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COMMISSION STAFF WORKING DOCUMENT

Evaluation of the Instrument for Nuclear Safety Cooperation

Accompanying the document

**REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND
THE COUNCIL**

Midterm Review Report on the External Financing Instruments

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Executive summary

This Staff Working Document evaluates the Instrument for Nuclear Safety Cooperation¹(INSC) over the period 2014-2017 to answer the question is the INSC is fit for its purposes to promote in third countries a nuclear safety culture, the safe management of radioactive waste and spent fuel, and effective safeguards of nuclear material. This evaluation is informed on an external evaluation by a Consortium under GDSI part of the mid-term review of ten External Financing Instruments. Opinions from the Open Public Consultation mostly support those findings.

The Instrument is assessed as highly **relevant**² for improving nuclear safety in third countries aligned to EU policies and priorities and addressing specific needs. The set-up in 2015 of a multilateral Environmental Remediation Account on remediating legacy mining waste in Central Asia is an example of how the Instrument addresses needs, in coordination with international donors and organisations. The Instrument duly promotes the highest standards and practices used in the European Union on the basis of the EURATOM Treaty and a set of relevant Directives³. The Instrument also matches recognised priorities as pursued by the International Atomic Energy Agency (IAEA) and the G7 Nuclear Safety and Security Group (NSSG). Coordination with the European External Action Service ensures compatibility of actions with international Conventions and Treaties and international developments.

A profound example of the **effectiveness** of implementation leading to a **sustainable impact** concern a National Management and Maintenance Training Centre for Energoatom (operator of nuclear power plants in Ukraine). The **efficiency** is assessed as good with a timely and competent support². The high staff workload is alleviated by support of the Joint Research Centre and by reducing the administrative burden with larger projects. Cross-cutting issues, on environmental protection, sector management and gender equality are well-mainstreamed.

The distinctive EU **added value** lies in the long experience in cooperation on nuclear safety and security, the set-up under EURATOM with promoting the highest safety standards, especially applicable to Neighbourhood countries pursuing the *acquis communautaire*. **Coherence and consistency** are generally ensured for the relatively self-contained INSC with special attention to actions on nuclear security (addressed by IcSP) and nuclear safety. Financial **leverage** is best demonstrated by the sliding event in November 2016 of the new safe confinement over the destroyed Chernobyl reactor unit 4 in Ukraine. The EU support was a major catalyst for the international community to also contribute to restore safe conditions.

The Commission services concur with the external evaluation that directly measuring nuclear safety is inherently difficult, the staff workload is high, and that external evaluations on indirect measures as achievements and impact are to be used more frequently. Moreover, programming documents can be more informative for non-experts without constraining the flexibility. The direct and mainstreamed support to environmental protection, sector management and gender equality deserves wider visibility and recognition. A special merit of this stable and well-established Instrument is the promotion of policy and political dialogue linked to e.g. the Joint Comprehensive Plan of Action with Iran. Conclusions feeding in reflection on how to improve the INSC until 2020, and beyond. Overall the INSC is

¹ Council Regulation (EURATOM) No 237/2014, 13 December 2013 establishing an INSC.

² External Evaluation of the INSC, Final Report, Vol I – June 2017, pages 12-15.

³ EURATOM Directives on Nuclear Safety (amended 2014), Radioactive Waste management (established 2011), and Basic Safety Standards on radiation protection (amended 2013).

favourably evaluated as fit for purpose.

1. Introduction

Purpose of the evaluation

This Staff Working Document is informed by the external evaluation of the Instrument for Nuclear Safety Cooperation (INSC) for the period 2014 to mid-2017⁴ and employs six Evaluation Questions⁵ on (i) relevance, (ii) effectiveness, impact, and sustainability, (3) efficiency, (4) added value, (5) coherence, consistency, complementarity and synergy, and on (6) leverage (see Annex A) based on evaluation principles set by the criteria developing committee of the Organisation for Economic Co-operation and Development (OECD-DAC⁶).

The evaluation's purpose is to inform future work on the Instrument and its actions. It is also part of a set of ten evaluations covering all the EU External Financing Instruments (EFIs)⁷ and the 11th European Development Fund (EDF) that inform the Mid-Term Review Report⁸ which draws conclusions across the External Financing Instruments.

Scope of the evaluation

This evaluation covers the period from 1 January 2014 to 1 June 2017. However, due to the length of the implementation cycle of INSC, the availability of data on results is limited. Therefore the evaluation also looks at the previous Instrument covering the period 2007-2013 for some of the evaluation criteria (e.g. efficiency and effectiveness). In order to usefully feed into the Mid-Term Review Report, the evaluation is set at Instrument level. In consequence it focuses, to the extent possible, on the INSC Regulation (e.g. on its principles and objectives), its programming and the measures that have been put in place for its implementation.

The beneficiaries covered under the evaluation are the nuclear regulatory authorities, the radioactive waste management organisations and in duly justified case the nuclear energy operating organisation with priority given to neighbouring countries and to countries acceding to the EU. A specific case study on Ukraine, which is by far the biggest recipient of support under the INSC, has been used to validate the overall assessment of the Instrument.

In accordance with the EU Better Regulation Agenda⁹, the following evaluation criteria are used: relevance, effectiveness, efficiency, coherence, and added value, complemented by impact, sustainability, consistency, complementarity and synergies and leverage.

⁴ External Evaluation of the Instrument for Nuclear Safety Cooperation (2014 – mid 2017) Final Report – [Vol. I](#), and [Vol. II](#), EuropeAid/137211/DH/SER/Multi, by Consortium with GDSI limited as leader, June 2017.

⁵ External Evaluation of the INSC, Final Report, Vol I – June 2017, page 1.

⁶ DAC Criteria for Evaluating Development Assistance: [Glossary of Key Terms](#), OECD, 2002.

⁷ The Development Cooperation Instrument, the European Neighbourhood Instrument, the European Instrument for Democracy and Human Rights, the Greenland Decision, the Instrument contributing to Stability and Peace, the Instrument for Pre-accession Assistance, the Instrument on Nuclear Safety Cooperation, the Overseas Countries and Territories Decision, the Partnership Instrument and the Common Implementing Regulation.

⁸ In line with Article 17 of the Common Implementing Regulation (CIR), Regulation (EU) No 236/2014 of the European Parliament and of the Council of 11 March 2014 laying down common rules and procedures for the implementation of the Union's instruments for financing external action, OJ L77, p. 95.

⁹ Commission Communication Better regulation for better results – An EU Agenda, COM (2015) 215, and Commission Staff Working Document Better Regulation guidelines, SWD (2015) 111.

2. Background of the initiative

The External Financing Instruments take up a major part of the MFF¹⁰ – Heading IV Global Europe, which provides the EU with the tools necessary to reinforce its role on the world stage and to ensure that it is able to live up to its ambitions in promoting its interests and values such as democracy, human rights, peace, solidarity, stability and poverty reduction and to help safeguard global public goods.

Adopted in early 2014, the External Financing Instruments were designed to facilitate and support policy implementation, with the intention of remaining relevant until the end of 2020, thereby enabling the EU to implement external action policy as needed within the defined principles and objectives.

The support to nuclear safety in third countries by the European Communities started in 1991 under TACIS¹¹ in response to increased awareness of trans-boundary effects of the Chernobyl accident (1986) and the dissolution of the Soviet Union in 1991. The new independent states had an urgent need for assistance for safe operation, regulation and remediation of legacy waste. International co-operation (IAEA, G7, EBRD - European Bank for Reconstruction and Development) was at the basis of the European Communities' cooperation, which – after addressing highly urgent needs – became more centred around assistance to regulators, safe management of radioactive waste and safeguards, while its geographic scope has been enlarged since 2007 to a world-wide dimension with focus on countries near the EU. This approach is confirmed by both the stakeholders and during the open public consultation, see Annex 2. Synopsis report of the stakeholders' consultation

Description of the initiative and its objectives

The current INSC was set up to improve nuclear safety and reach the highest standards to ensure a safe environment for the present and future generations. The intervention logic in Figure 1 shows the achievement of this goal through the cause - effect relationships:

1. The **rational for EU engagement in nuclear safety cooperation** is derived from the awareness that accidents have cross-boundary effects and that the EU has a solid basis for cooperation with third countries to improve nuclear safety.
2. A **budget for EU engagement** allows for a pursuit of three specific objectives, aligned with the EU external policy objectives on promoting regulatory reform and Union standards and practices.
3. The **implementation** of the **INSC** is carried out through the adoption of a Strategy document, a Multi-annual Indicative Programme and Annual Action Programs focusing on the objectives and priorities of the Instrument. These documents are adopted following consultation with partners and Member States.
4. The **INSC outputs** are achieved through an efficient use of the inputs (resources) including competitive tendering, efficient management and implementation either directly with Partner Countries or in partnership with IAEA or EBRD.

¹⁰ Council Regulation (EU, EURATOM) No 1311/2013 of 2 December 2013 laying down the multiannual financial framework for the years 2014-2020, OJ L 347/884, p. 884.

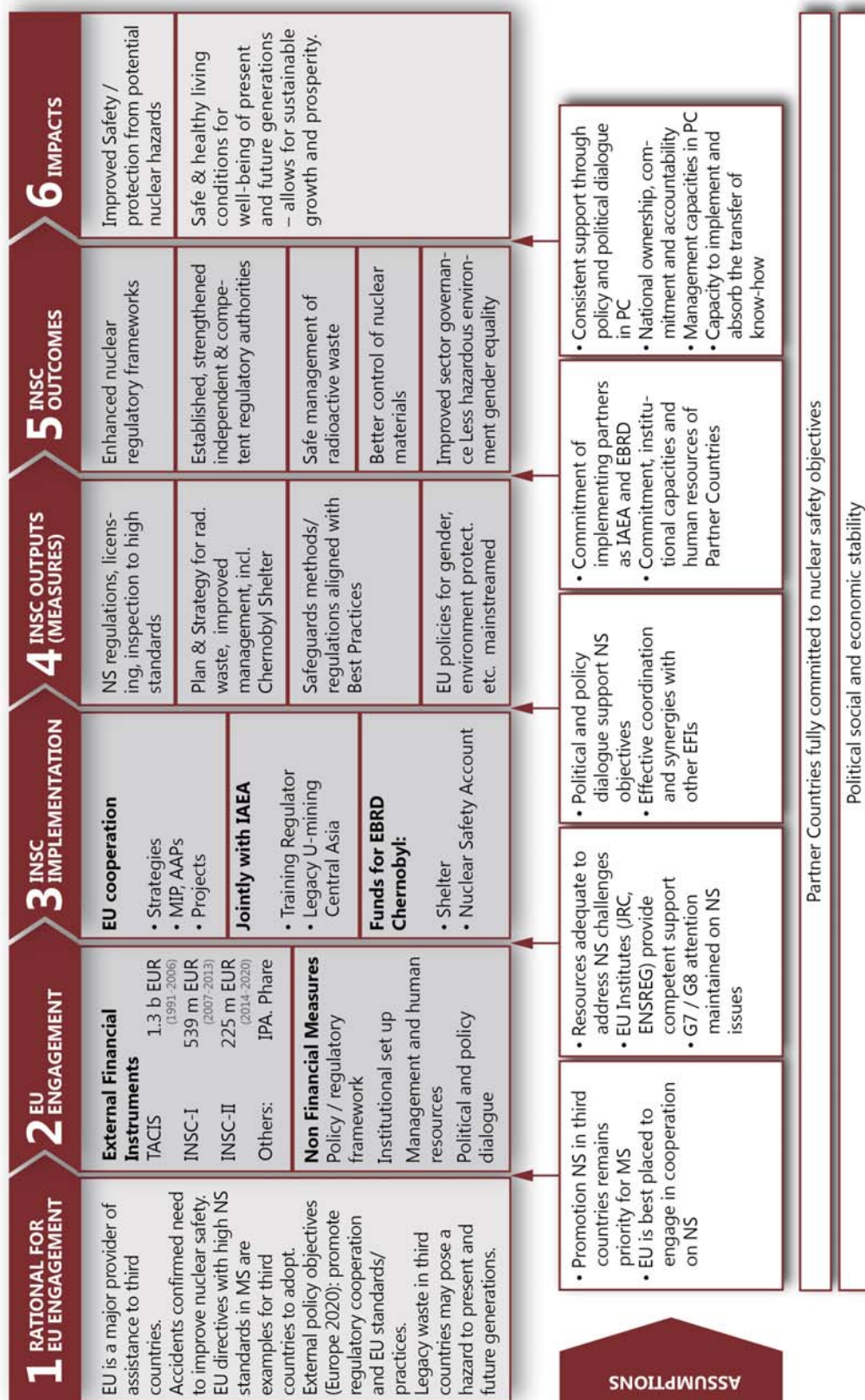
¹¹ Technical Assistance to the Commonwealth of Independent States.

5. The **outcomes** are generated by the outputs for the three objectives with due regard to EU crosscutting priorities as Sustainable Development Goals.
6. Ultimately, **sustainable impacts** are achieved in concert with the policy of partner countries and others.

Baseline

As this is a mid-term evaluation, the baseline has been set at January 2014 when INSC 2014-2020 was adopted. Therefore the evaluation compares, to the extent possible, the situation on 1 January 2014 with the current situation. For some evaluation criteria, where data is unavailable for this reference date, earlier baselines have been used, as described later in the document.

Figure 1: INSC Intervention Logic¹²



3. Method

¹² External Evaluation of the INSC (2014 – mid 2017) Final Report, [Vol. II](#) - June 2017, page 1.
 MS = Member State, NS = Nuclear Safety

This evaluation is informed by the mid-term external evaluation of the Instrument for Nuclear Safety Cooperation¹³ which focused on the instrument level processes and aimed to contribute to lesson-learning and accountability. The mid-term external evaluation covered the period 1 January 2014 to June 2017 in line with the Common Implementing Regulations (CIR)¹⁴. The external evaluation comprised the following phases:

- *Desk Phase*, from August 2016 to November 2016, with two main deliverables: i) the Inception Report with design and workplan of the evaluation with judgement criteria, and ii) the Desk Report being an interim response to the Evaluation Questions containing hypotheses and identified information gaps for the subsequent verification.
- *Validation Phase* for gathering supplementary information to substantiate or reject the hypotheses and for developing preliminary findings and “emerging messages” presented to the Inter Services Group on 15 December 2016. Access to project and executive staff of the Commission services allowed the external consultant to obtain an informed appreciation of the project cycle processes. In addition, representatives of a working group of ENSREG (European Nuclear Safety Regulators Group) were consulted as well as executive management at EBRD. A case study for Ukraine informed the evaluation on achievements and impact at project and country level, also to compensate for the limited external assessments and monitoring reports, and the lack of direct measurability of an improved nuclear safety.
- *Synthesis Phase* for finalising the draft evaluation report on 31 January 2017 on the basis of feedback and supplementary information.
- *Consultation Phase* compliant with the Better Regulation Guidelines including: i) Open Public Consultation from 7 February to 8 May 2017 resulting in 51 reactions with 20 reactions from associations and organizations and 11 from public authorities, and ii) targeted consultations with the Civil Society, the Parliament, the Council and Member States, the Council Working Party on Atomic Questions, and the INSC Committee.

The responses did not dispute the draft findings, neither led to modifications of findings. The targeted consultations strengthened the dialogue on the Instrument with support to strategic recommendations on how the instrument could improve its effectiveness. A summary of the responses is given in

¹³ External Evaluation of the Instrument for Nuclear Safety Cooperation (2014 – mid 2017) Final Report – [Vol. I](#), and [Vol. II](#), EuropeAid/137211/DH/SER/Multi, by Consortium with GDSI limited as leader, June 2017.

¹⁴ [Regulation \(EU\) No 236/2014](#) laying down common rules and procedures for implementation of EU's EFIs.

Annex 2. Synopsis report of the stakeholders' consultation

- *Finalisation Phase* in which the draft final report is completed reflecting responses from the Consultation Phase and supplementary review comments together with an update of significant events since January 2017 for truly covering the period up to 1 June 2017. The Evaluation Report was issued 5 July 2017.

The Commission services fully facilitated the evaluation as coordinated with other evaluations compliant to the Terms of Reference. The findings are regarded as a balanced and unbiased external view, valuable to be considered in improving the INSC implementation.

4. Implementation state of play

Implementation status

With reference to the INSC Regulations, the Strategy 2014-2020¹⁵ provides a concise basis for the cooperation with an indicative budget for the three objectives of promotion of an effective nuclear safety culture, safe management of radioactive waste and remediation, and safeguards of nuclear material. The Strategy presents the geographic priorities and the coordination with international organisations¹⁶. Synergies are being pursued as nuclear security is in the scope of the Instrument contributing to Stability and Peace. The Multi-annual Indicative Programme 2014-2017¹⁷ further elaborates the Strategy and sets out the priority areas for financing after consultation of the European Nuclear Safety Regulators Group (ENSREG). The Programme gives attention to international coordination and avoiding duplications.

The Annual Action Programmes 2014¹⁸, 2015¹⁹ and 2016²⁰ comprise 28 actions with 14 actions in pre-accession countries and the EU neighbourhood: Armenia (2 actions), Belarus (2), Iraq, Ukraine (5), Morocco, Turkey and Contributions to the Chernobyl Shelter Fund (2), 6 actions in countries and areas at larger distance: Central Asia (2), China, Iran, South East Asia, and Tanzania; and 8 horizontal actions: IAEA cooperation, Safeguards, Support Measures (3), Technical support from the Joint Research Centre, and Training and Tutoring (2).

These actions are under implementation or are waiting to be implemented. Contracts for all above actions are expected to be signed before the end of 2017. Actions not requiring a Financing Agreement with the Beneficiary Country have been contracted before the end of the year following the Annual Action Programme.

The status on decided, contracted and paid budgets of the Multiannual Financial Framework according to the Commission's accounting system per 1 June 2017 is as follows:

	Decided	Contracted	Paid	MFF	Decided	Contracted	Paid
	Budget in million EUR				Percentage of Multiannual Financial Framework (MFF)		
INSC	164.56	131.44	102.10	225.32	73%	58%	45%

¹⁵ Strategy for a Community Cooperation Programme in the field of Nuclear Safety 2014-2020, Commission Implementing Decision C (2014)3763.

¹⁶ Most notably the IAEA and its Regulatory Cooperation Forum, and the G7/8 Nuclear Safety Security Group.

¹⁷ Multiannual Indicative Programme 2014-2017, Commission Implementing Decision C (2014)3764.

¹⁸ Annual Action Programme 2014 for Nuclear Safety Cooperation to be financed from the general budget of the European Union, Commission Implementing Decision C(2014)4302.

¹⁹ Annual Action Programme 2015 for Nuclear Safety Cooperation to be financed from the general budget of the European Union, Commission Implementing Decision C(2015)3961.

²⁰ Annual Action Programme 2016 for Nuclear Safety Cooperation to be financed from the general budget of the European Union, Commission Implementing Decision C(2016)2182.

Performance of the Predecessor programme

The INSC is to be considered as a follow-up of its predecessor programme INSC-I (2007-2013) the implementation of which was evaluated²¹ as being in accordance with its regulation, and with the criteria and priorities set in its revised Strategy. The cooperation with support regulatory authorities, decommissioning, the management of radioactive waste and environmental remediation continued throughout INSC-I. The enlargement of projects was appraised as a good measure to increase efficiency. However, the evaluation mostly addresses the thematic scope and provides little pertinent conclusions on the actual effectiveness.

The Fukushima Daiichi accident in 2011 again highlighted the importance of preventing accidents through support to independent and competent regulatory authorities to ensure a safe use of nuclear energy.

Interventions now at the core of the current INSC programme were prepared under INSC-I for instance with feasibility studies and environmental impact assessments for remediating the uranium mining legacy sites in Central Asia.

A "training and tutoring" initiative started to provide young nuclear safety professionals of regulatory authorities and technical support organisations opportunities to cope with evolving challenges. In November 2015, the 1000th trainee completed a training course. Especially important for countries embarking on the use of nuclear power is the availability of necessary expertise for the regulatory assessment of the subsequent licensing stages.

Result-Oriented Monitoring

In the period January 2014 to early 2017, in total 11 Result-Oriented Monitoring (ROM) reports were issued. All projects belong to INSC-I. The projects' budgets mostly range from EUR 0.8 million up to EUR 3 million. Geographically the projects subject to ROM cover Ukraine (5 projects), China (4 projects), Mexico (1 project) and Egypt (1 project). The ratio of ROM reports compared to the total number of projects is fully aligned with the European Commission's practices for the other EFT's.

Key achievements

A multilateral Environmental Remediation Account for Central Asia established in 2015 is to finance the clean-up of legacy uranium mining site. Central Asia states inherited a legacy of hazardous waste from the Soviet-era uranium mining and processing. Toxic chemical and radioactive residues in legacy sites in the Kyrgyz Republic, Tajikistan and Uzbekistan impact the local population and environment, the socio-economic development and increase the political risk in a volatile region as severe cross-border impacts would occur in case of contamination of the water resources (for example due to seismic induced land-slides or ferocious alpine rainfall). The European Union has financed under the INSC a series of feasibility studies and environmental impact assessments at priority legacy sites; this flagship programme is now mature for implementation and the EBRD upon Commission's request has established in 2015 the mentioned Environmental Remediation Account. The EU being the first donor to contribute to this fund (EUR 16.5 million in December 2015) is organising an

²¹ Report from the Commission on the evaluation of the implementation of the Council Regulation (EURATOM) No 300/2007 (INSC) in the [period 2007-2013, Italtrend, March 2014](#).

international donor conference in 2018 together with the EBRD and the IAEA. A new EU contribution will be pledged at this conference.

A first phase of remediation of the Prydniprovskiy Chemical Plant was concluded in November 2016. This plant in Ukraine was from 1947 to 1992 a major uranium processor for the Soviet Union. Uranium ores of different origin (Ukraine, Central Asia and Eastern-Europe) were processed in this plant leaving behind a legacy of five tailing storage facilities and two industrial disposal facilities. Since 1992, activity has been continued in privatised buildings, which has led to limited regulatory control and uncontrolled exposure of workers. The absence of restricted access to the site led to trafficking (in e.g. contaminated scrap metal) and unrestricted presence of the public. The EU in close coordination with the Ukrainian Government agreed on a first phase of support resulting in topographical and radiological surveys for identifying the most contaminated facilities and public awareness actions directed to persons working at or living near the site. Follow-up is under preparation with the Ukrainian authorities to implement the complete remediation plan drafted under the first phase.

The sliding of the New Safe Confinement over the destroyed Chernobyl unit 4 on 29 November 2016 is a major milestone making the site environmentally stable and safe again. The accident with unit 4 occurred in April 1986. The giant arch-shaped structure with a height of over 100 metres and a design life of 100 years prevents any further radioactive release and allows for ultimate removal of the damaged reactor and radioactive material in a controlled atmosphere. This milestone was achieved through joint efforts of the EU, Ukraine, EBRD and the international community after more than 15 years of work and at a total project cost in the order of EUR 1.5 billion. The EU contributed more than EUR 430 million (under TACIS: EUR 210 million and INSC programmes: EUR 220 million) apart from bilateral support by individual European countries being de facto the first donor after the EBRD itself. In 2017 the last EU pledge to the Chernobyl on the Nuclear Safety Account has been executed to complete the Interim Storage Facility for spent nuclear fuel.

INSC finances follow-up to the Joint Comprehensive Plan of Action Cooperation (JCPoA) with Iran through engaging in a civil nuclear safety co-operation starting in 2017. Preparatory actions concerned two short expert missions (July and September 2016) to support the Iranian Nuclear Regulatory Authority in developing legislative documents. In line with the agreed timeline, civil cooperation on nuclear safety starts in 2017 supporting the design of a nuclear safety centre, enhancing the capabilities of the regulator and performing a stress test exercise (evaluation of lessons from the Fukushima-Daiichi accident) at the Bushehr nuclear power plant. This contribution part of the EU commitments under the Annex 3 of the JCPoA is completed by supporting the IAEA's safeguards verification activities in the country (Annex 1 of the JCPoA).

Agreement with Turkey was reached in 2016 to support the capacity building of the nuclear regulatory authority in view of a decision to introduce nuclear in the national energy mix.

The Training and Tutoring programme is acknowledged by all stakeholders, being beneficiary or implementers on behalf of the EU, as a successful, flexible and powerful tool²² to promote the nuclear safety culture worldwide and build capacity in the partner countries and organisations.

²² External Evaluation of the INSC (2014 – mid 2017) Final Report, [Vol. I](#) - June 2017, page 11.

The EU has successfully engaged with the Sub-Saharan African countries to establish a harmonised and appropriate regulatory framework for sustainable uranium mining activities²³ to avoid a future need for very expensive remediation as encountered currently in Central Asia.

Since 2011 and following the Belarussian decision to introduce nuclear in its energy mix, the EU is supporting the regulatory authority in the licensing process and the stress tests exercise of the Astravets nuclear power plant currently under construction. This power plant is less than 50 km away from the Lithuanian capital Vilnius.

Engagement with Serbia has just started to address the issue of the legacy of radioactive wastes at the Vinca research center.

The EU continues to closely monitor the situation at the Medzamor nuclear power plant in Armenia, providing support to the regulatory authority in the review of the safety assessment of the lifetime extension process and supporting the plant operator in the implementation of the recommendations of the stress tests exercise.

²³ [Press release: Regional seminar on Uranium mining, milling and transport](#), Brussels, Belgium October 2014.

5. Answers to the evaluation questions

Relevance

To what extent do the specific objectives (INSC Regulation, Article 2) and the design of the INSC respond to:

- (i) EU priorities and beneficiary needs identified at the time the Instrument was adopted (end 2013)?
- (ii) Current EU priorities and beneficiary needs, given the evolving challenges and priorities in international context (up to mid-2017)?

The INSC specific objectives as set in the Regulation²⁴ concerning the promotion of a nuclear safety culture, the safe management of radioactive waste and spent fuel, and safeguards of nuclear material are well aligned to the EU policies and priorities²⁵. The pursued promotion of high-level regulations, standards and practices are shared with the Europe 2020 strategy²⁶, while environmental remediation (of radioactive waste legacy sites), building strong regulators and life-long learning are at the core of the 2030 Agenda for Sustainable Development. INSC interventions are contributing as well to cross-cutting issues and pursue direct or indirect several of the 17 Sustainable Development Goals (SDG)²⁷ on education (No. 4), gender equality (No. 5), elimination of water pollution by hazardous material (No. 6 & 14), affordable energy and combat climate change (No. 7 & 13), and effective and accountable institutions (No. 16).

The INSC is set to promote and transfer advanced nuclear safety rules, standards and practices to third countries in line with provisions of the EURATOM Treaty and a set of three Directives on radiation protection, nuclear safety, and management of radioactive waste and spent fuel²⁸ (*acquis communautaire*). High standards in Member States underpin the regulatory basis. The diversity of the national set-up in Member States, though all being compliant with the EU Directives, adds flavour to the cooperation and demonstrates that the practical implementation in specific partner countries is to fit to the national legal and industrial framework. The common denominator of all nuclear legislation are the fundamental safety principles²⁹ established by the IAEA in 2006. This unique dedicated Instrument for Nuclear Safety therefore finds its rationale in the specialised know-how needed which is available in the EU Member States and the need to support the establishment of competent and independent nuclear regulatory authorities that in turn will guarantee the deployment of the highest safety standards in the partner countries.

The Commission maintains a long-standing cooperation with IAEA and EBRD. The INSC promotes international cooperation based on conventions on nuclear safety and radioactive waste management, and the Treaty on the Non-Proliferation of Nuclear Weapons. Partner countries are encouraged to become party to these conventions allowing for an IAEA-assisted

²⁴ [Council Regulation \(EURATOM\) No 237/2014](#), 13 December 2013 establishing an Instrument for Nuclear Safety Cooperation.

²⁵ External evaluation of the INSC, Final Report, Vol I – June 2017, pages 3-7.

²⁶ EUROPE 2020 A strategy for smart, sustainable and inclusive growth, [COM\(2010\) 2020](#) final.

²⁷ The Sustainable Development Goals (SDGs) and their impact on the European SD governance framework Preparing for the post-2015 agenda, European Sustainable Development Network (ESDN), January 2015.

²⁸ EURATOM Directives on Nuclear Safety (amended 2014), Radioactive Waste management (established 2011), and Basic Safety Standards on radiation protection (amended 2013).

²⁹ Fundamental Safety Principles, IAEA, Safety Fundamentals, SF-1, 2006.

periodic peer review of relevant national systems. Conventions' summary review reports provide an external view on the state-of-play and challenges in nuclear safety.

Oversight of current international challenges is provided through meetings with IAEA, EBRD and the G7-NSSG. The Instrument has adequate flexibility to adjust to evolving challenges, as demonstrated by the response to the 'Iran Deal'³⁰ on a comprehensive intervention, as defined in the INSC Annual Action Programme for the year 2016. This expedient action realised within one year is a favourable example of the Instrument's responsiveness to international challenges. Additionally, the INSC Regulation provides a special provision for responding to nuclear accidents and emergencies.

INSC objectives are also relevant to the third country partners' needs and priorities. Compliance with the INSC Regulation, partners' policies and needs are accounted for through consultations, road maps, strategies and dedicated structures as the Joint Support Office in Kiev assisting Ukrainian partners to identify and prioritise projects eligible for implementation. Additionally, the needs assessment in Ukraine is facilitated by a dedicated supervisory board (see Box 1).

Effectiveness, impact and sustainability

To what extent does the INSC deliver results against the Instrument's objectives and specific EU priorities?

Based on the experience gained under the TACIS nuclear safety programme, the INSC consistently delivered outputs contributing to its specific nuclear safety objectives, see also Box 2. The INSC also contributed to EU cross-cutting issues, particularly well to better environmental protection and sector governance, and to a lesser extent to ownership and gender equality³¹.

A good example of effectiveness, impact and sustainability of the INSC is the completion of a National Management and Maintenance Training Centre for the Operator 'NNEGC Energoatom', which was co-funded by the EU (EUR 14 million) and Ukraine (EUR 26 million). This intervention, defined in the predecessor Instrument (INSC 2007-2013), marks the termination of the support to the revenue generating operating organisations, as they have become able to generate adequate revenues by themselves for sustaining the improved nuclear safety culture. Therefore, the current INSC

Box 1 INSC needs assessment in Ukraine

The Ukraine Supervisory Board (USB), co-chaired by the Ministry of Energy and Coal Industry and Commission services, provides an effective mechanism to support the project cycle management including a needs assessment up to the final endorsement. The USB includes the Regulator, the Radioactive waste management organisation, and the Operator.

Box 2 Response of ENSREG Working Group 1 'Improving Nuclear Safety Arrangements' to a questionnaire

INSC is "effective in delivering results contributing to nuclear safety goals. The priorities of the Instrument, first of all the cooperation with national nuclear regulatory authorities and the promotion of nuclear safety culture, are well addressed".

Questionnaire of the external evaluation.

³⁰ Agreement (16 Jan. 2016) with Iran by (E3/ EU+3) China, EU, France, Germany, Russia, United Kingdom, and United States on the Joint Comprehensive Plan of Action (JCPoA).

³¹ External evaluation of the INSC, Final Report, Vol I – June 2017, pages 5, 8, 10.

2014-2020 only supports the regulatory authorities, safe management of legacy radioactive waste and remediation, and safeguards.

The external evaluation made a profound effort to become fully informed on the specific nature of the Instrument. The Commission services recognise that an increased measurability of effectiveness and impact is to be further pursued also to facilitate the communication on performance with non-expert decision makers. However, as the focus in nuclear safety is on *preventing* incidents and accidents, a reduced rate of incidents is difficult to measure. On the contrary, the resolution of design deficiencies at nuclear power plants, which were at the basis of TACIS, could be measured directly by the replaced obsolete equipment. Correction of shortcomings in the safety culture and in the regulatory process mostly comes down to the correction of human errors, for which lasting results are more difficult to measure and to ascertain.

For these reasons, dedicated IAEA services, such as IRRS and INIR³² are relied on to improve the measurability of the assistance to the regulatory authorities. Using these services also gained support through responses to the Open Public Consultation performed by the Commission services. However, as the IRRS review imposes a significant administrative burden to the authority under review, deriving suitable metrics through a less intrusive method would be preferred as the performance indicators as put forward in the annex of the Multi-Annual Indicative Programme³³. Concerning the safe management of radioactive waste, a strategic road map in Ukraine facilitated by the Kiev-based Joint Support Office provided initially the pursued measurability with milestones at a national level, while at the regional level, the IAEA-assisted Coordination Group for Uranium Legacy Sites (CGULS) gives a suitable forum for coordinated international activities.

The executive summary of the external evaluation stressed that the “Strategy and programming documents³⁴ need increased detail”³⁵ with further developed baselines at national and regional levels. The IAEA-assisted peer review meetings of national reports for the two major conventions on nuclear safety and the safe management of radioactive waste provide an appropriate forum for such analysis with overall acceptance. Although the assets and the mandate of the INSC are well-known in the nuclear safety community, the Commission services agree that the summary findings the Conventions’ peer-review meetings³⁶ as well as the recent annual IAEA nuclear safety reviews³⁷, are to be better reflected in the INSC programming documents.

The Instrument made very limited use of external evaluations with focus on measurable changes and sustainable impact. Nevertheless, the Instrument fully complies with its legal requirements and the limited use of external evaluations is partially due to the limited resources for the implementation of the INSC programme.

³² Integrated Regulatory Review Service, Integrated Nuclear Infrastructure Review; independent expert review services organised by IAEA.

³³ [Instrument for Nuclear Safety Cooperation Multi-annual Indicative Programme 2014-2017](#).

³⁴ INSC, Multi-annual Indicative Programme 2014-2017.

³⁵ External evaluation of the INSC, Final Report, Vol I – June 2017, page v and page 13.

³⁶ [7th Review Meeting of The Convention on Nuclear Safety](#), Summary Report, 27 March – 7 April 2017; [Summary report, 5th Review Meeting of the Joint Convention of the Safe Management of Radioactive Waste and Spent Nuclear Fuel, 11 to 22 May 2015](#).

³⁷ IAEA, [Nuclear Safety Review 2016](#), GC(60)/INF/5.

Efficiency

To what extent is the INSC delivering efficiently?

INSC is a well-performing Instrument³⁵ with mechanisms and resources appropriate to support the project pipeline and the delivery of outputs. Stakeholders expressed a desire for more efficiency as well. An important factor constraining project performance is the limited absorption capacity of Partner Countries. Support arrangements provide adequate capacities comprising technical expert support (JRC) and dedicated support for the beneficiaries and end-users in Ukraine.

Centralized management of the INSC is a justified arrangement to ensure that qualified assistance is provided on the basis of high-level nuclear expertise. Centralized management in the same unit also supports close coordination of the INSC with the Instrument contributing to Stability and Peace (IcSP dealing with nuclear security).

The Instrument is also well tuned to the need for flexibility, speed of delivery and, partially, in promoting ownership. An example of increased attention to visibility of cross-cutting issues concerns the JRC's Database on Training and Tutoring which since 2015 monitors the gender and age balance in training actions, Figure 2, showing the focus on young professionals and 29% of women participants).

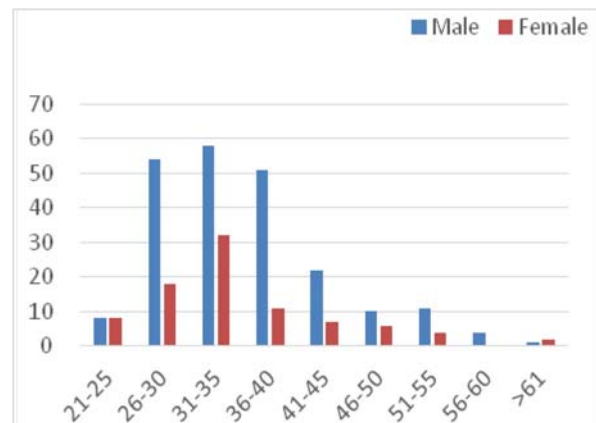
Added value

To what extent do the INSC programmes add value compared to interventions by Member States or other key donors?

The Instrument fosters unique added value as its distinctive features allow for interventions in the nuclear safety sector well beyond actions by Member States and other donors³⁸. In particular:

- i. Support by its institutional framework and engagement in international collaborations allows INSC to act at a global level, featuring specialised know-how and expertise, high nuclear safety standards and exclusive EU competences to handle nuclear safeguards.
- ii. A relatively large financial allocation and continuity of nuclear safety cooperation with a track record of over a quarter of a century.
- iii. The Instrument allows the EU to assume a leading role in nuclear safety on the basis of the advanced safety requirements and standards as established under EURATOM and by the Member States; the Instrument also allows engaging in policy and political dialogue with Partner Countries as follow-on to cooperation arrangements.

The Convention on Nuclear Safety under secretariat of IAEA has in its charter to achieve and maintain a high level of nuclear safety worldwide. The Contracting Parties have the obligation to submit every three years a national status reports and engage in a mutual peer review. The final plenary session of the 2017 peer review meeting of the Convention on Nuclear Safety



Source: JRC

Figure 2: Number of trainees male/female for age categories - INSC Training & Tutoring Project

³⁸ External evaluation of the INSC, Final Report, Vol I – June 2017, page 16.

(May 2017, Vienna) with currently 79 State Parties reflected on the worldwide achievements and identified "the implementation of the Instrument for Nuclear Safety Cooperation program for assisting non-EU countries" as one of the four good practices. In general the Instrument allows the EU to assume a world leading role in nuclear safety and permits engagement in policy level dialogue with Partner Countries and, in specific cases, triggering a political dialogue in the wake of nuclear safety negotiations as for instance with Iran³⁹.

Coherence, consistency, complementarities and synergies

To what extent does INSC facilitate coherence, consistency, complementarity and synergies (CCC&S) both internally between its own set of objectives and programmes and vis-à-vis other EFIs (see also INSC Regulation, Article 4)?

INSC mechanisms and management processes support a sound level of coherence, consistency, complementarity and synergies throughout programming and implementation.

The Commission's procedure (the Quality Support Group, the Inter Service Group, the INSC Committee) and consultations held with the ENSREG Working Group 1 'Improving Nuclear Safety Arrangements' and the Joint Research Centre are conducive to supporting internal coherence and complementarities, as ENSREG is fully informed on the requirements in the Directives and the Joint Research Centre also supports the IcSP dealing with nuclear security projects.

The external evaluation notes that an overview of Member States' and other donors' interventions is not included in programming documents. Although duplications of interventions is avoided through coordination mechanisms with EBRD or IAEA for major actions (Chernobyl, and Central Asia legacy mining for example); the mentioned mapping would contribute to transparency and accountability.

The scope for overlap and synergies with other EU's External Financing Instruments (IPA II, ENI and DCI) is limited, because of the specialised thematic focus on nuclear safety⁴⁰. As a result, even though the Instrument is well set for coordination and coherence on nuclear safety, INSC operates in relative isolation vis-à-vis other EFIs also due to its technical specificities. Nevertheless, coordination and interactions between INSC (nuclear safety) and the Instrument contributing to Security and Peace (IcSP) is well facilitated. No significant interactions have been identified with the other instruments.

Leverage

To what extent has the INSC leveraged further funds and/or political or policy engagement?

The INSC supports leverage of both political engagement and financial resources for the nuclear safety sector. The major example of this is shown in Figure 3. The EU contributions to the Chernobyl Shelter Fund and the Nuclear Safety Account have leveraged substantial contributions from EU Member States, EBRD and other donors.

Leveraging interventions with the private sector is not foreseen as nuclear safety is not a revenue generating activity which can attract private investment.

³⁹ Agreement (16 Jan. 2016) with Iran by (E3/ EU+3) China, EU, France, Germany, Russia, United Kingdom, and United States on the Joint Comprehensive Plan of Action (JCPoA).

⁴⁰ External evaluation of the INSC, Final Report, Vol I – June 2017, page 21.

With respect to policy and political engagement, the INSC has an important part in enabling the EU to play a leading role in the follow-up on challenges and initiatives identified in the G7 Nuclear Safety and Security Group. As demonstrated by interventions under both INSC-I and INSC-II, the Instrument gives the EU the opportunity to lead cooperation on nuclear safety, by providing swift reactions to be carried out within a concerted political and policy effort, In specific cases the Instrument demonstrated that it works as a door-opener for political engagement. For example, it helped obtain the engagement of Iran on a comprehensive cooperation on civil nuclear safety, once the international agreement on the Joint Comprehensive Plan of Action was reached. The policy dialogue is supported by sound coordination between Commission services, the Joint Research Centre, and the European External Action Service.

EU contributions to the EBRD funds for projects related to the Chernobyl accident

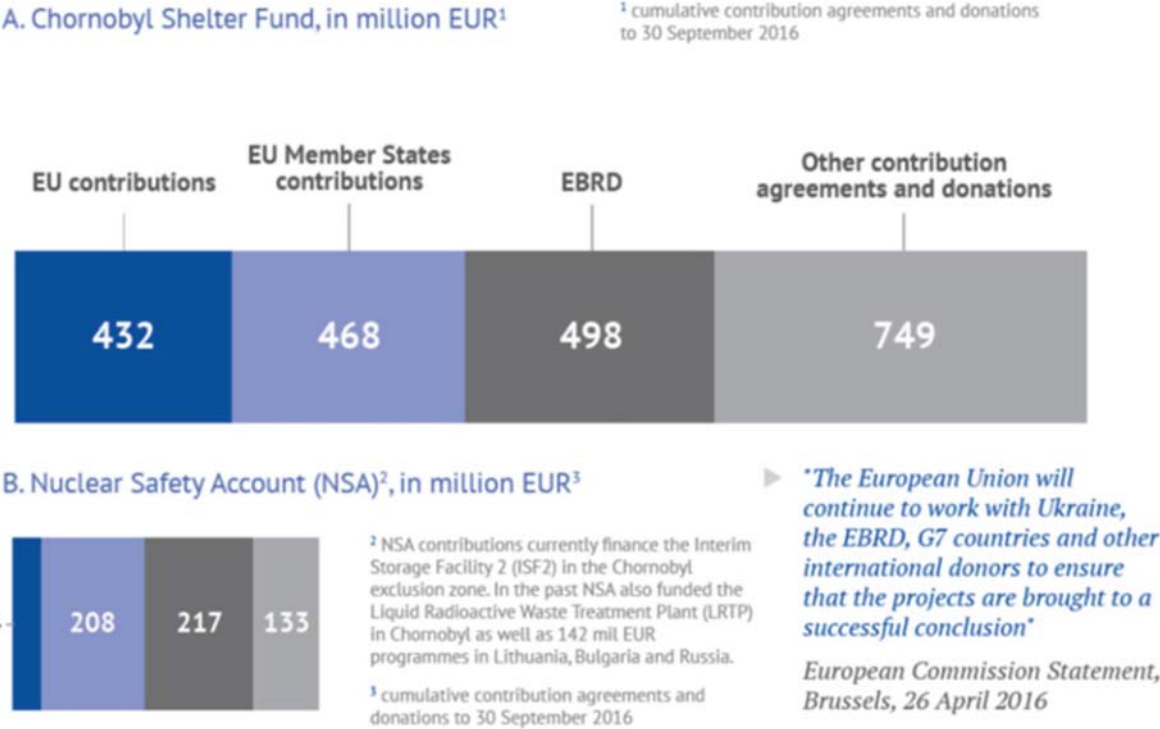


Figure 3: Major funds with contributions by EU, Member States, EBRD and other donors

6. Conclusions

The conclusions of the Commission services concern the main assessment criteria and are based on the analysis in this report. Conclusions that differ from the external evaluation are explained. The evaluation of the Commission services is confined to a retrospective analysis. Hence the recommendations of the external evaluation will be reflected without comment.

1. *The Instrument is fit-for-purpose⁴¹ with objectives in its Regulation⁴² aligned with nuclear safety priorities* as expressed in EURATOM Directives⁴³ and compatible with the relevant international Conventions and Treaties, most notably the Convention on nuclear safety, on the safe management of radioactive waste and the Treaty on non-proliferation of nuclear weapons. EU cross-cutting issues as protecting the environment and good governance are directly addressed or mainstreamed in interventions. The Instrument's highly technical content and focus on transfer of know-how with an international outreach under a centralized management are appropriate. This conclusion was supported by the stakeholder and public consultation.

2. *The Instrument adequately addresses evolving challenges and new issues* as demonstrated by the support to stress test exercises (evaluation of lessons from the Fukushima-Daiichi accident), the response to the 'Iran Deal' on engaging in a comprehensive intervention, and initiatives on environmental remediation of legacy uranium mining sites in Central Asia and now under preparation in Sub-Sahara Africa.

3. *The Instrument processes, including programming and implementation are well coordinated within the Commission services and with the Member States* which support the effectiveness, impact and sustainability of the Instrument.

Although the external evaluation supports this overall conclusion, they differ on the following:

- (i) the project cycle's measurability is insufficient;
- (ii) the Strategy and programming documents should be more results' oriented and specific as also reflected in the stakeholder consultation;
- (iii) the accountability and lessons learning capacity is insufficiently supported by Results-Oriented Monitoring (ROM) - a view also expressed by stakeholders during the open public consultation; and
- (iv) the direct and mainstreamed support to environmental protection, sector management and gender equality deserves wider visibility and recognition.

In response, the Commission services:

- (i) maintain that indicators on an improved nuclear safety culture are difficult to define as well as indicators on an improved safety of the living conditions of the population in the vicinity of radioactive legacy sites, this generally implies that the living conditions are at risk of being contaminated by an uncontrolled dispersion of radioactive material;

⁴¹ External evaluation of the INSC, Final Report, Vol I – June 2017, pages 26-27.

⁴² [Council Regulation \(EURATOM\) No 237/2014](#), 13 December 2013 establishing an Instrument for Nuclear Safety Cooperation.

⁴³ EURATOM Directives on Nuclear Safety (amended 2014), Radioactive Waste management (established 2011), and Basic Safety Standards on radiation protection (amended 2013).

- (ii) regard that the nuclear stakeholders were well informed on the INSC and its context, but recognise, as also appeared at the stakeholder consultations that the non-expert community/ civil society is insufficiently informed on the global and country-specific nuclear safety status in the programming documents, such as the INSC Strategy;
- (iii) hold that the application of monitoring actions is generally in-line with the policy of other EFIs; and
- (iv) recall that visibility of the Instrument has been given due attention as proved by the brochure assembled by the Kiev EU Delegation on the occasion of the sliding event of the Chernobyl Shelter on 29 November 2016.

4. *The INSC has been consistently delivering outputs enhancing the nuclear safety culture* with reference to the major achievement in the nuclear power sector in Ukraine with the Operator being highly motivated to roll-out save culture initiatives and the regulator now being properly competent on nuclear power plant regulation and licensing reviews, as revealed by the Case Study on Ukraine and as a result of highly committed partners. Outputs relate to an improved capacity and framework of nuclear regulatory authorities. Promoting the EU's high safety and regulatory standard worldwide, of which this case is an example, was also clearly recognised by stakeholders as a valuable role of the Instrument.

5. *Instrument's programming and implementation are coherent and provide added value* through its close coordination with relevant Commission services, Member States and the ENSREG Working Group 1 'Improving Nuclear Safety Arrangements', while the INSC promotes international cooperation. The role of ENSREG (Working Group 1) is important in the programming and results' appraisal. The INSC has achieved a sector leadership as a result of its long experience in nuclear safety cooperation with third countries. This leadership supports its prominent role in the political and policy dialogue.

Some stakeholders expressed a desire in their response to the Open Public Consultation to be more deeply involved in programming. However, the Commission services are of the opinion that the present set-up of programming strikes the right balance between stakeholder feedback and the final responsibility of the Commission services for programming. Moreover the procedure followed to consult Member States and getting their endorsement for programming documents, is in line with those for the other External Financing Instruments.

6. *The EU cooperation on nuclear safety, safe management of radioactive waste and safeguards* has unique features not to be compared with any other international action with respect to its consistent and long term support while providing comprehensive support in close cooperation with authorities, expert institutes, and companies in third countries. In selected areas a profound impact is achieved leading to a self-sustainability properly linked to international organisations to ensure that complacency is avoided with focus on continuous improvement and learning lessons from international experience.

Annex 1. Procedural information

A Mid-Term Review Report on the Instrument for Nuclear Safety Cooperation 2014-2020 is to be submitted to the European Parliament and the Council by the end of 2017 compliant to the Common Implementing Regulation (CIR) article 17 applicable fully or partially to the EU External Financing Instruments. This Mid-Term Review shall cover the period from January 2014 to June 2017. With a view to achieving the objectives of each Instrument, that report shall in addition address, the added value of each Instrument, the scope for simplification, internal and external coherence, including complementarity and synergies between the Instruments, the continued relevance of all objectives, and the contribution of the measures to a consistent Union external action. The review report shall take into account any findings and conclusions on the long-term impact and shall contain information on the leverage effect.

In line both with the Better Regulation guidelines (2015), and the requirements of the CIR, the main assessment criteria are: relevance, effectiveness, efficiency, EU added value, scope for simplification, coherence, complementarity and synergies, consistency, sustainability leverage, and impact. Evaluation issues, and questions to be further developed are set out below.

The Directorate-General for International Cooperation and Development (DEVCO) had the lead in facilitating the external evaluation whereas the Inter Service Group (ISG) of Commission services guided the evaluation process and gave feedback on intermediate outcomes.

Evaluation Questions

1. RELEVANCE

To what extent do the specific objectives (INSC Regulation, Article 2) and the design of the INSC respond to:

(iii) EU priorities and beneficiary needs identified at the time the Instrument was adopted (end 2013)?

(iv) Current EU priorities and beneficiary needs, given the evolving challenges and priorities in international context (up to mid-2017)?

2. EFFECTIVENESS, IMPACT, SUSTAINABILITY

To what extent does the INSC deliver results against the Instrument's objectives and specific EU priorities?

3. EFFICIENCY

To what extent is the INSC delivering efficiently?

4. VALUE ADDED

To what extent do the INSC programmes add value compared to interventions by Member States or other key donors?

5. COHERENCE, CONSISTENCY, COMPLEMENTARITY AND SYNERGIES

To what extent does INSC facilitate coherence, consistency, complementarity and synergies (CCC&S) both internally between its own set of objectives and programmes and vis-à-vis other EFIs (see also INSC Regulation, Article 4)?

6. LEVERAGE

To what extent has the INSC leveraged further funds and/or political or policy engagement?

Annex 2. Synopsis report of the stakeholders' consultation

Part A – OPEN PUBLIC CONSULTATION

Introduction

The Open Public Consultation on the INSC evaluation was launched on 7 February 2017, jointly with such consultations of the other External Financing Instruments, and lasted for over a 12-week period ending on 8 May 2017. Summary data, see Table 1, show how overall, the INSC consultation achieved a reasonable response rate in comparison with the other EFIs, with responses received from a wide range of stakeholders. In total 51 reactions were obtained with 20 reactions from associations and organizations and 11 from public authorities. Reactions of respondent who did not object their opinion to be publicised are available at an EU website.

Table 1: Response rate to the OPC on EU's EFIs

Category of respondent	Respondents		Share of total
	Total	INSC	
Citizen/individual	8	2	25%
Consultancy	2	1	50%
EU platform, network, or association	12	7	58%
Industry, business or workers' organisations	8	5	63%
Organisation or association	62	20	32%
Other	2	2	100%
Public authority	25	11	44%
Research/academia	5	3	60%
Total	124	51	41%

Source: Altair Asesores' calculation based on OPC responses received until 8 May 2017.

Summary of OPC contributions on INSC

Question 1: How well do you think the INSC has addressed its objectives?

The main assessment criteria for the evaluation are: relevance; effectiveness, impact and sustainability; efficiency; EU added value; coherence, consistency, complementarity and synergies; and leverage. Feel free to comment on the findings, conclusions or recommendations for any/all of the criteria.

Summary of contributions

The 18 relevant responses generally support the evaluation findings on INSC as expressed in the final draft evaluation report published on the internet site of the OPC. The majority of responses provide specific recommendations aligned to conclusions and recommendations set out in the evaluation. The responses mainly confirm the identified lack of monitoring. Some improvements beyond the evaluation findings are identified (e.g. on prioritisation specific INSC-actions or on increasing the INSC budget). Responses did not challenge the findings.

Views of public authorities

The 6 responses are generally supportive to the findings; dissenting views on the evaluation's conclusions or recommendations are not expressed. It is suggested to improve the efficiency (EQ3). INSC-actions on strengthening the legal framework of neighbouring countries are welcomed as well as INSC actions in countries facing the consequences of the Chernobyl accident. Some concrete suggestions (EQ1, EQ2, EQ3) concern:

- (a) Provision of a “complementary contribution” by the beneficiary country as a guarantee;
- (b) A suggestion for a supplementary review cycle involving:
 - Annual communication of all INSC project proposals to the EU Member States to allow the latter to make recommendations on the INSC's geographic and thematic priorities;
 - The Commission should take the MS's recommendations into account and submit the proposals to the group of experts who, in turn, should issue their recommendations;
 - Based on Taking all recommendations into account, the INSC Committee should decide which proposals are retained; the process should foresee a consultation of ENSREG WG1 at programming level, even when time constraints render this consultation difficult (e.g. 2018-2020);
- (c) Creation of a streamlined methodology and evaluation framework (similar to other EFIs):
 - Improvement of the action documents having more details on inter alia, the legal framework in partner countries, other donor actions (IAEA, EBRD, G7), and with follow-up projects to set up an evaluation framework to avoid redundancies;
 - Communication of the provisional calendar of calls for tender to the INSC Committee at the presentation of the annual work plan and regular information in writing to this Committee of the results of the calls for tender;
 - Presentation by DEVCO of an evaluation report to the INSC Committee at the end of each project, in line with INSC Regulation;
 - More efficient project management modalities allowing for a larger impact in partner countries including some specific comments on criteria for no-key experts at regulatory/ TSO level and tender specifications as language skills and hiring local staff.

The added value of the INSC (EQ4) is underlined with two recommendations on complementarity, coherence and synergies (EQ5): (i) the INSC should remain a separate Instrument with the legal basis of EURATOM and exclusively dedicated to nuclear safety; not to be merged with the IcSP (strengthening INSC/IcSP links should only be done with respect to the INSC's strict scope); and (ii) coordination between the INSC and the IRRS Peer Review service of the IAEA should be enhanced.

Organisation or association

The two responses have no relevance to the evaluation report. One of the two responses mentions only the word ‘coherence’ without any qualification.

Industry, business or worker's association

The 5 responses are aligned with the findings of the evaluation all highlighting the relevance, effectiveness and the efficiency of the INSC. To maximise the Instrument's results, the selection of partner countries should be reviewed. The unique added value of the INSC is stressed with specific recommendations: (i) optimize the prioritization of objectives; (ii) follow-up of project and programming documents be more transparent; (iii) consider interests of the European industry; (iv) enforce monitoring and assessment mechanisms (project-level evaluation, impact assessment, and assessment of results); (v) respect timelines for tendering procedure and give visibility to bidding organizations in particular for planning

of resources; (vi) facilitate and extend the participation of the European industry to INSC projects together with EU regulators.

The INSC's budget reduction is considered regretful although the objectives remain as ambitious as initially. An opinion states that the mid-term evaluation is disappointing because allocated resources failed to achieve the Instrument' objectives and recommends an increase of the budget.

Moreover, reactions point out that partner countries should provide a financial contribution to the EC in return for INSC assistance. Finally, the INSC's important leverage role is stressed by stating that terminating the INSC would significantly weaken the EURATOM/EU's role in promoting the EU's high safety and regulatory standards world-wide. The response underlines that the INSC provides a favourable basis for political dialogue and promotion of EU priorities at global level, e.g. the Iran Deal on nuclear safety cooperation.

Research/academia

Two responses praise the relevance of INSC (EQ1) with reference to the completion of the Chernobyl's New Confinement.

Citizen/private individuals

The one received comment has no relevance to the evaluation report.

Consultancy

One response mostly aligned with the evaluation findings provides useful recommendations:

- (i) QSG feedback should be analysed to improve the design of INSC projects;
- (ii) Mechanisms should be created to ensure that JRC's institutional memory is adequately transferred to the other services of the European Commission;
- (iii) Projects' specific objectives and indicators should be formulated to allow for a measurement of cross-cutting issues;
- (iv) TORs should be drafted in a way that binds the beneficiaries of the INSC-projects to timely provide all required information and ensure speed of delivery;
- (v) Joint project implementation (contractor/end-user) should be favoured where possible in order to foster ownership;
- (vi) Cooperation with IAEA should be further improved, especially as regards streamlined project management/monitoring and policy dialogues with the partner countries;
- (vii) A results/outcome-based approach should increase coherence between different INSC projects (e.g. parallel actions benefiting a regulator, on the one hand, and an operator, on the other hand);
- (viii) Partner Country expertise in nuclear safety (acquired through TACIS/INSC) should be included in new INSC projects to promote ownership, facilitate the adoption of changes in "newcomer" countries and foster bilateral cooperation for the benefit of leverage;
- (ix) Training and Tutoring (T&T) projects should be continued as an important (bottom up) element of the INSC's leverage.

Other

The one received contribution confirms the findings of the evaluation and in particular the unique added value of the Instrument. The transfer of EU know-how and expertise under the INSC should constantly be updated in accordance with the applicable EU standards and be tested on all applicable installations, including the new generations of reactors. It also favours

cooperation between EU regulators and TSOs with a view to harmonise nuclear safety standards.

Response of the Evaluation Team

The OPC responses converge toward the Instrument evaluation and generally confirm the findings, conclusions and recommendations of the draft evaluation report. Overall consensus exists on improving INSC monitoring, both at instrument level and project level.

On the request to enhance the INSC's efficiency, the evaluator refers to the recommendation to *Reinforcing results delivery*. The evaluator supports the endorsement of the INSC's unique added value, as well as the confirmation of the INSC's role on leverage. The evaluator supports the view to maintain the INSC as a separate instrument, and the suggestion to enhance coordination with the IAEA's IRRS review service.

The evaluator welcomes the operational recommendations, e.g. an enhanced involvement of the EU Member States and EU regulators at project and programming level, an enhanced involvement of the INSC Committee in the tendering process, end-of-project results reporting, optimisation of prioritisation, enhanced transparency in project follow-up, etc. However, the evaluator does not endorse recommendations relating to an increased participation of the European industry as the INSC is not aimed at promoting the EU nuclear industry but exclusively aimed at promoting nuclear safety.

On comments on the INSC's budgetary cutback, the evaluator acknowledges the significant budget reduction from INSC-I to INSC (some 60%) but nevertheless concludes that (i) the INSC's financial resources are adequate for targeted support, and (ii) the budget resources for cooperation is well beyond the reach of Member States (some EUR 30 million per year). The international collaboration platforms (IAEA, EBRD, G7, etc.) facilitate co-financing arrangements, which also increase the reach of the Instrument. In the G7 context, pledging conferences are held on an ad-hoc basis to the benefit of Chernobyl, at which the EC usually pledges substantial amounts triggering additional pledges by other donors. The evaluator therefore differs with the suggestion that the INSC's mid-term review is disappointing because allocated resources have failed to achieve all the objectives. The evaluation's overall conclusion is, on the contrary, that the Instrument is well fit to its purpose. The evaluator key recommendation to develop result orientation and measurability will provide quantifiable evidence of the Instrument's contributions to its objectives.

Concerning the increase of coherence between different INSC projects (e.g. parallel actions benefiting a regulator, on the one hand, and an operator, on the other hand), the evaluator notes that it is unusual that support is provided to operators under INSC because of the fact the INSC exclusively promotes nuclear safety and does not promote nuclear energy.

On the comment expressing a need for updating the transfer of EU know-how and expertise, the evaluator is of the opinion that this occurs automatically given that INSC actions are tailor-made for the beneficiary country's proposed project and takes account of the applicable technology. The evaluator also observes that it is highly unlikely that INSC-action will be called upon to ensure nuclear safety of GEN-III or GEN-IV reactor technology. As to comments on cooperation between EU regulators and TSOs to ensure harmonisation of nuclear safety, the evaluator refers to the recommendation on *Cooperation of nuclear safety*

should be pursued and reinforced. This cooperation should also imply EU cooperation in order to strengthen its transfer of solid know-how and expertise on nuclear safety.

One recommendation supported by different stakeholders is that national contributions to nuclear safety programmes should be sought to increase ownership. The evaluator fully agrees with this approach, as this measure would not only strengthen ownership, but also favours sustainability while leveraging additional resources to support nuclear safety goals.

Question 2: Do you consider that concentration on accession countries and countries in the European neighbourhood area is appropriate?

Please give reasons to support your view.

Summary of contributions

The received 13 relevant responses all support the evaluation finding, that the INSC's focus on accession countries and countries in the European neighbourhood area is appropriate. The reasons given include (i) this is in the interest of the EU and protects the EU from nuclear and radiation hazards; (ii) these countries are more inclined to successfully cooperate with INSC-actions and absorb/implement INSC know-how; and (iii) at present, the regulatory framework of many of these countries does not comply with the international safety standards.

Some stakeholders (all belong in the category Industry, Business and Workers' Organisations) clarify that, even though it is important that INSC focuses on the European neighbourhood area, its geographical scope should not be confined but should continue to be of a global nature. None of the stakeholders suggest to confine the INSC's focus to accession countries and countries in the European neighbourhood area; the unique added value concerns its global reach.

Views of public authorities

The 3 responses do not challenge the evaluation findings, conclusions and recommendations. Responses stress the key role played by INSC in strengthening nuclear safety in the European neighbourhood. Given the geographic proximity, a severe accident would likely affect the EU Member States. Hence, an improved nuclear safety in the European neighbourhood area enhances the radiation protection in the EU against effects from accidents in third countries. The INSC is recommended to continue strengthening the legal framework of countries in the European neighbourhood area. This is particularly important for the regulatory framework of countries licensing or first constructing a new nuclear power plants, the long-term operation of nuclear power plants, and nuclear waste management. The need to support countries facing the consequences of the Chernobyl accident is underlined.

Organisation or association

The two respondents support the INSC's concentration on accession countries and countries in the European neighbourhood area is appropriate. In particular, they recognize the relevance of nuclear safety in accession countries and countries of the European neighbourhood area for Europe's own nuclear safety and underline these countries' tight cooperation links with the EU.

Industry, business or worker's association

The four contributions stress that, despite the importance to focus on the European neighbourhood, its geographical scope should not be confined to this area but remain its

global nature. The importance was stressed of closely coordinating actions with other donors. Geographically, support to Ukraine and Armenia is highlighted with regard to the European neighbourhood while at a global level, following regions are highlighted: Africa, the Middle East, South East Asia, Central Asia (Kirgizstan) and Latin America (Brazil and Argentina). The INSC's unique added value to engage in nuclear safety cooperation with third countries is underlined. Indeed, the INSC's key role is highlighted in disseminating a European safety culture and European solutions for the management of radioactive waste and spent fuels world-wide: on the one hand, the INSC enables the EU, with a mature nuclear industry and a leading EURATOM regulatory framework, to cooperate with third countries promoting nuclear activities are in line with highest standards of nuclear safety and security, and on the other hand, the INSC enables EURATOM to participate in joint actions with the IAEA.

Research/academia

The only response converges with the evaluation finding that INSC's focus on accession countries and countries of the European neighbourhood area is appropriate. It highlights that nuclear accidents pose very high safety concerns and that radiation is not contained by borders.

Citizen/private individuals

One short comment agrees with the concentration on accession countries and the European neighbourhood as such adequately increases the INSC's impact in those countries.

Consultancy

The received contribution highlights the importance of the INSC's focus on accession countries and countries of the European neighbourhood area. Reference was made to the ageing, obsolete equipment used in nuclear power and nuclear waste disposal infrastructure in the Newly Independent States (NIS), whose regulatory structures do not meet international safety standards. Additionally, the NIS' dependence on nuclear energy is likely to continue and even to increase due to an economic and political impossibility to diversify their energy mix. It identifies this as a commercial opportunity for the EU industry and recommends that the latter seeks support from countries in the Eastern European neighbourhood that already developed nuclear safety experience, such as Ukraine. It also links the INSC to the IcSP by stating that INSC should give a priority to countries that support EU security and peace-building policies and quotes Jordan as an example. The response also notes that the INSC's focus on accession countries and countries of the European neighbourhood area has decreased since 2013 and draws the attention to INSC actions in China, South-East Asia, Tanzania and Iraq.

Other

The one contribution agrees with the draft evaluation finding that the geographic priority is appropriate, as such corresponds with the interests of the EU and EURATOM Community. It adds that INSC-cooperation outside this area is legitimate if it serves EU interests.

Response of the Evaluation Team

The OPC responses confirm the assessment of the evaluator on the appropriateness of the INSC's concentration on accession countries and countries in the European neighbourhood.

Key is the qualified statement emphasising that the INSC's priority to accession countries and the European neighbourhood should not obstruct the Instrument's global reach. This

statement is fully in line with the evaluator's assessment. The evaluator supports the Instrument's focus on its close neighbourhood but emphasizes not to preclude the INSC's global reach. The EU's international pivotal role in nuclear safety matters is crucial in the light of the transboundary effects of nuclear accidents. Hence, the evaluator fully endorses the voiced unique added value of the INSC which, thanks to its distinctive features, mobilizes a critical mass with specialized expertise in the EU, disseminating the high nuclear safety standards of the EU Member States, and exclusive competences to handle nuclear safeguards under EURATOM.

The evaluator does not endorse an additional comment that "*NIS' dependence on nuclear energy represents a commercial opportunity for the EU industry*" and the associated recommendation that the latter are to seek support from countries in the Eastern European neighbourhood with nuclear safety experience, e.g. Ukraine. The issue is not pertinent to the discussion of the Instrument and its evaluation. The evaluator stresses that INSC is not aimed at supporting any commercial activities relating to nuclear energy but exclusively aimed at promoting nuclear safety and that INSC objectives are typically non-revenue generating activities (waste remediation, regulatory support) with the sole aim to strengthen nuclear safety.

The evaluator does not endorse either an additional suggestion that INSC should prioritize countries that support EU security and peace-building policies, e.g. Jordan. The INSC's eligibility rules are set out in the INSC Regulation (adequately referring to CIR) and the evaluator's position is that, even though the link between safety (INSC) and security (IcSP) deserves strengthening, the INSC should be maintained as a separate instrument from IcSP.

Question 3: If you have any other views on the INSC you would like to share they are welcome here

Summary of contributions

A total of 14 relevant responses addressed the INSC mostly supportive to the evaluation findings. Some contributions lack relevance and not taken into account. However most responses provide pertinent recommendations with a view to further strengthen the Instrument.

Views of public authorities

The three contributions stress that the INSC be kept as a separate instrument.

Organisation or association

The one response merely recommends that the INSC should not be discriminatory in nature.

Industry, business or worker's association

The 4 responses are all in agreement with the evaluation findings. One response concerns that the selection criteria for INSC contractors should not be limited to only the regulatory experience, but also credit implementation experience in order to improve the execution of projects. A better exploitation of the regional centres of excellence is recommended. The separation from security is stressed together with preserving and strengthening the budget.

Research/academia

One of the two contributions is irrelevant and the other is discussed under Question 2.

Citizen/private individuals

The two received comments lack relevance to the Instrument evaluation.

Consultancy

The only one response converges with the evaluation findings and strengthens some of the recommendations: (i) Recommendation 2 should include End-of-Project Results Reporting (to illustrate INSC achievements and continuity of INSC support), allowing for the creation of baselines for further planning; (ii) Recommendation 3 should include tangible targets in terms of cross-cutting issues in INSC project design (e.g. target values for tangible indicators for improved governance, environmental measures, etc.); and (iii) Recommendation 4 (“opening up”) should take account of the EU Delegations’ frequent reluctance to be involved in INSC projects and their involvement should, hence, be institutionalised, e.g. on INSC leverage (irrespective of the INSC’s centralized management, which is appropriate for its objectives).

Other

The one response recommends to improve the INSC’s governance to allow for an effective transfer of know-how and expertise of EU regulators and TSOs. The response is also favours more cooperation with EU regulators and TSOs with a view to harmonising nuclear safety.

Response of the Evaluation Team

The OPC responses generally confirm the assessment of the evaluator. The evaluator concurs with the comments that the INSC should be maintained as a separate instrument and should not formally or informally be merged with IcSP.

With respect to the recommendation that the INSC should not discriminate, the evaluator refers to the eligibility criteria of the INSC Regulation and CIR. The On suggestions relating to Recommendations 2, 3 and 4, the evaluator welcomes these suggestions, which do not contradict the evaluation findings. On the general recommendations to improve INSC’s governance and selection process, the evaluator refers to Recommendation 2 *Strengthening measurability and effectiveness*.

Part B – TARGETTED CONSULTATIONS

Policy Forum for Development: consultation with Civil Society

The Consultation was held on March 23 2017 at the Policy Forum for Development. The consultation offered the opportunity of meeting with a large number of civil society and EC stakeholders; however the discussion was short and for all the EFIs evaluations the time dedicated was limited to two hours.

The INSC evaluation was presented, following the presentation of the other EFIs evaluations. Specific comments was not raised on the INSC evaluation. Most participants expressed a need to strengthen the role of Civil Society participation in EU Cooperation.

Technical Seminar with Member States Representatives

On the 27 of March was held a Technical Seminar for Council, European Parliament and Member States in Van Maerlant building in Brussels. Following the presentation of the evaluation findings, conclusions and recommendations there was an exchange with participants. Minutes were taken by the evaluation team and comments recorded for possible adjustments to the report. Overall participants expressed views favourable with evaluation outcomes and no comment was raised to dispute findings.

One participant expressed a positive assessment on the SWOT analysis carried out to identify opportunities and constraints of a possible merge of the Instrument with the IcSP. The evaluation team evidenced the need to strengthen the nexus between nuclear safety and security across the Instrument interventions. However the analysis of whether the Instrument should be merged or not goes beyond the scope of the evaluation. The analysis of opportunities and threats clearly evidenced the advantages to maintain the INSC as a separate instrument, also in consideration of the high level of specialization and its specific mandate.

Other comments addressed security issues and the nexus safety - security, and one participant evidenced how security should be an exclusive competence of the Member States. The evaluation team pointed to the specific evaluation recommendation for strengthening the linkage of the Instrument with security issues and the need to strengthen existing complementarities and synergies across the INSC and IcSP. The Instrument according to the evaluator should be faithful to its mandate and not intervene in security issues while linkages with security should be strengthened.

Questions were also addressed about criteria for selection of beneficiary Countries and geographic scope of the Instrument. The evaluation team responded that eligibility criteria are defined by the Instrument regulations and have been assessed by the evaluation as relevant and adequately designed.

Another comment was made on how to address an improved sustainability of interventions. The evaluation team recommended strengthening sustainability through improved design and analysis of sustainability factors, during design and implementation; also adequate exit strategies need to be developed for each intervention.

A participant enquired about how the evaluation assesses the dialogue with Member States and could Member States play an increased role in the Instrument programming. The evaluation team confirmed the finding of an existing structured dialogue and the specific

recommendation to strengthen this dialogue and to strengthen the role of ENSREG Working Group 1 ‘Improving Nuclear Safety Arrangements’ also to support programming and follow-up of the Instrument’s interventions.

Meeting of Council Working Party on Atomic Questions

On 10 April 2017, the evaluator presented the Draft Final Report to the Council Working Party on Atomic Questions (WPAQ) at the Justus Lipsius building. Most EU Member States (27 out of 28) attended the meeting. The debate on the INSC concerned a support (i) to maintain the legal basis under EURATOM, and (ii) to leave the geographic scope unchanged with focus on neighbourhood and pre-accession countries but including a world-wide coverage.

Another response concerned to pursue compliance of partner countries with provisions of the Convention on Nuclear Safety. However, the INSC has no mandate and is not designed for this purpose; leading by example by EU Member States is a way forward in this area.

The need for transparency and freely accessible project implementation reports was advocated where further transparency is supported by the evaluation as well as access to concise information on completed projects (access to implementation reports may be difficult due to proprietary and confidentiality issues).

INSC Committee

On 4 May 2017, the evaluator presented the Draft Final Report of the INSC Mid-Term Evaluation to the INSC Committee in Brussels (Borschette). The Member States attending the meeting were Austria, Belgium, Croatia, the Czech Republic, Denmark, France, Italy, Lithuania, Slovakia, Spain and Sweden. The meeting was partially presided by DG DEVCO. The debate centred on the absence of sufficient indicators, the measurability of the INSC performance, on improving the INSC’s public communication, on the methodology of the Mid-Term Evaluation, on the encouragement by INSC to partner countries to ratify international nuclear safety conventions, on ex-Soviet waste management within the INSC and on the appropriateness to maintain a distinction of the INSC under the EURATOM and the IcSP under the legal basis of the EU.

Annex 3. Acronyms

AAP	Annual Action Programme
AD	Action Document
BSS	Basic Safety Standards
CBRN	Chemical, Biological, Radiological, and Nuclear
CCC&S	Coherence, Consistency, Complementarity and Synergies
CGULS	Coordination Group for Uranium Legacy Sites
CIR	Common Implementing Regulation
CNS	Convention on Nuclear Safety
CSF	Chernobyl Shelter Fund
DAC	Development Assistance Committee (of OECD)
DG DEVCO	Directorate-General for International Cooperation and Development
DG ENER	Directorate-General for Energy
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ECA	European Court of Auditors
EDF	European Development Fund
EEAS	European External Action Service
EESC	European Economic and Social Committee
EFI	External Financing Instrument
EIA	Environmental Impact Assessment
ENSREG	European Nuclear Safety Regulators Group
ENSREG WG1	ENSREG Working Group 1 'Improving Nuclear Safety Arrangements'
EU	European Union
EURATOM	European Atomic Energy Community
IAEA	International Atomic Energy Agency
IcSP	Instrument contributing to Stability and Peace
INIR	Integrated Regulatory Review Service
INSC	Instrument for Nuclear Safety Cooperation
IPA	Instrument for Pre-Accession
IRRS	Integrated Regulatory Review Service
ISC	Inter-service consultation
ISG	Inter-Service Group
JCPoA	Joint Comprehensive Plan of Action
JRC	Joint Research Centre
JSO	Joint Support Office
LTO	Long-Term Operation
M&E	Monitoring and Evaluation
MAN	Management Support

MFF	Multiannual Financial Framework
MIP	Multi-annual Indicative Programme
MS	Member State
MTR	Mid Term Review
NIP	National Indicative Programme
NPP	Nuclear Power Plant
NPT	Non-Proliferation Treaty
NRA	Nuclear Regulatory Authority
NRC	Nuclear Regulatory Commission
NSSG	Nuclear Safety and Security Group
OECD	Organisation for Economic Co-operation and Development
OJT	On Job Training
OSART	Operational Safety Review Team
PAGODA	Pillar Assessed Grant Or Delegation Agreements
QSG	Quality Support Group
ROM	Results-Oriented Monitoring
SNRIU	State Nuclear Regulatory Inspectorate of Ukraine
T+T	Training and Tutoring
TACIS	Technical Assistance to the Commonwealth of Independent States
ToR	Terms of Reference
TSO	Technical Support Organisation
USB	Ukraine Supervisory Board
WENRA	Western European Nuclear Regulators Association
WPAQ	Council Working Party on Atomic Questions

Annex 4. External evaluator's report, including its annexes

The external evaluation can be found here: https://ec.europa.eu/europeaid/public-consultation-external-financing-instruments-european-union_en