

ICRS-13 & RPSD-2016

13th *International Conference on Radiation Shielding*
&
19th *Topical Meeting of the Radiation Protection & Shielding Division*
of the *American Nuclear Society -2016*

Plenary keynote:

“AAEA contribution to strengthening radiation protection
in the Arab countries”

Dr. Abdelmajid Mahjoub

Arab Atomic Energy Agency, Tunis



Dr. Abdelmajid Mahjoub received a master's degree from Tulane University in New Orleans and a PhD from the University of Nebraska-Lincoln in the USA.

Dr. Mahjoub was a Professor at the University of Tunis (1985-1997). He held the position of Director General of the National Center for Nuclear Sciences and Technologies of Tunisia (1997-2001). He worked at the International Atomic Energy Agency (IAEA) in the Department of technical cooperation for seven years.

Dr. Mahjoub is currently Director General of the Arab Atomic Energy Agency (AAEA) based in Tunis since February 2009.



AAEA CONTRIBUTION TO STRENGTHENING RADIATION PROTECTION IN THE ARAB COUNTRIES

Abdelmajid Mahjoub

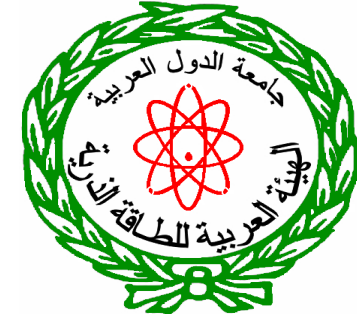
Arab Atomic Energy Agency

Tunis

aaea@aaea.org.tn

ICRS 13
RPSD 2016
3-6 Octobre 2016, Paris, France

ANNuR MEMBRE STATES



22 member states in LAS

African Countries

Egypt
Libya
Sudan
Tunisia
Mauritania
Morocco
Algeria
Comoros
Djibouti
Somalia

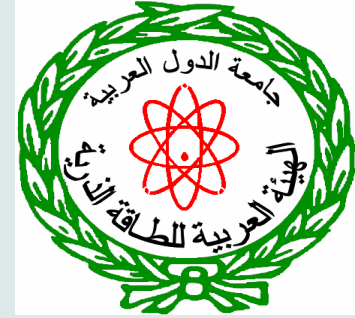


Gulf Countries

Bahrain
KSA
Kuwait
Oman
Qatar
UAE

Asian Arab Countries

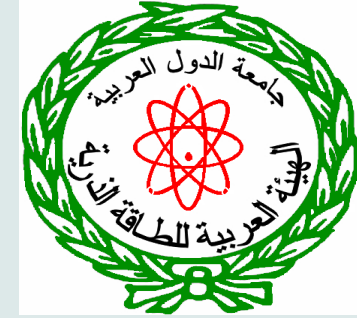
Iraq, Jordan, Lebanon,
Palestine, Syria, Yemen,



AAEA Activities

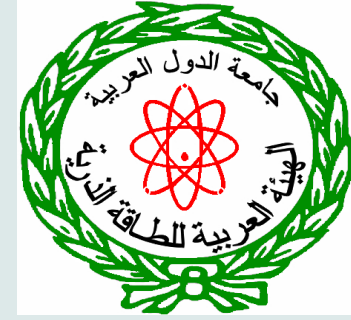
- AAEA translate many IAEA guides and technical documents related to **Radiation Protection** into Arabic like:
 - Safety series, International Basic Safety standards for protection from Ionizing radiation and safety of radioactive sources BSS
 - Assessment of occupational exposure (Safety guide)
 - Occupational radiation protection
 - Technical document of radioactive waste disposal
 - Decommissioning of research reactors and NPP
 - **ICRP- Publications**

AAEA spreads the safety and security culture among Arab speaking nuclear community



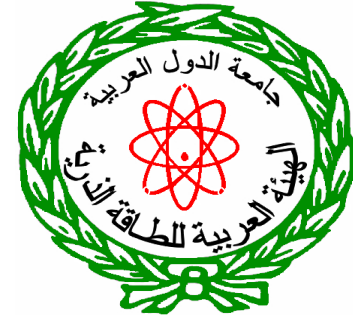
AAEA Missions

- Coordinates among member states in the field of peaceful applications of atomic energy,
- Assists in human resources development and transfer of knowledge and information concerning nuclear sciences & technologies,
- Sets up unified Arab regulations for radiation protection, nuclear safety and security and safe handling of radioactive materials. Building the SS culture
- Raise the public awareness of benefits and hazards of ionized radiation.,



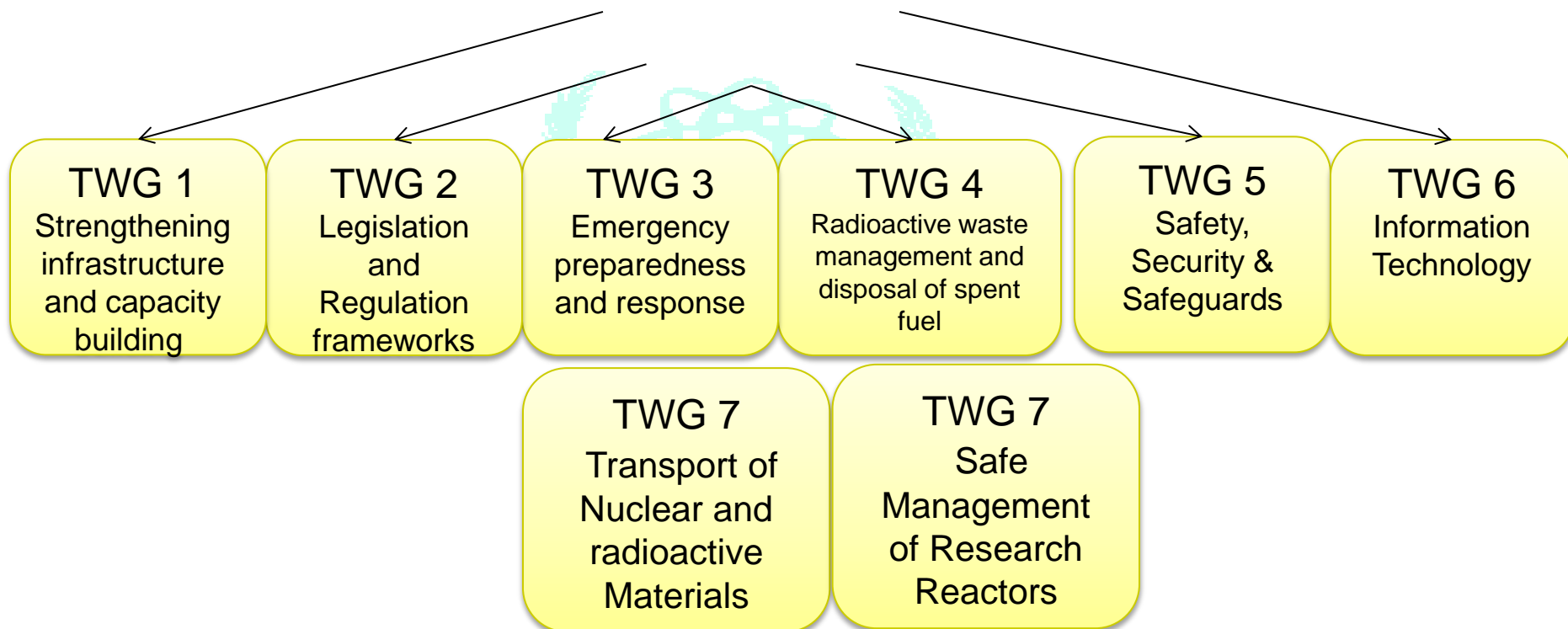
Need for **Arab Safety Networks**

- To ensure that safety, security and knowledge, experience, and lessons learned are made visible and available, through links between Arab RB,
- To enable and support interaction and collaboration between competent people and organizations relevant to nuclear regulation.
- Therefore, The Arab Network of Nuclear Regulators (ANNuR) has been established

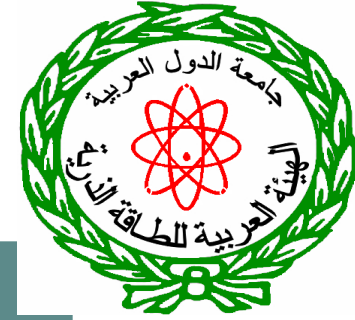


ANNuR's THEMATIC WORKING GROUPS

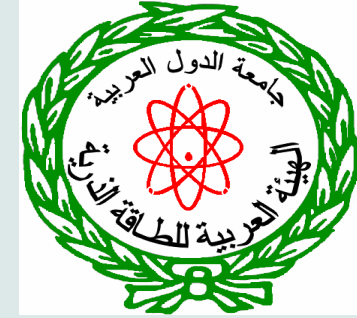
ANNuR's AREAS OF WORK



The Thematic Working Groups



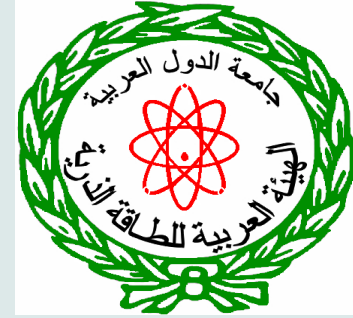
Thematic Working Group	coordinator
strengthening infrastructure and capacity building for regulatory bodies	Jordan
Legislation and Regulation frameworks	Tunisia
Emergency preparedness and response	Iraq
Radioactive waste management and disposal	Libya
Safety, Security and Safeguards	Egypt
Information Technology	IAEA/AAEA
Transport of Nuclear and Radioactive Materials	Tunisia
Safety Management of Research Reactors	Morocco



ANNuR Meetings

January 2010	+++++→	First meeting
May 2011	+++++→	Second meeting
April 2012	+++++→	Third meeting
March 2013	+++++→	Fourth meeting
March 2014	+++++→	Fifth meeting
March 2015	+++++→	Sixth meeting
March 2016	-----→	Seventh Meeting

Cooperation with IAEA



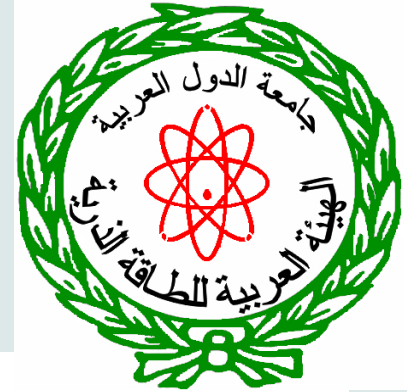
IAEA assisted in establishing ANNuR

IAEA provides expert support to different ANNuR activities

IAEA funds many ANNuR activities, (TC, Wkps, EM,...)

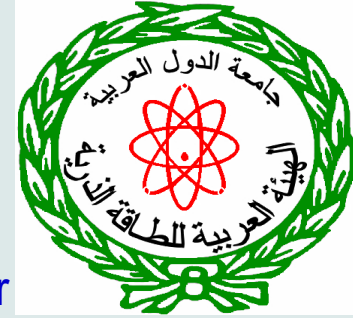
ANNuR and IAEA signed a practical agreement on cooperation in the area of strengthening the nuclear safety and security frameworks

Cooperation with KINS

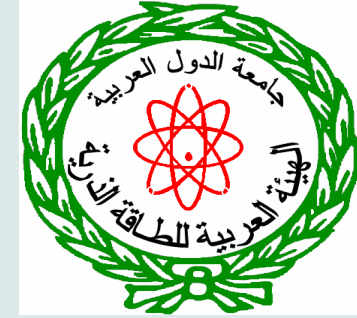


- *MOU has been signed between KINS and AAEA*
- *Co- sponsoring of ANNuR activities*
- *Attended all six ANNuR Annual Plenary meetings*
- *MsC grants in ISNS for ANNuR member states.*
- *Joint IAEA-KINS Basic Professional Training Course on Nuclear Safety for Regulators, (Tunis, Tunisia, 4-15 May 2015)*
- *Workshop on Safety and Protection of radiation sources, (Daejong, Korea, 1-11 June 2015)*
- *Emergency preparedness and Radiation protection measures, (Daejong, Korea, 5-9 Sept. 2016)*

US-NRC support to ANNuR



- Nuclear Executive Workshop for Decision Makers in Nuclear Power Programs, (March 2012, New Orleans, USA).
- Workshop on the Physical Protection and Security of Radioactive Sources, (June 2012, Tunisia).
- Site Application Review, (February 2013, Tunisia).
- Workshop on Physical Protection of Nuclear Materials and Installations, (November 2013, Kuwait).
- Regulatory Aspect of Power and Research reactors siting, (September 2013, Jordan).
- Radiological and Nuclear Emergencies, (August 2013, Tunisia).
- Workshop on Construction Permit for Power and Research Reactors, (October 2014, Rockville, USA).
- Workshop on Probabilistic Risk Assessment, (November 2014, Kuwait).
- Workshop on Advanced Steps on Safety of Radioactive Sources and Nuclear Materials (8-12 June 2015, Marrakech, Morocco).
- Workshop on SMRs Technologies and Regulations (January 2016, Vienna, Austria).



➤ **EU representatives participate at all ANNuR meetings**

➤ **EU supports ANNuR activities since 2013**

Actions planned/implemented:

➤ EU-Acquis, legal and regulatory framework, regulatory role and responsibilities for licensing and enforcement (**Hammamet, Tunisia, 20-24 April 2013**)

➤ **Radiation protection principles and system at Nuclear Facilities:**
(**Hammamet, Tunisia 21-24/4/2015**)

➤ Radiation Protection and Regulatory Emergency Preparedness (**Bizerte, Tunisia, 19-23 Sept. 2016**)

➤ Regulatory functions, licensing management, basic safety concepts and decision making. (To be implemented).

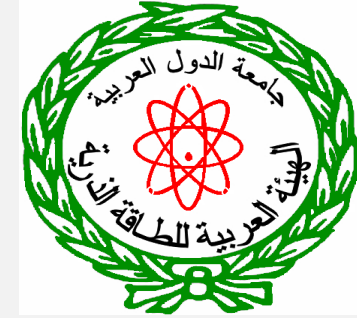
➤ AAEA had an agreement with DoE-LLNL to support three activities annually in the field of Nuclear SSS

➤ SUBJECTS:

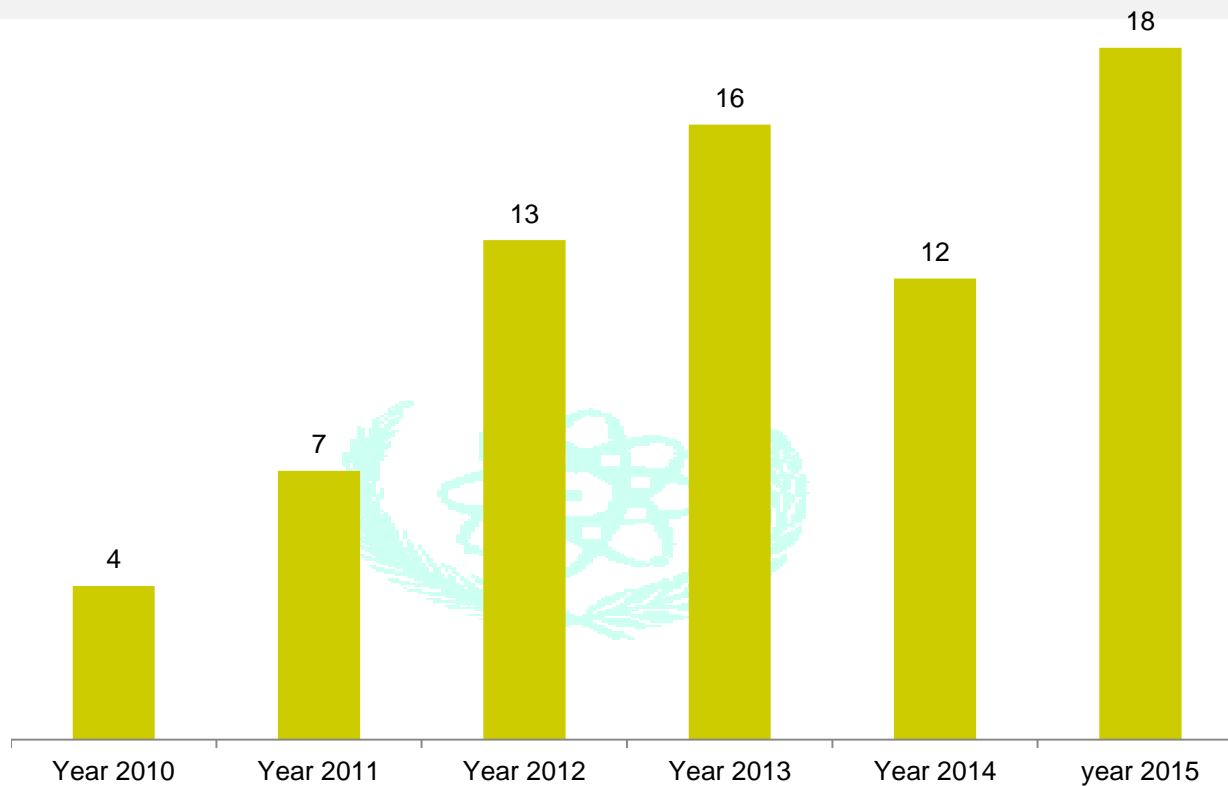
- NPP Project Management
- Basic Requirements of Nuclear Regulatory Bodies
- Radiation Protection, Nuclear Safety and Nuclear Security
- Nuclear Security and Safeguards
- Regulation, Legislation and Security of Radioactive Sources
- Radiation Monitoring and Export Control

VENUES

- Kuwait, Jordan, Morocco, Saudi Arabia Bahrain.

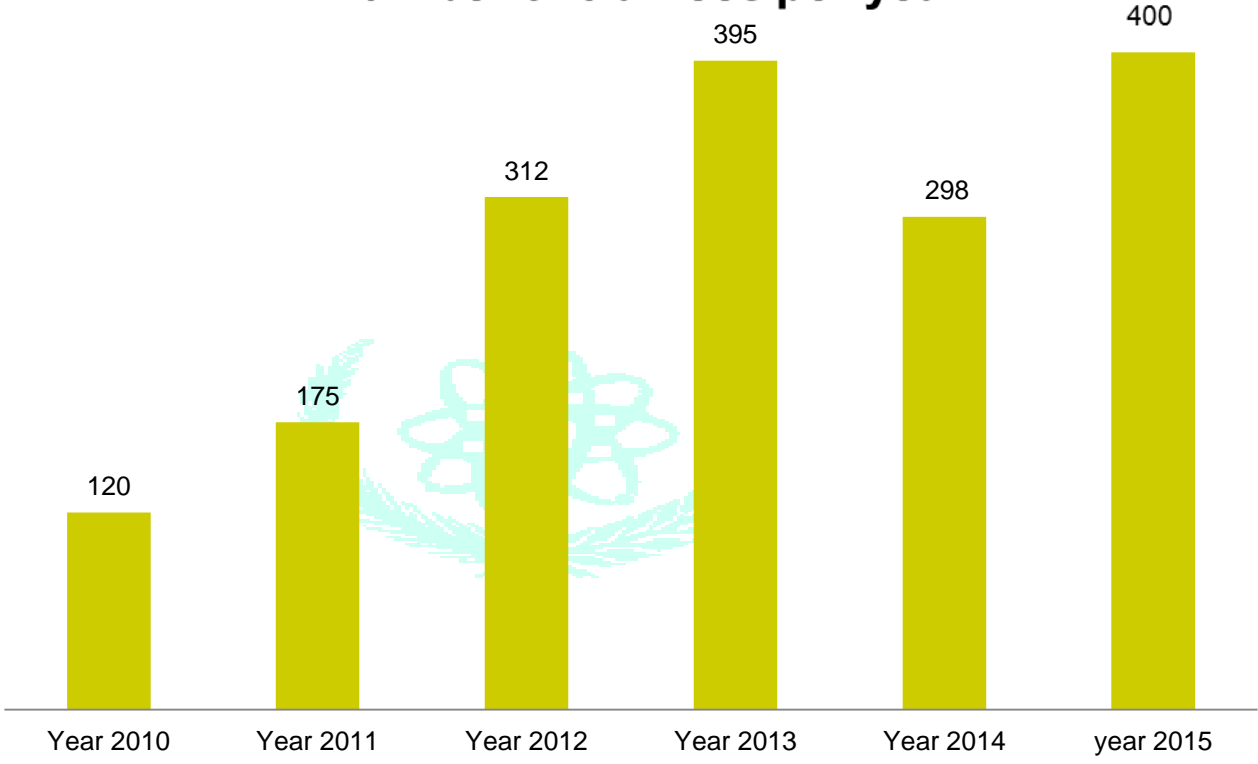


ANNuR Number of training events per Year

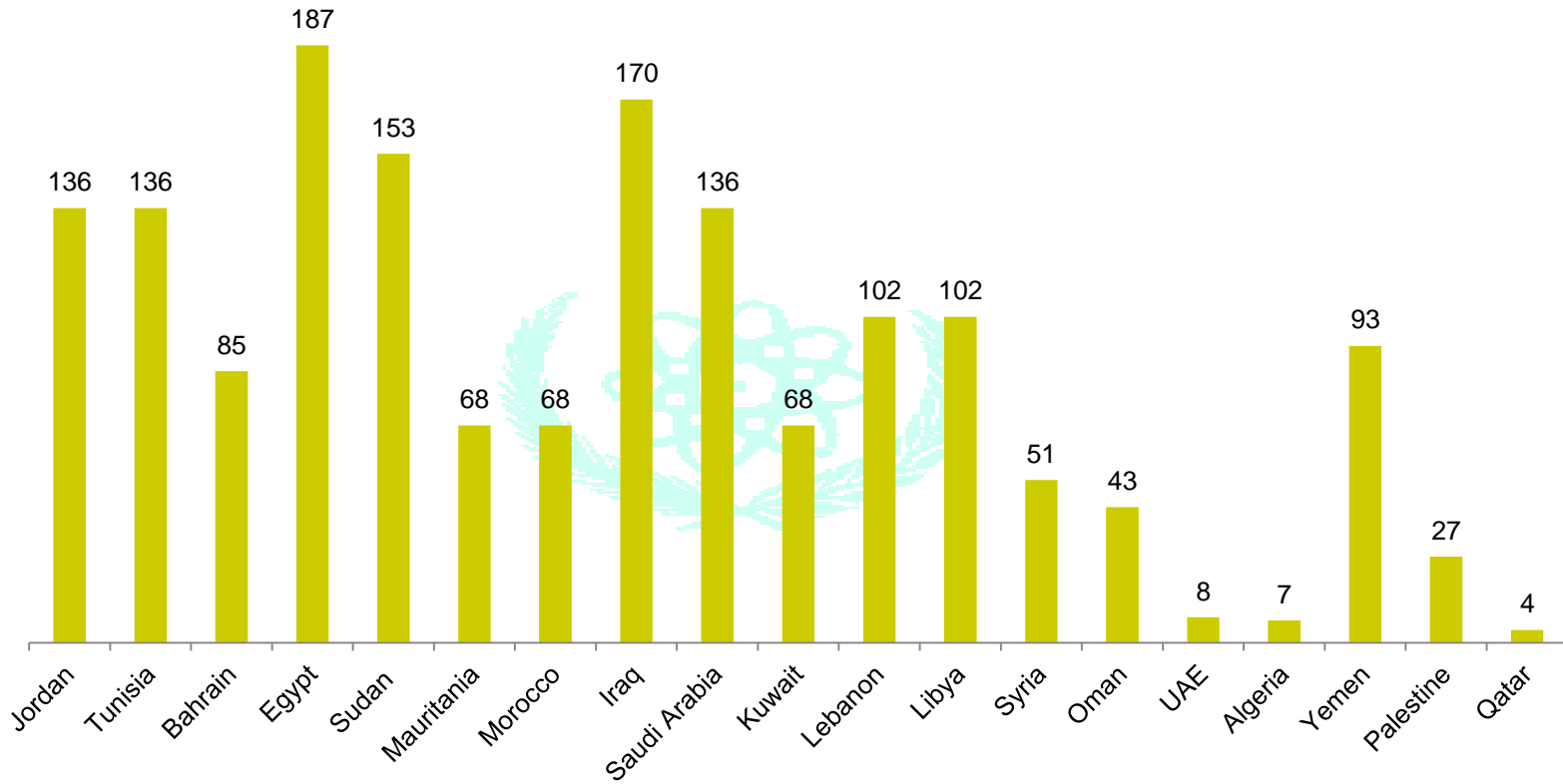
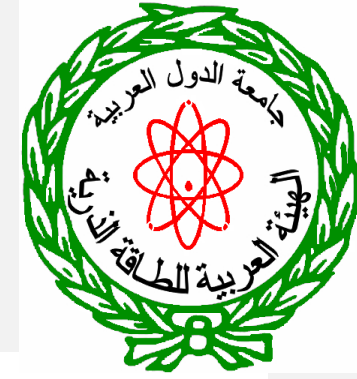


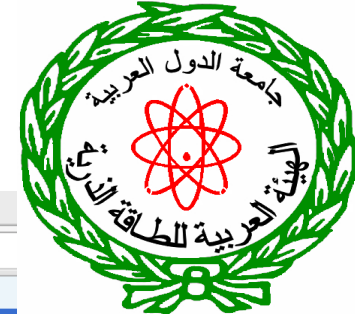


Number of trainees per year



Number of Participants per Country 2010-2015





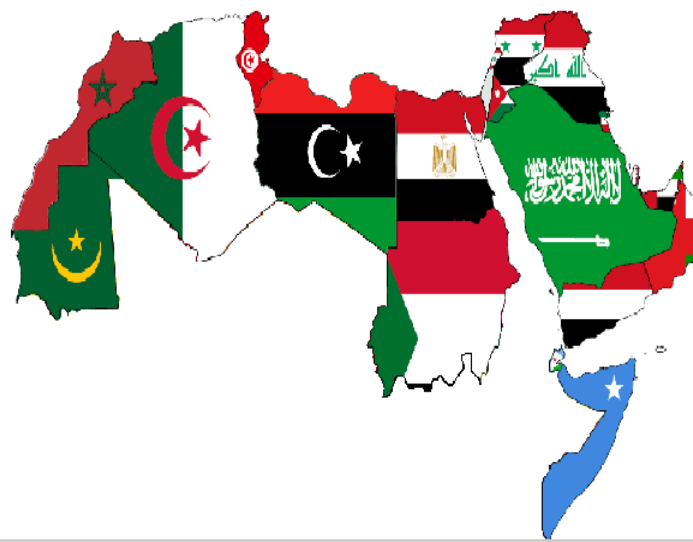
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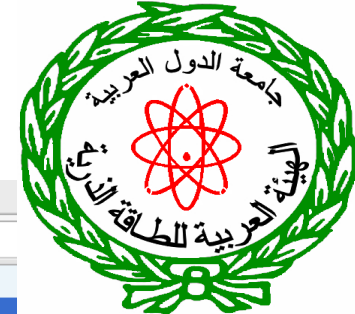
Arab Network of Nuclear Regulators



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Objectives

The objectives of ANNuR are to:

1. Provide a platform for fostering regional cooperation;
2. Provide for the exchange of expertise, information and experience;
3. Provide opportunity for mutual support and coordination of regional initiatives;
4. Leverage the development and optimization of resource utilization.

Membership

Membership of the ANNuR shall be open to all national nuclear regulatory bodies in all Arab countries on a voluntary basis. Participants in ANNuR meetings shall be senior representatives of regulatory bodies in member states as well as representatives from AAEA, IAEA and KINS.

Observers from other international or regional organizations may be invited to attend meetings on an ad-hoc or continuing basis by the decision of the Steering Committee.

National Nuclear Regulatory Portals of the ANNuR Member States



Algeria



Bahrain



Comoros



Djibouti



Egypt



Iraq



Jordan



Kuwait



Lebanon



Libya



Mauritania



Morocco



Oman



Palestine



Qatar



Saudi Arabia



Somalia



Sudan



Syria



Tunisia



UAE

Webinar





ANNuR is an effective mechanism to address regional challenges and shifts in the member states priorities

ANNuR has proven its capabilities by providing the framework for conducting the first inter-regional inspection programme for a Research Reactor Facility (Cairo, September 2014)



ANNuR is developing an action plan for all member states operation a research reactor or willing to implement a RR, using the milestone approach. In May 2015, three IAEA departments jointly are implementing the final step of this project.

ANNuR is working with the IEC/IAEA to further develop the Emergency preparedness self-assessment for the region and a regional emergency action plan is expected.



In order to respond to the ANNuR member States needs in a systematic and proactive manner, ANNuR is working with the ANSN to use the ANSN regional self assessment and to adopt it for the ANNuR region

As requested by partners during the GNSSN coordination meeting, ANNuR is developed a capacity building framework, in order to promote the challenges and the priority areas in the region and to build strategic partnerships with donors.



ANNuR is coordinating closely with FNRBA and ANSN to strengthen the Global nuclear safety framework.

ANNuR with the IAEA secretariat is promoting the National Nuclear Safety Knowledge management Platforms hosted under GNSSN. To this date 9 Countries have developed their NNRP.

13th Arab Conference on the Peaceful Uses of Atomic Energy

Hammamet, Republic of Tunisia
18-22 December 2016

Organized by

Arab Atomic Energy Agency

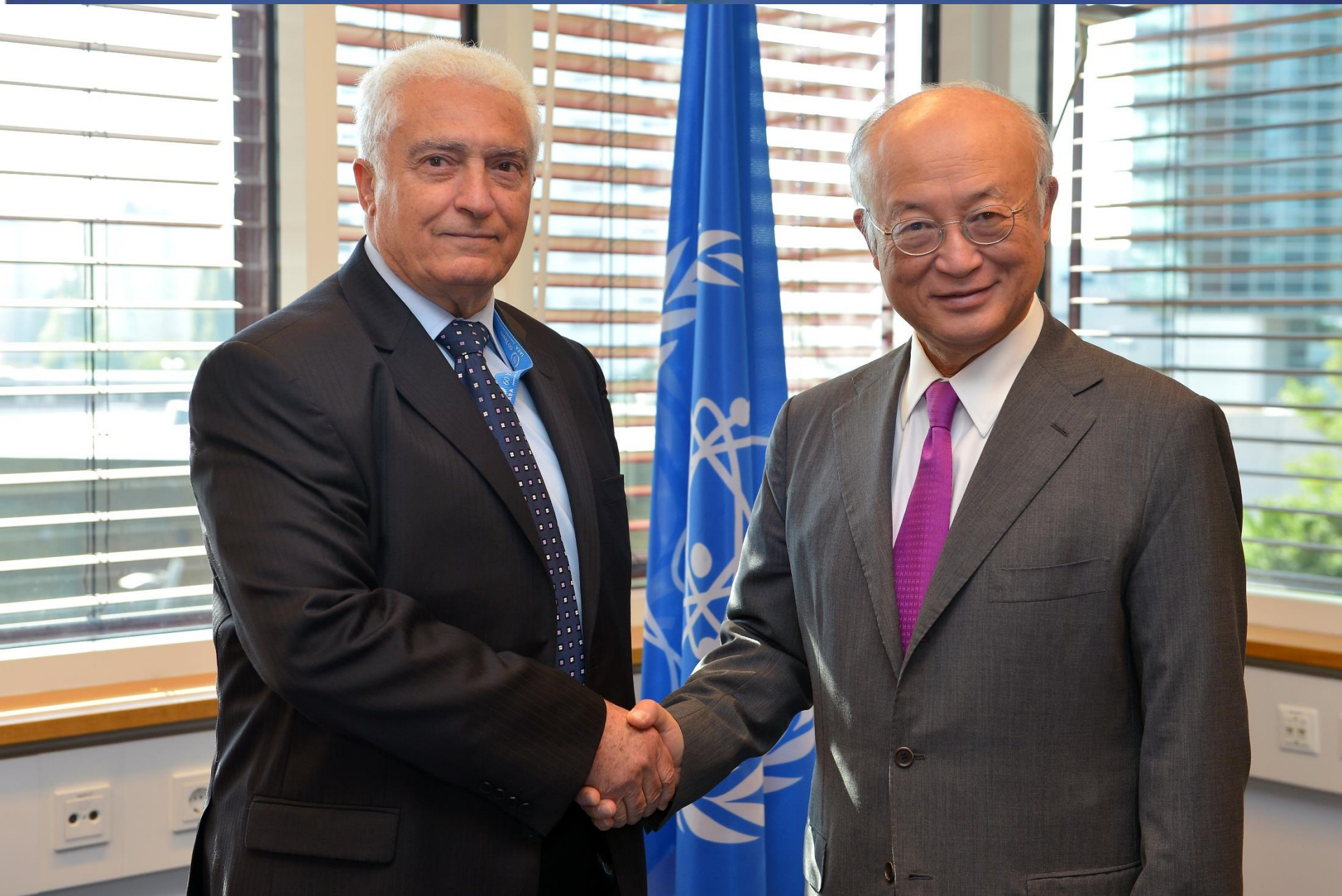
in Collaboration with

National Center for Nuclear Sciences
and Technologies – Tunis



شكراً

Thank you



ICRS13 - RPSD 2016, Paris, France, 3-6 October 2016.