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ANNEX 4

of the Commission Decision on the Annual Action Programme 2016 for Nuclear Safety Cooperation to be financed from the general budget of the European Union

Action Document for Iran Nuclear Safety Cooperation

1. Title/basic act/ CRIS number	IRN3.01/16 Enhancing the capabilities of the Iranian Nuclear Regulatory Authority (INRA). CRIS number: 2016/038880 financed under the Instrument for Nuclear Safety Cooperation			
2. Zone benefiting from the action/location	Central Asia & Gulf, Iran The action will be carried out at the following location: Iran, Tehran and Bushehr Nuclear Power Plant, and possibly other locations linked to the work of the Action, e.g. research reactors, fuel cycle facilities or other locations where radiation activities are carried out in Iran			
3. Programming document	Commission implementing decision of 13.6.2014 on the Instrument for Nuclear Safety Cooperation Multiannual Indicative Programme (2014-2017) – C(2014)3764 final			
4. Sector of concentration/ thematic area	Nuclear Safety	DEV. Aid: NO ¹		
5. Amounts concerned	Total estimated cost: EUR 5 million Total amount of EU budget contribution EUR 5 million			
6. Aid modality(ies) and implementation modality(ies)	Project Modality Direct management procurement of services			
7 a) DAC code(s)	Main DAC code – 23150			
b) Main delivery channel	1000 Public Sector Institutions			
8. Markers (from CRIS DAC form)	General policy objective	Not targeted	Significant objective	Main objective
	Participation development/good	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

¹ Official Development Aid is administered with the promotion of the economic development and welfare of developing countries as its main objective.

	governance			
	Aid to environment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Gender equality (including Women In Development)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Trade Development	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Reproductive, Maternal, New born and child health	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	RIO Convention markers	Not targeted	Significant objective	Main objective
	Biological diversity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Combat desertification	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Climate change mitigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Climate change adaptation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Global Public Goods and Challenges (GPGC) thematic flagships				

SUMMARY

This action is the EU contribution to the implementation of Annex III of the Joint Comprehensive Plan of Action (JCPoA) agreed between the E3/EU+3 and Iran in July 2015. The objective of this action is to enhance the capabilities of the Iranian Nuclear Regulatory Authority (INRA), and support the implementation of the EU stress tests of the Bushehr Nuclear Power Plant in accordance with the EU stress test methodology.

1 CONTEXT

1.1 Sector/Country/Regional context/Thematic area

1.1.1. Country context

The Partner country of this Action is Iran.

On 14 July 2015, the E3/EU+3 (China, EU, France, Germany, Russia, UK and USA, with the High Representative of the Union for Foreign Affairs and Security Policy) and Iran reached a Joint Comprehensive Plan of Action whose full implementation will ensure the exclusively peaceful nature of Iran's nuclear programme.

This deal, the Joint Comprehensive Plan of Action (JCPoA) includes the necessary verification to ensure the exclusive civil nature of the Iranian nuclear programme as well as specified areas for civil-nuclear cooperation. In particular, Annex III of the documents provides a detailed description of the future cooperation in civil nuclear cooperation which largely is covered by activities funded by the EU under the Instrument for Nuclear Safety Cooperation.

The EU has a special responsibility as the leader of the negotiations that have produced the JCPoA. Annex III of the JCPoA provides for cooperation in the field of nuclear safety which covers, *inter-alia*:

- Support to the regulatory authority;

- Creation of a Nuclear Safety Centre;
- Training and tutoring activities;
- Emergency Preparedness and Response and Severe Accident management capability;
- Nuclear safety assessment (including stress tests) and studies;
- Safe management of nuclear and radioactive wastes.

The EU has considerable experience in the implementation of nuclear safety projects supporting regulatory authorities in third countries as a result of the previous TACIS (Technical Assistance to the Commonwealth of Independent States) and Poland and Hungary: Assistance for Restructuring their Economies (PHARE) programmes and now under the INSC (i.e., Armenia, Brazil, China, Russia, Turkey, Ukraine and several other countries such as Jordan, Morocco and Vietnam) and is able to ensure effective cooperation with the Iranian Nuclear Regulatory Authority (INRA).

1.1.2. Sector context: policies and challenges

Nuclear power programme

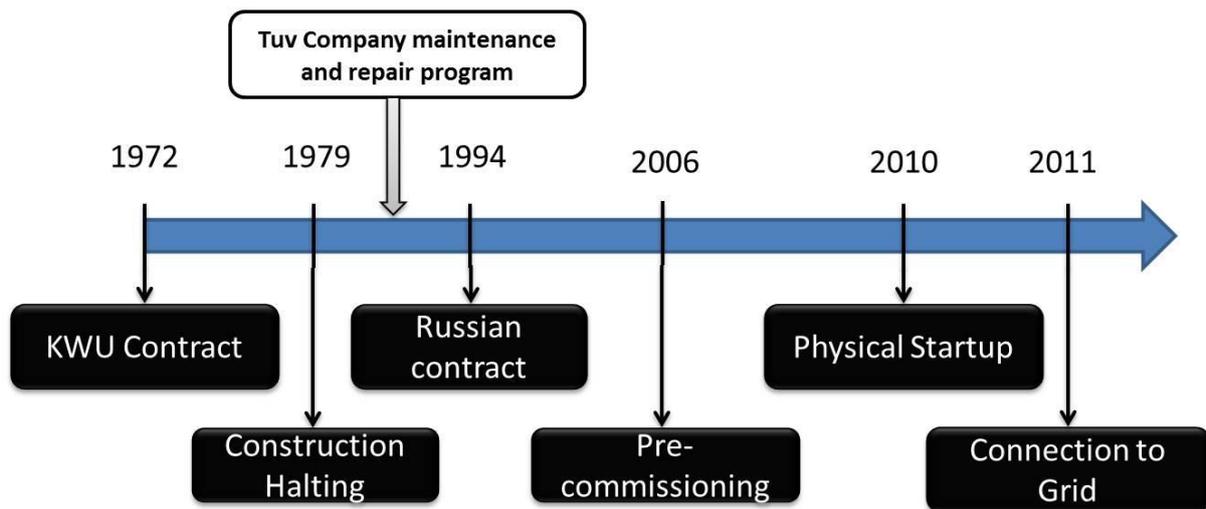
Iran has one nuclear power plant in operation at Bushehr on the Persian Gulf. It comprises one unit, the main components of which are based on the VVER²-1000 V-320 design. The plant was constructed in 1994 by the nuclear power equipment and service export company Atomstroyexport of Russia and has the model designation V-446. It deviates considerably from the standard V-320 design due to the requirement to take over and make maximum possible use of the Unit 1 structures and the equipment already existing at Bushehr. These structures and equipment remained after two partly constructed Siemens KWU 1300 MW PWRs were abandoned in 1979 following the Islamic revolution. Unit 1 was already substantially completed (around 85%) at the time, while Unit 2 was approximately half complete. The completion of Unit 1 by Atomstroyexport in 2006 presented significant challenges related to the need to adapt the main VVER components to the retained Siemens KWU parts and equipment as well as the need to verify and in some cases upgrade the abandoned Siemens components, many of them having little or no technical documentation.

The plant has a higher seismic rating than the standard VVER V-320 design due to the high seismicity of the region.

Despite problems and delays during commissioning, mainly caused by the failure of one of the main circulation pumps from the original German supply, the unit entered commercial operation in September 2013. Initially the plant was operated mainly by Russian personnel. Following training of Iranian operational staff in Russia, the operation was taken over by Iranian operators under the supervision of Russian experts until the end of 2015.

²*Vodo-Vodianoï Energeticheski Reaktor or Water Water Energy Reactor*

BNPP-1 Development History



The plant is owned and operated by the Bushehr Nuclear Power Plant (BNPP) Operation Company, a subsidiary of the Nuclear Power Production & Development Company of Iran (NPPD), which was established in 2004, from the former Nuclear Power Plant Division of the Atomic Energy Organisation of Iran (AEOI). NPPD remains a subsidiary of AEOI in charge of the nuclear power plant development in Iran.

Plans to construct a second unit at Bushehr have been under discussion with Russian Federation and a contract has been signed in 2015. The reactor will be a VVER-1000 V-392 and will not need to be adapted to the abandoned structures of the original Siemens KWU Unit 2. These structures will be removed and the plant will be constructed from scratch as a standard V-392.

Iran plans for further expansion of nuclear power capacity include Bushehr phase II, for which a contract has been signed with Nizhny-Novgorod Atomenergoproekt – Atomstroyexport (NIAEP-ASE) for the construction of two further VVER-1000 units. Further plans include two more VVER-1000 at Bushehr, four at another site not yet specified and two Chinese units at a site on the Makran coast on the Gulf of Oman. There are also plans for the construction of an indigenous design of LWR of 360 MWe capacity at Darkhovin, on the Karun River, close to the border with Iraq, on the site where the construction of two French 910 MWe PWRs had been abandoned after the revolution in 1979.

Iran has also developed indigenous capacity for the fabrication of nuclear fuel for the Tehran Research Reactor and the IR-40 reactor located at the Arak site. This would also allow the provision of fuel for the planned power reactor at Darkhovin and potentially for the Bushehr Nuclear Power Plant, although a significant amount of development would be needed to allow indigenous production of VVER fuel elements.

Nuclear regulation

The legislative and statutory framework for regulating nuclear facilities and activities in Iran is provided primarily by the Atomic Energy Organization of Iran (AEOI) Act (1974) and the Radiation Protection (RP) Act (1989). These Acts are supplemented by related lower tier legislation to provide for the control of nuclear, radiation, waste and transport safety.

Iran has yet to accede to a number of important International Conventions in the area of nuclear safety, in particular those concerned with Nuclear Safety, the Safe Management of Waste and Spent Nuclear Fuel and Civil Liability for Nuclear Damage. These Conventions are currently under consideration by the Government of Iran.

The Atomic Energy Organization of Iran Act of 1974 establishes the Atomic Energy Organization of Iran and its field of activities. These activities include the use of nuclear energy and ionising radiation in industry, agriculture and service industries, establishing nuclear power plants and related fuel cycle and desalination facilities, establishing the required scientific and technical infrastructure for these activities, and coordinating and supervising all nuclear energy related matters in Iran.

AEOI is defined as the competent regulatory authority by both the AEOI and RP Acts. AEOI delegates its responsibilities for regulatory functions to the Iran Nuclear Regulatory Authority (INRA), which is a part of AEOI and is authorised by AEOI to:

- develop and issue regulations and guides for nuclear and radiation safety
- perform safety assessments
- issue (as well as suspend/revoke) licences related to the siting, design, construction, commissioning, operation and decommissioning of nuclear and radiation facilities
- undertake inspection, supervision and enforcement activities.

INRA is also responsible for regulation in the area of nuclear safeguards and security. INRA comprises three departments for discharging its regulatory functions, as well as a directorate providing technical services on a national basis:

- National Nuclear Safety Directorate (NNSD)
- National Radiation Protection Directorate (NRPD)
- National Nuclear Safeguards Directorate (NNSG)
- Nuclear & Radiation Service Directorate (NRSD).

INRA has developed and implemented a management system for its activities on the basis of ISO and IAEA standards.

The safety of nuclear facilities, including the Bushehr Nuclear Power Plant (BNPP-1) as well as a number of research reactors in Iran, is regulated and supervised by NNSD, which is responsible for developing the related policies, safety principles and criteria, regulations and regulatory guides that are applied as a basis for its regulatory actions.

With regard to the completion of the Bushehr Nuclear Power Plant (BNPP-1), a licensing procedure was developed by NNSD for the reconstruction, commissioning, operation and decommissioning of the plant. The procedure took due account of INRA requirements and internationally accepted recommendations such as those issued by the IAEA, as well as the safety standards applicable in the vendor country (Russian Federation). Specific features of the design and operating characteristics and unusual or novel design measures of the BNPP-1 have also been considered. The compliance of the plant with the applicable safety requirements, on the basis of the safety documentation submitted by the operating organisation (NPPD), was supervised by NNSD. VO "safety", a Technical Support Organisation (TSO) to the Russian Federation regulatory body, Rostekhnadzor, was

contracted to provide technical support to NNSD for the BNPP-1 licensing and supervisory activities.

Due to the sanction regime, the INRA lacks international exchange and networking that will strengthen its position in particular by capacity building and peer review.

2 RISKS AND ASSUMPTIONS

Risks	Risk level (H/M/L)	Mitigating measures
This project is the first of its kind as the EU is engaging with Iran after the sanction regime period.	M	Close monitoring of project implementation will take place that could lead to remedial steps by the Commission.
Assumptions		
Effective implementation assumes full support from the national authorities and institutions identified as partners (see section 3.4 below). In addition, it is assumed that the partners will mobilise the necessary capacity and capability for the management of the project cycle and make the required manpower resources available.		

3 LESSONS LEARNT, COMPLEMENTARITY AND CROSS-CUTTING ISSUES

3.1 Lessons learnt

Extensive and broad experience has been gained over the past years in supporting regulatory authorities in third countries in the promotion of nuclear safety culture. However, this project will be the first of its kind to be implemented in Iran and communication and support from the beneficiary and end-users will be a key element for a successful implementation.

3.2 Complementarity, synergy and donor coordination

A close working relationship will be maintained between the Commission and the EEAS and also with the future EU Delegation in Iran, in order to help ensure a coherent approach vis-à-vis Iran taking relevant developments into account.

The Commission will coordinate its activities with the other international donors through the Joint Commission established under the JCPoA and possibly the IAEA Technical Cooperation Department.

3.3 Cross-cutting issues

The project will strengthen the regulatory authority of Iran and therefore the overall nuclear safety in the country.

The project tasks will contribute to the overall improvement of the living conditions of the population concerned, and to environmental sustainability. It will reduce the current health and environmental risks resulting from exposure to ionising radiations.

3.4 Beneficiary/End User organisations

The envisaged Beneficiary/End User organisations are:

- the Atomic Energy Organization of Iran (AEOI)
- the Iran Nuclear Regulatory Authority (INRA) for Tasks 1, 2, 3.2 and 4
- the Nuclear Power Production & Development Company of Iran (NPPD) for Task 3.1

4 DESCRIPTION OF THE ACTION

4.1 Objectives/results

The EU legislative framework has been significantly strengthened in the past four years: a Council Directive for the responsible and safe management of spent fuel and radioactive waste was adopted in 2011 (2011/70/Euratom), a revised Directive establishing basic safety standards to protect the health of workers and the general public against dangers arising from ionising radiation was adopted in 2013 (2013/59/ Euratom) and a revised Nuclear Safety Directive in 2014 (2014/87/Euratom, amending 2009/71/Euratom). Further, the Council has adopted, in December 2015, conclusions on off-site nuclear emergency preparedness and response (EP&R) that aim to improve coherence and cross-border cooperation between EU Member States and with neighbouring States, regarding the implementation of the EP&R provisions of directive 2013/59/Euratom concerning the management of nuclear and radiological emergencies with cross-border consequences. Altogether, this represents the most advanced legally binding and enforceable regional legal framework in the world.

With the amendment to the Nuclear Safety Directive, the EU enhanced its legislation and leadership in nuclear safety. An ambitious EU-wide safety objective for all types of nuclear installations has been introduced, with the aim of reducing the risk of accidents and avoiding large radioactive releases. This EU-wide safety objective is fully in line with the recent Vienna Declaration on the Convention of Nuclear safety.

The objective of this action is to enhance the capabilities of INRA and Iran more generally, mainly by sharing the experience with EU regulatory authorities in the area of interest jointly prioritised during the preparatory period and therefore to contribute to international nuclear safety. This cooperation should also enhance Iran's ability for fast accession to the relevant international conventions in the field of nuclear safety mentioned above. This experience sharing will take fully into account, where applicable to the tasks undertaken within the action, the evolution in the EU legislative framework since 2011, as described above.

The objective of the action will be achieved through four main activities implemented by the successful tenderers: firstly, support in the design of the Nuclear Safety Centre that will be established in the framework of the implementation of the Joint Comprehensive Plan of Action; secondly, cooperation with the Iranian Nuclear Regulatory Authority to share experience and promote best international practices, to support improvements in the Iranian legislative and regulatory framework, and to strengthen safety assessment capabilities (particularly in view of the lessons learned from the Fukushima accident); thirdly to support the implementation of stress tests of the Bushehr NPP; and finally, the training of Iranian officials through the INSC Training and Tutoring Programme and the establishment of training and outreach activities in Iran.

4.2 Main activities

4.2.1 Task 1 – Designing the future Nuclear Safety Centre

The objectives of this task are:

- to perform a feasibility study together with INRA to describe in detail the technical and administrative requirements for the set-up of a modern and state-of-the-art nuclear safety centre as foreseen in the JCPoA. The intention of the Nuclear Safety Centre (NSC) is to support and facilitate technical and professional training and exchange of lessons-learned for reactor and facility operators, regulatory authority personnel and related supportive organisations. The feasibility study will take into account international experience with regard to organisations having similar functions, and will consider the mission and objectives of the NSC, its human resource requirements and the necessary infrastructure (offices, laboratories, tools, techniques and equipment, etc.). The task will be implemented in close coordination with the E 3 + 3.

4.2.2 Task 2 – Support to the Iranian Nuclear Regulatory Authority

The objectives of this task are:

- to jointly review the regulatory framework in Iran against the EU and international standards, taking into account the lessons learned from the Fukushima Daichii accident;
 - to enhance technical capacity in the development of Probabilistic and Deterministic Safety Assessment;

Task 2.1: Review of the regulatory framework

The objective of this Task is to review together with INRA the current Iranian legislative and regulatory framework and its alignment with European and international standards and best practice, to identify potential gaps and to make recommendations on the improvements required. Through this project, Iran will be encouraged to sign and to ratify the relevant safety conventions. If considered necessary, training and assistance for drafting of legislation, regulatory documents, guides and technical standards could also be provided. A dedicated focus on the lessons learned from the Fukushima accident and their feedback into the legislative and regulatory system in the EU will be an important part of the review. Examples of specific areas of interest are provided below (non-exhaustive list):

- Collaboration with INRA's staff to develop INRA's regulatory requirements on enforcement;
- Review of INRA's regulatory criteria for ageing management of facility components, including Long Term Operation management;
- Review of INRA's policies and principles for emergency preparedness and response;
- Collaboration with INRA's staff in developing Severe Accident Management regulations & guides;
- Collaboration with INRA's staff in developing INRA's regulatory requirements related to Fuel Cycle facilities;

Further training activities will include:

- Workshop on Decision Making related to Environmental Remediation Projects;

- Training courses or identification of available courses and facilitation of attendance in courses of the INSC Training & Tutoring projects, on regulatory issues of earth sciences including geology, seismicity, meteorology, hydrology as well as models for seismic hazard assessment of nuclear installations.

Task 2.2: PSA and DSA

Task 2.2.1: Co-operation with INRA in Probabilistic Safety Analysis (PSA)

The main objective of this task is to support INRA in the strengthening of Probabilistic Safety Assessment capabilities including regulatory review of PSA as well as PSA application in the regulatory and decision making processes. It includes:

- an overview of the current status of application of PSA in the licensing process, support in establishing an overall policy for use of PSA in this framework and support in the selection of regulatory PSA applications to be envisaged for the Iranian NPPs;
- if necessary, update of the Iranian regulatory guide(s) for both development and use of PSAs according to international state of the art and in the perspective of the regulatory PSA applications to be envisaged;
- support in establishing and implementing a regulatory PSA review process according to the international state of the art, particularly in developing specific review guides and training for application. Examples of specific topics of interests are provided below (non-exhaustive list):
 - to perform an analysis of success criteria for safety systems and accident progression;
 - to perform a review of the fault tree modelling, principally those associated with the protection systems;
 - in establishing a data collection programme;
 - in developing requirements for the development of a Quality assurance programme for PSA projects.
 - training of staff in PSA topics
 - review and identification of suitable PSA level 1 and 2 computer codes, including their validation and certification status, and training of INRA staff in their use.

Task 2.2.2: Co-operation with INRA in Deterministic Safety Assessment

The objective of this task is to cooperate with INRA to strengthen capabilities for independent review and verification of Deterministic Safety Assessments. The task will include transfer of knowledge, methodologies and practices through activities such as training courses, on-the-job training, workshops and possibly joint reviews. Example items of interest are addressed in the list below (non-exhaustive list):

- Design Basis Accident analyses;
- Loss of Coolant Accident analyses;
- Overview on the use of computer codes for accident analysis; training on use of codes;
- Severe accident analyses;
- Safety of nuclear fuel.

The task will also include a review of the available computer codes, including their validation and certification status, for the following technical areas:

- Reactor physics codes;

- Fuel behaviour codes;
- Thermo-hydraulic codes, including system codes, sub-channel codes, porous media codes and computational fluid dynamics (CFD) codes;
- Containment analysis codes;
- Atmospheric dispersion and dose codes;
- Structural analysis codes;
- Severe accident analysis codes, including core melting and relocation codes, vessel breach codes, direct containment heating codes, molten core-concrete interaction (MCCI) codes, steam explosions codes, hydrogen combustion (mixing, deflagration, detonation) codes, codes for fission product release, transport, settling, re-suspension and removal in the reactor coolant system, and containment codes.

Proposals for suitable and appropriate codes to be acquired/procured by INRA will be made and training in the use of selected codes will be provided in order to ensure that INRA staff will be able to prepare input data, run the codes, analyse the output and perform uncertainty and sensitivity analyses.

4.2.3 Task 3 - Stress Tests at the Bushehr Nuclear Power Plant (NPP)

Following the accident at the Fukushima nuclear power plant in Japan in March 2011, the European Council requested that the safety of all EU nuclear plants should be reviewed, on the basis of a comprehensive and transparent risk and safety assessment ("stress tests"). Subsequently, participation in the European stress test exercise was opened for voluntary participation of neighbouring countries.

The "stress tests" were defined as targeted reassessments of the safety margins of nuclear power plants in response to extraordinary triggering events like earthquakes and floods and the consequences of any other initiating events (e.g. transport accidents, such as airplane crashes) potentially leading to multiple loss of safety functions requiring severe accident management. A technical specification describing the scope and methodology for the stress tests was developed by the European Nuclear Safety Regulators Group/ Western European Nuclear Regulators Association ENSREG/WENRA. The reassessment exercise was performed in stages. Firstly, for all nuclear power plants in the EU the NPP operators performed self-assessments of the response of each of their nuclear plants to those extreme situations. The operators' self-assessment reports were then reviewed by their national nuclear regulators and the regulators prepared summary national reports. The national reports were then subject to a review process, by peer review teams set up by ENSREG and comprising experts from different European regulatory authorities and the European Commission. After finalisation of the national reports, National Action Plans (NACp) had to be prepared by the national nuclear regulators and made publicly available. The implementation of the NACPs is followed-up on a periodic basis by ENSREG and the European Commission.

The activities of this task are divided into two sub-tasks:

Task 3.1: Support to the Bushehr nuclear power plant operator (NPPD) to perform the stress tests exercise according to the ENSREG methodology

The objectives of this sub-task are to provide assistance, as needed, to the operator of the Bushehr nuclear power plant (BNPP) for establishing the detailed work programme and

methodology³ for the 'stress tests', for performing the self-assessment and for preparing the self-assessment report in accordance with the ENSREG/WENRA technical specification, including:

- evaluation of the response of the BNPP when facing a set of extreme situations - initiating events - loss of safety functions from any initiating events - severe accident management issues.
- definition of possible urgent safety measures to be implemented following the outcome of the stress tests as well as studies and other measures that need to be implemented.
- preparation of stress test self-assessment report, as well as a report on the safety measures to be implemented, for submission to the Iranian Nuclear Regulatory Authority.

An important element for conducting the stress test is the availability of the plant safety documentation and corresponding safety analyses that are typically included in the plant safety analysis report (SAR).

Task 3.2: Support INRA for review of the BNPP stress test self-assessment and preparation of the Iranian national stress test report

The stress test self-assessment report mentioned above will be submitted to the Iranian Nuclear Regulatory Authority (INRA). INRA (and eventually its technical support organisation) will review the self-assessment report. Based on review results, INRA may ask NPPD for comment resolutions, and will complete the national report consistently with the ENSREG recommended format and content.

The objectives of this sub-task are to assist INRA to:

- Review the methodology proposed by NPPD to perform the stress test;
- Review the results of plant assessment relative to earthquake, flooding and other extreme weather conditions;
- Review the results of plant assessment relative to Loss of Electrical Power and Loss of Ultimate Heat Sink;
- Review the results of plant assessment relative to Severe Accident Management;
- Review the proposed studies and safety measures to be implemented;
- Assist INRA in completing the national report in accordance with the ENSREG template.
- Support INRA in presenting the report to the European Nuclear Safety Regulators Group (ENSREG) for its peer-review.

4.2.4 Task 4 - Training and Outreach activities

Task 4.1: Training and Tutoring

The Training and Tutoring programme of the European Commission is open to nuclear safety professionals, both junior and senior, to acquire or strengthen their expertise in the area. These

³ A detailed guidance for the BNPP to conduct the “stress tests” and perform a self-assessment in accordance with the ENSREG specifications

professionals are staff of regulatory authorities and technical support organisations that deal with the licensing process of nuclear activities requiring independence and competence.

The programme will be opened to the participation of Iranian officials in training courses and tutoring at EU organisations and funded separately by the Training and Tutoring on-going project.

In addition, a scientific visit and on-the job training in the EU will be provided (financed under the present Action) to selected staff of INRA covering the following topics:

- Environmental Monitoring;
- Joint-inspection during operation of NPPs;

Task 4.2: Duplication of the ESARDA training course on nuclear safeguards and non-proliferation in Iran

The Joint Research Centre in cooperation with the International Atomic Energy Agency (IAEA) has produced for the European Safeguards Research and Development Association (ESARDA) a one week training course on nuclear safeguards and non-proliferation. This training course is offered annually to students and young professionals coming from all over the world. The quality of this course based on the international standards published by the IAEA has been acknowledged by the international safeguards community and been successfully duplicated.

The objective of this task is to transfer the course on non-proliferation and nuclear safeguards developed by ESARDA to Iran. The support shall also include transfer of training material, including syllabus, for the course and two additional courses that will be done by the recipient institution as part of the sustainability of the education outreach.

Task 4.3: Outreach activities

The objective of this Task is to support INRA in planning and organising regional conferences on nuclear safety related issues to start setting up a regional network of regulatory authorities. Future activities and regional cooperation as e.g. in Emergency Preparedness and Response will benefit from such network.

4.3 Intervention logic

The Government of Iran will be provided with the technical means to support the decision making process in establishing a national nuclear safety centre and establishing a regulatory framework according to the best international standards.

5 IMPLEMENTATION

5.1 Financing agreement

In order to implement this action, it is not foreseen to conclude a financing agreement with the partner country, referred to in Article 184(2)(b) of Regulation (EU, Euratom) No 966/2012.

5.2 Indicative implementation period

The indicative operational implementation period of this action, during which the activities described in section 4.1 will be carried out and the corresponding contracts and agreements implemented, is 72 months from the date of adoption by the Commission of the Decision containing this action document.

Extensions of the implementation period may be agreed by the Commission's authorising officer responsible by amending this Decision and the relevant contracts and agreements; such amendments to the Decision constitute technical amendments in the sense of point (i) of Article 2(3)(c) of Regulation (EU) No 236/2014.

5.3 Implementation modalities

5.3.1 Procurement (direct management)

Subject in generic terms, if possible	Type (works, supplies, services)	Indicative number of contracts	Indicative trimester of launch of the procedure
Support to INRA	Service	2	4/2016

5.4 Scope of geographical eligibility for procurement and grants

The geographical eligibility in terms of place of establishment for participating in procurement and grant award procedures and in terms of origin of supplies purchased as established in the basic act and set out in the relevant contractual documents will apply, subject to the following provision.

The Commission's authorising officer responsible may extend the geographical eligibility in accordance with Article 9(2)(b) of Regulation (EU) No 236/2014 on the basis of urgency or of unavailability of products and services in the markets of the countries concerned, or in other duly substantiated cases where the eligibility rules would make the realisation of this action impossible or exceedingly difficult.

5.5 Indicative budget

	EU contribution (amount in EUR)	Indicative third party contribution, in currency identified
Procurement (direct management) including:	5 000 000	N.A.
Evaluation and audit	will be covered by another decision	N.A.
Communication and visibility	will be covered by another decision	N.A.

Totals	5 000 000	N.A
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5.6 Organisational set-up and responsibilities

The beneficiary of the Action is the Atomic Energy Organization of Iran (AEOI). The end users are the Iranian Nuclear Regulatory Authority (INRA) and the Nuclear Power Production and Development Company of Iran (NPPD).

Governmental organisations or agencies with a role in, or responsibility for, nuclear safety (as e.g. technical support organisations) would be important stakeholders; if stress tests are to be implemented in Iran, the nuclear power plant operator will be involved.

5.7 Performance monitoring and reporting

The day-to-day technical and financial monitoring of the implementation of this project will be a continuous process and part of the implementing partner's responsibilities. To this aim, the implementing partner will establish a permanent internal, technical and financial monitoring system for the action and elaborate regular progress reports (not less than annual) and final reports. Every report will provide an accurate account of implementation of the action, difficulties encountered, changes introduced, as well as the degree of achievement of its results (outputs and direct outcomes) as measured by corresponding indicators, using as reference the logframe matrix (for project modality) or the list of result indicators (for budget support). The report will be laid out in such a way as to allow monitoring of the means envisaged and employed and of the budget details for the action. The final report, narrative and financial, will cover the entire period of the action implementation.

The Commission may undertake additional project monitoring visits both through its own staff and through independent consultants recruited directly by the Commission for independent monitoring reviews (or recruited by the responsible agent contracted by the Commission for implementing such reviews).

5.8 Evaluation

Having regard to the nature of the action, a final evaluation(s) will be carried out for this action or its components via an implementing partner.

It will be carried out for accountability and learning purposes at various levels (including for policy revision), taking into account in particular the fact that this kind of project is relevant for other beneficiary countries.

The evaluation reports will be shared with the partner country and other key stakeholders. The implementing partner and the Commission will analyse the conclusions and recommendations of the evaluations and, where appropriate, in agreement with the partner country, jointly decide on the follow-up actions to be taken and any adjustments necessary, including, if indicated, the reorientation of the project.

Indicatively, one contract for evaluation services will be concluded under a framework contract in 2019.

5.9 Audit

Without prejudice to the obligations applicable to contracts concluded for the implementation of this action, the Commission may, on the basis of a risk assessment, contract independent audits or expenditure verification assignments for one or several contracts or agreements.

Indicatively, one contract for audit services will be concluded under a framework contract in 2019.

5.10 Communication and visibility

Communication and visibility of the EU is a legal obligation for all external actions funded by the EU.

This action will contain communication and visibility measures which will be based on a specific Communication and Visibility Plan of the Action, to be elaborated at the start of implementation and supported with the budget indicated in section 5.5 above.

In terms of legal obligations on communication and visibility, the measures will be implemented by the Commission, the partner country, contractors, grant beneficiaries and/or entrusted entities. Appropriate contractual obligations will be included in, respectively, the financing agreement, procurement and grant contracts, and delegation agreements.

The Communication and Visibility Manual for European Union External Action will be used to establish the Communication and Visibility Plan of the Action and the appropriate contractual obligations.

The amount dedicated to communication and visibility as indicated in the table under chapter 5.4 will be marked as such under the incidentals in the contract to be awarded.

APPENDIX - INDICATIVE LOGFRAME MATRIX (FOR PROJECT MODALITY)

The activities, the expected outputs and all the indicators, targets and baselines included in the logframe matrix are indicative and may be updated during the implementation of the action, no amendment being required to the financing decision. When it is not possible to determine the outputs of an action at formulation stage, intermediary outcomes should be presented and the outputs defined during inception of the overall programme and its components. The indicative logframe matrix will evolve during the lifetime of the action: new lines will be added for including the activities as well as new columns for intermediary targets (milestones) for the output and outcome indicators whenever it is relevant for monitoring and reporting purposes. Note also that indicators should be disaggregated by sex whenever relevant.

	Results chain	Indicators	Baselines (incl. reference year)	Targets (incl. reference year)	Sources and means of verification	Assumptions
Overall objective: Impact	Contributing to achieving the overall INSC objectives and contribute toward providing a sustainable and visible nuclear safety framework	See below	2016	2019	Project Terms of Reference	Full support of all government stakeholder organisations.
Specific objective(s) Outcome(s)	I1 & 2: strengthening the nuclear regulatory authority by transferring EU expertise and best international practices and capacity building	I1: Number of regulatory documents or safety analysis produced under the project*	I1: 0	I1: 10	I1: Project reports provided by the contractor and accepted by the Commission project manager	Sufficient resources and absorption capacity in INRA
		I2: Number of staff trained in the beneficiary country*	I2: 0	I2: 50	I2: Training course report provided by the contractor	
	I3: promotion of gender equality	I3: Number of women enrolled in training and tutoring activities	I3: To be determined during project inception	I3: 20%	I3: Training course report provided by the contractor	
	I4: Early completion of feasibility study and needs assessment on the Nuclear Safety Centre	I4: Nuclear Safety Centre feasibility study completed in first year of project	I4: N/A	I4: Study completed < 1 year after contract signature	I4: Project reports provided by the contractor and accepted by the Commission project manager	

Outputs	Training activities, draft regulatory documents, safety analysis, assessment reports	Number of training courses and number of participants, number of documents produced and translated into the regulatory framework	To be determined during project implementation	To be determined during project implementation	Progress and final reports provided by the contractor and accepted by the EC project manager	
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*Indicators derived from the Multiannual Indicative Programme