



Executive Summary: JRC Strategy for its Nuclear Activities

HIGHLIGHTS

- The Executive summary provides an overview of the JRC's Strategy for its Nuclear Activities, presenting the nine Key Actions and the main topics that informed the creation of the strategy.
- The strategy envisions both a medium and a long-term horizon, allowing the strategy to include key foresight elements.
- Five priority areas have been identified, all of equal importance. These are Activities, Communication, Competencies, Infrastructure and Stakeholders.
- The strategy responds to the key challenges that the European Union is facing, while taking into account the current Euratom Research and Training Programme budget.

The development of the Nuclear Strategy stems from the need to tailor the JRC's nuclear programme to European and global challenges and to accommodate the considerable reduction of the Euratom Research and Training Programme budget.

Through a medium-term outlook, the JRC's Nuclear Strategy addresses the entire scope of the JRC's nuclear activities, including the safe and secure use of nuclear technology, innovative nuclear systems and applications, the management of nuclear competencies, nuclear knowledge, research facilities, support to nuclear-related EU policies and the implementation of the Decommissioning and Waste

Management Programme. The Nuclear Strategy also JRC nuclear activities' evolving scope, role and impact.

To achieve its objectives, the Nuclear Strategy has identified five Priority Areas which require action: Activities, Communication, Competencies, Infrastructure and Stakeholders. The JRC will address them by implementing nine key actions.

KEY ACTIONS

The actions identified by the Nuclear Strategy have the overarching objective of enabling the JRC to carry out its important mandate, i.e. to provide independent and neutral

support to policy, research, education and training within the nuclear field and related areas.

- **Action 1:** aims to prioritise and reorganise activities by merging, reducing and gradually phasing out activities with lower priority. It will enable addressing new priorities with an appropriate amount of resources;
- **Action 2:** aims to strengthen cooperation between nuclear and non-nuclear domains within the JRC;
- **Action 3:** aims to improve communication of the scientific work carried within the JRC through a targeted, transparent and proactive strategy;
- **Action 4:** aims to ensure an active and strategic partnership with EU Member States;
- **Action 5:** aims to optimise international cooperation with international organisations and third countries based on the EU priorities;
- **Action 6:** aims to address the issue of competencies management. This will be done to maintain critical capabilities and simultaneously acquire new skills in line with future JRC priorities;
- **Action 7:** aims to develop tools for efficient knowledge management and to incorporate this element as part of the research activities;
- **Action 8:** aims to concentrate, cluster and optimise essential experimental facilities (Petten, Geel, Karlsruhe and Ispra) by consolidating projects and activities by thematic priorities, and enabling its use, through open access, by the Euratom Community;
- **Action 9:** aims to fulfil the JRC's responsibility for decommissioning its obsolete nuclear research facilities by ensuring coherence and compatibility between the research and training programme's implementation and the Decommissioning and Waste Management programme.

The JRC steers the implementation through a detailed implementation plan to accommodate the necessary adjustments in response to the changing scientific and political landscape in the EU and at a global level. After two years, there will be a review of the implementation plan, whilst an assessment of the strategy will take place after five years.

BROAD NUCLEAR TOPICS TAKEN INTO CONSIDERATION IN THE NUCLEAR STRATEGY

- **Nuclear safety:** addressing different aspects such as safety of current and innovative reactors and their fuel cycles (including Small Modular Reactors and advanced systems), long term operation, spent fuel and

radioactive waste management and disposal, radioactivity monitoring and emergency preparedness and response;

- **Nuclear safeguards:** addressing safeguards analytical methods, which ensures state-of-the-art analysis of nuclear materials, and addressing digitalisation and new technologies within the field of nuclear safeguards;
- **Nuclear security:** addressing capacity building in internal and external security through the European Nuclear Security Training Centre (EUSECTRA), and aiming at constantly improving detection and analysis techniques;
- **Non-proliferation:** addressing tools and methodologies to control dual-use technologies and R&D on proliferation resistance;
- **Nuclear Science and Non-Power Applications:** addressing medical use of radioisotopes and innovative applications of nuclear technology;
- **Nuclear Competencies and Knowledge Management:** aiming at identifying and improving nuclear competencies, knowledge management for decommissioning, and integrating nuclear in JRC communication strategy, ultimately improving nuclear communication;
- **Nuclear Standardisation and Digitalisation:** addressing harmonisation of EU radioactivity measurements, providing technical and scientific support through the provision of nuclear data, reference materials and methods, supporting the development of standards and better applying digital solutions in the field of nuclear technologies;
- **Cooperation with EU Member States and International Actors:** aiming at continuous complementarity between Euratom direct and indirect actions, supporting integrated R&D platforms, the fulfilment of the EC Euratom responsibilities, and the implementation of regular review and assessment of agreements based on an agreed set of criteria;
- **Operational Decommissioning and Waste Management:** addressing the definition and carrying out the decommissioning programme, ensuring the dissemination of knowledge and experience in relevant areas, and ensuring consistency between reduction, concentration and reorganisation of nuclear infrastructures and activities.

BIBLIOGRAPHIC INFORMATION:

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This executive summary has been developed by the JRC Unit A.7. Euratom Coordination on the basis of the new JRC's Strategy for its Nuclear Activities. This falls within the framework of the Revitalising the JRC Strategy 2030, which is also publicly available.

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