

**INTERNATIONAL CONFERENCE ON HUMAN RESOURCE DEVELOPMENT FOR
NUCLEAR POWER PROGRAMMES: BUILDING AND SUSTAINING CAPACITY
12 – 16 MAY 2014**

Education & Training, and Knowledge Networks for Capacity-Building in Nuclear Security

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IAEA

International Atomic Energy Agency

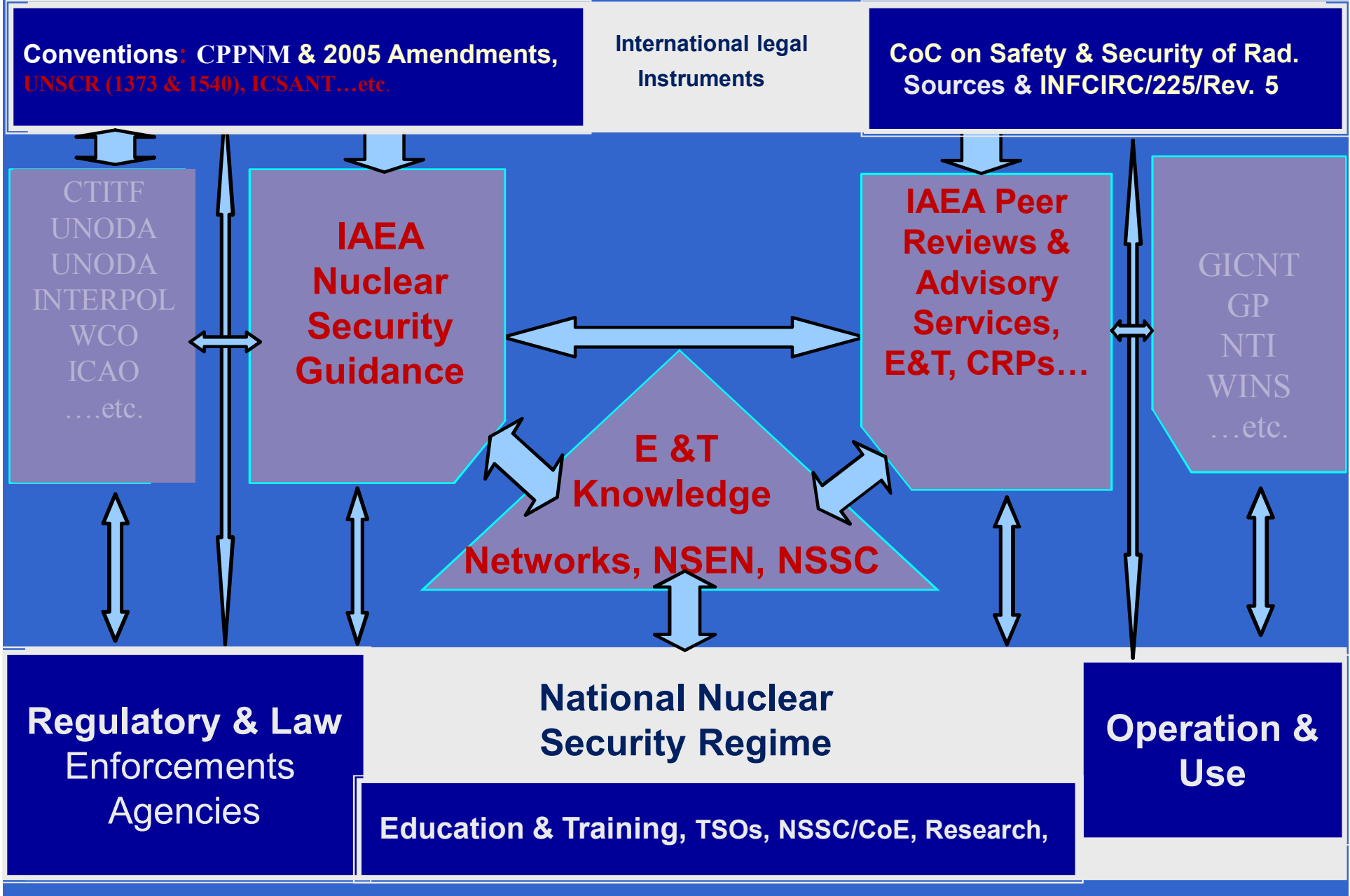
The Vision

Achieving worldwide, effective security wherever nuclear or other radioactive material is in use, storage and/or transport, and of associated facilities and activities.



A global threat demands a global response.

Global Nuclear Security Framework



Importance of CB in Nuclear Security ⁽¹⁾

All Nuclear Security Plans (NSP) reiterate the importance of HRD as an integral part of capacity building in nuclear security for Member States. For example:

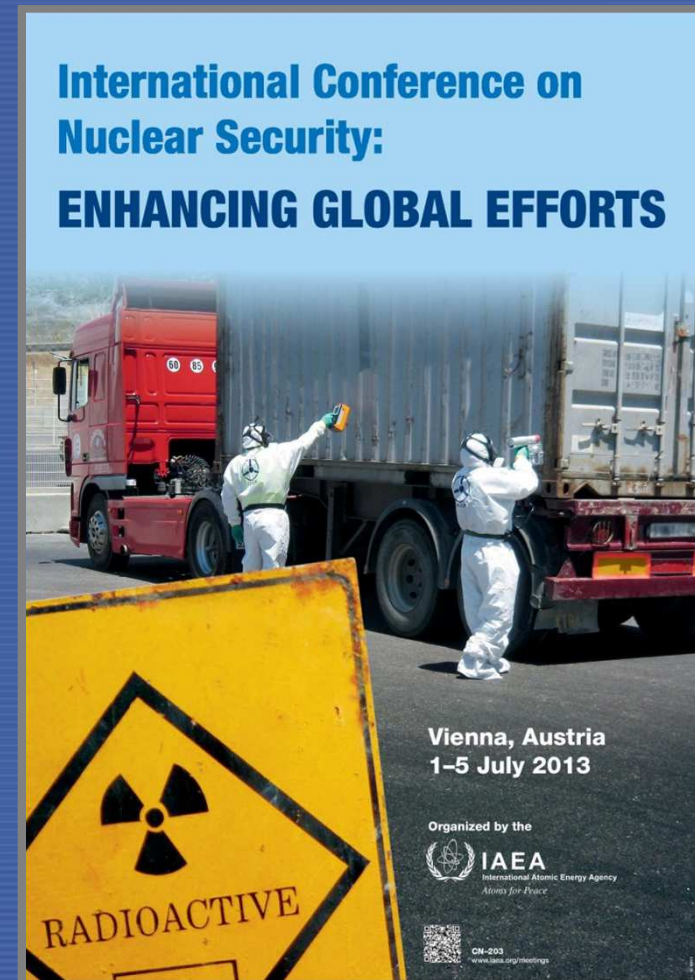
- *NSP 2010-2013:* to support States, upon request, in their efforts to establish and maintain effective nuclear security through assistance in capacity building, guidance, human resource development, sustainability and risk reduction.
- *NSP 2014-2017:* to continue to focus on human resource development, education and training, assisting states to meet their national responsibilities and international obligations.



Importance of CB in Nuclear Security ⁽²⁾

2013 International Conference on Nuclear Security Ministerial Declaration:

“...welcome the IAEA's support for capacity building in States, upon request, ... and recognize the importance of the collaborative International Nuclear Security Education Network (INSEN) and Nuclear Security Support Centre (NSSC) network.”



Importance of CB in Nuclear Security ⁽³⁾

GC(57)/RES/10

“Underlining the importance of IAEA programmes for education and training in nuclear security, as well as other international, regional and national efforts to this end...”

"Encourages the Secretariat, in cooperation with Member States, to continue its training and train-the-trainers programmes, and to adapt the courses as appropriate, within its mandate, to meet the needs of Member States, and further encourages ongoing initiatives of Member States, in cooperation with the Secretariat, to foster nuclear security culture through nuclear security education and training and collaborative networks, including through the establishment of Nuclear Security Support Centres (NSSCs) and through the International Nuclear Security Education Network (INSEN);



IAEA Support for CB in Nuclear Security

Comprehensive Training Programme

- To raise awareness, to fill gaps between the actual performance of personnel and the required competencies and skills, and to prepare qualified instructors/trainers

Nuclear Security Support Centres

- To provide member states with training, expert, technical, and scientific support for better nuclear security

Nuclear Security Education

- To support the development of nuclear security experts through teaching material, professional development of faculty and promotion of nuclear security education in collaboration with the academic and scientific community

Nuclear Security Knowledge

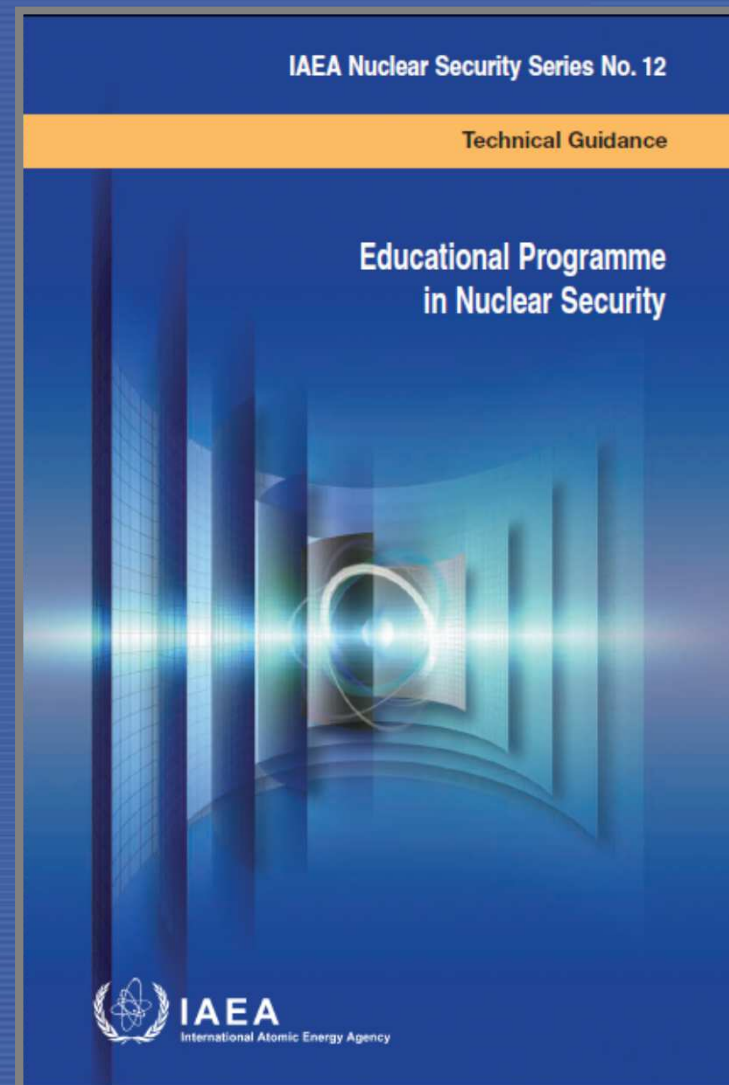
- To assist member states in establishing, maintaining and sustaining an effective national nuclear security regime on the basis of clearly identified needs and reliable and accurate knowledge and information

Ultimate Goal:

- *To develop capabilities to support the sustainable implementation of the international legal instruments and IAEA guidelines for nuclear security worldwide and to foster nuclear security culture.*

IAEA and Nuclear Security Education

- Increased interest & awareness in and nuclear security globally
- Requests from member-states for support in capacity-building and human resource development
- IAEA Nuclear Security Series No. 12 – Educational Programme in Nuclear Security published in 2010
 - Master of Science Programme
 - Certificate Programme



International Nuclear Security Education Network

established in 2010



A partnership between the IAEA and universities, research institutions and other stakeholders

- Promotion of nuclear security education
- Development of educational materials
- Professional development for faculty members
- Collaborative research and resource sharing

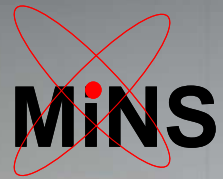
Currently over 100 members from 40 member states

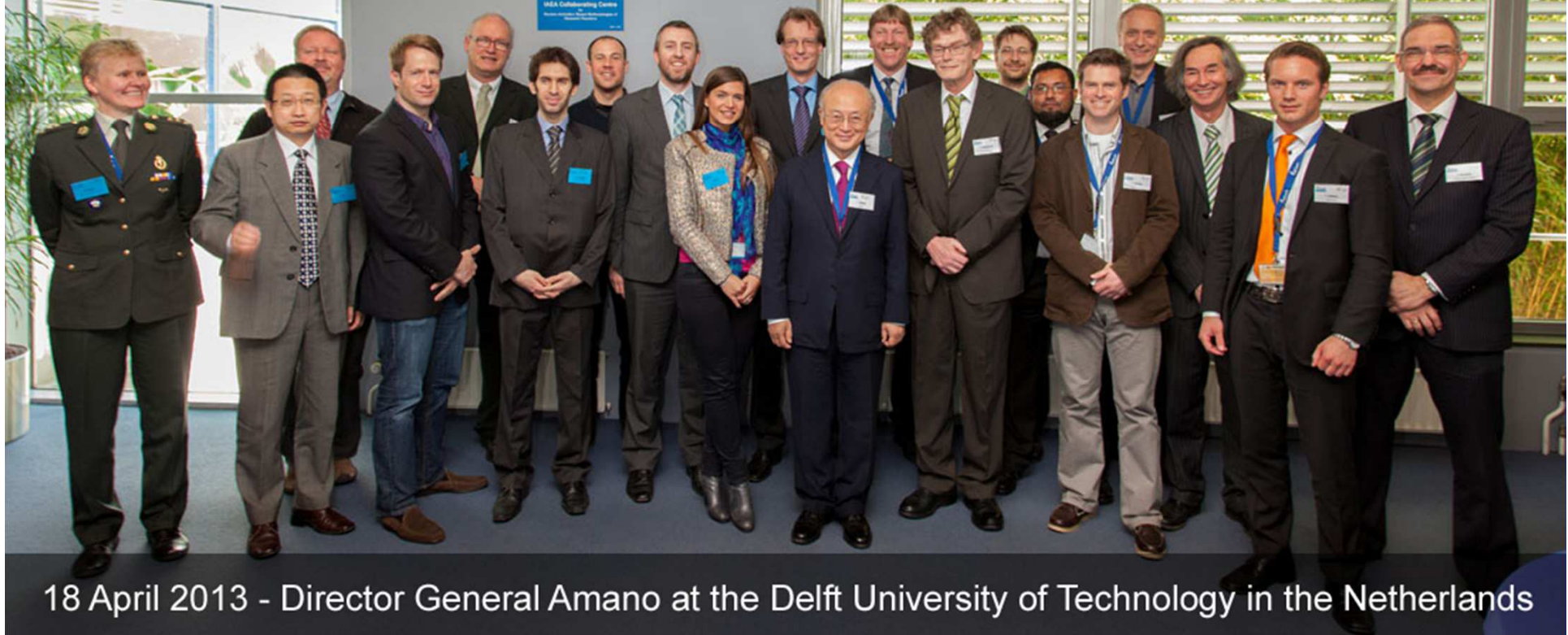
Mission: to enhance global nuclear security by developing, sharing and promoting excellence in nuclear security education

Achievements in Nuclear Security Education

- Over 100 members in total (78 institutions from 40 member states, +10 International Organizations, +4 Observers).
- Development and peer review of teaching materials and textbooks
 - 14 course packages out of 23 are completed.
 - three INSEN textbooks (Introduction to NS, Security of Nuclear and Other Radioactive Material in Transport, and Computer Security).
 - four textbooks are scheduled to be developed in 2014-2015.
- Mentor/Protégé programme for professional development of faculty in the areas of nuclear security attended by 140 faculty and instructors from 31 member states.

Master of Science in Nuclear Security

**MiNS**



18 April 2013 - Director General Amano at the Delft University of Technology in the Netherlands

Education Priorities for the Future

- Incorporate feedback from the first pilot program into future academic activities in nuclear security
- Based on feedback from pilot programme:
 - Revise the NSS12 guidance document
 - Update educational materials and textbooks
- Support INSEN members, which consider launching MSc programs at their institutions
- Continue promoting nuclear security education as part of existing degree programmes
- Support the use of new forms of teaching and learning in nuclear security education
 - Online e-learning degree programmes and modules
 - Learning by experience
 - Problem-oriented learning tailored to nuclear security functions

IAEA Nuclear Security Training

Training in Numbers

- Over 30 different nuclear security training courses designed
- More than 80 training events run per year
- Over 15,800 participants from 120 States trained since 2002

Training Catalogue

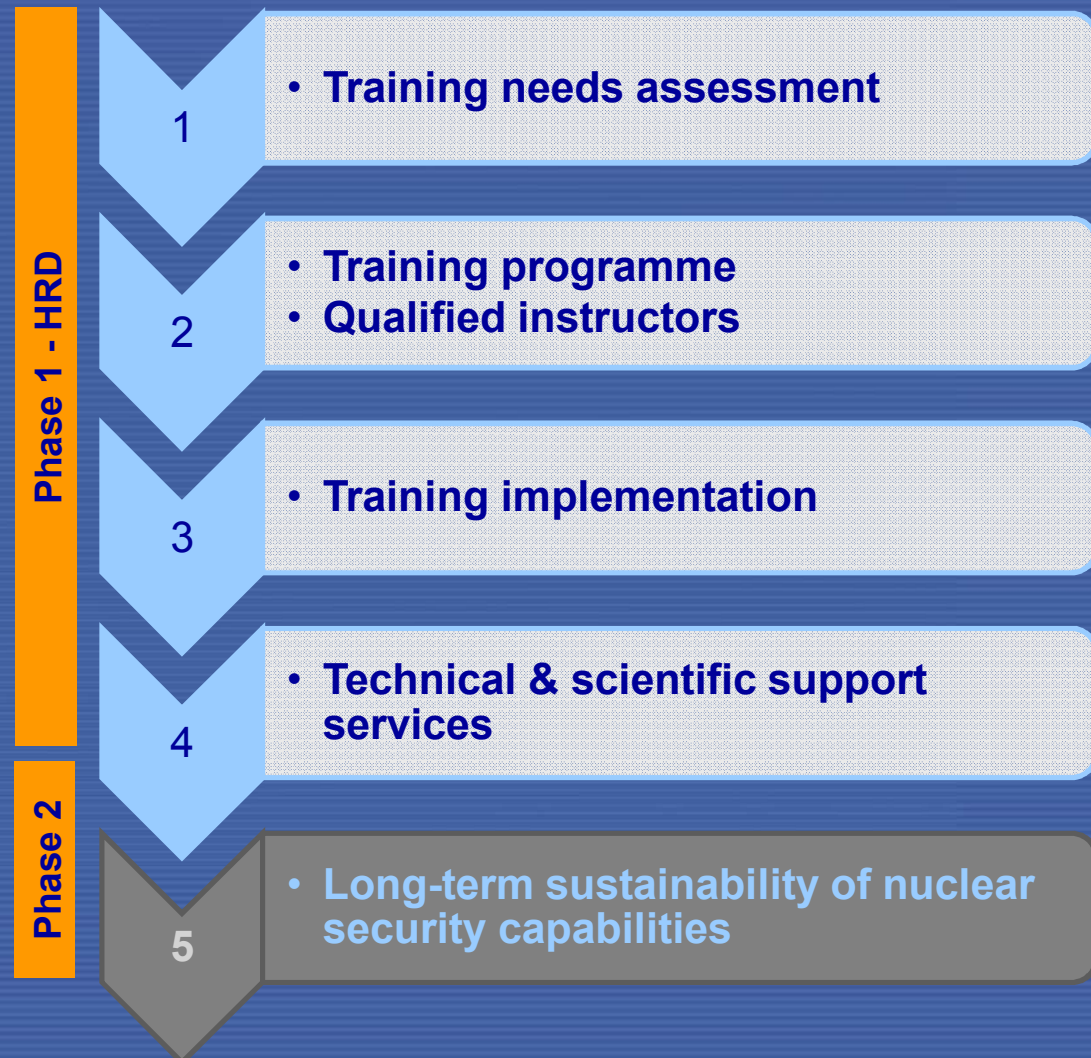
- 26 courses in the Catalogue covering all aspects of nuclear security
 - Additional courses – Member States requests through official channels
 - Modularized and standardized
- Developing online e-learning modules on basic topics in nuclear security
 - The Use of Radiation Detection Instruments (available)
 - Physical Protection, Transport Security, Nuclear Material Accounting and Control for Nuclear Security, Radiological Crime Scene Management, and Computer Security (available in 2014)
 - ...



Nuclear Security Support Centres

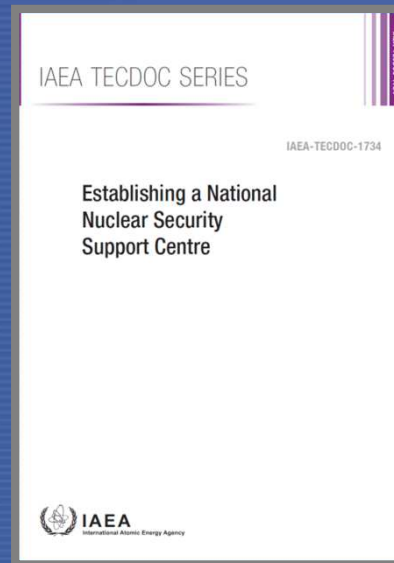
Primary objectives are:

- Develop human resources through the implementation of a tailored training programme
- Develop a network of experts
- Provide technical support for lifecycle equipment management and scientific support for the detection of and the response to nuclear security events



International Network of Nuclear Security Training and Support Centres (NSSC)

- Key to coordinated collaboration at the international and regional levels
- Members from over 50 institutions worldwide
- Information exchange, resource sharing, coordination with educational networks



Bridging Nuclear Security Training and Education

IAEA-ICTP International School on Nuclear Security

- Announced by the Italian government in 2010 at the Nuclear Security Summit in Washington (USA), and reinforced at the Nuclear Security Summits in 2012 and 2014 as a continued initiative
 - Supported each year by the Italian Government
 - Next school scheduled for Spring 2015



INSEN and NSSC as Knowledge Networks for Member-State Capacity Building

- Both networks established for human resource development for capacity building in nuclear security
- Both networks produce, share, and disseminate new knowledge in nuclear security
 - Teaching and training materials, textbooks, handbooks, manuals, scientific and technical expertise and services, etc.
- Such networks are essential to leveraging expertise from the international community to promote and support nuclear security and assist the Agency in fulfilling its mandate

The Global Nuclear Safety and Security Network

Mission



Building Capacity for nuclear safety and security



Sharing and Managing information and knowledge



Enable Multilateral Cooperation and Coordination



**Enhance
Nuclear Safety
and Security
Infrastructure**

Conclusions

- Capacity Building (CB) is critical for States to establish & maintain effective & sustainable nuclear security regime.
- IAEA is a worldwide platform promoting international cooperation for CB in nuclear security involving more than 160 countries & over 20 Organizations and Initiatives.
- IAEA Division of Nuclear Security is ready to continue supporting States in developing their CB through:
 - Comprehensive Training Programme: more than 80 training events annually
 - International Nuclear Security Training and Support Centre Network (NSSC)
 - Comprehensive Education Programme
 - International Nuclear Security Network (INSEN)

...Thank you for your attention



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IAEA
International Atomic Energy Agency