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About the UNIDO Centre

The UNIDO Centre for International Industrial Cooperation in the Russian Federation (UNIDO Centre) was established in 1989 within the framework of the Agreement between UNIDO and the Government of the USSR. The Agreement was renewed in 1992 with the Government of the Russian Federation. It stipulates general legal aspects of the Centre's status, objectives, activities and priority tasks. All financial matters, including project budget, are set forth in the respective Trust Fund Agreement between the parties signed in December 2008.

The main objective of the UNIDO Centre, as defined by the Agreement and respective Project Document, 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 benefits Russian institutions involved in investment promotion by upgrading skills of local staff of these institutions using UNIDO tools and methodologies and by expanding coverage of their activities. 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.

The UNIDO Centre contributes to a substantial increase of the number of industrial projects implemented in the Russian Federation with foreign participation as well as to open new markets in developing countries and countries with economies in transition for potential Russian investors.

Through the support of the UNIDO Centre, SMEs in Russia can enhance their knowledge and experience on how to establish cooperation with foreign partners in other countries. The UNIDO Centre is closely linked with the UNIDO worldwide Investment and Technology Promotion Network (ITPO Network). This results in an increased number of investment and cooperation projects under promotion, negotiation and implementation.

The UNIDO Centre gives special attention to environmental considerations, the development of SMEs and generation of employment in line with UNIDO strategies and policies in these fields. The Centre places great emphasis on promotion of the UNIDO's vision of inclusive and sustainable industrial development (ISID) in developing countries and countries with economies in transition and promotion of international industrial cooperation.

The UNIDO Centre provides the following services:

- Access to investment information, government and private business institutions and contacts in other countries through the UNIDO worldwide network;
- Promotion of technical and investment cooperation, attraction of investments into Russia;
- Assistance in technology development and transfer to benefit Russia and other UNIDO Member States;
- Development of regional projects and programmes with the participation of foreign partners;
- Assistance and implementation of technical and financial support programmes in Russia;
- Support in implementation of government programmes aimed at developing SMEs;
- Assistance in implementation of international conventions and protocols in Russia within the framework of GEF activities;
- Participation at UNIDO-sponsored and/or organized investment and technology promotion events;
- UNIDO Focal Point activities and Liaison with local authorities.



Sergey Korotkov, Director of the UNIDO Centre, with the UNIDO Centre's team

Highlights in 2018

8 February 2018

Workshop on the promotion of Russian business on emerging African markets

Representatives of the UNIDO Centre participated in a workshop on the promotion of Russian business on emerging African markets organized by All-Russia Public Organization “Business Russia”. The roundtable discussion brought together managers of Russian companies, representatives of foreign embassies in Russia and Russian Ministry of Economic Development.

The meeting was dedicated to opportunities for sharing Russian technology development solutions with African companies, and to export potential of products in demand on local markets. Existing tools of support and development of international cooperation with African partners, necessary steps and initiatives for a more efficient positioning of Russian high-technology companies in Africa were discussed.

The UNIDO Centre Director delivered a presentation on investment opportunities in the African economies for Russian entrepreneurs. He presented the UNIDO experience of collaborating with African partners within the framework of technical cooperation projects aimed at supporting the industrial development of the least developed countries, highlighting the success of UNIDO Programmes for Country Partnership (PCP) being implemented since 2015 in Senegal and Ethiopia.



13 – 14 February 2018

All-Russia Business Forum “Ecotechnoparks of Russia”

The Forum organized by the European-Russian Business Association “ERBA”, the Chamber of Commerce and Industry of the Russian Federation in cooperation with the All-Russia Public Organization “Business Russia” and with the support of the Ministry of Industry and Trade of the Russian Federation, was dedicated to comprehensive technological and organizational solutions in such areas as collection, sorting, recycling, neutral-

ization and disposal of various types of household and industrial wastes in modern multifunctional regional and trans-regional technological centres – industrial waste management parks in the Russian Federation.

The event was attended by the Director of the UNIDO Centre, Sergey Korotkov, national project coordinator, Vladimir Komissarov, and national expert, Svetlana Erkenova.

The UNIDO Centre Director made a presentation at the plenary session “Ecothech-

noparks in Russia and worldwide” focusing on the role of UNIDO in promoting best available technologies of waste treatment into secondary resources. In the context of the Fourth Industrial Revolution, the activities of the UNIDO Centre are geared towards providing support to Russian institutions in their transition to the circular economy model with the aim of improving environmental protection and ensuring efficiency in resource use. He spoke about the UNIDO Centre’s experience in this field, and in particular the work under the regional project “E-waste Academy” for CIS countries.



15-16 February 2018

Russian Investment Forum

The annual event gathered more than 6 100 participants, including the Prime Minister of Russia, Dmitry Medvedev, Governors of Russian regions, major Russian and foreign companies, representatives of business and scientific community from more than 60 countries. The

Forum was dedicated to opportunities for development of Russian economic potential, attraction of investment, and seeking solutions to most urgent problems faced by the State and business.

Representatives of UNIDO participated in panel discussions “An Environmental image of Russia’s Future: Prospects and Goals” and “Russian Goods on Global Markets: A Glance into the Future”. Current activities and future plans of the Organization in the field of creation of a green industry in Russia and support to the establishment of strategic business alliances in trade and investment between Russia and other countries were presented.





22 March 2018

9th International Forum "Ecology"

The aim of the Forum "Ecology" held annually under the patronage of the State Duma Committee on Ecology and Environmental Protection is to support the creation and development of favorable conditions for the improvement of environment in Russia through an inclusive dialogue between the authorities, civil society and business.

The UNIDO Centre Director participated as a speaker in a panel session devoted to green financial instruments. In his presentation, he spoke about a number of UNIDO projects aimed at supporting the development of a green industry in Russia and financed, among other sources, by various environmental funds. These projects are intended to develop market mechanisms for increasing the efficiency of energy-in-

tensive industries in Russia, phase out consumption of HCFCs and encourage the transition to energy-efficient refrigeration and climate equipment in the Russian Federation, environmentally sound management and final disposal of PCBs at the Russian railroad network and other PCBs owners.



18 April 2018

Official closure of the UNIDO Industrial Energy Efficiency project

An event dedicated to official closure of UNIDO Market Transformation Programme on Energy Efficiency in Greenhouse Gas-Intensive

industries in the Russian Federation was held at the Analytical Centre under the Government of the Russian Federation.

The GEF-supported project was being implemented in Russia for a period of six years, from 2011 to 2017. It has helped more than 50 national industrial enterprises to implement energy management systems and conduct energy system optimizations, which led to direct energy saving of 3 687 GWh, and GHG emission decrease by 2 564 thousand tons. Energy savings in the next 10 years are projected to be in amount of 13 444 GWh.

Along with energy saving and reducing negative environmental impact,



the sustainability of achieved results was one of the most important aspects: the project aimed to ensure knowledge transfer to the national level and communication of UNIDO methodology to the wide circle of industrial specialists, consultants and academia, to enable them to disseminate knowledge and best practices and teach others even upon the project completion.

As a result, more than 370 Russian energy specialists have been trained in the international expert-level programmes “Energy management implementation” and “Energy system optimization”, 154 of them became UNIDO national experts. More than 25 000 people took part in webinars on energy saving and EnMS implementation. More than 200 State officials have attended trainings on EnMS implementation and Energy Performance Indicators.

Another project highlight was the initiation of EnMS implementation programme on municipal level. Following the industrial programme, 10 municipal enterprises in Naberezhnye Chelny have implemented energy management sys-

tem by UNIDO methodology. This successful experience is envisaged to scale up to other regions and cities: for example, Astrakhan has started working on developing city-level EnMS implementation.

One of the major work directions was support to State policy on energy sector development. To accomplish this goal, the project team collaborated with leading Russian research institutions and government bodies and jointly developed recommendations on energy policy improvements, conducted a series of research works, particularly, formulated qualification requirements for market participants, and created a practical guide on EnMS implementation in industrial and municipal enterprises. Benchmarking system for energy efficiency of industrial enterprises has also been developed.

The closing event was attended by representatives of ministries and other project partner organizations. All of them highly rated the achieved results in terms of energy efficiency increase, and also very positively marked the long-term effects of the project on Russian energy sector development.



23-26 May 2018

St. Petersburg International Economic Forum (SPIEF'18)

On the opening day of SPIEF, UNIDO in cooperation with the OPORA Russia Committee on Women Entrepreneurship Development held an International Forum “Increasing the contribution of women to economic growth and prosperity: creating an enabling environment”. The main theme of the event was the promotion of an increased participation of women in economic activities through capacity building and access to resources for entrepreneurship development. National expert of the UNIDO Centre, Svetlana Erkenova, took part in a discussion on foster-

ing smart and innovative business models and success stories of their implementation into practice in the Russian Federation.



ing smart and innovative business models and success stories of their implementation into practice in the Russian Federation.

On 24 May, the UNIDO Centre Director, Sergey Korotkov, took part in the panel discussion “Nature-like technologies:

responding to major challenges”, organized by a partner of the UNIDO Centre, the Kurchatov Institute. Matters of support of future nature-like developments and their effective implementation in Russia and abroad were discussed. At the end of the event, it was officially announced that the Global Forum on Nature-Like and Convergent Technologies for Inclusive and Sustainable Industrial Development will be held in September 2018 in Sochi.

Furthermore, on 24-25 May, upon invitation of the Minister of Industry and Trade of the Russian Federation took place an official visit of the Deputy Director General of UNIDO Hiroshi Kuniyoshi to St. Petersburg. The purpose of the visit was the formalization of the intent expressed by the Russian Federation to organize the second Global Manufacturing and Industrialization Summit. As part of the visit, a joint declaration and a memorandum of understanding were signed during an official ceremony, laying the foundations and outlining respective responsibilities for organizing the next summit of Roscongress Foundation, Global Manufacturing Organization Limited, Ministry of Industry and Trade of the Russian Federation, Ministry of Energy and Industry of the United Arab Emirates, and Government of Sverdlovsk Region. The event is to be held in July 2019 in Yekaterinburg and is expected to be dedicated to nature-like technologies.

On the sidelines of SPIEF, representatives of the UNIDO Centre held a number of meetings with regional and international partners with the purpose of discussing potential opportunities for cooperation in the field of sustainable industrial development.

The main topics of discussions during the meeting in Tokyo were the role of the global ITPO Network in the implementation of goals and objectives of UNIDO, current challenges and opportunities, the establishment of a common communication strategy, and the update of project approval procedures. Moreover, Heads of ITPOs presented the main achievements of the past year, as well as plans for 2018. Director of the UNIDO Centre briefed his colleagues on the upcoming events in Russia, in which the UNIDO Centre will be taking part, including the Global Forum on Convergent Technologies for Inclusive Sustainable Industrial Development (September 2018) and the Second Global Manufacturing and Industrialization Summit (July 2019).

3-8 June 2018

ITPO Heads' meeting

The main topics of discussions during the meeting in Tokyo were the role of the global ITPO Network in the implementation of goals and objectives of UNIDO, cur-

rent challenges and opportunities, the establishment of a common communication strategy, and the update of project approval procedures. Moreover, Heads of ITPOs presented the main achievements of the past year, as well as plans for 2018. Director of the UNIDO Centre briefed his colleagues on the upcoming events in Russia, in which the UNIDO Centre will be taking part, including the Global Forum on Convergent Technologies for Inclusive Sustainable Industrial Development (September 2018) and the Second Global Manufacturing and Industrialization Summit (July 2019).





6 June 2018

Holding of a roundtable at the All-Russian Water Congress

The event was dedicated to discussing aspects of modernization of the Russian water industry and all water management sectors, taking into account modern environmental challenges, the need for new technologies, management and financing models. UNIDO Centre organized a roundtable dedicated to international instruments of support for industrial development of the water sector in the modern context.

National expert, Svetlana Erkenova, acted as moderator and spoke about the mandate of the Organization, inclusive and sus-



tainable industrial development strategy, projects being implemented, and the role of the UNIDO Centre in Russia. National expert, Maxim Eliseev, presented successful projects implemented in the water sector, and the representative of Chelnyvodokanal shared his practical experience of participating in a UNIDO project and improving energy efficiency using UNIDO methodology. As part of the roundtable, financing mechanisms and instruments for mobilizing investment resources, transferring technologies for energy saving and improving the energy efficiency of water supply and sanitation facilities were also discussed.

The business program of the Congress included thematic sections on the development of water transport and tourism, efficient use of water in fuel and energy and agribusiness complexes, in the nuclear industry, and agriculture and communal services. Special attention was paid to the protection of the Volga River and Lake Baikal, as well as to the improvement of environmental legislation in the field of protection of water bodies.



8-11 July 2018

INNOPROM 2018

INNOPROM is the biggest international industrial exhibition in Russia held annually since 2010 in Yekaterinburg. In 2018, the event brought together more than 600 companies from 20 countries.

On 9 July, as part of INNOPROM, the Russia-Korea Industrial Forum was held, where UNIDO Centre representatives presented the UNIDO mandate in the field of technical and industrial cooperation. On the same day, the Director of the UNIDO Centre took part in the Russia-Algeria Business Dialogue on strategic partnerships between business circles of the two countries. He spoke about UNIDO activities in the field of import and export capacities building and technology transfer support.

On 10 July, Sergey Korotkov took part in the roundtable dedicated to the upcoming Global Manufacturing and Industrialization Summit taking place in Yekaterinburg in 2019. Representatives of interested organizations discussed possible strategies for the preparation and holding of the event.

On the sidelines of INNOPROM, representatives of the UNIDO Centre held several bilateral meetings with regional partners.





30 July – 1 August
2018

UNIDO workshop on development of a waste management solution for the city of Astrakhan

The purpose of the workshop was to discuss the current situation with waste management in Astrakhan and to develop an integrated solution for the management of waste and sludge at the city level with most of the stakeholders involved in the process: environmental specialists, representatives of city departments and services, municipal enterprises and non-profit organizations. The seminar was intended to familiarize UNIDO representatives and technical experts with the problems, priorities and needs of the parties involved, thus enabling them to formulate the most efficient model, which would take into account the interests of all participants of waste and wastewater treatment process.

The meeting was attended by the Head of Astrakhan administration, Oleg Polu-mordvinov, who stressed the importance of developing a waste management solution using UNIDO's technical expertise

in this matter. In his speech, the UNIDO Centre Director noted increasing awareness of environmental problems in Russia and the need to develop a concept that would not only be economically sound but, above all, would positively affect the quality of life of city residents. Carlos Chanduvi-Suarez, Senior Coordinator of UNIDO Climate and Technical Innovation Division, also stressed the importance of a holistic approach to the concept and outlined the next steps: collection and analysis of technical data, elaboration of the master plan and its subsequent presentation at the Southern Dialogue Forum.

In addition to the workshop, representatives of UNIDO, along with technical experts from ECEXA – Austrian Association for the Exchange of Ecological Concepts, conducted site visits to wastewater treatment facilities, including reed fields for wastewater treatment – a low-cost, but highly efficient and natural water filtration method. The experts also examined the process of collecting, sorting and processing of municipal solid waste in the city and visited one of the landfills.



20-21 September 2018

Support in the organization and participation in the Second Baikal International Ecological Water Forum

The event organized by the Government of Irkutsk oblast brought together more than 1 000 participants from 32 countries. The Forum was dedicated, among other themes, to international cooperation in the field of preservation of lake ecosystems, introduction of innovative technologies in water treatment and waste management, environmental education and other related questions.

The UNIDO Centre Director told the audience about UNIDO projects aimed at industrial development and reduction of negative impact on the environment in the water management sector of the Russian Federation. Specifically, he presented the project implemented by the Centre in 2011-2015 that was aimed at improving water quality and reducing negative regional and transboundary



impact from industrial activities within the Middle and Lower Volga River basin. The project used the UNIDO's integrated approach for the transfer of environmentally sound technologies (TEST). Furthermore, Sergey Korotkov presented the joint initiative of the UNIDO Centre and the Ministry of Natural Resources and Environment of the Russian Federation, which has received the approval of the Ministry of Foreign Affairs, seeking to improve cooperation between BRICS countries in the fight against river pollution.

On the sidelines of the Forum, several bilateral meetings were held with prospective foreign partners, representatives of Russian institutions and companies, and the academic community.

28-29 September 2018

Assistance in the preparation of the Global Forum on Naturally-Based and Convergent Technologies

An international forum to discuss nature-based and convergent technologies was organized by Russia's National Research Centre Kurchatov Institute in Sochi, in cooperation with the Russian

Ministry of Industry and Trade and UNIDO. The UNIDO Centre in Russia actively participated in the preparation and holding of the Forum. Some 500 people took part in the event and discussed topical issues concerning the development of nature-friendly technologies and the risks and challenges associated with the formation of a nature-friendly technosphere.

The term "convergent technologies" refers to the integration of nano-, bio-, information and cognitive technologies in the process of creation of results that are not achievable when using them separately.

Addressing the Forum, Hiroshi Kuniyoshi, Deputy to the Director General of UNIDO, said, "This is the first international event to provide an ideal setting



for sharing knowledge and best practices among experts and policymakers in the rapidly evolving field of naturally-based and convergent technologies.” He added, “UNIDO, together with our partners in Russia, is committed to promote these new technological approaches to advance global prosperity and sustainability. Such an event is all the more important ahead of the 2019 Global Manufacturing and Industrialization Summit which

will also be focusing on nature-based technologies and biometric design.”

As part of the event, an informal meeting was held between the Forum’s leading experts and youth, where a film “Kurchatov Codes” showing the state of advancement of naturally-based technologies in Russia and a UNIDO documentary on the Fourth Industrial Revolution were screened and discussed.

5 October 2018

Assistance in the preparation of a UNIDO session at Russian Energy Week

Policymakers, experts and academics from Germany, Austria, Brazil, Switzerland and Russia, came together at the Russian Energy Week to discuss how to deal

with increasing volumes of waste and increasing demand for energy. At a session entitled “Strengthening international alliances for localization of Waste-to-Energy solutions”, organized by UNIDO, participants shared experiences of the implementation of waste-to-energy solutions in their respective countries.

Russian Energy Week is an international forum aiming to demonstrate the prospects of the Russian fuel and energy industry and unlock the potential of international cooperation in energy. The Forum serves as a platform for discussion of the main challenges faced by the energy sector and topical issues involving the

development of gas, oil, coal industries, petrochemicals, electricity, energy conservation and energy efficiency. Waste issues also lie among priority areas, as the volume of municipal solid waste in Russia has been steadily increasing in recent years and is expected to reach between 70 and 80 million tons per year by 2025.

The panelists focused on ways international alliances can be forged to achieve sustainable solutions, such as through institutional agreements, innovative decentralized technological solutions and business models, regulatory and innovative financial instruments, and public-private partnership mechanisms.

Director of the UNIDO Centre explained the UNIDO’s role as a bridge between the international community and local needs: “UNIDO helps to implement international conventions and facilitates technology transfer. And our role is to inform Russian community and to help various stakeholders cooperate to achieve sustainable solutions.”

Experts concluded that the elaboration of innovative solutions for waste treatment is of vital importance for Russia and other emerging economies, and government support and commercially feasible business solutions are needed to ensure that the development of waste treatment technologies is going in the right direction.





17 October 2018

Holding of a panel discussion at Open Innovations Forum

A panel discussion on “Modern mechanisms and digital infrastructure of innovative cooperation in BRICS” was held as part of the Open Innovations Forum. The event was jointly organized by the UNIDO Centre and the Skolkovo Foundation.

Representatives of business, academia and public authorities from BRICS discussed the existing challenges and possible mechanisms to encourage the use of innovations for indus-



trial development in their countries, examples of successful initiatives in this field, and prospects for cooperation aimed at commercializing and industrializing innovations.

Director of the UNIDO Centre noted that UNIDO has all the necessary knowledge and skills at its disposal to support the creation of an enabling environment for mutual innovations transfer among BRICS. “The Organization can act as an integrator and serve as a platform for cooperation between BRICS countries, facilitating the development of small and medium enterprises’ capacities by fostering innovation,” he said.

Following the panel discussion, UNIDO Centre and Skolkovo Foundation plan to work together on a synthesis report, identifying prospective directions and methodological recommendations on the formation of joint mechanisms and digital infrastructure for promotion of innovative cooperation and development among BRICS.



18 October 2018

Signing of a Joint Declaration with the Government of the Republic of Bashkortostan

On the sidelines of the Fourth Forum on Small Business of the SCO and BRICS Regions, that took place in Ufa, Director of the UNIDO Centre met with Prime Minister of the Government of the Republic of Bashkortostan, Rustem Mardanov. The meeting was devoted to discussions of possible areas of cooperation in the context of industrial potential development of Bashkortostan, mainly through improvement of competitiveness of local enterprises on external markets.

The parties signed a Joint Declaration on intentions to develop collaboration in a number of areas, among which

capacity building for the development and modernization of small and medium-sized enterprises, promotion of environmentally sustainable use of resources by industry and cleaner production.





15 November 2018

Participation in GMIS Roadshow Italy

Representatives of Italy's private sector, academia and the regional government gathered in Trieste to discuss innovation, competitiveness and Industry 4.0 under the aegis of Global Manufacturing and Industrialization Summit (GMIS). The event was organized by UNIDO and the GMIS Organizing Committee, in cooperation with the government of the Friuli Venezia Giulia region, AREA Science Park, and World Trade Centre Trieste.

Industrial Revolution, while the second focused on Italy's vision for achieving the Sustainable Development Goals through digital manufacturing. The final segment was an interactive session, soliciting feedback from participants on their top priorities and potential solutions to key challenges facing the manufacturing sector.

The UNIDO Centre Director delivered a keynote address during the second panel discussion, outlining the involvement of the UNIDO Centre in the preparation of the upcoming GMIS in the context of UNIDO efforts to implement the 2030 Agenda for Sustainable Development.

Following the interactive segment, participants then embarked on a "factories of the future tour" aimed at providing a practical illustration of best practices for the Fourth Industrial Revolution. Wärtsilä Italia S.p.A., which provides smart technologies and complete lifecycle solutions for marine and energy

markets, facilitated a guided tour of their Trieste production centre for attendees.



The GMIS roadshow event consisted of three discussion segments, the first of which discussed the potential of Italy's strategic national plan, "Piano Nazionale Industria 4.0", for harnessing the Fourth



11 December 2018

Meeting of the Steering Committee of UNIDO/GEF project

The meeting of the Steering Committee of UNIDO/GEF project “Environmentally sound management and final disposal of PCBs at the Russian Railways network and other PCBs owners” took place in the Centre

for Scientific and Technical Information of Russian Railroads.

The event was attended by representatives of the Ministry of Natural Resources and Environment of the Russian Federation, Ministry of Energy, Russian Energy Agency, GAZ Group, Rusatom Greenway – a subsidiary of the State Corporation Rosatom – Vodokonal of St. Petersburg, Bureau Veritas Rus, and others.

During the meeting, key events and main achievements of the project in 2018 were discussed. In particular, it was highlighted that considerable progress had been made in adopting national legislation aimed at creating a regulatory system for persistent organic pollutants (POPs) management, lifting the ban on importing POPs-containing analytical standards, establishing a marking system for PCB-contaminated equipment, and commissioning facilities for PCB disposal.

At the meeting, the first results of pre-commissioning of the PCBs decontamination unit “Meliiform-PCB-5000”, supplied by NPO Dekanter, and an online management system for the project were presented.

At the end of the meeting, members of the Steering Committee officially endorsed the activities carried out under the UNIDO/GEF project in 2018.



Further information on each event can be found at: http://www.unido.ru/news_en/

Projects in the Russian Federation

In 2018, the UNIDO Centre was implementing the following projects:

- Environmentally Sound Management and Final Disposal of PCBs at the Russian Railroad Network and Other PCB Owners;
- Promotion of Technologies and Best Practices for Inulin Production by SMEs in the Russian Federation;
- Industrial Innovation Club;
- E-waste Academy for CIS Countries.

More information on each of the projects is provided below:

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

Background

Implementation dates:

2014 – 2019

Project manager:

Sergey Korotkov,
s.korotkov@unido.org

Project coordinator:

Mikhail Nikiforov,
minikif@gmail.com

Website:

<http://www.stoppcb.ru>

Objective – creation of the State polychlorinated biphenyls (PCB) management system in the Russian Federation, PCBs identification system in the energy equipment of industrial enterprises, safe maintenance of PCB contaminated energy equipment and PCBs environmentally sound disposal in accordance with Russian and international regulations.

The following activities are foreseen within the project:

- Institutional, regulatory and workforce capacity building for implementation and performance of PCBs environmentally sound management system;
- Country-wide inventory of PCB-contaminated equipment and wastes;
- Environmentally sound management and disposal of PCB-contaminated equipment and wastes.

Project partners

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

During the reporting period, within the framework of implementation of the National Implementation Plan (NIP) of the Russian Federation under the Stockholm Convention on Persistent Organic Pollutants (POPs), an Inter-Agency Working Group on Coordination of NIP Implementation was established and began its work. The working group consists of representatives of federal executive bodies and UNIDO project consultants. The working group has developed an Action Plan (“roadmap”) to improve national legislation in order to fulfill the Russian Federation’s obligations under the Stockholm Convention on POPs. The document reflects the directions of policy-making activities for the period of 2019-2022 and calls for development and approval of regulatory legal acts for PCBs management.

Significant progress was achieved in removing administrative barriers to the import into Russia of analytical standards and chemical reagents containing PCBs. With assistance of the UNIDO Centre, the Council of the Eurasian Economic Commission amended the EEC Board Decision № 30 dated on 21 April 2015 “On non-tariff regulation measures”. The amendment makes it possible to conduct an instrumental PCBs inventory and identify POP-containing wastes in Russia and other countries of the Customs Union.

More than 120 people were trained on environmentally sound management of PCBs, environmentally safe disposal of PCB-containing wastes and identification of PCBs negative effects to the human body and health. Russian and international experts on hazardous wastes management and regulation of PCB management took part in trainings as lecturers.

The first stage of sampling of transformer oils from electrical equipment (15 000 units) completed in 2017 brought to light shortcomings of the existing system of transformer oils sampling, specifically as regards the handling of the samples taken and filling out the sampling protocols. To correct these drawbacks, the UNIDO Centre developed an adapted method of transformer oils sampling for PCB analysis.

The gas chromatographic complex with an electron capture detector based on the “Chromatek-Kristall 5000” chromatograph was supplied to Research and Production Centre for Environmental Protection of the Russian Railroads JSC. The laboratory personnel of the Centre were trained to perform PCBs analysis in electrical insulating fluids.

Tender procedures for supply of two mobile laboratories for PCBs analysis in electrical insulating liquids, environmental components and materials were completed. Mobile laboratories will be used to conduct inventories of oil-filled electrical equipment in remote regions presenting deficiencies in laboratory capacity. Putting the laboratories into service is expected in 2019.

The instrumental analysis of PCBs in samples of transformer oils taken at power supply and electrification facilities of Russian Railroads was started. The results of the analysis are entered into the Database on control of implementation of the provisions of the Stockholm Convention on POPs in the Russian Federation, which collects inventory data of manufacturers, equipment, materials using or containing PCBs, as well as PCB-containing wastes, and is available to project partners and authorized federal executive bodies.

Russian Railroads JSC has completed a documentary inventory of capacitors of electricity supply and electrification objects. More than 25 000 capacitors filled with pure Sovtol have been identified, the geographical distribution of PCB-contaminated equipment is being specified.

During the reporting period, the commissioning works of the first PCBs decontamination facility in the Russian Federation “Melioform-PCB-5000” were initiated. The facility allows not only to decontaminate electrical insulating liquids from PCBs to values below the established limits (50 ppm), but also to provide additional treatment of oil from mechanical impurities and water residues for reuse in electrical equipment.

As part of “Melioform-PCB-5000” commissioning, six employees of the Russian Railroads JSC were trained in maintenance and operation of the equipment and safety of PCBs decontamination.

A contract for the supply of a PCBs disposal facility based on high-temperature oxidation was concluded. Procurement of facilities for PCBs decontamination and disposal will allow to create an integrated system for management of PCB-containing wastes with different concentration of pollutants and will speed up the fulfillment of the Russian Federation’s obligations under the Stockholm Convention on POPs.



Events

2 March 2018

Meeting of the Chamber of Commerce and Industry Committee on Natural Resources Management and Ecology on the topic: “Organization of Hazardous Waste Management in Russia: Possible Ways for Development”

The event was dedicated to the development of an infrastructure for the management of 1 and 2 class hazard waste, including PCBs. Representatives of the Ministry of Natural Resources and Environment presented statistical data on the annual volumes of hazardous waste generation in Russia, and the regulation of waste management in the framework of international environmental agreements. The Director of the UNIDO Centre made a presentation on the objectives of the Stockholm Convention on POPs and requirements for handling PCB-containing equipment.

16-20 April 2018

Training “Legal and practical aspects of PCBs environmentally sound management in Russia and abroad”

The UNIDO Centre conducted a five-day training on “Legal and practical aspects of PCBs environmentally sound management in Russia and abroad”. The event was supported by the Russian National Coordination Centre for the Stockholm Convention on POPs and the Regional Centre for the Stockholm Convention on POPs (RECETOX, Czech Republic, Brno). More than 80 participants participated in the event. The training was attended by representatives of executive authorities, Russian energy sector, large industrial companies, research institutes and employees of environmental protection centres of Russian Railroads JSC. The training programme included all aspects of safe PCB management in Russia and abroad.

At the end of the training, participants received certificates of completion of the course, and training and information materials.

3 April 2018

Meeting of the Working Group on regulation of Stockholm Convention on POPs

The meeting took place at the Ministry of Natural Resources and Environment of the Russian Federation, and was dedicated to activities of the National Coordination Centre (NCC) in Russia created with the aim of information exchange on the implementation of Stockholm Convention on POPs’ provisions in the Russian Federation. UNIDO Centre was represented by the Director, Sergey Korotkov, and national consultant, Daria Razorenova. The discussions focused on settling differences related to the approval of the activities plan of the NCC for 2018.

22-24 May 2018

6th Annual Conference “Base Oil and Lubricants”

A focus-day “Collection and recycling of waste oils” was held within the event, where regulatory legal aspects of waste oils and lubricants management as well as the development of waste oil recycling infrastructure were discussed. Ekaterina Demicheva, national consultant on PCBs management and disposal, made a presentation on “UNIDO mandate in the Russian Federation. UNIDO experience in implementation of projects for PCBs disposal”. As part of the focus-day, a discussion on CIS countries experience of treatment of waste oil, including PCB-contaminated oils, also took place.

10-11 July 2018

6th Meeting of Authorized Representatives of the State Railways Authorities

The meeting was held in Yaroslavl, at the Research and Production Centre for Environmental Protection of Russian Railroads JSC. It was attended by authorized representatives of railway administrations of Kazakhstan, the Russian Federation, Estonia, Belarus, Ukraine, the Director of the Department – Chief State Inspector of the Yaroslavl Region in the Field of Environmental Protection, Chief Engineer of the Northern Railway – a branch of Russian Railroads JSC, the Director of the Scientific and Production Centre for Environmental Protection, as well as UNIDO national consultant on hazardous wastes management, Valeriy Pershin, among others. The implementation of the UNIDO/GEF project and prospects for extending the UNIDO and Russian Railroads experience to railway infrastructure in the neighboring countries were discussed.

10-11 October 2018

14th International Conference “Production and Market of Lubricants-2018”

Within the framework of the event, issues of used oils recycling, and regulatory legal aspects of waste oils management were discussed. A panel session “Base oils and additives: technology, innovations, ecology” was dedicated to approaches to the used oils management under the Technical Regulations of the Customs Union and the development of an infrastructure for management of 1 and 2 class hazard waste. National consultant, Ekaterina Demicheva, noted that despite an intensive development of the industry for the processing of used oils, including transformer oils, there is no separate collection and processing of PCB-contaminated oils in Russia. As a result of potential cross-contamination, the amount of PCB-contaminated waste multiplies. Recycling of waste of uncertain composition represents both an environmental hazard and a health hazard to personnel.

8-9 October 2018

Meeting of the Working Group on Best Available Techniques (BAT) to prevent and control industrial chemical pollution

A regular meeting of the Working Group on BAT established within the framework of the Chemicals Committee and the Working Party on Chemicals, Pesticides and Biotechnology of the Organization for Economic Co-operation and Development (OECD) took place in Paris.

Experts from the European Union, Germany, France, Russia, China, India, Israel, the United States of America and other countries, and the UNIDO Centre in Russia, discussed the results of the evaluation of BAT effectiveness assessment methodologies and data quality for development of national BAT regulatory systems, exchanged views on the current status of BAT inclusion procedures in the environmental and industrial State policies, and demonstrated cases of BAT application in chemical industry, namely in aluminum and copper production. Special emphasis was made on the necessity to consider public and NGOs opinion while introducing BAT.

During the meeting, the Secretariat of the OECD Working Group on BAT presented a preliminary draft of the report on the implementation of the third phase of the project “Best Available Techniques. Prevention and control of industrial pollution”, carried out under the auspices of the Environment, Health and Safety Division of the Environment Directorate of OECD. The report accumulates the information on the evaluation of BAT effectiveness assessment methodologies or similar solutions using data from the Pollutant Release and Transfer Register or monitoring data of nine Member States of OECD.

The Working Group is planning to prepare a guidance document for national governments, analysis of BAT integration in value chains, and a comparative analysis of BAT reference documents of different countries. In this regard, Svetlana Sheynfeld, UNIDO national expert, emphasized that the facilitation of international dialogue on BAT and technology transfer should be closely related to SDG, providing a common base for inclusive sustainable industrial development.

The next meeting of the Working Group will be held in 2019 in South Korea.

15 October 2018

Visit of the Nordic Environment Finance Corporation (NEFCO) delegation

The agenda included a visit to the production site of the UNIDO/GEF project, as well as negotiations on joining the UNIDO and NEFCO efforts regarding the implementation of the Stockholm Convention on POPs in the Russian Federation.

At the joint meeting, UNIDO consultants, management of Russian Railroads JSC and TransWoodService JSC – a branch of Russian Railroads – and NEFCO experts discussed prospects for cooperation in the field of PCBs disposal in the Russian Federation, including in the Arctic region. The parties agreed to sign a Joint Declaration on cooperation in the field of implementation of provisions of the Stockholm Convention on POPs.

During the meeting, the possibility of Russian Railroads and TransWoodService to store, transport and dispose of 1 and 2 class hazard waste was explored. The Head of the Department of Occupational Safety, Industrial Safety and Environmental Control of Russian Railroads, Piotr Potapov, highlighted the company's commitment to the goals and objectives of the UNIDO/GEF project and the high importance of the project for the development of a POPs management system in the country.

The delegation of NEFCO experts visited the production site of Manikhino power sub-station, where the commissioning tests of the plant for PCBs decontamination from transformer oils are taking place. The plant is supplied to Russian Railroads as part of the technical assistance within the UNIDO project. NEFCO experts noted that the recycling of transformer oils after PCBs decontamination, that is to be provided by the facility, is extremely important in terms of reduction of unintentional POPs and greenhouse gas emissions into the atmosphere, as well as for the decrease in resource consumption.

Following the meeting, participants agreed to continue working together and to develop joint activities in POPs management in Russia.

18 October 2018

Meeting of the Working Group on regulation of Stockholm Convention on POPs

The event was attended by more than 60 participants: medical doctors from State health-care institutions and medical stations located in manufacturing facilities, occupational health supervisors, staff of Rospotrebnadzor centres for hygiene and epidemiology, departments for hydrometeorology and environmental monitoring of Rosgidromet, representatives of research institutions.

The workshop covered the following themes:

- Stockholm Convention on POPs requirements and National Plan for the Convention's implementation in Russia;
- Monitoring of PCB impact on human health and environment: facilities, mechanisms and organization of monitoring;
- Hygiene requirements and PCBs in the Russian Federation, State monitoring of PCBs in the environment;
- Impact of PCBs on human health: findings of Russian and international studies;
- Safety measures while handling PCBs and medical assistance following the exposure to PCBs.

The workshop is the first educational activity for medical staff on the PCBs impact on human health and wellbeing.

24-26 October 2018

6th International Scientific and Practical Conference “Technosphere and Environmental Safety in Transport” (TEBTRANS-2018)

The event was held as part of the International Engineering Forum at Emperor Alexander I St. Petersburg State Transport University, and focused on issues of environmental safety and labor protection on railway transport.

The Environmental Strategy for the period up to 2025 of Russian Railroads JSC was introduced to the public. It covers, among other areas, the implementation of international environmental agreements related to the company’s activities.

The Director of the UNIDO Centre spoke about the implementation of the Stockholm Convention on POPs in partnership with Russian Railroads, as well as other prospective areas of cooperation. He noted that transformer oils contaminated with PCB should be recycled in accordance with current regulatory requirements. Decontamination of such oils should be carried out using dedicated installations isolated from materials not contaminated with PCBs. For the purpose of environmentally safe cleaning of PCB-contaminated insulating liquids, the UNIDO Centre within the framework of the UNIDO/GEF project is supplying a PCB-decontamination unit for transformer oils purification.

Along with discussions about challenges and prospects of Stockholm Convention’s implementation in Russia, the conference participants discussed the implementation of other environmental agreements, such as the Montreal Protocol on substances that deplete the ozone layer, the Paris Climate Agreement, and other legal instruments in the field of environmental protection and improvement of environmental safety system throughout rail transport infrastructure.

27 November 2018

Presentation of PCBs decontamination unit “Melioform-PCB-5000”

The decontamination unit for treatment of transformer oils from PCB “Melioform-PCB-5000”, supplied to the Russian Railroads JSC under the UNIDO/GEF project was officially presented to the partners of the project. The event was held at the Manikhino power sub-station of the Istra district of Moscow region.

The facility is the only one of its kind at the moment in Russia, allowing to treat electrical insulating liquids from PCB contamination and to reuse them in technological processes.

The presentation was attended by the First Deputy General Director – Chief Engineer of Russian Railroads JSC, Sergey Kobzev, Deputy Head of the Department of Rosprirodnadzor for the Central Federal District, Nikolay Beloglazov, Deputy General Director of the Russian Energy Agency, Zukhra Galperina, and others.

The presentation provided an overview of the functioning of the equipment with pure oil (not contaminated with PCBs), main technological units and procedures, and experience of transformer oils treatment in other countries at similar facilities.

During the discussion, which took place after the equipment presentation, the participants noted the high importance of environmentally sound disposal of PCB-contaminated oils, as well as the significant contribution of Russian Railroads JSC and UNIDO to the creation of a PCB management system in Russia. The parties additionally discussed the economic efficiency of the implementation of programmes for decommissioning of PCB-containing equipment and materials, and agreed to join forces in developing a PCBs management system in order to meet the targets of the Stockholm Convention on POPs on time.

Meeting of the Steering Committee of the project

The meeting of the Steering Committee of the project took place at the Centre for Scientific and Technical Information of Russian Railroads.

The event was attended by representatives of the Ministry of Natural Resources and Environment of the Russian Federation, Ministry of Energy, Russian Energy Agency, GAZ Group, Rusatom Greenway, a subsidiary of the State Corporation Rosatom, Vodokonal of St. Petersburg, Bureau Veritas Rus, and others.

During the meeting, key events and main achievements of the project in 2018 were discussed. In particular, it was highlighted that considerable progress had been made in adopting national legislation aimed at creating a regulatory system for POPs management, lifting the ban on importing POPs-containing analytical standards, establishing a marking system for PCB-contaminated equipment, and commissioning facilities for PCB disposal.

Representative of the Ministry of Natural Resources and Environment, Maya Kolosentseva, noted the importance of the project and its role as a catalyst for adopting a legislative base on POPs management, including the participation of the projects' consultants in the development of a roadmap for the updating of legislation to meet the requirements under the Stockholm Convention on POPs. At the same time, participants of the meeting observed that the elaboration of legislative norms on PCBs management should be carried out jointly with owners of PCB-contaminated equipment.

Representatives of Bureau Veritas Rus and UNIDO consultants talked about the importance of a responsible approach to inventory of PCB-contaminated equipment. The project's experience demonstrates that the

sampling should be done in accordance with a quality control system and by a specially trained personnel, specifically as regards the sampling of electrical insulating liquids, including reference samples. Other issues raised related to the automation of the process of filling in related forms and thorough control of samples integrity during transportation and temporary storage. Such approach will be implemented in cooperation with Bureau Veritas during the next stages of the development of a PCB-contaminated equipment inventory under the UNIDO and Russian Railroads project.

At the meeting, the first results of pre-commissioning of the PCBs decontamination unit "Melioform-PCB-5000", supplied by NPO Dekanter, and an online management system for the project were presented.

At the end of the meeting, members of the Steering Committee officially endorsed the activities carried out under the UNIDO/GEF project in 2018.

Major achievements in 2018

Component 1.1 Strengthening of the policy and regulatory framework

1. During the reporting period, the implementation of the Stockholm Convention on POPs in Russia, issues of disposal of PCB-containing equipment and materials reached a new level of interagency cooperation and joint efforts, with the coordinating role of Ministry of Natural Resources and Environment of Russia. On 21 May 2018 by order of the Minister of Natural Resources and Environment of the Russian Federation, an Interdepartmental Working Group was established to coordinate the execution of the National Implementation Plan of the Russian Federation under the Stockholm Convention on POPs. In addition to representatives of the Ministry of Natural Resources and Environment, the working group consists of representatives of Rosprirodnadzor, Rosgidromet, Rostekhnadzor, Ministry of Health, Ministry of Construction, Ministry of Economic Development, Ministry of Higher Education and Science, Ministry of Transport, Ministry of Energy, Ministry of Industry and Trade, Rospotrebnadzor, and UNIDO Centre. Within the framework of the working group, special subgroups have been established, including a subgroup on the improvement of legislation. During the reporting period, two meetings of the working group were held (7 June and 2 August 2018), in which representatives of UNIDO Centre took part.
2. The working group has developed an Action Plan (“roadmap”) to improve legal regulation in order to fulfill the Russian Federation’s obligations under the Stockholm Convention on POPs. The Action Plan reflects the provisions of the draft regulatory legal acts that were developed in 2016–2017 by the working group on the Stockholm Convention on POPs of Rosprirodnadzor in collaboration with the UNIDO Centre. In particular, the Action Plan provides for amendments to federal legislation for:
 - consolidating the conceptual framework for POPs;
 - prohibition of production and use, import and export, restriction of production and use of POPs (according to the list established by the Government of the Russian Federation);
 - establishing requirements for the identification (inventory) and labeling of transformers and capacitors containing PCBs;
 - establishing the requirements for the phased withdrawal of equipment containing PCBs;
 - establishing the requirements to ban the use of equipment containing PCBs starting from 2025;
 - establishing the requirements for the disposal and decontamination of liquids and equipment containing PCBs by 2028;
 - establishing the procedures for inventory and labeling of equipment and materials containing PCB, etc.

Development of relevant draft regulatory legal acts is envisaged in 2019.

3. At the same time, authorized federal executive bodies are preparing a draft federal law related to management of 1 and 2 class hazard waste, the provisions of which are to be extended from 1 June 2019. The Ministry of Natural Resources and Environment, on behalf of the President of Russia, developed and submitted to the Government of the Russian Federation a draft law aimed at establishing full accounting for 1 and 2 class hazard waste and creating a unified State system for management of such wastes. The draft law provides for the emergence of a federal operator, which will coordinate the entire cycle of handling of 1 and 2 class hazard waste.
4. An important achievement of the reporting period was the removal of administrative barriers to the import into Russia of analytical standards and chemical reagents containing PCBs. With the assistance of the UNIDO Centre, the Council of the Eurasian Economic Commission made amendments to the Decision of the EEC Board of 21 April 2015 № 30 “On non-tariff regulation measures”, according to which the import of analytical standards and chemical reagents containing PCBs for chemical analysis is permitted in accordance with the provisions of the Stockholm Convention on POPs. In accordance with the protocol of the Interdepartmental Working Group meeting regarding the designation of an authorized executive authority on issuance of a conclusion (permission) for the import into the Russian Federation of plant protection products and other POPs to be used in laboratory-scale research, and of reference standards, which was held at the Ministry of Natural Resources and Environment of Russia on 21 December 2018, it was proposed that the Federal Service for Supervision of Consumer Rights Protection and Human Welfare (Rosпотребнадзор) be granted such authority.

Component 1.2 Training on the new regulations for the staff of the federal and regional government agencies, customs authorities, NGO’s and PCB owners

1. Trainings on PCBs environmentally sound management for technical specialists and managers of energy enterprises, employees of federal and regional executive authorities were conducted.
2. From 16 to 20 April 2018, a five-day training course “Legal and practical aspects of PCBs management in Russia and abroad” was held. The event was supported by the National Focal Point of the Russian Federation on the Stockholm Convention on POPs and the Regional Centre of the Stockholm Convention on POPs (RECETOX, Czech Republic, Brno). Ivan Holubek, professor of the Research Centre for the Study of Toxic Substances in the Environment RECETOX, was invited as a lecturer. More than 80 people took part in the training and received certificates.
3. Methodological materials for teaching of various target groups on PCBs environmentally sound management issues have been developed. These materials include:
 - A set of educational, methodological and informational materials on the

management of PCB handling for government agencies, and decision-making managers of organizations;

- A set of educational, methodological and informational materials on PCBs management for environmental inspectors;
- A set of educational, methodological and informational materials on PCB management for Russian customs officers;
- A set of educational, methodological and informational materials on PCB management for employees of companies engaged in PCB handling (packaging, storage, transportation and disposal of hazardous waste).

Developed methodological materials will form the basis of educational courses, advanced training courses and professional retraining of the PCB Training Centre.

Component 1.3 Introduction of ESM measures for safe management disposal of PCB wastes and occupational health

1. On 18 October 2018, the first workshop on PCBs hazards to human health for general medical workers was held. The event was organized jointly by the Russian Energy Agency and the UNIDO Centre. More than 60 medical doctors from State healthcare institutions and medical stations located in manufacturing facilities, occupational health supervisors, staff of Rospotrebnadzor centres for hygiene and epidemiology, attended the workshop.
2. For the purpose of awareness raising of medical professionals about the potential effects of PCBs on human health, a set of educational, methodological and informational materials has been developed. Materials are publicly available and distributed to the medical professional community.
3. As part of the commissioning of the PCBs decontamination unit “Melioform-PCB-5000” six employees of the Russian Railroads JSC were trained on the maintenance and operation of the PCBs decontamination unit and safety of works during PCB disposal.

Component 2.1 Adoption of methods for PCBs analysis and accreditation of 3-4 laboratories for PCB analysis

1. The first stage of sampling of transformer oils in electrical equipment (15 000 units) completed in 2017, brought to light shortcomings of the existing sampling system. Namely it was noted that:
 - incorrect (illegible and incomplete) filling of sampling protocols made it impossible to identify the origin of samples;
 - unsealed closure of sampling containers led to spillage of transformer oils and loss of samples.

To correct these drawbacks, the UNIDO Centre made a proposal to amend inventory approaches within the project. The proposal was sent to respective project

counterparts, and formed the basis for the updated procedure of transformer oils sampling for PCB analysis. Among other things, the procedure involves the collection of at least two samples, one of which is working, and the second one is a control sample, sealing samples, filling out of the sampling protocols in electronic form.

2. The gas chromatographic complex with an electron capture detector based on the “Chromatek-Kristall 5000” chromatograph was delivered to the Research and Production Centre for Environmental Protection of the Russian Railroads JSC in Yaroslavl. The laboratory personnel were trained on the principles of equipment operation and analysis of PCBs in electrical insulating liquids in accordance with approved methodological documents. The supply of the chromatographic complex will allow to create a system of PCB content analytical control in electrical equipment, other materials and wastes at the company.
3. Two mobile laboratories are being manufactured for the PCBs analysis in electrical insulating liquids and other materials. Given the shortage of laboratory capacity for PCBs analysis on the territory of the Russian Federation, the introduction of mobile laboratories will contribute to large-scale inventory of electrical equipment, waste and materials for the presence of PCBs. Putting laboratories into operation is expected in the second quarter of 2019.

Component 2.2 Undertaking the extended PCB inventory

1. The adoption of changes in the customs legislation of the Eurasian Economic Commission countries regarding the elimination of the ban of PCBs reference standard import made it possible to begin laboratory analysis of transformer oils samples taken during previous reporting periods. By the end of the current reporting period, 100 samples of transformer oils had been analyzed.
2. The Russian Railroads JSC completed a documentary inventory of the capacitors of electricity supply and electrification objects for PCBs presence. The company has identified more than 25 000 capacitors filled with pure Sovtol. At the moment, the geographical distribution of PCB-contaminated equipment is being specified to optimize previously developed logistic schemes for the disposal of hazardous waste.

Component 2.3 PCBs inventory labeling and database established

1. For the purpose of PCB-contaminated electrical equipment accounting, a labeling system has been developed for marking capacitors and transformers depending on the degree of PCBs contamination. Three levels of labeling are to be introduced:
 - PCB-contaminated equipment, when the concentration of PCB is more than 50 ppm;
 - conditionally not contaminated equipment, with a PCB concentration of less than 50 ppm;
 - PCB-free equipment, in the absence of PCB.

The labeling of equipment will be carried out in parallel with the analysis of transformer oils for PCB content and is scheduled for 2019.

2. The results of transformer oils sampling (15 000 samples) and their analysis for PCB content are entered into the Database on control of the implementation of the provisions of the Stockholm Convention on POPs in the Russian Federation, which collects inventory data of manufacturers, equipment, materials using or containing PCBs, as well as PCB-containing wastes, and is available to project partners and authorized federal executive bodies.

Component 3.1 Establishing the system for environmentally safe packaging, storage, and transportation of PCBs

1. A technological and logistic scheme for decommissioning and treatment of capacitors contaminated with PCB-containing oils and PCB-containing oils has been developed. The developed scheme will serve as a basis for implementing practical actions for handling PCB-contaminated capacitors and materials.

Component 3.2 Selection of environmentally safe disposal technology

1. The commissioning of the first installation in the Russian Federation for the decontamination of transformer oils from PCBs and subsequent reuse of decontaminated oils “Melioform-PCB-5000” was started. As a result of treatment, the concentration of PCB in transformer oil is reduced to values below the levels established by the Stockholm Convention (50 ppm, the minimum reached concentration is 0,5 ppm). After additional processing, transformer oils can be reused as insulating liquids. The unit is delivered in two standard 40-foot containers and can be transported both by road and by rail.
2. A contract for provision of facility for high-temperature disposal of highly PCB-contaminated waste and materials was concluded. The technology is based on thermal neutralization of hazardous waste followed by afterburning in a plasma furnace and gas cleaning. This process ensures a more complete combustion of waste, and prevents the formation of dioxins and furans.

Procurement of facilities for PCBs decontamination and disposal will allow to create an integrated system for management of PCB-containing wastes with different concentration of pollutants and will speed up the fulfillment of the Russian Federation’s obligations under the Stockholm Convention on POPs.

Component 3.3 Environmentally safe disposal of 3 800 tons of PCBs

1. During the commissioning of the PCBs decontamination unit “Melioform-PCB-5000” 2 tons of transformer oil were purified from PCB contamination. The pollutant concentration was reduced from 130 ppm to 20 ppm, which is in agreement with the requirements of the Stockholm Convention on POPs.

Further actions under the project

Within the framework of project implementation, the following activities are planned for 2019:

- Approval of the Action Plan (“roadmap”) to improve legal regulation in order to fulfill the Russian Federation obligations stipulated by the Stockholm Convention on POPs and the development of the relevant regulatory legal acts;
- Assistance to the authorized bodies of the Russian Federation in determining the procedure for importing the PCBs reference standards to be used in laboratory-scale research;
- Training of environmental inspectors on PCB-containing equipment inventory and environmentally sound handling;
- Training of the Russian Railroads JSC and other interested organizations personnel on the environmentally safe disposal of PCBs;
- Taking inventory of 35 000 transformers owned by Russian Railroads JSC for the PCBs presence;
- Analysis of transformer oils for the presence of PCBs;
- Commissioning of two mobile laboratories for the analysis of PCBs in transformer oil, environment and materials;
- Integrating the data array on PCB-contaminated equipment with the Database on control of the implementation of the provisions of the Stockholm Convention on POPs in the Russian Federation, aiming at conducting the inventory of manufactures, equipment, materials using or containing PCBs, as well as PCB-containing wastes;
- Setting up a system of labeling transformer equipment, based on the PCBs presence in electrical insulating liquids;
- Decontamination and final disposal of 3 800 tons of PCB-containing electrical insulating liquids.

Media coverage

The project activities were covered by the following media:

1. Summary of the report at the XII All-Russian Scientific and Practical Conference “Topical issues of oil and gas sector development in Russia”. 12-14 February 2018. “Express testing for PCBs in transformer oils”, E.A. Demicheva, I.A. Davydov, M.P. Nikiforov.
2. Article “Pioneers of purity”. Gudok Magazine issue № 121 (26494), 18 July 2018
3. Article “NEFCO delegation visit to Russia”. Project’s website, 18 October 2018
[// http://stoppcb.ru/ru/news/39](http://stoppcb.ru/ru/news/39)
4. Article “Russian Energy Agency and UNIDO jointly hold a workshop on risks of PCBs for human health and environment”. UNIDO in Russia Magazine website, 22 October 2018 [// http://www.unido-russia.ru/news/vozdeistvie_phb_na_zdorove/](http://www.unido-russia.ru/news/vozdeistvie_phb_na_zdorove/)
5. Article “Presentation of PCBs decontamination unit to Russian Railroads JSC”. NOPCB.RU Internet Portal, 29 November 2018 [//http://www.nopcb.ru/news/prezentacija_ustanovki_po_obezvrezhivaniyu_phb_dlja_oao_rzhd.html](http://www.nopcb.ru/news/prezentacija_ustanovki_po_obezvrezhivaniyu_phb_dlja_oao_rzhd.html)

Project activities were also featured on the UNIDO Centre’s official website:
<http://www.unido.ru>

Promotion of Technologies and Best Practices for Inulin Production by SMEs in the Russian Federation

Background

Implementation dates: 2018-2019

Project coordinator: Vladimir Milenin,
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Objective – to foster implementation of new technologies and best practices for production of inulin from Jerusalem artichoke by SMEs through cooperation between the Interstate Corporation for Development and the UNIDO Centre. The project will strengthen technical cooperation between industrial enterprises, government and private business institutions by making available appropriate advanced technologies that allow for a faster rate of innovation and an effective technology transfer.

Project tasks – development of a mechanism for implementation of selected best available technologies and facilitation of industrial cooperation between Russia and Eurasian Economic Union (EAEU) countries. The project will increase capacities and knowledge of public institutions in Russia and EAEU on inulin production technologies, issues, approaches and successful initiatives to design and implement modern policies and programmes for leveraging opportunities from new technologies to foster ISID.

Project partners

- Interstate Corporation for Development (ICD);
- All-Russian Research Institute of Potato Farming by A.G. Lorch;
- Zavolzhskiy CJSC, Kostroma region;
- Agro Kaluga LLC, Kaluga region.

Events

3 September 2018

The first meeting on the perspectives of the inulin production in the Russian Federation was held at the International Centre for Scientific and Technical Information in Moscow. Representatives of organizations uniting agricultural business, including producers, researchers, as well as representatives of executive authorities responsible for supporting agriculture in Russia took part in the event.

23 October 2018

The Southern African Development Community (SADC) Investment Forum was held in Moscow. The UNIDO Centre Director acted as moderator of the panel discussion “Regional industry value chains and the mining industry”, and made a presentation on the project. Meetings were held with participants on the event following the panel discussion in order to attract attention of foreign manufacturers of inulin processing equipment.

Major achievements in 2018

Component 1 Training of potential recipients of technical support and technology transfer and other institutions interested in cooperation

1. A series of meetings were held with representatives of farms and farmers' associations in Russia and several EAEU countries in order to reach agreements on the participation of farmers in the implementation of the project.

In Moscow, in cooperation with Lorch Potato Research Institute, lectures were organized for trainers who will lead training courses on cultivation of Jerusalem artichoke and implementation of new technologies and best practices for production of inulin from Jerusalem artichoke by SMEs.

12 trainers were trained in Jerusalem artichoke cultivation technologies and are ready to travel to the EAEU countries to conduct workshops targeting local farmers.

2. Negotiations were held with representatives of the Administrations of Moscow, Kostroma and Kaluga regions of the Russian Federation, as well as local authorities of Kazakhstan, Kyrgyzstan, Tajikistan and Armenia on possible assistance in concluding agreements on the purchase of the Jerusalem artichoke crop in certain volumes and at market price. The development of draft agreements on guaranteed purchases of Jerusalem artichoke harvest from small farms has begun with the local authorities of the countries mentioned.

Component 2 Establishment of demonstrative manufacturing capacity and the creation of market and financial relations

1. Two meetings were held with representatives of the Kostroma region Administration in order to agree on the establishment of a manufacturing capacity. An agreement has been reached on the readiness of local authorities to allocate territory (4,5 hectares in

the Gorchuha rural settlement) and to assist in finding an investor for the construction of a factory for processing the Jerusalem artichoke. Technical conditions and requirements for the manufacturing facility design were developed.

2. In September 2018, the ICD signed a Memorandum on Cooperation with the Kostroma Business Support Centre and held negotiations about the Centre's participation in the project activities. The Kostroma Business Support Centre agreed to work out a financing scheme for poor farmers and submit it for consideration of Kostroma region local governmental agencies supporting the agro-industrial sector.

Component 3 Public awareness activities

1. On 3 September 2018, the first meeting of representatives of organizations uniting agricultural business, including producers, researchers in the field of agriculture, as well as representatives of executive authorities responsible for supporting agriculture in Russia, was held at the International Centre for Scientific and Technical Information.

About 40 participants representing SMEs business associations, government bodies and policymakers took part in the in-depth presentation made by the UNIDO Centre on the perspectives of inulin production in the Russian Federation. Interviews with participants after the meeting showed interest and willingness to take into account the needs of the Jerusalem artichoke producers in the State's agricultural policy.

2. On 23 October 2018, Moscow hosted the SADC Investment Forum. Participants discussed areas of economic cooperation of SADC countries and Russia. The main goal of the event was to attract Russian investments in developing industries and agriculture, and level up the opportunities to promote business cooperation between SADC countries and Russia. The UNIDO Centre Director, who acted as moderator of the panel discussion "Regional industry value chains and the mining industry", made a presentation of the current Inulin project and held some talks in order to attract attention of the foreign manufacturers of the inulin processing equipment.
3. An agreement on cooperation with the All-Russian Research Institute of Agricultural Economics was concluded regarding the preparation of a technical manual.

The manual with recommendations on how to use Jerusalem artichoke in inulin production is under preparation by the experts of the Institute.

Further actions under the project

In 2019, the training of recipients of technical support will take place with at least five training seminars for farmers planned with the support of local authorities of Russia, Kazakhstan, Kyrgyzstan, Tajikistan and Armenia.

Work towards the conclusion of by-back safeguards and pricing agreements for small Jerusalem artichoke collectors will be pursued. Relevant procurement and pricing agreements should be concluded in the autumn of 2019 after the adoption of local budgets and the inclusion of provision related to support of SMEs.

Work on public awareness activities will continue to be carried out, namely through the preparation and dissemination of a manual with recommendations on how to use Jerusalem artichoke as commodity to produce inulin.



Industrial Innovation Club

Background

Project coordinator:

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Website:

[http://www.unido.ru/programmes/
projects_unido/prom_innovac_klub/](http://www.unido.ru/programmes/projects_unido/prom_innovac_klub/)

Objective – promotion of scientific and technological development of industrial sectors for the development of the real industrial sector of sustainable economy.

Project tasks – development and implementation of complex industrial projects at all stages of the innovation cycle, from research and development, to technologies and their practical use in production, including project management mechanisms.

Project partners

Governmental and public entities, private sector stakeholders involved in the project :

- Ministry of Economic Development of the Russian Federation
- Investment Development Agency of the Government of Novosibirsk region
- Committee on Innovations in Metallurgy and Foundry Industry of the Tula CCI
- Committee on Foundry of the Union of Machine Builders of Russia
- Russian Association of Foundrymen
- Leningrad Association of Foundry
- Magnitogorsk State Technical University
- Business Club of the Shanghai Cooperation Organization (SCO)
- Foundry Association of BRICS
- Foundry engineering company LITAFORM
- Group of companies RELTEK
- SIBELECTROTERM JSC
- SIBLITMASH JSC
- METALLURGMASH Engineers
- NRI TSVETMET Research Institute

- Russian Academy of Science (RAS)
- Department of Agricultural Sciences RAS
- Siberian branch of Agricultural Science of RAS
- Moscow State University (MSU) Science Park
- Pushchino Scientific BioCentre of RAS
- Association of Textile Industry of Russia (SOUZSLEGPROM)
- Innovation Centre of Textile and Light Industry
- PROEKTPI SHESTROY JSC
- Scientific Research Institute of Meat Industry of RAS
- Research Institute of Bakery
- Large Kostroma Flax Factory (BKLM)
- Cotton factory “Shuisky Cotton” JSC
- Moscow Silk CJSC

- INION Russian Academy of Science
- Russian Union of Scientific and Engineering Organizations
- Free Economic Society of Russia
- Euro-Asian Information and Analytical Consortium
- Russian Export Centre
- AFROCOM Coordinating Committee
- Department of Trade and Industry, South Africa
- Southern African Development Community Secretariat (SADC)

Events

10 - 12 January 2018

Participation of a delegation comprised of 11 members representing Russian foundry industry in BRICS Foundry Forum organized by BRICS Foundry Association in Ahmedabad (India).

4 April 2018

Participation in the National Conference of the Russian Union of Scientific and Engineering Organizations.

17 April 2018

Support in the organization of the conference for the establishment of a Euro-Asian Information and Analytical Consortium held in Moscow.

15 May 2018

Participation in an international conference of the Russian Export Centre on non-raw material export.

24 May 2018

Presentation of the Updated Comprehensive Programme and the Roadmap until 2025 to AFROCOM Coordinating Committee for non-raw material export to Africa.

9-12 July 2018

Participation in INNOPROM 2018.

27-30 August 2018

Participation in the International Forum of Technological Development (TECHNOPROM) in Novosibirsk.

Presentation of the Updated Comprehensive Programme and the Roadmap until 2025 via Investment Development Agency of the Government of Novosibirsk region.

18 October 2018

Participation in the Fourth Forum on Small Business in SCO and BRICS Regions in Ufa.

8 November 2018

Submission to the Ministry of Economic Development of the Russian Federation of the consolidated, updated and extended Comprehensive Programme of SMEs industrial projects with complete innovation cycle.

9-10 June

Participation of project's partners in the SCO Summit in Qingdao (China).

25-27 July 2018

Participation of project's partners in the 10th BRICS Summit in Johannesburg (South Africa).

17 October 2018

Participation in the panel discussion on "Modern mechanisms and digital infrastructure of innovative cooperation in BRICS", held as part of Open Innovations Forum in Moscow.

23 October 2018

Participation in the SADC Investment Forum.

21-22 December 2018

Participation in the International Scientific and Practical Conference "Modernization of Russia: Priorities and Solutions in the framework of Great Eurasia-2030".

Major achievements in 2018

1. One of the major achievements of the reporting period is the development, consolidation and update of the Comprehensive Programme with extension until 2025, taking into account the information gathered through participation in the relevant events and familiarization with existing guidelines on SMEs development in Russia, namely the National Project on SMEs Development and Support of 25 September 2018 and National Project on Science of 3 September 2018.

The Programme's main objective is to provide guidance to SMEs on the consolidation of scientific, industrial and financial resources. The document foresees the development of innovative infrastructure instruments for an effective preparation and implementation of project proposals.

To consolidate efforts of industrial and research and manufacturing enterprises in support of the UNIDO project, the Industrial Innovation Club, formed on a voluntary basis at the UNIDO Centre, and consisting of representatives of Russian companies, has continued to operate in 2018, focusing on priority areas of industrial development and engaging in practical activities in BRICS countries.

2. The updated Comprehensive Programme for the period until 2025 was presented to the Ministry of Economic Development of the Russian Federation on 8 November 2018.

The Comprehensive Programme includes a Roadmap and 40 project proposals for 5 industrial branches of 12 regions of the Russian Federation. The development of additional 60 project proposals is envisaged for the period until 2025 in such fields as small-scale metallurgy and foundry industry, small-scale energy industry and energy production from renewable sources, agricultural industry, textile industry and affordable housing technologies.

The Programme is in line with goals and objectives defined in the National Economic Security Strategy of the Russian Federation until 2030 and the Scientific and Technological Development Strategy of the Russian Federation until 2035. The selected project proposals are considered as pilot. The experience gained in implementing the provisions of the Program will be used in other regions of the Russian Federation and other BRICS and SCO countries.

Further actions under the project

1. Based on the work carried out during the reporting period and resulting in the formulation of the Comprehensive Sectoral Programme for 2017-2025 and the corresponding Roadmap, the main task for 2019 remains the finalization of the project proposal "Creation and support to activities of the Centre of Industrial Development". The Centre will be established as an instrument of practical implementation of the Comprehensive Programme, aimed at providing a system management support for the integrated projects.

2. Project proposals for the creation of a dedicated Centre of Industrial Development have been prepared by the project team. The Centre will be aimed at ensuring the completion of the full innovative cycle, regulating questions associated with intellectual property, within the framework of the Comprehensive Program till 2025 for industrial projects of complete innovation cycles orientated for SME production development.
3. In 2019, participation of the project team and partners of the project is planned in a number of international events:
 - Russian Week of Textile and Light Industry (March 2019);
 - BRICS International Foundry Forum (June 2019);
 - Second Global Manufacturing and Industrialization Summit (July 2019);
 - Metal Week in Moscow (November 2019).



Media coverage

The project activities were covered by the following media:

Article “Technological development of an agro-industrial centre of Russia”, I.V. Kulkov, V.I. Gerasimov. Yearbook of the Scientific Council of RAS on complex issues of Eurasian economic integration, modernization and sustainable development, issue № 11.

E-waste Academy for CIS Countries

Background

Implementation dates:

2017 – 2018

Project coordinator:

Vladimir Komissarov,

weerecyclers@gmail.com

Objective – enhancement of capacities of employees of relevant ministries in CIS countries through the creation of a network of experts that could further distribute information on e-waste management and available BAT/BEP in their respective countries.

Project tasks – provision of a training in e-waste management for employees of relevant ministries from CIS countries, including regional ministries from the Russian Federation, with the aim to ensure favourable conditions for development of modern systems of e-waste management including the preparation of draft legislative and regulative acts at the federal and regional level.

The course of the E-Waste Academy was conducted within the framework of the project on establishing an integrated regional system of WEEE management in the CIS Member States. The concept of the project was developed and first presented by the UNIDO Centre at the meeting of the Industrial Policy Council of CIS in 2014. The E-waste Academy is a follow-up to the UNIDO project “BAT/BEP Centre for environmentally safe disposal of potentially hazardous consumer products and industrial wastes”, which was implemented by the UNIDO Centre in 2010-2015.

Project partners

- Association of WEEE Recyclers;
- United Nations University.

Events

30 January - 1 February 2018

Workshop on WEEE management held in Almaty (Kazakhstan).

Major achievements in 2018

- The course has laid the foundations to intensify an active fruitful cooperation among the experts in e-waste management from the CIS Member States and facilitate the exchange of knowledge and experience among them.
- As a continuation of the training course of the E-Waste Academy, Managers Edition, conducted in May 2017 in Moscow, a workshop on WEEE management was held in Almaty (Kazakhstan) in January 2018. The three-day workshop was arranged for experts, representatives of the regional governments, business executives from Armenia, Belarus, Azerbaijan, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Uzbekistan.
- A total of 42 participants took part in the event. Leading experts from Austria, Czech Republic, Germany, Italy, Switzerland, Belarus, international organizations as Basel Convention Secretariat, UNEP, WEEELABEX made presentations on different aspects of WEEE management. Practical trainings were arranged as well.
- Financing of the project was provided mainly by the Federal Environmental Agency of Germany.
- The project has a very positive impact on the WEEE management in the CIS countries. Graduates of the EWAM and participants of the workshop in Almaty took part in the development of the intergovernmental agreement of seven CIS countries on the cooperation in WEEE management that was signed in Dushanbe (Tajikistan) in June 2018. In November 2018, the roadmap of implementation of the agreement was adopted at the meeting of prime ministers of CIS countries in Astana.
- Similarly to the training course held in Moscow in 2017, the programme of the workshop in Almaty consisted of lectures, seminars, practice sessions, and roundtable discussions. The participants had an opportunity to learn about the legislation on WEEE management in different countries, as well as acquire practice-based knowledge on how to organize an e-waste management business in compliance with legal requirements, including on transboundary movements of waste for further processing. Moreover, the participants learnt about easy methods to sort plastics contained in WEEE, which often represents a challenging task that waste-recycling companies face at the start of their business. The dismantling session, during which the participants had to dismantle different types of e-waste, helped them to further understand the specifics of business operations in this field. During this session, the participants learnt about the composition of various appliances, as well as about possible ways of commercial use of marketable fractions and fractions which are not yet commonly used for commercial purposes. One of the key parts and results of the course were the action plans on developing an environmentally-sound and commercially attractive system of e-waste management for a chosen country or region, that were prepared and presented by the working groups of participants.



Further actions under the project

The UNIDO Centre is planning to continue supporting the efforts of the Russian Federation to implement the CIS intergovernmental agreement on cooperation in WEEE management, signed in Dushanbe in June 2018.

Media coverage

The project activities were covered by the following media:

Article “The way towards a regional WEEE management system”, V.A. Komissarov. Solid Waste Magazine, issue №3

Project activities were also featured on the UNIDO Centre’s official website:
<http://www.unido.ru>

Publications

The UNIDO Centre official magazine “UNIDO in Russia” is published on a regular basis.

The publication is intended to provide information support of UNIDO projects and activities, coverage of the events organized by the Organization and the Centre aimed at attracting foreign technology and investments related to modernization of the Russian industry and economy, promotion of Russian technologies in other countries and assistance in the placement of funds of Russian investors abroad.

The magazine is distributed through ITPOs 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



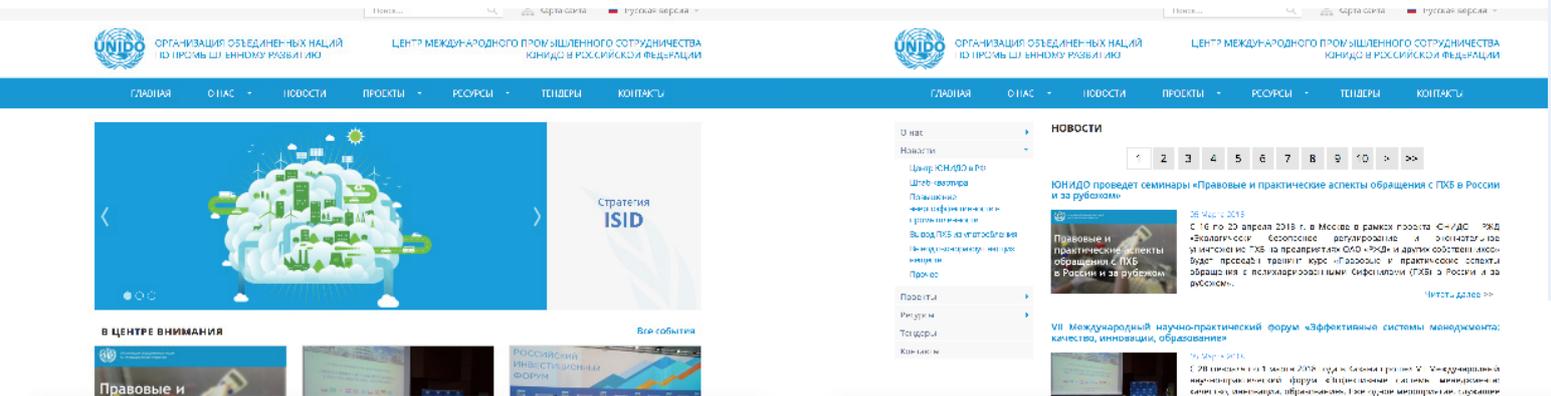
Since 2017 the UNIDO Centre has been publishing a monthly newsletter covering key events that took place during the previous month. This document is primarily intended for the main partners of the Centre from among the ministries and institutions of the Russian Federation.



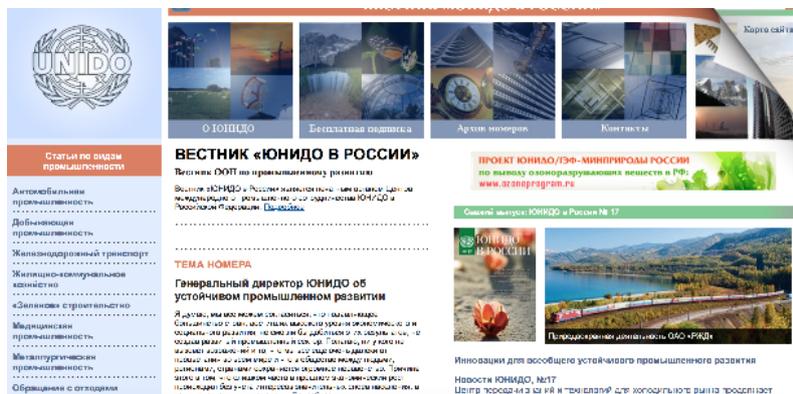
Internet resources

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

- The UNIDO Centre official website (www.unido.ru) is devoted to the description of the mission and activities of the Centre in Russia and abroad, providing information on completed and ongoing projects. The website news line is regularly updated.



- Online version of the magazine “UNIDO in Russia” (www.unido-russia.ru).





UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO Centre for International Industrial Cooperation
in the Russian Federation

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