IAEA 60 Years
Atoms for Peace and Development

Session VI:
Nuclear Safety and Security in Brief

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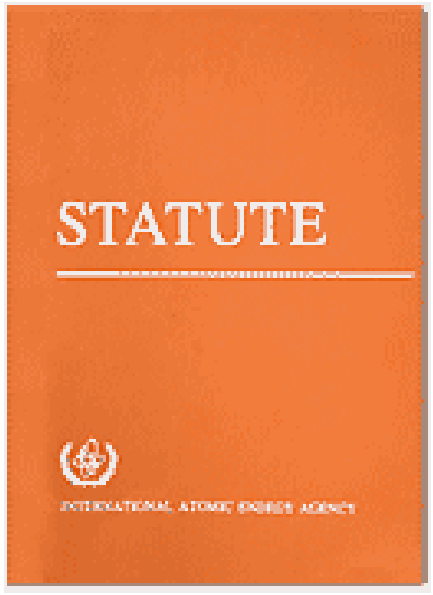
IAEA Statute



- IAEA statute Article III, A.1
  - "To encourage and assist research on, and development and practical application of, atomic energy for peaceful uses throughout the world; …"
- IAEA statute Article III, A.6,
  - "To establish or adopt, in consultation …, standards of safety for protection of health and minimization of danger to life and property …and to provide for the application of these standards"

Department of Nuclear Safety and Security

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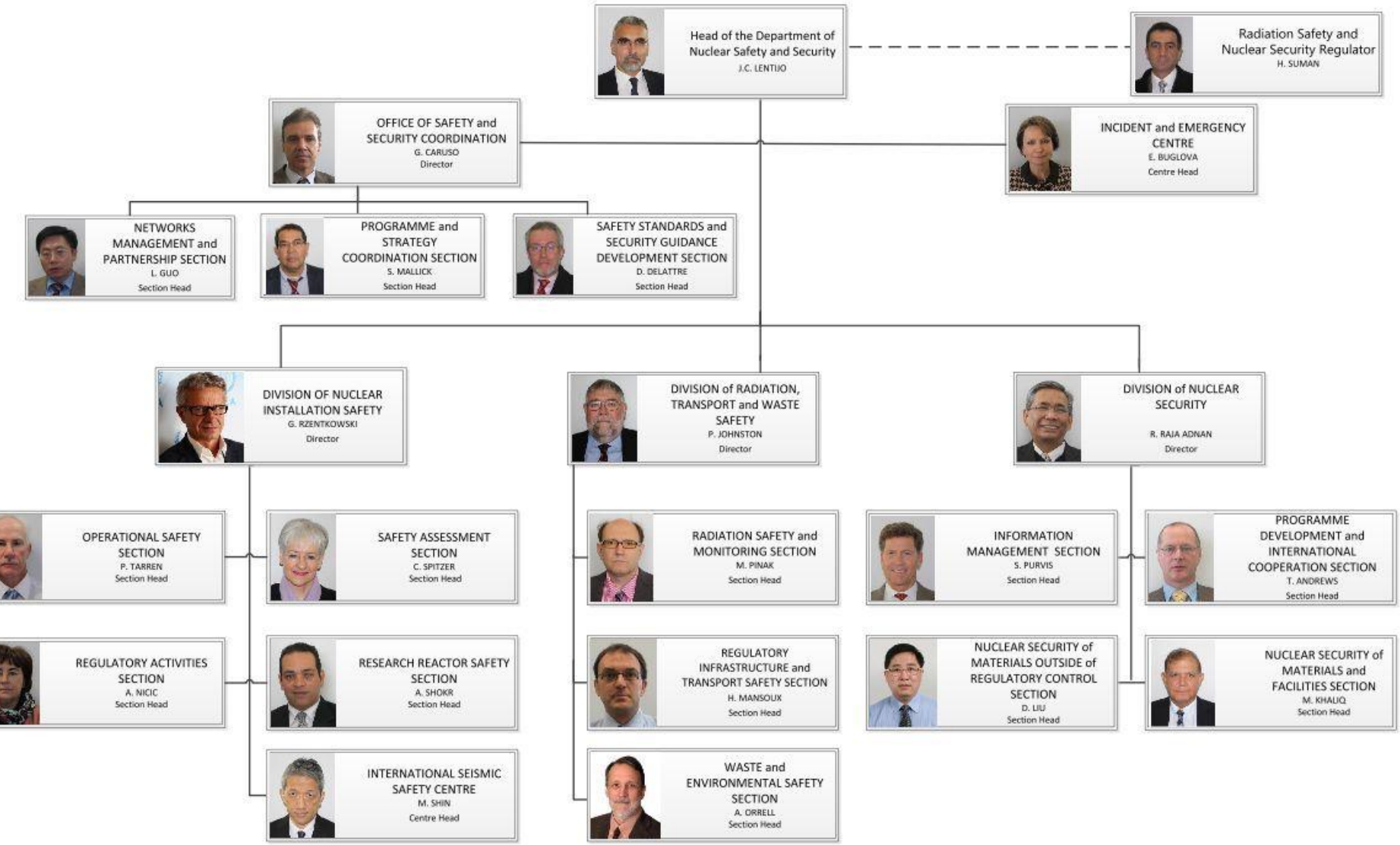

Major Programme 3
Nuclear Safety and Security

- Strategic objective:
  - To improve nuclear safety and security.
- Outcome:
  - Improved nuclear safety and security capabilities at national, regional and international levels;
  - A current, comprehensive suite of safety standards and security guidelines;
  - A global communications and knowledge sharing network.

Departmental Programme

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Incident and Emergency Preparedness and Response


Safety of Nuclear Installations

Radiation and Transport Safety


Management of Radioactive Waste

Nuclear Security

Incident and Emergency Preparedness and Response

- To maintain and further enhance efficient Agency, national and international emergency preparedness and response (EPR) capabilities and arrangements for effective response to nuclear/radiological emergencies independent of their cause.
- To improve provision/sharing of information on nuclear or radiological incidents and emergencies among Member States, international stakeholders and the general public/media in preparedness stage and during response.
  - EPR publications, Peer Review, capacity building (EPREG, EPREV, training, CBC, tools and RANET);
  - International emergency management (JPLAN, IACRNE, EPREG);
  - Maintaining/enhancing IEC systems (Convex-1/2/3).

Safety of Nuclear Installations

- To continuously improve the safety of nuclear installations during site evaluation, design, construction and operation.
- To support Member States in developing and implementing the appropriate safety infrastructure (embarking countries).
- To assist adherence to, and implementation of, the Convention on Nuclear Safety (CNS) and the Code of Conduct on the Safety of Research Reactors.
  - Publication of standards and capacity building activities (BPTC, RC and training courses);
  - Providing Review Services (IRRS, SEED, SALTO);
  - Support CNS (CNS review meetings, FINAS, IRSRR database);
  - Strengthening international cooperation (GNSSN, RegNet, GSAN, SARCON, SAET, IGALL).

Radiation and Transport Safety

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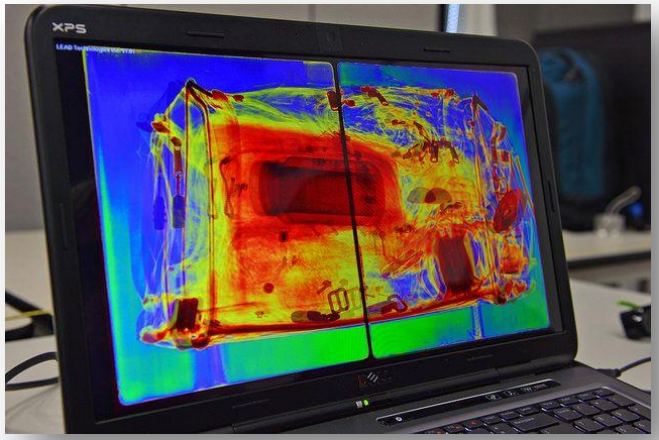
- To achieve global harmonization of the development and application of the Agency's safety standards in this area, and to increase the safety of radiation sources and thereby raise the levels of protection of people, against the harmful effects of radiation.
  - Radiation protection criteria and standards (BSS, workshops and training);
  - Radiation protection for patients (PACT programme);
  - Occupational radiation protection (ORPAS and ORPNET);
  - E&T in radiation Protection (PGEC courses).

Radioactive Waste Management and Environmental Safety

- To achieve harmonization in policies and standards governing waste safety and public and environmental protection, together with provisions for their application, including sound technologies and good practices.
  - Developing safety standards and coordination of the Joint Convention;
  - Review Service (ARTEMIS);
  - Decommissioning and remediation programme (Iraq decommissioning project, RSLS programme).

Nuclear Security

- To contribute to global efforts to achieve effective nuclear security, by establishing comprehensive nuclear security guidance and providing for its use through peer reviews and advisory services and capacity building, including education and training.
- To assist in adherence to, and implementation of, relevant international legal instruments, and to strengthen the international cooperation and coordination of assistance in a way that underpins the use of nuclear energy and applications.
- To play the central role and enhance international cooperation in nuclear security, in response to General Conference resolutions and Board of Governors directions
  - Assessing nuclear security needs, priorities and threat (self-assessment and INSSP);
  - Illicit Incident and Trafficking database (ITDB);
  - Advisory Services and E&T (IPPAS, NSSC, INSEN).



Our frame of work, what we do… our services

We support and promote the implementation of legal instruments i.e. conventions and codes of conduct

We develop safety standards & security guidance: Facilitating international consensus

We provide for capacity building through training and knowledge networks

We propose and conduct Peer Reviews :

- ✓ Self assessment & continuous improvement
- ✓ Openness and transparency,
- ✓ Identifying good practices & mutual learning

- ✓ Emergency Preparedness and Response
- ✓ Nuclear Installation Safety
- ✓ Radiation and Transport Safety
- ✓ Waste management and Environmental safety
- ✓ Nuclear Security

Safety Standards Hierarchy

Safety Fundamentals

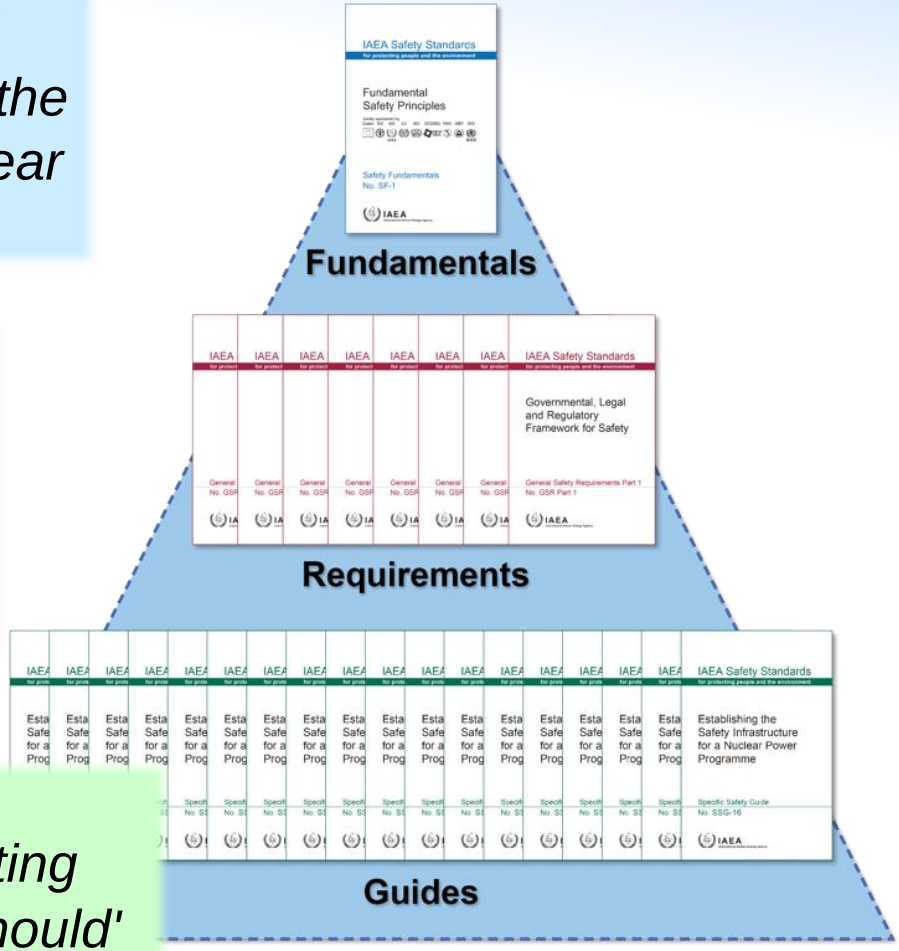
"...basic objectives, concepts, and principles of safety and protection in the development and application of nuclear energy for peaceful purposes..."

Safety Requirements

*"...establish the requirements that must be met to ensure safety. Expressed as 'shall' statements" and governed by **Safety Fundamentals...**"*

Safety Guides

*"...recommend procedures for meeting safety requirements. expressed as 'should' statements, to comply with the **Safety Requirements...**"*



Process to Develop Safety Standards and Nuclear Security Series

Planning

Drafting

Review and approval

Outline and work plan (DPP)
Prepared by the Secretariat
Review by the Committee(s)

Drafting or revising
by the Secretariat and consultants

Review
by the Committee(s)

Member States

Safety Standards

Endorsement
by the CSS

Establishment
by the DG or BoG

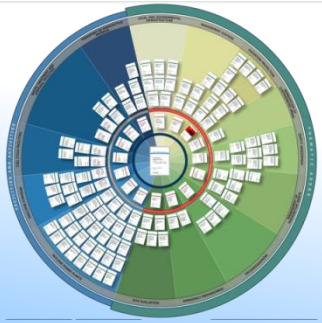
Security Series

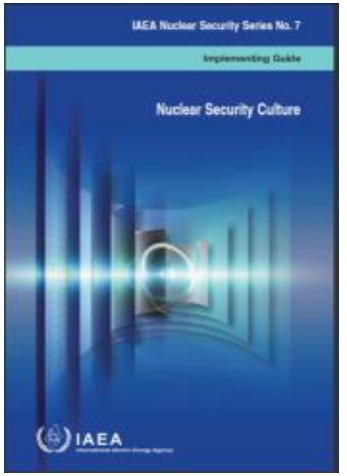
Approval
by the DDG

Endorsement
by the DG or BoG

Publication

Safety Standards: 3 – 5 years from start to publication





Integrated Regulatory Review Service (IRRS)

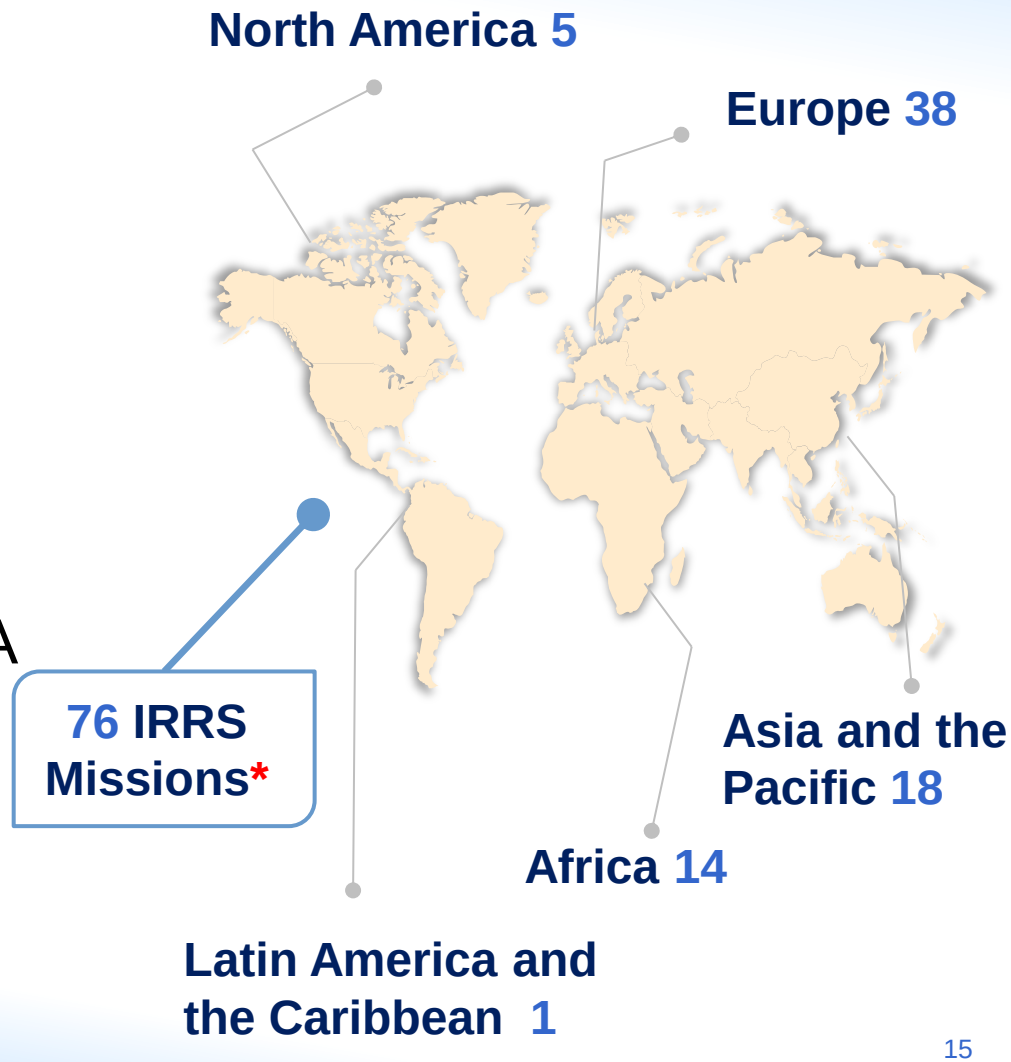
Purpose: To Enhance Effectiveness of Regulatory Bodies

Recipient: Governments and regulatory bodies

Duration: 5-15 days, follow-up 5-10 days

Team composition: 3-5 IAEA experts, 5-20 MS experts

Follow-up: within 2 - 4 years



** total number of missions to date*

Operational Safety Review Team (OSART)

Purpose: To provide MSs an objective and transparent assessment by worldwide experts of key NPP operational safety areas with respect to IAEA safety standards.

Recipient: Operating Organization

Duration: 3 weeks

Team composition: 2-3 IAEA experts, up to 16 MS experts

Follow-up: within 1-1.5 years

** total number of missions to date*

International Physical Protection Advisory Service (IPPAS)

Purpose: To assist States in strengthening their national nuclear security regime by providing peer advice on implementing international instruments, and Agency guidance on the protection of nuclear and other radioactive material and associated facilities.

Recipient: Nation-wide or site-specific as requested

Duration: 2 weeks

Team composition: 1-2 IAEA experts, 5-10 MS experts

Follow-up: within 5 years

** total number of missions to date*

Emergency Preparedness Review Service (EPREV)

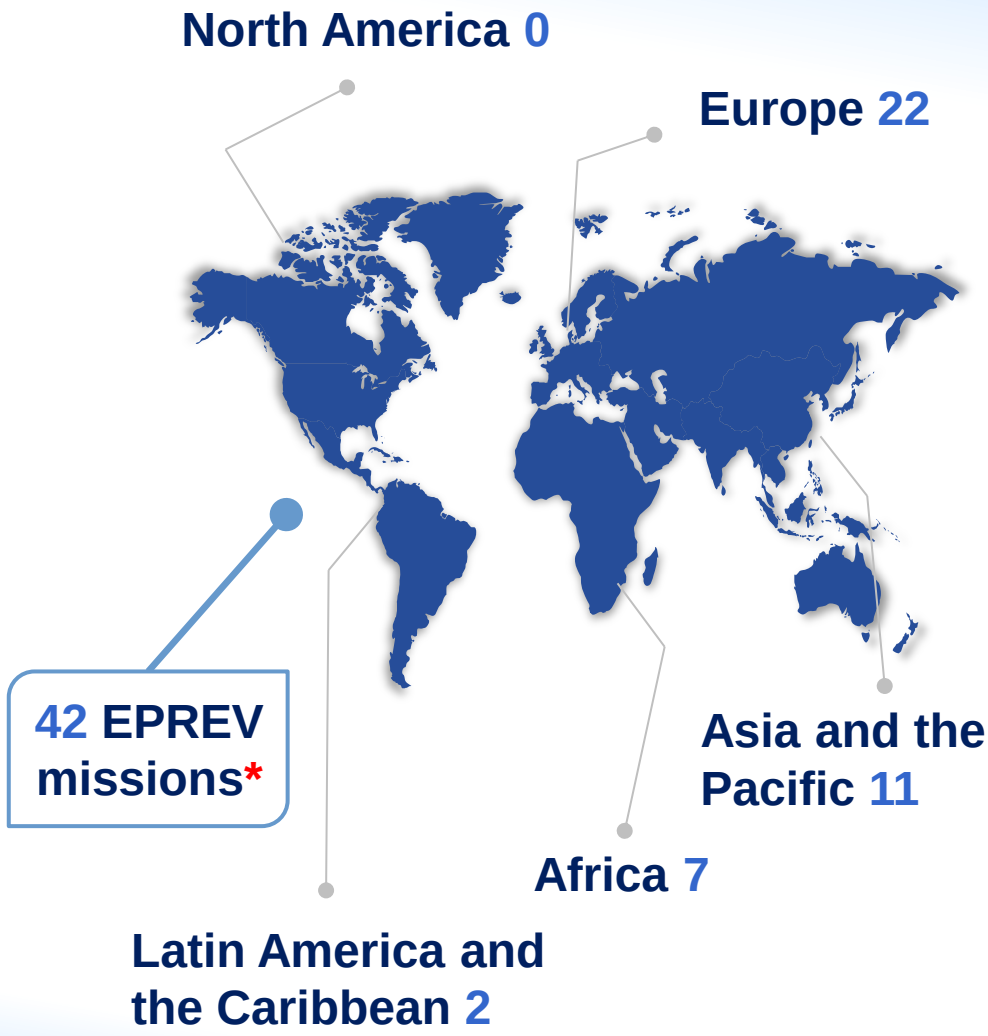
Purpose: To appraise the level of preparedness for nuclear/radiological emergencies in Member States

Recipient: All organizations involved

Duration: 5 – 10 days

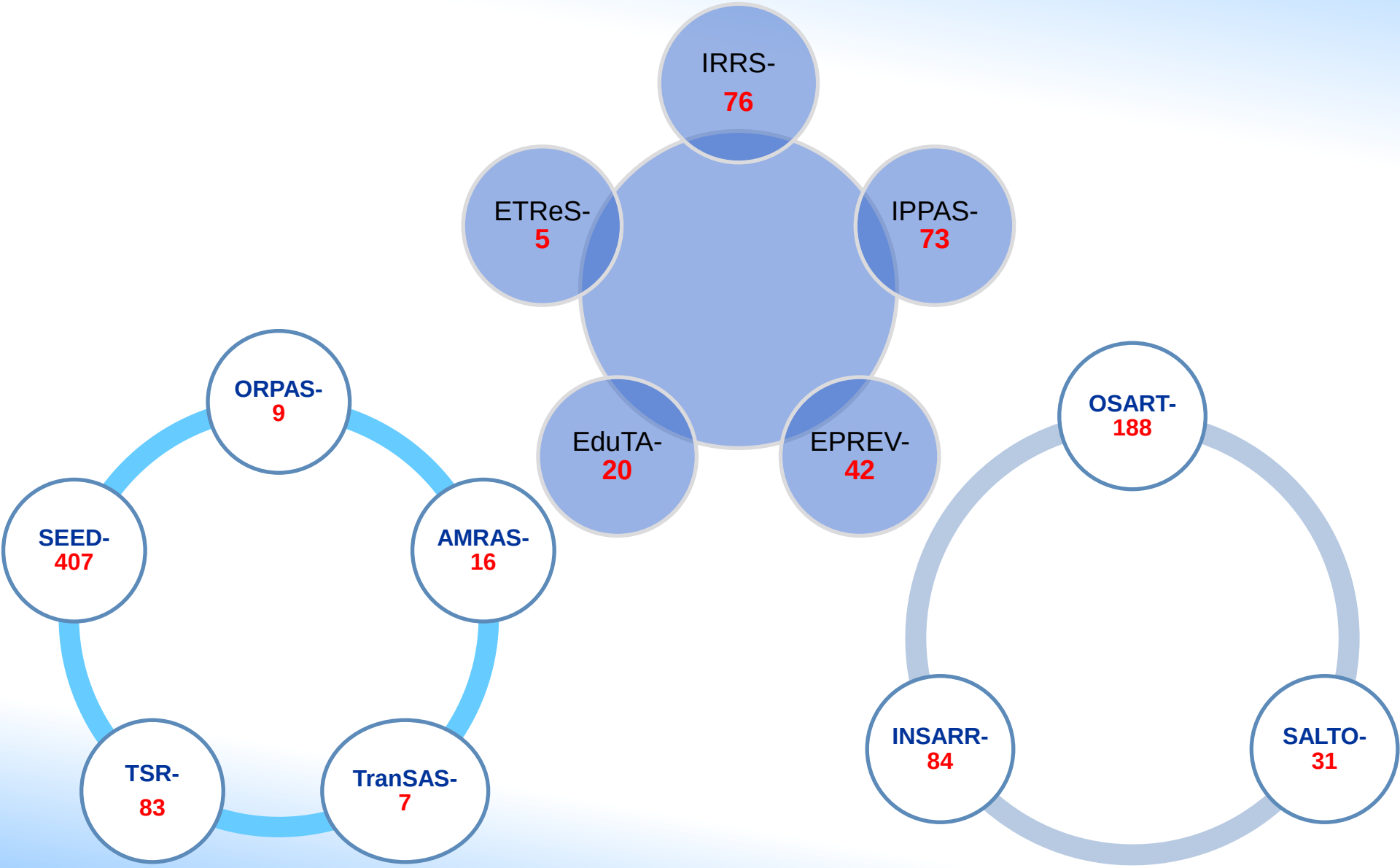
Team composition: 1 – 2 IAEA experts, 2-6 MS experts

Follow-up: within 3 – 4 years



** total number of missions to date*

Peer Review / Advisory Services – Number of implementations



Global Nuclear Safety and Security Network

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- **18** Networks including global (e.g. RegNet, TSO Forum, GSAN), regional (e.g. ANSN, ANNuR, FNRBA) and thematic (e.g. Regulatory Cooperation Forum, CANDU Senior Regulators Group, WWER Regulators' Forum, SMR Regulators' Forum, Control of Sources Network).
- **17** Thematic Area
- **120** Member States
- Over **70 000** documents
- Since 2011, over **350** regional and national activities
- Since 2011, **~3500** experts involved in the GNSSN activities

GNSSN Global Nuclear Safety and Security Network

People who network through GNSSN have greater opportunities to learn more, grow professionally and have a bigger impact on safety and security in their own countries.

NS Role in TC Programme

- *NS Supports the development of the TC programme right from the start and through this support helps in building capacity in Member States.*

- Input of NS on safety related aspects of Country Programme Framework (CPF) is the key for success.
- By building safety and security elements in the CPF a firm basis is established.
- NS regularly provides input in the development of projects. (concepts, projects, activities.)
- Bulk of support comes from the Technical Officers (TOs) for each project.
- Safety reviewer role in determining the adequacy of radiation safety infrastructure.

Radiation Safety Information Management System

RASIMS

http://rasims.iaea.org/

RASIMS.Contact-Point@iaea.org

Content of RASIMS

- Country Profiles provide a summary of information on the radiation and waste safety infrastructure in Member States receiving Agency assistance, as well as an indication of the level of compliance with IAEA Safety Standards.

- Member States that receive assistance from IAEA are obliged to meet several 'conditions', one of these being that they apply IAEA Safety Standards*.

  * Note: Although IAEA Safety Standards are generally non-binding on MS, those MS that receive assistance from the Agency are obliged to apply the Safety Standards, e.g.: through the 'Revised Supplementary Agreement'

Uses of RASIMS

In this context, RASIMS is used for a range of purposes, including:

- During the **'radiation safety clearance'** process prior to the provision of radiation sources to Member States
- During the design of technical cooperation **(TC) projects** (National and Regional) to ensure they are based on identified safety needs
- In general, to provide an overview of States' progress in **applying IAEA's safety standards** (e.g.: when preparing for IAEA missions, briefs for IAEA Management, etc)

It is therefore crucial that Member States update periodically the information contained in RASIMS

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Thank you!