International POPs Elimination Project

Fostering Active and Efficient Civil Society Participation in Preparation for Implementation of the Stockholm Convention

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A Survey of the Chemicals Management Policy of the Russian Federation

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About the International POPs Elimination Project

On May 1, 2004, the International POPs Elimination Network (IPEN http://www.ipen.org) began a global NGO project called the International POPs Elimination Project (IPEP) in partnership with the United Nations Industrial Development Organization (UNIDO) and the United Nations Environment Program (UNEP). The Global Environment Facility (GEF) provided core funding for the project.

IPEP has three principal objectives:

- Encourage and enable NGOs in 40 developing and transitional countries to engage in activities that provide concrete and immediate contributions to country efforts in preparing for the implementation of the Stockholm Convention;

- Enhance the skills and knowledge of NGOs to help build their capacity as effective stakeholders in the Convention implementation process;

- Help establish regional and national NGO coordination and capacity in all regions of the world in support of longer term efforts to achieve chemical safety.

IPEP will support preparation of reports on country situation, hotspots, policy briefs, and regional activities. Three principal types of activities will be supported by IPEP: participation in the National Implementation Plan, training and awareness workshops, and public information and awareness campaigns.

For more information, please see http://www.ipen.org

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A Survey of the Chemicals Management Policy of the Russian Federation

The survey incorporated materials from the Russian Ministry of Natural Resources, Committee on Environment of the Russian State Parliament, Russian Ministry of Health and Social Development, Russian Ministry of Agriculture, Russian Ministry of Regional Development, State Sanitary and Epidemiology Control, Centre of international Projects, Arctic Council, UNEP, Eco-Accord, Greenpeace-Russia, Russian Union of Chemists, JSC "Kaustic", and outcomes of projects implemented in the frame of the International POPs Elimination Project.

Introduction

Some experts argue that, in the last year, the situation in the Russian chemical industry has somehow improved: Russian chemical companies got access to foreign finance markets, while favourable international economic conditions facilitated a rather high

growth of chemical industries in 2004. However, the key problem of the industry still remains - i.e. the steadily growing decline in technical, environmental and economic performance of chemical facilities. Some chemical facilities operate equipment with critically high depreciation levels of 60 - 80%.

According to the State Committee for Statistics, rates of replacement of fixed assets in chemical industry decreased from 4% in 1990 to 0.8% in 2004 (while under contemporary conditions, the minimal rate of replacement should reach 12-15% per annum). For comparison - in the oil processing sector, the rate is higher and it increased from 3% to 3.3%.

As a result of growing prices for services of monopolies and the lack of technical modernisation, the price competitiveness of a substantial part of Russian chemical products decreased to a critically low level. In the range of mainstream export products of Russian chemical companies, in 1999, only 3 products were competitive in terms of the ratio of global to domestic prices (in 2003, the figure increased to 7, while in 2005, the figure is expected to increase to 11).

The need to improve the competitiveness of Russian products entails another problem to be addressed - i.e. the need to harmonise chemical management legislation, including issues of classification and marking of chemicals, as well as exchange of information on toxic substances and associated risk factors.

Discussion of issues of harmonisation of Russian chemical management legislation becomes particularly important in connection with development of the Globally Harmonised system of Classification and Labelling of Chemicals (GHS) and the new EU chemical management legislation (REACH). For example, should Russian facilities fail to comply with REACH standards and rules for the whole production cycle, access of Russian exporters to markets of EU member-states would be substantially limited.

This survey sought to assess Russian chemical management legislation (including both the already existing and draft laws and regulations), to review the national policy in the sphere of regulation of chemical substances, including *inter alia* issues of chemical safety, control and enforcement.

The survey also incorporates good practices of sustainable chemical management, both at the governmental level and at the level of NGOs.

In addition, the survey provides specific recommendations for improvement of the Russian legislation in the sphere of regulation of chemical substances. In particular, these recommendations call on Russian authorities to ensure the integration of chemical safety issues into governmental development strategies, programs and plans; to ratify international environmental treaties on chemical safety and ensure efficient public participation in their implementation; to guarantee transparency of finance flows from international financial institutions and donor countries for elimination of toxic chemicals; and search for safer alternatives.

New Technical Regulations in Russia: Options for Harmonisation of Russian and International Standards

On July 1, 2003, the Federal Law on Technical Regulation was made effective in Russia. The development of the law was mainly initiated due to accession of the Russian Federation to the World Trade Organisation (WTO). The Federal Law sought to harmonise the Russian system of standards with the international one. The Federal Law defined main aims of the system of technical regulation in Russia to reform legal relations in the sphere. According to the Law, in the territory of the country, both voluntary and mandatory systems may be applied to meet certification requirements.

The document covers standard setting, voluntary and mandatory compliance certification, state control and supervision, as well as certification of testing laboratories and accreditation of certification bodies. In addition, the Law regulates procedures of voluntary and compulsory withdrawal of products from markets. The Law regulates relations associated with:

- development, approval, application and compliance with mandatory requirements for products, production processes, operations, storage, transportation, sale and recycling;
- development, approval, application and compliance with voluntary requirements for products, production processes, operations, storage, transportation and recycling, works and services;
- compliance assessment

According to the Law, technical regulations are intended to:

- protect human life and health, the property of physical persons and legal entities, and state and municipal property;
- protect the environment, life and health of animals and plants;
- prevent actions that might mislead buyers

Accounting for associated damage risks, technical regulations impose some minimal requirements to ensure *inter alia* biological and chemical security.

Technical regulations should incorporate an exclusive list of products, production, operation, storage, transportation, sales and recycling processes, subject to requirements of the regulations and rules of identification of objects to be regulated under the document. Technical regulations may provide rules and forms of compliance assessment, that depend on relative risks, terms of compliance assessment for every object of control under the technical regulations and/or requirements to terms/definitions, packaging, marking, labels and rules of labelling.

Compliance assessments are conducted by means of state control, accreditation, testing, registration, certification of compliance, authorisation and commissioning of a newly constructed facility or by other means.

Technical regulations provide mandatory requirements to products, production, operation, storage, transportation, sale and recycle processes, rules and forms of compliance assessment, identification rules, requirements to terms/definitions, packaging,

marking, labels and labelling. These technical regulations are exclusive and are documents of direct application at the whole territory of the Russian Federation.

Depending on associated damage risks, technical regulations may stipulate special requirements to products, production, operation, storage, transportation, sale and recycle processes, requirements to terms/definitions, packaging, marking, labels and labelling in order to ensure protection of specific categories of persons (minors, pregnant women, nursing mothers and the disabled).

Technical regulations are applied equally regardless a country/region of manufacture of a particular product, specific processes of production, operation, storage, transportation, sale and recycle, types or specific features of associated business deals, and regardless of status of producers, contactors, sellers and buyers (physical persons or legal entities).

Technical regulations cannot stipulate requirements to products that endanger human life or health by means of accumulation of adverse effects in the course of long-term use of these products, depending on other factors, that make it impossible to assess tolerable risk levels. In such cases, technical regulations may require notification of buyers on potential risks and factors these risks depend on.

The technical regulation may be drafted fully or partly on the basis of international or national standards. Technical regulations also stipulate minimal veterinary and plant sanitary requirements for products produced in certain countries/locations (including limitations for import, use, storage, transportation, sales and recycling to ensure biological security).

The Government of the Russian Federation organises continuous registration and analysis of all cases of non-compliance with technical regulations that resulted in damages to human life/health, property of physical persons and legal entities, public/municipal property, the environment, life/health of animals and plants (accounting *inter alia* for severity of these damages), and organises notification of buyers, producers and sellers on situation in the sphere of compliance with requirements of technical regulations.

The negotiations on Russia's accession to WTO reached the final stage, while the EU tightened its chemical management legislation by introducing the REACH system. As a result of these developments, the problem of introducing international standards in the Russian chemical industry and the problem of competitiveness of Russian chemical products has become rather serious as only 328 of 1140 international standards are implemented in Russia by relevant national ones. Should Russian companies fail to accept international standards for the whole production cycle, they may lose access to their traditional export markets.

Changes in the Russian Legislation in Connection with the Law on Technical Regulation

Now, new technical regulations are being drafted in Russia and many of them are directly associated with the modernisation of the chemical industry. These regulations include technical regulations on:

- Safety of chemical production facilities
- Safety of chemical products, processes of their storage, transportation, sale, use and recycling
- Safety of synthetic surfactants and household chemicals
- Hazardous chemical products (includes requirements for hazard information and safe handling measures)
- Requirements for security of testing, production, storage, sale, use, neutralisation and recycling of pesticides
- Packaging and packaging waste
- Safety of paint and varnish materials and solvents

Every month, at least one or two technical regulations undergo public discussion, and some of them may influence operations of the Russian chemical industry.

Overall, according to the Law on Technical Regulation, changes and amendments will be introduced to 120 federal laws and 800 governmental regulations. These changes and amendments will allow development of a system of standards and rules for the whole production cycle (from raw materials to finished products, including delivery). In particular, these issues are relevant for legislative acts on production, use and recycling of packaging. It is necessary to develop and approve technical regulations on production, use and recycling of packaging materials. Market analysis suggests that Russia almost completely lacks a system of collection and reuse of packaging waste.

Experience of organisations that deal with recycling of solid municipal waste in Russia suggests that:

- only 10-15% of packaging waste undergoes some secondary processing;
- there are no legislative acts on the collection and processing of packaging waste;
- there is no experience in collecting and processing of packaging waste;
- similarly to "commercial waste", "packaging waste" in Russia is considered as an integral component of solid municipal waste;
- the market of services of collection of packaging waste is underdeveloped;
- the infrastructure of facilities for processing of packaging waste is underdeveloped;
- there are no mechanisms of co-operation between waste collecting and waste processing companies;
- no research, methodological and consultative support is provided to organisations and facilities that generate packaging and commercial waste;
- positive international experience of collection and processing of packaging waste, as well as mechanisms to finance these operations are not used;
- there is no state policy in the sphere of regulation of waste generation and waste management and there is no state policy for reduction of waste generation; So far, fragmented state policies in the sphere rely on "treatment" instead of "prevention" and application of the "end of pipe" principle that substantially hinders modernisation of Russian industry.

Now, Russia almost completely lacks laws and regulations in the sphere of management of used packaging materials. The legislative gap hinders development of financial sources and finance systems of collection and processing of unusable packaging that is a

necessary component of market infrastructure. The already existing laws and regulations are scattered, obsolete and are not harmonised with international ones.

In contrast to other countries, that deal with development of packaging industry in parallel with addressing issues of packaging waste collection and processing (EC Directive 94/62/EC on Packaging and Packaging Waste, national programs and laws of EU member-states, Poland, Norway, etc.), Russia does not pay due attention to these aspects.

According to requirements of the Federal Law on Technical Regulation, it is necessary to develop and approve several technical regulations on use of packaging and packaging materials: "On Labelling of Food Products" (compliant with several EC Directives), "On Signs and Marking of Food Products Allowing to Identify a Batch", "On Labelling Food Products, Including Their Nutrition Value", "On Signs for Materials and Items that Contact with Food Products", "On Safe Handling at the Consumer Food Market", "Packaging and Marking of Pharmaceuticals", "Packaging, Marking, Transportation and Use of Chemicals and Chemical Mixtures", "On Safe Handing at the Consumer Food Market: Production, Storage, Transportation and Sale Processes", "On Integrated Pollution Control" (the latter one should incorporate development of technical documentation on Best Available Techniques (BATs)).

However, notwithstanding that the Law on Technical Regulation itself is a rather progressive legislative act, technical regulations that are developed pursuant to the Law, are generally intended to reduce environmental limitations for economic activities.

For example, the draft Technical Regulations on Environmental Security is almost silent about issues of territorial nature conservation issues that are of major importance for environmental security. The draft document stipulates a substantial reduction of the range of facilities, subject to state environmental expert assessment procedures and almost completely fails to reflect environmental rights of citizens and citizens' associations. As a result, if the draft is approved in its current version, and if the Federal Law on Environmental Protection is repealed, the constitutional rights of citizens and citizens' associations in this sphere will be substantially limited (the Constitution of the Russian Federation stipulates that Russian citizens have the right to a healthy environment and reliable information on environmental quality). Besides that, the draft document does not incorporate a section on procedures of compensation payments for environmental damages (a major factor to promote environmental security).

Legislation of the Russian Federation on the Safe Management of Pesticides

Now, the Federal Law on Safe Management of Pesticides and Agricultural Chemicals is in force. According to Article 2 of the Law, the due legislation of the Russian Federation regulates relations, associated with fulfilment of state management functions in the sphere of safe handling of pesticides and agricultural chemicals, development, production, sale, storage, transportation, use, neutralisation, recycle, destruction, advertising, import and export of pesticides and agricultural chemicals. However, the

above article of the Law (as well as other articles) is not supported by relevant regulations on procedures of state testing and registration of pesticides; on state control of production, transportation, storage and elimination of pesticides; or on rehabilitation of storage facilities contaminated by pesticides.

The State Chemical Commission of the Russian Federation cannot address all aspects of safe management of pesticides and only publishes its annual lists of authorised pesticides. In recent years, several pesticide management rulebooks were introduced (in addition, there are several standards and manuals on pesticide management).

In addition, the Federal Law on Safety Requirements to Processes of Testing, Production, Storage, Transportation, Sale, Use, Neutralisation and Recycle of Pesticides (special technical regulations) is under development now. These technical regulations provide a legislative framework for ensuring safe management of pesticides and their active agents for the protection of environment, public health and gene pool of the population. The latter document is developed pursuant to Federal Law on Technical Regulation (No.184-FZ of 27.12.2002), and based on applicable international and national standards.

The technical regulations stipulate mandatory requirements to the following objects of technical regulation:

- imported pesticides, and pesticides produced in the Russian Federation;
- active agents of pesticides and their potentially hazardous metabolites;
- procedures of registration-related testing and state registration of pesticides in the Russian Federation;
- technologies of pesticide production and use;
- construction plans, operation manuals, standards and technical documents on production, transportation, sale, use, neutralisation and recycling of pesticides

Requirements of the Technical Regulations cover all groups and types of pesticides, namely: pesticides and agricultural chemicals in general; insecticides; herbicides; fungicides; other pesticides and agricultural chemicals (including biological preparations, acaricides, defoliants, desiccants, plant growth regulators, veterinary pesticides).

Pesticides, that have undergone due state registration procedures (or incorporated into the list of pesticides to undergo the state registration testing) can be produced, sold, used and imported to the territory of the Russian Federation. Pesticide handling and use operations should not result in excess levels of residual active agents of pesticides, toxic and hazardous metabolites and biological agents (over the set limits) in soils, air, water bodies and agricultural products. Besides that, adverse effects on non-target flora and fauna of natural biocenoza and agrobiocenoza should be avoided.

Economic agents, specially authorised federal executive bodies in the sphere of safe management of pesticides, territorial bodies of state sanitary and epidemiological control, state environmental, technological and nuclear supervision, and state plant sanitary and veterinary control, that failed to comply with the Technical Regulations, are liable to administrative, civil law and other sanctions, according to the due legislation of the Russian Federation.

However, the above technical regulations have some serious shortcomings as well, including:

1. The draft Technical Regulations does not contain an article or articles on the right of citizens and citizens' associations in connection with pesticide inventories.
2. The draft document refers to specific installations, equipment items and technologies. It seems absolutely inappropriate for a federal law to incorporate such references, as they make impossible application of more efficient or better technologies in the future to comply with provisions of the Technical Regulations. Moreover, such an approach contradicts to clause 4 of Article 7 of Federal Law on Technical Regulation.

Some articles of the Technical Regulations should be also adjusted. Besides that, in connection with some international conventions, that impose limitations or prohibit the use of persistent organic pollutants (e.g. the Stockholm Convention on POPs), it seems appropriate (in order to ensure fulfilment of Russia's commitments under international agreements), to incorporate a ban on use of pesticides, that may be categorised as POPs, into the text of the Federal Law.

Legislation of the Russian Federation in the Sphere of Consumer Rights for Information

In many countries of the World, including Russia, considerable attention is paid to issues of provision of information in household and occupational environments on potential hazards associated with production, use, storage, transportation and recycling of products, including chemicals. The Law of the Russian Federation on Protection of Consumer Rights regulates relations between consumers and manufacturers, operators, sellers in the course of sale of products (works, services), defines consumers' rights for purchase of goods (works, services) of due quality and safe for their life and health, as well as provision of necessary information on goods (works, services).

According to State Standard GOST R 51121-97 "Non-food Products. Consumer Information. General Requirements", information on safety measures for storage, transportation, use, recycle, burial and destruction of goods should be made visible at the background of other information entries by a different font, colour or by other means.

A seller (service provider), who failed to provide a buyer full and adequate information on goods (works, services), is liable for damages (material losses, damages of a consumer, including full costs of damages to natural objects, owned (operated) by the consumer, as well as moral damages), as stipulated by this Law, caused by deficiencies of goods (works, services), that emerged after their transfer to the consumer due to lack of the above information. In the course of examination of the consumer's claims for damages caused by inadequate or insufficient information on goods (works, services), it is necessary to assume that the consumer cannot have special knowledge of properties of the goods (works, services).

According to the due legislation on occupational safety, workers have the right to get adequate information on workplace conditions and safety measures, on existing health

risks and protection measures to avoid impacts of adverse/hazardous occupational factors.

General legislative requirements to safe handling of pesticides and agricultural chemicals stipulate that every package of these chemicals should contain recommendations on their transportation, use and storage and a warning label.

Standard requirements to potentially hazardous goods stipulate the need for necessary warning information (warning labels), that, in general terms, may incorporate:

- special signs, specifying safe conditions of use;
- warnings about potential harm/damage, associated with normal use of goods or with their potential use for other purposes

Warning labels should preferably contain standard, generally recognised signs. Associated warning texts on items should:

- be short and clear;
- note potential hazards, inform users on nature of these hazards and options to reduce potential risks

In order to attract attention of users, special "signal words" may be used, according to the following hierarchy: "DANGER" - high risks; "HANDLE WITH CARE" - medium risks; "CAUTION" - potential risks.

Examples of warning labelling may include:

- marking and design of pharmaceutical preparations and medical gear (prescribed storage conditions, expiration dates and use precautions);
- information on the presence of such ingredients as milk/egg protein or peanuts in food products and information on associated contraindications;
- manufacturers' warnings on measures to prevent access to food products (special seals, protective films or foil);
- health hazard warnings on tobacco and alcohol items;
- marking of children's goods (toys);
- warnings in public places, at workplaces, in transport carriages;
- marking on non-food items on associated physical and chemical risk factors (e.g. electric appliances, chemicals)

Many developed countries enforce laws and regulations, stipulating requirements to labelling of potentially hazardous substances to prevent accidents caused by their inappropriate handling. In particular, producer/consumer labels and transportation packaging of hazardous substances and materials are stipulated to specify hazard types and hazard severity, precautions and protective gear, first aid measures to be taken in the case of an accident, names of a substance under different classifications, as well as references to so called Material Safety Data Sheets (in Russia, similar documents are called Substance (Material) Safety Certificates), that provide more detailed and comprehensive information on safe handling of these materials. Substance Safety Certificates contain the following information: impact on the environment; requirements for safe transportation; stability and chemical activity; rules of the manipulation and storage; measures to prevent and liquidation of emergency situations; physical and

chemical features of products; national and international legislation; information on toxicity; description of measures providing safety of the use of chemical products and measures of first aid; short description of toxicity; identification of products; information of components in products; and information on labeling.

The System of Labelling of Hazardous Substances and Materials (HSMs) in Russia

The main responsibility of the Government is to secure safety of products. Rostest is the key Russian Governmental organization that certifies all products to ensure that they do not pose risk to the consumers. Today when lots of products produced by different companies appear on the market consumers have to be very attentive to choose products of proper quality. All goods that went through Rostest expertise have a special ROSTEST labeling (Russian standard) which means that this particular product is safe for consumers. If there is no such labeling it means that this product does not comply with Rostest requirements and thus can pose risk to human health.

Imported goods have to go through Rostest standardization procedure as well. If they meet all the requirements they will have to receive the same ROSTEST labeling.

Now, the most common and internationally harmonised labelling system for transportation of hazardous substances and materials (HSM) is based on UN recommendations. In Russia, these recommendations were used for development of State Standard GOST 19433-88 "Hazardous Cargo Classification and Labelling". Works are under way to harmonise national legislative acts and to develop international standards under auspices of international and regional organisations (UN, EU, ILO, etc.) in addition to and for further development of already existing requirements to producer/consumer labelling of HSMs to ensure their safe use.

Now, packaging items of different chemicals of Russian manufacturers contain some information on safe handling of these chemicals (generally, in text format). Labelling contains short description of substance toxicity; description of measures providing safe management of chemical products and measures of first aid; sign of hazard; identification of products; information on the structure of products (main hazardous components, signal word).

End-user packaging items of some chemicals are marked by special hazard signs according to State Standard GOST 19433-88 or by EU signs. In production environments, safety colour codes and signs are regulated by State Standard GOST 12.4.026-76 "SSTB. Safety Colour Codes and Safety Signs".

Requirements to HSMs labelling are generally defined by standards for products (product groups). However, there are no specific nation-wide requirements to consumer/producer packaging and labelling of HSMs, harmonised with international standards and standards of leading industrialised countries.

As a functional example of palpable signs we may consider 3 raised rings on glass bottles for acetic acid that were produced in the USSR and now are produced in Russia.

Some experts argue that already established Russian requirements for labelling of cargo items of HSMs (the ones, already harmonised with international rules) should be extended to cover producer/consumer labelling as well.

The key reasons against extension of State Standard GOST 19433-88 to cover producer/consumer labelling of HSMs include the following ones:

- the State Standard stipulates signs that are rather difficult for ordinary consumers; For example, the standard stipulates several different signs for explosive and flammable materials;
- labelling of hazardous cargo items does not specify hazard types, adverse impacts, precautions and first aid tips, that are necessary for ordinary consumers;
- the classification and hazard signs are primarily intended to inform on so called "immediate danger" of substances in the course of their transportation and do not account duly for long-term exposure and organ-specific adverse effects of HSMs (the latter effects are important for use of HSMs in industry and in household practices).

At the same time, it is necessary to note that the US and EU member-states, in parallel with their systems of transportation labelling of hazardous materials, also apply separate requirements to producer/customer labelling of HSMs. Therefore, it would be appropriate to use experience of application of State Standard GOST 19433-88 and other relevant standards for development of national standards for producer/consumer labelling of HSMs (accounting for the need of their optimal harmonisation with intentional and foreign requirements to meet modern environmental and health safety standards).

Now, the draft Law on Safety of Synthetic Surfactants and Household Chemicals is under development in Russia. The draft Law is considered as a further development of Federal Law on Technical Regulation. The document is closer to international requirements to producer's labelling of chemicals substances and materials. In particular, Article 8 of the draft incorporates the list of requirements to warning labels of hazardous chemicals (warnings should be clearly distinguished from other information entries at packages of synthetic surfactants and other household chemicals, they should be clear and legible, resistant to chemicals and environmental factors, they should be visible for the whole period of use of a product). These warning labels should contain:

a. name and brand of a product (including its trade name), information of ingredients and other data that should allow one to distinguish clearly a specific product from other products at a market;
b. information on organisation (person) that registered the products, including contact information for emergency calls - name or business name or trade mark, full phone number of a party that marketed the product (if the party is not a manufacturer);
c. hazard description (a signal/code word);
d. precautions;
e. batch data

The draft Law also contains the list of ingredients of synthetic surfactants and household chemicals, and criteria for indicating them at consumer packaging.

Besides that, the draft Law stipulates that the necessary information should be provided in the Russian language. Company name, product name and address of a foreign producer may be printed in Latin characters.

In addition to a warning label at consumer (retail sale) packaging of surfactants, a manufacturer should also print the following information entries (clear, visible and indelible):

1) Net weight (g, kg) or volume (cm^3, dm^3) of a product in the retail sale package at the date of packaging.
2) Shelf life, identified as "Use before (month, year)", or "Shelf life (month, years)" and a date of production (or reference to a place at the retail sale packaging, where the production date is printed).
3) Storage conditions that guarantee due quality of the product for the whole shelf life (if necessary).

Environmental Certification and Labelling

Environmental certification was introduced in Russia in 1992 to protect human health and environment from environmentally hazardous products and services of low quality. Environmental certification requirements cover environmentally hazardous production facilities and technologies; more environmentally friendly products that are produced with application of resource efficient and no-waste technologies (comparatively to similar products).

Prior to effective date of Law of the Russian Federation on Technical Regulation (July 2003), environmental certification was regulated by laws of the Russian Federation "On Certification of Products and Services", "On Protection of Consumers' Rights", "On Standardisation", as well as by "Rules of Certification in the Russian Federation" (1994) and "Rules of Certification of Works and Services in the Russian Federation" (1997).

According to the Law on Technical Regulation, certification means assessments of compliance of objects with requirements of technical regulations, standards or treaties that is performed by a certification body. The Law on Technical Regulation stipulates that mandatory environmental certification may be performed only to certify compliance with general technical regulations and should follow procedures established by the Government of the Russian Federation.

The underlying legal framework of certification (including environmental certification) is defined by Law No. 5151-1 of the Russian Federation on Certification of Products and Services of 10.06.93 (as amended), that defines certification of products as actions being made to certify that a product in question meets established requirements. Referring to aims of certification, the Law particularly focuses on control of products' safety for human life/health and the environment.

Basic principles of development and application of eco-labelling are provided by international standards (ISO 140000 series) that are broadly recognised throughout the World. Now, the range of compatible Russian standards incorporates the following ones:

- State Standard GOST R ISO 14020-99 "Eco-labels and Statements. Key Principles";
- State Standard GOST R ISO 14021-2000 "Eco-labels and Statements. Self-declared Eco-statements";
- State Standard GOST R ISO 14024-2000 "Eco-labels and Statements. Type 1 Eco-labelling. Principles and Procedures".

It is worth noting that requirements of these state standards are mandatory for governmental bodies and economic actors (Article 29 of Federal Law on Environmental Protection, Law of the Russian Federation on Standardisation).

Types of Eco-labelling Applied in Russia:

In the case of voluntary certification of compliance with established environmental requirements, code signs of the system of environmental certification compliance are regulated by laws and secondary legislative acts in spheres of environmental protection, protection of consumers' rights, standardisation, certification, advertising, as well as by state standards and agency-specific regulations of the Ministry of Natural Resources of the Russian Federation pertaining to the system of certification of compliance with environmental requirements.

In the case of voluntary certification of compliance of products and services with requirements, duly agreed by an applicant and a certification body, code signs of systems of voluntary environmental certification, registered according to established procedures, are regulated by laws and secondary legislative acts in spheres of environmental protection, protection of consumers' rights, standardisation, certification, advertising, as well as by state standards and agency-specific regulations of the Ministry of Natural Resources of the Russian Federation and the State Committee for Standardisation of the Russian Federation, pertaining to application of compliance code signs of voluntary certification.

Code signs of approval of recognised organisations that are applied by these organisations independently or applied on request of a manufacturer/consumer, are regulated by laws and secondary legislative acts in spheres of environmental protection, protection of consumers' rights, standardisation, certification, advertising, as well as by state standards and agency-specific regulations of the Ministry of Natural Resources of the Russian Federation pertaining to application of eco-labels.

Self-declared eco-statements of producers/providers are regulated by laws and secondary legislative acts in spheres of environmental protection, protection of consumers' rights, standardisation, certification, advertising, as well as by state standards and agency-specific regulations of the Ministry of Natural Resources of the Russian Federation and the State Committee for Standardisation of the Russian Federation, pertaining to application of eco-labels.

ID marking for purposes of rational resource use (to identify items to be collected separately and recycled) are regulated by laws and secondary legislative acts in spheres of environmental protection, protection of consumers' rights, standardisation, certification, advertising, as well as by state standards and agency-specific regulations of the Ministry of Natural Resources of the Russian Federation and the State Committee for Standardisation of the Russian Federation, pertaining to application of eco-labels.

Legislative acts of Russia prohibit application of environmental compliance code signs without prior testing by competent bodies. As a result, there is a real problem of finding such bodies.

Certification Systems in Constituents of the Russian Federation

Now, constituents of the Russian Federation develop their own systems of certification of compliance with environmental requirements. As the most well known example we may refer to "Moscow Eco Register" system of voluntary certification (referred hereinafter to as the System of Voluntary Certification) and its certification code sign developed by the Department of Natural Resources and Environment of Moscow and duly registered by the State Committee for Standardisation of the Russian Federation (state registration certificate No. ROSS RU.B065.04 REOO of October 29, 2002). The System of Voluntary Certification certifies Environmental Management Systems (ESM) of Moscow organisations for compliance with requirements of State Standard GOST R ISO 14001-98 (i.e. objects of certification are limited to ESMs of Moscow organisations).

Certification of the System of Voluntary Certification cannot be used instead of mandatory certification if the latter one is stipulated by applicable legislative acts of the Russian Federation.

Development and operations of the System of Voluntary Certification are based on the following laws and regulations of the Russian Federation:

- Federal Law on Environmental Protection of 10.01.2002 (No. 7-F3);
- Law of the Russian Federation on Technical Regulation of 27.12.2002 (No. 184-F3);
- Rules of Certification in the Russian Federation, approved by Order No. 26 the State Committee for Standardisation of the Russian Federation of 10.05.2000 and registered by the Ministry of Justice on 27.06.2000 (No. 2284);
- Rules of State Registration of Certification Systems and Compliance Signs in the Russian Federation approved by Order No. 18 of the State Committee for Standardisation of the Russian Federation of 22.04.99 and registered by the Ministry of Justice on 14.06.99 (No. 1795).

Legislation in the Sphere of Production / Consumption Waste Management in Russia

Today, Russian waste disposal sites have accumulated more than 80 billion tons of solid municipal waste, and every year the figure increases by about 30 million tons. It is necessary to note, that annual per capita waste generation rates in Russia increase by 1%.

In addition, the country's industry generates more than 120 million tons of industrial waste. The most toxic types of waste include organochlorine and mercury compounds, followed by waste oil, oil derivatives, electroplating sludge, wastewater treatment sludge, coal ash, etc.

Therefore, the country generates 1 ton of municipal and industrial waste per every Russian citizen. Overall, waste disposal sites cover more than 2 thousand sq. km of the national territory. At the same time, Russia has neither a waste recycling culture nor a waste recycling system. The bulk of wastes are either disposed of or processed by obsolete technologies. The market of secondary resources is almost non-existent. Moreover, notwithstanding that regulations of some constituents of the Russian Federation provide for preferences for recycled products instead of products made from primary raw materials in the course of state procurement operations, these provisions are not used in practice.

In contemporary Russia there are quite a few waste separation/processing facilities and 7 waste incineration plants - in Moscow (3 waste incinerators), Murmansk, Vladivostok, Pyatigorsk and Cherepovets. In Sochi and Vladimir, waste incinerators were decommissioned. Nation-wide, the share of processed solid municipal waste does not exceed 5-10%. Waste is supplied to incinerators unsorted - as a result, waste incinerators cannot maintain their standard operation modes and generate substantial emissions due to presence of highly toxic substances in municipal waste. Moreover, waste incinerators generate highly toxic ash and there are no disposal sites available for the ash in Russia. For example, the Murmansk waste incinerator (a first generation waste incineration plant) incinerates waste without preliminary separation of reusable materials. In 2002, the plant incinerated 101.17 thousand tons of solid municipal waste and generated 27.1 thousand tons of slag and fugitive ash. On August 9, 2005, a major 2-day fire happened at Murmansk waste incineration plant. The fire was assessed as the third grade of intensity (the highest grade). The fire started in a waste feeder at 20 m height. When the first fire brigade arrived on the site, the fire covered an area of 200 sq. m.

Industrial waste

Analysing dynamics of toxic waste generation, one can conclude that waste generation rates continue to grow in industry, and, as a result, in Russia as well: from 82.6 million tons in 1996 to 132.5 million tons in 2000. Almost all toxic waste flows are generated by industry (94-95%). In 2000, the rest - about 5% of toxic waste - were almost equally distributed between agriculture (3.7 million tons) and households (3.4 million tons).

The heaviest waste generating sectors include metallurgy, chemical and petrochemical industries and coal industry. According to the State Committee for Statistics of the Russian Federation, there are 2.9 thousand waste disposal sites for toxic waste that cover 22 thousand hectares.

Due to the shortage of sites for disposal and storage of industrial waste, industrial facilities often dispose of their waste in unauthorised places and these unauthorised waste dumps pose a particularly serious environmental threat. In 2000, six constituents of the Russian Federation generated more than 50% of all toxic waste: Kemerovo Oblast (16.5

million tons); Krasnoyarskiy Krai (16.1 million tons); Chelyabinsk Oblast (13.2 million tons); Orenburg Oblast (9.2 million tons); Vologda Oblast (7.0 million tons); the Republic of Bashkortostan (6.8 million tons).

Household waste

Issues of management of solid household waste are not less complicated. Large cities accumulate huge amounts of waste that endanger human health and environment. In Moscow Oblast, about 5.6 million tons of solid municipal waste is disposed annually. The amount of waste is compatible with the large cities of Western Europe and Japan (however, per capita waste generation is a little bit lower).

Landfilling is the principal option for disposal of solid municipal waste in Russia. It is necessary to note that Russia lacks duly equipped landfills that avoid infiltration of hazardous waste components to environmental media. None of Russian cities has a balanced waste management budget. In addition, cities have no financial resources for investments. As a result, waste management services are chronically under funded and provide low quality services.

Russia regulates the import of hazardous waste (e.g. banned and obsolete pesticides) and return of these types of wastes to producers according to the Basel Convention on Control over Trans-border Transportation and Disposal of Hazardous Waste. Russia acceded to the Convention long ago and uses its mechanisms and Federal Law on Production and Consumption Waste for waste management purposes in the territories of constituents of the Russian Federation.

Decree No. 1098 of the Government of the Russian Federation of 13.09.96 approved the Federal Target-specific Program "Waste". The list of urgent program actions to address waste management problems incorporates: development of a classifier of toxic waste; the conduction of an environmental expert assessment of industry-specific design standards and incorporation of provisions on mandatory comprehensive processing of raw materials, use, neutralisation and environmentally safe waste disposal; and development and introduction of a system of economic regulation to intensify secondary use of waste materials.

Federal Law on Production and Consumption Waste was passed by the State Duma on May 22, 1998 and approved by the Federation Council on June 10, 1998. The Law provides a legal framework for management of production and consumption waste in order to prevent their adverse health and environmental impacts, and to reuse waste materials as an additional resource. According to the Law, the key principles of state waste management policy incorporate:

- protection of human health, maintenance or improvement of environmental quality and protection of biological diversity;
- a scientifically sound balance of environmental and economic social interests for purposes of sustainable development;
- application of state of the art science for introduction of low-waste and no-waste technologies;
- comprehensive processing of production inputs to reduce waste generation;

- application of economic methods to regulate waste management activities in order to reduce waste generation and to reuse waste materials;
- access to information on waste management, according to the due legislation of the Russian Federation;
- participation in international co-operation of the Russian Federation in the sphere of waste management

The Law emphasises that economic incentives in the sphere of waste management include:

- reduction of waste disposal fees for individual businessmen and legal entities, whose operation generate waste, if they introduce technologies for reduction of waste generation;
- application of higher depreciation rates for those fixed assets that are used for waste management operations

At the level of constituents of the Russian Federation, some regional programs were developed to address problems of hazardous production/consumption waste and some other programs, e.g. "Socio-environmental Rehabilitation of Samara Oblast Territory and Protection of Human Health"; "Environmental and Health Improvement of Cherepovets for 1997-2010"; " Environmental and Health Improvement of Orenburg Oblast for 1996-2000"; "Environmental and Health Improvement of Nizhniy Tagil (Sverdlovsk Oblast) for up to 2000"; "Program for Environmental and Health Improvement of Tula Oblast for 1993-1998"; "Ecology of the City of Bratsk".

Chemical Safety Legislation of the Russian Federation

Now, there are more than 10 million known chemical compounds. More than 70 thousand chemicals are incorporated into the International Register of Potentially Hazardous Chemicals and about 1 thousand chemicals are registered as highly toxic substances. Depending on the chemical structure and sources of industrial production, these chemicals may be rather roughly divided into the following groups:

1. Products of full/partial combustion of organic fuel (coal, natural gas, oil derivatives, wood), simple oxidation products (toxic oxygen and peroxide radicals, nitrogen oxides, sulphur dioxide, carbon monoxide, carbon dioxide), polycyclic organic products of partial oxidation of hydrocarbons (benz[a]pyrenes, benzanthracenes, cholanthrenes).

2. Industrial chemical products: benzene, phenols, xylene, ammonia, formaldehyde, wastes of plastic, rubber, paints and oil-processing industries.

3. Household and agricultural chemicals: surfactants, synthetic fibres and paints, organic solvents for dry cleaning, pesticides, herbicides, food additives, cosmetics.

4. Heavy metals (chromium, lead, mercury, cobalt, manganese, etc.), released to the biosphere in the course of combustion of organic fuel and emitted by metal smelters.

5. Inorganic particular matter (silicates, asbestos, carbon soot).

6. Biological pollutants, allergens of plant origin, microscopic fungi, bacteria, viruses and mycotoxins.

In terms of their toxic impacts, chemical substances may be divided into the following classes:

- 1st class - highly toxic chemicals (cadmium, chromium and their compounds, dioxins, ozone, mercury, lead, polycyclic aromatic hydrocarbons, toxic radicals);
- 2nd class - toxic chemicals (arsenic, phenol, chlorine, phosgene, zinc, hydrogen sulphide and carbon bisulphide, strontium, cyanides, etc.);
- 3rd class - hazardous chemicals (acetic acid and some other organic acids, selenium, butanol and propanol, tobacco, ethylene, particulate matter);
- 4th class - medium to low toxic chemicals (ammonia, naphthalene, ethanol, petrol, carbon monoxide, butane, nitrates).

Depending on the health impacts of chemicals, the following classification was proposed:

- the group of extremely toxic chemicals, that cause higher mortality, morbidity, incidence of spontaneous abortions and birth defects;
- the group of highly toxic chemicals, exposure to which cause higher morbidity, incidence of pregnancy/birth complications, mental/physical retardation;
- the group of hazardous toxicants that facilitate development of different health disorders;
- the group of medium hazard chemicals, that cause dysfunctions;
- the group of low-toxic chemicals that do not affect demographic parameters, children's development and growth

It is clear, that the extreme diversity of chemicals and their health impacts requires nation-states to take serious measures in order to ensure biological and chemical security of their citizens. On December 4, 2003, the Key Provisions of the State Policy to Ensure Chemical and Biological Safety of the Russian Federation for up to 2010 and for a longer term were approved. The Key Provisions define aims, key principles, priorities, objectives and state support actions in the sphere of ensuring chemical and biological security of individuals, the society and the state, as well as mechanisms and stages of implementation of state policies in the sphere.

The state policy in the sphere of ensuring chemical and biological security responds to the following factors:

- growing numbers of facilities that have completely exhausted their technical and technological capacity or are close to capacity exhaustion;

- existence of sites with accumulated stockpiles of toxic industrial waste, land (water) areas contaminated by operations of industrial facilities and organisations (including operations of elimination of chemical weapons), large natural reservoirs of hazardous bacteria/viruses and lack of facilities for processing of hazardous chemical and biological materials in the majority of regions;
- declining levels of professional skills of technical and auxiliary personnel; non-compliance with rules and procedures of physical protection, storage, handling and utilisation of hazardous items and materials;
- non-compliance with technical and technological standards in the course of production of specialised equipment, technical systems (instruments), as well as non-compliance with design specifications and requirements in the course of construction/reconstruction of hazardous facilities;
- growing attention of terrorists to hazardous facilities;
- growing risks of environmental disasters, associated with large-scale application of environmentally insecure technologies, that cannot guarantee chemical and biological security in industry, agriculture, power industry, transport, housing and utilities sector;
- inadequately efficient state management and regulation in the sphere of ensuring security of residents, industrial and social infrastructures at the background of growing industrial, natural and terrorist risks;
- weakening state supervision and regulation functions in the sphere of ensuring chemical and biological security (including in the process of privatisation/sale/transfer of hazardous facilities);
- provisions of international agreements and treaties of the Russian Federation in the sphere of ensuring chemical and biological security

The range of key objectives in the sphere of improvement of state regulation incorporates:

- development of mechanisms of state management, co-ordination and control, including legislative delineation of powers and responsibilities of federal agencies, executive bodies of constituents of the Russian Federation, local self-government bodies, bodies in charge of control of hazardous facilities and operators of these facilities; development of mechanisms for their co-operation;
- assessment of necessary finance resources and identification of sources of financing (including budgetary and extra-budgetary ones), their allocation (mobilisation) for implementation of action programs/plans in the sphere of ensuring chemical and biological security;
- development of mechanisms of state guarantees and social protection of different categories of persons, affected by adverse chemical and biological impacts and residents of special protection zones of facilities for elimination of chemical weapons and other hazardous sites;
- enhancement of efficiency of state regulation of counter-terrorism activities to ensure protection of hazardous sites, places of high concentration of people and other potential targets of terrorist activities;
- development of state management at the federal, regional, territorial, sector-specific and local levels (including the level of specific sites) in the sphere of development and improvement of the system of development, production, storage and upgrade of chemical/biological protection gear to ensure safety of residents,

production and service personnel of hazardous sites, personnel of emergency response teams, special counter-terrorism teams and units involved into mitigation of consequences of accidents;

- maintaining capacity of the Russian Federation to prevent development, purchase and accumulation of chemical and biological weapons by other states, including by maintenance of due capacity of the system of defensive measures against these types of weapons and by maintenance of counter-terrorism and military deterrent capacity of the country;
- development of international co-operation, including improvement of mechanisms of implementation of international agreements and treaties of the Russian Federation in the sphere of ensuring chemical and biological security.

There are several main mechanisms and stages of implementation of the state policy in the sphere of ensuring chemical and biological security.

The range of planned activities for the first stage (2003 - 2004) incorporated development of the Action Plan for implementation of the Key Provisions starting from 2004 and implementation of the following actions:

- establishment of the Commission for Chemical and Biological Security of the Russian Federation to implement state policies and co-ordinate actions in the sphere;
- identification of executive bodies at the federal, regional and municipal levels to be authorised to implement state policies in the sphere of ensuring chemical and biological security of the Russian Federation, including development of individual chemical and biological protection gear and development of protection means to protect industrial and social infrastructures from the adverse impacts of chemical and biological factors;
- development of sub-programs for ensuring chemical and biological security in the framework of Federal Target-specific Program "Reduction of Risks and Mitigation of Consequences of Natural Disasters and Industrial Accidents in the Russian Federation";
- establishment of integrated research and production entities of designers and manufacturers of personal chemical and biological protection gear and means of chemical and biological protection of industrial and social infrastructures; granting them status of federal centres of sciences and high technologies (according to established procedures); concentration of finance, material and other resources for fulfilment of objectives of these entities and for implementation of co-ordinated research and technical policies in their spheres of operation;
- development and approval of co-ordinated criteria and methodologies for assessment and categorisation of chemical and biological hazard classes of sites, territories and natural phenomena;
- inventories of hazardous facilities, including assessment of their quality, adjustment of protection actions' areas, checking sufficiency of protection gear stocks, and estimation of needs to replace and upgrade domestically produced chemical and biological protection gear, development of the list of hazardous chemical and biological facilities of the Russian Federation based on the results of these inventory works (including identification of critically important facilities in the above list);

- development and approval of the Federal Plan to Improve Protection of Critically Important Facilities of the Russian Federation for 2004 - 2008, including measures to enhance security of critically important chemical and biological facilities that are prone to disastrous accidents (including particularly important measures to introduce safe and economically feasible technologies at facilities that operate with large quantities of ammonia and chlorine);
- securing necessary financial resources for development of technologies to reduce adverse chemical and biological impacts on the environment, local residents, industrial and social infrastructures; for development of standard technologies for processing of hazardous industrial and household waste, banned and obsolete agricultural chemicals, other toxic substances and virulent micro-organisms;
- development and establishment of systems (means) and methods of national control in the sphere of chemical disarmament in order to ensure their chemical and biological security;
- introduction of licensing requirements to activities of entities that deal with design, construction, commissioning and operation of hazardous facilities;
- organisation of training of specialists in the sphere of comprehensive protection of the environment, individuals, industrial and social infrastructures from adverse impacts of chemical and biological factors (under governmental contract arrangements)

Plans for the second stage (2005 - 2007) stipulate:

- approval of legislative provisions on mechanisms to ensure protection of the environment, local residents, industrial and social infrastructures from adverse impacts of chemical and biological factors, as well as legislative provisions on co-operation and delineations of responsibilities of federal executive bodies, executive bodies of constituents of the Russian Federation, local self-government bodies and bodies in charge of management of hazardous facilities;
- development of a computerised system of identification and prevention of chemical and biological threats (including threats of sanitary and epidemiological nature) at hazardous facilities and in places of potential terrorist acts with use of toxic substances and virulent micro-organisms;
- implementation of a pilot project on the backbone regional system of chemical and biological security (in the framework of development of the state system of ensuring chemical and biological security in the Russian Federation);
- development of a system of state extra-budgetary funds (federal and regional levels) to ensure chemical and biological security

Plans for the third stage (2008 - 2010) stipulate:

- development and introduction of technical regulations for different types of industrial activities to meet requirements of chemical and biological security; as well as general technical regulations on physical protection of hazardous facilities, introduction of a system of certification of occupational safety measures at the above facilities;
- ensuring implementation of the mainstream works for elimination of collectors of toxic industrial waste, rehabilitation of land (water) areas affected by industrial

pollution (including rehabilitation of areas contaminated by missile fuel) and elimination of natural reservoirs of virulent micro-organisms;

- development and implementation of comprehensive measures for relocation of hazardous facilities from densely populated areas or restructuring (decommissioning) of hazardous facilities that pose systemic threats to chemical and biological security of Moscow, St.Petersburg, and regional centres of constituents of the Russian Federation

Plans for the period after 2010 stipulate completion of implementation of a set of measures to enhance the economic; research and development; and technological readiness of the country to prevent chemical and biological threats.

The underlying laws and regulations of Russia in the sphere of protection of the environment and human health from adverse impacts of hazardous chemicals incorporate the following key documents:

- the Criminal Code of the Russian Federation (Chapter 26 "Environmental Crimes"),
- the Administrative Code of the Russian Federation,
- Federal Law on Environmental Protection,
- Federal Law on Environmental Expert Assessment,
- Federal Law on Sanitary and Epidemiological Wellbeing of the Population,
- Federal Law on Protection of Consumers' Rights,
- Federal Law on Quality and Safety of Food Products,
- Federal Law on Safe Handling of Pesticides and Agricultural Chemicals,
- Federal Law on Production and Consumption Waste,
- Federal Law on Protection of Ambient Air,
- the Water Code of the Russian Federation,
- Federal Law on Technical Regulation,
- Federal on industrial safety of dangerous and industrial enterprises,
- The Labour Code
- Bases of Russian legislation on health protection of citizens, etc.

In particular, Article 49 of Federal Law on Environmental Protection - Environmental Requirements to Application of Chemicals in Agriculture and Forestry - stipulates that physical persons and legal entities are obliged to comply with rules of production, storage, transportation and application of agricultural and forestry chemicals; to comply with environmental requirements and to take measures for prevention of adverse impacts of economic and other activities, for elimination of adverse consequences to ensure environmental quality, sustainable functioning of natural ecosystems and protection of natural landscapes according to the due legislation of the Russian Federation. The Law prohibits application of non-biodegradable toxic chemicals. Requirements to neutralisation of potentially hazardous chemicals are listed in Article 47 of the Law.

Moreover, paragraph 2 of Article 51 of Federal Law on Environmental Protection prohibits discharge of production and consumption waste (including radioactive waste) to surface water bodies and groundwater, to water catchments areas, soils and underground; disposal of hazardous/radioactive waste within areas adjacent to urban and rural settlements, forests/parks, medical facilities, heath improvement and recreation zones, on

wildlife migration routes, nearby fish breeding grounds and in other places if the waste disposal may endanger the environment, natural ecosystems and human health; burial of hazardous/radioactive waste in water catchment areas of underground water bodies that are used for drinking water supply, for extraction of mineral resources or for balneology; transportation of hazardous and radioactive waste to the Russian Federation for burial and neutralisation.

According to Article 27 of the Criminal Code of the Russian Federation, production of banned types of hazardous waste, transportation, storage, burial, use or other circulation of radioactive, bacteriological, chemical substances and waste in violation of the due rules, if these actions pose a threat of a serious harm to human health or the environment - are liable to a monetary fine from 200 to 500 minimal subsistence incomes, or wages/other income of the convicted person in a period of time from 2 to 5 months, or by a restraint of liberty for up to 3 years, or by imprisonment for up to 2 years. The same actions, if resulted in pollution, poisoning or virulent biological contamination of the environment, damage to human health or a large-scale murrain, or if committed in a zone of environmental disaster/emergency - are liable to imprisonment for up to 5 years. Actions, referred to in paragraphs 1 and 2 of this Article, if they result in the accidental death of a person or a large scale human disease spread - are liable to imprisonment from 3 to 8 years.

Article 103 of the Water Code of the Russian Federation (Protection of Water Bodies from Contamination by Pesticides and Other Chemicals) stresses that application of pesticides and other chemicals may be authorised only if their application would not affect quality of water bodies and aquatic bio-resources.

In the Labor Code of the Russian Federation it is prohibited to use hazardous substances, and products for which no methods and no measures of metrological control were developed, no toxic assessment and no requirements for safety at work place were elaborated, etc.

In the Bases of Russian legislation on health protection of citizens the need to certify disinfection means, strong and poisonous substances, control over their production and use. ????I don't understand this sentence?

In terms of environmental protection from the impacts of persistent organic pollutants (POPs), Federal Target-specific Program "Protection of the Environment and Human Health from Dioxins and Dioxin-like Toxic Chemicals for 1996 - 1997" is the most relevant document. In the framework of the latter program, regional programs and projects were developed and implemented (the program of the Republic of Bashkortostan was the most efficient regional program). Unfortunately enough, the federal program was not further developed.

The Public Health Ministry of Russia, in the sphere of its competence, had developed the model national strategy and action plan for reduction and elimination of POPs releases.

Accounting for the accessible data, priority actions for identification and prevention of environmental and health impacts of POPs should incorporate:

- identification and registration of POPs sources and assessment of associated risks;

- ranking of relative hazards;
- development of the national register of POPs-releasing facilities and technologies and development (introduction) of POPs release and transfer registers (POPs PRTR);
- ensuring pollution monitoring at the most dangerous sites and efficient control of primary and secondary pollution sources;
- assessment of POPs health impacts in the course of design, reconstruction of industrial/agricultural facilities, land use planning and urban development, identification of priority facilities (the most hazardous ones) for relocation outside human settlements, environmental impact assessments (EIA);
- ensuring funding for setting official maximal acceptable concentrations (MACs) of key POPs in soil, water and other environmental media

Over the years, the Russian Federation, also developed and implemented other programs pertaining to environmental protection, environmental security and protection of human health from impacts of toxic chemicals: "Protection of the Environment from Lead Pollution and Reduction of its Health Impacts"; “Reduction of Emergencies' Risks"; “Elimination of Stockpiles of Chemical Weapons"; “Improvement of Occupational Safety for 1998-2000”; “Safe Motherhood"; “Children of Russia", etc.

At the level of constituents of the Russian Federation, some regional programs were developed to address problems of hazardous production/consumption waste and some other programs, e.g. "Socio-environmental Rehabilitation of Samara Oblast Territory and Protection of Human Health"; "Environmental and Health Improvement of Cherepovets for 1997-2010"; "Environmental and Health Improvement of Orenburg Oblast for 1996-2000"; “Environmental and Health Improvement of Nizhniy Tagil (Sverdlovsk Oblast) for up to 2000"; "Program for Environmental and Health Improvement of Tula Oblast for 1993-1998"; "Ecology of the City of Bratsk".

Experts argue that the legislation pertaining to management of hazardous chemicals and mitigation of their adverse health and environmental impacts should be amended, particularly by Law on Status of Environmental Disaster Zones and Regulation of Economic and other Activities in these Zones and Law on Ensuring Safe Use of Chemicals.

International Documents on the Management of Hazardous Chemicals

There are three international documents of particular relevance to management of hazardous chemicals in Russia: the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, the Stockholm Convention on Persistent Organic Pollutants, and the Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.

Russia prevents the import of hazardous waste (e.g. banned and obsolete pesticides) and returns these types of waste to producers according to the Basel Convention. Russia had

acceded to the Convention long ago and uses its mechanisms and the Federal Law on Production and Consumption Waste for management of waste in the territories of constituents of the Russian Federation.

According to the Stockholm Convention that bans the production/use and seeks to eliminate 12 chemicals (including pesticides), the Convention Parties are obliged to act consistently to collect and eliminate these substances. Russia signed the Stockholm Convention on May 22, 2002 (Decree No. 320 of the Government of the Russian Federation of May 18, 2002). As a signatory of the Stockholm Convention, Russia is eligible for grant funding of the Global Environmental Facility (GEF) for purposes of development of the National Plan of Implementation of the Stockholm Convention and optimisation of domestic capacity for development and implementation of national action plans (specific technical projects).

Decree No. 323 of the Government of the Russian Federation of June 3, 2003 authorised the Ministry of Natural Resources of the Russian Federation to fulfil functions of the national agency in charge of implementation of provisions of the Stockholm Convention.

In 2002, the Ministry of Natural Resources issued Order No. 583 of 18.09.2002 to authorise the Centre of International Projects to fulfil functions of the National Co-ordination Centre of the Russian Federation on the Stockholm Convention (NCC). Regulations of the NCC were approved by Order No.822 of the Ministry of Natural Resources of 10.09.2003.

The key functions of the NCC incorporate co-ordination of activities of Russian organisations that participate in implementation of the Convention. The Centre should be financed by allocations of donors, international organisations and the Global Environmental Facility for purposes of development and implementation of the National Plan of Implementation of the Stockholm Convention.

According to proposals of interested ministries, agencies and NGOs, the personal composition of the Inter-agency Council for development of the National Plan of Implementation was approved by Order No. 899 of the Ministry of Natural Resources of Russia of 08.10.2003. Several meetings of the Council were held to discuss organisational arrangements, to review results of implementation of associated international projects on POPs, to discuss priorities and the structure of the National Plan of Implementation, as well as program measures and specific priority actions for implementation at the federal and regional levels.

At the same time, it was noted that National Environmental Action Plans of the Russian Federation for recent years and a longer term future stipulated development of regional environmental action plans in all regions of Russia that should mandate incorporating issues pertaining to ensuring the environmental security and management of especially hazardous chemicals and toxic waste.

Now, in Russia, the draft document has been developed (PDF-B). The draft incorporates a preliminary situation assessment in the sphere of persistent organic pollutants and defines requirements for development of the National Plan of Implementation of the Stockholm Convention on POPs. The planned actions cover 5 key stages, recommended

by the document of the Global Environmental Facility (GEF) - "Preliminary Guidelines on Implementation of Actions under the Stockholm Convention on Persistent Organic Pollutants": identification of mechanisms of co-ordination and organisation of POPs inventories, assessment of the national infrastructure and its capacity, setting POPs management priorities and objectives; development of the National Plan of Implementation and ensuring planned participation of relevant stakeholders.

The third convention (the Rotterdam Convention) is dedicated to management of international flows (movements) of hazardous chemicals and pesticides. According to the Rotterdam Convention, special customs codes are used to regulate controlled substances under procedures of prior informed consent. Russia has not acceded yet to the Rotterdam Convention, however, it is worth to note that mechanisms of international standard setting at the base of ISO 14000 series were used in Russia for a long time.

Participation of Russia in the International Chemical Industry Program of Responsible Care

On January 21, 2005, in Moscow, the Russian Union of Chemists, the Russian Chemical Trade Union, the Association of Chemical Industry of Finland and the Trade Union of Workers of Chemical Industry of Finland signed the Program Agreement on Accedence of Chemical and Petrochemical Facilities of Russia to the International Program of Responsible Care. The document primarily focuses on implementation of a set of actions to prepare chemical and petrochemical facilities of Russia for implementation of the Responsible Care Program.

The Environmental Program of the United Nations (UNEP) approved Responsible Care as a key instrument of the chemical industry for purposes of sustainable development. ???where does it say this…actually Responsible Care is a PR program designed to prevent actual regulation…..According to participants of the process, the relevance of accedence of the Russian chemical and petrochemical industries to Responsible Care is associated with economic globalisation and the incoming membership of Russia in the WTO which would entail tightening of environmental requirements. The program agreement of chemical industry organisations of Russia and Finland sought to ensure implementation of the framework plan that stipulates three key spheres of activities: 1) promotion of dialogue between social partners at the level of companies and workers' organisations; 2) promotion of good environmental and occupational safety practices; 3) facilitation of implementation of international program Responsible Care.

Two Russian JS companies were selected for pilot implementation of Responsible Care program ("Apatite" Co. Ltd. and "Nizhnekamskneftekhim" Co. Ltd.). Facilities of these companies will apply basic principles of Responsible Care, reporting and certification systems, as well as improved systems of facility-level safety management. Implementation of the framework plan was scheduled for the period from 2005 to 2008. If successful, implementation of the Program Agreement would facilitate accedence of Russia to international program of Responsible Care.

"Apatite" Co. Ltd. is a large and modern chemical and mining complex, incorporating 4 mines, a concentrating mill, railway and road transport facilities, as well as 30 auxiliary

facilities. The company belongs to largest global producers of raw phosphates for production of fertilisers, the company's mainstream product - apatite concentrate - is well known to all producers of phosphorous fertilisers in Russia and abroad.

Russian producers of fertilisers are main customers of the apatite concentrate. Besides that, the concentrate is exported to Poland, Finland, Germany, Norway, Belgium, Ukraine, Byelorussia and Lithuania.

The company had introduced and operates the occupational safety management system harmonised with international standards. In 2004, DuPont conducted assessment of the occupational safety management system of "Apatite" Co. Ltd. to identify its advantages and disadvantages and to develop recommendations for improvement of occupational safety in the company.

"Nizhnekamskneftekhim" Co. Ltd is the largest petrochemical complex in Russia and Europe. Now, the company incorporates 11 plants, 11 directorates, 5 centres and 7 general purpose facilities. Mainstream products of the company include: butyl rubber, halobutyl rubber, isoprene rubber, divinyl, isoprene-propylene rubber, ethylene, ethylene oxide, styrene, polyesters, surfactants, polyethylene films, polystyrene and other products. The company had introduced international standards of ISO 9000 series (quality management) and ISO 14000 series (environmental management).

However, it is necessary to note the following fact that essentially the Responsible Care program is an example of the chemical industry response to public environmental concerns surrounding the disastrous Bhopal accident in India. The accident released 27 tons of deadly methyl isocyanate gas from a Union Carbide facility exposing half a million people in the city. To date, 20,000 people have died from their exposure and more than 120,000 suffer various health impacts caused by the accident. Despite the long gap between the accident and current times, the site has never been cleaned up and has now poisoned the groundwater. Dow Chemical purchased Union Carbide in 2001 but claims no responsibility for cleaning up the site or compensating victims. The origin of the accident involved substandard operating systems in the Indian facility. None of the six safety systems designed to contain a leak were operational. Public concern over this accident and the industry’s troubled reputation resulted in the chemical industry proposing Responsible Care as a way to salvage and improved the industry’s image.

Responsible Care does not propose introduction of tighter environmental requirements. Instead, companies establish unions and promise to comply with policies of their own making. In this way, Responsible Care program is a private initiative of chemical industry to that appears to improve environmental protection, health and industrial security but primarily serves an important public relations function for the industry. Recent practices suggest that if "voluntary" corporate initiatives are not supported by legislative limitations and control, they remain initiatives on paper. Ironically, sometimes facilities that declined to participate in Responsible Care program, demonstrated higher environmental effects comparatively to companies that participated in the program.

There is another argument against Responsible Care program - the range of program participants incorporates members of the Chlorine Chemistry Council (i.e. producers of organochlorine chemicals that are primarily responsible for serious contemporary global

contamination of our planet by persistent organic pollutants). The only way to terminate large-scale releases of organochlorine compounds to the environment is associated with phase out of chlorinated compounds and a switch to production of safer alternatives. However, the Chlorine Chemistry Council promotes application of more efficient emission control technologies and refuses to discuss issues of phase out of chlorinated compounds. Notwithstanding the above position, these facilities participate in Responsible Care program.

Major Chemical Safety Problems in Russia and Environmental Enforcement Issues

One of the key problems of providing chemical safety is the steadily growing decline in technical, environmental and economic performance of chemical facilities. Some chemical facilities operate equipment with critically high depreciation levels of 60 - 80%. According to the State Committee for Statistics, rates of replacement of fixed assets in chemical industry decreased from 4% in 1990 to 0.8% in 2004 (while under contemporary conditions, the minimal rate of replacement should reach 12-15% per annum). For comparison - in the oil processing sector, the rate is higher and it increased from 3% to 3.3%.

There is another problem as well, as chemical facilities have rather low investment capacity. Their accessible financial resources are mainly limited to their own funds (about 80% of investments). The public authorities almost completely rely on private investors and practically abandoned financial support of the industry. The government allocates less than 0.1% of the overall industrial investments to the industry in the framework of targeted investment support of socially significant production facilities (production of pharmaceutical preparations for cancer diagnostics and treatment, production of insulin, iodine preparations, and feed proteins).

Strategic investors are constrained by the growing reduction of domestic markets and by the decline of competitive capacity of a substantial share of chemical products, while portfolio investors are constrained by low share prices and by the almost complete absence of shares of chemical companies on the stock market.

Opportunities to use domestic debt financing are also limited, as interest rates often exceed rates of return in the industry. Loans of Russian banks may be used to finance only a few projects (predominantly short-term ones). Substantial foreign investments also seem problematic for the majority of chemical facilities due to their low investment attractiveness, closed nature of business ventures, inadequately developed infrastructure and professional skills of managers.

As a result, chemical companies face a severe shortage of investments. It would be enough to note that the chemical sector needs more than 6 billion roubles annually to ensure simple reproduction of the industry. Depreciation costs (the industry average share of these costs in production costs reaches 4%) are not sufficient, while facilities cannot increase the share up to the necessary level of 10%.

Dissociation of chemical enterprises is one more serious problem. While earlier, all chemical plants, including suppliers of raw materials, producers and waste recycling facilities operated as closely interconnected economic actors, now the situation is radically different. For example, many facilities cannot transport their waste to waste processing sites. As a result, amounts of their on-site waste stockpiles rise every consecutive year, while waste storages do not meet safety requirements. For example, one of the largest industrial waste disposal sites operates in Tambov Oblast and the site does not meet environmental safety requirements. Besides that, the municipal waste site in the region does not meet applicable sanitary standards and requirements. Moreover, facilities either accumulate their liquid industrial waste on-site or discharge wastewater to sewers or surface water bodies. Large amounts of industrial and household waste are disposed to illegal dumps.

Since 1968, "Pigment" Co. Ltd. has been pumping its wastewater to deep underground layers. In a few recent years the company pumped about 3200-3500 m^3 daily. The overall estimated capacity of the underground wastewater collection site reaches about 500 million m^3. For 35 years, "Pigment" Co. has already pumped 50 million m^3 of wastewater - i.e. 10% of the estimated site capacity. Nobody knows what would happen with the wastewater in the future.

Weak control of all stages of chemical production should be also considered as a serious problem. Very often facilities import relatively safe chemicals for production of hazardous ones, including pesticides. It is extremely difficult to control these processes, as there are numerous new small production facilities that can be hardly controlled.

There is another problem worth mentioning - Russia lacks a chemical register (such a register should contain information on individual chemical substances/wastes, their production, applications and storage). According to Decree of the Government of the Russian Federation of November 12, 1992 "On State Registration of Potentially Hazardous Chemical and Biological Agents", as at September 30, 2003, in Russia, 2510 newly introduced chemicals (including both imported and domestically produced ones) were registered. Many of them belong to toxic or biologically active substances. Persistent organic pollutants are also registered in the Russian Register of Potentially Hazardous Chemical and Biological Agents. The relevant database was submitted to regional authorities. However, the Register more resembles a reference book rather than a comprehensive information resource on chemicals.

Besides that, it is important to note that, in the course of decommissioning of chemical facilities, operations of associated security systems are also terminated, thus posing a threat of serious environmental consequences.

The system of state environmental control

In recent years, the system of state environmental control (SEC) underwent substantial changes that seriously affected its results and the whole situation in the sphere of environmental protection in Russia. Now, the underlying laws, regulations and methodological support of the state environmental control are seriously weakened. The framework environmental law of Russia has been effective since 2001 - Federal Law on Environmental Protection. In contrast to its predecessor (Law of RSFSR on

Environmental Protection), the new law is not a direct action law and requires regulations of the Government of the Russian Federation and constituents of the Russian Federation for its implementation. However, so far, executive bodies have not passed any implementing regulations stipulated by the Law.

According to V.Grachev - the Chairman of the Committee for Ecology of the State Duma of the Russian Federation – the environmental situation in the country did not improve, it got even worse. In Russia, different reorganisations resulted in a gradual decline of the system of state environmental monitoring and control. Mr. Grachev believes that executive bodies fail to act to their full capacity. He called for restoration of rights of constituents of the Russian Federation in the sphere of addressing environmental problems and for delegation of powers both top-down and bottom-up. Since January 1, 2005, executive bodies of constituents of the Russian Federation did not have rights to execute state control and supervision in the sphere of waste management, air protection, use and protection of water bodies, quality, use, protection and restoration of forests. Besides that, they do not have rights to get information on environmental control measures of economic actors and other facilities - such information should be submitted to federal executive bodies and local self-government bodies that fulfil functions of state and municipal control, respectively.

The new Federal Law on Environmental Protection does not deal with many key issues of the state environmental expert assessment, in particular, with rights of state inspectors to freeze financing of economic and other activities that do not comply with the due environmental legislation. Article 66 of the Law declares rights of inspectors to limit/terminate economic activities. However, Article 80 stipulates that requests to terminate economic activities shall be examined by courts of law. These contradictions in the Law allow one to by-pass requests of state environmental control officials easily.

As it was already noted, the Law stipulates that it is necessary to pass at least 3 regulations at the level of the Government of the Russian Federation and relevant regulations of constituents of the Russian Federation to make the state environmental control operational. However, notwithstanding that the Law was made effective a year ago, only one of the necessary decrees of the Government of the Russian Federation was passed - "On Approval of the List of Facilities under Requirements of the Federal State Environmental Control". Other regulations, necessary to make the state environmental control operational (on procedures of federal environmental control and officials in charge of federal environmental control) have not been approved yet. As a result, implementation of any state environmental control actions may be appealed against on grounds of non-compliance with the due legislation.

It is important to note that there are numerous examples of non-compliance with the due environmental legislation in the sphere of production and use of chemicals that adversely affect environmental quality and human health. For example, in some regions, some facilities (including petrochemical ones) use environmental production safety certificates instead of state environmental expert assessment statements to justify their environmental non-compliance. Serious problems in the sphere of production and use of chemicals are primarily associated with outdated technologies and production equipment at the majority of chemical plants, as well as with inadequate co-operation linkages between chemical facilities themselves.

Contradictions in waste-related legislation

Order No. 144 of the Chief State Sanitarian of the Russian Federation of June 16, 2003 approved Sanitary Rules (SR) 2.1.7.1386-83 - "Sanitary Rules for Identification of Hazard Classes of Toxic Production and Consumption Waste".

Clause 1.2. of the Sanitary Rules stipulates that the Rules set hygiene requirements and criteria for identification of hazard classes of production and consumption waste, depending on toxicity; the Rules are introduced to assess and prevent adverse health and environmental impacts of toxic waste.

Clause 2.1. of the Sanitary Rules introduces 4 hazard classes of waste, depending on relevant health and environmental impacts (5th hazard class incorporates low hazard waste). The document does not regulate management of the 5th class waste.

Order No. 511 of the Ministry of Natural Resources of the Russian Federation of 15.06.2001 approved Criteria for Categorisation of Hazardous Waste by Environmental Hazard Classes. According to the Criteria, 5th hazard class wastes are almost environmentally safe as their environmental impacts are very low and ecosystems are practically unaffected. Clause 4 of the Criteria stipulates that, if a waste generating facility defines its waste as 5th hazard class waste according to its estimates, the estimates should be supported by relevant testing. If no supportive testing results can be submitted, waste should be classified as 4th hazard class waste. The Criteria were not abrogated and are still in force.

According to paragraph 4 of Clause 1 of the Regulations of the Ministry of Natural Resources of the Russian Federation (approved by Decree No. 726 of the Government of the Russian Federation of 25.09.2000, the Ministry is the specially authorised governmental body in the sphere of waste management under its competence (excluding management of radioactive waste).

As a result, sanitary and epidemiological rules cannot set mandatory rules for identification of hazard classes of production and consumption waste.

Accounting for the above considerations, production facilities should rely on the above Criteria in the course of identification of hazard classes of their waste, instead of the Sanitary Rules that contradict to Law on Production and Consumption Waste and the Regulations on Sanitary and Epidemiological Standard Setting.

Besides the above contradictions:

The existence of 5th hazard class waste in the Waste Register induce production facilities to identify their waste as 5th hazard class waste without any supportive testing (for example, facilities classify their alkaline waste as waste # 524 002 00 02 01 0 of the Federal Waste Register - "waste alkalis and their mixtures"), however, these wastes may contain many hazardous substances, including sulphides and mercury (if alkaline solutions were used in pollution control installations).

One may also doubt categorisation of meat-processing waste (5th hazard class waste # 132 004 00 01 00 - "waste animal and poultry meat" of the Federal Waste Register and other, overall 12 Waste Register classification entries). The Register suggests that the above wastes do not pose environmental threats in places of their disposal. At the same time, any supportive testing would inevitably suggest such effects as death of hydrobionts or growth stimulation.

In addition, already effective regulations do not stipulate the need of mandatory full chemical analysis of raw materials, intermediate products and finished products. As a result, facilities are also induced to conceal their toxic waste or dispose off toxic substances, specifying only 2 parameters that are necessary for the waste certificate form (moisture content and aggregation state). Moreover, a waste certificate, if once issued, eliminates the need of further chemical control of disposal of accumulated waste stockpiles. As a result, we cannot expect to know where many tons of mercury are disposed off by "Kaustik", "Plastkard" and "Khimprom" companies that report their waste mercury as "losses".

Our assumption that production facilities prefer to report lower hazard classes (due to lower waste disposal fees) is supported by practice: for example, Volgograd facilities transported hazardous pesticides and mercury-containing granozan to Leningrad Oblast (Krasniy Bor waste disposal site) that were reported as plant protection chemicals. Moreover, 1st hazard class substances were loaded to open body trucks without necessary protection gear. In February 2005, 20 tons of hexachlorocyclohexane were delivered to the same site. Initially, HCCH was intended for burial nearby a settlement in Ilovlinskiy district. Sand soils were eroded by water and as a result, toxic substances migrated. Soil samples taken at the site revealed excessive concentrations of toxic substances (100 times MACs and higher). In early February 2005, toxic pesticides and contaminated soils were collected, re-packed in polyethylene bags and transported to a specially equipped storage site. Then the waste was reportedly transported to the Krasniy Bor waste disposal site in Leningrad Oblast. However, when checked, it was found that no waste of the above type was registered at the site.

Contradictions in legislative acts on waste cause difficulties in control of their toxicity and disposal. Moreover, in the case of waste disposal sites (e.g. landfills, different ponds), it was necessary to get a waste disposal permit pursuant to a document that confirmed or set maximal limits of adverse impacts on groundwater bodies. Calculations were made according to the only authorised methodological guidelines available: "Methodological Guidelines for Setting Limits of Adverse Impacts on Groundwater Bodies and Limits of Discharge of Hazardous Substances to Groundwater Bodies" (approved by the Ministry of Natural Resources of the Russian Federation on December 29, 1998). The Guidelines had been officially abrogated by Order No. 84 of the Ministry of Natural Resources of the Russian Federation of 03.02.2004 - "On Declaring Legislative Acts of the Ministry of Natural Resources of Russia Null and Void. ("Methodological Guidelines for Setting Limits of Discharge of Hazardous Substances to Surface Water Bodies" and "Methodological Guidelines for Setting Limits of Adverse Impacts on Groundwater Bodies and Limits of Discharge of Hazardous Substances to Groundwater Bodies", approved on September 23 1999; Order No. 71 of March 13, 2000, "On Making the Methodological Guidelines Effective".)

As a result, a new potential threat emerges - in areas with permeable soils, some hazardous substances may infiltrate to groundwater and then to rivers (e.g. to the Volga) or may infiltrate to downstream aquifers that are used as a drinking water supply source.

Charges for wastewater discharges to surface water bodies and groundwater.

Decree No. 632 of the Government of the Russian Federation of 28.08.92 does not stipulate charges for adverse impacts of wastewater accumulation ponds on groundwater bodies, as a result, production facilities benefit from use of such ponds. In Volgograd, wastewater treatment facility in the southern part of the city, that treats wastewater of more than 60 clients (including the municipal sewer) operates without "Discharge Rules" that are to be approved by local self-government bodies. Discharge limits are regulated by contracts between clients and the wastewater treatment facility - as a result, environmental releases of hazardous substances depend on the financial interests of the owner of the wastewater treatment facility.

The city of Dzerzhinsk (Nizhniy Novgorod Oblast) is one of the largest centres of the Russian chemical industry. In the past, Dzerzhinsk was proudly called "the capital of chemistry of the USSR" or "the chemical laboratory of the country". The high density of large chemical plants in a relatively small area and many decades of use of outdated technologies have resulted in severe contamination of the city area and the whole Nizhniy Novgorod Oblast by persistent organic pollutants.

For several years, Dzerzhinsk was even placed in the Guinness Book of Records as the most heavily contaminated town in the World (the Guinness Book of Records - 1999).

Notwithstanding the radical economic changes in the country, the rights of Dzerzhinsk residents to a healthy environment and environmental security are still violated by production facilities, governmental bodies and even by environmental officials. For example, nobody controls vinyl chloride emissions of "Caprolactam" Plant of "SIBUR-Neftekhim" company in the territory of Dzerzhinsk since 2003. The decision to terminate emission control was made by V.M.Prozorov - the Chief of Dzerzhinsk City Environmental Control Department.

"Caprolactam" Plant in Dzerzhinsk has been producing vinyl chloride since 1944 (the new production line has operated since 1970). Published sources suggest that vinyl chloride emissions in the course of PVC (polyvinylchloride - a common plastic) production reach 0.1-0.5 kg/ton. The MAC for vinyl chloride in ambient air of human settlements is set at the level of 0.01 mg/m^3. In 2001, in Dzerzhinsk, excessive vinyl chloride concentrations were registered (up to 11 times MACs). In 2002, excessive vinyl chloride levels in ambient air were registered as well: 2,3,4,5,6,11 MACs in October, 1, 3, 4 MACs in December 2002. Vinyl chloride is classified as a known human carcinogen

Vinyl chloride levels still are not controlled and "SIBUR-Neftekhim" company plans to triple production capacity of the PVC plant. It is particularly important to note that south-western and western winds prevail in Dzerzhinsk (towards Nizhniy Novgorod).

Gorbatovka township is located in-between Dzerzhinsk and Nizhniy Novgorod, near the industrial waste disposal site of Gorky Motor Works (GAZ) and the abandoned deep burial site of toxic simazine (pesticide) production waste of "Orgsteklo" Co. Ltd. Now the company is bankrupt and the latter waste burial site is abandoned and in poor technical condition. At any time, toxic wastewater may blow out and cause potentially disastrous consequences in Dzerzhinsk and Nizhniy Novgorod. One of the largest municipal landfills of Dzerzhinsk and Nizhniy Novgorod is located about 2 km from the township that has a combined population of 1.5 million residents. The municipal landfill is one of the most serious sources of dioxin releases - as it regularly burns, sometimes for several weeks. According to independent specialists, the landfill is expected to burn for several years, until exhaustion of the layer of solid municipal waste that was landfilled in violation of relevant rules. For a decade, toxic water from the landfill infiltrates to the nearby water body in close proximity to the landfill.

According to official data, for about 25 years, another serious source of environmental contamination existed - the chemical waste pit (so called Black Hole). Volosyanikha channel is still a source of pollution of surface water bodies and groundwater (the channel was constructed in 1936 for discharge of chemical waste of Dzerzhinsk facilities, including organochlorine compounds and mercury, to the Oka river. The Pyra river is the most heavily contaminated river of Nizhniy Novgorod Oblast (for several decades wastewater of TNT production was discharged to the river). The river is categorised as "very dirty water body" - for example, in May 2005, iron concentrations in the most polluted sampling points were 35 times higher than regulatory levels expressed as maximal acceptable concentrations. The Pyra river joins the Volga about 10 km upstream of Nizhniy Novgorod.

There are specific pollution problems in Igumnovo and Petriaevka townships, located in close proximity to largest chemical plants of the Eastern industrial area of Dzerzhinsk. Results of numerous studies suggest that the area is heavily contaminated by dioxins, dioxin-like compounds (PCBs) and heavy metals. Samples of soils of residents' gardens and water contain excessive levels of such heavy metals as cadmium, lead, mercury and copper. Locally grown vegetables (carrots, potatoes, beets, etc.) contain high levels of nitrates in excess of relevant MACs. The centralised water supply in these townships was constructed in 1984, while earlier local residents used water from wells. Nearby the largest collection pond for solid waste (the so called "White Sea") covers an area of about 50 hectares. In the Volosyanikha river, water levels of DDT (the pesticide was banned long ago), mercury and PCBs levels in bottom deposits exceed relevant MACs by many times. In autumn 2002, near a residential house in Igumnovo township, soil samples revealed presence of DDT (6 times higher than MACs), while water samples taken from a deep water well revealed phenol (300 times higher than MACs), and samples of local apples revealed nitrates (24 times higher than MACs). All these facts suggest continued adverse environmental impacts of industrial facilities and toxic waste storages. Residents of townships located within the sanitary protection zone of the chemical facilities were reportedly resettled to the city in early 1980s However, the resettlement was carried out on paper only. The townships were even erased from official maps.

Several decades passed from that time. The townships still exist with all their social, environmental and economic problems. The city and the townships that worked for the

military-chemical complex of the country for the whole Soviet period were left alone face-to-face with their problems.

Since 1995, Dzerzhinsk chemical plans have been stockpiling their industrial waste on their territories due to the decommissioning of the industrial waste site. As a result, these wastes contaminate soils and groundwater and facilitate karst processes (underground aquifers formed on carbonate rock). In the eastern and south-western industrial zones of Dzerzhinsk (in some cases in close proximity to residential areas) dozens of dumps and collection ponds of industrial and municipal waste are located.

Notwithstanding numerous requests of residents of these townships and environmental activists and results of surveys of many commissions, there is no chemical environmental monitoring in the territory of the townships and local residents get no systemic information on local environmental quality and actions of authorities to improve the situation. The Constitution of Russia guarantees rights for a healthy environment, but these rights of residents of Dzerzhinsk and Nizhniy Novgorod Oblast are still violated.

Annex 1. Good Practice Examples

At the national level

1. GEF/UNEP/AMAP project "Persistent Toxic Substances, Food Security and Indigenous Peoples of the North". The project sought to assess the impacts of persistent organic pollutants on the health of residents of the Russian North and to develop recommendations for different governmental levels on the reduction of adverse impacts of POPs on Indigenous Peoples.

In 2002, inventory works were conducted in the following areas of the Russian Arctic where Indigenous Peoples of the Russian Far North live: Murmansk Oblast, Lovozero township area (the main living area of the Russian Lapps); Nenetskiy Autonomous District, Nelmin Nos township area (the main living area of the Nentsy; Taimyr Autonomous District, areas of Dudinka and Khatanga townships (the main living area of the Nentry and the Dolgany), Chukotka Autonomous District, areas of Konchalan, Providenia and Uelen townships (living areas of the Chukchi and the Eskimo). Preliminary estimates suggests that the maximal distance between living areas and pollution sources to be inventoried reaches up to 100 km. Specific borders of inventory zones were adjusted on case-to-case basis accounting for local conditions (prevailing winds, rivers, intensity of regional pollution sources, etc.).

2. The Arctic Council project "Reduction/elimination of Emission of Dioxins and Furans in the Russian Federation with Particular Focus on Arctic and Northern Regions that Affect the Arctic".

The project implementation activities incorporate identification of sources of releases of dioxins and furans, improvement of technological processes to prevent generation of these pollutants in the Russian Federation.

3. The Arctic Council/UNEP project "Environmentally Sound Management of Obsolete Pesticide Stockpiles in the Russian Federation".

In the framework of the project implementation, the Technical Guidelines for Inventory, Identification, Collection and Storage of Banned and Obsolete Pesticides were developed. With participation of the Ministry of Agriculture, the Ministry of Public Health and the Ministry of Natural Resources of Russia and state administrations of some constituents of the Russian Federation (Archangelsk, Murmansk, Kurgan, Omsk, Magadan, Kamchatka oblasts, the Komi Republic, Krasnoyarskiy Krai, Altaiskiy Krai, etc.), primary inventories of stockpiles of obsolete pesticides and their storage sites were conducted, plans were developed and implemented for repackaging of obsolete pesticides and

improvement of their storage facilities, for selection and justification of technologies for their elimination.

Roles of non-governmental organisations

4. At spring 2003, NGOs of Chelyabinsk Oblast approved the Regional NGO Action Program for Health and Environment. One of the key sections of the Program is dedicated to chemical security issues. The section focuses on participation of the general public and local communities in conducting primary inventories of stockpiles of banned and obsolete pesticides and submission of inventory results to territorial authorities and oblast-level administrations for informed decision-making. These measures should be incorporated into regional plans of implementation of the Stockholm Convention, while primary inventory results should be incorporated into official reports on inventories of stockpiles of banned and obsolete pesticides.

The first project for implementation of the Program was associated with public participation in primary inventories of banned and obsolete pesticides in Chelyabinsk Oblast. In the course of the project implementation, 11 rural settlements were surveyed (9 of them were surveyed according to information of local residents). The surveys allowed identification of unauthorised storage of banned and obsolete pesticides in the territory surveyed. The project results were submitted to local authorities of Chelyabinsk Oblast for decision-making. In the course of the project implementation, recommendations were developed on further facilitation of public participation in primary inventories of stockpiles of banned and obsolete pesticides.

5. Eco-Accord Centre, in co-operation with experts of the Committee for Ecology of the State Duma of the Russian Federation, developed Methodological Recommendations for NGOs on Primary Inventory of Banned and Obsolete Pesticides. Such recommendations were developed for the first time. The document is intended to provide information to members of the general public - where should one look for stockpiles of banned, obsolete and unusable pesticides; how pesticide storage facilities should be examined, how primary inventory works should be conducted at nearby territories.

6. Eco-Accord Centre, in co-operation with the Ministry of Natural Resources and Greenpeace-Russia, developed the survey of POPs-related developments in Russia. The survey contains information on POPs sources and pollution levels, health impacts of POPs, underlying laws and regulations, proposals of non-governmental organisations for elimination of POPs.

7. "Iskorka" NGO implemented project "Identification of PCDDs/Fs and PCBs in Breast Milk of Women - Residents of Magnitogorsk". The project results were submitted to regional authorities for relevant decision-making.

Annex 2

State Governance in the Sphere of Chemical Management and Ensuring Environmental Security in the Russian Federation

(as of August 2005)

No.	Federal executive bodies	Underlying laws and regulations		Participation in international activities
		Law/regulations	**Provisions of the document, pertaining to chemical management**	
1.	**The Ministry of Foreign Affairs of the Russian Federation**	The Regulations of the Ministry, approved by Decree No. 865 of the President of the Russian Federation of July 11, 2004	Powers: 4) by diplomatic and international law means [the Ministry] carries out efforts of the Russian Federation to promote international peace, global and regional security, including its responsibilities as a permanent member of the UN Security Council, and as a participant of the Pan-European process and other regional mechanisms; 6) participates in development and implementation of the state policy in the sphere of guaranteeing rights and freedoms of citizens of the Russian Federation, national defence and security, development of trade, economic and finance relations, scientific, cultural and other exchanges between the Russian Federation, foreign countries and international organisations; 22) maintains general supervision of fulfilment of international commitments of the Russian Federation. participates in development of recommendations for harmonisation of the	Fully, *inter alia* according to the Inter-agency Delineation of Responsibilities to Ensure Participation of the Russian Federation in activities of international organisations of the UN system (approved by Decree N. 323 of the Government of the Russian Federation of June 3, 2003). - in the Expert Committee on transportation of hazardous cargo and the global harmonised system of classification and marking of

			legislation of the Russian Federation with its international commitments;	chemicals.
2	**The Federal Service for Environmental, Technological and Nuclear Supervision**	The Regulations of the Service, approved by Decree No. 401 of the Government of the Russian Federation of July 30, 2004	1. The Federal Service for Environmental, Technological and Nuclear Supervision is a federal executive body that fulfils functions of approval of regulations, control and supervision in the sphere of environmental protection, to the extent pertaining to reduction of adverse industrial impacts (including the sphere of management of production and consumption waste). [The Service] has the following powers: it independently approves the following regulations in its authorised sphere of activities: 5.2.5. requirements on the registration of sites/facilities in the State Register of Hazardous Production Facilities and requirements to maintenance of the Register; 5.2.9. requirements on the contents and a range of documents on assessment of industrial environmental impacts; 5.2.10. lists (registers) of facilities, subject to setting technical emission limits; 5.2.11. procedures of issuance and formats of permits for emissions of hazardous (polluting) substances; 5.2.12. manuals for estimation of qualitative and quantitative parameters of hazardous (polluting) substances in air emissions; 5.2.13. methodological guidelines on development of draft documents for setting waste generation	According to the Regulations of the Service, it serves as a regulatory body under the Convention on Nuclear Safety and as a competent body of the Russian Federation under the Basel Convention on Control of Trans-border Transportation and Disposal of Hazardous Waste

			limits; 5.2.14. rules of inventories at waste disposal facilities and rules of registration/record-keeping in the sphere of waste management; 5.2.15. regulations on other issues in the authorised sphere of activities, except issues, that, according to the Constitution of the Russian Federation, federal constitutional laws, federal laws, legislative acts of the President of the Russian Federation and the Government of the Russian Federation are regulated exclusively by the Constitution of the Russian Federation, federal constitutional laws, federal laws, legislative acts of the President of the Russian Federation and the Government of the Russian Federation; 5.3. according to federal laws, legislative acts of the President of the Russian Federation and the Government of the Russian Federation, [the Service] fulfils the following control and supervision functions in its authorised sphere of activities: 5.3.1. [the Service] controls and supervises: 5.3.1.10. compliance with requirements of the due legislation of the Russian Federation in the sphere of environmental protection (state environmental control), within its sphere of competence; 5.3.2. issues licenses for the following activities: 5.3.2.3. management of radioactive wastes in the course of their storage, processing, transportation and burial; 5.3.2.8. operating chemically hazardous production facilities;	

			5.3.3.5. emissions and discharges of pollutants to environmental media and hazardous physical impacts on ambient air; 5.3.3.7. import and export of toxic substances to/from the Russian Federation; 5.3.8. [the Service] controls (inspects) compliance of legal entities and physical persons with requirements of the due legislation of the Russian Federation, regulations, standards and rules in the authorised sphere of activities; --- [the Service] participates, jointly with interested federal executive bodies, in development of regulations in the sphere of ensuring biological and chemical security of the Russian Federation, including development of draft federal laws, decrees of the President of the Russian Federation and legislative acts of the Government of the Russian Federation on technical regulations, setting requirements to chemical security of objects of technical regulation; [the Service] organises and conducts state environmental expert assessment of draft regulations and international treaties of the Russian Federation, draft target-specific federal programs, feasibility studies and projects of construction, reconstruction, extension, modernisation, decommissioning and liquidation of production/commercial facilities of the Russian Federation, technical standards, instructions, methodological documents and other documents, dealing with management of toxic chemicals, that, if implemented, can generate direct	

		Regulations on Delineation of Responsibilities of Federal Executive Bodies in the Sphere of Ensuring Biological and Chemical Security of the Russian Federation - approved by Decree No. 303 of the Government of the Russian Federation of May 16, 2005	or indirect adverse environmental effects (except expert assessment of facilities in the sphere of natural resource use); [the Service] fulfils functions of control and supervision of compliance with safety rules in the course of construction, operations, decommissioning and liquidation of hazardous chemical production facilities, as well as in the course of manufacturing, installation, tuning, maintenance and repairs of technical instruments in use at these hazardous chemical facilities and in the course of transportation of hazardous chemicals on production sites; [the Service], jointly with the Federal Agency for Industry, organises implementation of engineering measures to reduce risks of impacts of hazardous chemicals on local residents, production infrastructure and ecosystems in the course of design, construction, operations and decommissioning of hazardous chemical production facilities; [the Service] registers hazardous production facilities and maintains the State Register of these facilities.	
3	**The Ministry of Public Health and Social Development of the Russian Federation**	The Regulations of the Ministry, approved by Decree No. 321 of the Government of the Russian Federation of June 30, 2004.	[The Ministry] has the following powers: 5.2. it independently approves the following regulations: 5.2.36. maximal allowed quantities of narcotic substances, psychotropic substances and their precursors in medical preparations, that can be exempt from some control requirements;	WHO According to the Inter-agency Delineation of Responsibilities to Ensure Participation of the Russian Federation in activities of international

			5.2.43. lists of narcotic and psychotropic substances authorised for veterinary applications;	organisations of the UN system (approved by Decree N. 323 of the Government of the Russian Federation of June 3, 2003). The Rotterdam Convention.
4	**The Federal Agency for Public Health and Social Development**	Regulations on Delineation of Responsibilities of Federal Executive Bodies in the Sphere of Ensuring Biological and Chemical Security of the Russian Federation - approved by Decree No. 303 of the Government of the Russian Federation of May 16, 2005	[the Agency] ensures protection of the population from hazardous biological agents and chemical substances;	
5	**The Federal Service for Supervision in the Sphere of Protection of Consumers' Rights and Human Wellbeing**	The Regulations of the Service approved by Decree No. 322 of the Government of the Russian Federation of June 30, 2004.	[the Service] has the following powers: 5.3. it registers (*Regulations on the State Register and the Information System for Registration of Products, Substances, Preparations (Except Medical Preparations), that Underwent State Registration - approved by Order No. 3 of the Federal Service for Supervision in the Sphere of Protection of Consumers' Rights of 09.09.2004):* 5.3.1. newly introduced into production and never used earlier chemical and biological substances and their preparations, potentially hazardous for human health (except medical preparations);	

		Regulations on Delineation of Responsibilities of Federal Executive Bodies in the Sphere of Ensuring Biological and Chemical Security of the Russian Federation - approved by Decree No. 303 of the Government of the Russian Federation of May 16, 2005	5.3.2. some products, potentially hazardous for human health (except medical preparations); 5.3.3. some products, including food products, that are imported to the Russian Federation for the first time; --- [the Service] participates in organisation of development of national standards and technical regulations, that set requirements to biological and chemical security of objects of technical regulation, and in their implementation; [the Service] organises and conducts monitoring of hazardous natural biological agents and chemical substances, and health problems, generated by these agents and substance in order to forecast chemical and biological threats at the territory of the country and implementation of planned and emergency response sanitary and counter-epidemic actions to ensure chemical and biological security of the country's population and the environment; organises activities for sanitary education of the country's population and training of specialists, whose activities are associated with production, storage, transportation and sale of products (including drinking water and food products), that are under chemical and biological security requirements of technical regulations and national standards of the Russian Federation.	
6	**The Federal Medical and Biological Agency**	The Regulations of the Agency approved by Decree No. 789 of the Government of the Russian	4. The key functions of the Federal Medical and Biological Agency incorporate: a) organisation and conducting state sanitary and	

		Federation of December 15, 2004	epidemiological supervision in some industries with particularly hazardous labour conditions and at some territories; b) organisation and implementation of measures in some industries and at some territories to identify particularly hazardous physical, chemical and biological factors and mitigation of their impacts;	
		Regulations on Delineation of Responsibilities of Federal Executive Bodies in the Sphere of Ensuring Biological and Chemical Security of the Russian Federation - approved by Decree No. 303 of the Government of the Russian Federation of May 16, 2005	[the Agency] organises research and development works in the sphere of development (for purposes of the state) of efficient methods and instruments for identification of hazardous biological agents and chemical substances, as well as development of methods and means of prevention, diagnostics and treatment of chemical impacts on human health (poisonings) and diseases; [the Agency] organises monitoring of hazardous natural pathogens and chemical substances, as well as poisonings/diseases they cause, at territories under control of the Agency, in order to forecast biological and chemical threats at the territory of the Russian Federations and to initiate adequate sanitary and counter-epidemic measures; [the Agency] organises development of databases and information/analytical resources in the sphere of ensuring biological and chemical security of the Russian Federation; [the Agency] organises provision of information on matters of biological and chemical security from national and foreign sources to interested federal executive bodies and their subordinate organisations;	

7	**The Ministry of Natural Resources of the Russian Federation**	The Regulations of the Ministry, approved by Decree No. 370 of the Government of the Russian Federation of July 22, 2004	1. The Ministry of Natural Resources of the Russian Federation is a federal executive body, that fulfils function of development of state policies and regulations in the sphere of … specially protected natural territories and in the sphere of environmental protection (except in the sphere of environmental control). 5.2. [the Ministry] independently approves the following regulations in its sphere of activities: 5.2.39. limits of adverse impacts on the unique ecosystem of the Baikal Lake and methods of their assessment; 5.2.40. rates and methodologies of assessment of environmental damages.	According to the Inter-agency Delineation of Responsibilities to Ensure Participation of the Russian Federation in activities of international organisations of the UN system (approved by Decree N. 323 of the Government of the Russian Federation of June 3, 2003) The Basel Convention The Stockholm Convention The Vienna Convention on Protection of the Ozone Layer and the Montreal Protocol on Banning Ozone-depleting Substances
8	**The Federal Service for Supervision in the Sphere of Natural Resources Use**	The Regulations of the Service, approved by Decree No. 400 of the Government of the Russian Federation of July 30, 2004	[the Service] fulfils the following functions: 5.1.6. control of compliance with the due legislation of the Russian Federation, international rules and standards in the sphere of marine media and natural resources of internal sea waters, the territorial sea and the exclusive economic zone;	

9	**The Ministry of Industry and Energy of the Russian Federation**	The Regulations of the Ministry, approved by Decree No. 284 of the Government of the Russian Federation of June 16, 2004 Regulations on Delineation of Responsibilities of Federal Executive Bodies in the Sphere of Ensuring Biological and Chemical Security of the Russian Federation - approved by Decree No. 303 of the Government of the Russian Federation of May 16, 2005	The Ministry of Industry and Energy of the Russian Federation, in its sphere of competence, fulfils function of development of state policies and regulations in the sphere of industrial, military-industrial and fuel and energy complexes, as well as in the sphere of development of aeromechanics, technical regulation and ensuring uniformity of measurements. [the Ministry], jointly with interested federal executive bodies, organises contests for development of technical regulations, that set requirements to biological and chemical security of objects of technical regulation and ensures financing of these contests and works.	
10	**The Federal Agency for Industry**	Regulations on Delineation of Responsibilities of Federal Executive Bodies in the Sphere of Ensuring Biological and Chemical Security of the Russian Federation - approved by Decree No. 303 of the	[the Agency] ensures supply of goods, completion of works, provision of services, completion of R&D works for purposes of the state in the sphere of biotechnological, medical, chemical and other industries, that produce products, necessary to ensure biological and chemical security of the Russian Federation;	

		Government of the Russian Federation of May 16, 2005	[the Agency] participates in organisations of development of national standards and technical regulations, that set requirements to biological and chemical security of objects of technical regulation, and in their implementation; [the Agency] ensures protection of critically important biological and chemical facilities in order to minimise or eliminate risks of adverse health and environmental impacts of their technological processes, products and waste; [the Agency], jointly with the Federal Service for Environmental, Technological and Nuclear Supervision, organises implementation of actions for development of systems, methods and instruments of technical control of facilities and installations that exceeded their expected service life, but are still used at hazardous biological and chemical facilities; as well as organises running and capital repairs of fixed assets of these facilities; [the Agency], jointly with the Federal Service for Environmental, Technological and Nuclear Supervision, organises implementation of comprehensive engineering measures to reduce risks of adverse impacts of chemicals on the population, production infrastructures and ecosystems in the course of design, construction, operations and decommissioning of critically important chemical facilities; [the Agency] organises works for development (accounting for emergency preparedness) of the research and production complex that produces	

			systems (means) of material and technical support to ensure biological and chemical security of the Russian Federation; [the Agency], jointly with the Federal Service for Environmental, Technological and Nuclear Supervision and the Ministry of the Russian Federation for Civil Defence, Emergency Response and Mitigation of Consequences of Natural Disasters, develops the database on reliability of critically important biological and chemical facilities.	
11	**The Federal Agency for Technical Regulation and Metrology**	The Regulations of the Agency, approved by Decree No. 249 of the Government of the Russian Federation of June 17, 2004	[the Agency] fulfils the following functions in its sphere of competence: 5.3. [the Agency] organises: 5.3.1. expert assessment and development of expert reports on draft federal target-specific programs, inter-agency and inter-state R&D and innovation programs; 5.3.2. expert assessment of draft national standards; 5.3.5. collection and processing of information on damages caused by non-compliance with requirements of technical regulations, as well as provision of information to buyers, manufacturers and sellers on issues of compliance with conditions of technical regulations; 5.4. [the Agency] implements: 5.4.1. publication (according to established procedures) of notifications on development and completion of public discussions of draft technical regulations, the draft Federal Law on Technical	

			Regulation, approved by the State Duma of the Russian Federation in the first reading, as well as reports of expert commissions on technical regulation pertaining to expert review of draft technical regulations; 5.4.2. publication of notifications on development, completion of public discussions and approval of national standards, and the list of national standards that can be voluntarily applied to comply with terms of technical regulations, official publications of national standards and nation-wide classifiers of technical, economic and social information, and their distribution; 5.4.3. directing activities of the State Metrological Service, the State Service for Time, Frequencies and Measurement of the Rotation of the Earth, the State Service for Standard Values of Physical Constants and Properties of Substances and Materials, and the State Service for Standards Samples of Composition and Properties of Substances and Materials; 5.4.17. [the Agency] maintains: 5.4.17.1. the federal information fund of technical regulations and standards; 5.4.17.2. the integrated information system on technical regulation; 5.4.17.3. the list of products under requirements of mandatory certification of compliance; 5.4.17.4. the register of registered declarations on compliance; 5.4.17.5. the integrated register of issued certificates;	

		Regulations on Delineation of Responsibilities of Federal Executive Bodies in the Sphere of Ensuring Biological and Chemical Security of the Russian Federation - approved by Decree No. 303 of the Government of the Russian	5.4.17.6. the state register of accredited organisations, that certify compliance of products, production processes and services with prescribed quality and safety requirements, as well as activities to ensure integrity of measurements; 5.4.17.7. the state register of approved types of measuring instruments; 5.4.17.8. the integrated register of registered voluntary certification systems; 5.4.17.9. the federal register of products for state purposes; --- [the Agency] conducts expert assessments and development of expert reports on draft federal target-specific programs, inter-agency and inter-state R&D and innovation programs in terms of identification of potential adverse health and environmental impacts of hazardous biological agents and chemical substances; [the Agency], jointly with interested federal executive bodies, designs programs for development of national standards and their approval, and organises expert assessments of draft national standards, accounting for the need of compliance with biological and chemical security requirements for objects of technical regulation; [the Agency] participates in organisation of development of technical regulations, that set requirements to biological and chemical security of objects of technical regulation, and in their implementation; [the Agency] organises, in the framework of the	

		Federation of May 16, 2005	Integrated Information System, collection and processing of information on damages, caused by non-compliance with chemical and biological security requirements to objects of technical regulation, and informs buyers, manufacturers and sellers on issues, pertaining to compliance with these requirements.	
12	**The Ministry of Regional Development of the Russian Federation**	The Regulations of the Ministry, approved by Decree No. 40 of the Government of the Russian Federation of January 26, 2005	Clause 1. The Ministry is a federal executive body that fulfils functions of development of state policy and regulations in the sphere of socio-economic development of constituents of the Russian Federation and municipal entities, including in regions of the Far North and the Arctic, … as well as functions of protection of minority ethnic groups and indigenous peoples of the Russian Federation. 5.3. [the Ministry] maintains: 5.3.1. monitoring and analysis of implementation of state and regional policies, including policies in the sphere of development of regions with specific socio-economic, geographic and other features, as well as in the sphere of local self-government and fulfilment of ethnic and cultural needs of representatives of different ethnic communities of Russia; 5.3.2. monitoring of socio-economic processes in regions and constituents of the Russian Federation and in municipal entities; 5.3.3. monitoring of efficiency of use of governmental support funds by constituents of the Russian Federation, including analysis of efficiency	

			of implementation of federal target-specific programs and their effects for socio-economic development of regions and constituents of the Russian Federation;	
13	**The Ministry of Agriculture of the Russian Federation**	The Regulations of the Ministry, approved by Decree No. 315 of the Government of the Russian Federation of June 28, 2004 Regulations on Delineation of Responsibilities of Federal Executive Bodies in the Sphere of Ensuring Biological and Chemical Security of the Russian Federation - approved	The Ministry independently approves the following regulations: 5.2.19. rules and standards in the sphere of land melioration; 5.2.20. plans of implementation of agro-technical, agro-chemical, plant sanitary and counter-erosion activities in the sphere of ensuring fertility of agricultural lands; 5.2.21. plans of implementation of actions for rehabilitation of agricultural lands, contaminated by radionuclides, heavy metals and other hazardous substances; [the Ministry] participates in development of state policies in the sphere of ensuring biological and chemical security of the Russian Federation; [the Ministry] co-operates with interested federal executive bodies in the sphere of ensuring biological and chemical security of the Russian Federation; [the Ministry] fulfils regulation functions in the sphere of ensuring veterinary and plant sanitary wellbeing for reduction of adverse impacts of hazardous biological agents and chemical substances on agricultural animals, plants and their environment, as well as on agricultural raw materials, products of agriculture and food-	

		by Decree No. 303 of the Government of the Russian Federation of May 16, 2005	processing industry; [the Ministry] participates in development of draft federal laws, decrees of the President of the Russian Federation and regulations of the Government of the Russian Federation on technical regulations that set requirements to biological and chemical security of objects of technical regulation in agro-industrial and fishery complexes of the Russian Federation; [the Ministry], in co-operation with interested federal executive bodies, executive bodies of constituents of the Russian Federation and local self-government bodies, academies of sciences (the ones granted state status), R&D and industrial organisations, organises development of federal target-specific and agency-specific programs in the sphere of ensuring biological and chemical security of the Russian Federation and ensures their implementation;	
14	**The Federal Agency for Agriculture**	Regulations on Delineation of Responsibilities of Federal Executive Bodies in the Sphere of Ensuring Biological and Chemical Security of the Russian Federation - approved by Decree No. 303 of the Government of the Russian Federation of May 16, 2005	[the Agency] implements actions to maintain sufficient stockpiles of plant protection preparations and agricultural chemicals, as well as diagnostic preparations and drugs, necessary to protect animals from hazardous biological agents and chemicals of natural and industrial origin, including implementation of these actions in emergency cases; [the Agency] organises works and supply of goods for purposes of the state in order to ensure biological and chemical security in the agro-industrial complex of the Russian Federation;	

15	**The Federal Service for Veterinary and Plant Sanitary Supervision**	Regulations of the Service, approved by Decree No. 327 of the Government of the Russian Federation of June 30, 2004 Regulations on Delineation of Responsibilities of Federal Executive Bodies in the Sphere of Ensuring Biological and Chemical Security of the Russian Federation - approved by Decree No. 303 of the Government of the Russian Federation of May 16, 2005	1. The Service is a federal executive body that fulfils functions of control and supervision in the sphere of veterinary medicine, quarantines and plant protection, application of pesticides and agricultural chemicals. 5. The Service has the following powers: 5.1. it supervises: 5.1.2. safe application of pesticides and agricultural chemicals; 6. The Service has the right: 6.1. to organise necessary investigations, tests, expert assessments, analysis and research studies on matters of supervision in its sphere of competence; --- [the Service] maintains state control over safe management of pesticides and agricultural chemicals for public health and environmental protection purposes; [the Service] maintains state control over ensuring of protection of agricultural lands from pollution by hazardous chemicals, pathogens and eco-pathogens; [the Service] participates in organisation of development of national standards and technical regulations, that set requirements to biological and chemical security of objects of technical regulation in the agro-industrial complex of the Russian Federation, and in their implementation;	
16				

	The Ministry of Economic Development and Trade of the Russian Federation	The Regulations of the Ministry, approved by Decree No. 443 of the Government of the Russian Federation of August 27, 2004	2. The Ministry of Economic Development and Trade of the Russian Federation co-ordinates and controls operations of the Federal Customs Service, subordinated to the Ministry … 5. [the Ministry] has the following powers: 5.2. [the Ministry] approves regulations, that set: 5.2.21. forms and procedures of preliminary decision-making on classification of goods according to the Foreign Trade Item List for specific goods, on countries of origin of these goods; 5.2.22. procedures and technologies of customs clearance, depending on types of goods that cross the customs border, associated transport, categories of persons, who deliver goods and transportation means; 5.2.24. lists of documents and data, requirements to information, necessary for customs clearance, depending on specific customs clearance procedures and customs regimes, as well as terms of submission of these documents and data; 5.2.25. forms and procedures of completion of transit declarations; 5.2.36. procedures of sampling of goods and procedures of their testing in the course of customs control operations; 5.3. [the Service]: 5.3.4. registers technical assistance projects and programs, maintains the Integrated Register of technical assistance projects and programs and controls, according to established procedures, purposeful use of technical assistance at the stage of	

			organisational arrangements; [the Ministry] reviews, jointly with the Ministry of Education and Sciences of the Russian Federation, proposals of federal executive bodies on programs for ensuring biological and chemical security of the Russian Federation, as well as concepts of relevant federal and inter-governmental target-specific programs and submits them to the Government of the Russian Federation; [the Ministry] reviews draft target-specific programs on matters of ensuring biological and chemical security of the Russian Federation and submits its conclusions on these drafts according to established procedures;	
		Regulations on Delineation of Responsibilities of Federal Executive Bodies in the Sphere of Ensuring Biological and Chemical Security of the Russian Federation - approved by Decree No. 303 of the Government of the Russian Federation of May 16, 2005		
17	**The Federal Customs Service**	The Regulations of the Service, approved by Decree No. 429 of the Government of the Russian	5. [the Service] has the following powers in its sphere of competence: 5.4. to carry out customs clearance and customs	

		Federation of August 21, 2004	control; 5.5. to decide on classification of goods according to the Foreign Trade Item List and to ensure publication of these decisions;	
18	**The Federal Service for Technical and Export Control**	Regulations on Delineation of Responsibilities of Federal Executive Bodies in the Sphere of Ensuring Biological and Chemical Security of the Russian Federation - approved by Decree No. 303 of the Government of the Russian Federation of May 16, 2005	[the Service] co-ordinates activities of federal executive bodies and organisations for protection of secret state information and confidential information on activities in the sphere of ensuring biological and chemical security of the Russian Federation; [the Service] develops, with participation of interested federal executive bodies and organisations, draft lists of biological and chemical items, subject to export control requirements; [the Service] ensures implementation of export control operations, including organisation and implementation of state expert assessments of foreign trade contracts dealing with goods (works, services), information and intellectual products, that might be applied for development of biological and chemical weapons, and relevant delivery systems; [the Service] participates in implementation of state policies in the sphere of non-proliferation of biological and chemical weapons.	
19	**The Federal Security Service of the Russian Federation**	Regulations on Delineation of Responsibilities of Federal Executive Bodies in the Sphere of Ensuring Biological and Chemical Security of the Russian Federation - approved	[the Service] informs the President of the Russian Federation, the Prime-minister, and (according to their assignments) governmental bodies of the Russian Federation on threats to biological and chemical security of the Russian Federation; [the Service] prevents and suppress terrorist acts	

		by Decree No. 303 of the Government of the Russian Federation of May 16, 2005	with potential use of dangerous pathogens, biological and chemical weapons; [the Service] participates in forecasting and assessment of external and internal sources of threats to biological an chemical security of the Russian Federation; [the Service] participates, jointly with interested executive bodies, in activities for disclosure and suppression of illegal trafficking in hazardous pathogens, eco-pathogens and chemical toxins, and their use for criminal purposes; [the Service], jointly with the Ministry of the Russian Federation of Civil Defence, Emergency Response and Mitigation of Consequences of Natural Disasters, and the Ministry of Interior of the Russian Federation, develops the computerised database on matters of biological and chemical security of the Russian Federation, including matters of transnational terrorist threats, accounting for the need to ensure data confidentiality;	
20	**The Federal Drug Control Service of the Russian Federation**	The Regulations of the Service, approved by Decree No. 976 of the Presidents of the Russian Federation of July 28, 2004	1. [the Service] is a federal executive body, that fulfils functions of development of state policies, regulations, control and supervision in the sphere of circulation of drugs, psychotropic substances and their precursors, as well as function of suppression of illegal trafficking in these substances. 3. The key objectives of the Drug Control Service of Russia incorporate: 1) ensuring control over circulation of drugs, psychotropic substances and their precursors and	6) co-operation and information exchange, according to international agreements of the Russian Federation, with international organisations and competent bodies in the sphere of combating

			implementation of actions to suppress illegal trafficking in these substances; 5) development and maintenance of the integrated database on matters of circulation of drugs, psychotropic substances and their precursors and suppressing illegal trafficking in these substances;	illegal trafficking in drugs, psychotropic substances and their precursors.
21	**The Foreign Intelligence Service of the Russian Federation**	Regulations on Delineation of Responsibilities of Federal Executive Bodies in the Sphere of Ensuring Biological and Chemical Security of the Russian Federation - approved by Decree No. 303 of the Government of the Russian Federation of May 16, 2005	[the Service] provides intelligence information, analytical assessments and forecasts on potential biological and chemical threats to crucially important interests of the Russian Federation from foreign countries, international terrorist and other criminal organisations to the both chambers of the Russian Parliament, the President of the Russian Federation and the Government of the Russian Federation.	
22	**The Federal Service for Hydrometeorology and Environmental Monitoring**	The Regulations of the Service, approved by Decree No. 372 of the Government of the Russian Federation of July 23, 2004	1. the Service is a federal executive body that fulfils function of approval of regulations, management of state property and provision of state services in the sphere of … environmental monitoring, environmental pollution, .. 5. [the Service] has the following powers in its sphere of competence: 5.2.3. setting requirements to measurements of state of the environment, environmental contamination, collection, storage and dissemination of information on state of the environment, environmental contamination as well as to information products; 5.4. [the Service] conducts: 5.4.2. maintenance of the Integrated state database	the Service ensures, in its authorised sphere of activities, fulfilment of international commitments of the Russian Federation, including commitments under the Convention of the World Meteorological Organisation, the Framework UN Convention on Climate Change and the Protocol

			on state of the natural environment and environmental contamination; 5.4.4. state monitoring of ambient air (in its sphere of competence); 5.4.5. state monitoring of surface water bodies (in its sphere of competence); 5.4.6. state monitoring of the continental shelf, as stipulated by the legislation of the Russian Federation (in its sphere of competence); 5.4.7. state monitoring of the exclusive economic zone of the Russian Federation (in its sphere of competence); 5.4.9. provision of information to users (consumers) on composition of information about state of the natural environment, environmental contamination, forms of provision of such information and organisations dealing with supply of information to users (consumers);	on Environmental Protection under the Agreement on the Antarctic, signed in Madrid on October 4, 1991.
		Regulations on Delineation of Responsibilities of Federal Executive Bodies in the Sphere of Ensuring Biological and Chemical Security of the Russian Federation - approved by Decree No. 303 of the	[the Service] maintains monitoring of the environment, environmental contamination, ambient air, surface water bodies and ensures publication of emergency information on anthropogenic (industrial) pollution of the environment, including chemical pollution that might endanger human life/health and the environment; [the Service] develops the integrated state database on state of the environment and environmental contamination.	

		Government of the Russian Federation of May 16, 2005		
23	**The Federal Atomic Energy Agency**	The Regulation of the Agency, approved by Decree No. 316 of the Government of the Russian Federation of June 28, 2004	1. the Agency is an authorised federal executive body, that fulfils functions of implementation of state policies, development of regulations, provision of state services and management of state property in the sphere of … nuclear science and technologies, nuclear and radiation security, non-proliferation of nuclear materials and technologies, as well as international co-operation in this sphere. the Agency is the body in charge of state management of use of nuclear power, and the competent state body in charge of nuclear and radiation security in the course of transportation of nuclear materials, radioactive substances and items with these substances. 5.3.5. [the Agency] fulfils functions of the state contractor - co-ordinator of special environmental programs; 5.3.8. [the Agency] maintains the state register of nuclear materials; 5.3.11. [the Agency] ensures informational, analytical, documental, legal and logistic support of activities of the Special Commission on matters of transportation of foreign irradiated nuclear fuel to the territory of the Russian Federation;	

24	**The Ministry of Education and Sciences of the Russian Federation**	The Regulations of the Ministry, approved by Decree No. 280 of the Government of the Russian Federation of June 15, 2004 Regulations on Delineation of Responsibilities of Federal Executive Bodies in the Sphere of Ensuring Biological and Chemical Security of the Russian Federation - approved by Decree No. 303 of the Government of the Russian Federation of May 16, 2005	5. [the Ministry] fulfils the following functions: 5.3. [the Ministry] conducts tenders according to established procedures and awards state contracts for supply of goods, implementation of works, provision of services, R&D works for purposes of the state in its sphere of competence; [the Ministry] defines priorities of development of sciences and technologies, lists of critically important technologies and innovation technologies, associated with development of high-tech industrial biotechnologies, including GE technologies necessary to ensure production of safety gear and protection means to protect people, biosphere and industrial objects from hazardous biological agents and chemical substances; [the Ministry] co-ordinates activities of federal executive bodies and academies of sciences with the state status for organisation of R&D works to ensure biological and chemical security of the Russian Federation;	
25	**The Ministry of Defence of the Russian Federation**	Regulations on Delineation of Responsibilities of Federal Executive Bodies in the Sphere of Ensuring Biological and Chemical Security of the Russian Federation - approved by Decree No. 303 of the Government of the Russian Federation of May 16, 2005	[the Ministry] participates in development of state policies in the sphere of ensuring biological and chemical security of the Russian Federation and sets, jointly with interested federal executive bodies, requirements to chemical and biological protection gear; [the Ministry] organises, on requests of federal executive bodies and executive bodies of constituents of the Russian Federation, sanitary,	

			counter-epidemic and other activities in areas under biological and chemical impacts; [the Ministry] maintains necessary preparedness of radiation, chemical and biological protection units of the Armed Forces of the Russian Federation for their use in emergency situations; [the Ministry] organises development of the integrated system of the Armed Forces of the Russian Federation for identification and assessment of intensity and consequences of emergencies, caused by biologic agents and industrial chemicals; [the Ministry] conducts assessments of external and internal sources of chemical and biological threats to biosphere and industrial objects, and submits, according to established procedures, proposals for their prevention and elimination, including proposals on combating development, purchase, production and accumulation of biological and chemical weapons by other nation-states.	
26	**The Ministry of the Russian Federation of Civil Defence, Emergency Response and Mitigation of Consequences of Natural Disasters**	Regulations on Delineation of Responsibilities of Federal Executive Bodies in the Sphere of Ensuring Biological and Chemical Security of the Russian Federation - approved by Decree No. 303 of the Government of the Russian Federation of May 16, 2005	[the Ministry] implements, in co-operation with interested federal executive bodies, state policies in the sphere of ensuring biological and chemical security of the Russian Federation and develops regulations in the sphere of protection of residents and the territory of the Russian Federation from natural and industrial emergencies, caused by hazardous biological agents and chemical substances; [the Ministry], jointly with interested federal	

			executive bodies, executive bodies of constituents of the Russian Federation and local self-government bodies, organises regular monitoring of protection of critically important facilities, including hazardous production facilities that potentially might cause accidents, accompanied by biological and chemical emergencies	
27	**The Commission of the Government of the Russian Federation on the World Trade Organisation and the Organisation for Economic Co-operation and Development**	The Regulations of the Commission, approved by Decree N 419 of the Government of the Russian Federation of August 19, 2004	4. The Commission fulfils the following functions to accomplish its objectives: [the Commission] co-ordinates activities of interested federal executive bodies, associated with assessment of the due legislation of the Russian Federation on matters of international economic relations to harmonise it with rules and standards of WTO and OECD; [the Commission] co-operates with competent bodies of CIS countries on matters of accession to WTO and OECD; [the Commission] reviews issues of participation of the Russian Federation in WTO and OECD after accession of the country to these organisations.	