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

**Evaluation of the implementation of the Instrument for Nuclear Safety Cooperation
(INSC) during its first three years (2007-2009)**

{SEC(2011) 1199 final}

FOREWORD

The Council Regulation establishing an Instrument for Nuclear Safety Cooperation, referred here below as the INSC Regulation,¹ requires, under Article 21, that (besides a report on progress as per Article 18) the Commission submit a report to the European Parliament and the Council evaluating the implementation of the INSC regulation during the first three years of the programme².

As part of the evaluation process, the Commission contracted a group of independent experts to conduct an evaluation of the implementation of the programme from 2007 to 2009. The experts were selected on the basis of their experience in the field of nuclear energy, nuclear safety, radioactive waste and spent nuclear fuel management.

The full expert report on the actions carried out by the Commission under the Annual Action Programmes (AAPs) 2007 to 2009 is available as an accompanying Commission Staff Working Document³. This document only engages its authors.

The present Report is the evaluation by the Commission, taking into account the Commission's INSC *Progress* Report for 2007-2009⁴ and the above-mentioned expert report.⁵

¹ Council Regulation (Euratom) No 300/2007 of 19 February 2007 (OJ L 81, 22.3.2007, p. 1).

² Art. 21 – Review - of the INSC Regulation requires that "Not later than 31 December 2010, the Commission shall submit to the European Parliament and the Council a report evaluating the implementation of this Regulation in the first three years together, if appropriate, with a legislative proposal introducing the necessary modifications to the instrument."

³ Commission Staff Working Paper – External evaluation report on the implementation of Council Regulation (EURATOM) N.300/20047 (Instrument for Nuclear Safety Cooperation) in the period 2007-2009 Accompanying the document "Report from the Commission to the European Parliament and the Council on the evaluation of the implementation of the Instrument for Nuclear Safety Cooperation (INSC) during its first three years (2007-2009)" - SEC(2011)xxx

⁴ Report from the Commission to the European parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the implementation of the Instrument for Nuclear Safety Cooperation. First Report - Annual Action Programmes for 2007, 2008 and 2009, in accordance with Article 18 of the INSC Regulation.
Ref COM(2011) 111 final of Brussels, of 10.3.2011,
<http://register.consilium.europa.eu/pdf/en/11/st07/st07637.en11.pdf>

⁵ The impacts of the Fukushima-Daiichi accident which occurred on 11 March 2011 falls outside the scope of this report; the lessons learned as a result of the accident will be incorporated into the Multi-annual Indicate Programme 2012-2013 and in subsequent Annual Action Programmes as appropriate. Nothing that has happened in connection with the Fukushima-Daiichi accident changes the conclusions presented in this report.

1. INTRODUCTION

In 1991, the Commission launched the Nuclear Safety component of the TACIS programme⁶ to address the safety concerns raised by the Chernobyl accident. Between 1991 and 2006, more than €1.3 billion were committed to nuclear safety projects. Since 2007, the EU's nuclear safety assistance and cooperation activities have continued under the Instrument for Nuclear Safety Cooperation (INSC), with a financial reference amount of €524 million for the implementation of the Regulation over the period 2007 to 2013. The INSC introduced a number of changes compared to the TACIS nuclear safety programme which are worth noting.

The INSC extended the geographical coverage to *third countries*⁷ worldwide. This has allowed the Commission's experience gained with ex-Soviet countries to be used elsewhere to address the needs of emerging countries, as well as countries with established nuclear power programmes in need of nuclear safety improvement, in particular those with rapidly expanding nuclear programmes. In 2008, the Commission proposed a strategy⁸ to address the international challenge of nuclear safety and security. Subsequently the Council formulated a set of criteria to be observed when considering and prioritising projects with new partner countries⁹ which the Commission took into account in its revised INSC Strategy for 2010-2013, which also includes geographical priorities.

The strategic framework for the implementation of the INSC programme during the first three years is constituted by the Nuclear Safety Strategy 2007-2013 for Community Cooperation Programmes and Indicative Programme 2007-2009 of 1 August 2007 (C(2007)3758). The Annual Action Programmes (AAPs) for 2007, 2008 and 2009 provided details on the actions to be undertaken by the Commission. The Strategy, the Indicative Programme and the Action Programmes received favourable opinions from the INSC Committee.

The objectives of the INSC Regulation are defined in its Article 1:

- the promotion of a high level of nuclear safety;
- radiation protection, and
- the application of efficient and effective safeguards of nuclear material in third countries.

These objectives were to be achieved through the implementation of measures stipulated in article 2 of the INSC Regulation:

- Support for regulatory authorities;

⁶ TACIS (Technical Assistance to the Commonwealth of Independent States) is the European Commission programme to assist 12 countries of Eastern Europe and Central Asia (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan) and Mongolia in their transition to democratic market-oriented economies.

⁷ 'Third countries' are countries outside the EU, excluding those covered by the Pre-Accession Instrument.

⁸ Commission Communication "Addressing the international challenge of nuclear safety and security", COM (2008) 312 final, 22 May 2008.

⁹ Council Conclusions on assistance to third countries in the field of nuclear safety and security, 9 December 2008. http://www.consilium.europa.eu/uedocs/cms_Data/docs/pressdata/en/trans/104601.pdf

- Improvements in the design, operation and maintenance of existing nuclear installations;
- Safe transport and disposal of spent nuclear fuel and radioactive waste;
- Development and implementation of strategies for decommissioning and site remediation;
- Promotion of effective regulatory frameworks for radiation protection;
- Establishment of regulatory framework and methodologies for nuclear safeguards;
- Prevention of accidents and mitigation of their consequences, should they occur, and
- Measures to promote international cooperation in the above fields.

The Indicative Programme for 2007 - 2009 elaborated further on the specific intervention areas and the proposed budget for the implementation of the above measures.

2. IMPLEMENTATION OF THE PROGRAMME

The activities of INSC are implemented by the European Commission by centralised management. Under the AAPs for 2007, 2008 and 2009, some 50 projects were approved. The projects are at various stages of implementation. Details on the sums originally allocated and contracted by mid-2010 are provided in Table 1.

Table 1 -Summary of Programme implementation by sector and by year (€million)

Cooperation / Assistance area	AP 2007		AP 2008		AP 2009		Total	
	Allocated	Contracted	Allocated	Contracted	Allocated	Contracted	Allocated	Contracted
On site assistance and support to operators	28.900	19.185	18.355	1.300	21.300	2.000	68.555	22.485
Regulatory Authorities	4.600	1.500	6.700	2.000	10.700		22.000	3.500
Waste Management	1.500	1.490	11.000	2.000	7.000		19.500	3.490
Safeguards			0.500				0.500	0
Multi-country/ Regional projects	1.500	1.344	9.000	5.461	3.500	3.333	14.000	10.138
Chernobyl NSA and CSF	10.000	10.000	25.700	25.700	24.700	24.700	60.400	60.400
IAEA Cooperation	2.000	2.000			6.500	6.500	8.500	8.500
TOTAL	48.500 (Note 1)	35.519	71.255	36.461	73.700	36.533	193.455 (note 2)	108.513

Note (1) €76.772 million with the €28.272 million included that was de-committed after the Russian Federation did not conclude the 2007 Financing Agreement.

Note (2) €21.727 with the €28.272 million included that was de-committed after the Russian Federation did not conclude the 2007 Financing Agreement.

Each of the specific INSC measures referred to in the Introduction were addressed by one or more projects. The expenditure by area of cooperation is indicated in table 2 and compared with the amounts which had been foreseen in the Indicative Programme for 2007-2009. The largest proportion of funds was allocated to the "Promotion of an effective nuclear safety culture" and "Participation in International Funds". Expenditures on "Safeguards" fell particularly short of the indicative target.

The divergence between the Indicative Programme and the approved projects and expenditures results partly from the requests from the beneficiaries, the possibility to implement projects and the re-allocation of funds initially intended for the Russian Federation. As far as safeguards projects are concerned, coordination with projects funded under Priority 1 of the Instrument for Stability (IFS)¹⁰ in the domain of illicit trafficking of Chemical, Biological, Radiological and Nuclear (CBRN) Materials and agents led to the conclusion by some Member States that nuclear safeguards projects should also be dealt with in the framework of the IFS. As a result, the Commission limited the definition and implementation of safeguards projects under the INSC.

Table 2 – Allocation of funds by area of cooperation / assistance

	Measure / cooperation area⁽¹⁾	Indicative Percentage⁽²⁾ (%)	Actual Percentage⁽³⁾ (%)
1	Promotion of an effective nuclear safety culture - Support to regulators - Support to operators	25 (10) (15)	(47) (12) (35)
2	Safety of nuclear installations - Safety assessment and engineering support to operation - Safety-related improvements and modernisation	11 (5) (6)	5 (5) (0)
3	Safety of radioactive wastes and spent nuclear fuel management, including environmental remediation of former nuclear sites - Waste management & Decommissioning, Decontamination and Remediation	20	10
4	Safety and accountability of nuclear materials - Safeguards, illicit trafficking, - Radioisotope Thermoelectric Generators (RTG's), orphan sources & research reactors	14 (8) (6)	0.25
5	Off-site emergency preparedness	4	1
6	Participation in International Funds (Chernobyl and Northern Dimension Environmental Partnership (NDEP))	20	31
7	Technical support	6	6
	TOTAL	100	100

Note (1) According to the Indicative Programme for 2007-2009
(2) The total allocation for the 2007 – 2009 was €217 million
(3) Ref the Commission report on the implementation of the INSC for the period 2007 – 2009⁴

¹⁰ Regulation (EC) No 1717/2006 of the European Parliament and of the Council of 15 November 2006 establishing an Instrument for Stability [Official Journal L 327, 24/11/2006].

The allocation of funds by region / country and the progress in the geographic expansion of the INSC programme beyond the former Soviet Union is illustrated in Table 3.

Table 3 -Summary of Programme implementation by Region / Country¹¹ (€)

Region/ Country	2007	2008	2009
Russian Federation	31.272.000 (1)	3.500.000 (2)	2.000.000
European Neighbourhood Policy (ENP) East			
Armenia	7,200,000	6,000,000	11,000,000
Belarus		2,200,000	2,200,000
Georgia		1,800,000	500,000
Ukraine	35,800,000	53,755,000	38,500,000
ENP SOUTH			
Egypt		1,000,000	
Jordan		1,000,000	
Morocco			1,000,000
SOUTH EAST ASIA			
Philippines			1,500,000
Vietnam			2,000,000
LATIN AMERICA			
Brazil			5,000,000
Multi-country / Regional	2,500,000	1,000,000	6,500,000
Accompanying measures		1,000,000	3,500,000
TOTAL AAP 2007 / 2008 / 2009	76,772,000	71,255,000	73,700,000

Note (1) The figure includes €28.3 million for projects which were cancelled due to the Russian Federation refusal to conclude a Financing Agreement. This sum could no longer be used under the INSC.

(2) The figure excludes €13.5 million which were re-allocated.

Kazakhstan benefited from considerable assistance under the TACIS Nuclear Safety Programme, but this cooperation was discontinued due to lack of interest on the side of Kazakhstan apart from participation in a regional project concerning uranium mining legacy.

3. EVALUATION

The first three years of implementation of the INSC (2007 – 2009) saw the gradual transition from the actions of the TACIS Nuclear Safety programme, which had been centred on the former Soviet Union, in particular the Russian Federation and Ukraine, towards a global programme.

¹¹ For details see Commission Staff working Document SEC(2011) 284 final of 10.03.2010

While the TACIS programme focused on nuclear safety *assistance* including, in many cases, supply of equipment ('hard assistance'), the INSC objective is enhanced *cooperation* with a view to improving nuclear safety with a much reduced emphasis on the supply of equipment ('soft assistance'). Partners have also been encouraged to take a more prominent role in the definition, management and implementation of cooperation projects.

Cooperation with new partner countries initially concentrated on strengthening regulatory authorities, but progressively cooperation is being extended to the development of management of spent nuclear fuel and radioactive waste, decommissioning, site remediation and, to a lesser extent, to the improvement of operational safety.

The cooperation with the International Atomic Energy Agency (IAEA) was stepped up for a number of reasons, including the need to improve coordination, to avoid duplication of efforts, to jointly establish priorities and to support the IAEA's implementation of projects in areas where this improves the effectiveness of implementation due to the IAEA's international standing and particular expertise.

The suspension of cooperation with the Russian Federation on new nuclear safety projects, due to the fact that Russia was not prepared to conclude Financing Agreements with the Commission, gives cause for concern. Limited cooperation has continued under ongoing TACIS projects and the Commission has continued to explore possible ways to solve the current impasse with Russian authorities.

The cooperation with Armenia has continued, despite the EU's firm position that the Armenian nuclear power plant, which operates a 'first generation' reactor, should be shut down as soon as possible. All specific safety cooperation actions need to continue to be reviewed against the agreed strategic framework for the implementation of the INSC programme.

The long delay observed between the definition of new cooperation projects and their eventual implementation is a serious problem, particularly when engaging in cooperation with new partner countries. These delays result from the steps required from identification of a project until its contracting. Typically, the process starts with an exploratory mission by the Commission services, followed by an expert mission to develop 'action fiches' which provide a broad definition of potential projects. The subsequent approval process includes an Inter-Service Consultation, an opinion by the INSC Committee followed by the adoption of the Commission Decision. Tendering and contracting can then only really start after the conclusion of a Financing Agreement with the partner country, which can cause additional delay.

In some cases, the initial phase of the cooperation was somewhat shortened, as in the case of Brazil, where a high degree of inter-institutional preparedness allowed rapid progress on establishing the 'action fiches'. However the process remains lengthy.

A close relationship has been maintained with the services in charge of the implementation of the IFS, the relevant Commission desks and the EU Delegations, which helped to maintain a coherent approach vis-à-vis third countries. However, further synergies between the INSC and the IFS might be explored in the future, notably in the framework of the 'Centres of Excellence' (an IFS initiative).

Activities in nuclear safeguards during 2007-2009 have been significantly less than projected under the Indicative Programme for the period (0.25% Vs 14% of the Programme). The Commission will take this into account in the formulation of the Indicative Programme for 2012-2013 and future Action Programmes.

4. CONCLUSIONS

The evaluation of the implementation of the INSC programme by the Commission leads to the following main conclusions:

- The projects were established in line with the strategic documents of the Instrument of Nuclear Safety Cooperation (INSC).
- The INSC continued the nuclear safety cooperation initiated under TACIS and gradually expanded it to new partner countries. However, further cooperation with the Russian Federation was suspended while searching a solution to its objections concerning the conclusion of a Financing Agreement.
- The enhancement of the nuclear safety culture through INSC incorporated lessons learned from the TACIS Nuclear Safety programme, while addressing emerging needs within a mandate no longer restricted to the region of the former Soviet Union.
- The time to start implementing projects following their identification is currently two to three years due to lengthy decisional and contracting processes and generally heavy administrative procedures. The Commission will need to review if and how it may be possible to reduce projects' implementation cycle by adjusting operational and implementation practices.
- The Commission concurs with the independent evaluation finding that the INSC implementation was well targeted and the projects well conceived. When successfully implemented the projects are expected to contribute 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.
- For countries that do not have nor plan to have a nuclear power programme, the INSC is also helping to build the required nuclear safety regulatory infrastructure particularly related to the management of nuclear waste.
- For countries planning to implement nuclear power programmes, the INSC is helping to build the required nuclear safety regulatory infrastructure while for countries with established nuclear power programmes, which lacked nuclear safety resources due to underfunding or isolation, it focuses on capacity building and improving nuclear safety culture.
- Overall, the INSC programme has become a well established vehicle for nuclear safety cooperation worldwide.
- Article 21 of the INSC Regulation provides that the Commission may submit a legislative proposal introducing modifications to the INSC, alongside the present evaluation report, if appropriate. The Commission considers that the concerns which were raised in respect of the implementation of the INSC Regulation, and how they might be mitigated, can be addressed within the existing provisions of the Regulation and that there is no need for a new legislative proposal.