

Instrument for Nuclear Safety Cooperation

Strategy for a Community Cooperation Programme in the field of Nuclear Safety

2014-2020

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INTRODUCTION

This Strategy was prepared in accordance with Article 5 of Title II of the Regulation establishing the new Instrument for Nuclear Safety Cooperation (INSC)¹, which provides the framework for Community cooperation in the field of nuclear safety for the period of 2014-2020

The Strategy responds to the global challenges and the need for EU action in the field of nuclear safety, radiation protection and nuclear safeguards. The experience of the European Union and of its Member States will be mobilised taking into account, *inter alia*, the geographic priorities as defined in the Regulation. Full consideration will be given during the implementation of this Strategy to the commitments the EU made in the framework of various Association Agreements, Joint Declarations, Memoranda of Understanding or other Cooperation Agreements with third countries.

The Strategy is based on the previous experience of the European Union in nuclear safety cooperation implemented from 1991 to 2013. From 1991 to 2006, the TACIS Nuclear Safety Programme was the main instrument of the EU to improve the safety of nuclear plants in the former Soviet Union. The TACIS Nuclear Safety Programme allocated some €1.3 billion for nuclear safety assistance to the New Independent States (particularly in Russia and Ukraine and, to a lesser extent, in Armenia and Kazakhstan). Over the period 2007-2013 cooperation continued under the Instrument for Nuclear Safety Cooperation with an expanded geographical scope. A new INSC regulation was adopted in 2014 in order to continue cooperation during the period 2014-2020. The geographical scope of this new regulation was extended to include, for the first time, countries previously covered by the Instrument for Pre-Accession (2007-2013)².

The Strategy for 2014-2020 is guided by the following objectives set by the Regulation:

- (1) Promotion of an effective nuclear safety culture and implementation of the highest nuclear safety and radiation protection standards, and continuous improvement of nuclear safety;
- (2) Responsible and safe management of spent fuel and radioactive waste (i.e. transport, pre-treatment, treatment, processing, storage and disposal), decommissioning and remediation of former nuclear sites and installations;
- (3) Establishment of frameworks and methodologies for the application of efficient and effective safeguards for nuclear material in third countries.

¹ Council Regulation (Euratom) No. 237/2014 establishing a new Instrument for Nuclear Safety Cooperation.

² During the period 2006-2013 the nuclear safety cooperation with these countries was financed by the Instrument for Pre-Accession (IPA).

This Strategy will be implemented through two successive multiannual indicative programmes for the periods 2014-2017 and 2018-2020, respectively, in compliance with Article 6 of the Regulation in order to adequately respond to the challenges which are likely to evolve during the period 2014-2020. These multiannual indicative programmes will also specify the indicative budgets and the geographical scope of cooperation under the Instrument during the periods concerned. The duration of the programming periods may be changed to reflect the nature of nuclear safety cooperation with third countries in the light of rapidly evolving developments in the field.

The main focus of the activities during the period 2014-2020 will be the promotion and implementation of the highest nuclear safety and radiation protection standards together with the nuclear regulatory authorities active in third countries. Support will be given to build and develop nuclear safety capacities.

During the first half of the period 2014-2020, activities in waste management, including environmental remediation and decommissioning, will be scaled down in accordance with the available budget. However, priority and viable projects already started during the period 2007-2013 will continue, while others will be considered on a case by case basis. Given the strategic importance of these activities, special attention will be given to future support under this component in the framework of the review before the next multiannual programme 2018-2020.

The INSC Regulation stipulates that the Commission should consult the European Nuclear Safety Regulators Group (ENSREG) prior to the elaboration and adoption of the Strategy paper and Multiannual Indicative Programme. Such consultations took place and were concluded on 15 January 2014.

FUTURE APPROACH

The Instrument for Nuclear Safety Cooperation (2014-2020) will continue to promote the highest nuclear safety levels worldwide. The main focus of the activities will be the promotion, the adoption and implementation of the relevant EU best practices in third countries towards that objective.

Programme components

The programme components here below are consistent with the objectives and measures envisaged by the INSC. They are based on the long standing experience of the European Union, the feedback received from the stakeholders, and take into account the needs of partner countries expressed through regular dialogue.

Table 1 provides an overview of the indicative financial allocations per component of the programme.

Promotion of an effective nuclear safety culture and implementation of the highest nuclear safety and radiation protection standards

Regulatory authorities are essential to ensure nuclear safety through their licensing and control activities. The objective is to ensure their technical competence and independence and the reinforcement of the regulatory framework, notably for licensing activities. Measures to improve protection against ionising radiations, the prevention of nuclear accidents and emergency preparedness and response, particularly at a regional level, will be supported. In doing so, the lessons learnt after the Fukushima-Daiichi nuclear accident will be taken into account. This objective shall be implemented through the following measures:

- Support to nuclear regulatory authorities, technical support organisations and reinforcement of the regulatory framework, notably on Periodic Safety Reviews and other assessments, as well as the subsequent implementation measures; this could include assistance to regulatory bodies in performing stress tests³ and their follow-up;
- Promotion of effective regulatory frameworks, procedures and systems to ensure adequate protection against ionising radiations from radioactive materials, in particular from high activity radioactive sources, and their safe disposal;
- Training of Nuclear Regulators and Technical Support Organisations; training is an integral part of the nuclear safety support and cooperation projects of the EU; this activity will be continued through the ‘Training and Tutoring project’ which offers the regulatory authorities in partner countries an opportunity to train staff in the European Union;
- Education initiatives in nuclear safety will be considered in third countries at the regional level;
- Establishment of effective arrangements for the prevention of accidents with radiological consequences, including accidental exposure, as well as the mitigation of such consequences should they occur (for example, monitoring the environment in case of radioactive releases, design and implementation of mitigation and remediation activities and cooperation with national and international organisations in the case of accidental exposure), and for emergency-planning, preparedness and response, civil protection and rehabilitation measures, keeping in mind that prevention should have priority over mitigation;
- Support for ensuring safety of nuclear installations and sites regarding practical protective measures designed to reduce existing radiation risks to the health of workers and of the general public.

³ Stress tests are targeted reassessments of the safety margins of the power plants in the light of the Fukushima accident. Natural hazards, the loss of safety systems and severe accident management are the main topics. In the EU the stress tests include an international peer review of the national exercise.

The cooperation will be primarily directed at the regulatory authorities dealing with nuclear safety. Exceptionally, the programme may provide support to IAEA activities in these fields when they are complementary to relevant EU initiatives.

Cooperation with operators of nuclear installations in third countries will be considered in specific situations in the framework of follow-up measures of the 'stress tests'. Such cooperation with nuclear installations operators will exclude the supply of equipment.

Safety of radioactive waste and spent nuclear fuel management, including environmental remediation of former nuclear mining sites

This objective shall be implemented through measures comprising development and implementation of strategies and frameworks for:

- the responsible and safe management of spent nuclear fuel and radioactive waste, including orphan sources;
- decommissioning of nuclear installations, which are not covered by commercial obligations (e.g. research reactors);
- environmental remediation of former nuclear mining sites; this includes the necessary environmental impact assessments and feasibility studies and corresponding remediation works at prioritised sites.

Safeguards

The following activities will be supported under this component:

- Establishment of the necessary regulatory framework and the development of methodologies for the implementation of nuclear safeguards, including for the proper accounting and control of fissile materials at state and operators' level;
- Support for the infrastructure and training of staff;
- Education initiatives in nuclear safeguards will be considered in third countries at a regional level.

International Cooperation

The implementation of the above measures will include cooperation with relevant international organisations, notably the IAEA, to optimize the use of the available resources and avoid duplication of efforts. Collaboration with the IAEA has, *inter alia*, the objective of further developing nuclear safety culture and the required expertise at the global level and to support adherence to international Conventions and Treaties. This cooperation may take the form of grants, co-financing or joint projects and will cover several of the programme components referred to above.

Regional cooperation will be encouraged where possible and appropriate, making use of existing networks as e.g. the FORO, AFCONE and ASEANTOM. The views held by

national regulatory authorities will be taken into account when engaging with regional organisations.

Geographical criteria

The geographical scope of the Programme will follow the criteria established in paragraph 1(a) of the Annex to the INSC Regulation.

Priority will be given to Accession Countries and countries in the European Neighbourhood area. But no geographical regions are excluded from the cooperation and full consideration will be given to the commitments the EU made in the framework of various Agreements, Declarations and Memoranda with third countries.

Cooperation with high-income countries is intended to facilitate relations between their respective stakeholders competent in nuclear safety and radiation protection. Such relations shall exclude any INSC funding to high income countries. However, special measures may be undertaken, for example following a major nuclear accident, if necessary and appropriate.

Appropriations

The appropriations will correspond to the Commission's provision to implement and manage the INSC.

PROGRAMME COORDINATION AND IMPLEMENTATION

Support to partner countries in the areas covered by the INSC is also provided by international organisations, individual Member States and other donors, the G8 members in particular. The European Commission will continue coordinating its activities through established channels and bilateral contacts to ensure that funding is well targeted and does not duplicate and/or overlap with that provided by other donors and organisations. Coordination with the IAEA and its Regulatory Cooperation Forum (RCF) is particularly important; further coordination takes place within the G8 Nuclear Safety and Security Group (NSSG), the Global Partnership Programme, with other relevant international organisations and partners as well as in the context of international donor funds.

The present strategy supports the INSAG-21 of the IAEA “Strengthening the Global Nuclear Safety Regime” and complements the IAEA Action Plan on Nuclear Safety adopted by the Agency in 2012 following the Fukushima accident.

Synergies will be sought between the implementation of the INSC and the Instrument contributing to Stability and Peace (IcSP)⁴, in particular on cooperation addressing global and trans-regional and emerging threats. As experience has shown, there are important gains in impact if cooperation under the three pillars – safety, security and safeguards – is implemented in a coherent way for both instruments. At the regional level, coordination

⁴ The IcSP continues the cooperation initiated under the Instrument for Stability (IfS) which expired at the end of 2013

between both instruments should take into account the input of the established CBRN Centres of Excellence network.

The European Commission will draw on the experience of competent authorities and organisations in the Member States in the fulfilment of its task, in order to make the best use of European expertise in the field of nuclear safety especially the European Nuclear Safety Regulators Group (ENSREG), the Western European Nuclear Regulators Association (WENRA), the Heads of the European Radiological protection Competent Authorities (HERCA) and the Council Working Party on Atomic Questions.

The possibility granted by the regulation of co-funding projects with Member States, and/or regional/multi-national entities will be explored.

The European Community's cooperation will be based on a common understanding and a reciprocal agreement between the third country and the EU involving a formal commitment of the authorities of the third country. Third countries wishing to cooperate with the European Union should be parties to the relevant nuclear safety conventions, in particular the Nuclear Safety Convention and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste, or have taken steps demonstrating a firm undertaking to accede to such conventions.

When programming its cooperation, the EU pays particular attention to the structural as well as economic capacity of the countries concerned. The possibility to react to unforeseen needs is envisaged within the current INSC regulation and may be made available, if needed, in case of an accident.

During the programme preparation and implementation the European Commission will seek the support and participation of Member States' experts. The Joint Research Centre of the European Commission will provide continued technical support for the implementation of the programme.

The European Commission has initiated a study to establish new indicators that, in combination with already existing indicators, such as those developed by the IAEA and other partners, will be used to assess the impact of the programme⁵.

Special attention will be paid to the visibility of the actions under this Strategy.

ADDED VALUE OF THE COOPERATION

With a large number of commercial nuclear power plants (about 1/3 out of some 450 worldwide) and nuclear power providing for about 30% of the electricity generation, the EU has accumulated a long experience in the domain of nuclear safety, including in decommissioning of nuclear installations and radioactive waste management. As a result a wide expertise in all the domains of nuclear safety is available in EU Member States. The diversity of technologies, which requires different approaches, allows for the necessary flexibility in addressing the needs of third countries.

⁵ Performance indicators include programme impact indicators and implementation indicators as well as project specific indicators. They use both quantitative and qualitative tools.

The EU has adopted common legal frameworks concerning nuclear safety and radioactive waste and spent fuel management. In this respect, the EU has set up an example and expects to persuade others to adopt similar high standards.

Past experience showed that the INSC implementation had been well targeted and the projects well-conceived, the projects contributed significantly to enhance nuclear safety and nuclear safety culture. The INSC projects with focus on exchange of know-how and practices were found to be particularly appreciated by partners in target countries. It is expected that this will continue to be the case in future.

A more coordinated and integrated approach between the EU and its Member States through joint programming will bring about more added value, increased strength and legitimacy, and more impact and effectiveness.

The EU is in a uniquely neutral and impartial position to deliver on external action on behalf of and with Member States, giving enhanced credibility in the countries in which it works. With 28 Member States acting within common policies and strategies, the EU has the critical weight to respond to global challenges. The EU is a natural coordinator and has a network of international agreements which permits influencing international relations, including on nuclear safety.

TABLE - Financial overview INSC 2014-2020

Component	Title	Indicative budget Million EUR	%
1	Promotion of an effective nuclear safety culture	112.661	50
2	Responsible and safe management of spent fuel and radioactive waste	78.862	35
3	Safeguards	22.532	10
Sub-total		214.055	
4	Support measures	11.266	5
TOTAL		225.321	100%