



# Monthly Newsletter



A group photo of world leaders during the Nuclear Security Summit at the Convention and Exhibition Center in southern Seoul on March 27, 2012

## UAE Backs Global Fight against Threat of Nuclear Terrorism

The UAE has pledged a contribution of \$1 million towards the expansion and enhancement of the International Atomic Energy Agency's (IAEA) Safeguards Analytical Laboratory. In October 2013, it will also be hosting in October 2013 of an international conference on strategies and techniques for maintaining continuous control of radioactive sources throughout their life cycle.

This was announced by His Highness General Sheikh Mohammed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces, during the Nuclear Security Summit in Seoul, South Korea, from 26 to 27 March 2012.

Along with over 50 Heads of States and representatives of the United Nations (UN), the IAEA, European Union (EU) and INTERPOL, the UAE called for international cooperation to better protect nuclear materials and facilities from terrorist groups. The UAE highlighted the eminent and pivotal role of the IAEA in promoting nuclear security.

Speaking at the world's largest summit of leaders on nuclear issues, Sheikh Mohammed emphasized that "a fundamental part of international efforts" is to eliminate the dangers of misappropriation of nuclear materials and technology, including the threat of "nuclear terrorism."

During the summit meetings, the UAE announced that, it will support the objectives of the summit to respond to the threat of nuclear terrorism through ensuring enhanced protection of nuclear materials and facilities, and the prevention of illegal trafficking of nuclear materials.

In this regard, the UAE will join with other nations in contributing to IAEA project regarding the IAEA's Safeguards Analytical Laboratory. The UAE's contribution of \$1 million dollars will go specifically toward the expansion and upgrading of existing laboratories which will, among other things, allow the Agency to determine the origin of nuclear materials and to detect undeclared and illegal nuclear installations.



Sheikh Mohammed meets  
US President Barack Obama  
at the nuclear summit

(Continuation on page 2)

Issue: March 2012

### Highlights of the month (March 2012):

- UAE backs global fight against threat of nuclear terrorism
- Improving nuclear safety after Fukushima
- Developing environmentally sustainable nuclear power programme
- Capacity building in nuclear medicine
- Enhancing competencies in nuclear organizations
- Increasing effectiveness of nuclear organizations through advanced integrated management systems
- UAE hospital addresses radiation safety of patients

*"The possibility of nuclear terrorism became a real threat after 9/11, which increased the importance of strengthening nuclear security to prevent nuclear materials from being misused by terrorist groups. There is a need to recognize the importance of nuclear security at the summit level and seek cooperation, as the threat of nuclear terrorism cannot be addressed by a single nation."*



Furthermore, the UAE announced that it would host an IAEA international conference on the safety and security of radioactive sources. The conference will be hosted in the UAE from October 27 to 31, 2013.

The summit this year has continued enhancing the political commitments consolidated at the 2010 Washington Nuclear Security Summit. These commitments include strengthening nuclear security, reducing the threat of nuclear terrorism, and preventing the illegal possession, use or transfer of nuclear material, technology and expertise or other radioactive material.

## Improving Nuclear Safety after Fukushima accident

The IAEA Department of Nuclear Safety and Security held a meeting to discuss the root causes of the accident at Fukushima Daiichi Nuclear Power Plant. UAE Experts actively participated in these discussions, as a key element of the UAE nuclear energy programme is to base its safety structure on lessons learned from the accident.

From 19 to 22 March 2012, over 230 experts from 44 IAEA Member States and 4 international organizations assembled to analyze all the relevant technical aspects of reactor and spent fuel safety in light of the accident at TEPCO's Fukushima Daiichi nuclear power station.

Held by the IAEA Nuclear Safety and Security Department, an '*International Expert's Meeting on Reactor and Spent Fuel Safety in Light of the Accident at the Fukushima Daiichi Nuclear Power Plant*' worked towards analysing the Fukushima accident and taking appropriate actions to respond.

Furthermore, it reviewed all the knowledge gained on the accident at the Fukushima Daiichi nuclear power station in order to understand its root causes, and to share the lessons learned from the accident.



*International experts ahead the meeting at the IAEA Headquarters, Vienna, Austria, 19 March 2012*

"It is important for all, nuclear regulator, plant operators, governments or international organisations, to maintain the momentum gained over the last 12 months in our collective drive to improve nuclear safety around the world" said Denis Flory, IAEA Deputy Director General, Department of Nuclear Safety and Security in his opening remarks.

One-week of joint work by nuclear experts from Member States and the IAEA, identified the necessary priorities for further actions in the areas of nuclear reactor and spent fuel safety, focusing in particular on different power reactor types, such as boiling water reactors (BWRs) and pressurized water reactors (PWRs), and on their spent fuel.

The meeting's Chairman, Richard Meserve, Chairman of the International Nuclear Safety Group and President of the Carnegie Institution for Science, said, "In the nuclear business you can never say, 'the task is done'." It is an inherent responsibility to explore, examine, and assess the significance of nuclear safety and security vulnerabilities continuously.

The meeting provided a forum for discussion on how Member States are assessing the safety vulnerability of their nuclear power plants.

Among those Member States, the UAE has conducted its own assessment based on recent experiences from Fukushima and lessons learned, and this will be applied in addressing any potential safety issues at its Braika Nuclear Power Plant facilities. In December 2011, the UAE's plant operator, the Emirates Nuclear Energy Corporation (ENEC) submitted a detailed report compiling the results of the assessment to the UAE's nuclear regulator, Federal Authority for Nuclear Regulation (FANR) to ensure better nuclear safety and radiation protection at its proposed Braika Nuclear Power Plants.

## Developing Environmentally Sustainable Nuclear Power Programme

UAE experts participated at a meeting to discuss advanced approaches to manage the development of a new nuclear power programme in an environmentally sound manner, consistent with the IAEA's Milestones approach.

A three-day Technical Meeting on '*Environmental Issues in New Nuclear Power Programme*' was aimed to help nuclear "newcomers" build capacity in this area. The meeting took place at the IAEA Headquarters in Vienna, Austria, from 20 to 23 March 2012. *(Continuation on page 3)*



Along with 30 representatives of more than 20 Member States, the UAE experts from the Environmental Agency of Abu Dhabi (EAA) and the Emirates Nuclear Energy Corporation (ENEC) presented the progress of the country's first nuclear power plant facilities, shared national practices and knowledge in tackling environmental issues the country faces in its nuclear power programme.

The IAEA's guidance on this topic will be beneficial in forming a common approach among Member States and facilitating the implementation of an appropriate Environmental Impact Assessment (EIA) framework.

The outcome of the discussions will be outlined in the planned IAEA publication "Environmental Issues in New Nuclear Power Programme."



*Participants of the technical meeting from Member States, IAEA Headquarters, Vienna, Austria, 23 March 2012*

## Capacity Building in Nuclear Medicine for Asia and the Pacific Region



The nuclear medicine physicist's knowledge of the complex techniques and equipment involved in modern diagnosis and treatment of disease are essential to the safe and effective application of nuclear medicine procedures.

Representatives of the United Arab Emirates (UAE) public health authorities discussed the progress towards initiating a structured and supervised clinical training programme in medical physics in Asia and the Pacific (ARASIA) region.

A third coordination meeting under the technical cooperation regional project 'Upgrading Medical Physics Services in ARASIA State Parties through Education and Training' was held by IAEA Technical Cooperation (TC) Department from 5 to 9 March 2012, Vienna, Austria.

Participating with over 20 healthcare experts from 9 Arab States, the UAE officials from the Dubai Hospital, and Dubai Department of Health and Medical Services (DOHMS) contributed to the status report on progress achieved under the project. The report identified regional and national training needs for the implementation of national clinical training programmes. The meeting also planned the further work for the conduct of the regional clinical training programmes.

The application of radiation in human health, for both diagnosis and treatment of disease, is an important component of the technical cooperation work between the IAEA and the Member States. The radiation medicine is to a greater extent dependant on well-trained medical physicists. Accordingly, the lack of qualified and capable professionals significantly limits medical physics support for the healthcare sector in the ARASIA region.

## Enhancing Competencies in Nuclear Organizations

The UAE's nuclear operators and regulators share their experience in identifying, planning and developing competencies needed for nuclear organizations, during their participation in a technical meeting on 'Mapping Competencies in Nuclear Organizations', held by the IAEA Nuclear Energy Department in Vienna, Austria, from 26 to 30 March 2012.

Key entities of the UAE's civil nuclear power programme, along with experts from Member States have provided recommendations on the IAEA's existing knowledge management methodologies related to competency management.

Maintaining nuclear competencies in the nuclear industry and nuclear regulatory authorities is one of the most critical challenges.

This is a result of the retirement of nuclear experts around the world, with a substantial amount of knowledge remaining only in minds of Board members and corporate memory. Therefore, the primary challenge of preserving such knowledge is to determine how best to capture tacit knowledge and transfer it to successors.

To achieve this, the IAEA helps to transfer knowledge from centres of competence to the centres of growth, to ensure safe and sustainable operation of the nuclear facilities in Member States.

A variety of documents published by the IAEA in the area of competency management and assessment are essential for nuclear organizations to identify their current and future competencies, to develop their competency models and to support the competency-base workforce development.





### About the Permanent Mission

The UAE has been a member of the IAEA since 1976. The Permanent Mission of the United Arab Emirates to the IAEA acts as the main liaison between the UAE government and the International Atomic Energy Agency (IAEA) in Vienna, Austria.

The office of the Permanent Mission was established in 2008. The objective of the Mission is to represent the interests of the UAE Government at the IAEA and to facilitate the UAE's engagement and cooperation with the IAEA in the areas of nuclear safety, nuclear security, non-proliferation and safeguards, technical cooperation and in the implementation of relevant international obligations.

**Permanent Mission of the United Arab Emirates to the International Atomic Energy Agency Vienna**

Peter Jordan str., 66  
A-1190, Vienna, Austria

Tel: (+43 1) 715 00 28  
Fax: (+43 1) 715 00 25

**E-Mail:**  
[general@uae-iaea.org](mailto:general@uae-iaea.org)

## Increasing the Effectiveness of Nuclear Organizations through Advanced Integrated Management Systems

Representatives from the UAE's regulator, the Federal Authority for Nuclear Regulation (FANR), shared their expertise on establishing Integrated Management Systems in nuclear organizations during a five-day consultancy meeting at the IAEA in Vienna, Austria.

On 15 March 2012, the meeting on 'Implementing Knowledge Management in Integrated Management Systems (IMS) of Nuclear Organizations', organized by the IAEA Nuclear Energy Department, has finalized inputs of Member States on enhancing Nuclear Knowledge Management (NKM).

Upon the Member States' experiences, the IAEA develops methodologies and guidance documents for NKM, as well as

facilitates nuclear education, training and information exchange.

Accordingly, a draft document on the 'Implementation of Knowledge Management in Integrated Management Systems', developed by the IAEA was reviewed by Member States during the meeting.

The UAE recognizes NKM as a vital element of the nuclear sector, and thus benefits from the IAEA's assistance in maintaining and preserving nuclear knowledge in developing peaceful uses of nuclear technology. Additionally, UAE supports such network through hosting servers for this purpose in the Khalifa University in Abu Dhabi.

## UAE Hospital Addresses Radiation Safety of Patients

The Mafraq Hospital, owned and operated by the Abu Dhabi Health Services Company PJSC (SEHA), conducted a training course on 'Patient Radiation Safety in Radiology Practice' with local and international experts from 10 to 12 March 2012, in Abu Dhabi, United Arab Emirates.

The training course was organized in cooperation with the Federal Authority for Nuclear Regulation (FANR), the International Atomic Energy Agency (IAEA) and the Dubai Health Authority (DHA).



More than 170 medical experts from 13 hospitals and healthcare centers across the UAE improved their knowledge on radiation protection of patients in diagnostic radiology and shared their best practices during the course.

Radiation safety is very important due to the number of X-Rays that are taken all over the world. The UAE is no different and there has been an increase in the number of X-Rays taken in all hospitals. The Mafraq Hospital alone has 73 employees supervising 34 X-Ray machines.

Dr. Noumann Habab, Chairman of the Radiology Department of the Mafraq Hospital said: "It is vital that all employees throughout the UAE comply with the strict international standards set by FANR and avoid overusing X-Rays."

Dr. Mustafa Majali, FANR Inspector, added: "Regulations and policies set by IAEA are strictly imposed and rules are also in place to ensure safety of those employees handling X-Ray machines."

The two-day study covered radiations safety education and training; measures to minimize radiation exposure; and evaluation to ensure regulations are applied. (Mafraq Hospital)