Special nuclear project fiche

1. BASIC INFORMATION

1.1 CRIS number (2005): 

1.2 Title: Technical assistance to SERAW for the establishment of an emergency response preparedness system for radiological accidents.

1.3 Sector: IN & EN

1.4 Location: Bulgaria

1.5 Duration: 12 months

2. OBJECTIVES

2.1 Overall Objective:

To improve safety of radioactive waste management and disposal in Bulgaria.

2.2 Project purpose:

Technical assistance to SERAW for the establishment of an emergency response preparedness system in case of accident with radiological consequences.

2.3 Accession Partnership and NPAA priority

This proposal is in accordance with the requirements of Act for Safe Use of Nuclear Energy (ASUNE): “organisations performing radioactive waste management activities are required to take actions for the prevention of incidents and accidents and for mitigation of their consequences”. Following these requirements SERAW is obliged to develop emergency plans for response in case of an accident with radiological consequences on the nuclear sites where SERAW activities are taking place: Kozloduy NPP and Novi Han Repository, and to support the State Agency for Civil Protection at national level concerning emergency planning.

2.4 Contribution to National Development Plan

N/A

2.5 Cross Border Impact

N/A
3. DESCRIPTION

3.1 Background and justification

State Enterprise “Radioactive Waste” (SERAW) was created in 2004. SERAW is responsible for the establishment and operation of the future national disposal facility, as well as for the operation of other radioactive waste management facilities (waste treatment/conditioning and storage facilities at NPP Kozloduy site and at Novi Han).

According to the requirements of the above-mentioned article 16 of the Act for the safe use of nuclear energy (ASUNE), SERAW must:

- develop emergency plans for response in case of an accident with radiological consequences;
- support the National State Agency for Civil Protection concerning emergency planning.

In addition a series of new regulations laid down by NRA must be respected:

- regulation of emergency planning and emergency preparedness in case of nuclear and radiological accident (Decree of the Council of Ministers №189, 30 July 2004, promulgated in State Gazette № 71, 2004);

Before the establishment of SERAW, emergency planning was under the sole responsibility of the State Agency for Civil Protection. Since the promulgation of the ASUNE and establishment of SERAW, the emergency planning system in place must be fully revised and a new organisational and communication structure has to be established. In this context, in the event of an accident with radiological consequences that is related to radioactive waste management (operation of waste management facilities and transport), SERAW must:

- Inform immediately the population and the mayors of municipalities within the emergency planning areas and other competent authorities and notably the local officers of civil defence and the NRA emergency centre;
- Secure specialized human/technical resources upon request;
- Secure radiation data in the concerned area by the accident;
- Take actions for the mitigation and remediation of the accident consequences;
- Control and regulate the exposure of the persons engaged in accident mitigation and elimination of the consequences;
- Ensure continuous monitoring of the radioactive releases into the environment;
- Participate in activities included in the National Environment Monitoring System;
- Perform any other obligations as may be established in the emergency plans and by ASUNE.
This new organisational and communication structure should consider procedural links and ways for communication with the on-site operational management (Kozloduy and Novi Han) and with the responsible organisations involved in emergency planning at national level (notably NRA and the State Agency for Civil Protection). Three main tasks should be fulfilled:

- development of emergency management support system and training of experts;
- support to the establishment of communication and data transfer system, based on wireless and internet links;
- communication means and on-line data transfer from Kozloduy and Novi Han sites to SERAW HQs and link to national early warning system for the permanent monitoring of the gamma-background (managed by the Ministry of Environment and Waters).

Since the equipment available on-site for emergency situations is generally in poor state, it is also important to assess the status of this equipment to cope with an accident with radiological consequences.

It might also be useful to perform an analysis to cover all expected accidental events and to proceed with an updating of the procedures.

3.2 Linked activities

The management of radioactive waste in Bulgaria has been supported through PHARE program -BG9107-02-04-01 “Management of radioactive waste in Bulgaria”, BG9809-02-01 “Support for the establishment of a state body for Radioactive Waste Management (RWM) and to the activities of the RWM Fund” and PHARE project for installation of RODOS (Real-time on-line decision support) in the Republic of Bulgaria;

Under PHARE project BG9809-02-01 “Support for the establishment of a state body for Radioactive Waste Management (RWM) and to the activities of the RWM Fund” were developed the main documents which assist the establishment of the current SERAW.

The Emergency response preparedness system for radiological accidents of SERAW will be connected to RODOS.

3.3 Results

The main result will be the establishment of the emergency response preparedness system for accidents with radiological consequences that are incumbent to activities under the SERAW responsibility.

The project should clearly define the technical specifications for the equipment that should be funded later on through Bulgarian funding or an additional project.

3.4 Activities

The activities should comprise:
• assessment of the current situation regarding emergency planning in Bulgaria and the breakdown of responsibilities between all Bulgarian nuclear stakeholders including SERAW
• review of the new regulatory requirements and evaluation of the emergency plans
• assessment of the existing communication system in place and the availability of the equipment at Kozloduy and Novi Han to cope with any accident involving the dispersion of radioactive material into the environment and/or additional occupational exposure
• development of technical specifications for the possible requested special equipment;
• development of an effective coordination within SERAW with all relevant nuclear stakeholders involved in emergency planning;
• development of procedures and management support system, as well as proposal for modification of the existing documents;
• review of the new organisational structure in the field of management of low and medium level radioactive waste and organisation of suitable training for the concerned personnel;

The supply component (to be funded outside this project) should comprise amongst other:

• procurement of communication equipment and elements of management support system (HW/SW);
• procurement of the components necessary to secure its full functionality;
• installation of the system
• testing of the functionality of the system

4. Institutional Framework

The project will support the work of the newly established SERAW organisation which must develop emergency plans for response in case of an accident with radiological consequences at the Kozloduy and Novi Han sites, as well as to support the national level emergency planning.

The contract will be managed by CFCU Directorate within the Ministry of Finance.

The Ministry of Energy shall provide project monitoring.

5. Detailed Budget

<table>
<thead>
<tr>
<th>Year 2005 - Investment support</th>
<th>Phare/Pre-Accession Instrument support</th>
<th>Co-financing</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>National Public Funds (*)</td>
<td>Other Sources (**)</td>
<td>Total Co-financing of Project</td>
</tr>
</tbody>
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### jointly co funded

<table>
<thead>
<tr>
<th>Sub-project</th>
<th>NA</th>
<th>NA</th>
<th>NA</th>
<th>NA</th>
<th>NA</th>
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</thead>
<tbody>
<tr>
<td><strong>Investment support – sub-total</strong></td>
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<td>NA</td>
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<td>NA</td>
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<td>NA</td>
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<tr>
<td><strong>% of total public funds</strong></td>
<td>max 75 %</td>
<td>min 25 %</td>
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</tbody>
</table>

In case of parallel co-funding (per exception to the normal rule, see special condition as indicated below:

<table>
<thead>
<tr>
<th>Year 2005 - Investment support co-funded in parallel</th>
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<tr>
<td>Sub-project 1</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Investment support – sub-total</strong></td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td><strong>% of total public funds</strong></td>
<td>max 75 %</td>
<td>min 25 %</td>
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<thead>
<tr>
<th>Year 2005 Institution Building support</th>
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</thead>
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<tr>
<td>Sub-project 1</td>
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<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>0,500</td>
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<td>NA</td>
<td>NA</td>
<td>NA</td>
<td><strong>0,500</strong></td>
</tr>
</tbody>
</table>

| Total project 2005                                   | **0,500** | NA | NA | NA | **0,500** |

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### 6. Implementation Arrangements

6.1 Implementing Agency

Central Finance and Contracts Unit (CFCU)
Ministry of Finance
102, Rakovski St.
Sofia, Bulgaria
Tel: +359 2 9859 2771
Fax: +359 2 9859 2773
E-mail: efcu@inet.bg

6.2 Beneficiary: SERAW

6.3 Contact person:
Anton Ivanov, Executive Director of SERAW,
Tel.: +359 2 962 4834
6.4 Twinning
N/A

6.5 Non-standard aspects
N/A

6.6 Contracts
One Technical Assistance contract for € 500,000.

7. Implementation Schedule

7.1 Start of tendering/call for proposals
February 2006.

7.2 Start of project activity
June 2006.

7.3 Project Completion

8. Equal Opportunity
Equal participation in the project by women and men will be assured.

9. Environment
N/A

10. Rates of return
N/A

11. Investment criteria
N/A

12. Conditionality and sequencing
N/A
ANNEXES TO PROJECT FICHE

1. Logical framework matrix in standard format
2. Detailed implementation chart
3. Contracting and disbursement schedule by quarter for full duration of programme
# ANNEX 1

## Phare log frame

### LOGFRAME PLANNING MATRIX FOR

<table>
<thead>
<tr>
<th>Project</th>
<th>Programme name and number</th>
<th>Contracting period expires</th>
<th>Execution of contract expires</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical assistance of SERAW for establishment of an emergency response</td>
<td>2005/</td>
<td>30 November 2006</td>
<td>30 November 2008</td>
</tr>
<tr>
<td>preparedness system for accidents with radiological consequences.</td>
<td></td>
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<tr>
<td>Total budget: € 500,000</td>
<td>Phare budget: € 500,000</td>
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</table>

### Overall objective
- To improve safety of radioactive waste management and disposal in Bulgaria.

### Objectively verifiable indicators
- Approval of the Emergency response preparedness system for radiological accidents granted by NRA
- Functioning coordination and communication line with Civil Defence Agency, Municipalities Counsels.

### Sources of Verification
- Work programme of SERAW
- National Emergency Plan

### Project purpose
- Technical assistance of SERAW for the establishment of Emergency response preparedness system for radiological accidents

### Objectively verifiable indicators
- Functioning Emergency response preparedness system for radiological accidents in SERAW.

### Sources of Verification
- Monitoring Reports
- Documents for approval issued by the Beneficiaries.
- Monitoring Reports and

### Assumptions
- Approved rules for application of Act for crisis management
<table>
<thead>
<tr>
<th>Results</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
</table>
| • Emergency response preparedness system for radiological accidents of SERAW put in place and fully operational;  
• Capacity built for prevention of incidents and accidents and for mitigation of their consequences;  
• Procedures for emergency planning put in place compliant with the requirements of the Regulation of emergency planning: | • Establishment of Emergency response preparedness system for radiological accidents of SERAW including staff, technical means and procedures. | • Technical assistance reports provided by contractor.  
• Documents issued by the Beneficiary.  
• Monitoring Reports and EC Delegation. | • Full scope of integrated communication and mobile emergency system shall be developed based on the results of this project |

<table>
<thead>
<tr>
<th>Activities</th>
<th>Means</th>
<th>Assumptions</th>
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</thead>
</table>
| Service activities, which included the following:  
• Review of the new regulatory requirements and evaluation of the emergency plans.  
• Development of specification of needed special equipment.  
• Development of effective coordination within SERAW and with the competent organizations.  
• Development of procedures and management support system, as well as proposal for modification of excising documents.  
• Review the new organizational | • Contract provides: technical assistance providing long and short term experts for implementation of the activities and procurement of limited equipment for support of the emergency preparedness. | • No major modification in emergency preparedness rules. |
structure in the field of LILW management and provision of suitable training for the focused personnel.

Procurement of equipment for support of emergency preparedness which includes:

- Procurement of communication equipment and elements of management support system (HW/SW).
- Procurement of the components necessary to secure its full functionality;
- Installation of the system
- Testing of the functionality of the system
- Training of personnel that will manage and run the system
Establishment of SERAW, which is obliged to develop emergency plans for response in case of a radiological accident on Kozloduy and Novi Han sites, as well as to be in support on national level emergency planning.

In early 2004, SERAW was established. This company should take over all activities dealing with radioactive waste treatment, conditioning, storage and disposal.
<table>
<thead>
<tr>
<th>Programme number</th>
<th>Document</th>
<th>Strategic Plan</th>
<th>Section</th>
<th>D</th>
<th>Version</th>
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**IMPLEMENTATION PLAN OF THE PROGRAMME**

<table>
<thead>
<tr>
<th>Date of Drafting</th>
<th>Planning Period</th>
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<tbody>
<tr>
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<td>2006-2007</td>
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Programme Title

Technical Assistance for Development of conceptual design for construction of National disposal facility for low and intermediate level radioactive waste.

<table>
<thead>
<tr>
<th>Project</th>
<th>Implementation Schedule</th>
<th>Budget Allocation</th>
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<tbody>
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</thead>
<tbody>
<tr>
<td>Project I</td>
<td>D</td>
<td>C</td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>I</td>
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<tr>
<td>Total Programme</td>
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</tbody>
</table>

**Legend:**

D = design of sub-projects (ToR evaluation).
C = tendering and contracting.
I = contract implementation and payment.

Total Programme Budget Allocation 500 000
## ANNEX 3

**CUMULATIVE CONTRACTING and DISBURSEMENT SCHEDULE (Million euro)**

<table>
<thead>
<tr>
<th>Date</th>
<th>30/05/06</th>
<th>30/09/06</th>
<th>31/12/06</th>
<th>31/03/07</th>
<th>31/09/06</th>
<th>31/06/07</th>
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<td></td>
</tr>
<tr>
<td>Contracted</td>
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<td>0.50</td>
<td>0.50</td>
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<tr>
<td>Disbursed</td>
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<td>0.35</td>
<td>0.40</td>
<td>0.45</td>
<td>0.50</td>
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