development in connection with the loss of interest in work in this format from potential partners.

In fact, the work was restored in May 2014, with the beginning of the contracting of national experts involved in the project implementation. The work was built on the following priority areas:

- Search for primary partners, restoring working contacts and coordination format of their participation in the Project;
- Preparation of TOR for the development of a technology transfer platform, raising funds for the development of software and information base of the platform;
- Promotion of specific projects on technology transfer, with the prospects of implementation before the expiry of the Project;

- Laying the foundations for the expansion of the project and its connection to the activities of the other BRICS countries.

## **PARTNERS OF THE PROJECT**

Partners of the Project are Latin American Technological Information Network – LATIN, Foundation of Centers for Implementation of Innovative Technologies (Fundação Centros de Referência em Tecnologias Inovadoras – CERTI), Brazilian Institute of Information in Science and Technology (Instituto Brasileiro de Informação em Ciência e Tecnologia - IBICT), Center for Innovation and Technology of the Federal University of São Paulo Paulista (Universidade Estadual Paulista – UNESP), PetroReconcavo S/A, Purcom Quimica Ltda., Russian Technology Transfer Network (RTTN), OOO Novas engineering, OOO NVP Vladipur.

## **MAJOR ACHIEVEMENTS IN 2014**

Restored working contacts with the primary partner from the Russian side - RTTN, agreed on format and conditions of its participation in the Project, signed an agreement to develop a platform technology transfer. Hold consultations with National Confederation of Industries of Brazil – CNI, Brazilian National Service for Industrial Learning – SENAI, defined Brazilian organizations that could act as a primary partners from the Brazilian side (IBICT, CERTI, UNESP). Meetings with the aforementioned Brazilian organizations have been held, discussed possible forms of cooperation in the framework of the Project. The decision on primary partner from the Brazilian side will be accepted until the end of 1-quarter 2015 according to the analysis of proposals of interested organizations to participate in the Project.

As part of the creation of a technology transfer platform, a TOR was prepared and concluded a contract between UNIDO and RTTN for the development platform, its software and information base. In accordance with the agreement in November–December 2014 a model of technology transfer network, the principles of its structure and operation, standardized format for the preparation and transfer of information were developed.

In terms of specific technology transfer projects promotion – assisted in organization and conduction of following negotiations:

- Russian company “Novas engineering” and Brazilian company “PetroReconcavo” on the Project of Russian technology of plasma-pulse action (PPA) application to enhance oil recovery from oil fields in Brazil. Parties selected and well matched the expected timing of technology introduction in a pilot project.
- Brazilian company "Purcom" and Russian company "NVP Vladipur" on the Project of Brazilian technology transfer on production of poly-urethane foam systems and products based on methyl formate. Parties agreed upon the terms and conditions of the technology

transfer, developed the program and signed a contract between UNIDO and "NVP Vladipur" for its development and implementation in production.

## **EVENTS TO SUPPORT AND DEVELOP THE PROJECT**

### **Industrial Innovation Club and BRICS Roadmap**

The Industrial Innovation Club, formed on a voluntary basis at the UNIDO Center in Russia and consisting of representatives of Russian companies representing priority areas for industrial development and carrying out practical activities in the BRICS countries, continued to operate to consolidate the efforts of industrial, scientific and manufacturing facilities in support of UNIDO projects in 2014.

The purpose of the Club is to promote development projects in priority industries of the real sectors of economy, creation of models and formation of the BRICS Technology Platform, interaction between small and medium-sized businesses with the public sector, sharing of experiences on SMEs support in international technology partnership.

In 2014, proposals and requests from Russian enterprises were prepared for the Industrial Innovation Club for the development of the BRICS Technology Platform in the direction of South Africa and mission of UNIDO delegation to South Africa in November 2014 as part of the project with the aim of expanding to other BRICS countries.

With the participation of the Club, the UNIDO Centre proposals for inclusion in the Draft BRICS Roadmap were prepared, initiated in 2014 by Russian Ministry of Economic Development for the formation of the "BRICS Strategy". The project proposals of Russian enterprises for technology platform were included into the proposal for the Road Map.

### **Memorandum with Vnesheconombank and MSU Science Park**

On 10 April 2014, in accordance with the memorandum of 28 November 2013 on cooperation between Vnesheconombank and the UNIDO Centre in Russia, the Coordination Action Plan to identify opportunities to assist in the implementation of project proposals in BRICS Technology Platform was approved in order to support the UNIDO Project.

Memorandum of 14 November 2014 between UNIDO Centre and MSU Science Park also includes the use of regional and industrial expertise of the sides for innovative cooperation within BRICS. MSU Science Park has prepared a proposal for establishing of business relationships with the Technology Park of South Africa (Western Cape).

### **Cluster Concepts for the BRICS Technology Platform**

- BRICS Metallurgy

The concept of coordination of programs and projects of industrial development and joint cooperation in the development of BRICS metallurgical cluster "Prospects for cooperation among BRICS countries in the field of metallurgy" was designed by Magnitogorsk State Technical

University (MSTU), the International Association of metallurgical equipment manufacturers (METALLURGMASH) and Industrial Innovation Club.

The concept "Creation a training center for BRICS metallurgy" for training and skills upgrade in the field of metallurgy, developed by the International Association of metallurgical equipment manufacturers (METALLURGMASH) and Industrial Innovation Club, is represented in the information and analytical materials digest of the Club.

- Metallurgy and foundry

On September 22, 2014 the Committee on Innovation in metallurgy and foundry of Tula Chamber of Commerce and Industry (TCCI) and Industrial Innovation Club drafted a programme for regional industrial development with participation of small and medium businesses and with support of public-private partnership the "Action Plan 2014 - 2015 on development of small metallurgy and foundry in Russia". The plan includes proposals for the domestic market and export proposals for international cooperation and also envisages participation in the UNIDO/BRICS project.

The action plan envisages creation of regional and sectoral Engineering Center of Tula region to promote the development of small metallurgy and foundry production within the federal SME support program of Ministry of Economic Development of Russia.

- Foundry and Machinery

On 14 February 2014 JSC "Litaform" prepared a concept note "Innovative revival and development of the domestic foundry engineering and foundry in Russia."

### **Participation in BRICS Foundry Forums**

After taking part in the Third BRICS Foundry Forum in South Africa a marketing review of BRICS foundry industry was prepared, Industrial Innovation Club participated in the development of the Russian part. The Russian version of the consolidated BRICS foundry market review was published in the electronic edition of the application of the "UNIDO in Russia" magazine in 2014.

Industrial Innovation Club provided organizational support for participation of the Russian delegation (9 companies) in the fourth BRICS Foundry Forum in India in February 2014. The club is a contact representative for the fifth BRICS Foundry Forum in Nizhny Novgorod in the framework of the XII Congress of Russian foundry and the International Exhibition "Foundry-2015". It is planned to sign the Charter of the BRICS Foundry Association on Foundry Forum, in the formation of which Industrial Innovation Club also participated in 2014.

## **PROJECT EXPANTION TO OTHER BRICS COUNTRIES**

### **South Africa**

In 2014, work was focused on priorities in the part of creation of the basis for the Project expansion. The following work was conducted in the South Africa vector:

- Prepared an overview of South Africa regional technology platforms and their participants to develop recommendations for creation of the BRICS Technology platform model;
- The recommendations on the draft of BRICS consolidated technology platform model developed, taking into consideration the priority clusters of South African National Development Plan (NDP 2030) and Action Plan for Industrial Policy of South Africa (IPAP);
- A group of potential Russian enterprises to participate in the BRICS technology platforms with is defined taking into account their practical experience of international industrial cooperation;
- Started work on the preparation of project proposals focused on South Africa and southern Africa for the development of priority industrial clusters involving small and medium businesses:
  - Small metallurgy, foundry, steel production;
  - Small-scale power generation, renewable energy;
  - Processing of agricultural products;
  - Construction technology for affordable housing.
- Prepared proposals for the Work Plan for 2015 - 2016.

UNIDO delegation visited South Africa on November 22 – December 3, in the framework of the Project. The objective of the visit was to present the Project and the BRICS Technology platform, identify the main directions of technological and innovative cooperation in the priority industrial areas of the National Development Plan and South Africa Action Plan for Industrial Policy.



**Visit of UNIDO delegation to South Africa**

The Project was presented in four South African provinces for more than 50 organizations, agencies and corporations, including:

- Department of Trade and Industry;
- Department of Science and Technologies;
- Industrial Development Corporation;
- Western Cape Government Economic Development & Tourism;
- KZN Development, Tourism and Environmental Affairs;
- Eastern Cape Development Corporation;

- Coega Development Corporation;
- National Foundry Technology Network;
- Small Enterprises Development Agency;
- Nelson Mandela Bay Business Chamber;
- University of Pretoria.

## India

The work on the Indian vector was focused in the following directions:

- Analysis of existing technology platforms and public and private organizations in the field of technology transfer in India;
- Analysis of the priority development clusters of small and medium enterprises in India;
- Indian Government policy analysis in regard of small and medium enterprises development promotion;
- Analysis of Indian Government innovation policy directions for 2014-2020;
- Search for primary partners, establishment of working relationships and development of the format of their participation in the Project;
- Enlisted support from the Embassy of India in the Russian Federation, as well as the Indian Cultural Center of the John Nehru in Moscow;
- Prepared content for the working visit to India in 2015.

During the working visit to India it is planned to hold meetings with representatives of ministries, science, technology and innovation organizations and centers, universities and associations, including:

- Antrix of Indian Space Research Organization;
- Centre for Scientific and Industrial Consultancy (CSIC) of Indian Institute of Science;
- India SME Technology Services Ltd.;
- Machine Tools Manufacturers' Association;
- National Research Development Corporation - NRDC;
- Foundation for Innovation and Technology Transfer (FITT) of Indian Institute of Technology;
- Council of Scientific and Industrial Research;
- The Department of Scientific and Industrial Research (DSIR), Ministry of Science & Technology;
- Biotech Consortium India Ltd.



## China

The work on the Chinese vector was focused in the following directions:

- Search for primary partners, establishment of working relationships and development of the format of their participation in the Project;
- Established contacts with the Embassy of China in Moscow;
- Analysis of the Chinese Government priority in regard of small and medium enterprises;
- Analysis of main areas of innovation policy in China;
- Prepared for the UNIDO delegation visit scheduled for May 2015.

During the visit it is planned to hold meetings with the following ministries and departments of the People's Republic of China, located in Beijing and Shanghai:

- China Development Bank Corporation;
- Ministry of Environmental Protection;
- Ministry of Science and Technology;
- Ministry of Housing and Urban-Rural Development;
- All-China Federation of Industry and Commerce;
- Shanghai Co-Way International Technology Transfer Center Co. Ltd.;
- China National Space Administration.

## MEDIA COVERAGE

In 2014 UNIDO continued a series of publications on industrial partnership between BRICS countries in the field of technology and innovation for the development of priority industrial sectors of the real economy as the foundation for sustainable economic development and growth of social welfare.

Following articles on the Project were published in the UNIDO in Russia magazine, Industrial Innovation Club Digest, Magazine «Localization for Africa»:

1. UNIDO in Russia magazine, issue 8, article «BRICS partners» ([http://www.unido-russia.ru/archive/num8/art8\\_6/](http://www.unido-russia.ru/archive/num8/art8_6/));
2. UNIDO in Russia magazine, issue 9, Concept «Prospects for cooperation among BRICS countries in metallurgy» ([http://www.unido-russia.ru/archive/num9/art9\\_9/](http://www.unido-russia.ru/archive/num9/art9_9/));
3. UNIDO in Russia magazine, issue 10, article «BRICS priorities» ([http://www.unido-russia.ru/archive/num10/art10\\_8/](http://www.unido-russia.ru/archive/num10/art10_8/));
4. UNIDO in Russia magazine, issue 10, article «UNIDO/Africa» ([http://www.unido-russia.ru/archive/num10/art10\\_9/](http://www.unido-russia.ru/archive/num10/art10_9/));

5. UNIDO in Russia magazine, issue 11, article «BRICS development» ([http://www.unido-russia.ru/archive/num11/art11\\_19/](http://www.unido-russia.ru/archive/num11/art11_19/));
6. UNIDO in Russia magazine, issue 15, article Innovative development of India and UNIDO/BRICS Project «The partnership between BRICS countries in the field of science, technology and innovation for the development of small and medium enterprises»;
7. Industrial Innovation Club Digest, Concept «Creating a training center for BRICS metallurgy» ([http://www.unido.ru/upload/files/s/sbornik\\_pic.pdf](http://www.unido.ru/upload/files/s/sbornik_pic.pdf));
8. Magazine «Localization for Africa», article «BRICS/Africa» (<http://www.localisationforafrica.com/news/brics-and-africa-partnership-for-development-integration-and-industrialisation>);
9. Series of press releases on the results of the Project events at the UNIDO Centre web site: [http://www.unido.ru/events/unido\\_briks\\_v\\_juar/](http://www.unido.ru/events/unido_briks_v_juar/), [http://www.unido.ru/events/forum\\_molodih\\_liderov\\_stran\\_briks\\_2014/](http://www.unido.ru/events/forum_molodih_liderov_stran_briks_2014/).

In 2014 the publication of the special supplement to the "UNIDO in Russia" magazine on the Project UNIDO/BRICS started. The first issue reflects one of the priority clusters of the BRICS Technology Platform – Metallurgical, including the production of metals, metal products and machinery. The supplement was published in the "UNIDO in Russia" magazine (number 13) and in electronic form ([http://www.unido-russia.ru/archive/special\\_02/](http://www.unido-russia.ru/archive/special_02/)).

In December 2014 the second electronic edition was completed for publication in the first quarter of 2015 on the key theme of the project - the role of small and medium businesses for the development of a sustainable economy and the welfare of society.

### DESCRIPTION OF THE PROJECT. PROJECT ADVANCEMENT

Since June 2010, UNIDO conducts the Project „BAT/BEP Center for Environmentally Safe Disposal of Potentially Hazardous Consumer Products and Industrial Wastes” in Russia. The Project was initiated by the Ministry of Natural Resources and Ecology of Russia and was supported by the President of the Republic of Tatarstan, on the basis of the Memorandum of Understanding between UNIDO and the Republic of Tatarstan, signed in December 2009. The Project aimed to assist the relevant Federal and Regional Ministries and Agencies in the development and application of the industrial strategy and management capabilities through the application of BAT/BEP to create an effective system of collection and recycling of electronic scrap (EEW) and Worn Tires. The main task of the activities undertaken during the Project is primarily to decrease toxic and dangerous wastes and save natural resources through the use of secondary resources.

#### Phase one (2010 – 2012)

During the first phase of the project priority was given to the analysis of the current situation in the field of potentially hazardous waste in Russia (such as, electronic waste (EEW) and Worn Tires); changes in the law to encourage and support the implementation of safe methods of disposal and recycling. 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".

#### Phase two (2014)

The Project extension for the Phase Two started in January 2014. The following tasks were identified for the extension period:

- Comparative analysis of EurAsEC countries legislation, harmonization of legislation in order to facilitate cooperation and cross-border trade in the field of disposal and/or recycling, expanding best practices in waste management to other countries in the region;
- To develop a Unified Information Analysis System including BAT/BEP databases and unify expertise scheme; to create an integrated comprehensive waste management system in Russia and in the EurAsEC countries, as common market for recycled materials;

- To attract IPLA's (International Partnership for Expanding WM services of local authorities) opportunities for construction of a comprehensive waste management system for municipalities and regions based on principles of "3R" and "Zero" waste management;
- Development of a regional project on EEW management, with the participation of Russia, Belarus and Armenia to assist countries in order to reduce the production of POPs, ODS and greenhouse gases;
- To impart training and conduct educational seminars on the different WM practices in the field of WEEE treatment and recycling of used tires, development of eco-towns Projects;
- Establishment of Hazardous waste management centers in two EurAsEC countries;
- To implement waste management practices in the EurAsEC countries through the established ITPO offices in Belarus, Armenia, and Kazakhstan;
- Creation of a common specialized vocabulary of environmental protection and waste disposal terms (using the languages of the EurAsEC).

## **PARTNERS OF THE PROJECT**

### **Public authorities and non-governmental organizations**

- The State Duma of Russia: work with the Committee on Transport, work with the Committee on Environment and Ecology and the Higher Environment Council for development and finalization of proposals to the Law on Wastes (№89-FZ) in part of introduction of the principle of "extended producer responsibility";
- Chamber of Commerce and Industry of the Russian Federation: the formation and implementation of the Project on "green" economy in Russia;
- Analytical Centre under the Government of the Russian Federation: Fostering recycling industry in Russia;
- Coordinating Council on development of the waste management sector of the Association of interregional social and economic interaction "Central Federal District": formation of inter-regional cooperation programs in the Central Federal District in the area of waste management.

### **Main partners**

- Association to facilitate the recovery and recycling of tires "Shinoekologiya";
- Industrial association of recyclers EEW "APET";
- Association of Manufacturers and importers of tires;

- Association of trading companies and manufacturers of consumer electronic and computer equipment (RATEK);
- Association of handling mercury waste NP "APCO";
- Company "Environmental services plant";
- Group of companies "Koltek";
- Magazine "Household Solid Waste";
- Magazine "Waste Recycling";
- ZAO International Center for Regional Development.

### **International cooperation**

- UNIDO ITPO Japan;
- Federal Environment Agency (Das deutsche Umweltbundesamt (UBA));
- StEP Initiative;
- European association WEEE Forum;
- ANO "Japan Center";
- Asphalt Rubber Association, USA;
- International Partnership for Expanding WM services of local authorities (IPLA);
- Valorpneu Company, Portugal;
- Steinbeis University, Germany;
- SET-Group, Finland;
- State Institution "The operator of secondary material resources", Republic of Belarus;
- OAO BelVTI, Republic of Belarus;
- NGO "Center for Environmental Solutions", Republic of Belarus;
- Centre for Sustainable Production and Consumption, Republic of Kazakhstan;
- Waste Management Association «Kazakh Waste», Republic of Kazakhstan.

### **MAJOR ACHIEVEMENTS IN 2014**

- Adopted a new revision of the Waste Act (№89-FZ), which introduces the principle of "liability of producer (December 23, 2014);
- Developed model of integrated waste management on the example of Central Federal District;
- Developed proposal for establishment of the Directorate of waste management programmes on the example of Central Federal District and submitted to the Government;

- Performed analysis of existing programmes and recommendations for setting up inter-regional waste management systems.
- Established GIS "Othodopererabotka" on the example of Central Federal District;
- Developed and implemented practical project for utilization of used tires of OAO Nizhnokamskshina in Republic of Tatarstan. The project is supported by the Agency for Strategic Initiatives;
- Developed database of best available technologies and best environmental practices in the field of utilization of potentially hazardous waste;
- Prepared training course "Basic aspects of WEEE utilization";
- The course was held for the students of the Moscow Institute of State and Municipal Administration, the Institute of State and Municipal Management, Academy of National Economy, Moscow State University of Environmental Engineering, Gubkin Russian State University of Oil and Gas;
- Developed a 5-day seminar "Basic aspects of application of industrial wastes as secondary resources in road construction";
- Implementation of a pilot project in the Republic of Tatarstan on complex utilization worn out tires. Total raised funds - ₸ 3 billion;
- Established model of regional treatment with worn tires on the example of the Moscow region In collaboration with Association "Shinoekologiya";
- Developed a regional project to create a WEEE management system for the EEU. The initial presentation as a project for CIS countries - at the Council of Industrial Policy of the CIS in March 2014;
- Established a professional technology platform "Secondary material resources" on the basis of the Analytical Center of the Government of the Russian Federation, where professionals can share their experience and get the latest information on innovations in the industry;
- Developed matrix for creation of a regional complex management system for treatment of worn tires in the Moscow region. Report on the current practice was sent to the Minister of Transport of the Moscow Region A.Y. Zaitsev on 24 September 2014;
- Formulated recommendations on harmonization of the laws of Russia and the Eurasian Economic Community in the sphere of worn tyres. Recommendations were sent to the relevant ministries of Russia, Armenia and Kazakhstan;
- Designed procedure for creation of a management system for worn tyres in terms of legislative introduction of the principle "liability of producer" in Russia;



- UNIDO project experts performed research work "Development of a model for implementation of complex projects in the field of solid waste management on the example of Central Federal District: ecological, technological and logistical aspects" on the order of OAO "Federal Center for Project Finance" (JSC "FCPF");
- UNIDO project experts performed research work "Expert assessment of recycling technologies of solid waste, proposed for use in a particular area in the Russian Federation" on the order of the Regional public organization "Russian Technical Society";
- Developed a standard "Technical specifications for asphalt mix and asphalt concrete containing rubber modifier" at the request of the State Company "Avtodor" and MADI institute;
- Prepared materials "Specifications for rubberized asphalt concrete and rubber-bitumen binder in different US states" in collaboration with Professor S. Amirkhanyan (USA).

## EVENTS

**26 March 2014**, Presentation of the regional project for organization of WEEE management in EurAsEC countries was made at meeting of the Council of Industrial Policy of CIS member states. V.A. Komissarov, UNIDO national expert made a presentation of the Project. The Project got a preliminary approval of EurAsEC countries.

**7-8 May 2014**, UNIDO participated in European Global Forum of International Partnership for Expanding Waste Management Services of Local Authorities (IPLA) on a topic "Creating favorable conditions for development of efficient business models and PPP in waste management sector in developing countries", which was held at IFAT-2014 exhibition. V.A. Maryev, UNIDO Project Coordinator visited International Exhibition and participated in the Forum, where he presented achievements of the Project. According to the results of meetings, it was decided to hold the IPLA 2015 Global Forum in Russia.

**28-29 May 2014**, UNIDO Centre in Moscow in cooperation with Analytical Center under the Government of the Russian Federation, Chamber of Trade and Commerce of the Russian Federation, Sectorial Association of recyclers of electronic and electric equipment (WEEE Recyclers) organized the International Conference „Organization of Management of Waste Electronic and Electrical Equipment in Russia: the Situation in the Industry and its Prospects“. The conference addressed current problems of the management of waste electrical and electronic equipment (WEEE) in the line with world experience of development, implementation and enforcement of legal requirements for WEEE management, environmental, technological, methodological and legal aspects of collecting, processing and recycling of EEE in Russia and CIS countries. The main objective of the conference was to promote the principle "liability of producer" among the authorities and the business community of Russia and CIS. Prepared during the conference recommendations are intended to form the basis for the industry in WEEE management. Resolution of the conference was sent to the Federation Council and the State Duma of the Federal Assembly of the Russian Federation, the Government of the Russian



**International Conference “Organization of Management of Waste Electronic and Electrical Equipment in Russia: the Situation in the Industry and its Prospects”**

Federation in order to facilitate development of Russia’s system of management of waste electrical and electronic equipment.

**2 July 2014**, The Ministry of Transport of the Moscow Region under the state program "Ecology and Environment of Moscow region on 2014 - 2018 years" held a round table on "Collection, recycling of worn tires and sale of commercial products" in Krasnogorsk, Moscow region. The meeting was attended by representatives of ministries and departments of the Moscow Region, Association "Shinoekologiya" and representatives of municipalities and heads of companies of the Moscow Region involved in treatment of worn tires. Following the meeting, a resolution was passed, and then sent to the Minister of Transport of the Moscow Region.

**11 September 2014**, UNIDO Project Coordinator, V.A. Maryev conducted a seminar at the Moscow State Construction University (MGSU) for 25 university students on the topic "Use of rubber asphalt modifier for installation and repair of coatings and formation of motor-roads"

**26 September 2014**, The 6th meeting of the Council of environmental protection of the EurAsEC Integration Committee was held in Bishkek. Specialized meeting was held CIS Executive Committee at a meeting of environment ministers of the EurAsEC countries. The meeting was attended by the UNIDO Project Coordinator, V.A. Maryev who proposed "UNIDO regional project for organization of WEEE management system in EurAsEC countries". The project was approved, and interest in cooperation was expressed by Armenia, Belarus, Kazakhstan and Kyrgyzstan.

**9 October 2014**, National expert UNIDO, A.V. Rudenskiy conducted a seminar "Application of crumb rubber in road construction" at the Moscow State Automobile and Road Technical University (MADI). The seminar was attended 30 participants.

**12 November 2014**, The 4<sup>th</sup> Scientific and practical conference on environmental problems in the Moscow region was organized by Department of Natural Resources



**A business trip of group of experts to Germany**

and Ecology of the Moscow City to discuss problems and possible solutions. Presentations were made by the project coordinator, V.A. Maryev on rubber goods treatment and national expert, V.A. Commissarov on WEEE treatment. The next conference will be held in autumn 2015.

**23-27 November 2014**, A business trip of group of experts from Russia, Belarus and Kazakhstan to Germany was organized in order to study the organization of WEEE management in the country. Besides visiting various enterprises, meeting was held at the German Federal Environment Agency (UBA), during which, in particular, project to establish a regional management of WEEE for the EAEC was presented.

**3-5 October 2014**, the XV Scientific and Practical Conference "Waste Recycling" was held in Saint Petersburg in the hotel "October". The conference was organized by the magazine "Waste Recycling" together with several other organizations and was devoted to the problems of waste management, resource conservation and recycling. A report on the UNIDO project, including plans to establish a regional system of WEEE management for the EAEC was made by UNIDO national expert, V.A. Commissarov.

**5 December 2014**, The XI Conference of the RATEK Association "Electronics: production and trade" was held in Moscow in the hotel "Golden Ring". The Conference was organized by RATEK and Intel. Participants of the conference discussed issues related to functioning of the market of electronic and electrical equipment in Russia in view of new aspects of the Russian legislation and the current economic situation.

## **PLANNED PROJECT ACTIVITIES**

- Development of regulatory and legal documents and by-laws to implement the principle "Extended liability of producer" after the adoption of amendments to the Law on Production and Consumption Waste (№89-FZ) dated 23 December 2015;
- Work on Model act on secondary material resources in the framework of Customs Union;
- Work on the Integrated information and analytical system "Atlas of the best environmental technologies";
- Work on establishing GIS Othodopererabotka in Russia, increasing the number of information layers, dissemination of GIS on EAEC member states to create a single exchange of secondary raw materials;
- Development and implementation of methodology to assess BAT / BEP in the environmental field based on international experience;
- Establishing model eco-tehnoparks in pilot regions of Central Federal District in cooperation with Association "Central Federal District" to reduce the anthropogenic impact on the environment and maximize recovery of secondary raw materials from waste and construction of Russia's integrated waste management system in compliance with principles «3R» and «Zero waste»;

- Development of complex training and educational programmes in the field of hazardous and municipal waste, lecturing courses within training programmes in specialized educational institutions in Russia;
- Promotion of a complex pilot project on collection and utilization of worn tires in the Republic of Tatarstan (Koltek group of companies). Increasing the amount of collected worn tires for recycling for OAO Nizhnekamskshina.

The following events under the Project are planned in 2015:

- IPLA 2015 Global Forum on "Interaction of Science - Politics - Business - Society in order to maximize resource recovery and minimize landfilling towards the establishment of resource-efficient society" (October 2015);
- A seminar-workshop on the establishment of a regional system of WEEE management in the EAEC (Minsk, Belarus, June 2015);
- A seminar on "Best available technologies used for recycling WEEE" (Moscow, July 2015);
- Development together with Asekol of a concept of pilot project on collection and recycling WEEE in a district in Moscow (Moscow, May 2015);
- Development of tender and technical documentation for compete for implementation of research work "Development of evidence-based proposals for the creation of environmental, resource-saving collection and utilization system for electronic and computer equipment, technical and economic analysis of the system in the city of Moscow" (Moscow, March-April 2015);
- International conference on WEEE recycling (October 2015);
- Development of series of events dedicated to the 15th anniversary of the Department, including organization of programmes for collection of chemical power sources (batteries) in Moscow, in cooperation with Department of Natural Resources and Environmental Protection of Moscow.

## **MEDIA COVERAGE**

The following articles on the Project were published:

1. Magazine «Waste Recycling», issue 3 (51), V. Komissarov, Article «Manufacturer responsibility: an important element of its implementation - registration»;
2. Magazine «Waste Recycling», issue 4 (52) and 6 (54), V. Maryev, V. Komissarov, T. Smirnova, Article «Experience in implementing the principle of the manufacturer responsibility for electrical and electronic equipment waste in Asia»;

3. Magazine "Solid Household Waste", issue 2 (February 2014), Article «Sustainable waste management in the cities of the XXI century»;
4. Magazine "Solid Household Waste", issue 3 (March 2014), Article «Old tires: the introduction of the principle of the manufacturer responsibility»;
5. Magazine "Solid Household Waste", issue 6 (June 2014), Article «IFAT sets records»;
6. Magazine "Solid Household Waste", issue 2 (February 2015), Article «Extended producer responsibility - a new paradigm in the waste management».

### DESCRIPTION OF THE PROJECT. PROJECT ADVANCEMENT

The Project is aimed at the environmentally sound regulation of polychlorinated biphenyls (PCBs), including inventory, creation of the regulation mechanism, PCBs and PCB-contaminated equipment and waste control in a network of OAO Russian Railways enterprises and at the facilities of SUE Vodokanal of St. Petersburg with the subsequent distribution of experience for the energy sector enterprises and development of regulatory framework for the management of PCB-contaminated materials and waste. The Project document provides implementation of activities in the following directions:

- Creation of institutional regulatory and human capacity in order to ensure the functioning of the environmentally sound regulation system in the field of PCB-contaminated equipment, materials and waste management;
- Countrywide inventory of PCB-contaminated equipment and waste;
- Environmentally sound regulation and disposal of PCB-contaminated equipment and waste.

The Project is implemented in three stages:

- Carrying out inventory of PCB-contaminated equipment (including establishment of laboratory facilities, appropriate staff training, chemical analysis of transformer oils for the presence of PCBs);
- Creation of a system for PCB-contaminated equipment and materials management and creation of an appropriate database (including marking of equipment, temporary placement of equipment / waste, creation of logistics schemes of PCBs management, as well as training staff of private companies and government authorities on the safe handling of PCBs);
- Environmentally sound disposal of PCBs.

Activities for the development of appropriate regulatory framework are done throughout all 3 stages.

### PARTNERS OF THE PROJECT

UNIDO Project partners are:



- Ministry of Natural Resources and Environment of the Russian Federation;
- OAO Russian Railways;
- SUE Vodokanal of St. Petersburg;
- The Gubkin Russian State University of Oil and Gas.

## **MAJOR ACHIEVEMENTS IN 2014**

### **Component 1. Creation of institutional regulatory and human capacity in order to ensure the functioning of the environmentally sound regulation system in the field of PCB-contaminated equipment, materials and waste management**

- The workgroup on improvement of Russian legislation on management of PCB-contaminated equipment and the waste was created. It prepared and implemented the work plan;
- A list of regulatory acts requiring amendments regarding implementation of the Stockholm Convention on POPs (12 RA) and a list of the regulatory acts requiring development (2 RA) were prepared;
- A list of changes in the federal executive bodies legal structure relating to implementation of the Russian Federation commitments under the Stockholm Convention on POPs was prepared;
- The following drafts of normative legal acts were prepared: Resolutions of the Government of the Russian Federation "On approval of rules for the management of PCB-contaminated equipment and waste", The order of the Ministry of Natural Resources and Environment "On approval of the inventory of equipment and materials using or containing PCBs and PCB-contaminated wastes on the territory of the Russian Federation";
- Amendments to the Technical Regulations of Customs Union "On requirements for lubricants, oils and special liquids" TR CU №030/2012 were prepared;
- Proposals "On inclusion of PCB-contaminated waste into the Federal classification catalog of waste" were prepared;
- Amendments to guideline documents of OAO Russian Railways regarding the rules of safety techniques for PCB-contaminated equipment and materials and the rules of sampling electro insulating liquids were made.

## Component 2. Countrywide inventory of PCB-contaminated equipment and waste

- A preliminary inventory of transformer equipment at the facilities of OAO Russian Railways within the preparation of the Project document was carried out in order to detect the total chlorine content in transformer oils. It revealed the excess total chlorine content in 5-7% of the investigated samples (more than 50 ppm). The gas chromatographic analysis of samples (on the basis of the Laboratory of Analytical Ecotoxicology at the Severtsov Institute of Ecology and Evolution of the Russian Academy of Sciences) was carried out and confirmed the existence of PCBs in the investigated samples;
- A purchase of 15 000 sets for sampling transformer oils was carried out in May and August 2014, these sets were transferred for sampling to the Krasnoyarsk and East Siberian Railway infrastructure facilities;
- The Gubkin Russian State University of Oil and Gas began to repair laboratory facilities within co-financing of the Project. A gas chromatograph with mass spectral detection for PCB analysis was purchased. At the present time the laboratory of the University Department of Industrial Ecology is being prepared for accreditation in the Russian and International Laboratory Accreditation Cooperation (ILAC);
- The tender documentation was prepared. A purchase of the gas chromatography equipment for qualitative and quantitative determination of PCBs in electro insulating liquids is being carried out;
- The Analytical Laboratory Research and Production Center of OAO Russian Railways (Yaroslavl) developed "Requirements for laboratories that carry out analysis of process fluids for the presence of PCBs". The guidelines of OAO Russian Railways for management of PCB-contaminated waste were developed in collaboration with the laboratory of the University Department of Industrial Ecology and UNIDO experts;
- The training of specialists of the Gubkin Russian State University of Oil and Gas on analysis of PCBs in electro insulating liquids, including rapid detection of PCBs in transformer oils (Sea Marconi Technologies, Turin, Italy) and gas chromatographic analysis of PCBs (Helmholtz Centre for Environmental research, Leipzig, Germany) was carried out;
- The database for monitoring the implementation of the Stockholm Convention on POPs in the part of transformers cleaning from PCBs is being developed. The coordination of the database architecture and procedure of system transferring are being carried out jointly with Rosprirodnadzor;

- A training program for environmentally sound management of PCBs for environmental inspectors, representatives of local authorities and heads of organizations was developed.

### Component 3: Environmentally sound regulation and disposal of PCB-contaminated equipment and waste

- Research and Production center of OAO Russian Railways (Yaroslavl) completed the construction of the plant for the destruction of hazardous waste (including those PCB-contaminated). In January 2015 the plant was put into operation. Commissioning work is being carried out.

## EVENTS

**24 April 2014**, A presentation of the UNIDO Project "Environmentally sound management and the final disposal of equipment and materials contaminated PCBs at companies belonging to Russian Railways and other owners of PCBs" was held in the exhibition center of OAO Russian Railways in Moscow. The main purpose of the event was to inform interested parties about planned activities and to discuss current issues identified in the preparation stage of the Project.



**Presentation of the official launch of the Project**

The Project Steering Committee comprising representatives of the Ministry of natural resources and environment, Ministry of foreign Affairs, UNIDO, OAO Russian Railways, SUE Vodokanal of St. Petersburg and The Gubkin Russian State University of Oil and Gas was formed upon the results of



**Scientific and Technical Council of Rosprirodnadzor "Dealing with POPs. Possible ways of inventory"**

the presentation. In addition topical issues of PCBs inventory, laboratory support and opportunities to utilize resources of the Russian companies for the Project were discussed.

**18 June 2014**, The Scientific and Technical Council of Rosprirodnadzor "Dealing with persistent organic pollutants (POPs). Possible ways of inventory" was held in Moscow. The Council

was prepared and conducted on the initiative of Rosprirodnadzor, OAO Russian Railways and UNIDO. The main purpose of the event was to discuss mechanisms of POPs (especially PCBs) inventory and measures taken by the state to carry out it successfully. The Council was attended by the leadership of the Federal Service for Supervision of Natural Resources, OAO Russian Railways, the Ministry of natural resources and environment of the Russian Federation, UNIDO, representatives of energy companies of Russia and the regular members of the Council. Proposals in the field of POPS inventory were prepared upon the results of the event and sent to the Security Council of the Russian Federation, the State Duma and the Ministry of Natural Resources and Environment in order to develop the relevant resolutions and normative legal acts.

**22-24 October 2014**, The round table discussion on management of PCB-contaminated equipment in the system of OAO Russian Railways enterprises was held in the framework of the Conference "TEBTRANS-2014" (Technosphere and Ecological Safety on Transport) in St. Petersburg. The event was organized by UNIDO, OAO Russian Railways and the Petersburg State Transport University. The main purpose of the event was to



**The Conference "TEBTRANS-2014"**

discuss an inventory of the OAO Russian Railways electrical facilities and inform employees of OAO Russian Railways about the UNIDO Project on management of PCB-contaminated equipment, the need and approaches to its inventory. The round table recommendations on the inventory of the electrical facilities and staff training were included into the decision of the Conference and were sent to the Ministry of energy of the Russian Federation and structural subdivisions of OAO Russian Railways.

**10 December 2014**, The Project Steering Committee held a meeting on the initiative of the UNIDO CIIC in Russia and OAO Russian Railways in Moscow. The meeting was attended by the Project experts and members of the Committee - the leadership of OAO Russian Railways, representatives of UNIDO (Vienna, Austria), Ministry of Foreign Affairs, Ministry of Natural Resources and Environment and SUE Vodokanal of St. Petersburg. In the framework of the meeting the main Project achievements for 10 months were presented and the main difficulties in its implementation were highlighted. Solutions on controversial issues were worked out and were considered for planning of further activities. Roadmaps for legislation improvement and inventory of OAO Russian Railways electrical facilities were approved.

## PLANNED PROJECT ACTIVITIES

- Introduce changes to existing normative legal acts of the Russian Federation in the field of regulation of activities of PCBs management and obligatory tooling inventory of PCB-contaminated materials and wastes;
- Introduce changes to industry normative legal acts (OAO Russian Railways) in the field of PCB-containing equipment and materials management;
- Conduct an inventory of PCB-contaminated equipment and materials (in three stages with 15,000 samples) at OAO Russian Railways;
- Create a system of marking and temporary placement of PCB-contaminated equipment and materials;
- Prepare technical specifications and tender documentation for purchase of a mobile facility for purification of transformer oils from PCBs (based on the results of the tooling inventory);
- Train the staff of the laboratories on gas chromatographic detection of PCBs in insulating liquids;
- Establish a Center for training professionals involved in PCBs management.

## MEDIA COVERAGE

In 2014 the following news articles and press releases based on the UNIDO Project were published:

1. Press releases on the results of the Project activities the UNIDO CIIC in the Russia official website ([http://www.unido.ru/news/konferencija\\_unido\\_rzhd/](http://www.unido.ru/news/konferencija_unido_rzhd/), [http://www.unido.ru/news/zasedanie\\_rnts\\_fs/](http://www.unido.ru/news/zasedanie_rnts_fs/));
2. The magazine «GUDOK» № 73 (25508), article "Health and quality" (<http://www.gudok.ru/newspaper/?ID=1143298&archive=2014.04.28>);
3. Information analytical portal «GreenEvolution.ru» (<http://greenevolution.ru/2014/04/28/rzhd-zajmetsya-obezvrezhivaniem-opasnyx-otxodov/>);
4. The newspaper "Moskovsky Komsomolets" (Irkutsk city) (<http://baikal.mk.ru/news/2014/04/25/1020246-rzhd-namerenyi-sozdat-v-irkutskoy-oblasti-zavod-po-obezvrezhivaniyu-opasnyih-othodov.html>).

Information about the project, its goals and objectives are available at the following sites:

1. ANO International Best Available Environmental Technologies Centre (<http://www.icbet.ru/dejatelnost/realizacija-stokgolmskoi-konvencii/>);
2. Electronic newspaper "Green World" (<http://zmdosie.ru/otkhody/situatsiya/3914-rzhd-namereny-sozdat>).



## PUBLICATIONS

The CIIC official magazine "UNIDO in Russia" is being published on a regular basis since 2014. At the present time the magazine is distributed through the Investment and Technology Promotion Offices (ITPO) and the Ministry of Foreign Affairs of the Russian Federation to the largest government agencies and industrial enterprises of the Russian Federation. The magazine covers the following topics:

- Automotive industry
- Mining industry
- Rail transport
- Housing and public utilities
- «Green» building
- Medical industry
- Metallurgical industry
- Waste management
- Food Industry
- Industrial Ecology
- Vocational education
- Rocket and space industry
- Fishery
- Agriculture
- Textile Industry
- Fuel industry
- Chemical and Petrochemical Industry
- Refrigeration industry
- Power industry

The magazine closely cooperates with representatives of large commercial enterprises, including DAIKIN and Samsung.



«UNIDO in Russia» Magazine, № 13 и № 14

## INTERNET RESOURCES

The following websites were established to inform on the activities of the UNIDO CIIC and UNIDO Projects in Russia:

1. The UNIDO CIIC official website ([www.unido.ru](http://www.unido.ru)). The website is devoted to the description of the mission and activities of the Center in Russia and abroad. The website news line is regularly updated. A large-scale modernization of the Russian and English version of the website is planned for 2015.



The CIIC website - [www.unido.ru](http://www.unido.ru)

2. Online version of the magazine "UNIDO in Russia" ([www.unido-russia.ru](http://www.unido-russia.ru)).



"UNIDO in Russia" magazine website - [www.unido-russia.ru](http://www.unido-russia.ru)

3. The website of the project "Phase Out HCFCs and Promotion of HFC-free Energy Efficient Refrigeration and Air-Conditioning Systems in the Russian Federation Through Technology Transfer" ([www.ozoneprogram.ru](http://www.ozoneprogram.ru)). The Website informs not only about the project stages of realization and plans, but also gives a large amount of actual information on the ozone layer protection problems, international initiatives and the world community coordinated actions results concerning the issue.



The project website - [www.ozoneprogram.ru](http://www.ozoneprogram.ru)

4. In the framework of the UNIDO Project "Market Transformation Programme on Energy Efficiency in GHG-Intensive Industries in Russia" an internet portal "Energy efficiency and energy saving" is to be put into operation in 2015. The portal is aimed to become an important information source for the Russian industrial enterprises and will combine

information on specialized subjects from foreign and domestic sources. It will also be filled with automated services and databases so that you can quickly find the right equipment or get online advice on optimization of industrial systems.

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