

Design Document

Concept No:

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Title:

Enhancing Capacity Building Activities in the European Nuclear and Radiation Safety Organizations for the Safe Operation of Facilities

Project Description/Abstract:

(Max 300 words)

The project aims to strengthen national nuclear infrastructures through a capacity building initiative in alignment with IAEA methodology, addressing the reinforcement and widening of excellence in the nuclear and radiation safety areas through a regional initiative aimed to develop strategies for maintaining, improving and integrating competences and infrastructures regarding the nuclear safety aspects in Member States (MSs). The first logical step is to develop and implement a robust capacity building programme at the national level, based on a comprehensive and integrated approach of the four main elements of capacity building. The MSs will benefit from the existing European expertise under IAEA facilitation and coordination. At the country level, the nuclear safety infrastructure can be strengthened through the development of a National Nuclear Safety Knowledge Platform allowing partners, stakeholders and governmental entities to work together to enhance the global nuclear safety and security framework. Both capacity building and nuclear safety knowledge programmes allow MSs to have in place a consistent plan for sustainable human resource development and a robust approach on

education and training in support of the national nuclear safety capacity building plan. The successful implementation will help MSs to fulfil the requirement of the new IAEA standard GSR Part 2 (Leadership and Management for Safety), the integration of knowledge management into the organization's management systems. Also, MSs have the possibility to create links with other Regional/Interregional Networks. The project offers high impact opportunities, such as the establishment of comprehensive nuclear safety roadmaps for national organizations; setting up national communities of practice and nuclear safety knowledge bases; resources optimization and mobilization; and development of strategic partnerships, among others. The harmonization of MS priorities, needs and gaps with IAEA recommendations and standards will ensure the consistency and effectiveness of national, regional, European and international policies in nuclear safety.

Problem to be addressed:

Competences improvement and new skills development, strategies for a reliable and sustainable human resources development as well as approaches and plans for knowledge management in the field of nuclear safety represent major objectives for many European countries like Belarus, Bulgaria, the Czech Republic, Estonia, Finland, France, Germany, Hungary, Poland, Romania, Slovenia, the UK, and others; most of them have operating nuclear facilities, but they are also considering/preparing new nuclear programmes dealing with innovative nuclear systems development and implementation. One of the main challenges is to develop a comprehensive nuclear safety capacity building

programme aimed to ensure the human resources able to face the present needs, but also the future challenges of the fast evolving innovative nuclear systems. Moreover, a coordinated regional strategy is the key element in developing a healthy education and training (E&T) process in the nuclear safety area, and is also able to ensure proper knowledge management and the appropriate framework for regional/interregional cooperation in nuclear safety. A regional approach under IAEA coordination allows a proper sharing of information and exchange of expertise about the mechanisms and tools that should be implemented and used in order to develop a robust programme in capacity building.

Why should it be a regional project?:

The project has been conceived as a tool able to contribute to the reduction of disparities among European countries concerning the competences on nuclear safety related aspects. By gathering a large number of organizations spread across Europe that share common interests and visions regarding nuclear safety aspects and challenges of innovative nuclear technologies, the project creates the framework conditions to widen and reinforce European excellence in this area under IAEA coordination. The development of an efficient regional programme in capacity building will allow the improvement and harmonization of all four pillars: human resources development (HRD), E&T, KM and knowledge networks (KN). The actions proposed will increase cohesion and cooperation at the European level in the field of nuclear safety related aspects; this ensures the safe operation of the present nuclear facilities as well as the sustainable development and future implementation of

innovative nuclear systems.

Stakeholders:

Stakeholders will include the following countries: Belarus, Bulgaria, the Czech Republic, Estonia, Finland, France, Germany, Hungary, Kazakhstan, Poland, the Russian Federation, Romania, Slovenia, Ukraine, the UK, and others, which will be the beneficiaries of the project. Moreover, they can be considered as end users of the project's results. All parties (responsible governmental organizations, regulators, technical support organizations (TSOs), research and development (R&D) organizations, operators, educational institutions, research laboratories, and other stakeholders) are involved in capacity building programmes of Member States.

Partnerships:

Technical consultations have been performed with the organizations mentioned above, which expressed their interest and commitment to participate in the project. There are many practical arrangements between the IAEA and MSs' nuclear organizations in the area of capacity building. Several EU ongoing projects help MSs to enhance their nuclear competences.

Role of nuclear technology and IAEA:

The IAEA plays the key role in the facilitation and coordination of this capacity building initiative aimed to straighten the excellence in the nuclear and radiation safety areas, mainly in the Baltic and Eastern European countries. IAEA's experts will inform MSs about existing good practices in the development and implementation of capacity building

methodologies and opportunities offered by the introduction/implementation of a Nuclear Safety Knowledge Platform. Also, they will familiarize MSs with the methods and tools for developing and implementing a robust nuclear safety capacity building programme.

Physical infrastructure and human

resources:

By gathering a large number of organizations spread across Europe that share a common interest and vision regarding the importance of nuclear safety capacity building (Baltic, Eastern European countries), by involving developed countries having specialized infrastructures and experts with a sound expertise in nuclear (France (IRSN, CEA), Germany (KIT), Finland, etc.) and under IAEA coordination and facilitation, the project creates the appropriate framework to share the existing good practices in the development and implementation of capacity building methodology and about opportunities offered by the introduction/implementation of a Nuclear Safety Knowledge Platform.

Sustainability:

The sustainability is ensured by: - The involvement from the beginning of the Responsible Governmental Organizations, Regulators, TSOs, R&D Organizations, Operators, Educational Institutions, Research laboratories, and other stakeholders having a role and responsibilities in building and maintaining the nuclear safety; - The development of the National Nuclear Safety Knowledge Platform which will allow partners and stakeholders from different sectors and governmental entities to work together on enhancing nuclear safety and strengthen the global nuclear safety framework; - The development and implementation in each MS of

strategies and action plans addressing the human resource development, education & training, knowledge management and knowledge networks based on the IAEA recommendations, mechanisms and tools; - The Practical Arrangements between IAEA and MSs Nuclear Organizations in the area of Capacity Building ensure the framework and support for medium and long term effectiveness of the activities developed under the present project; - MSs participation in EU on-going and future projects focused on enhancing their competences and skills in nuclear safety related aspects.

Safety regulatory infrastructure:

The regulatory bodies of the participating countries are also beneficiaries of the capacity building process in nuclear safety and play an important role in the development of the National Nuclear Safety Knowledge Platform.

Requirements for Participation:

- Baltic, Eastern European countries, etc., having in place nuclear programmes and nuclear facilities, which identified their needs and gaps regarding the capacity building in nuclear safety related aspects; - Developed countries having specialized infrastructures and experts with a sound expertise in the nuclear field. The status of nuclear field as well as the composite indicator on Research Excellence is mentioned in the EU documents: “Research and Innovation in the EU - Innovation union progress at country level” (www.ec.europa.eu).

Participating Member States:	None selected
Other considerations, e.g. environment, gender:	<p>Addressing the safe operation of nuclear facilities that can be reached through a high level of competences and skills and a robust safety culture, the project has a clear positive impact on the environment. Both man and women will benefit the project and the participation of women in the envisaged activities will be encouraged.</p>
Implementation Strategy:	<p>- Gathering the representatives of all entities having roles and responsibilities in the nuclear safety related aspects (R&D Organizations, Operators, Educational Institutions, Ministries, etc); - Identification of needs and gaps through a detailed analysis performed at all national levels (Government-Organizations-Individuals); - All the key players are informed about the existing good practices related to the capacity building process; - Developing action plans for all 4 pillars capacity building system (HRD, E&T, KM, KN); - Informing the entities about opportunities offered by the introduction/implementation of a Nuclear Safety Knowledge Platform and staff training; - Including the innovative nuclear systems in the Capacity Building system; - Developing actions under the framework of the “Practical Arrangements between IAEA and MSs Nuclear Organizations” in support of the capacity building process running under the present project; - Integration the outcomes of the MSs participation in EU on-going and future projects addressing capacity building in safety related aspects.</p>

Monitoring and progress reporting:

With a focus on the envisaged outcomes, the monitoring process will include, inter alia, the followings: -Regular communication by project coordinator aimed to assess the achievements and to analyse the open issues based on the indicators stated in LFM; - Use of participatory monitoring mechanism (permanent involvement of the MSs – group analysis , video meetings); - Regular analysis of the Reports from meetings, workshops, training, etc.; - Annual Project Progress Assessment Report (PPAR)

Risk management:

A low level low risk could be associated: with a lack of timing correlation between trainers (or IAEA's experts) and the trainees/participants or with the schedule of the activities for some MSs. Both could be mitigated through common agreements on the re-scheduling and funds allocation.