



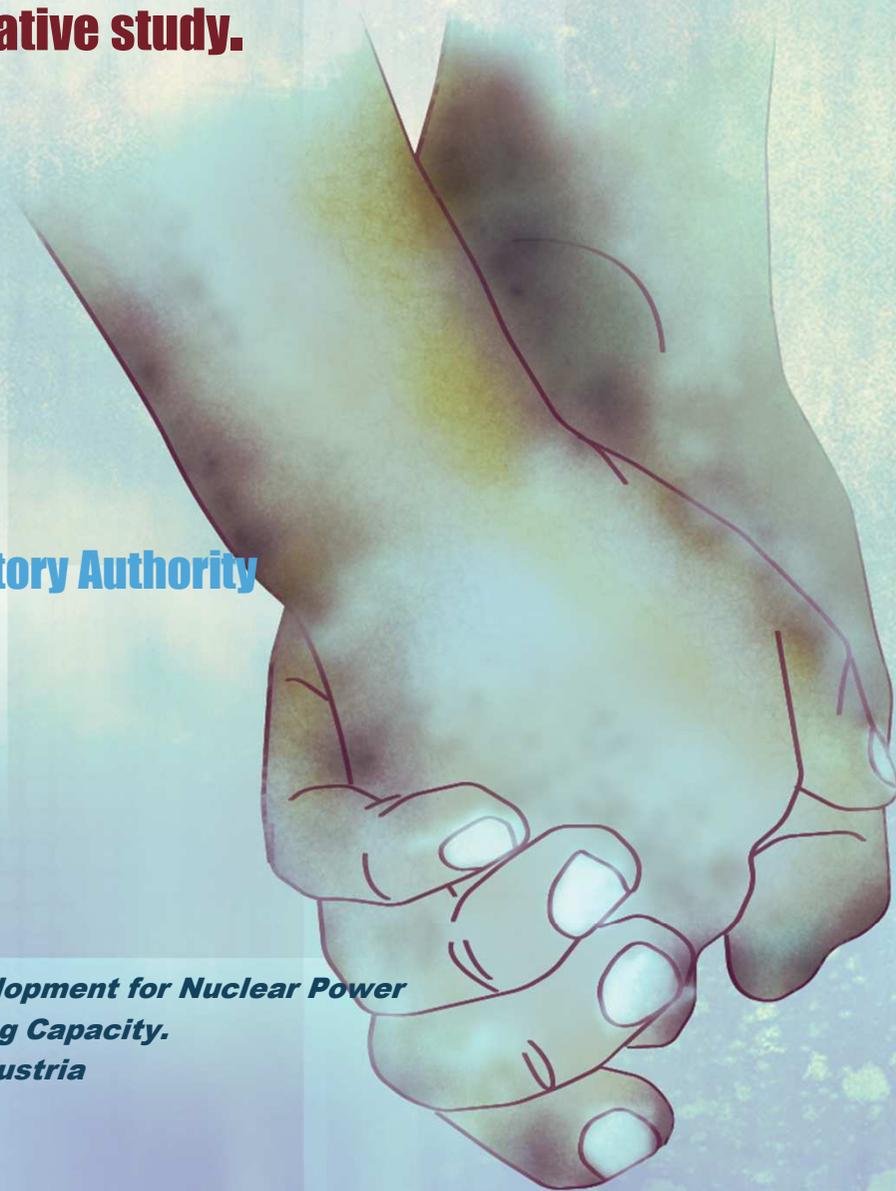
# **Contribution of IAEA, FNRBA and ANNuR as Networking in Developing and Maintaining Capacity Building for a nuclear power programme: comparative study.**

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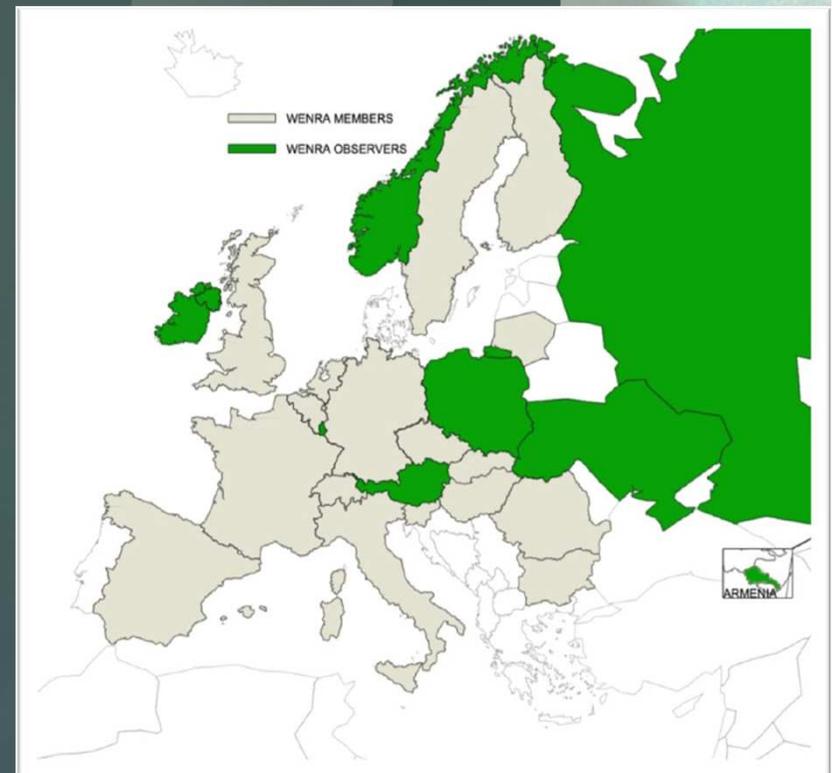
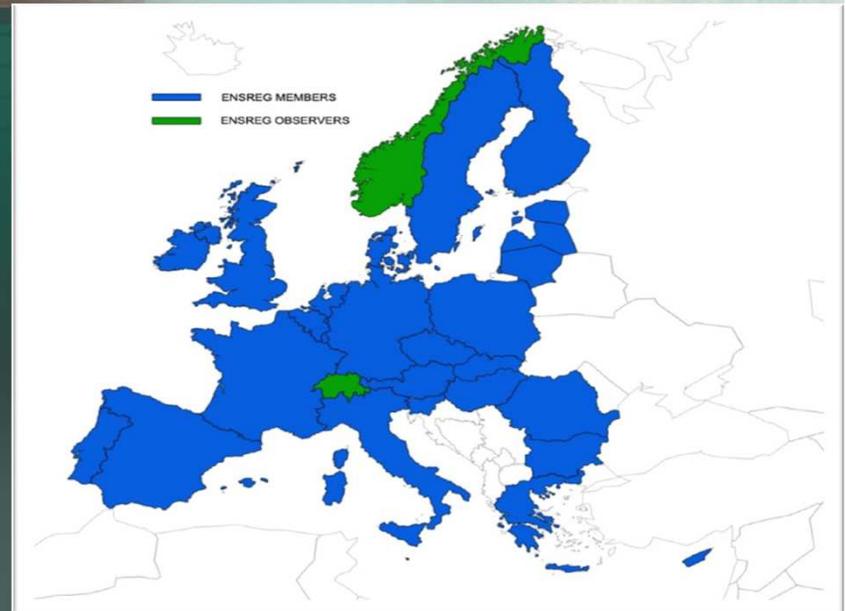
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# Introduction

It is increasingly recognised that the mobilization and exchange of knowledge between different sectors (such as academia, policymakers, Regulators and practitioners) and regions or global can be of paramount importance in the field of Capacity Building for a nuclear power programme. As a result, the number of knowledge networks in this field has risen dramatically in recent years. Some of these networks bring together actors within a specific region, such as European Nuclear Safety Regulators Group (ENSREG) – Western European Nuclear Regulators Association (WENRA) The Arab Network of Nuclear Regulators (ANNuR). Still others cover entire continents such as Asian Nuclear Safety Network (ANSN), Asia Pacific Safeguards Network (APSN) and Forum of Nuclear Regulatory Bodies in Africa (FNRBA). Or even operate worldwide and globally, like IAEA Special Support Services, Global Nuclear Safety and Security Network (GNSSN), World Organization of Nuclear Operators (WANO) and International Nuclear Regulators Association (INRA).





# Introduction

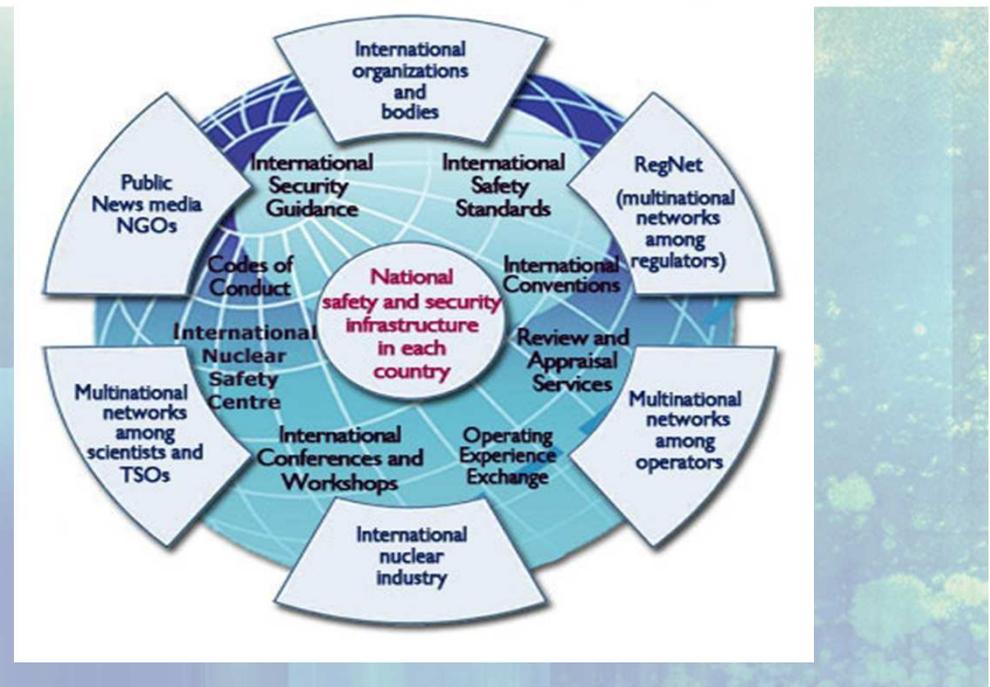
- Many networks attempt to bring these different groups of people together in order to achieve cross- sectoral learning and knowledge exchange for the improvement of policy, practice, and research. Most of these initiatives are still in a relatively early phase, searching for the best modes of exchange.
- Some networks focus on a specific issue within the field of Human Resource Development for a nuclear power programme, while many others have a much broader content area.
- This work aims to shed light on these initiatives and activities achieved by the IAEA ANNuR and FNRBA during the two years ago (2012-2013).



## OVERVIEW OF THE REGIONAL AND INTERNATIONAL KNOWLEDGE NETWORKS

### *International Atomic Energy Agency (IAEA)*

The IAEA serves as an intergovernmental forum for scientific and technical cooperation in the peaceful use of nuclear technology and nuclear power worldwide. The programs of the IAEA encourage the development of the peaceful applications of nuclear technology, provide international safeguards against misuse of nuclear technology and nuclear materials, and promote nuclear safety (including radiation protection) and nuclear security standards and their implementation.





- **Arab Network of Nuclear Regulators (ANNuR)**
- The purpose of ANNuR is to foster enhancement, strengthening and harmonization of the radiation protection, nuclear safety and security regulatory infrastructure and framework among the members of ANNuR; and to provide for mechanisms for the ANNuR to be an effective and efficient internationally recognized forum for the exchange of regulatory experiences and practices among the radiation and nuclear regulatory bodies in Arab countries.





## OVERVIEW OF THE REGIONAL AND INTERNATIONAL KNOWLEDGE NETWORKS

### *Forum of Nuclear Regulatory Bodies in Africa (FNRBA)*

The Forum of Nuclear Regulatory Bodies in Africa (FNRBA) was established on 26 March 2009. The establishment of FNRBA is considered as a key milestone catalyzing the enhancement, strengthening and harmonization of radiation and nuclear safety and security regulatory infrastructure in member states and serve as effective platform for the exchange of regulatory experiences and practices among the nuclear regulatory bodies in Africa.





# ***NETWORK ASSESSMENT METHOD***

Although a network assessment is an important process to improve network performance, there is very little in the evaluation literature on methodologies that can be directly applied to networks. This work is our attempt to use activities implemented by IAEA, ANNuR and FNRBA which was attended and documented by Sudanese Nuclear & Radiological Regulatory Authority (SNRA) as one of evaluations and comparative methodologies between IAEA, ANNuR and FNRBA networks.





Figure (1) shows the activities implemented by IAEA, ANNuR and FNRBA for two years ago. As noticed from the fig (1) the main target of the IAEA is, to enhance infrastructure and capacity building in the field of nuclear safety and security lately, especially after the Fukushima Daiichi nuclear disaster in Japan. But the agency continues strongly with the goal of facilitating adherence to and implementation of the radiation safety program. The commitment of ANNuR and FNRBA to achieve completely nuclear safety program diminished their interest of the radiation safety program.

The implemented activities related to radioactive waste and radiological emergency by the IAEA, ANNuR and FNRBA Decreased clearly, although there are thematic working groups in ANNuR and FNRBA specific in radioactive waste and emergency preparedness and response.

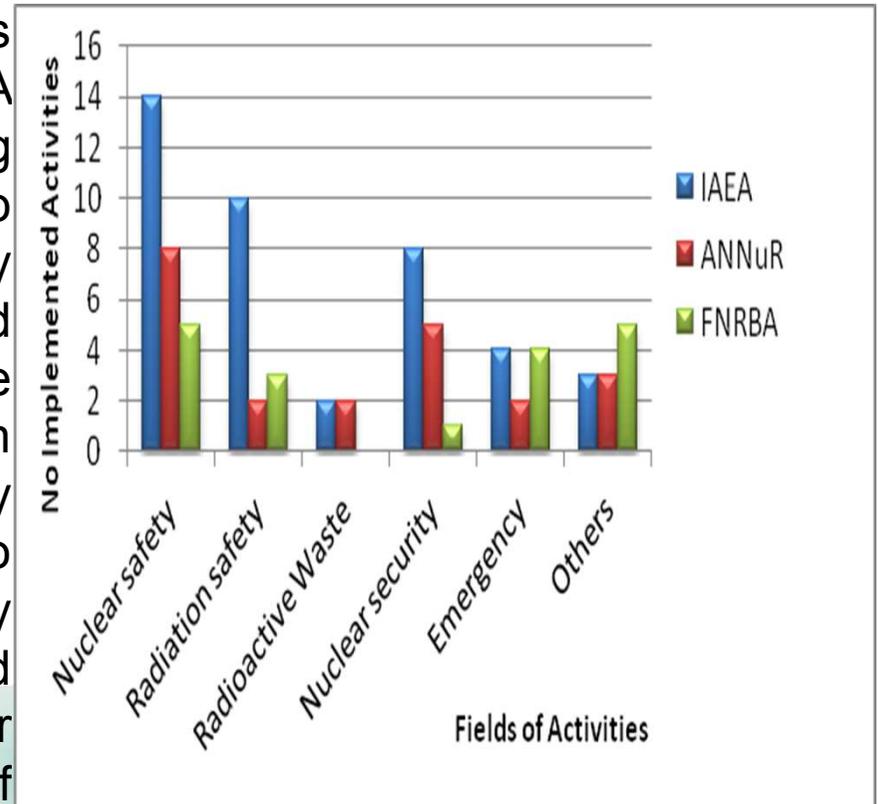


Fig.1. Total No of activities implemented by IAEA, ANNuR and FNRB regarding to fields of practice (2012-2013) different fields.

- Fig (2) shows the Manner of the IAEA, ANNuR and FNRBA for implementation activities. It is clear that the IAEA has taken the principle of training course for radiation safety applications and open meetings as well as conferences Approach as one of the effective means to enhance the nuclear safety infrastructure fig(3) explains that clearly . While the trajectory of ANNuR as workshops in most of its activities, which are also focused on nuclear safety and security as the FNRBA approach.

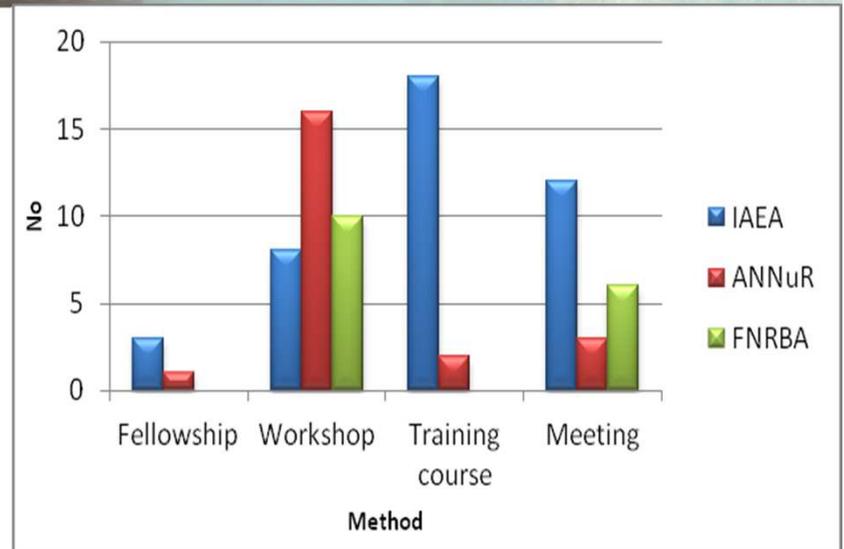


Fig.2. Manner of the IAEA, ANNuR and FNRBA for implementation activities in different fields

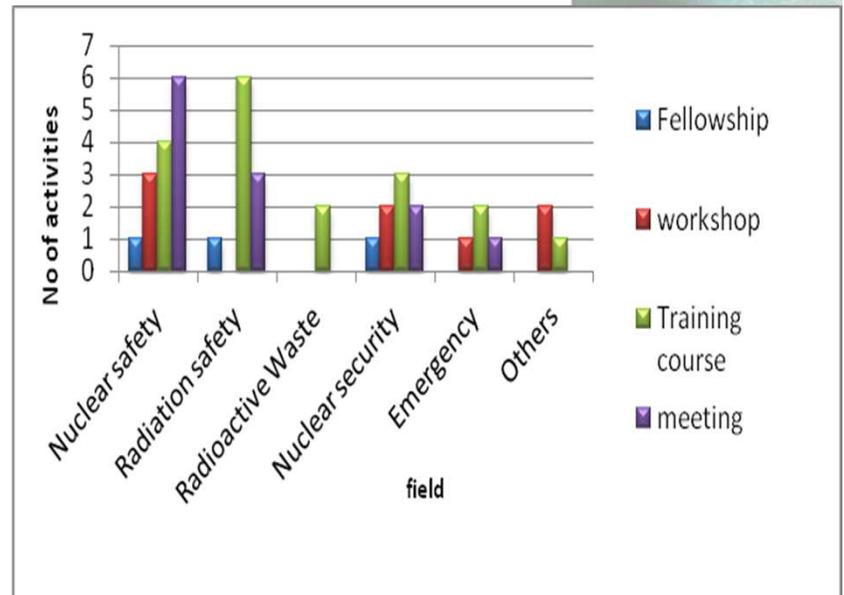


Fig.3. Manner of the IAEA for implementation activities in different fields.



- Fig (4) shows the summery of total activities implemented by IAEA, ANNuR and FNRBA and explains that the activities implemented by IAEA more than the total activities implemented by ANNuR and FNRBA in specific period (2012-2013).

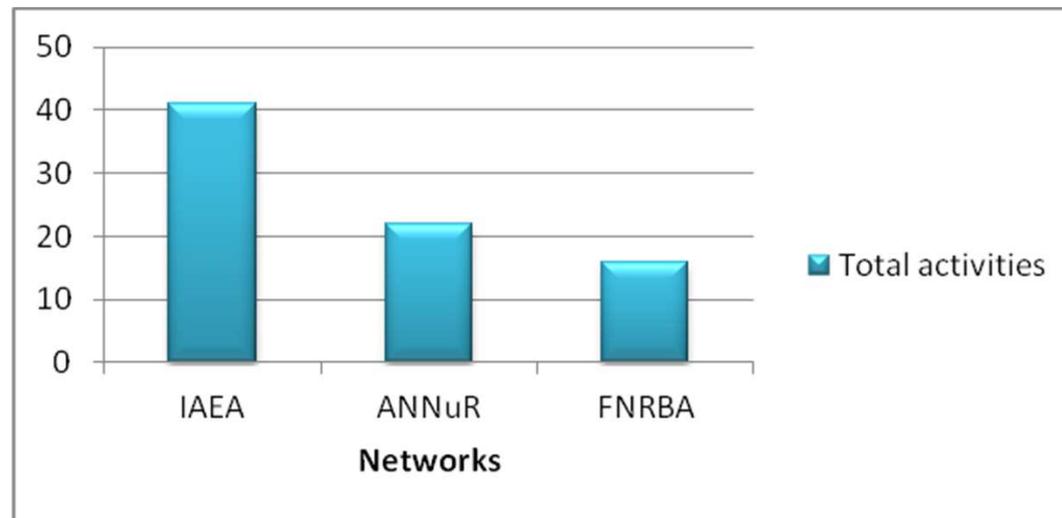


FIG.4. Total activities implemented by IAEA, ANNuR and FNRBA (2012-2013)



# Conclusions

- Overall, the role played by these networks contributed significantly in capacity building and enhanced the RB infrastructure for a nuclear power program. However the International Atomic Energy Agency plays a major role in human resources development that due to the **multiplicity** of its financial resources and its **infrastructure** as well as The IAEA serves as an **intergovernmental** forum.
- The ANNuR and FNRBA has been identified as a useful platform for exchanging information and experience among regulators, thereby contributing to the enhancement of the effectiveness of nuclear regulatory Systems.
- **Lack of financial resources** affected significantly in ability of ANNuR and FNRBA for the implementation of their plans and programs, which will reflect negatively on their expectation role in capacity building and human resource development in the field of nuclear power program in near future.



# *Recommendations*

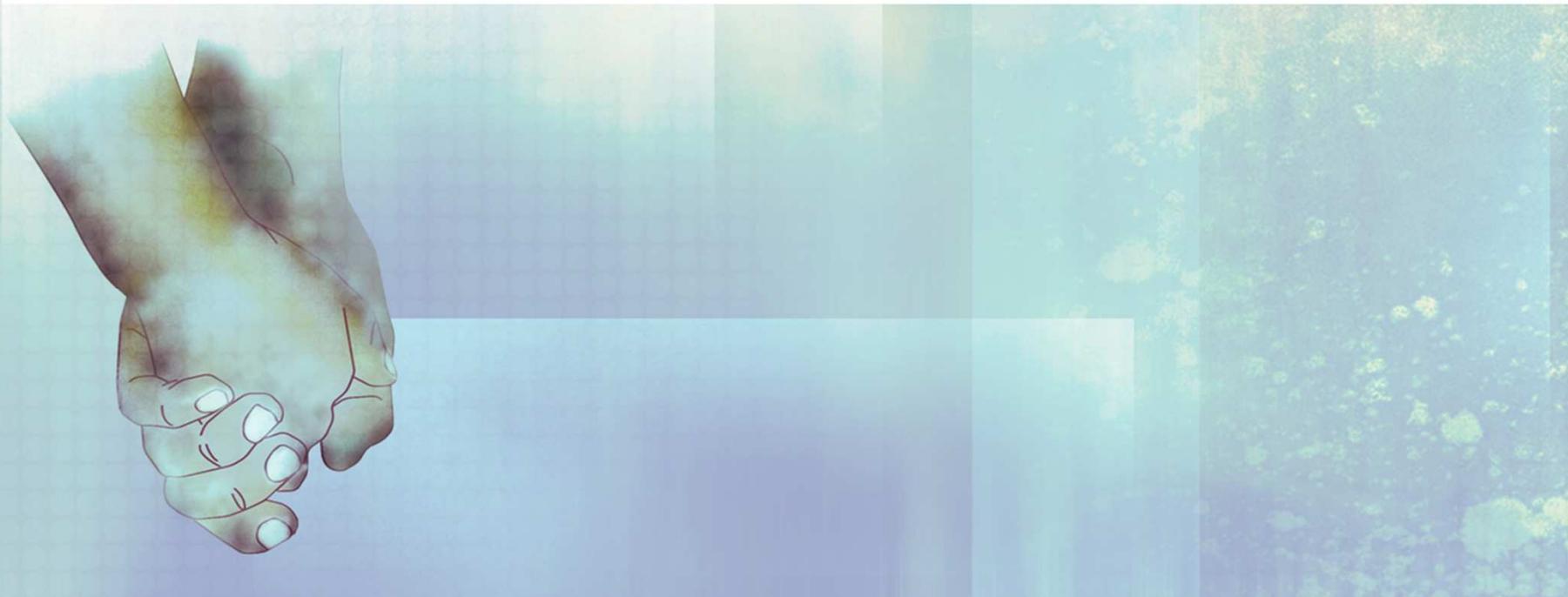
- Revitalization ANNuR & FNRBA projects that are already exist. Furthermore working hard to create new projects to meet the needs of ANNuR & FNRBA member states.
- Take advantage of the agreements signed between these networks and some of the other actors in addition to continue the efforts to signing a several Memoranda of Understanding (MoU) with other parties which can take advantage of its capabilities and resources in the projects implementation.



- Particularly, FNRBA and ANNuR as Knowledge networks those are need to engage in three types of activities:
  - ***Collaborative research and information exchange:*** the systematic investigation of the target issue or problem, conducted jointly by two or more members of the network, or by an individual member with significant consultation with other members.
  - ***Engaging with stakeholders:*** streaming the knowledge into policy and action, through improved communications and interaction with those who are in a position to put the knowledge to use.
  - ***Network management:*** setting up and running the operating structure necessary to build the relationships among the participants in order to strengthen the knowledge, communications and engagement processes of individual members and of the network as a whole (e.g. SharePoint in NNRP).



Creating an attractive way to encourage member states to contribute effectively in the development of the FNRBA & ANNuR framework technically and financially support in the form of hosting, sponsoring and providing experts within regional activities to build the national/regional capabilities in the field of the nuclear safety and security





**ΕΥΧΑΡΙΣΤΟΥΜΕ**

Asante

**мерсі**

Dankie

**DZIĘKUJĘ**

**ДЯКУЄМО**

**THANK YOU !**

**СПАСИБО**

**VĂ MULTUMESC**

**HVALA**

terima kasih

**RAKHMET**

**KÖSZÖNJÜK**

**TEŞEKKÜR EDERİZ**