



# ANNUAL REPORT 2013

UNIDO CENTRE FOR INTERNATIONAL  
INDUSTRIAL COOPERATION

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## ABOUT UNIDO CIIC IN RUSSIA

The CIIC was established in Moscow based on the Agreement between the Government and UNIDO concluded on 19 December 1992. The Agreement defined main functions, structure and priorities of the Centre. In 2007, the Russian Government and UNIDO agreed to extend the Agreement from January 2008 until December 2009. It had a planned duration of 2 years to be followed by extensions in a 2-year cycle. The Government coordinating agency on the Russian side is the Ministry of Education and Science.

According to the current project document (signed Dec. 2008), the major objective of the project is to ensure the efficient functioning of the UNIDO CIIC in the Russian Federation in order to facilitate inward investment and technology flows as well as to promote joint business initiatives focusing on thematic priorities between entrepreneurs in the Russian Federation and foreign industrial counterparts. Further, it has been playing an active role in the preparation and implementation of various technical assistance (TA) projects of UNIDO and coordinating them. It also provides technical expertise in the design, organization and implementation of investment promotion events in Russia. Target beneficiaries are Russian SMEs interested in cooperation with foreign partners.

The Head (Director) and the Deputy Director of the CIIC are to be appointed by UNIDO. The Head of the Centre would direct and manage the operations under the overall supervision of the UNIDO ITPO Branch. UNIDO is to provide access to its established network of ITPOs worldwide and the IPU in the Arab region, as well as its methodology and software to carry out feasibility analyses of investment projects.

The CIIC is to submit progress reports to UNIDO every 4 months, in accordance with ITPO Manual.

The UNIDO CIIC provides the following services:

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

The project document also formulates the continuous improvement of analytical and operational capacities of ITPO and the expansion of ITPO networks in CIS countries as its outputs.

## 2013 CIIC HIGHLIGHTS

### RUSSIAN MNRE MEETING FOR THE PREVENTION OF OZONE-DEPLETING SUBSTANCES TRAFFICKING AND DECREASE OF THEIR RELEASES AND LEAKAGES

On January 25, in the Hall of Russian MNRE Board, meeting “PREVENTION OF ILLEGAL IMPORT OF OZONE-DEPLETING SUBSTANCES INTO THE RUSSIAN FEDERATION AND DECREASE OF THEIR RELEASES AND LEAKAGES AT MAINTENANCE OF EQUIPMENT CONTAINING SUCH SUBSTANCES” was held. The meeting was attended by more than 60 persons including representatives of federal executive bodies (MNRE of Russia, MIT of Russia, MOI of Russia, FCS of Russia, and FTS of Russia); heads of major manufacturers and suppliers of refrigerants; industry associations and self-regulated organizations working in the field of HVAC&R equipment installation and maintenance.



The participants of the meeting were welcomed by **S. LEVI, THE DEPUTY MINISTER FOR NATURAL RESOURCES AND ENVIRONMENT OF THE RUSSIAN FEDERATION**, who specified the national importance of the ozone-depleting substances (ODSs) phase-out and the call for active cooperation between representatives of executive and legislative bodies and business in this field.

**D. BRYUNIN, THE HEAD OF THE DEPARTMENT OF THE STATE POLICY AND REGULATION IN THE FIELD OF HYDROMETEOROLOGY AND ENVIRONMENT MONITORING OF MNRE OF RUSSIA**, informed the participants on the measures taken by MNRE of Russia in 2012 for the prevention of ODS illegal importation: limitation of the number of customs posts for importing the substances; criminalization of their illegal import to the country and prohibition of importation of hydrochlorofluorocarbon (HCFC)-containing equipment to the territory of the Customs Union member states. The draft Federal Law “On amending Federal Law “On Environment Protection” and Article 82 of the Russian Code of Administrative Violations in part of ensuring fulfillment by

the Russian Federation of its obligations under the Montreal Protocol on Substances That Deplete the Ozone Layer to the Vienna Convention for the Protection of the Ozone Layer” has been completely agreed upon and presented to the State Duma of the Russian Federation due to which all concerned market players will have the opportunity of taking part in the preparation of relevant bylaws preparation.

V. TSELIKOV, THE SENIOR TECHNICAL ADVISOR OF THE UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION (UNIDO), presented international experience in the field of preventing illegal importation and leakages during equipment installation and maintenance. This includes such measures as (mainly lacking at present in the Russian Federation): ODS import/export licensing system; ODS import/export/manufacture quota allocation; obligatory (annual) reporting of importers/exporters; marking system; reporting system; in-country circulation control system; training/certification for specialists engaged in installation and maintenance of HVAC&R equipment; prohibition of expendable cylinders for refrigerants, and state-and-private partnership in the field of refrigerant circulation control.

A. LYUBESHKIN, THE COORDINATOR OF UNIDO/GEF AND MNRE OF RUSSIA PROJECT FOR HCFC PHASE-OUT IN THE RUSSIAN FEDERATION, told about main components of the Project being implemented in Russia: conversion of Russian industrial enterprises to the manufacture of ozone-friendly products with relevant personnel training;

- aid of MNRE of Russia through the development of the legislation basis;
- aid in law enforcement departments equipping and training;
- pilot project for the creation of a network for ODS collection and disposal;
- educational component including translation and adaptation of international training and certification programmes on HVAC&R systems;
- creation of information source, [www.ozoneprogram.ru](http://www.ozoneprogram.ru) and
- **HOLDING OF THE ALL-RUSSIA CONTEST “PROTECT EARTH’S OZONE LAYER AND CLIMATE”** (Order of the Chairman of the Government of the Russian Federation of November 26, 2012, No 2189-p).

He called the participants to take part, within the framework of a workgroup of UNIDO-MNRE of Russia, in preparation of institutional suggestions, support the activities of law enforcement agencies in preventing ODS illegal importation to the country, and to take part in creating civilized forms of work at the market of refrigerants<sup>1</sup>.

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<sup>1</sup> Read more at: [http://www.ozoneprogram.ru/eng/events/25012013\\_en/](http://www.ozoneprogram.ru/eng/events/25012013_en/)

## SESSION OF UNIDO–BUSINESS WORKING GROUP

On March 1, 2013, the session of UNIDO–Business Working Group took place in Moscow. The Group was established in pursuance of decisions of the meeting “Prevention of Illegal Import of Ozone-Depleting Substances into the Russian Federation and Decrease of Their Releases and Leakages at Maintenance of Equipment Containing Such Substances” conducted on January 25, 2013.

The meeting was attended by representatives of UNIDO, Russian and foreign companies producing and supplying refrigerants, trade associations and self-regulated HVAC&R organizations.

The meeting resolved to **PREPARE PROPOSALS ON ESTABLISHMENT OF A BY-LAW PACKAGE FOR DRAFT FEDERAL LAW “ON AMENDING FEDERAL LAW “ON ENVIRONMENT PROTECTION” AND ARTICLE 82 OF THE RUSSIAN CODE OF ADMINISTRATIVE VIOLATIONS** in part of ensuring fulfillment by the Russian Federation of its obligations under the Montreal Protocol on Substances That Deplete the Ozone Layer to the Vienna Convention for the Protection of the Ozone Layer, as well as on correction of government regulation measures in the field of ODS production and consumption.

The working group approved proposals on creation of certification system for specialists engaged in installation and service of HVAC&R equipment; imposition of a ban on non-refillable cylinders; cooperation with force agencies in prevention of ODS trafficking and other problems raised at the meeting held at the Russian Ministry of Natural Resources and Environment on January 25, 2013.

Besides, it was resolved to support creation of a high-capacity chemical cluster on the territory of VOA Khimprom and development of ozone-safe refrigerant production facilities in Russia.

## WORKING MEETING WITH THE TURKMENIAN OZONE UNIT

On June 10–13, Ashgabat, the capital of Turkmenistan, became the venue of a working meeting of the Turkmenian Ozone Unit and the Project Management Unit of the UNIDO project for HCFC phase out in the Russian Federation. The meeting was dedicated to consideration of environmentally safe alternatives to ozone-depleting substances and a set of proliferation measures to be implemented on the territories of Russia and Turkmenistan.



The meeting was attended by representatives of the **TURKMENIAN MINISTRY OF NATURAL RESOURCES, MINISTRY OF EDUCATION, STATE CORPORATE GROUP TURKMENGAZ, STATE ALLIANCE TURKMENTORGSERVIS ACTING UNDER THE MINISTRY OF TRADE OF TURKMENISTAN, PO REMBYTTEKNIKA**, educational institutions, service organizations and private entrepreneurs engaged in installation and maintenance of air-conditioning and refrigerating systems.

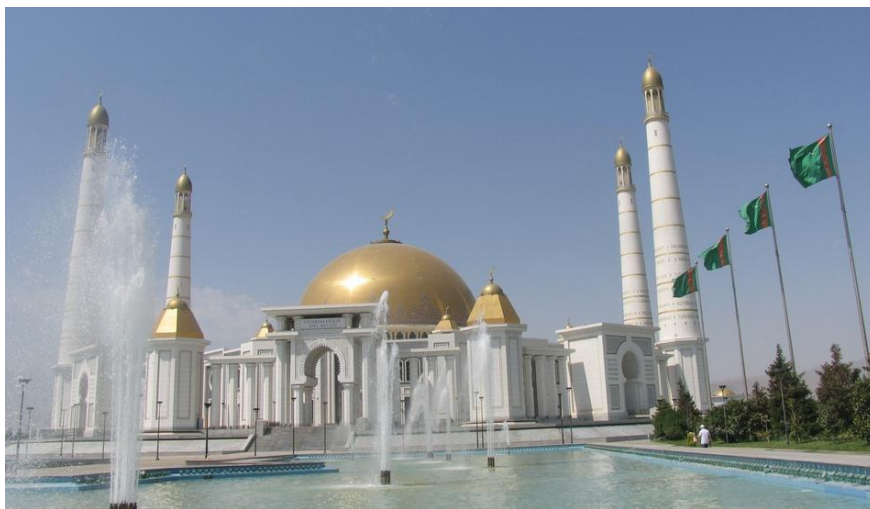
Russian delegation shared their experience in implementation of the HCFC phase out project and covered practical aspects of transition from ozone-depleting substances to natural refrigerants, organization of professional development centers for HVAC&R technicians and reported on the organization of the All-Russian Competition “Protect the Ozone Layer and Climate of the Earth” held by the Russian Ministry of Natural Resources and Environment, Ministry of Education and Science and the UNIDO Centre in the Russian Federation.



**GREAT ATTENTION WAS PAID TO** consideration of the European environmental certification mechanism aimed at reduction of ODS emissions and of opportunities offered by initiation of a similar mechanism in Russia and Turkmenistan. At request of Turkmenian colleagues, the Russian delegation shared their experience in creation and development of associations and

self-regulated organizations that support the state in solving environmental and industrial development matters.

The whole day of the working meeting was dedicated to practical training on ways of detecting ozone-depleting substances with the aid of rapid-response analyzers and conversion of refrigerating equipment from ozone depleting R-22 to HC refrigerants. Due to immense reserves of natural gas in Russia and Turkmenistan, such conversion is quite actual.



In conclusion, parties discussed cooperation in the field of protection of the ozone layer and the first measure in this respect will be a working meeting dedicated to ammonia, natural refrigerant. Preliminarily, it is planned for November 2013.

## ALL-RUSSIAN COMPETITION “PROTECT THE OZONE LAYER AND EARTH CLIMATE”

September 16, 2013, a ceremony of awarding the winners of all-Russian competition “Protect the Ozone Layer and the Climate of Earth” took place in the conference hall of the Ministry of Natural Resources and Environment of the Russian Federation. The competition was held as part of the formal events of the Year of the Environmental Protection in pursuance of the Russian President’s Decree No. 1157 “On conducting the Year of the Environmental Protection in the Russian Federation” of 10.08.2012 and Edict of the Government of the Russian Federation No. 2189-p of 26.11.2012. The competition participants were students of schools, secondary vocational and higher education institutions. The competition organizers were: the Ministry of Natural Resources and Environment, Ministry of Education and Science of the Russian Federation, and UNIDO (United Nations Industrial Development Organization).





The competition was held with support of the Global Environment Facility which implements the project for HCFC phase out in the Russian Federation in cooperation with UNIDO and the Russian Ministry of Natural Resources and Environment.

Sergey Donskoy, the Minister of Natural Resources and Environment, greeted the competition participants via video message.

The awarding ceremony was attended by Semen Levi, the Deputy Minister of Natural Resources and Environment, Sergey Korotkov, the Director of the UNIDO Center for International Industrial Cooperation in the Russian Federation, representatives of the Ministry of Natural Resources and Environment, Ministry of Education and Science, UNIDO, Federal Service for Supervision of Natural Resource Usage, Federal Service for Hydrometeorology and Environmental Monitoring, and the competition partners: Daikin Europe, OOO DuPont Science and Technologies, and GoldStar.

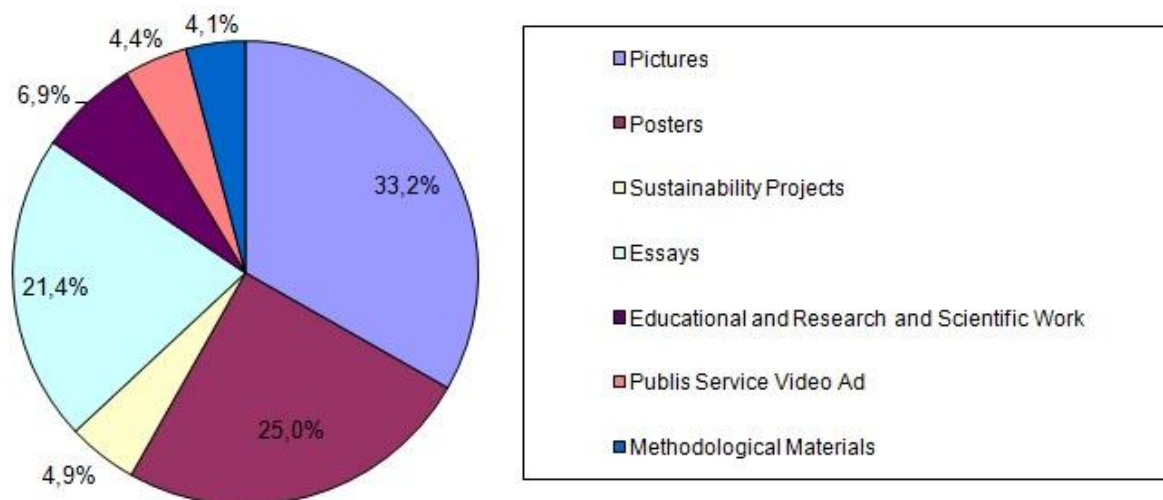
IN RUSSIA, OZONE DEPLETING SUBSTANCES ARE STILL WIDELY USED AS REFRIGERANTS IN INDUSTRIAL AND DOMESTIC AIR-CONDITIONERS (MORE THAN 8 MILLION OF HCFC-CONTAINING APPLIANCES ARE CURRENTLY IN OPERATION), IN INDUSTRIAL AND COMMERCIAL REFRIGERATING EQUIPMENT, FOAM AGENTS USED IN HEAT INSULATION OF DOMESTIC REFRIGERATORS (UP TO 40 % OF THOSE IN OPERATION), SANDWICH PANELS, AND SOLVENTS

In Russia, the celebration of the International Day for the Preservation of the Ozone Layer was initiated in 2011 by the Russian Ministry of Natural Resources and Environment. In 2012 the country celebrated the 25th anniversary of the Montreal Protocol.

In 2013, the Government of the Russian Federation, with its Edict No. 2189-p, charged the Ministry of Natural Resources and Environment, Ministry of Education and Science of the Russian Federation, and UNIDO with

arrangement of all-Russian competition “Protect the Ozone Layer and Earth Climate” which was held among students of schools, secondary vocational and higher education institutions.

The Competition goal was to raise the awareness of teachers, students and pupils of the problems of the ozone layer and the national policy for build-up of the youth’s ecological literacy.



The competition was held in 3 stages (regional, federal and final) in all constituents of the Russian Federation. The nominations were in the following age groups:

“Picture” for 1–4 year students,

“Poster” for 5–7 year students,

“Sustainability project” for students aging from the 5th year of school to higher educational institutions,

“Essay”, “Educational and Research and Scientific Work”, “Public Service Ad” for students from the 8th year to higher educational institutions,

“Methodological materials” for students of secondary vocational and higher education institutions.

**689 BEST WORKS SELECTED** at the regional stage from 58 constituents of the Russian Federation were submitted for the federal stage.

The final stage was held from September 14 till September 16, 2013. The winners’ awarding ceremony, timed to the International Day for the Preservation of the Ozone Layer celebrated on September 16, took place in the conference hall of the Ministry of Natural Resources and Environment of the Russian Federation.

The winners also attended an occasional educational lecture at the Moscow planetarium and visited the DuPont innovation center in Moscow.

### THE WINNERS' WORKS WERE EXHIBITED IN THE UNIDO HEADQUARTERS IN VIENNA (AUSTRIA) AFTERWARDS.

It is worthy of note that on July 23, 2013, the President of the Russian Federation signed Federal Law No. 226-FZ "On amending Federal Law "On Environment Protection" and particular legislative acts of the Russian Federation" aimed at ensuring fulfillment of the Russia's Montreal Protocol commitments. Its provisions prohibit to design and construct any facilities producing ozone-depleting substances (ODS) and ODS-containing products, and landfill ODS-containing products without prior environmentally safe recovery of ODS for re-use or destruction; as well as introduce reporting on ODS production and use, and administrative responsibility for failure to comply with new requirements regulating ODS use.

The prizes for the winners and awardees were provided by **DAIKIN EUROPE, GOLDSTAR, OOO DUPONT SCIENCE AND TECHNOLOGY, UNIDO, RESEARCH INSTITUTE FOR ECOLOGY AND RATIONAL USE OF NATURAL RESOURCES.**

Currently, the Ministry of Natural Resources and Environment, with active participation of representatives of enterprises engaged in manufacture of ODS-based products as well as installation and servicing of HVAC&R equipment (as part of the working group set up under the auspices of UNIDO), prepares an FZ-226 by-law.



This law entering into force will not only favor fulfillment of Russia's international obligations—failure to do so would entail serious economic sanctions, with the next 90 % cut in use coming already in 2015—but will also allow Russia to introduce new technologies, open global markets for Russian producers to export their refrigerating equipment and insulating foams, contribute

to legalization of the domestic HVAC&R market, and improve energy efficiency of HVAC&R systems in operation<sup>2</sup>.

## CONFERENCE “NATURAL REFRIGERANT AMMONIA. CHEMICAL AND TECHNICAL SECURITY OF THE RUSSIAN FEDERATION”

RUSSIA WITNESSES THE  
RETURN OF AMMONIA TO  
THE BIG REFRIGERATION

On October 16, conference “Natural refrigerant ammonia. Chemical and technical security of the Russian Federation” took place in Moscow. The conference was organized by the Ministry of Natural Resources and Ecology of the Russian Federation, UNIDO, and Global Environmental Facility and attended by more than 100 representatives of Russian ministries, trade associations, research institutes, large public and private users of refrigerating systems, Russian and foreign producers of natural refrigerant-based systems.

As many other parties to the Montreal protocol, Russia is phasing out HCFC and, by 2015 the country is expected to reduce their consumption by 90%. HCFC-22 was one of very few refrigerants produced in the country. What’s next? Stake on HFC which will likely be covered by the Montreal Protocol? Use expensive refrigerants which are not and will never be even planned for production in Russia? Extend nationwide use of natural refrigerants which Russia produces and which will ensure its technical safety?

The conference participants supported the idea of developing systems based on natural refrigerants, and the refrigerant of choice of the industry is ammonia. Although Russian ammonia regulations and lack of any measures on the HFC use are seriously constraining the proliferation of this efficient natural refrigerant, the government is working to overcome these barriers.

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<sup>2</sup> Read more at: [http://www.ozoneprogram.ru/eng/newsederal\\_stage\\_completed/](http://www.ozoneprogram.ru/eng/newsederal_stage_completed/)



The conference resulted in a resolution which, in particular, recommended state structures to intensify efforts on development of government programs related to the use of ammonia and other natural refrigerants; revise safety, technical and legal regulations to expand the scope of ammonia use; accelerate harmonization of the Russian legal framework regulating the refrigerant use with the European one; elaborate standards of qualification and education, system for certification of technicians, and Russian version of the F-gas regulation.

The conference was attended by representatives of federal bodies (the Ministry of Natural Resources and Environment, Ministry of Industry and Trade, Federal Service for Environmental, Technological and Nuclear Supervision, Moscow Department for Labor and Employment), trade organizations (Association of Professionals in the Industry of Climate, Russian union of refrigeration industry), international experts (UNIDO, Euroammon), representatives of end-users from the fishing, meat processing and other industries. The conference proved interesting for representatives of Russian and foreign companies engaged in use or production of refrigerants: Akvalinks, Baltimore Aircoil, Bitzer CIS, VNIINEFTEMASH, VNIKHOLODMASH-HOLDING, GEA Refrigeration RUS, Danfoss, Johnson Controls, Interkhimkholod, Kreovent, Lisbor, MARKON-KHOLOD, OK, Ostrov-Komplekt, Podolsktorgtechnika, Remklimat, OTsR Technology, TEKO GmbH, Tekhanaliz, Transcool.RUS, OLEKS HOLDING-M, KHIMKHOLODSERVIS, KHOLTEK. R&D, educational and trade publishing sectors were represented by Atmosphere research institute, VNIKHI, Sechenov First State Medical University, Razumovsky State University of Technology and Management, Professional training center, Krzhizhanovsky Energy Institute, and some others.

## UNIDO DG'S VISIT TO THE RUSSIAN FEDERATION

The DG, LI Yong visited the Russian Federation from 23-24 October 2013. The DG was accompanied by H.E. Mr. Vladimir Voronkov, Ambassador Extraordinary and Plenipotentiary, Permanent Representative of the Russian Federation to UNIDO, Vienna and UNIDO staff members including, Mr. Zhao Jie, Special Assistant to the Director General, Ms. Olga Memedovic, Chief, Europe and NIS Programme, Ms. Marina Ploutakhina, Chief, Energy Efficiency, Energy and Climate Change and Mr. S. Korotkov, Director of UNIDO CIIC Moscow.

During this three-day visit to the Russian Federation, DG held meetings with high ranking government representatives, including:

MR. ARKADY DVORKOVICH, DEPUTY PRIME MINISTER

MR. SERGEI LAVROV, MINISTER OF FOREIGN AFFAIRS

MR. DMITRY LIVANOV, MINISTER OF EDUCATION AND SCIENCE

MR RINAT GIZATULIN, DEPUTY MINISTER OF NATURAL RESOURCES AND ECOLOGY

During the meetings with high level government representatives, the DG discussed:

UNIDO's record of technical cooperation with the Russian Federation, including past, ongoing and proposed planned projects as well as successful projects that can be replicated.

UNIDO's long-term goals for cooperation with the Russian Federation, which are to expand and strengthen technical cooperation in third countries and in the Russian Federation in the fields of energy, environment management and climate change, technology promotion, skills upgrading, vocational training, industrial parks and industrial clusters.

The importance of BRICS as a platform for international multilateral cooperation, dialogue and sharing best practices and experiences that could be extended to other regions. The UNIDO-BRICS projects on technology and innovation for the development of SMEs.

The DG also gave a keynote speech at the Ministry of Foreign Affairs, within the framework of the 'Golden Collection' project for the journal "International Affairs", on the vision for UNIDO's future as well as on cooperation with the Russian Federation.

The DG also invited Government senior officials to participate in the UNIDO General Conference in Lima.

Further meetings were held with heads of Russian Railways Company and national and international associations representing industrialists and entrepreneurs. The DG signed a Joint Declaration on "support for the advancement of environmentally sustainable solutions in the

Russian Federation” with the President of Russian Railways, one of the largest companies in the Russian Federation, which will consolidate efforts to develop mutually beneficial cooperation in the field of environmental technologies and green industry in general. DG also visited the UNIDO Center for International Industrial Cooperation (CIIC) in Moscow and discussed the positive achievements of the UNIDO Center as well as successful cases that can be replicated in the Russian Federation and in other countries.



DG, Li Yong, Ms. Olga Memedovic, Chief, Europe and NIS Programme,  
Ms. Marina Ploutakhina, Chief, Energy Efficiency, Energy and Climate Change



DG, Li Yong and H.E. Mr. Vladimir Voronkov,  
Ambassador Extraordinary and Plenipotentiary,  
Permanent Representative of the Russian Federation to UNIDO, Vienna

## DG MEETINGS ON 23 OCTOBER 2013

The Director General's meeting with the Minister of Education and Science of the Russian Federation

The DG met with HE. **MR. DMITRY LIVANOV**, Minister of Education and Science of the Russian Federation, and **MR. EUGENIE UGRINOVICH**, Director of the International Department at the Ministry. The Minister expressed his full support for cooperation with UNIDO and satisfaction with partnerships between the Russian Federation and the organization. Particular reference was made to the UNIDO Centre for International Industrial Cooperation (CIIC), established in 1989, and funded by the Russian Federation. The Center and its links with the global network of UNIDO ITPOs as well as its financial model of support were referred to as examples of successful partnerships that contribute greatly to innovation and technological learning.

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**THE RUSSIAN FEDERATION IS INTERESTED IN THE UNIDO—BRICS PROJECTS ON TECHNOLOGY AND INNOVATION FOR THE DEVELOPMENT OF SMES. SUCCESSFUL IMPLEMENTATION IN FIVE COUNTRIES CAN BE EXPANDED TO OTHER REGIONS AND BE GLOBAL**

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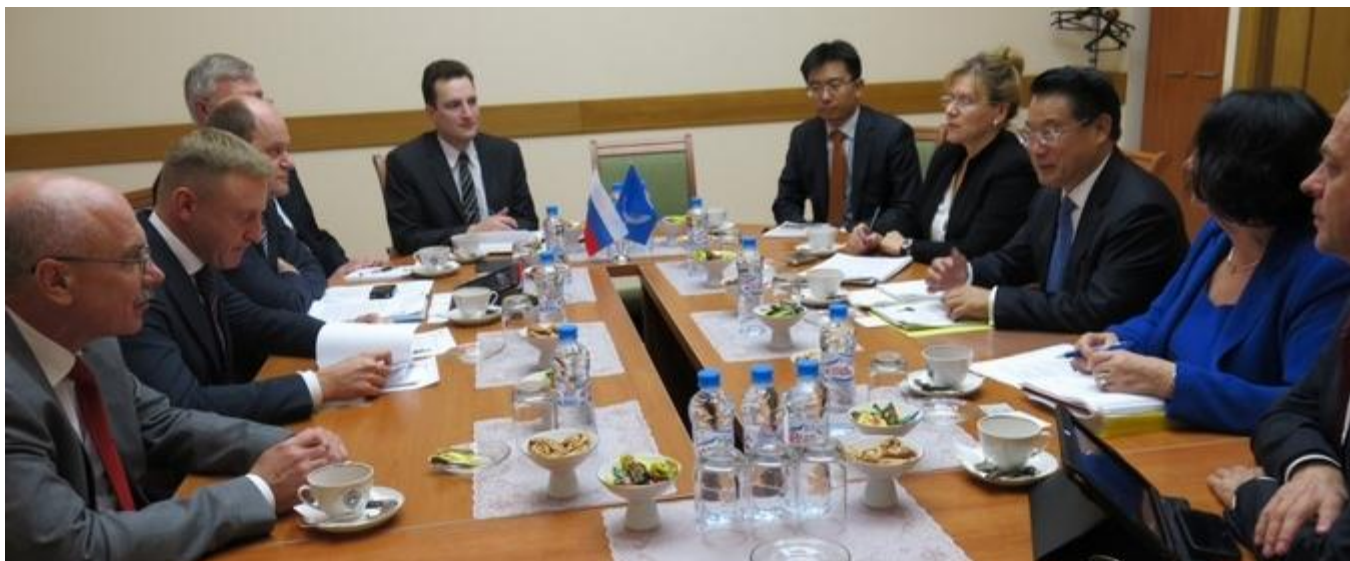
DG was informed about the current responsibilities of the Ministry, which are education, and science and technology and that the new mandate of the Ministry is closely linked with industrial development. The Ministry is working on the formulation of a national strategy for

vocational training and it is envisaged that UNIDO is seen as the important partner organization that would share best practices and contribute to the development of vocational training programmes in the Russian Federation. At the same time, the experiences of the Russian Federation can be shared with other CIS countries, as well as with countries in the Middle East and Latin America. It was further pointed out that international experience gained by UNIDO, and its status as a specialized agency, provide important value added and credibility to the projects that Ministry of Education and Science would like to implement. Other potential areas of cooperation identified are the industrial parks, as the important tool for focusing on the regions as a practical approach to ensure SME development and building professional skills. The importance of BRICS as a platform for international multilateral cooperation, dialogue and sharing best practices and experiences was also emphasized, which could be extended to other regions. The Russian Federation is interested in the UNIDO—BRICS projects on technology and innovation for the development of SMEs. Successful implementation in five countries can be expanded to other regions and be global.

In response, the DG commented on the recent internal audit of the Centre that recommended both partners to explore new potential areas and extend current activities. The DG informed about his vision for UNIDO services and the concept of inclusive and sustainable industrial development (ISID), which is aligned to the post-2015 development



agenda. Finally, the DG briefed on the General Conference in Lima and expressed his hope for Russian high –level participation in the work of UNIDO General Conference.



Meeting with the DG General and the Minister of Education and Science of the Russian Federation in the Ministry of Education and Science of the Russian Federation, Moscow

## THE DIRECTOR GENERAL'S MEETING WITH THE MINISTER OF FOREIGN AFFAIRS OF THE RUSSIAN FEDERATION

DG met with H.E. **MR. SERGEY LAVROV**, Minister of Foreign Affairs of the Russian Federation. The Minister expressed his full support for UNIDO and appreciation that the DG chose the Russian Federation as one of his first destinations to visit since his election. During the meeting the two leaders discussed the positive experience of cooperation between the Russian Federation and UNIDO and the good prospects to expand joint activities in the coming years given the country's continued commitment and strong interest in developing technical cooperation projects aligned with the Russian Federation's geographic and thematic priorities. In response, the DG mentioned that UNIDO has a strong portfolio of pipeline projects and is experiencing growing interest from countries such as Brazil, China and India to develop cooperation on inclusive and sustainable industrial development, which is promising for the organization's future. The DG then informed the Minister of UNIDO's five pillar strategy to refocus on new goals, provide more services, generate stronger partnerships, ensure more efficient and effective UNIDO in-house operations, and motivate staff. The DG and the Minister also demonstrated a shared emphasis on the importance of the General Conference and the adoption of the Lima Declaration by Member States, and the DG spoke of his wish for high level participation from the Russian Federation.



DG, Li Yong and H.E. Mr. Sergey Lavrov, Minister of Foreign Affairs of the Russian Federation

The DG attended an official lunch with **MR. GENNADIY GATILOV**, Deputy Minister of Foreign Affairs of the Russian Federation. The Deputy Minister expressed his appreciation for the DG's visit to the Russian Federation and his satisfaction with UNIDO project implementation, including the first project in Africa funded by the Russian Federation – the establishment of a fishery institute in Sierra Leone. The Deputy Minister also referred to the importance of international cooperation, citing the example of the BRICS platform and the importance of the work of diplomatic community in Vienna on institutionalization of the BRICS platform in Vienna and in UNIDO in particular, and in this connection the establishment of a UNIDO BRICS cooperation unit, and that this work should continue in terms of defining possible project portfolio, funding sources, mechanisms of implementation and monitoring and should define concrete milestones. The development of projects within the BRICS platform would promote UNIDO activities on strengthening the industrial base and on knowledge sharing and technology transfer within the group and beyond.

The DG highlighted UNIDO's activities in the frameworks of the Global Environmental Facility and Montreal Protocol, in which the organization has become one of most experienced implementing agencies. The DG also mentioned the importance of the upcoming General Conference in Lima, which will be an occasion to reconfirm to Member States UNIDO's vision for inclusive and sustainable industrial development, and adopt the Lima Declaration.

The DG also gave a keynote speech at the Ministry of Foreign Affairs, within the framework of the 'Golden Collection' project for the journal "International Affairs," on the vision for UNIDO's future as well as on cooperation with the Russian Federation.



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## THE DIRECTOR GENERAL’S MEETING WITH THE PRESIDENT OF THE RUSSIAN RAILWAYS COMPANY

The DG met with **MR. VLADIMIR YAKUNIN**, President of the Russian Railways Company. During the meeting, and DG and the President signed a Joint Declaration on support for the advancement of environmentally sustainable solutions in the Russian Federation. Discussion during the meeting also focused on projects funded by the Global Environmental Facility (GEF), including the project developed with the UNIDO Center for International Industrial Cooperation on “Environmentally Sound Management and Final Disposal of polychlorinated biphenyls (PCBs) at the Russian Railroad Network and other PCB Owners (Phase I)”, which has global relevance since it is directly linked to the implementation of the Stockholm Convention on Persistent Organic Pollutants. In this regard, the DG informed the President about his recent meeting with the Deputy Chair of the GEF who praised UNIDO activities. The DG also pledged to explore opportunities to develop new projects with Russian Railways in areas funded by the GEF, including waste management and elimination of PCBs. Finally, Mr Yakunin, in his capacity as President of the Railway Union of the CIS countries and President of the World Railway Union, proposed to share the positive experience of cooperation with UNIDO with other countries.

## DG MEETINGS ON 24 OCTOBER 2013

The Director General’s meeting at the UNIDO Center for International Industrial Cooperation (CIIC) in the Russian Federation

DG visited the UNIDO Center for International Industrial Cooperation (CIIC) in Moscow. During the meeting attended by **MR. VIKTOR ZAGREKOV**, Deputy Director Department of International Organizations, the Ministry of Foreign Affairs, **MR. SERGEY KOROTKOV**, Director of the CIIC and UNIDO Delegation, the discussion focused on the positive achievements of the UNIDO Center, and the commitment of both the Russian Federation and UNIDO to deepen cooperation and expand existing projects in the country, and the potential to replicate these success stories in other countries.



LI Yong, Director General, Mr. Sergey Korotkov, Director, UNIDO Centre for International Industrial Cooperation in the Russian Federation and Mr. Viktor Zagrekov, Deputy Director Department of International Organizations, the Ministry of Foreign Affairs



DG and UNIDO Delegation visited the UNIDO Center for International Industrial Cooperation (CIIC)

## THE DIRECTOR GENERAL'S MEETING WITH THE PRESIDENT OF THE RUSSIAN UNION OF INDUSTRIALISTS AND ENTREPRENEURS (RSPP) AND THE PRESIDENT OF THE INTERNATIONAL CONGRESS OF INDUSTRIALISTS AND ENTREPRENEURS (ICIE)

The DG met with **MR. ALEXANDER SHOKHIN**, President of the Russian Union of Industrialists and Entrepreneurs (RSPP) and **MR. VICTOR GLUKHICH**, President of the International Congress of Industrialists and Entrepreneurs (ICIE). Mr. Shokhin spoke about the long history of cooperation between UNIDO and the RSPP and the recently established Business-20 (B-20), the goal of which is to promote dialogue between the business community and the G-20. The DG responded that UNIDO and RSPP could be observers at G-20 and G-8 meetings. Mr. Shokhin also proposed that RSPP and UNIDO establish a business aid association to set priorities for sustainable industrial development, including infrastructure development and the promotion of green and bio-technologies. Mr. Glukhich added that environmental and waste issues should be also included in the areas of cooperation and discussed the development of projects in ICIE's geographic priority regions in North and Latin America and Middle East. Finally, the DG spoke about his new vision for UNIDO as a leading proponent of inclusive and sustainable industrial development, and the General Conference in Lima.

## THE DIRECTOR GENERAL'S MEETING WITH THE DEPUTY PRIME MINISTER OF THE RUSSIAN GOVERNMENT

The DG met with **MR. ARKADY DVORKOVICH**, Deputy Prime Minister of the Russian Government. The Deputy Prime Minister highlighted UNIDO's critical role in achieving the Millennium Development Goals and in shaping the post-2015 sustainable development agenda. The Deputy

Prime Minister also expressed the wish to expand cooperation between the Russian Federation and UNIDO to areas such as innovative technologies, water remediation, renewable energy, food security, industrial clusters and skills' upgrading. Waste management is also particularly important for the Russian Federation, given the legacy of industrial pollution from the Soviet period. The DG discussed his new vision for UNIDO, namely inclusive and sustainable industrial development and the importance of the upcoming General Conference in Lima during which Member States will adopt the Lima Declaration.



DG, Li Yong and HE Mr. Arkady Dvorkovich, Deputy Prime Minister of the Russian Government

## THE DIRECTOR GENERAL'S MEETING WITH THE DEPUTY MINISTER OF ENVIRONMENT OF THE RUSSIAN FEDERATION.

The DG met with **MR. RENAT GIZATULIN**, Deputy Minister of Environment of the Russian Federation. The Minister highlighted cooperation on clean technologies for SMEs, which is a priority area for the Russian Federation. The Deputy Minister suggested the establishment of a Russian Technology Centre, in cooperation with UNIDO, to support the development and dissemination of new technologies and best practices, with a view to facilitating greater access to such knowledge and information for Russian SMEs. Having supported the idea of creating such a Centre, Mr. Yong promised to consider the possibility of using potential of the UNIDO Centre for International Industrial Cooperation.

Discussion then focused on the potential to expand cooperation with UNIDO in various areas of environmental protection, particularly in light of the Russian Federation's intention to join the

Minamata Convention on reducing mercury emissions. The DG informed the Minister about his new vision for UNIDO and the importance of the upcoming General Conference in Lima where Member States will adopt the Lima Declaration on inclusive and sustainable industrial development. In response, the Deputy Minister reiterated his support for the organization and for continued joint activities between the Ministry and UNIDO.

The cooperation of UNIDO and Carlsberg company, owner of Baltika brewing company, in the area of minimizing adverse effect on the environment was discussed as a good example of the private-public partnership. According to Mr. Gizatulin, UNIDO's experience will be needed for the implementation of the Saint-Petersburg initiative which will operate as a private-public partnership for the development of the across-the-border cooperation and economically feasible actions and projects for the benefit of the Baltic region.

In conclusion, Mr. Yong said that UNIDO and the Ministry of Natural Resources and Environment of the Russian Federation had already worked together in 30 projects: "The success of these projects convinces us in the future fruitful cooperation, including promotion of the concept of 'clean' and innovative production."<sup>3</sup>



DG, Li Yong and Mr. Renat Gizatulin, Deputy Minister of Environment of the Russian Federation

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<sup>3</sup> Read more at: [http://www.ozoneprogram.ru/eng/events/23102013\\_en/](http://www.ozoneprogram.ru/eng/events/23102013_en/)

## JOINT TRAINING SESSION IN ASHGABAT ORGANIZED BY REPRESENTATIVES OF THE TURKMENIAN OZONE UNIT AND UNIDO PROJECT FOR HCFC PHASE-OUT IN THE RUSSIAN FEDERATION

On November 21–22, 2013, Ashgabat, the capital of Turkmenistan, saw a two-day training session dedicated to the use of natural refrigerants as alternatives to ozone depleting substances being under phase-out. The organizers were members of the Ozone Unit under the Turkmenian Ministry of Environment Protection and UNIDO project for HCFC phase-out in the Russian Federation. The session was timed to the 20th anniversary of signing the Vienna Convention and Montreal Protocol by Turkmenistan.

On the first day of the session, representatives of various decision-making ministries, organizations, agencies, and public offices took part.

Consideration was given to provisions and development of the international and Turkmenian legislation in the area of protection of the ozone layer and Earth's climate, and possible alternatives to ozone depleting substances and greenhouse gases to be used in Turkmenistan. The representatives of the Turkmenian party also communicated the situation in HCFC phase-out activities in Turkmenistan and implementation progress of the respective UNIDO/Turkmenistan project.

The Russian representatives shared their success in implementation of the project for HCFC phase-out in the Russian Federation. Special interest attracted development of the Russian legal framework, elaboration of by-laws, and technical regulations and standards of the Russian Federation and Customs Union. At least equal attention was given to collaboration between MNRE, FCS and MOI of the Russian Federation, and UNIDO-Business working group aimed at improving the legislation, suppressing illegal ODS importation, creating training centers, training HVAC&R installation technicians, holding federal competitions dedicated to the environment protection, etc.

On the second day, participants of the training session met representatives of the Ministry of Construction, Ministry of Environment Protection of Turkmenistan, largest public procurement authorities, foreign companies and representatives working on the territory of the country, and of the HVAC&R and construction sector (companies engaged in supply, installation and maintenance of refrigerating systems).

The meeting looked into the Turkmenian ozone layer protection legislation in detail. The UNIDO representatives dealt with matters of using natural refrigerants in Turkmenistan and existing international practice in application of refrigerating systems in hot countries. They also covered thermodynamic properties of natural refrigerants, their advantages, disadvantages, areas of successful application, global trends of their market development, and energy-efficient solutions using natural refrigerants.



Representatives of LG, GREE (Peyman commercial company), and Midea presented the situation on the Turkmenian HVAC&R market and working models of using refrigerants in the country.

Head of the Turkmenian Ozone Unit G. Joraeva showed the first training stand prepared with support of the UNIDO representatives for training of refrigeration technicians.

Then, students of Ashgabat college No. 4 held the first skill building session using the stand and rapid-response analyzer that determines the refrigerant type and composition. In December 2013, the Turkmenian Ozone Unit will deliver more up-to-date rapid-response analyzers for training of customs and other services engaged in control over the ODS use.

The two-day training session resulted in recommendations on standardization, creation, and development of professional trade associations; training of specialists in the matters of environmentally safe refrigeration and air-conditioning; training of specialists in the matters of suppression of illegal importation and control over the ODS use (customs service, state committee for standardization); elaboration of systems for technicians' certification, and exchange of experience in HCFC phase-out; and in other fields related to adoption of environmentally safe technologies.



## UNIDO CIIC RUSSIA ONGOING PROJECTS

Active projects in 2013:

1. Market Transformation Programme on Energy Efficiency in GHG-Intensive Industries in Russia
2. Phase Out HCFCs and Promotion of HFC-free Energy Efficient Refrigeration and Air-Conditioning Systems in the Russian Federation Through Technology Transfer.
3. Creation of a UNIDO BAT/BEP Centre for environmentally safe disposal of potentially hazardous consumer products and industrial wastes.

Also due to significant work of the UNIDO CIIC Russia team several new initiatives turned out to be future projects in 2014:

1. Russia—Brazil Partnership in Technology and Innovation for development of SMEs with expanding to all BRICS countries.
2. Environmentally Sound Management and Final Disposal of PCBs at the Russian Railroad Network and Other PCB Owners.
3. Save the Source: Catalyzing Market Transformation of Breweries from a Major Natural Resource Consuming Industry to a Pro-active Steward for Resource Efficient Cleaner Production.
4. Low Carbon Technology Transfer in the Russian Federation.
5. GEF UNIDO Cleantech Programme for SMEs in the Russian Federation.
6. Transfer of Environmentally Sound Technologies for Industrial Climate Change Mitigation in the Republic of Tatarstan, Russian Federation.

7. Regional Demonstration Project for Coordinated Management of ODS and POPs Disposal in the Russian Federation, Ukraine, Belarus, Kazakhstan and Armenia.

More information see below.



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

### PROJECT OVERVIEW

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

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

The primary objective of this project is the direct **PHASE OUT 600 ODP TONNES OF HCFCs** in the foam and refrigeration manufacturing sectors in the Russian Federation to meet the 2015 Montreal Protocol target. The GHG emissions reduction resulting from the phase out of HCFCs will be approximately 15.6 MMT CO<sub>2</sub>. The secondary objective of the project is to introduce more energy efficient designs, through technology transfer, during the conversion of refrigeration and air conditioning manufacturing facilities. By doing the project aims to achieve indirect GHG emissions reduction through reduced electricity consumption in the commercial and industrial refrigeration sectors, is approximately 10 MMT CO<sub>2</sub> in 5 years.

The secondary objective of the project is to introduce more energy efficient designs, through technology transfer, during the conversion of refrigeration and air conditioning manufacturing facilities.

Expected outcomes of the project include:

1. Policy, legal framework and institutional capacity required to assess and accelerate HCFC phase out and reduction of HFC consumption.
2. Analysis of the level of residual demand of HCFC after 2014 and 2019 by looking at the stock of DS equipment in the country.
3. Monitoring and assessment of HCFCs and HFCs production, consumption, export and import.
4. Policies reviewed and HCFC legislation developed. **HARMONISATION OF REGULATIONS** in the Russian Federation with EC F-gases regulations.
5. Up-grading of ODS and HFC import/export legislation, customs officers training activities, procurement of ODS control equipment for customs.
6. Determination of the most appropriate phase out strategies for different subsectors. Capacity to adapt to developing phase out scenarios and technology developments.
7. **MEET MONTREAL PROTOCOL PHASE OUT OBLIGATIONS.** Technical assessment of capacity within sectors.
8. Phase out of 600 ODP tonnes HCFC (22,141b,142b) (Direct phase out 60% and 40% by replication)
9. Demonstration project to make a full technical and economical analysis of recycling and destruction scheme
10. Reduction on ODS Bank Monitoring, Inspection and Verification procedures. Installation, commissioning and operating training plan
11. Analysis of the financial operating model and the commercial viability of replica schemes. Increased market share of more energy efficient refrigeration and air conditioning equipment.
12. Greater consumer and user awareness and increased demand for energy efficient technology. Technology Transfer of non-HFC alternatives to HCFC applications. Technology

WITH THE HELP OF THE PROJECT TEAM IN 2013 THE DRAFT FEDERAL LAW “ON AMENDING FEDERAL LAW “ON ENVIRONMENT PROTECTION” AND ARTICLE 82 HAS BEEN COMPLETELY AGREED UPON AND PASSED BY THE STATE DUMA OF THE RUSSIAN FEDERATION

transfer for design of higher efficiency RAC systems (in conjunction with purchase of production lines for demonstration projects).

13. Private sector energy efficient design capacity High efficiency manufacturing equipment. Stakeholder facilitation to agree production closure strategy.
14. Reduction of 1840 metric tones of HCFCs closed.

## INSTITUTIONAL CAPACITY BUILDING

Within the framework of the UNIDO/GEF Project, the Russian Government and federal bodies concerned are rendered assistance in elaboration of draft legal norms and regulatory documents, sectoral and federal programs and action plans. These documents are expected to facilitate solving of such issues as:

- Licensing of and quota allocation for production and import of HCFCs, increase of customs control
- Ban on HCFC-based equipment import
- Organization of HCFC use control
- Destruction of HCFCs at large and average facilities
- Promotion of the use of ozone-friendly refrigerants including ammonia
- Training and obligatory certification of specialists who work with refrigerants

DUE TO THE UNIDO TEAM'S EFFECTIVE EFFORTS THE ALL-RUSSIAN COMPETITION "PROTECT THE OZONE LAYER AND EARTH CLIMATE" GAINED THE FEDERAL STATUS

UNIDO experts helped MNRE to prepare materials for the Russian Government session dedicated to the establishment of the state system for regulation of use of ozone-depleting substances and ODS-based products within the territory of the Russian Federation was considered. Institutional offers reflecting approach of more than 800 largest HVAC&R businesses, research institutes and higher educational establishments were collected, summarized and presented, as well as analytical reports and estimates of ODS production, import, export and consumption. Currently, international best practices in HCFCs use regulation are being studied, analyzed and summarized and the future findings can be used in elaboration of respective Russian statutory and regulatory documentation.

With the help of the project team in 2013 the draft Federal Law "On amending Federal Law "On Environment Protection" and Article 82 of the Russian Code of Administrative Violations in part of ensuring fulfillment by the Russian Federation of its obligations under the Montreal Protocol on Substances That Deplete the Ozone Layer to the Vienna Convention for the Protection of the

Ozone Layer” has been completely agreed upon and presented to the State Duma of the Russian Federation due to which all concerned market players will have the opportunity of taking part in the preparation of relevant bylaws preparation.

Also due to the UNIDO team’s multiple effective efforts the All-Russian Competition “Protect the Ozone Layer and Earth Climate” gained the Federal Status (Edict of the Government of the Russian Federation No. 2189-p of 26.11.2012). Following this on September 16, 2013, a ceremony of awarding the winners of all-Russian competition “Protect the Ozone Layer and the Climate of Earth” took place in the conference hall of the Ministry of Natural Resources and Environment of the Russian Federation.

This event was supported by such major industrial companies as Daikin Europe, GoldStar, DuPont Science and Technology, Research Institute for Ecology and Rational Use of Natural Resources.

The awarding ceremony was attended by Semen Levi, the Deputy Minister of Natural Resources and Environment, Sergey Korotkov, the Director of the UNIDO Center for International Industrial Cooperation in the Russian Federation, representatives of the Ministry of Natural Resources and Environment, Ministry of Education and Science, UNIDO, Federal Service for Supervision of Natural Resource Usage, Federal Service for Hydrometeorology and Environmental Monitoring, and the competition partners: Daikin Europe, OOO DuPont Science and Technologies, and GoldStar.

689 best works selected at the regional stage from 58 constituents of the Russian Federation were submitted for the federal stage.

## TECHNOLOGY TRANSFER TO RUSSIAN ENTERPRISES

Within the framework of the component, help will be rendered to Russian manufacturers and producers of refrigerating equipment and foam materials in transition to the use of ozone-friendly substances and technologies. Technologies transfer will be performed via mechanisms of UNIDO and the Best Practices Center. UNIDO’s approaches tried in a number of countries will make it possible to use existing production equipment avoiding significant modernization costs. Thus, technologies of low-cost replacement of HCFC-141b (which is not produced in Russia) with methyl formate—minor product of natural and associated gas processing—have already been tried in RSA, Brazil, Mexico and USA. Within the framework of the Project, technical support to 3 or 4 system houses is provided with regards to development, adaptation and implementation of ozone-friendly formulas of components used in foam production. Such components are consumed by hundreds of Russian production facilities from throughout Russia.



In 2013 even more activities were taken to provide technology transfer and training sessions for to Russian manufacturers, including close work with the next project beneficiaries:

- Pozis (RSA), the Republic of Tatarstan, Russian Federation
- PLC "AISBERG", Smolensk, Russian Federation
- PLC «POLUS», Yoshkar-Ola, Russian Federation
- LLC «VLADIPUR», Vladimir, Russian Federation
- PLC «Mosflowline», Moscow, Russian Federation
- LLC «Saratov Electricl Product PA», SEPO-ZEM , Saratov, Russian Federation
- LLC «Dow-Izolan», Vladimir, Russian Federation
- LLC «Mariholodmash», Yoshkar-Ola, Russian Federation
- LLC «Orsk Refrigerator Plant», Orsk, Russian Federation
- LLC «Elastocam», the Republic of Tatarstan, Russian Federation

## **PUBLIC AWARENESS AND STIMULATING OF MARKET GROWTH FOR ENERGY EFFICIENT EQUIPMENT**

Stimulating of market growth for HVAC&R equipment is supposed to be performed through financing of information support of the Russia's transition to the use of ozone-friendly substances and technologies as well as providing of access to information resources of the Best Practices Centre which is

BESIDES, THIS COMPONENT PROVIDES FOR ACTIONS ON DEVELOPMENT OF ENVIRONMENTAL COMPETENCE AMONG STUDENTS OF ELEMENTARY, SECONDARY AND HIGHER VOCATIONAL INSTITUTIONS AND SECONDARY GENERAL SCHOOLS WITH REGARDS TO THE PROTECTION OF THE OZONE LAYER



being created now. Given that an effort to achieve two goals at the same time is made within the framework of the Project, additional institutional support to the market of energy-efficient HVAC&R equipment is planned. In 2011-2015, new standards will be developed, professional community will be informed through conferences of industrial units and self-regulated organizations, work with largest industry mass media will be done, and main industry exhibitions, conferences and workshops visited. One of the principal tools of implementation of this Project component is creation of an internet-portal and regular coverage of HCFC phase out in **UNIDO IN RUSSIA** magazine.

Besides, this component provides for actions on development of environmental competence among students of elementary, secondary and higher vocational institutions and secondary general schools with regards to the protection of the ozone layer and fulfillment of the international commitments under the Vienna Convention and Montreal Protocol. Help will be rendered in building of the all-Russian certification system of specialists working with ODS, elaborating of curricula, making of training programs and preparing of academic kits to support training activities, establishing of a pilot training center equipped with up-to-date display and training equipment.

Within the framework of this component, help is rendered in training of personnel of customs points of the Federal Customs Service and Ministry of Internal Affairs of the Russian Federation—the object of that training being acquisition of skills of ODS detection—and that of the Federal Service for Supervision of Natural Resource Usage—the object being environmental control of ODS.



**IN THE FRAMEWORKS OF THIS COMPONENT A HUGE EVENT WAS REALIZED — I.E. ALL-RUSSIAN COMPETITION “PROTECT THE OZONE LAYER AND EARTH CLIMATE”.**

On September 16, 2013, **A CEREMONY OF AWARDING THE WINNERS OF ALL-RUSSIAN COMPETITION “PROTECT THE OZONE LAYER AND THE CLIMATE OF EARTH”** TOOK PLACE in the conference hall of the Ministry of Natural Resources and Environment of the Russian Federation. The competition was held as part of the formal events of the Year of the Environmental Protection in pursuance

of the Russian President's Decree No. 1157 "On conducting the Year of the Environmental Protection in the Russian Federation" of 10.08.2012 and Edict of the Government of the Russian Federation No. 2189-p of 26.11.2012. The competition participants were students of schools, secondary vocational and higher education institutions. The competition organizers were: the Ministry of Natural Resources and Environment, Ministry of Education and Science of the Russian Federation, and UNIDO (United Nations Industrial Development Organization).

The competition was held with support of the Global Environment Facility which implements the project for HCFC phase out in the Russian Federation in cooperation with UNIDO and the Russian Ministry of Natural Resources and Environment.



## BAT/BEP CENTRE FOR ENVIRONMENTALLY SAFE DISPOSAL OF POTENTIALLY HAZARDOUS CONSUMER PRODUCTS AND INDUSTRIAL WASTES

### PROJECT OVERVIEW

Russian Federation faces the challenge with the ever-increasing volumes of used consumer and industrial products and needs to undertake strong efforts to apply modern methods to reduce the negative environment impact and make possible the recycling and environmentally safe disposal of these products after their decommissioning.

The project addresses the creation of capacity for management of electronic, electric and rubber wastes. These products being safe during their utilization could become hazardous and toxic if recycled and disposed after their utilization by environmentally unsafe methods.

The project assists in developing of the industrial strategy and building up the management capabilities at several demonstration regions for introduction of BAT/BET for efficient recycling of these wastes, thus preventing the additional creation of toxic and hazardous wastes and saving of natural resources through reusing and recycling of valuable components of electronic, electric and rubber wastes.

It will be done by improving and strengthening the regulation and the regulation enforcement practices; by creating organizational and technical capacities through training and strengthening of specialized centers; by collecting information and developing information systems for assessment of possibilities of application of BAT/BEP on recycling and disposal of the wastes; and by pilot applications of the several BAT and working out selected BEP for recycling and disposal of electric and electronic wastes (EEW) and rubber technical goods (RGT).

The results of the project are to be introduced for application in other countries of the Euro-Asian Economic Community (EurAsEC).

Besides the regular activities there were several events within the frameworks of the project in 2013-beginning of 2014:

### **March 2013**

Organisation and participation in the International conference "Topical Issues of Recycling Waste Tires and the Use of Crumb Rubber in Road Construction" (April, 11-12) which was held in St-Petersburg. Representatives of tires producers, waste tires recyclers (including members of the association "Shinoecology") and road constructing companies took part in the event.

### **April 2013**

Organisation and participation in the round table meeting "Changes in Environmental Legislation of the Russian Federation. Implementation of the Principle of "Producer Responsibility" as a Major Factor Contributing to the Formation of the Waste Recycling Industry in Russia" which was held in at the Analytical Centre for the Government of the Russian Federation (April, 18). Participated representatives of several professional unions of producers and recyclers.

In **April 2014** several major conferences were held in the frameworks of the Project, i.e. "Topical Issues of Recycling Waste Tires and the Use of Crumb Rubber in Road Construction" (April, 11-12) which was held in St-Petersburg. Representatives of tires producers, waste tires recyclers (including members of the association "Shinoecology") and road constructing companies participated in the event.

The next event was Round table meeting "Changes in Environmental Legislation of the Russian Federation. Implementation of the Principle of "Producer Responsibility" as a Major Factor Contributing to the Formation of the Waste Recycling Industry in Russia" which was held in the Analytical Centre for the Government of the Russian Federation (April, 18). Representatives of several professional unions of producers and recyclers took part in this event.



## MARKET TRANSFORMATION PROGRAMME ON ENERGY EFFICIENCY IN GHG-INTENSIVE INDUSTRIES IN RUSSIA

### PROJECT OVERVIEW

The project aim is to reduce greenhouse gas emissions in the Russian Federation by transforming the market for Industrial Energy Efficiency in GHG-intensive industries. The project will lead to a transformation of the market for industrial energy efficiency through activities that will i) improve industrial energy efficiency in heavy industries, ii) have a direct positive effect on rational energy use with related environmental benefits, and iii) improve the commercial prospects of industrial borrowers. Initial estimates from an EBRD market demand study and model for Russia indicate that a dedicated financing facility of 120 million USD, assuming 80% debt financing for projects, could generate energy savings of 5600 GW per annum and emission reductions of up to 1.35 million tonnes CO<sub>2eq</sub> per annum.

This aim is to be realized through the following major steps:

### COMPONENT 1. NATIONAL PROGRAM TO ESTABLISH VOLUNTARY TARGET-SETTING AGREEMENTS WITH INDUSTRY

Expected outcomes of this Component are:

- A national mechanism is established for negotiating target-setting agreements to encourage greater energy efficiency in Russian industry.
- A national energy savings action plan is developed for industry to identify overall goals along with a framework of incentives and penalties for energy saving performance.
- Target-setting (voluntary) agreements are established between the government and 75 energy-intensive industrial firms in 4 or more industrial sectors.

- A tailored portfolio of financial incentives and technical assistance is made available to participating firms, including: a) Benchmarking performance against current best practices; b) Identification of sector-specific energy efficient process improvements (new technologies, procedures); c) Targeted technical assistance; d) Project implementation assistance.

INDUSTRY IN THE  
RUSSIAN FEDERATION IS  
AMONG THE WORLD'S  
MOST ENERGY INTENSIVE  
BUT THERE ARE NO  
INCENTIVES TO  
ENCOURAGE ENERGY  
EFFICIENT BEHAVIOUR IN  
INDUSTRIES – NEITHER  
CARROTS NOR STICKS.\*

*\*GEF, PROJECT PIF*

## COMPONENT 2: NATIONAL PROGRAM TO IMPLEMENT ISO-COMPATIBLE NATIONAL ENERGY MANAGEMENT STANDARD

Expected outcomes of this Component are:

- Industrial facilities understand importance of energy management standard and undertake energy management planning.
- Structure in place for reporting energy intensity improvements for any plant implementing the standard, whether ISO or not.
- Peer-to-peer network established to assist companies in implementing their energy management plans.

- Participating companies have access to technical and financial resources 5.300 industrial plants certified as energy efficient through compliance with standard

## COMPONENT 3. STIMULATION OF MARKET DEMAND FOR ENERGY EFFICIENCY GOODS AND SERVICES

Expected outcomes of this Component are:

- National information campaign on the benefits of energy management reaches 3500 facilities.
- National recognition program established for industrial facilities that implement an energy management plan and report energy intensity improvement.
- Recognition and financial incentives offered for companies that fully comply with the national energy management standard; additional project implementation incentives for companies participating in target-setting agreements.

- Use of preferred suppliers encouraged through targeted incentives

#### COMPONENT 4. CAPACITY BUILDING FOR ENERGY EFFICIENCY, INCLUDING ENERGY MANAGEMENT AND SYSTEMS OPTIMIZATION, IN INDUSTRY AND THE SUPPLY CHAIN TO SUPPORT INVESTMENTS IN ENERGY EFFICIENT TECHNOLOGIES AND OPERATION

Expected outcomes of this Component are:

- Energy management training and web-based tools developed as well as 30 industrial and energy efficiency professionals receive expert level energy management training.
- System optimization training and web-based tools developed. 75 energy efficiency professionals receive expert level systems optimization training.
- Energy management and system optimization experts offer awareness training to 500 industry representatives.
- Energy management and system experts assist industrial firms in identifying and implementing energy efficiency projects

#### COMPONENT 5. DEDICATED FINANCING MECHANISM FOR ENERGY EFFICIENCY INVESTMENT

Expected outcomes of this Component are:

- Investments in energy efficient technologies and energy efficiency systems optimization projects over 5 years.
- additional projects resulting from standards implementation.
- mechanisms for future post project sustainability established.

Industry in the Russian Federation is among the world's most energy intensive. Since energy was plentiful and cheap in Soviet times, little effort was made to conserve it. In recent times, rising energy prices have had a major impact on profits and production, which also has created a significant market potential for energy efficient products and services. Yet despite this, energy efficiency in heavy industries in the Russian Federation has not been implemented in a significant way, and a large potential exists for energy intensity improvement. A recent EBRD study in the Russian steel industry for example showed that in comparison to international good practice electricity and fossil fuel consumption are excessive - leading directly to significantly higher energy costs and environmental impacts. Energy used per tonne product showed

significant room for improvement in all process<sup>4</sup>. Total energy saving from short-medium term opportunities (i.e. with less than 5 years payback) amounted to USD107 million per year, 2.9 years simple payback and 2.5 million t CO<sub>2eq</sub> savings.

**THIS PROJECT WILL CREATE ADDITIONAL DEMAND FOR THE ENERGY EFFICIENCY FINANCING IN RUSSIA AND ENCOURAGE RUSSIAN INDUSTRY TO MAKE USE OF THEIR OWN RESOURCES AS WELL AS BANK FINANCE FOR ENERGY SAVING INVESTMENTS**

For many companies in the Russian Federation however the prospects for improving energy efficiency remain limited because only limited information is available on what improvements can be implemented. There is also little support or encouragement to management to help shift the emphasis away from increased production and more towards cost efficiency and

sustainability.

There are numerous barriers that stand in the way of financing and implementing energy efficiency options. These include:

## **INDUSTRIAL DECISION-MAKERS**

There is uncertainty and lack of information about available options, best practice, benchmarks and related financial reward.

Most industries have a budgetary disconnect between capital projects (equipment purchases) and operating expenses (energy and maintenance)

Energy efficiency is not a core interest mission for most industries and company strategies tend to focus on output growth rather than cost management.

Industrial markets focus on components, not on systems. When processes change over time, inefficiencies compound and reoccur.

Technology aims to support production, and production practices can have a significant impact on operational efficiency. These practices, however, are usually outside the control of the facility engineers.

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<sup>4</sup> A theoretical model shows savings for a typical steel mill for each process in the order of 1 400 GWh/yr in coking, 750 GWh/yr in sintering, 1 600 GWh/yr in the blast furnace, 1 000 GWh/yr in the Basic Oxygen Steel-making Process, 350 GWh/yr in the EAF Steel-making Process, and 3 000 GWh/yr in hot rolling mills.



Investment planning of companies does not taken into account future normalization of energy costs to market prices

System optimization knowledge resides with the individual who has been trained - it is not institutionalized. Trained individuals leave or transfer and take this knowledge with them

## SUPPLY CHAIN

Expertise – most consulting expertise on energy efficiency available in the region focuses on technology and not on processes and systems. Overall knowledge of Energy Management Systems is also limited. Design engineers have generally not been trained to design efficient systems. There is a need to build capacity in the supply chain on energy management systems, system optimization, data capture, analysis and reporting.

Marketing – local suppliers of finance, equipment and expertise have limited experience and skills in marketing their products to industrial decision-makers

## POLICY

There are no national industrial energy efficiency targets or policies aimed at improving industrial energy efficiency. There is generally a lack of knowledge about how best to address industrial energy efficiency at a government level.

There are no incentives to encourage energy efficient behaviour in industries – neither carrots nor sticks.

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TRAINING TOOLS WILL INCLUDE A WEB-BASED INFORMATION “LIBRARY”, WRITTEN IN ISO-COMPATIBLE LANGUAGE, PROVIDING TECHNICAL INFORMATION ON PROJECTS, PROCEDURES AND WORK INSTRUCTIONS

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To address these issues UNIDO and EBRD will improve energy efficiency through 1) technical assistance to develop target-setting agreements between the national government and industry and associated enabling policies, 2) technical assistance in the development and promulgation of a national energy management standard consistent with ISO principals, 3) stimulation of market demand for energy efficiency goods and services, 4) Capacity building for energy efficiency, including energy management and systems optimization, in industry and the supply chain to support investments in energy efficient technologies and operation, 5) Dedicated financing mechanism for energy efficiency investment. The goal is to establish a cadre of experts in energy management and system optimization that can assist Russian industries in developing and implementing energy efficiency improvement projects. Interest and value will be developed for the services provided by these suppliers through awareness training of

personnel at industrial facilities and national recognition of successful projects developed by these skilled experts.

The EBRD plans direct loans, credit lines, carbon finance and specialized loan or equity facilities to co-finance against the proposed investment component of the GEF project. All these are products which are well developed in the EBRD and which are already in use in Russia or other countries of operation of the EBRD. Based on the Bank's already extensive investment portfolio in Russia (the EBRD currently has outstanding loans or investments in the Russian general industry sector alone totaling approximately €1.2 billion) it is expected that all of these instruments will be employed in co-financing the investment component of the GEF project. The PPG will be used to identify the appropriate mechanisms and incentives (such as loan guarantees, interest rate subsidies, etc) which will be needed to create demand for energy efficiency financing to be delivered through the Bank's established mechanisms and which will be funded (or partially funded) through the investment component of the GEF grant.

This project will create additional demand for the energy efficiency financing in Russia and encourage Russian industry to make use of their own resources as well as bank finance for energy saving investments. The loan component of the co-financing described in the project is that which the EBRD can itself commit during the project. In addition to this, within this project, a substantial amount of local co-financing will certainly be made available for investments including from the local financial sector. Estimations of these amounts could be made during execution of the PPG.

The TA component will address key gaps in the institutional framework for energy efficiency in Russia, These gaps have been identified by the EBRD and UNIDO based on the EBRD's experience in other east European or CIS countries and both organizations' extensive knowledge of support frameworks and programmes of energy agencies across Europe and in many developing countries (the key gaps include a lack of standards for energy efficiency, limited availability of information about energy efficiency technologies or benefits and very limited federal or regional support or incentives to address energy efficiency). In addressing these gaps through the preparation and implementation of the principal energy efficiency programme in the Russian Federation the programme will lead directly to increased demand for energy efficiency technologies and hence to implementation of energy efficiency measures, practices and investments.

The capacity building component will support the introduction of targeting and benchmarking (possibly through voluntary agreements as will be determined during the PPG) as well as a Management System for Energy (MSE or Energy Management Standard) to be promulgated by national/regional authorities. The MSE will document the means by which industrial facilities will achieve their respective targets. Capacity building will be provided for companies in the selected energy-intensive sub-sectors. Training curricula will be at both the expert level for long-term capacity-building and at the plant level for near-term implementation, with the latter offered through the trained experts- initially with technical assistance from international

experts. This training (both expert and plant) will focus on both energy management, including the process of establishing an energy management plan, and on energy systems optimization (motor and steam systems) to provide a means to enable companies to comply with the standard. Training tools will include a web-based information “library”, written in ISO-compatible language, providing technical information on projects, procedures and work instructions.



## PARTNERSHIP BETWEEN COUNTRIES IN TECHNOLOGICAL AND INNOVATIONS FOR DEVELOPING SMES

### DESCRIPTION

UNIDO/BRICS project is aimed to enhance the development of industrial cooperation between the BRICS members on the basis of World scientific achievements, modern technology and innovations. For these purposes the Project Action Plan for 2012-2014 has been worked out for setting up Technology platform and establishing partnership for its practical implementation.

“The Technology platform of the BRICS countries is being worked out by UNIDO experts for uniting the technological potential of the participant countries to enhance the international industrial cooperation between the BRICS members for the sustainable economy establishment, development of real economy sector, financial sustainability and social stability reinforcement.

The action plan upon the setting up of Technology platform and its practical usage stems from the following factors determining the development of industrial sectors, their modernization and diversification:

- The ability of the owners of technological potential to supply the BRICS countries with the latest world-class technologies, competitive equipment, professional engineering services and specialists training.
- The demand of the national economies of the BRICS countries for the mutually beneficial technological cooperation for the active development of the priority clusters stated in the long-term plans for industrial development of the participant countries.

According to the 2011/12 Summits recommendations the strategic goal of the international industrial cooperation between the BRICS countries is the following – active Medium business and Middle class development assistance for social-economic stability enhancement.

Experience exchange is envisaged dealing with organizational and financial support of Medium business participation in the international industrial cooperation under the framework of

private-public partnership on the basis of BRICS Technology platform (Brazil, Russia, India, China, South Africa).

## TECHNOLOGY MOTIVATION (SHOWN ON THE CASE OF SOUTH AFRICA IN BRICS)

**SOUTH AFRICA.** The development of the Technology platform is based upon the initiative proposals from private and public enterprises of the BRICS countries with the focus on the priority clusters of the participants' industrial development.

For the development of international innovation cooperation South Africa owns the latest technologies:

- Liquid gas and liquid coal production including unique production of aviation fuel;

IN THE FRAME OF  
PROGRAM RUSSIAN-  
UNIDO COOPERATION,  
CONTEMPORARY RUSSIAN  
FEDERATION IS APPEARED  
AS TECHNOLOGICAL  
DONOR FOR DEVELOPING  
COUNTRIES

- Having no world analogues technology of solar energy films production;

- Unique technology of steel production from the magnetite ore waste products;

- Titanium production technology is being elaborated thus making South Africa one the leader in this sector;

- Technologies of ore primary processing based on many-years experience in mining;

- Progressive laboratory technologies of materials research

and testing; **Bio Technologies**

- Nanotechnologies development including nanosteel research by the Nanosteel Institute of South Africa.

Metal and metal products fabrication is considered to be one of the priority clusters of South Africa's National Plan of development (NDP 2030) and the Industrial Policy Action Plan of the Department of Trade and Industry of South Africa (IPAP).

The Fifth BRICS Summit will take place in South Africa on March 15-17, 2013. Besides, two important international events in metal industry will be held before this under BRICS framework: "BRICS Foundry Forum" in Johannesburg on March 11-12, 2013 and "South Africa Metal Casting Conference" in Pilanesberg on March 13-14, 2013.

**SOUTH AFRICA – BRICS.** Supporting the active partnership under BRICS framework the following international Forums took place in South Africa in 2012:

«BRICS Economic Outlook in South Africa Conference», Cape Town, June 26-27, 2012

«The BRICS Africa Export Import Forum 2012», Johannesburg, July 15-17, 2010

South Africa's National Development Plan 2030 (NDP 2030) states out the importance of technology partnership with China, India, Russia and Brazil under BRICS framework highlighting the active stand of China and India upon the cooperation with South Africa and the increase of progress in relationships with Russia and Brazil.

The press release issued by the Presidency of South African President Jacob Zuma

During the Fourth BRICS Summit in New Delhi on March 28-29, 2012 Jacob Zuma, President of South Africa, had a series of meetings with D.A. Medvedev, President of Russia, and Dilma Rousseff, President of Brazil. Following the results of these meetings the Administration of Jacob Zuma issued press release pointing out the importance of cooperation in the key areas for the implementation of the new long-term plan of South Africa's development:

Cooperation with Russia – in the fields of engineering and education, mining industry, steel and platinum production, energy;

Cooperation with Brazil – in the fields of transportation and logistics, railways, motorways, cooperation between the Banks of development (DBSA-BNDES),

WITH RUSSIA TECHNICAL ASSISTANCE THERE WERE BUILT 359 OBJECTS IN AFRICA BEFORE 1991 INCLUDING 132 INDUSTRIAL PROJECTS BASED ON RUSSIAN TECHNOLOGY, EQUIPMENT AND SERVICES

gas resources.

**RUSSIA – SOUTH AFRICA.** One of the key directions of South Africa's Development Plan is considered to be active engagement of Medium business into industrial cooperation and its support for gaining access to the modern international technologies.

Integration of such work can be shown as an example by activity of "International Science Bridge" (ISB). specializing in the sphere of development of technology cooperation and following to South Africa priority clusters of industrial development and jointly with Russian enterprises engaged, worked out the Concepts and Proposals on the basis of contemporary Russian technologies, engineering capacities and equipment:

- "Small metallurgy of scrap processing in South Africa: **steel Mini and Micro casting and rolling mills** – evaluation and application".

- "Small energy in South Africa: Renewable energy and **Mini-power stations** based on "Green coal" eco-technology".

- “Solar Water Heaters production and assembly **Mini plants** in South Africa: motivation and advantages”.
- “Agricultural processing **Mini mills** in South Africa”.
- “New building materials and technologies for housing construction by **Mini construction Plants**”.
- **Mini Mills** for Industrial wastes processing in South Africa (in the process).

In cooperation with Russian partners ISB has made considerable job on Presentation of Conceptions and potential Projects for central and provincial South African organizations, as well as development corporations, TECHNOLOGY PLATFORM UNIDO - BRICS PROJECT financial institutions and private companies within four Provinces during business visits including investment mission in the frame of industrial development support program of the Department of Trade and Industry of South Africa (DTI EMIA).

Adaptability and motivation of the Conceptions and Projects with consideration of specific traits of cooperation with South African Medium business, made it easy to integrate it into working out of UNIDO/BRICS Project “**Partnership between the BRICS countries in the spheres of science, technology and innovations for middle and small business development**”.

With the assistance of UNIDO Moscow Center initiative partnership proposals of Russian enterprises and ISB have been oriented onto UNIDO/BRICS Project for creating of the BRICS Technology Platform for involvement of the Medium business into the international industrial cooperation.

Russian partners worked out Coordinating Action Plans 2012-2014 for the development of industrial cooperation and partnership in the priority branches on the basis of the established structure of regional interaction:

At implementation of Action Plans, worked out on the basis of past and present regional cooperation experience, long-term recommendations of South Africa’s National Development Plan 2030 approved by SA Cabinet on 10 September 2012 will be taken into consideration.

## **MOTIVATION FOR RUSSIAN TECHNOLOGY PARTNERS**

Africa – Russia are used to be traditional partners for industrial cooperation. With Russia technical assistance there were built 359 objects in Africa before 1991 including 132 industrial projects based on Russian technology, equipment and services in various national economy sectors of African countries including Transport, Energy, Mining, Oil-Gas, Construction, Fisheries, Water Resources, Education and Training.

It is remarkable that, in the frame of Program Russian-UNIDO cooperation, contemporary Russian Federation is appeared as technological donor for developing countries.

Also NEPAD Seminar, held some time ago in Moscow with the subject “**NEPAD: A CALL FOR A NEW PARTNERSHIP BETWEEN AFRICA AND RUSSIA**”, emphasized the expected role of the Russian Federation as Development Partner of International Community.

**Russian Medium Business Enterprises (MBE)** as Development partners have enough experience of international cooperation and possess enough resources including intellectual, technological and industrial as well as international cooperation experience based on science achievements and modern technologies

They possess experience with modern leading companies of the world in various fields as well many years of previous experience assisting to economic of developing countries of Africa. It makes Russian enterprises as potential partners and capable high professional participants of joint Technology and Innovation projects in international industrial partnership.





## NEW INITIATIVES

A huge work has been done in order to implement great ideas into **NEW INITIATIVE AND PROJECTS**. UNIDO CIIC team **MADE THESE EFFORTS SUCCESSFUL**. Here are the projects to be realized in the nearest future:

1. Environmentally Sound Management and Final Disposal of PCBs at the Russian Railroad Network and Other PCB Owners.
2. Save the Source: Catalyzing Market Transformation of Breweries from a Major Natural Resource Consuming Industry to a Pro-active Steward for Resource Efficient Cleaner Production.
3. Low carbon technology transfer in the Russian Federation.
4. GEF UNIDO Cleantech Programme for SMEs in the Russian Federation.
5. Transfer of Environmentally Sound Technologies for Industrial Climate Change Mitigation in the Republic of Tatarstan, Russian Federation.
6. Regional Demonstration Project for Coordinated Management of ODS and POPs Disposal in the Russian Federation, Ukraine, Belarus, Kazakhstan and Armenia.

More information about see below.



## ENVIRONMENTALLY SOUND MANAGEMENT AND FINAL DISPOSAL OF PCBs AT THE RUSSIAN RAILROAD NETWORK AND OTHER PCB OWNERS

### DESCRIPTION

The project will build capacity to introduce and implement a PCB management system to facilitate the implementation of the Stockholm Convention on POPs , will dispose of at least 3,800 tonnes of PCBs and PCB-containing equipment in an environmentally-sound manner and will maximize opportunities for public-private partnership through development of efficient policies and regulations.

Gef UNIDO agency to implement the project is UNIDO and UNIDO CIIC Russia, Russian Executing Agencies are Ministry of Natural Resources and Environment Russian Railroad Holding.

The project seeks to "establish the national environmentally sound management (ESM) system for PCB's phase out and disposal and promote local use of non-combustion technologies for disposal of PCBs at the Russian railroad network and other PCB owners". It intends to carry out and effect the analysis, interim storage, collection, labelling, handling, transport and disposal of PCB-containing electrical equipment and related wastes.

Institutional, regulatory and human resources capacity building to support the national ESM system for PCB disposal is also to be carried out. As a former producer of PCBs and related equipment, the inventory of contaminated equipment is estimated to run in the millions of units. Overall level of awareness of the hazards of PCBs appears low and with the absence of adequate legislation there has been little incentive to date for owners of PCB equipment to take special measures to decontaminate or phase out the equipment. As expected, there is commensurate low technical, institutional, and infrastructural capacity to deal with the PCB problem. There is also acknowledgement of the varied climate and development conditions within the country which will challenge efforts of the project.

In this case expected outputs of the project include:

## COMPONENT 1. INSTITUTIONAL, REGULATORY AND HUMAN RESOURCES CAPACITY BUILDING FOR ESTABLISHMENT AND OPERATION OF ESM SYSTEM FOR PCBs DISPOSAL:

1. PCBs related legislation including administrative and technical guidelines for environment protection agencies, custom authorities, owners of PCB-contaminated equipment and service providers for PCBs management and disposal developed and adopted.
2. Staff of the federal and regional government agencies, customs authorities, NGOs and PCB owners trained to implement the relevant regulations.
3. ESM measures for safe management / disposal of PCB wastes and occupational safety introduced.
4. Economic and administrative instruments developed like incentives for using BATs for PCB disposal, established deadlines for PCB disposal, fines for non-compliance, updated customs regulation, etc. promoting ESM and disposal of PCBs.

## COMPONENT 2. COUNTRY-WIDE INVENTORY OF PCB-CONTAMINATED EQUIPMENT AND WASTES:

1. Methods for PCBs analysis adopted and 3-4 laboratories accredited for PCB analysis.
2. National quality standards, inspection methods and manuals approved and provided to PCB owners for facilitation of their PCB-related actions.
3. System for identification /labeling of PCB-containing equipment and centralized national data base of contaminated equipment created as legal tracking and record keeping instrument of environmental authorities.
4. Equipment containing PCBs analysed and recorded in database. Inspected equipment labelled and prioritized for decontamination or disposal.
5. Mid-term and long-term action plans including priority measures developed. Disposal measures elaborated and approved at enterprise level. All potentially contaminated sites identified and recorded.

### COMPONENT 3. ENVIRONMENTALLY SOUND MANAGEMENT (ESM) AND DISPOSAL OF PCB CONTAMINATED EQUIPMENT AND WASTES:

1. Interim storage sites established. ESM demonstrated and implemented at regional level. Methods and methodologies currently available and used in the country for PCB disposal reviewed and assessed.
2. Advanced technology options for treatment and disposal methods of PCB destruction assessed. Cooperation / partnership with selected technology providers for developing decontamination and destruction capacities established.
3. Technology(ies) for clean-up and destruction of PCB contaminated equipment and oil introduced and implemented in the country.
4. An estimated 3,800 tonnes of PCBs and PCB-containing equipment and wastes decontaminated or disposed of. New environmental industry and employment created.

### COMPONENT 4. IMPACT MONITORING AND EVALUATION:

- Impact indicator designed and applied. Project implementation and impacts evaluated

The Project start is intended for 2<sup>nd</sup> quartal of the 2014.



## SAVE THE SOURCE: CATALYZING MARKET TRANSFORMATION OF BREWERIES FROM A MAJOR NATURAL RESOURCE CONSUMING INDUSTRY TO A PRO-ACTIVE STEWARD FOR RESOURCE EFFICIENT CLEANER PRODUCTION

### DESCRIPTION

GEF executing agency is UNIDO and UNIDO Centre for International Industrial Cooperation in the Russian Federation, other executing agencies in Russia: Volga International Cleaner Production Centre, St. Petersburg National Cleaner Production Centre.

Inefficient brewing processes can have a very large environmental footprint as significant quantities of water and land areas are used in both the agricultural industries that provide vital ingredients (barley, rice, etc.) and at the breweries themselves in the beer production processes. Brewery processes are also relatively intensive users of both electrical and thermal energy.

UNDER THE PUBLIC PRIVATE PARTNERSHIP BALTICA WILL BECOME A STEWARD FOR THE STRENGTHENING OF INSTITUTIONAL CAPACITIES FOR SUSTAINABLE WATER MANAGEMENT

The objective of this FSP is to demonstrate a replicable approach how Baltika Breweries as a corporate socially responsible industrial player with technical assistance by UNIDO can become a steward in a public private partnership to pro-actively reduce direct and indirect brewery related environmental stress and promote sustainable management of natural resources along the entire supply chain in those regions of the Russian Federation where the Baltika Breweries and its agro-industrial suppliers operate.

Building on a significant private sector investment initiative – over the next five years Baltika Breweries will invest US\$ 30 mio in resource efficient cleaner production and pollution reduction into the eleven breweries operated in the territory of the Russian Federation that will minimize Baltika’s direct environmental impact in the brewing process, the public private partnership will aim at reducing the indirect environmental impact Baltika has through its agro-industrial suppliers and enhance institutional capacities for sustainable natural resource management and GHG emission mitigation.

Under the public private partnership Baltika will become a steward for the strengthening of institutional capacities for sustainable water management , proactive investments in infrastructure for communal waste water treatment and brewery waste water treatment beyond regulatory requirements, replenishment of depleted ground water resources, restoration of water body ecosystem services, the reduction of the environmental footprint of agro-industrial suppliers, for the transformation of innovative so far commercially not yet viable brewery waste to energy approaches to reduce GHG-emissions, for the development of economic and regulatory instruments to mainstream resource efficient cleaner production and the involvement of Civil Society Organizations in community based water and energy saving initiatives.

The expected outputs of the projects are the following.



**COMPONET 1. PUBLIC PRIVATE PARTNERSHIPS WITH INSTITUTIONS AT OBLAST LEVEL (COMMITTEE OF NATURAL RESOURCES) FOR WATER RESOURCE PROTECTION, CONSERVATION AND SUSTAINABLE WATER RESOURCE MANAGEMENT IN ATCHMENT AREAS UNDER WATER STRESS IN WHICH JSC BALTIKA IS A MAIN WATER USER.**

1. Development of a life cycle assessment methodology to measure the environmental footprint of breweries incl. its supply chain based on the cradle to grave methodology to identify further foot print reduction potentials
2. Local governments and regional institutions for water resource management assisted in the assessment and modeling of water resources for the sustainable conjunctive use of surface and groundwater in 5-6 locations
3. Joint public-private local community integrated watershed management programmes developed and implemented

## COMPONENT 2. PROACTIVE INVESTMENTS IN INFRASTRUCTURE FOR WASTE WATER TREATMENT, GROUND WATER REPLENISHMENT AND WATER BODY RESTORATION IN CATCHMENT AREAS UNDER WATER STRESS IN WHICH JSC BALTIKA IS A MAIN WATER USER:

1. Baltika water treated beyond the regulatory requirements for brewery effluents so that it can be re-used for the replenishment of depleted aquifers
2. Additional waste water treatment process for brewery effluents developed so that the water can be re-used for water efficient and nutrient recycling drip irrigation.
3. Waste water treatment capacities in a community upstream of Baltika breweries improved by the establishment of constructed wetlands
4. Previously drained wetlands and autochthon riparian vegetation restored along water bodies

## COMPONENT 3. REDUCTION OF ENVIRONMENTAL FOOTPRINT OF AGROINDUSTRIES ALONG THE SUPPLY CHAIN OF JSC BALTIKA BREWERIES:

1. Benchmarking system for agro-industrial suppliers in 5-6 locations established and technical assistance provided to these suppliers to identify and reduce their water and energy foot print.
2. TA assistance to agro-industries along the supply chain to reduce over fertilization and reduce N and PH inputs into ground and surface water bodies by developing of a rapid analysis methodology for determination of available nitrogen in Russian soils on the basis of infrared spectrometry at representative demonstration sites, by monitoring of nitrogen migration to groundwater by the use of lysimeters at 2 demonstration farms and by providing TA for optimal N and PH fertilizer application for agro-industrial suppliers.
3. TA incl field seminars and trainings for agricultural producers for the development of new agricultural technologies for the use of new drought resistant plant varieties.

## COMPONENT 4. DEVELOPMENT OF INNOVATIVE NON-COMMERCIAL BREWERY WASTE TO ENERGY APPROACHES:

- Testing, implementation of pilots in 2 Baltika breweries and standardization of innovative waste to energy methodologies based on the use of “spent grain” and other brewery waste products in aerobic digesters or combined heat and power plants

(exclusive focus will be on technologies which are not yet economically feasible under present energy price regime).

## COMPONENT 5. DEVELOPMENT OF ECONOMIC INSTRUMENTS AND CONTRIBUTION TO THE DEVELOPMENT OF REGIONAL, NATIONAL AND INTERNATIONAL POLICIES PROMOTING TO MAINSTREAM THE APPLICATION OF RESOURCE EFFICIENT CLEANER PRODUCTION PRINCIPLES:

1. Lessons learned from the implementation of pilots disseminated at regional and national level and used for the development of economic instruments and regional/national policies
2. Draft/model economic instruments designed to incentivize the sector and its supply chain to reduce pollution, reduce ghg-emissions and optimize water and resource utilization
3. Draft/model national policies, legislation institutional reforms which promote and mainstream application of cleaner and resource efficient production principles in the sector and its supply chain developed
4. Results achieved disseminated and up-scaled at national and global level through cooperation with national (Union of Russian Brewers) and international beverage associations (Beverage Industry Environment Roundtable -BIER)

## COMPONENT 6. CIVIL SOCIETY ENGAGEMENT:

- Awareness creation activities implemented by CSOs with regards to water and energy use/savings and environmental pollution in municipalities in the proximity of Baltika breweries.





## LOW CARBON TECHNOLOGY TRANSFER IN THE RUSSIAN FEDERATION

### DESCRIPTION

The objective of the proposed project is to reduce greenhouse gas emissions in the Russian Federation by increasing and accelerating the transfer and deployment of low-carbon technologies through the establishment of institutional mechanisms, pilot demonstration investments in LCT manufacturing capacity transfer, increased availability of financing for LCTs transfer and applications projects and enhanced policy frameworks.

The proposed project is designed to support the Russian Federation's efforts to meet its ambitious Energy Strategy and climate change mitigation targets by capitalizing on its large potential market for low-carbon technologies (LCTs) transfer and deployment.

The project aims to accelerate implementation pace, enhance scope, effectiveness and impact of ongoing and planned policies and initiatives for low-carbon technologies transfer (LCTT) and deployment in the Russian Federation. The project interventions are hinged on the establishment and demonstration of mechanisms to promote, facilitate and support transfer and deployment of state-of-the-art and leading-edge low-carbon technologies; while reinforcing the existing enabling conditions to promote and support LCT market.

The project proposes the establishment of a National Competitive Platform to stimulate, reward and facilitate the development and implementation of LCT transfer and deployment projects in selected climate technologies priority areas to be identified on the basis of experts' analysis and defined criteria. The Platform aims to establish an instrument to promote and facilitate greater and broader collaboration between the key public and private actors and

LCT TRANSFER AND DEPLOYMENT PROJECTS TO BE AWARDED THROUGH THE PLATFORM WILL RECEIVE TECHNICAL ASSISTANCE FROM THE PROJECT IN ORDER TO BRING THEM TOWARDS AND TO THE INVESTMENT AND IMPLEMENTATION STAGE

stakeholders in the LCTT chain in order to achieve greater coherence of plans and actions. The Platform is intended to establish close cooperation with the Russian Federation Climate Technology Centre and Network (CTCN) Nationally Designated Entity (NDE) and to enhance its institutional and functional capacity.

LCT transfer and deployment projects to be awarded through the Platform will receive technical assistance from the project in order to bring them towards and to the investment and implementation stage. The project would work with partner Russian financial institutions to establish a financial mechanism that would add value in leveraging funding available from private and public financing institutions and investors. A loan-guarantee scheme is envisaged and has been initially discussed with partner financial institutions.

Executing agencies are: UNIDO and UNICO CIIC Russia, Min.of Natural Resources and Environment, Min. of Education and Science, Min.of Energy, SME Bank.

## GEF UNIDO CLEANTECH PROGRAMME FOR SMES IN THE RUSSIAN FEDERATION

### DESCRIPTION

The project aims to establish a clean technology innovation platform and entrepreneurship accelerator programme targeted to SMEs following the successful model of the Clean Tech Open. The project is instrumental to strengthen national capacity, to support cleantech businesses creation and to link Russia innovators and SMEs to an extensive international network of entrepreneurs, experts and investors in clean technologies.

The project is integral part of the Global Cleantech Programme launched by the GEF and UNIDO after the successful pilot transfer of the CleanTech Open model to South Africa as part of the GEF funded project “Greening the COP17”.

This project is highly consistent with the commitments of the Russian Federation as an Annex 1 member of the United Nations Framework Convention on Climate Change, and it reflects national priorities that are expressed in Russia’s policies and legislation on energy, climate change mitigation, economic development, and innovation in science and technology.

The proposed project is consistent with the Energy Strategy to 2030 and the Climate Doctrine of the Russian Federation. In the field of energy efficiency, the project is consistent with the Law on Energy Efficiency (2009), the Government Action Plan on Energy Efficiency and Energy Saving (December, 2009) and the State Program of Energy Saving and Energy Efficiency Improvement until 2020.

In the field of economic development, energy efficiency and a rational model of resource consumption has been established as the first of five strategic directions for the modernization of the Russian economy. Modernization became an official policy with the establishment of a presidential commission for economic modernization and technological development (Presidential Decree dated 22 May 2009).

In June 2009, President Medvedev formulated five target areas for technological breakthroughs. He named energy efficiency and energy savings as the first strategic area for modernization policy. Modernization was promoted to the top of the political agenda primarily due to the global economic and financial crisis. The crisis demonstrated the vulnerability of a strategy based on the growth of the oil and gas sector, the need to move away from an economic model based exclusively on raw material exports, and the need to replace it with a more advanced strategy of social and economic development drawing on knowledge and state-of-the-art technologies.

In the vision of the Ministry of Economic Development and of the Russian Government a special role as innovation driver in the process of economy modernization and integration into the

global economy has to be played by innovative and export oriented SMEs. The Department for SME and Competition Development of the Ministry for Economic Development of the Russian Federation has set up a number of measures and

## THE PROJECT AIMS TO STRENGTHEN NATIONAL CAPACITY AND PLATFORMS TO PROMOTE INNOVATIONS IN CLEAN ENERGY TECHNOLOGIES IN SME IN RUSSIA

mechanisms to stimulate and support SMEs, including certification subsidies, IPR protection, grants for R&D and for starting export activities.

The 5th National Communication to the UNFCCC highlights the overarching goal of the RF Government to facilitate promotion of environmental sound technologies and innovation factor in all economic sectors. It poses special emphasis on the industry, and in particular on traditional important energy and low value-added manufacturing sectors, but it clearly features also other economic sectors such as agriculture, transport, housing and land use. While 5th NC does not explicitly indicate specific mitigation technologies to pursue, it can be inferred that energy efficiency and renewable energy technologies, including biofuels, are subjects of priority attention across the economic sector board.

The project is aligned with GEF's focal area strategy under Climate Change Mitigation with Objective 1: "Promote the demonstration, deployment, and transfer of innovative low-carbon technologies" and is in line with GEF-5 Modality 3: "SME Competition Pilot: Encouraging Entrepreneurs and Innovators", as it will provide support for entrepreneurs and innovators

seeking to establish a commercial venture, by specifically encouraging SMEs to expand in “green” and “clean” technologies to secure national competitiveness.

The Project aims to strengthen national capacity and platforms to promote innovations in clean energy technologies in SME in Russia while reinforcing relevant policy and incentives frameworks. It will strive to support innovative start-ups and promote entrepreneurship in selected SMEs sectors identified through the cleantech competition. The project will also mobilize investment and enhance national capacity of institutions and SMEs in Russia to promote clean low carbon technologies linking to global value chain resulting in a reduction of GHG emissions and carbon footprints.

## TRANSFER OF ENVIRONMENTALLY SOUND TECHNOLOGIES FOR INDUSTRIAL CLIMATE CHANGE MITIGATION IN THE REPUBLIC OF TATARSTAN, RUSSIAN FEDERATION

### DESCRIPTION

The objective of this project is the mitigation of the Russian Federation's contribution to anthropogenic climate change by improving the resource efficiency and reducing the GHG emissions of key manufacturing industries operating in the Republic of Tatarstan as well as by enabling the agro-forestry industry's capacities to produce planting material required by the Ministry of Forestry for climate change mitigating carbon sink enhancement.

The proposed FSP will promote climate change mitigation in Tatarstan through a three-pronged approach:

- 1) through the provision of technical assistance for the application of the integrated UNIDO TEST methodology by priority manufacturing industry clusters for energy efficient and low GHG production patterns,
- 2) through the direct Transfer of Environmentally Sound Technologies to state owned nurseries for the energy efficient industrial scale production of planting material for carbon sequestration and
- 3) through building and strengthening of institutional capacities and support for the development of regulatory and economic instruments for the mainstreaming, up-scaling and roll out of the UNIDO TEST methodology for resource efficient cleaner production and GHG emission mitigation by manufacturing industries beyond the lifespan of the project.

The contribution of manufacturing industry clusters (chemical, food processing and metal processing) to anthropogenic climate change will be mitigated through the provision of Technical

Assistance for the application of the UNIDO TEST methodology. While the UNIDO TEST methodology has originally been developed with a primary focus on water body related pollution, the provision of TA for the application of the integrated TEST methodology has the potential to identify and realize significant reductions in energy consumption as well as in GHG emissions loads. This does also apply for the TEST project implemented in the middle and lower Volga. Upon realizing that the provision of technical assistance for the application of the integrated TEST methodology can also result in significant GHG and energy consumption reductions the Government of Tatarstan has requested UNIDO to develop a project for the thematic up-scaling from a water body focused TEST limited to the Volga catchment area to a GHG emission focused TEST for the whole area of the Republic of Tatarstan. While the Russian financed TEST will continue to focus on water body pollution reduction the additional GEF financed TEST will focus exclusively on energy efficiency and GHG emission reductions.

Executing agencies are: UNIDO and UNIDO CIIC Russia, Ministry of Ecology of the Republic of Tatarstan, Ministry of Forestry of the Republic of Tatarstan, Volga International Cleaner Production Centre.

## REGIONAL DEMONSTRATION PROJECT FOR COORDINATED MANAGEMENT OF ODS AND POPs DISPOSAL IN THE RUSSIAN FEDERATION, UKRAINE, BELARUS, KAZAKHSTAN AND ARMENIA

### DESCRIPTION

The project will demonstrate environmentally sound collection and destruction of Persistent Organic Pollutants (POPs) and Ozone Depleting Substances (ODS) in the Russian Federation, Ukraine, Belarus, Kazakhstan and Armenia. The demonstration project will assist the countries involved in meeting their obligations under the Stockholm Convention and the Montreal Protocol. Through the demonstration activities the project aims to destroy a minimum of 2,500 MT of POPs pesticide waste and 280 MT of ODS (1.36 MM of CO<sub>2</sub>e) per annum as well as establishing an ESM for PCB waste in Armenia.

Since the environmentally sound management of POPs and ODS is a priority for the Ministries for Environment of the Governments concerned, it is recognized that the current weaknesses in legal frameworks and technical capacity must be addressed.

The proposed alternative scenario is to build on the baseline project to provide environmentally sound management of hazardous wastes and have in place the legal, institutional and technical infrastructure to identify, collect, store, transport and destroy waste in a sustainable manner.

This project is therefore considered essential to address the barriers currently being encountered. It addresses the global environmental problem of hazardous waste management

and the controls and activities required to manage each of these three forms of waste, taking advantage of the similarities and synergies that are available. This unique and innovative approach is in line with one of priorities highlighted at the 42nd Meeting of GEF Council (Concept Paper: GEF-5 Ozone, Climate, and Chemicals Program, GEF/C.42/09, GEF 42nd Council, 5-7 June, 2012, Washington), as it aims to conduct a number of complementary activities in parallel, designed to generate a robust framework and methodology for dealing with POPs and ODS destruction on a regional basis and at the same time demonstrate the operation of pilot destruction facilities.

The initial technical assistance project will focus on a) non-investment activities in all countries involved, b) ODS destruction in Belarus, Ukraine and Russian Federation and c) POPs destruction in Armenia.

A subsequent scale-up project will be developed to complete investment activities for POPs destruction in Belarus, Ukraine, Kazakhstan and Russian Federation and ODS destruction in Kazakhstan.

The initial technical assistant project aims to destroy 630 MT of ODS and 450 MT of POPs in the first three years of operation of the destruction facilities.

Subsequent scale-up project will aim to increase the regional destruction capacity funded by this project to 280 MT of ODS per year and 750 MT of POPs. The target total destruction volume over the period of the initial and scale-up projects is 840 MT of ODS and 7,500 MT of POPs.

## PUBLICATIONS & WEB-RESOURCES

**UNIDO IN RUSSIA** bulletin is pulished monthly and is an official bulletin of the UNIDO CIIC Russia. UNIDO thematic priorities and activities are covered here. The bulletin is supported by major industry companies and partners like DAIKIN and Samsung.



Also there several web-sites intended for UNIDO activities and efforts in Russia:

[WWW.UNIDO.RU](http://WWW.UNIDO.RU)

[WWW.UNIDO-RUSSIA.RU](http://WWW.UNIDO-RUSSIA.RU)

[WWW.OZONEPROGRAM.RU](http://WWW.OZONEPROGRAM.RU)

**Project components:**

- Institutional Capacity Building
- Technology Transfer to Russian Enterprises
- HCFC Phase Out in the Foam Sector
- HCFC Phase Out in HVAC&R
- Strategy for ODS Destruction and Creation of the Supporting Recovery Network
- Public Awareness and Stimulating of Market Growth for Energy Efficient Equipment

**UNIDO/GEF—Ministry of Natural Resources and Environment of the Russian Federation Project**

**News:**

**April 17, 2014**  
Fifth Meeting of the HCFC Phase-Out Project Steering Committee

**March 27, 2014**  
Decree of the Government of the Russian Federation No. 228 "On measures of state regulation of consumption and circulation of substances that deplete the ozone layer" dated 24.03.2014



**UNIDO CENTRE FOR INTERNATIONAL  
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