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EXECUTIVE SUMMARY OF THE INTERIM EVALUATION OF INDIRECT ACTIONS OF THE EURATOM RESEARCH AND TRAINING PROGRAMME 2014- 2018

Accompanying the document

**REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE
COUNCIL AND THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE**

Interim evaluation of the Euratom Research and Training Programme 2014-2018

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EXECUTIVE SUMMARY

This Commission staff working document (SWD) presents the interim evaluation of indirect actions funded through the Euratom research and training programme 2014-2018 (the 'Euratom programme', or the 'programme'). A separate SWD presents the interim evaluation of direct actions. These two documents accompany the Commission report which sets out the Commission's observations and the findings and recommendations from independent expert groups assisting the Commission in carrying out this evaluation.

In accordance with Council Regulation 1314/2013, the general objective of the Euratom programme is to pursue nuclear research and training activities with an emphasis on continuously improving nuclear safety, security and radiation protection. The programme's scope and objectives are based on the compromise reached by the Council following the Fukushima nuclear accident. As a result, the Euratom programme contains objectives allowing coordination of nuclear research in some specific areas. The compromise is also reflected in the budget allocated for the fission part of the programme. The Commission notes that for the moment a high level of expertise in nuclear research is still available in Europe, and one of the aims of a European research and training programme is to maintain this potential for the future.

The interim evaluation finds that the programme's original rationale for intervention and its objectives are highly relevant. As confirmed by the Commission Expert Group, Euratom research focuses on challenges of importance to the public. The programme provides a balance between the need to support the safety of nuclear technology in Europe and the need to underpin safety in the future. Euratom waste management projects help to better understand the issues relevant to the effective management of radioactive waste in the EU. These are issues, such as the safety of future geological disposal facilities, the conditioning of radioactive waste, the long-term behaviour of spent fuel in a repository and the clean-up of decommissioned sites. Euratom research on radiation protection will lead to an improved knowledge of the effects of low doses of ionising radiation on the human biota. This will translate into a more effective and safer use of radiation and radionuclides in medical diagnostic and therapeutic practices. Public consultation revealed that the programme is also important for research stakeholders and end-users of nuclear research – the nuclear industry, operators of power plants and safety authorities. The programme's relevance is also shown by the sustained interest in the competitive calls issued under the fission part of the programme.

On effectiveness, after three years of implementation of the Euratom programme (2014-2016), evidence indicates that progress is being made in delivering on all Euratom objectives in indirect actions, as set by the Council Regulation. In fusion there is significant progress on the agreed roadmap toward demonstrating the feasibility of fusion as a future energy source (47% of the research milestones for 2014-2018 were achieved by 2016). In particular, the programme is delivering key information and data of relevance for the future operation of ITER, the ground-breaking global research facility under construction in France. By confirming appropriate ITER design options and/or investigating relevant plasma scenarios and optimising plasma operation and control measures, Euratom research reduces costs and associated ITER construction and operation risks. The EUROfusion consortium coordinated the joint exploitation of three research tokamaks and supporting facilities, and Euratom supported access to these infrastructures for more than 1000 researchers in 2016. As a result,

European researchers submitted about 1000 articles in high-impact peer-reviewed scientific journals.

First reports show progress by fission projects in the three key areas of research (safety, waste management and radiation protection) with half of them having a safety focus. While the number of publications is understandably low at what is only the start of project implementation, Euratom projects have already set up substantial teams of researchers (almost 1200 people) and are reporting progress in reaching milestones.

Euratom is also at the forefront in implementing the new instruments in the area of joint programming of research. In 2014, the Euratom programme successfully pioneered the first use of the European Joint Programme (EJP) co-fund action with the major EUROfusion grant agreement for fusion energy research. Since then, in 2015, Euratom introduced another Joint Programme co-fund action (CONCERT) for radiation protection focused on achieving breakthroughs in understanding the effects of low doses of ionising radiation.

The results of the interim evaluation show a good overall level of efficiency in programme management (in particular, grant management and proposal evaluation in the case of indirect actions) and implementation by the Commission. The Commission is keeping its own administrative expenditure for indirect actions below the target of an average of 7% of the operational budget for 2014-2018, and available data shows that the planned target of 6% for 2018 will be met. Simplification measures introduced since the start of the programme have greatly improved efficiency, notably for the time-to-grant (TTG). The average TTG for the Euratom 7th Framework Programme was 315 days, whereas it was 261 days for the 23 projects launched following the 2014-2015 call, and decreased further to only 229 days for the 25 projects from the 2016-17 call.

A key part of the European added value of Euratom indirect actions, as underlined by stakeholders, is the EU's ability to mobilise a wider pool of excellence, expertise and multi-disciplinarity in nuclear research than individual Member States could. Through cooperative research and innovation, the Euratom programme also enables a Europe-wide approach to the improvement of nuclear safety and radiation protection in all areas of application. This complements the Euratom Directives on nuclear safety, radioactive waste management and basic safety standards and involves demonstrable scientific and technological progress in all areas that would not have been possible without a collaborative pan-European approach. The Euratom programme also enables a much more broad-based coordination throughout Europe of education and training, the use of research infrastructures and international cooperation. This is of particular benefit to smaller Member States, which can then take advantage of economies of scale afforded by the Europe-wide pooling effect.