

**Project Fiche – 2008 IPA Horizontal Programme
on Nuclear Safety and Radiation Protection**

1. Basic information

- 1.1 CRIS Number:** 2008/020-349
- 1.2 Title:** Strengthening Administrative Capacity of the State Office for Radiological and Nuclear Safety, regulatory body for the nuclear safety and security
- 1.3 ELARG Statistical code:** 03.64 – Nuclear Safety
- 1.4 Location:** Croatia

Implementing arrangements:

1.5 Implementing Agency:

Central Finance and Contracting Agency
Ms Marija Tufekčić
Programme Authorising Officer
Ulica grada Vukovara 284
10000 Zagreb, Croatia

1.6 Beneficiary:

State Office for Radiological and Nuclear Safety
Frankopanska1 1 16, HR - 10020 ZAGREB
Responsible person:
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Financing:

- 1.7 Overall cost (VAT excluded):** EUR 280 000
- 1.8 EU contribution:** EUR 252 000

- 1.9 Final date for contracting:** 3 years following the date of conclusion of the Financing Agreement.
- 1.10 Final date for execution of contracts:** 2 years after the end date for contracting.
- 1.11 Final date for disbursements:** 3 years after the end date for contracting.

2. Overall Objective and Project Purpose

2.1 Overall Objective:

Improvement of the operational capacity and independent functioning of national regulatory authority (SORNS) and implementation of the related *acquis communautaire*.

2.2 Project purpose:

Strengthening of the SORNS capabilities in relation with the inspection of the nuclear activities, equipment, material, Nuclear Power Plant (NPP) decommissioning and spent nuclear fuel and radioactive waste management in accordance with the EU legislation and practice regarding safety and security.

2.3 Link with AP/NPAA / EP/ SAA

Revised **Accession Partnership** (Council Decision 5122/08)

Priority “Ability to assume obligations of membership” - Chapter 15: Energy

This project will contribute to the achievement of the following priority of the AP:

“Strengthen administrative capacity and complete alignment with the EU *acquis* in the fields of security of supply, energy efficiency and renewable energy sources, the internal energy market (electricity and gas) **and nuclear energy as well as ensure high level of nuclear safety and radiation protection**”.

National Programme for the Accession of the Republic of Croatia to the European Union for 2007 – 3.15.3. Nuclear Safety and Radiation Protection

This project will contribute to the achievement of the one of the Mid term Priorities: Activities planed for 2008 and 2009, namely:

“State Office for Radiological and Nuclear Safety will continue to strengthen its administrative capacity through the recruitment of new staff and through the specialisation and professional training of all it employees”.

2.4 Link with MIPD¹

Nuclear safety and radiation protection are stipulated as one area of intervention in the Multi-beneficiary Multi-annual Indicative Planning document 2007-2009. Objective of assistance under the respective priority is the following “To facilitate the strengthening of public administration capacities in the radiation protection and nuclear area, particularly with regard to nuclear safety, radiation protection, radioactive waste management and emergency preparedness”.

This project will directly contribute to the achievement of the following results defined in the MIPD “Improved efficiency and effectiveness levels of relevant public administrations (radiation protection authority, nuclear safety authorities and other publicly funded bodies)” and “Greater competence and awareness among beneficiary officials on how to implement EU *acquis*”.

2.5 Link with National Development Plan

Not applicable

2.6 Link with national/ sectoral investment plans

Not applicable

3. Description of project

3.1 Background and justification:

¹ The following requirement is defined in Multi-annual Indicative Planning Document 2007 - 2009 for Croatia (Commission decision C(2007)2566) regarding nuclear safety and radioation protection sectors: „Support to nuclear safety and radio-active waste management will be foreseen within this MIPD. However, due to the need to develop harmonised approaches it will be programmed under the Multi Beneficiary IPA programme where it will be described in more detail.

According to the well proclaimed national interests Croatia's efforts in the next few years will focus on complete harmonisation of Croatia's legislation with the *acquis communautaire*, and on strengthening the institutions which shall be implementing the adopted regulations. Pursuant to the obligations under the Stabilisation and Association Agreement (SAA) between the European Union and the Republic of Croatia, as well as membership obligations in the IAEA, nuclear safety and security is one of the priorities for the Government of the Republic of Croatia.

By the Act on Nuclear Safety (Act governing all activities in the field of nuclear safety in the Republic of Croatia) from October 2003 (Official Gazette No. 173/03), the State Office for Nuclear Safety (SONS) was assigned to be an independent nuclear regulatory body in the Republic of Croatia. Unfortunately, the adoption of implementing legislation to the 2003 Act on Nuclear Safety was delayed and finally on 9 May 2005 the SONS began its work. From April 2010, by the Act on Radiological and Nuclear Safety (Official Gazette No. 28/10), the SONS was merged with the State Office for Radiation Protection and become the SORNS. The SORNS is funded from the state budget only. If needed, the SORNS could charge the costs of any special/additional independent safety analyses from the legal entities/applicants. There are three expert Sectors and three independent supporting organization units within the SORNS. The three Sectors are: Sector for Nuclear Safety, Sector for Activities with Ionizing Radiation Sources and Dosimetry and Sector for Inspection and Emergency Events. There are 25 employees currently working in SORNS and for the future it is planned to boost human resources up to 49 employees.

Beyond other activities defined by the above mentioned Act on Nuclear Safety the SORNS is also responsible for the inspection and technical tasks, international co-operation in the field of nuclear safety, safety of nuclear facility, trade, transport and handling of nuclear materials, accounting for and control of all nuclear facilities and materials, physical protection of nuclear facilities and materials, expert assistance in activities for preventing illicit trafficking in nuclear material etc.

Croatia does not have nuclear power plants on its territory or any other nuclear fuel cycle facility. However, as joint investment of two republics of former Yugoslavia in the late seventies of the last century, state utilities of Croatia and Slovenia constructed the Nuclear Power Plant Krško (NPP Krško) on the territory of the Republic of Slovenia. NPP Krško is situated on the 10 km distance from the Croatian border and 35 km from Zagreb - capital of the Republic of Croatia. Nowadays the two states, the Republic of Croatia and the Republic of Slovenia, share the ownership of that plant. On March 11, 2003 the Agreement between the Government of the Republic of Slovenia and the Government of the Republic of Croatia on the Regulation of the Status and Other Legal Relationships, Connected with Investments in the Krško Nuclear Power Plant, its Exploitation and Decommissioning came into force. This Agreement gives solutions on disputes (from 1998 regarding exploitation conditions) and brings to the end years-long attempts to regulate the joint exploitation of Krško NPP, in the new circumstances of independence of two countries. By this, two countries expressed their awareness and responsibility and further contributed to the safety of the Krško NPP. Based on this Agreement Croatia established its fund with the aim to finance spent nuclear fuel and radioactive waste management and decommission of the Krško NPP after its closure.

Croatia attaches great importance to nuclear safety and commends the work of the International Atomic Energy Agency in this field. The legal regime on nuclear safety, which is comprised of internationally binding documents, was effectively established with the acceptance of the Convention on Nuclear Safety and the Joint Convention on Spent Fuel and Radioactive Waste Management. By the virtue of succession, Croatia became a

party to the Convention on Physical Protection of Nuclear Material, Convention on Early Notification in Case of Nuclear Accident and the Convention on Assistance in Case of Nuclear Accident or Radiological Emergency.

The Republic of Croatia promotes a strong non-proliferation policy and is a party to the Non-Proliferation Treaty. Croatia is among those countries which strongly advocate the extensive application of this treaty because of its significance for international peace and stability. Therefore, Croatia has ratified the Comprehensive Safeguards Agreement and signed the Additional Protocol with the IAEA.

Based on all above mentioned things two areas where additional help and transfer of know-how from EU to Croatia within the nuclear safety and security were recognised. Those areas are:

- Inspection of the nuclear activities, material and special nuclear equipment in connection with European Union (EU) legislation and practice regarding safety, security and safeguards.
- Infrastructure capabilities and expert knowledge development related with the NPP decommissioning and spent nuclear fuel and radioactive waste management.

From the viewpoint of the Republic of Croatia, the education of the SORNS staff about above mentioned areas would mean major improvement of the entire nuclear safety and security in the country.

Specifically speaking, this project will provide:

- transfer of the best available know-how in the field of nuclear safety and security from EU countries to Croatia,
- strength capabilities of the SORNS in undertaking the responsibilities defined by the law (Act on Radiological and Nuclear Safety - Official Gazette No. 28/10) and
- strengthening administrative capacity to improve alignment with the acquis on nuclear safety.

3.1.1 Inspection of the nuclear activities, material and special nuclear equipment² in connection with European Union (EU) legislation and practice regarding safety, security and safeguards

Inspection of the nuclear material in use in Croatia is now regulated with the Act on Radiological and Nuclear Safety, Regulation on the control of nuclear material and special equipment (Official Gazzete No. 15/2008) and Regulation on the performing nuclear activities (Official Gazzete No. 74/2006). All above mentioned documents were developed having in mind positive IAEA and EU practice. Through internal evaluation of the SORNS activities it has been found that the most important areas of the training in nuclear inspection are:

- Nuclear safeguards inspection,
- Training in detection of fissile materials for determination of the mass of fissile material inside any form of matrix or shielding material,
- Courses for nuclear inspectors including training course portfolio how to adapt to the new requirements of IAEA and EURATOM inspectors,
- Training in nuclear material accounting.

² List of current nuclear activities, nuclear material and special nuclear equipment used in Croatia can not be published in the public document like this.

The SORNS has recognised this problem and one of its key interests in the near future is to educate its inspectors to be able to cover all above mentioned areas. The transfer of **know-how from the EU experience related with this field to Croatian inspectors is the most important element of this education process**. The education process is planned to be combination of the **on-the-job training and expert/scientific visit or fellowship**.

For all these reasons, it is considered worthwhile to analyse current inspection work of the SORNS and to suggest appropriate **on-the-job training and expert/scientific visit or fellowship** for two SORNS inspectors in one or more EU countries. **On-the-job training and expert/scientific visit or fellowship** must cover all four above mentioned areas.

From the viewpoint of the Republic of Croatia, the education of the nuclear safety inspectors would mean major improvement of the entire nuclear safety and security in Croatia.

3.1.2 NPP decommissioning and spent nuclear fuel and radioactive waste management.

The Republic of Croatia and the Republic of Slovenia, share the ownership of the Krško NPP. On March 11, 2003 the Agreement between the Government of the Republic of Slovenia and the Government of the Republic of Croatia on the Regulation of the Status and Other Legal Relationships, Connected with Investments in the Krško Nuclear Power Plant, its Exploitation and Decommissioning came into force. According to this Agreement Republic of Croatia has an obligation to manage half of the spent nuclear fuel and radioactive waste from Krško NPP and to finance half of its decommissioning costs. In the case that no joint solution for spent nuclear fuel and radioactive waste disposal will be found until Krško NPP final closure, Republic of Croatia will be obliged by this Agreement to take half of the spent nuclear fuel and radioactive waste from Krško NPP to its territory and to manage it safely according to the best EU practice.

The first Programme of Krško NPP Decommissioning, Spent Nuclear Fuel and Radioactive Waste Management was developed and adopted by Croatian Parliament and Slovenian Government in the year 2004. According to this programme a joint repository for radioactive waste from NPP Krško will be built by the year 2018, either on Croatian or on Slovenian territory. Regarding the spent nuclear fuel, the joint solution has been foreseen as well. It is foreseen that the revisions of the Programme will be done every three to five years. According to that the next revisions of the Programme will be in year 2009 and 2012/2014.

Having in mind issues that are still open and possible regarding Krško NPP decommissioning, spent nuclear fuel and radioactive waste management and obligations of the Republic of Croatia from above mentioned Agreement it is necessary for the SORNS to develop capacities for better understanding of NPP decommissioning, spent nuclear fuel and radioactive waste management.

Within the SORNS it has been recognised that the most important areas of the training in NPP decommissioning and spent nuclear fuel and radioactive waste management are:

- Overall project management and execution including cost, schedule, quality and technical baseline management in planning large scale NPP decommissioning and spent nuclear fuel and radioactive waste projects,
- “Path Forward” Planning, Development, Preparation and Review (Cost Assessment, Decommissioning Plan, Radiation Protection, Characterization Plan, Health & Safety, Quality Assurance Plan etc.)
- Review of NPP decommissioning and spent nuclear fuel and radioactive waste management plans with accent on nuclear safety and cost assessment.

The key interest of the SORNS in the near future is to educate its staff to be able to follow and/or participate in Programme development, its revisions and to fully understand all steps in NPP decommissioning, spent nuclear fuel and radioactive waste management that are and will be defined in the Programme and its revisions.

For all these reasons, it is considered worthwhile to suggest appropriate **on-the-job training and expert/scientific visit or fellowship** for two SORNS experts in one or more EU countries. **On-the-job training and expert/scientific visit or fellowship** must include all three above mentioned areas.

From the viewpoint of the Republic of Croatia, building capacities for better understanding of NPP decommissioning, spent nuclear fuel and radioactive waste management within SORNS mean major improvement of the entire nuclear safety and security in Croatia.

3.2 Assessment of project impact, catalytic effect, sustainability and cross border impact

Assessment of project impact – The envisaged project impacts are two folds: (1) to improvement of the operational capacity and independent functioning of the nuclear safety regulatory body and consequently (2) ability to meet EU principles and practices concerning the capability of nuclear safety and security.

Catalytic effects- Since the project objective is particularly focused on improving the overall capacity of the nuclear safety regulatory body, the project will provide a high catalytic effect to the sectoral efforts for adequate implementation of EU principles and practices.

Cross border impact- With this project the overall capacity of the Croatian nuclear safety regulatory body will be improved and the main cross border impact will be in enhanced communication with Slovenian and Hungarian nuclear safety regulatory bodies and experts.

Sustainability – Knowledge / Training gained will be used by the nuclear safety regulatory body in order to perform relevant tasks in accordance with EU practices and principles.

Additionality is ensured. EU funding will not replace other funding from the government or other donors and the EU funded intervention/project will result in benefits which would not occur otherwise.

The key objective of this project is to improve operational capacity and independent functioning of the SORNS. Croatia has to meet EU principles and practices concerning the capability of nuclear safety and security. **This project is very important for entire Croatian nuclear field especially regarding the transfer of know-how from the EU countries.** Therefore the project support will be very welcome and will help in future development.

3.3 Results and measurable indicators:

Result and measurable indicators in relation with activity 1:

Upgraded institutional capacity of the SORNS for the Inspection of nuclear activities, material and special nuclear equipment

- Document named 'Detailed plan for the on-the-job training and expert/scientific visit or fellowship for two SORNS inspectors

related with the inspection of the nuclear activities, material and special nuclear equipment' developed by contractor and accepted by SORNS till the end of the first quarter of the year 2010;

- Document named 'Report about success of the on-the-job training and expert/scientific visit or fellowship for two SORNS inspectors related with the inspection of the nuclear activities, material and special nuclear equipment' developed by contractor and accepted by the SORNS till the end of the fourth quarter of the year 2011;
- Two experts of the SORNS trained by the contractor till the end of the year 2011 for the inspection of the nuclear activities, material and special nuclear equipment according to the EU best practice regarding safety, security and safeguards;

Results and measurable indicators in relation with activity 2

Upgraded institutional Capacity of the SORNS in relation to the NPP decommissioning / spent nuclear fuel / radioactive waste management

- Document named 'Detailed plan for the on-the-job training and expert/scientific visit or fellowship for two members of the SORNS staff related with the NPP decommissioning and spent nuclear fuel and radioactive waste management' developed by contractor and accepted by SORNS till the end of the first quarter of the year 2010;
- Document named 'Report about success of the on-the-job training and expert/scientific visit or fellowship for two members of the SORNS staff related with the NPP decommissioning and spent nuclear fuel and radioactive waste management' developed by contractor and accepted by the SORNS till the end of the fourth quarter of the year 2011;
- Two experts of the SORNS trained by the contractor till the end of the year 2011 and with full understanding of all steps in the NPP decommissioning, spent nuclear fuel and radioactive waste management;

3.4 Activities:

This project shall be implemented through one Technical Assistance Contract that will cover all below mentioned activities. All activities are dedicated to Institutional Building and 10% of national co-financing is foreseen.

Activity 1. – Upgrading the Institutional Capacity of the SORNS for Inspection of nuclear activities, material and special nuclear equipment:

Activity 1.1. – Assessment of the existing SORNS inspection work and development of the plan for the on-the-job training and expert/scientific visit or fellowship for two SORNS inspectors;

Activity 1.2. – Organisation, supervision and conduction of the on-the-job training and expert/scientific visit or fellowship for two SORNS inspectors related with the nuclear safeguards inspection, detection of fissile materials for determination of the mass of fissile material inside any form of matrix or shielding material, training course portfolio how to adapt to the new requirements of IAEA and EURATOM inspectors and nuclear material accounting;

Activity 2. – Upgrading the Institutional Capacity of the SORNS in relation to the NPP decommissioning / spent nuclear fuel / radioactive waste management:

Activity 2.1. – Assessment of the SORNSs current level of expertise regarding knowledge regarding decommissioning / spent nuclear fuel / radioactive waste management and definition of the appropriate plan for the on-the-job training and expert/scientific visit or fellowship for two members of the SORNS about the NPP decommissioning /spent nuclear fuel / radioactive waste management;

Activity 2.2. – Organisation, supervision and conduction of the on-the-job training and expert/scientific visit or fellowship for two members of the SORNS about the overall project management and execution including cost, schedule, quality and technical baseline management in planning large scale NPP decommissioning and spent nuclear fuel and radioactive waste projects, “Path Forward” Planning, Development, Preparation and Review (Cost Assessment, Decommissioning Plan, Radiation Protection, Characterization Plan, Health & Safety, Quality Assurance Plan etc.) and review of NPP decommissioning and spent nuclear fuel and radioactive waste management plans with accent on nuclear safety and cost assessment;

3.5 Conditionality and sequencing:

All project activities are planned to start and perform in parallel. Subactivities within one activity are planned to start and perform consecutively.

The project results can be achieved when following conditions are met:

- Carefully prepared detailed functional description of the each phase of the project and
- Close cooperation of contractors working groups and the SORNS staff.

3.6 Linked activities³

The below mentioned project from the regional and horizontal programmes IPA 2007 (CRIS number: 2007/019-301) is related to this project proposal.

Project named: "Assessment of the regulatory infrastructure in the field of nuclear safety and radiation protection in Albania, Bosnia and Herzegovina, **Croatia**, the former Yugoslav Republic of Macedonia, Montenegro, and Serbia including Kosovo". This project comprises the following activities:

- Description and analysis of the current legislative background that is underpinning the establishment of regulatory bodies in each of the six beneficiary countries;
- Description and analysis of the current mandate, organisation, structure, quality management system, staffing, technical capacity, inspection procedures, and funding mechanism of the regulatory bodies in place in each of the beneficiaries;
- Analysis of the adequation of the current structure, organisation and technical capacity of the regulatory bodies against the radiological issues posed in the country and the transposition of the EURATOM Directives;
- Identification of the areas where enhancement of the capacity of the regulatory bodies would be desirable;

³ State Office for Radiological and Nuclear Safety does not participate in any of IAEA technical support Project in Croatia. IAEA technical support project in Croatia are focused mostly on implementation of nuclear technology in medicine, environment etc.

A service contract for an amount of EUR 500 000 will be concluded following a tender that will be launched in Q2 2008.

It is important to mention that proposed project (Strengthening Administrative Capacity of the State Office for Radiological and Nuclear Safety, regulatory body for the nuclear safety and security) will continue on results of the above mentioned IPA 2007 project. Above mentioned IPA 2007 project is expected to be finished in Q2 of 2009 and proposed project is planned to start in Q4 of 2009.

3.7 Lessons learned

The lessons learned from the previous EU projects were mainly related with the need for preciseness preparation of the necessary documentation and learning more practical skills about nuclear safety and security. Conclusions and recommendations from all previous and on-going EU projects have been taken into account during the preparation phase and design of this project by identifying the managerial and other users' needs and from the methodological, organisational and technical aspect.

4. Indicative Budget (amounts in €)

	TOTAL PUBLIC COST	SOURCES OF FUNDING											
		EU CONTRIBUTION				NATIONAL PUBLIC CONTRIBUTION					PRIVATE		
		Total	% *	IB	INV	Total	type of cofinancing (J/P **)	% *	Central	Regional	IFIs	Total	% ***
Activities													
Activities 1 and 2													
Contract 1	280.000	252.000	90	252.000		28.000	J	10	28.000				
TOTAL	280.000	252.000	90	252.000		28.000	J	10	28.000				

Amounts net of VAT

* expressed in % of the Total Public Cost

** compulsory for INV (minimum of 25 % of total EU + national public contribution) : Joint cofinancing (J) as the rule, parallel co financing (P) per exception

*** expressed in % of the Total Cost (public + private)

5. Indicative Implementation Schedule (periods broken down per quarter)

Contracts	Start of Tendering	Signature of contract	Project Completion
Contract 1	4 th Quarter 2011	2 nd Quarter 2012	2 nd Quarter 2014

6. Cross cutting issues (where applicable)

6.1 Equal Opportunity

Based on the fundamental principles of promoting equality and combating discrimination, participation in the project will be guaranteed on the basis of equal access regardless of sex, racial or ethnic origin, religion or belief, disability, age or sexual orientation.

All contractors shall be requested to provide monitoring data recording the participation of men and women in terms of expert inputs (in days) and of trainees benefiting under the project (in days) as an integral component of all project progress reports.

Participation will be open to both: female and male personnel. Records on staff participating in training and other project activities (e.g. project progress reports) will reflect this statement.

6.2 Environment

The aim of this project is administrative and there will be no negative impact on the environment. Therefore the screenings and impact reports will not be necessary due to the nature of this project.

6.3 Minorities

Based on the fundamental principles of promoting equality and combating discrimination, participation in the project will be guaranteed on the basis of equal opportunity for minorities.

The aim of this project is administrative and there will be no negative impact on the minorities. Therefore the screenings and impact reports will not be necessary due to the nature of this project.

ANNEXES

- 1- Log frame in Standard Format
- 2- Amounts contracted and Disbursed per Quarter over the full duration of Programme
- 3- Description of Institutional Framework
- 4- Reference to laws, regulations and strategic documents:
 - Reference list of relevant laws and regulations
 - Reference to AP /NPAA / EP / SAA
 - Reference to MIPD
 - Reference to National Development Plan
 - Reference to national / sector investment plans
- 5- Details per EU funded contract

ANNEX 1: Logical framework matrix in standard format

LOGFRAME PLANNING MATRIX FOR Project Fiche		Programme name and number:2008 IPA Horizontal Programme on Nuclear Safety and Radiation Protection	2008/020-349
Strengthening Administrative Capacity of the State Office for Radiological and Nuclear Safety, regulatory body for the nuclear safety and security		Contracting period expires 3 years following the date of conclusion of the Financing Agreement	Disbursement period expires 3 years following the end date for contracting
		Total budget: EUR 280 000	IPA budget EUR 252000
Overall objective	Objectively verifiable indicators	Sources of Verification	
Improvement of the operational capacity and independent functioning of national regulatory authority (SORNS) and implementation of the related acquis communautaire.	Further legislative alignments achieved and improved operational capacity and independent functioning of national regulatory authority for nuclear safety and security	<ul style="list-style-type: none"> ▪ National legislation, regulations and technical measures ▪ EU Progress Report 	
Project purpose	Objectively verifiable indicators	Sources of Verification	Assumptions
Strengthening of the SORNS capabilities in relation with the inspection of the nuclear activities, equipment, material, Nuclear Power Plant (NPP) decommissioning and spent nuclear fuel and radioactive waste management in accordance with the EU legislation and practice regarding safety and security.	Well trained and educated SORNS staff regarding the implementation of new skills	<ul style="list-style-type: none"> ▪ Project Final Documents. ▪ National legislation, regulations and technical measures. ▪ EU Progress Report. 	<ul style="list-style-type: none"> ▪ Carefully prepared detailed functional description of the each phase of the project ▪ Close cooperation of contractors working groups and the SORNS staff ▪ Adequate and on-time funding
Results	Objectively verifiable indicators	Sources of Verification	Assumptions
<ul style="list-style-type: none"> ▪ Upgraded institutional capacity of the SORNS for the Inspection of nuclear activities, material and special nuclear equipment. ▪ Upgraded institutional Capacity of the SORNS in relation to the NPP decommissioning / spent nuclear fuel / radioactive waste management. 	<ul style="list-style-type: none"> ▪ Document named 'Detailed plan for the on-the-job training and expert/scientific visit or fellowship for two SORNS inspectors related with the inspection of the nuclear activities, material and special nuclear equipment' developed by contractor and accepted by SORNS till the end of the first quarter of the year 2010. ▪ Document named 'Report about success of the on-the-job training and expert/scientific visit or fellowship for two SORNS inspectors related with the inspection of the nuclear activities, material and special nuclear equipment' developed by contractor and accepted by the SORNS till the end of the fourth quarter of the year 2011. ▪ Document named 'Detailed plan for the on-the-job training and expert/scientific visit or fellowship for two members of the SORNS staff related with the NPP decommissioning and spent nuclear fuel and radioactive waste management' developed by contractor and accepted by SORNS till the end of the first quarter of the year 2010. ▪ Document named 'Report about success of the on-the-job training and expert/scientific visit or fellowship for two members of the SORNS staff related with the NPP decommissioning and spent nuclear fuel and radioactive waste management' developed by contractor and accepted by the SORNS till the end of the fourth quarter of the year 2011. ▪ Two experts of the SORNS trained by the contractor till the end of the year 2011 for the inspection of the nuclear activities, material and special nuclear equipment according to the EU best practice regarding safety, security and safeguards. ▪ Two experts of the SORNS trained by the contractor till the end of the year 2011 and with full understanding of all steps in the NPP decommissioning, spent nuclear fuel and radioactive waste management. 	<ul style="list-style-type: none"> ▪ Project Final Documents. ▪ Quarterly reports from project manager. ▪ Task reports. ▪ National legislation, regulations and technical measures. ▪ EU Progress Report. 	<ul style="list-style-type: none"> ▪ Carefully prepared detailed functional description of the each phase of the project ▪ Close cooperation of contractors working groups and the SORNS staff ▪ Adequate and on-time funding
Activities	Means	Costs	Assumptions
<p>This project shall be implemented through one Technical Assistance Contract that will cover all below mentioned activities. All activities are dedicated to Institutional Building and 10% of national co-financing is foreseen.</p> <p>Activity 1. – Upgrading the Institutional Capacity of the SORNS for Inspection of nuclear activities, material and special nuclear equipment:</p> <ul style="list-style-type: none"> ▪ Activity 1.1. – Assessment of the existing 	One standard service contract – Technical Assistance	EUR 280 000	<ul style="list-style-type: none"> ▪ Experts from the contractor's side have necessary skills and experience. ▪ Carefully prepared detailed functional description of the each phase of the project. ▪ Close cooperation of contractors working groups and the SORNS staff. ▪ Adequate and on-time funding

<p>SORNS inspection work and development of the plan for the on-the-job training and expert/scientific visit or fellowship for two SORNS inspectors;</p> <ul style="list-style-type: none"> ▪ Activity 1.2. – Organisation, supervision and conduction of the on-the-job training and expert/scientific visit or fellowship for two SORNS inspectors related with the nuclear safeguards inspection, detection of fissile materials for determination of the mass of fissile material inside any form of matrix or shielding material, training course portfolio how to adapt to the new requirements of IAEA and EURATOM inspectors and nuclear material accounting; <p>Activity 2. – Upgrading the Institutional Capacity of the SORNS in relation to the NPP decommissioning / spent nuclear fuel / radioactive waste management:</p> <ul style="list-style-type: none"> ▪ Activity 2.1. – Assessment of the SORNSs current level of expertise regarding knowledge regarding decommissioning / spent nuclear fuel / radioactive waste management and definition of the appropriate plan for the on-the-job training and expert/scientific visit or fellowship for two members of the SORNS about the NPP decommissioning /spent nuclear fuel / radioactive waste management; ▪ Activity 2.2. – Organisation, supervision and conduction of the on-the-job training and expert/scientific visit or fellowship for two members of the SORNS about the overall project management and execution including cost, schedule, quality and technical baseline management in planning large scale NPP decommissioning and spent nuclear fuel and radioactive waste projects, “Path Forward” Planning, Development, Preparation and Review (Cost Assessment, Decommissioning Plan, Radiation Protection, Characterization Plan, Health & Safety, Quality Assurance Plan etc.) and review of NPP decommissioning and spent nuclear fuel and radioactive waste management plans with accent on nuclear safety and cost assessment; 			
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ANNEX 2: amounts (in €) Contracted and disbursed by quarter for the project

Contracted	2nd Q 2012	3rd 2012	4th Q 2012	1st Q 2013	2nd Q 2013	3rd Q 2013	4th Q 2013	1st Q 2014	2nd Q 2014	TOTAL
Contract 1 (service)	280.000	0	0	0	0	0	0	0	0	280.000
Cumulated	280.000	280.000	280.000	280.000	280.000	280.000	280.000	280.000	280.000	280.000
Disbursed	2nd Q 2012	3rd 2012	4th Q 2012	1st Q 2013	2nd Q 2013	3rd Q 2013	4th Q 2013	1st Q 2014	2nd Q 2014	TOTAL
Contract 1 (service)	84.000	0	0	168.000	0	0	0	0	28.000	280.000
Cumulated	84.000	84.000	84.000	252.000	252.000	252.000	252.000	252.000	280.000	280.000

ANNEX 3: Description of Institutional Framework

Beneficiary of this Contract will be Croatian State Office for Radiological and Nuclear Safety (SORNS). The legal framework of the SORNS is defined on the Act on Radiological and Nuclear Safety ("Official Gazette" No. 28/10). The regulatory, inspection and technical tasks of the SORNS are to: approve the carrying out of nuclear activities,

- approve the carrying out of practices involving sources of ionising radiation,
- approve procurement, import, export, transport and transit of ionising radiation sources,
- authorise the use of ionising radiation sources,
- conduct independent safety analyses and issue decisions or certificates regarding the location, design, construction, operation and decommissioning of a facility in which a nuclear activity is to be performed,
- take part in the procedure for issuing location permits, building permits, permits for removal and in the procedure for issuing use permits for structures that accommodate sources of ionising radiation or in which practices involving sources of ionising radiation are carried out in accordance with *lex specialis*,
- approve and supervise the professional operations of authorised technical services and authorised experts for nuclear safety,
- organise and supervise, and where necessary also carry out tests on the presence of the type and intensity of ionising radiation in the environment, food and feed, medicinal products and general use products under regular conditions as well as in cases of suspected emergency,
- keep records on the licences, approvals, decisions and certificates which it has issued within the scope of its authority, and maintain and supervise records on ionising radiation sources, licensees and licence holders, beneficiaries, exposed workers, level of irradiation of exposed workers as well as the level of irradiation of persons subject to medical exposure and of other persons,
- carry out inspections to ensure the implementation of the provisions of this Act and regulations adopted on the basis thereof,
- elaborate technical platforms for teaching curricula and programmes for regular and additional education as well as for renewal of knowledge in the field of protection against ionising radiation,
- ensure expert assistance in implementing the national plan and programme for procedures in the event of a nuclear accident and emergencies connected with sources of ionising radiation,
- inform the mass media, competent bodies, organisations, associations and

international institutions on emergencies connected with sources of ionising radiation,

- provide expert assistance and cooperation in activities for preventing illicit trafficking in nuclear and other radioactive material to state administration bodies competent for such activities,
- monitor safety conditions at nuclear power plants in the region and carries out assessments of the threat of nuclear accidents there, especially in the Krško Nuclear Power Plant in Slovenia and the Paks Nuclear Power Plant in Hungary,
- provide dosimetric assessments of exposure to ionising radiation of exposed workers, of the population from medical exposure and from exposure to ionising radiation originating from environmental radionuclides,
- fulfil the obligations which the Republic of Croatia has assumed through international conventions and bilateral agreements concerning protection against ionising radiation, nuclear safety and the application of protective measures aimed at the non-proliferation of nuclear weapons,
- cooperate with international and domestic organisations and associations in the area of protection against ionising radiation and nuclear safety, and appoint its own expert representatives to take part in the work of such organisations and associations or to monitor their work,
- coordinate technical cooperation with the International Atomic Energy Agency for all participants from the Republic of Croatia,
- stimulate and support scientific and research and development activities, encourage professional, statistic and other research in accordance with the demands and requirements of the development of nuclear safety and protection against ionising radiation in the Republic of Croatia,
- issue instructions for implementing international recommendations and standards in the area of protection against ionising radiation and nuclear safety and design the standards and methods in monitoring the state of protection against ionising radiation,
- carry out other activities under its competence pursuant to this Act, regulations adopted on the basis thereof, and other regulations.

There are three expert Sectors and three independent supporting organization units within the SORNS. The three Sectors are: Sector for Nuclear Safety, Sector for Activities with Ionizing Radiation Sources and Dosimetry and Sector for Inspection and Emergency Events. There are 25 employees currently working in SORNS and for the future it is planned to boost human resources up to 49 employees.

To ensure successful implementation of the project and all of its foreseen activities Project Implementation Unit is established and its members received Project Cycle Management and other relevant training.

ANNEX 4: Reference to laws, regulations and strategic documents

REFERENCE LIST OF RELEVANT LAWS AND REGULATIONS

Act on Nuclear Safety (Official Gazzete 173/03)

Act on Radiological and Nuclear Safety (Official Gazzete 28/10)

Regulation on the control of nuclear material and special equipment (Official Gazette No. 15/2008)

Regulation on performing nuclear activities (Official Gazette No. 74/06)

Regulation on the special conditions for authorisation of legal entities to perform specific expert practices in the field of nuclear safety (Official Gazette No. 74/06)

Agreement between the Government of the Republic of Slovenia and the Government of the Republic of Croatia on the Regulation of the Status and Other Legal Relationships, Connected with Investments in the Krško Nuclear Power Plant, its Exploitation and Decommissioning (Official Gazette – International Agreements No. 9/2002)

National Programme for the Accession of the Republic of Croatia to the European Union for 2007

Reference to AP/NAAP/EP/SAA (see point 2.3.)

Reference to MIPD (see point (2.4)

Reference to National Development Plan (see point (2.5)

Reference to national /sector investment plans (see point (2.6)

ANNEX 5: Details per EU funded contract where applicable

Central Finance and Contracting Agency for the European Union Projects and Programmes will be the Contracting Authority for this project. One technical assistance contract is foreseen in total amount of 0.28 million EUR covered 90% by the IPA resources and 10% of national co-financing. Due to the complexity and structure of the proposed project instead of Twinning TA contract is preferable.

The consultancy team will be expected to perform the following tasks:

- Activity 1 – Task 1.1: Evaluation of the existing SORNS inspection work and development of the plan for the on-the-job training and expert/scientific visit or fellowship for two SORNS inspectors.
- Activity 1 – Task 1.2: Organisation, supervision and conduction of the on-the-job training and expert/scientific visit or fellowship for two SORNS inspectors related with the nuclear safeguards inspection, detection of fissile materials for determination of the mass of fissile material inside any form of matrix or shielding material, training course portfolio how to adapt to the new requirements of IAEA and EURATOM inspectors and nuclear material accounting.
- Activity 2 – Task 2.1: Assessment of the SORNSs current level of expertise regarding knowledge regarding decommissioning / spent nuclear fuel / radioactive waste management and definition of the appropriate plan for the on-the-job training and expert/scientific visit or fellowship for two members of the SORNS about the NPP decommissioning /spent nuclear fuel / radioactive waste management.
- Activity 2 – Task 2.2: Organisation, supervision and conduction of the on-the-job training and expert/scientific visit or fellowship for two members of the SORNS about the overall project management and execution including cost, schedule, quality and technical baseline management in planning large scale NPP decommissioning and spent nuclear fuel and radioactive waste projects, “Path Forward” Planning, Development, Preparation and Review (Cost Assessment, Decommissioning Plan, Radiation Protection, Characterization Plan, Health & Safety, Quality Assurance Plan etc.) and review of NPP decommissioning and spent nuclear fuel and radioactive waste management plans with accent on nuclear safety and cost assessment.

PRAG manual will be strictly applied and followed. The contractor is responsible for the covering accommodation and travel costs and daily allowance for the SORNS staff during the on-the-job training and expert/scientific visit or fellowship.