Emergency Preparedness and Response System of ROSATOM

10-th International Nuclear Forum "Safety of Nuclear Technologies: Emergency Preparedness and Response"/ Obninsk, Russia

Roman Tiurin

Deputy Director of the Department - Head of the Emergency Preparedness and Civil Protection Section of the Department of Nuclear and Radiation Safety, Arrangement of Licensing and Permitting Activities of ROSATOM

06.10.2026



Safety is of paramount priority for ROSATOM as one of the leaders in technological development of the country.

A.E. Likhachev

Sources of the modern emergency preparedness and response system

ROSATOM

October 27, 1986

Convention on Early Notification



April 26, 1986

Accident at Chernobyl NPP

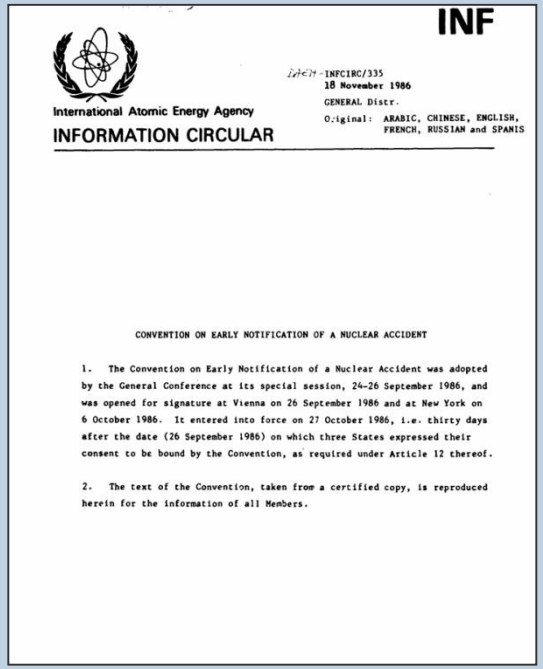
February 26, 1987

Convention on Assistance

Emergency conventions as the legal framework

Convention on Early Notification of a Nuclear Accident

The system for notification of nuclear accidents capable of resulting in trans-boundary releases potentially significant for any other state from the viewpoint of radiological safety has been arranged



INF

International Atomic Energy Agency

INFORMATION CIRCULAR

INFCIRC/335
18 November 1986
GENERAL Distr.
Original: ARABIC, CHINESE, ENGLISH, FRENCH, RUSSIAN and SPANIS

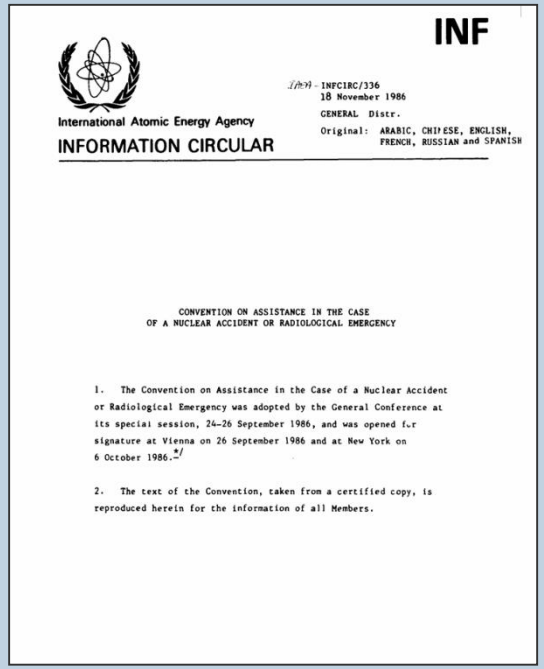
CONVENTION ON EARLY NOTIFICATION OF A NUCLEAR ACCIDENT

1. The Convention on Early Notification of a Nuclear Accident was adopted by the General Conference at its special session, 24-26 September 1986, and was opened for signature at Vienna on 26 September 1986 and at New York on 6 October 1986. It entered into force on 27 October 1986, i.e. thirty days after the date (26 September 1986) on which three States expressed their consent to be bound by the Convention, as required under Article 12 thereof.

2. The text of the Convention, taken from a certified copy, is reproduced herein for the information of all Members.

Convention on Assistance in Case of a Nuclear Accident or Radiological Emergency

The international basis has been established for cooperation between states to facilitate urgent provision of assistance and support in case of any nuclear accidents or radiological emergencies



INF

International Atomic Energy Agency

INFORMATION CIRCULAR

INFCIRC/336
18 November 1986
GENERAL Distr.
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CONVENTION ON ASSISTANCE IN THE CASE OF A NUCLEAR ACCIDENT OR RADIOLOGICAL EMERGENCY

1. The Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency was adopted by the General Conference at its special session, 24-26 September 1986, and was opened for signature at Vienna on 26 September 1986 and at New York on 6 October 1986.*/

2. The text of the Convention, taken from a certified copy, is reproduced herein for the information of all Members.

Regulatory and legal framework

Federal Law



Decree of the RF Government

ПРАВИТЕЛЬСТВО РОССИЙСКОЙ ФЕДЕРАЦИИ

ПОСТАНОВЛЕНИЕ

от 30 декабря 2003 г. № 794

МОСКВА

О единой государственной системе предупреждения и ликвидации чрезвычайных ситуаций

Во исполнение Федерального закона "О защите населения и территорий от чрезвычайных ситуаций природного и техногенного характера" и в целях совершенствования единой государственной системы предупреждения и ликвидации чрезвычайных ситуаций Правительство Российской Федерации **п о с т а н о в л я е т :**

1. Утвердить прилагаемое Положение о единой государственной системе предупреждения и ликвидации чрезвычайных ситуаций.

2. Министерству Российской Федерации по делам гражданской обороны, чрезвычайным ситуациям и ликвидации последствий стихийных бедствий по согласованию с федеральными органами исполнительной власти внести в 6-месячный срок в Правительство Российской Федерации предложения о возложении на федеральные органы исполнительной власти функций в области защиты населения и территорий от чрезвычайных ситуаций.

3. Министерству транспорта Российской Федерации и Министерству путей сообщения Российской Федерации обеспечивать в первоочередном порядке по заявкам Министерства Российской Федерации по делам гражданской обороны, чрезвычайным ситуациям и ликвидации последствий стихийных бедствий доставку к зоне чрезвычайной ситуации и возвращение обратно сил, средств и специальных грузов, необходимых для предупреждения и ликвидации чрезвычайной ситуации, за счет средств, выделяемых Министерству Российской Федерации по делам гражданской обороны, чрезвычайным ситуациям и ликвидации последствий стихийных бедствий на ликвидацию чрезвычайных ситуаций.

W603075

Order of ROSATOM

ГОСУДАРСТВЕННАЯ КОРПОРАЦИЯ ПО АТОМНОЙ ЭНЕРГИИ

«РОСАТОМ»
(Госкорпорация «Росатом»)

МИНИСТЕРСТВО ЮСТИЦИИ РОССИЙСКОЙ ФЕДЕРАЦИИ
ЗАРЕГИСТРИРОВАНО
Регистрационный № 67943
от "28" марта 2022.

П Р И К А З

09 ДЕК 2021 Москва № 1/16-НПА

Об утверждении Положения о функциональной подсистеме предупреждения и ликвидации чрезвычайных ситуаций в организациях (на объектах), находящихся в ведении и входящих в сферу деятельности Госкорпорации «Росатом», единой государственной системы предупреждения и ликвидации чрезвычайных ситуаций

В целях совершенствования работы по предупреждению и ликвидации чрезвычайных ситуаций в организациях (на объектах), находящихся в ведении и входящих в сферу деятельности Госкорпорации «Росатом», в соответствии с пунктом 4 Положения о единой государственной системе предупреждения и ликвидации чрезвычайных ситуаций, утвержденного постановлением Правительства Российской Федерации от 30.12.2003 № 794 (Собрание законодательства Российской Федерации, 2004, № 2, ст. 121; 2020, № 2, ст. 180),

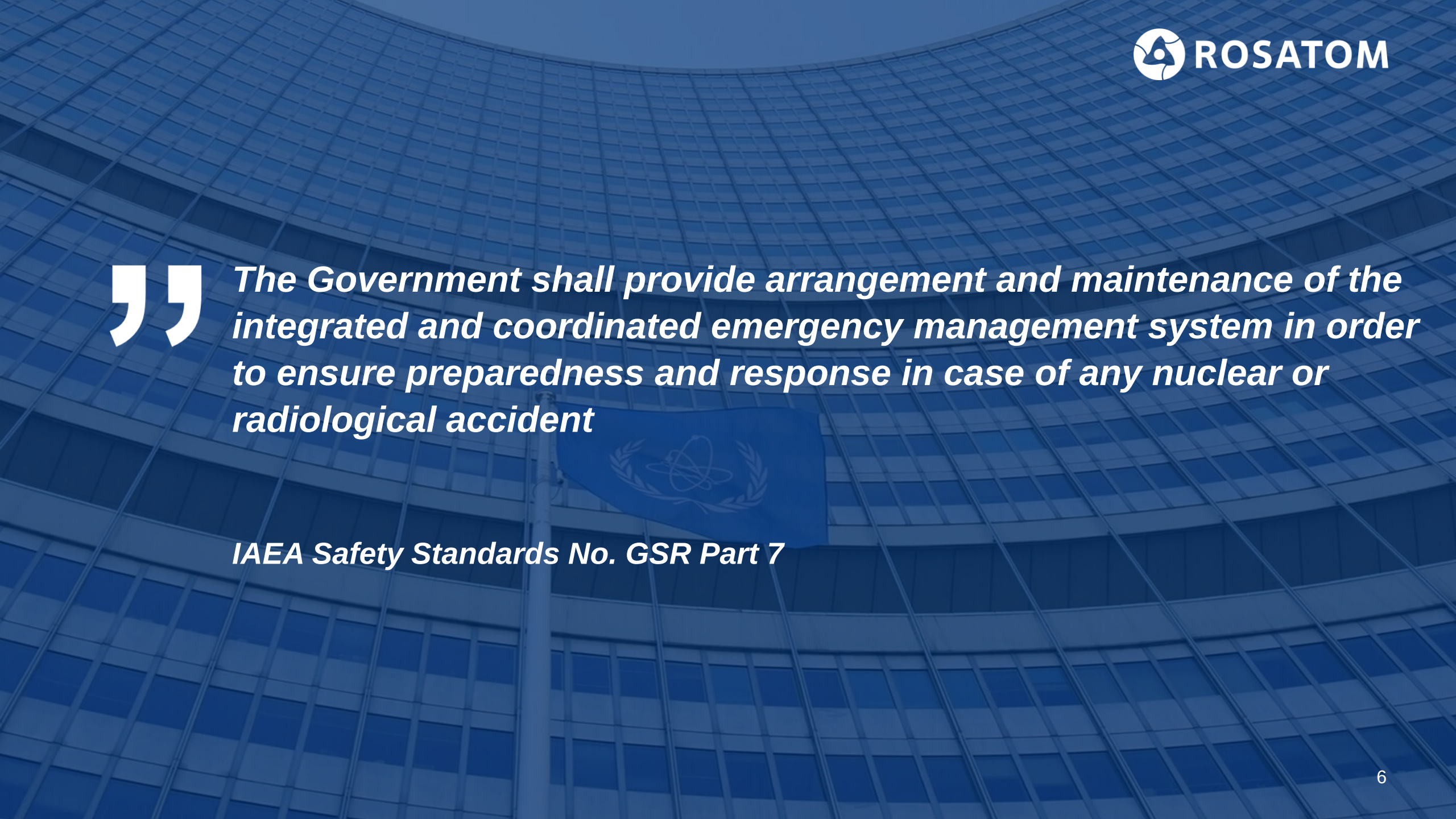
ПРИКАЗЫВАЮ:

1. Утвердить прилагаемое Положение о функциональной подсистеме предупреждения и ликвидации чрезвычайных ситуаций в организациях (на объектах), находящихся в ведении и входящих в сферу деятельности Госкорпорации «Росатом», единой государственной системы предупреждения и ликвидации чрезвычайных ситуаций.

2. Признать утратившим силу приказ Госкорпорации «Росатом» от 10.11.2010 № 1/418-П «О функциональной подсистеме предупреждения и ликвидации чрезвычайных ситуаций в организациях (на объектах), находящихся в ведении и входящих в сферу деятельности Госкорпорации «Росатом» (зарегистрирован Минюстом России 10.12.2010, регистрационный № 19154).

Генеральный директор А.Е. Лихачев

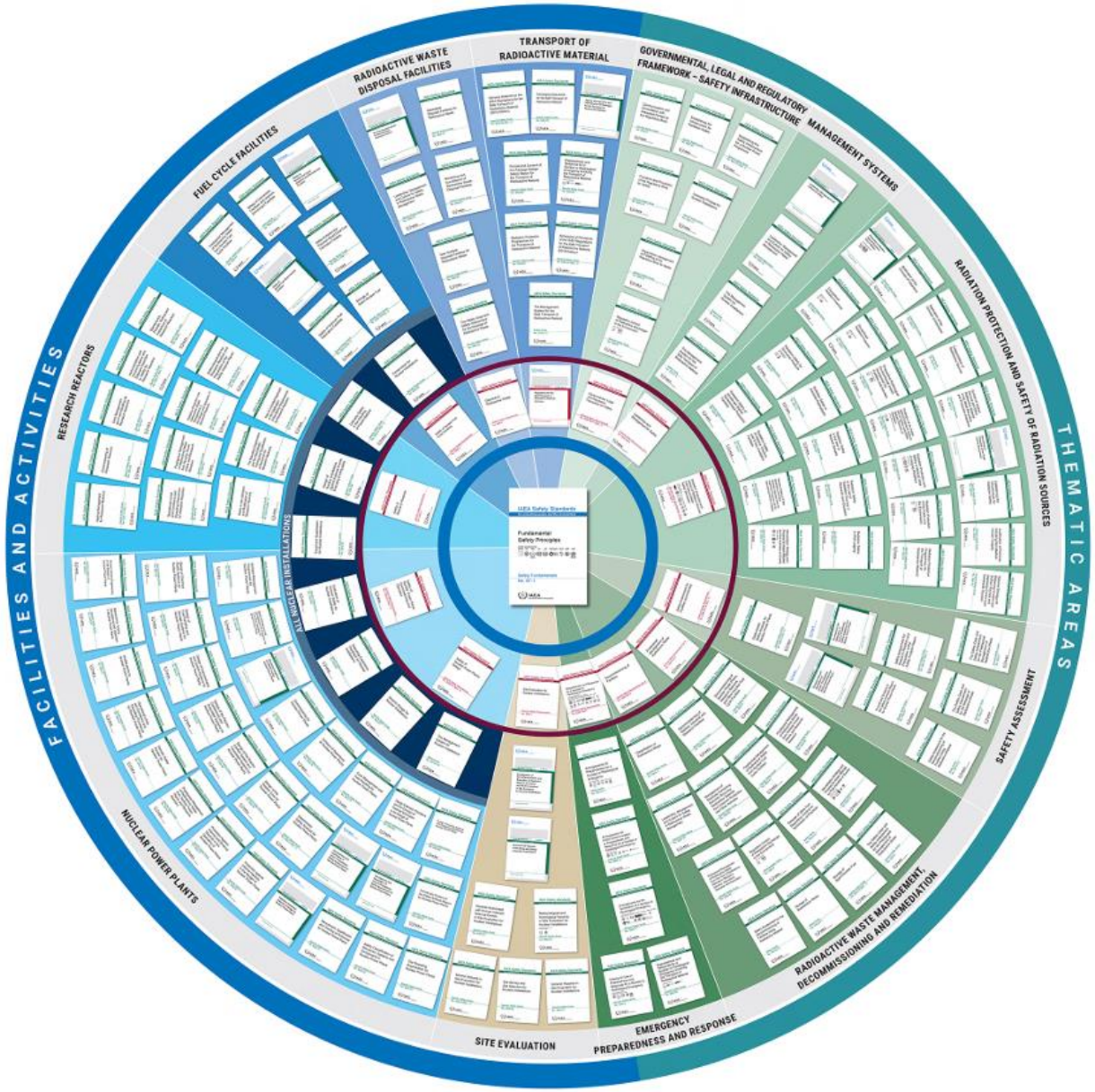
Захарко Татьяна Гендриковна
(499) 949-44-65

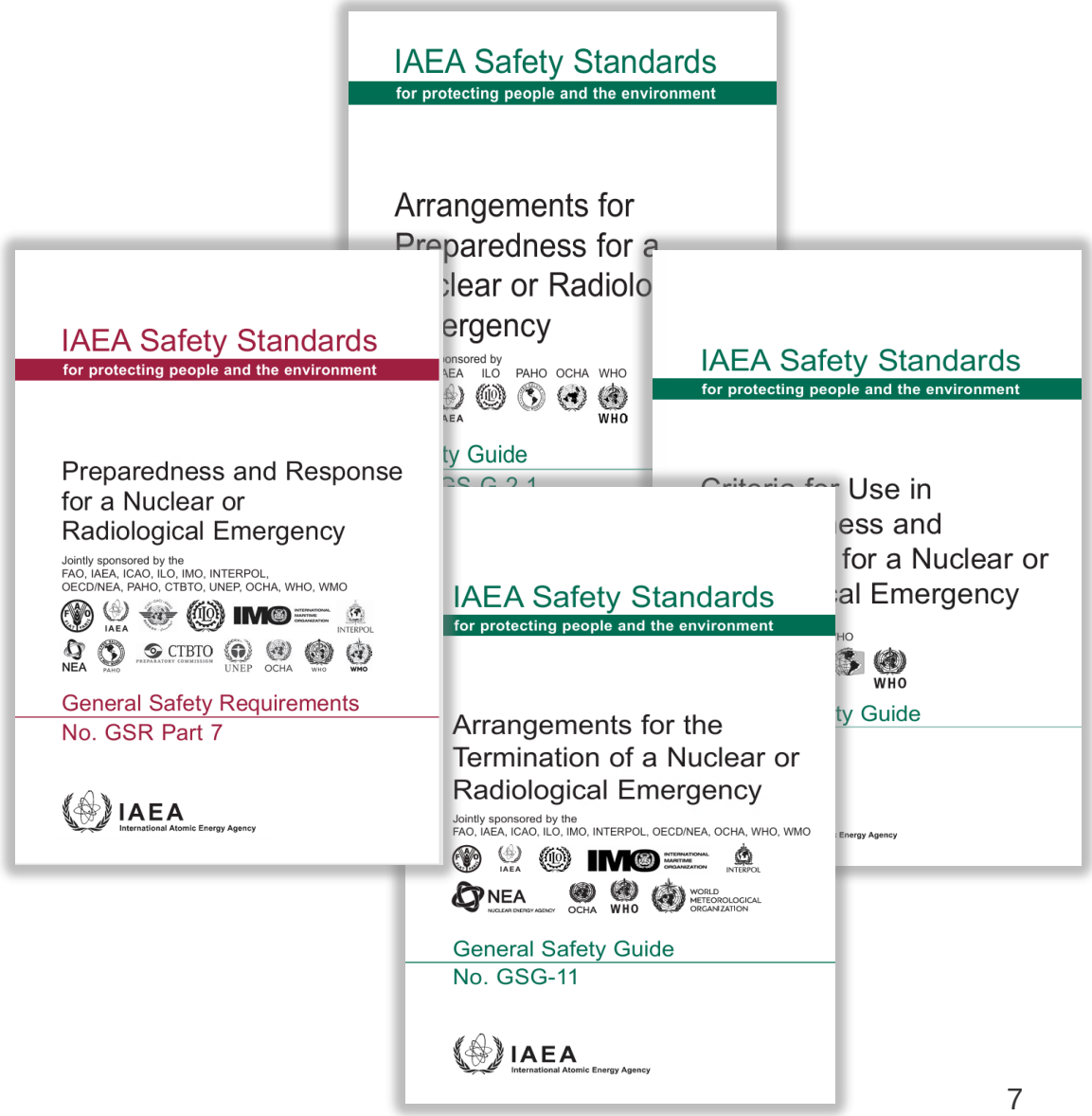


The Government shall provide arrangement and maintenance of the integrated and coordinated emergency management system in order to ensure preparedness and response in case of any nuclear or radiological accident

IAEA Safety Standards No. GSR Part 7

IAEA Safety Standards in the area of emergency preparedness and response



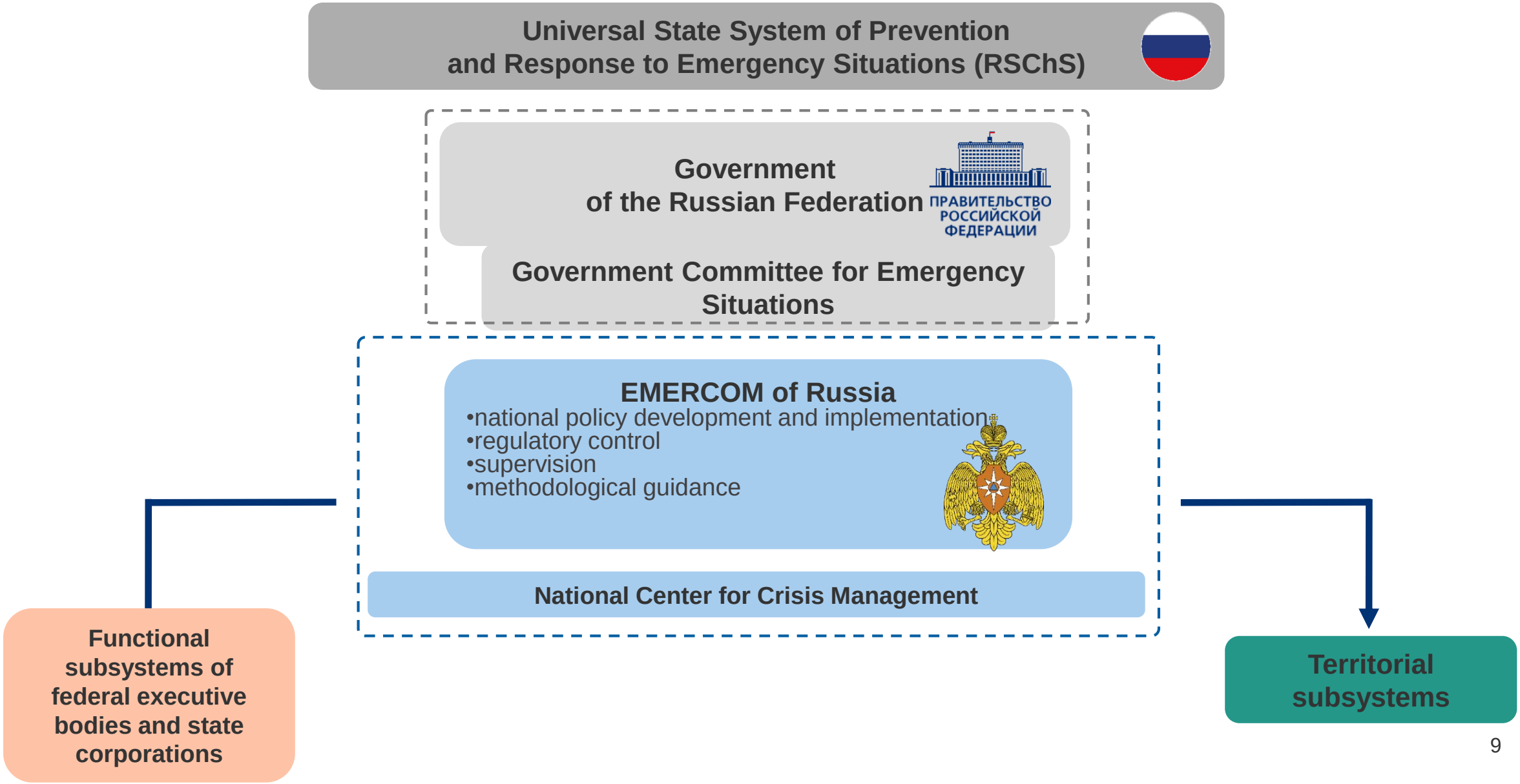




The concept of emergency preparedness and response implies enhancement of confidence in institutional mechanisms, provision of fail-safe systems and safety assurance for people in advance of any potential emergency situation

R.M. Grossi

Universal State System of Prevention and Response to Emergency Situations (RSChS)



Role and place of ROSATOM in RSChS

ROSATOM

85
territorial subsystems
in the RF constituent entities

Executive bodies of the RF constituent entities



45
functional subsystems
of federal executive bodies and state



Federal executive bodies

State Corporation ROSATOM

State Corporation ROSCOSMOS

Emergency preparedness and response to radiation accidents

State Corporation ROSATOM

EMERCOM of Russia

FMBA of Russia

Russian Ministry of Defense

Rostechnadzor

Industry-Specific System of Prevention and Response to Emergency Situations (OSChS) (ROSATOM):

- planning
- assurance of readiness for emergency mitigation
- emergency response
- state supervision over prevention of emergency situations

OSChS Structure

ROSATOM



federal level

object level

Coordination body of OKChS
Commission for the Prevention and Elimination of Emergency Situations and Ensuring the Corporation's FS

Coordination body of OKChS
Commission for the Prevention and Elimination of Emergency Situations and Ensuring the Organization's FS

Permanent management body of OSChS
Department of Nuclear Safety, Organization of Licensing and Permitting Activities

Permanent management body of OSChS
Authorized division (employees) of the organization

Daily management body of OSChS
Private Enterprise "SCC Rosatom" (http://www.skc.ru)

Daily management body of OSChS
Crisis center (duty and dispatch service) of organization

Head of liquidation of emergency situation

OSChS forces and means

RSChS (FS and TS)

Governance bodies

Forces and means

Emergency preparedness indicators

As of 01.10.2026

87 emergency response teams	**17** professional emergency response teams	**70** volunteer emergency response teams
~ 2900 rescue workers	**571** rescue workers	**1535** rescue workers

- Volunteer civil defense teams
- Communication, warning and information support systems
- Surveillance and control systems
- Special machinery and equipment
- Reserve of financial and material resources

- THE EMERGENCY RESPONSE **FORCES ARE EQUIPPED** WITH THE BASIC EMERGENCY RESCUE EQUIPMENT ACCORDING TO THE LIST OF EQUIPMENT
- THE EMERGENCY RESPONSE **FORCES ENSURE PREPAREDNESS** TO PERFORM ASSIGNED TASKS

Professional emergency response teams of permanent readiness at the federal OSChS level

ROSATOM

11 professional emergency response teams at the federal level

7 of them are structural units of ROSATOM ERC JSC

Murmansk Branch of ROSATOM ERC JSC (Murmansk)

ROSATOM ERC JSC (St. Petersburg)

VNIIA FSUE Robotics and Emergency Response Center (Moscow)

EPRON Underwater Emergency Response Operation Center ROSATOM ERC JSC (Selyatino)

ERC (Sarov)

Glazov Branch of ROSATOM ERC JSC (Glazov)

Novovoronezh Branch of ROSATOM ERC JSC (Novovoronezh)

ERC (Snezhinsk)

Seversk Branch of ROSATOM ERC JSC (Seversk)










Separate Militarized Mine Rescue Detachment (Krasnokamensk)

Far East Branch of ROSATOM ERC JSC (Vladivostok)

Operation of the emergency preparedness and response system

ROSATOM

EMERGENCY PREPAREDNESS

DAILY ACTIVITIES MODE

HIGH READINESS MODE

MEASURES TO PREVENT EMERGENCY SITUATIONS

- Action planning;
- Ensuring constant readiness of governance bodies and emergency response forces;
- Improving the warning system;
- Training of governance bodies and emergency response forces;
- Maintenance and equipment of the REU;
- Formation and maintenance of reserves of financial and material resources

- Strengthening control over the state of the environment, monitoring of hazardous natural phenomena and technogenic processes;
- Clarification of actions of emergency response forces;
- Checking the warning system;
- Building up forces and means;
- Planning measures to ensure the safety of the population and territories

EMERGENCY RESPONSE

EMERGENCY MODE

EMERGENCY RESPONSE MEASURES

- Continuous monitoring of the state of the environment, monitoring and forecasting the development of emergencies;
- Prompt emergency notification;
- Gathering and deployment of advanced emergency response forces to the emergency location;
- Carrying out priority emergency liquidation measures;
- Ensuring the implementation of security measures for the population and territories

Accident, incident, hazardous phenomena

SCIENTIFIC AND TECHNICAL SUPPORT

Potential consequences of radiation accidents

ROSATOM

> 500 th. people

responders*

> 200 th. km²

contaminated territories**

- 235 bln. USD

economic damage**



View of Chernobyl NPP after the reactor explosion

* Medical Radiological Consequences of the Chernobyl Accident, 1986-2025, Atomic Energy, 2026.

** Chernobyl Forum: 2003 – 2005, IAEA, April 2006

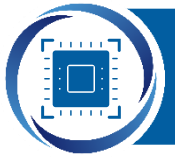
Development of the emergency preparedness and response system



Program for Development of the Emergency Preparedness and Response System of ROSATOM for the period up to 2035 and further



PURPOSE: OSChS improvement in order to ensure guaranteed response and preparedness for mitigation of any emergencies in the Corporation's organizations, as well as during transportation of any radioactive materials



Improvement of management for the emergency preparedness and response system of the Corporation



Improvement of the industry-wide and interdepartmental interaction system for the workforces and facilities in case of any emergency

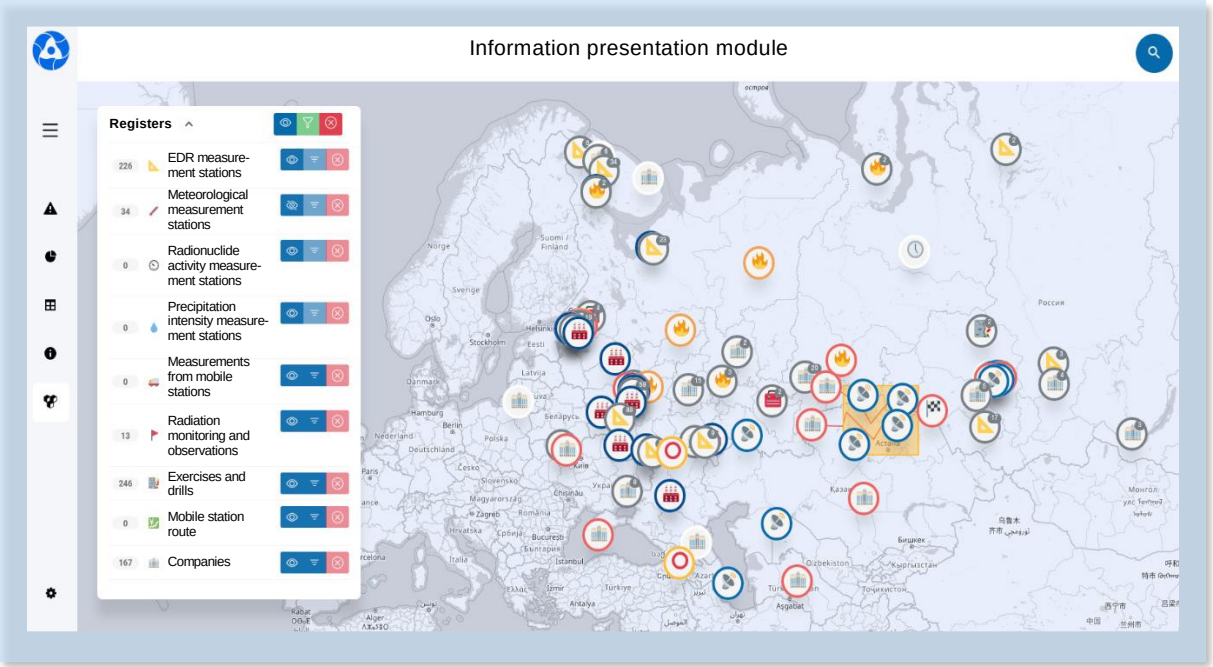


Comprehensive support of the activities in the area of emergency preparedness and response of the Corporation

Improvement of the emergency preparedness and response system management

Unified Digital Emergency Preparedness and Response Platform

PURPOSE: information and analytical support of decision making by the coordination bodies, OSChS management bodies in the course of emergency response and mitigation of any radiation accidents at nuclear- and radiation-hazardous facilities of the nuclear industry



Implementation of the information management system will enable:

to reduce the information load on the decision-maker **10** times

to reduce the emergency response time (deployment of assets) **3** times

to increase accuracy in prediction of radioactive contamination zones up to **1** km

Implementation of advance technologies is vital for enhancement of emergency preparedness and response

K. Hervieu, Deputy Director General of the IAEA - Head of the Nuclear Safety and Security Department



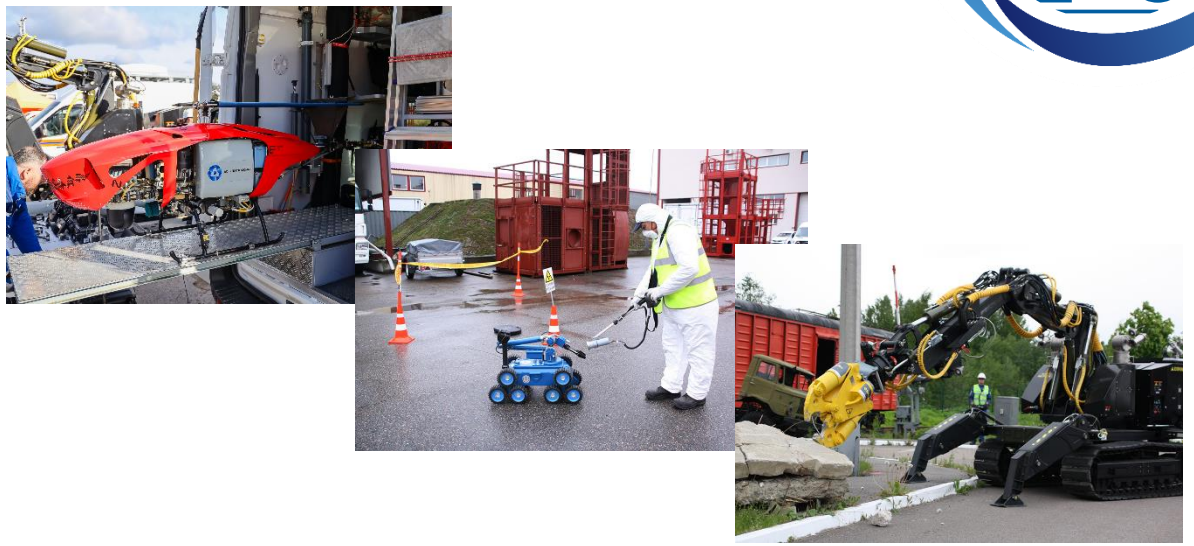
Scientific and technical policy in the area of robotics development

PURPOSE: assistance to ROSATOM in implementation of the unified scientific and technical policy in the area of development, testing and production of robotic complexes, as well as provision of the possibility for echeloning of the Emergency Response Division assets





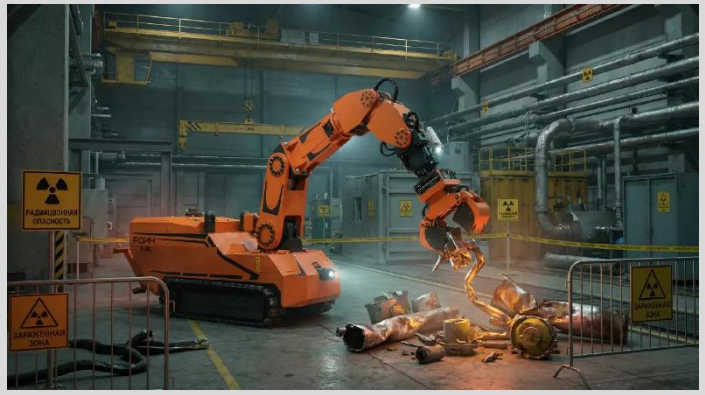
Industry Competence Center for Robotics



Concept for arrangement of the group of robotic complexes

PURPOSE: development of uniform approaches to arrangement of the group of robotic complexes enabling to mitigate any potential large-scale radiation accidents and catastrophes with the minimum damage to the life and health of the personnel, the public and the environment

Concept for arrangement of the group of robotic complexes in order to mitigate any potential large-scale accidents and catastrophes







The primary focus of the Concept is on:

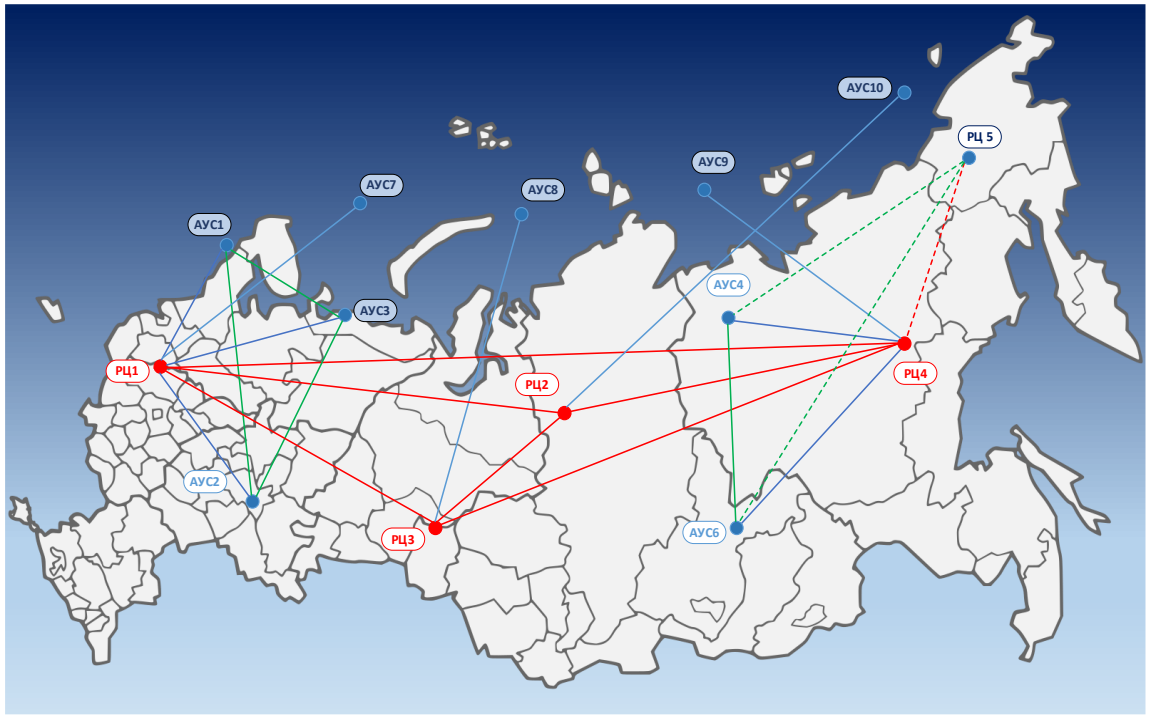
- the need for scientific and methodological support of the RC group arrangement
- development of technologies and process solutions for the RC group arrangement
- establishment of the infrastructure for development, production and testing of robotic complexes
- training of human resources in the area of robotics

Improvement of the industry-wide and interdepartmental interaction system for the workforces and facilities

Redundant HF/VHF radiocommunication system of ROSATOM

PURPOSE: arrangement of the centralized (trunk) backbone HF/VHF radio communication network to ensure redundant communication of the industry organizations in case of any emergency

- **4** main radio communication centers
- **80** stationary network terminals
- Integration with **EMERCOM of Russia** and **the Russian Ministry of Defense**
- **National** digital HF communication **standard**



Redundant management of the nuclear industry

Sea navigation safety assurance

In-house radio frequency spectrum

Maintenance of readiness of the management bodies and OSChS forces

ROSATOM

Emergency drills






Exercises







УМЦПС «Атомспас»

АО «АТЦ Роса

Training




ТЕХНИЧЕСКАЯ АКАДЕМИЯ РОСАТОМ

Practice-training sessions






Maintenance of readiness of the management bodies and OSChS forces

Training of boarding (deboarding) of emergency response teams on airplanes of the Russian EMERCOM










International cooperation

ROSATOM



Interaction with the IAEA

IAEA arrangements in the area of emergency preparedness and response:

- Performance of the competent authority functions within the framework of emergency conventions
- ConvEx exercises
- RANET system
- Participation in EPReSC, etc.



Regional cooperation

Agreement on interaction between the CIS states for assurance of preparedness in case of a nuclear accident or occurrence of a radiation emergency and mutual assistance in the course of their mitigation



Bilateral cooperation

Intergovernmental agreements on early notification of any nuclear accidents and exchange of information in the area of nuclear and radiation safety



Development of human resources

Emergency Response Competence Center in association with the IAEA where the international training courses for specialists in the area of emergency preparedness and response are arranged

State control

**STATE CONTROL (SUPERVISION)
IN THE FIELD OF PROTECTION
OF THE POPULATION AND TERRITORIES
FROM EMERGENCY SITUATIONS**

is carried out in accordance with the tasks assigned to the unified state system for the prevention and response to emergency situations, in order to verify the completeness of implementation of measures to prevent emergency situations and the readiness of officials, forces and means to act in the event of their occurrence, including nuclear accidents and radiation emergencies



Control tasks:

- determining the current state of activity;
- assistance

Objects of control





Items of control :

- implementation of mandatory requirements in the field of safety and emergency prevention;;
- readiness of control bodies, forces and means to act in conditions of accidents and emergencies

Forms of control :

- scheduled and unscheduled on-site inspections;
- documentary inspections

IRREDUCIBLE LEVEL OF READINESS IS ENSURED

Safety is the priority

ROSATOM



Thank you for your attention!

R.L. Tiurin

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