



Federal Medical Biological Agency of Russia



Worldwide Regulatory Challenges of Radioactive Legacy Sites - IAEA Working Forum

Working Group # 1

Enhancing the Regulatory Infrastructure

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Nuclear Legacy

- Uranium mining and milling facilities
- Sites affected by major radiological accidents
- Nuclear power technology development centres
- Nuclear peaceful and weapons testing sites
- Nuclear weapons development centres





IAEA Forum “RSLS”



Three working groups:

- **# 1:** Enhancing the regulatory infrastructure, which learn the regulatory experience in regulatory supervision of the legacy sites
- **# 2:** Safety assessment methods and environmental impact assessment. This group focuses on methods for safety assessment of legacy site
- **# 3:** Professional Development for Regulators, its work focuses on the professional development and training



Directions of work WG # 1



- Learning and generalization of the experience of regulators in planning of the legacy management and direct regulatory supervision of the legacy sites
- Development of recommendations to enhance the regulatory structure

Collect & generalize the materials on the past experience in remediation of legacy sites and provide recommendations on enhancement of such practice





Work organization WG # 1



1. Development of the questionnaire to assess the status of national regulation of nuclear legacy
 2. Development of summary on the status of the national strategy for nuclear legacy regulation taking into account information gathered through the questionnaire
 3. Summary on the nuclear legacy sites
 4. Analysis of national work programs in nuclear legacy regulation
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Popularization of the IAEA Forum in world scientific community, among regulators and operators dealing with nuclear legacy



Questionnaires



Consisting of 37 questions and covering the following eight modules:

- I. Legislative and governmental responsibilities
- II. Responsibilities and functions of the regulatory body
- III. Organization of the regulatory body
- IV. Authorization by the regulatory body
- V. Review and assessment
- VI. Inspection and enforcement
- VII. Development of regulations and guides
- VIII. Specification of nuclear legacy sites in your country



IAEA Documents



- GS-R-1 “Legal and Governmental Infrastructure for Nuclear, Radiation, Radioactive Waste and Transport Safety”
- GSR Part 1 “Governmental, Legal and Regulatory Framework for Safety”
- Guidance WS-G-5.1 “Release of Sites from Regulatory Control upon the Termination of Practices”



Module I - LEGISLATIVE AND GOVERNMENTAL RESPONSIBILITIES



- Legislative and statutory framework to regulate the safety of nuclear legacy facilities and sites
- Statutory powers of the regulatory bodies for interaction with the public, operator and regulators from other states
- Legislation for financial provision for nuclear legacy management



Module II - RESPONSIBILITIES AND FUNCTIONS OF THE REGULATORY BODY



- Safety principles and regulatory criteria
- Regulations and guide documents
- Competence of personnel in case of nuclear legacy management
- Interaction between the regulatory bodies



Module III - ORGANIZATION OF THE REGULATORY BODY



- Duties to carry out inspections
- Ability of the third-party involvement

Module IV - AUTHORIZATION BY THE REGULATORY BODY

- Demonstration of safety appropriate to the nuclear legacy facilities
- Review of the operator's application procedures



Module V - REVIEW AND ASSESSMENT



- Rules for review and preparation of conclusions to make decision
- The procedure for the review of technical documents submitted by the operator

Module VI - INSPECTION AND ENFORCEMENT

- The frequency and extent of the inspection;
- Reporting of inspectors;
- Penalties in case of the radiation safety violations



Module VII - DEVELOPMENT OF REGULATIONS AND GUIDES

- The structure of regulatory documents
- Availability of rules containing obligatory requirements for operators
- Ability to develop advisory requirements
- Account of the IAEA safety standards in the national regulations

Module VIII – SPECIFICATION OF NUCLEAR LEGACY SITES IN YOUR COUNTRY

- The presence and number of nuclear and uranium legacy sites
- The availability of the national programme on remediation of nuclear legacy sites and facilities



“The rate” of questionnaires



We have responses from 20 national regulatory bodies:

- Australia
- Brazil
- Bulgaria
- China
- Hungary
- Niger
- Norway
- Romania
- Russian Federation
- Tajikistan
- Ukraine
- United Kingdom
- USA
- Uzbekistan
- Zambia
- Iran
- Other



3 main areas to be analyzed:



1. The state of the art of the legislative and statutory basis for radiation safety regulation applicable for nuclear legacy facilities and sites.
2. Infrastructure and responsibilities of the regulatory body;
3. Characterization of national programs and legacy sites



The state of the art of the legislative and statutory basis (1)



- All countries have or develop legislation in radiation safety during radiation source management
- The radiation safety objective is to protect individuals, society, and environment against radiation hazards, both today and in future
- The legislation established the priority of international obligations.
- There is no nuclear or uranium legacy term in legislation of the majority of states
- Available laws helps to regulate nuclear legacy



The state of the art of the legislative and statutory basis (2)



- All countries have legislative and statutory authorities to regulate the nuclear and radiation safety (1-6)
- In some countries the regulatory body has no responsibilities to regulate the nuclear or uranium legacy
- Generally, independency of the regulatory body is statutory



The state of the art of the legislative and statutory basis (3)



- Generally the legislation defines how the public and other bodies are involved in the regulatory process (except for a few states)
- The legislation ensures that operator is responsible for radiation safety
- In the majority of states, the legislation permits foreign experts in legacy site regulation to be involved



Infrastructure and responsibilities of the regulatory body (1)



The legislation of the majority of states designates the following responsibilities to regulatory bodies:

- develop safety principles and criteria;
- establish regulations and to issue guide materials;
- require operators to carry out safety assessment;
- Inspections;
- implement enforcement in case of radiation safety violations



Infrastructure and responsibilities of the regulatory body (2)



The legislation of the majority of states designates the following responsibilities to regulatory bodies:

- **independently inform the public about regulatory requirements. Provide other state (governmental) authorities, national and international organizations, as well as the public with information on incidents, anomalies and other relevant information. In some states additional agreement is required**
- **contact to regulatory bodies of other states and to international organizations for the purpose of the cooperation development and information exchange in the area of regulation**



Current problems of the regulatory body



- In some states (in respect to uranium legacy) concerning their supervision functions:
- Lack of sufficient functional and technical potentials, necessary to execute obligations relating to review and assessments or inspections in respect to the nuclear legacy management
- In some states, lack of exact environmental (remediation) strategy and policy in respect to the nuclear legacy, safety principles and associated criteria as grounds for the regulatory activities; normative and methodical basis is insufficient when executing regulatory functions on regulating radiation safety at nuclear legacy sites
- Insufficiently detailed structure or insufficient amount of documents on organization, conducting inspections and reporting findings of inspections taking into account features of different of legacy sites
- Some states the program on remediation of nuclear legacy sites and facilities is absent and in the others this program is under development



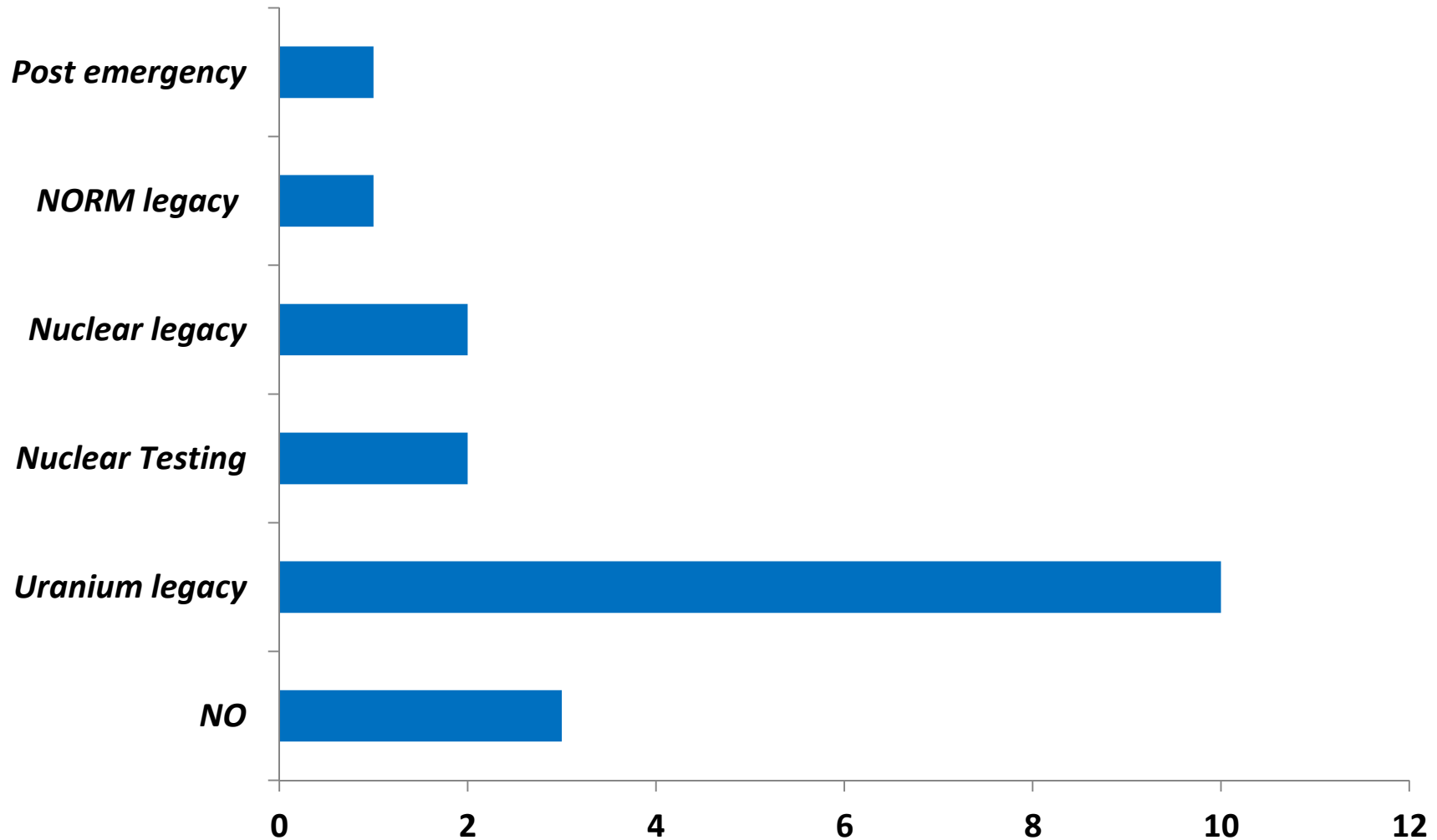
The main conclusions - Infrastructure and responsibilities of the regulatory body



- 1. In the majority of states, there are authorities responsible for the radiation safety regulation at nuclear facilities, including nuclear legacy sites.**
- 2. Generally, regulatory bodies have powers and functional capacities to review and issues authorizations, conduct inspections and making enforcement for the purpose of the radiation safety regulation.**
- 3. In some states the development of the safety culture and organization of regulatory work of the regulatory bodies, which determines the safety principles and criteria for its assessment in terms of radiation safety regulation at nuclear legacy sites, is insufficient.**
- 4. Poor development of methodical basis (regulations and guide documents) on the radiation safety regulation and nuclear legacy sites is obvious; so frequency of inspections at nuclear legacy sites under control is low.**



Characterization of national programs and legacy sites (1)





Characterization of national programs and legacy sites (2)

| | |
|---------------------------|------------|
| Australia | + |
| USA | + |
| United Kingdom | + |
| Hungary | + |
| Bulgaria | + |
| Tajikistan | + |
| Uzbekistan | + |
| Niger | - |
| Zambia | - |
| Brazil | - |
| Norway | + - |
| Romania | + |
| China | + |
| Russian Federation | + |
| Iran | + |
| Ukraine | + |



Conclusions



Implementation of the work plan submitted by the WG #1 gives us reason to expect that during the remaining two years (2013-2014), the following work will be carried out:

- **Exchange of experience in the legacy management: Development of recommendations to enhance the normative and legislative foundations for the legacy regulation on the basis of summarizing of the historical experience of the legacy supervision**
- **Exchange of information on success, failures and problems**
- **Specification of national frameworks of the legacy regulation**
- **Provision of feedback on problems inherent to the national circumstances etc.**



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<http://gnssn.iaea.org/sites/auth/rtws/rsls>



All persons involved in nuclear legacy regulation are invited for exchange of experience and active participation in IAEA Forum on the Regulatory Supervision of Legacy Sites

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Thank you for attention



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