

HORIZON

2020

Innovative Cluster for Radiological and Nuclear Emergencies

Berichterstattung

Projektinformationen

INCLUDING

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Projektwebsite

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 Italy

Periodic Reporting for period 4 - INCLUDING (Innovative Cluster for Radiological and Nuclear Emergencies)

Berichtszeitraum: 2023-08-01 bis 2024-07-31

Zusammenfassung vom Kontext und den Gesamtzielen des Projekts

INCLUDING has been an orchestrated action among the project partners to enhance the Member States' collaboration on a sensitive matter like Radiological and Nuclear Emergencies (RNEs). The

range of intervention of the project is broad as required by the plurality of scenarios that may initiate a RNE and by the set of actions to put in place for the prevention, immediate response, second response and recovery phases. In this framework it is essential for Member States, as also dictated by the “Action Plan to enhance preparedness against chemical, biological, radiological and nuclear security risks” issued by the EC on 18.10.2017 to:

- Steadily update training and exercise programs to realistic scenarios and promote the uptake of new technologies and procedures;
- Plan an efficient Pan-European collaboration scheme for sharing expertise and equipment and aimed at improving the mutual assistance program with a more rapid resources mobilization;
- Plan and execute joint exercises to test and evaluate a common approach to possible intervention scenarios and to promote standardization and interoperability.

The INCLUDING workplan has been specifically tailored to address all these challenges and from the the Nuclear Safety and Security perspectives, as in the definition of the International Atomic Energy Agency (IAEA). In this framework, INCLUDING contributed to the implementation in Members States of the IAEA guidelines of the establishment of a Nuclear Safety and Security Culture Regime. The contribution from INCLUDING has been, in particular, the development of a Federation of testbeds where to test in simulated but realistic scenarios innovative technological solutions and to raise the awareness of Nuclear Safety and Security organizations about the usefulness of training and exercise programs. With raising international tensions involving threats to nuclear installations and alleged deviations from non-nuclear proliferation treaties, the project marked a timely action to enhance the Member States capacities and capabilities to prevent and react to worst case scenarios.

As a final outcome, the project elaborated a series of recommendations that can be of help for the plurality of stakeholders in the RN domain. The recommendations are centered on specific aspects of RN emergencies, like Medical aspects, uptake of new technologies, Civil-military cooperation, radiological crime scene management and others. The recommendations have been published on the last project newsletter available on the project website ([www.including-h2020.eu](http://www.including-h2020.eu)).

## Arbeit, die ab Beginn des Projekts bis zum Ende des durch den Bericht erfassten Berichtszeitraums geleistet wurde, und die wichtigsten bis dahin erzielten Ergebnisse

Central to the INCLUDING vision has been the development of a Federation of Pan-European testbeds for the execution of exercise and training activities in the RN emergency domain and managed at a centralized level by a web-based tool, the INCLUDING Web Based Platform (IWBP). The developmental phase of the IWBP progressed all along the project and the platform reached a stable version that has been validated during a Field Trial in a nuclear premise in Italy.

Another key task of INCLUDING has been the assessment of how the scenarios of RN threats leading to emergencies are evolving and with the main objective to update the exercise and training activities of appointed organizations accordingly. The analysis took under considerations also crisis scenarios related to the Russian Federation invasion to Ukraine and the situation at the Zaporizhzhia power plant.

Building upon previous researches conducted in the FP7 EDEN project, INCLUDING produced a training matrix to be used by RN safety and security operators to establish the learning objectives of their training activities. The matrix proposes a methodology that can help the trainers to establish the set of learning objectives of training activities and based on the well consolidated Bloom's taxonomy approach. The matrix has been used in all the seven exercises (the Joint Actions) organized by the project and listed hereinafter:

- A Large Scale Demo in Athens (Greece) - June 2021
- A Field Technical Exercise (FTX) in Mikkeli (Finland) - September 2021
- A Field Technical Exercise in Saclay (France) - October 2021
- A Field Technical Exercise in Budapest - June 2022
- A Table Top Exercise (TTX) in Bologna (Italy) - September 2022
- A Large Scale Exercise in Rome - May 2023
- Virtual reality training in Porto - February 2024

For INCLUDING collaboration with other EU and international projects has been an important way for cross-fertilization and for avoiding duplication of efforts.

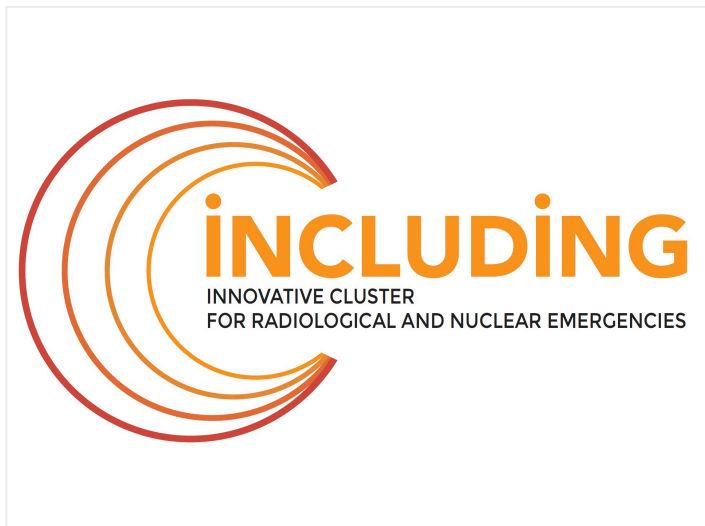
The dissemination activities of the project have been vibrant all along the project duration. The project results have been presented to workshops and conferences and in particular at CERIS events in Brussels.

The exploitation strategy has been refined and the project has applied for support from the Horizon Results Booster. The final result of this activity has been an exploitation report which describes the roadmap to adopt by the involved partners to bring on the market the Key Exploitable Results of the project.

## Fortschritte, die über den aktuellen Stand der Technik hinausgehen und voraussichtliche potenzielle Auswirkungen (einschließlich der bis dato erzielten sozioökonomischen Auswirkungen und weiter gefassten gesellschaftlichen Auswirkungen des Projekts)

INCLUDING has reached the high level objectives to enhance the collaboration between the stakeholders in Member States on a sensitive matter like nuclear safety and security. In particular the project has put in place initiatives at various level and in a wide range of interventions to strengthen the operative part of Member States nuclear security regime as suggested by IAEA in the publication "Objective and essential elements of a State Nuclear Security Regime". In particular INCLUDING has assessed the main weaknesses in the Nuclear security training programs and in the prevention and response capabilities of Member States. The organization of practical exercises with nuclear security scenarios has been the central moments of the project and finalized also to promote sharing of equipment and expertise between participants countries. The main societal impact of

INCLUDING is a improved coordination of stakeholders at Pan-European level to improve prevention, detection and response to RN emergencies with benefits for the EU citizens safety and security. This task has been gaining more and more relevance as a consequence of the aggression suffered by Ukraine in 2022. In doing this, it has been essential to outline the deep change in the perception and consideration of the RN risks at political and public level as a consequence of the Russian Federation aggression to Ukraine which started in February 2022. This date marks a dividing line from a period when nuclear security threats were mostly associated with criminals/terroristic groups to nowadays, where State actors with nuclear arsenals are adopting a worrying posture also towards the EU. This dramatically raises the scale and impact of the possible RN emergencies scenarios thus imposing to Member States to step up actions for implementing large-scale response capacities. In this complex situation, INCLUDING can be considered the reference project for the period 2019-2024 at EU level for promoting and introducing innovation in the RN emergencies domain. In light of this, it becomes more and more relevant an efficient Civil-Military Cooperation (CIMIC), intended as the involvement of military commanders for establishing connections with civilian agencies in operational theaters. This has been a recurrent theme in the INCLUDING Joint Actions.



Project logo

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