1. **BASIC INFORMATION**

1.1 CRIS Number: 2003/004-643. Project 2

1.2 Title: Upgrading the Solid Waste Management System (Landfill)

1.3 Sector: Environment

1.4 Location: Ministry of Interior, Nicosia, Cyprus

2. **OBJECTIVES**

2.1 Overall Objective(s):

The overall objective of the project is to enhance Cyprus’s capability in the disposal of solid waste, in accordance with EU standards and requirements.

2.2 Project purpose:

The project purpose is to carry out studies and designs for the construction of new landfills, the upgrading of existing ones and the restoration (rehabilitation of the landfill site to its initial environmental state) and after-care (maintenance of the site and the equipment) of waste disposal sites that will be closed.

2.3 Accession Partnership and NPAA priority

- Accession Partnership
  
  It is a priority within the Accession Partnership (p. 13) to complete transposition of the environmental *acquis* with special emphasis on Waste Management.

- National Programme for the adoption of the acquis (NPAA)
  
  The NPAA (Chapter 3.6.1.9.3, p. 469) states the following:
  “Cyprus will develop plans to upgrade two major landfills and to build a new one and to create pilot plans for domestic waste and recyclable material collection. An implementation program, assigned to consultants, will be completed by the beginning of 2002, dealing with the assessment of the landfills as regards their compliance to the Landfill of Waste Directive 99/31/EC and for specific suggestions for the closure, upgrading, etc., of each one of them, in order to secure compliance by 2009 under article 14 of the Directive.”

3. **DESCRIPTION**

3.1 Background and justification

Municipal solid waste is managed by the various municipalities, disposal of waste taking place in landfills of various degrees of environmental acceptability. There are 6 official landfills, none of
which complies fully with the Landfill of Waste Directive 99/31/EC. Illegal disposal mainly of household waste takes place in rural areas in particular. The per capita generation of solid waste in Cyprus is 470 Kg/year (as compared to 327 Kg/year in the EU), resulting to an annual total of 368,000 tons.

Basically, there is no waste sorting at source. This results in very low level of recycling in comparison to the waste disposed at landfill sites. A special study was submitted by mid-1999 to the Council of Ministers, in order to propose a strategy for a comprehensive domestic solid waste management system. The Council of Ministers approved the proposals by the end of 1999, including provisions for collection systems, the establishment of transfer stations, composting plants, etc. According to the Urban Solid Waste Management Plan approved by the Council of Ministers, Cyprus will have to upgrade two major landfills (Vati and Kotsiatis), build two new landfills (Paphos and Larnaca/Ammochostos). It will also have to close down the some landfills and restore them, in order to avoid adverse environmental effects and to create pilot plans for domestic waste and recyclable material collection, in order to fully comply, with the provisions of the Landfill of Waste Directive 99/31/EC, by 2009.

It should be noted that as regards the building of a new landfill in Paphos, the call for tenders was launched in May 2002. In September 2002, the pre-qualified contractors were invited to submit their proposals to the Main Tender Board by 15 November 2002.

The project purpose is to obtain all necessary plans, studies and documentation for the implementation of the following three projects:

- Upgrading existing landfills of “Kotsiati” (population served 273,129) and “Vati” (population served 197,300);
- Construction of a sanitary landfill and two transfer stations for the districts of Larnaca/Ammochostos (population served 153,004);
- Restoration and after-care of small (and often illegal) waste disposal sites that will be closed.

The cost of the works to be carried out after the completion of the studies will be born by the Ministry of Interior. According to the commitments undertaken in the accession negotiations these works will have to be completed by the year 2009. As implementation of the present project is anticipated to be completed, to a large extent, by the end of 2005, this leaves sufficient time for the completion of the necessary construction works.

3.2 Linked activities

- As already mentioned in the “Background and Justification”, the tender for the construction of a new landfill in Paphos was launched in May 2002.
- A Feasibility Study, expected to be completed by the end of 2002, was undertaken by the Ministry of Interior in order to:
  (a) map existing disposal sites, including illegal ones, and propose the location of the new landfill for Larnaca/Ammochostos;
  (b) determine more accurately the production of domestic solid waste for each district and the collection system applied by each municipality/community.
- Procedures for the use of an existing pilot composting plant near the village Ergates (Nicosia district) for the composting of solid plant waste and other organic solid material, have been completed. More specifically, the contract for the management of this project is expected to be signed in November 2002. The Plant is expected to become fully operational in early 2003. Results from this project will be used for reducing the volume of the domestic solid waste by composting the organic part of this waste.
3.3 Results

- Environmental Impact Assessment (E.I.A.) and feasibility studies, technical studies, detailed plans for landfill sites and transfer stations prepared.
- Conditioning Plans (upgrading of the two major existing sites) prepared.
- Study and plans as regards to the restoration and after-care of abandoned sites prepared.
- Tendering documentation for the three components of the project prepared.

3.4 Activities:

The activities of this project will be implemented in the framework of three main components:

Component 1:
- Preparing tender documentation for the designs and construction works [based on the Private Financing Initiative (PFI)] for the creation of the new Larnaca/Ammochostos landfill site and two transfer stations.
- Preparation of the EIAs and Detailed Plans.

Component 2:
- Preparing tender documentation for the designs and construction works [based on the Private Financing Initiative (PFI)] for the upgrading of “Kotsiati” and “Vati” existing landfill sites.
- Preparation of the EIA and Conditioning and Detailed Plans.

Component 3:
- Preparing tender documentation for the designs and construction works for the rehabilitation and aftercare of existing solid waste disposal sites.
- Prepare detailed plans for the rehabilitation and after-care of most sites and upgrading of a few selected landfills.

4. INSTITUTIONAL FRAMEWORK

Domestic solid waste collection, transport and disposal is the responsibility of local authorities. Competencies for these operations are defined in the Municipalities Law (Law No 111/85) and the Community Councils Law (Law No 86(I)/99).

However, a new Law, the Solid and Hazardous Waste Law of 2002 is expected to be enacted before the end of October 2002, covering all institutional aspects of the management of solid and hazardous wastes. According to the new Law, the national strategy (including the number and location of landfills) is approved by the Council of Ministers on a joint submission by the Minister of Agriculture, Natural Resources and Environment and the Minister of Interior.

Law provides that any operation of waste management need to be licensed either by the Minister of Interior (for mixed domestic and other types of municipal wastes e.g. organic and garden waste) or the Minister of Agriculture, Natural Resources and Environment (for any other type of waste e.g. hazardous, toxic, etc).
Inspection, monitoring and enforcement are carried out by a chief inspector and inspectors of each of the above mentioned permitting licensing authorities.

As the three components of the project relate to mixed domestic solid wastes, the implementing authority, according to the provisions of the above Law, is the Ministry of Interior.

For the effective management of the project, a Project Steering Committee (PSC) shall be set up immediately after the approval of the project by the Phare Committee, to oversee the progress of the project and provide input where necessary. The working rules of the PSC will be prepared by the Planning Bureau and communicated to the Implementing Authority before the setting up of the PSC. Representatives of the following institutions shall be members of the PSC:

- Ministry of Interior
- Ministry of Agriculture Natural Resources and Environment
- Planning Bureau
- Accountant General
- Town Planning and Housing Department (Public Health Engineers)
- District Officers
- Union of Municipalities
- Union of Communities
- Delegation of the European Commission in Cyprus (Observer)

5. **Detailed Budget**

<table>
<thead>
<tr>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Investment</strong>&lt;sup&gt;(1)&lt;/sup&gt;</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>1. Larnaca/Ammochostos landfill site and 2 transfer stations</td>
</tr>
<tr>
<td>2. Kotsiati and Vati</td>
</tr>
<tr>
<td>3. Restoration and aftercare of existing solid waste disposal sites</td>
</tr>
<tr>
<td><strong>Overhead Expenses</strong></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
</tbody>
</table>

<sup>(1)</sup> - In relation to equipment, software and related services (installation, testing, training etc.);
<sup>(2)</sup> - In relation to management, organisation, procedures, legislation, training programmes etc.
<sup>(3)</sup> - In relation to the overhead expenses of the project which will be considered as being expended according to the payments made against the project.

6. **Implementation Arrangements**

**PAO** for the project:
**Mr. Kyriacos Triandafyllides**
Permanent Secretary
Ministry of Interior

Project 2: Upgrading the solid Waste Management System
Dem. Severi Street, Nicosia, CYPRUS

6.1 Implementing Authority

Ministry of Interior  
Contact person: Dr Georgios Koullapis  
Sanitary Engineer  
Town Planning and Housing Department  
Nicosia  
Cyprus  
Tel No.: 00 357 24304191  
Fax No. 00 357 24304421  
E-mail:

6.2 Twinning  
N/A

6.3 Non-standard aspects  
The project will be managed according to the Extended Decentralised Implementation System (EDIS).

6.4 Contracts  
Three (3) service (technical assistance) contracts are foreseen for the following project components:

- Creation of a new sanitary landfill and two transfer stations for the district of Larnaca/Ammochostos (Budget: 0.430 MEURO)
- Upgrading of the existing landfill sites of “Kotsiati” and “Vati” (Budget: 0.430 MEURO)
- Restoration and after-care of existing solid waste disposal sites (Budget: 0.440 MEURO)

It was decided to divide the project into three separate contracts in order to allow more flexibility as regards the starting of the separate construction works (to be completed by 2009). The above three contracts could be undertaken by one or more contractors.

7. IMPLEMENTATION SCHEDULE  
7.1 Start of tendering/call for proposals: March 2003  
7.2 Start of project activity: January 2004  
7.3 Project completion: April 2006

8. EQUAL OPPORTUNITY  
Article 28 of the constitution safeguards the right of all persons to equality before the law, the administration and justice and of equal protection thereof and treatment thereby. Any direct or indirect discrimination against any person on the ground, i.e. of sex, is prohibited. Furthermore, the prevailing legislation with respect to equality of treatment for men and women is partly in conformity with the acquis communautaire. Harmonised legislation is under preparation and full compliance with the acquis communautaire will be achieved gradually by 1/1/2003.

The Ministry of Interior which is the implementing authority of this project is an equal opportunity employer.

9. **ENVIRONMENT**
N/A

10. **RATES OF RETURN**
N/A

11. **INVESTMENT CRITERIA**
N/A

12. **CONDITIONALITY AND SEQUENCING**
The components of the project are inter-related and adopt a logical approach to design and implementation. There is no conditionality and sequencing.

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**ANNEXES**
1. Logical framework matrix in standard format
2. Detailed implementation time chart in standard format
3. Contracting and disbursement schedule by quarter for full duration of programme
## LOGFRAME PLANNING MATRIX FOR

**PROJECT:**
UPGRADING THE SOLID WASTE MANAGEMENT SYSTEM (LANDFILL)

<table>
<thead>
<tr>
<th>Overall Objective</th>
<th>Objectively Verifiable Indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Meeting the obligations and the requirements of the Directive 99/31/EC on the Landfill of Waste</td>
<td>• Monitoring Reports on compliance accepted by the Commission (99/31/EC)</td>
<td>• Specific Accession Monitoring Reports</td>
<td>Technical and Tendering Documentation used for the investment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Regular Report of the European Commission</td>
<td>Funds are available for the investments prepared from the National Budget</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Purpose</th>
<th>Objectively Verifiable Indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Preparations for the construction of new landfills, upgrading existing ones and restoration and after-care of waste disposal sites that will be abandoned</td>
<td>• Constructions ready to be started</td>
<td>• Monitoring and Assessment Reports</td>
<td>Full commitment of all involved authorities</td>
</tr>
<tr>
<td></td>
<td>• All administrative requirements met</td>
<td>• Reports of the Steering Committee</td>
<td>Timely availability of adequate resources</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Results</th>
<th>Objectively Verifiable Indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• E.I.A. and Feasibility studies, technical studies, detail plans for landfills sites and transfer stations.</td>
<td>• Technical and Detailed Studies prepared in time and in full compliance with the Directive 99/31/EC</td>
<td>• EIA and Feasibility Study</td>
<td></td>
</tr>
<tr>
<td>• Conditioning Plans (upgrading of the two major existing sites, including E.I.A. studies)</td>
<td>• Conditioning plans ready and approved</td>
<td>• Conditioning Plans</td>
<td></td>
</tr>
<tr>
<td>• Technical assistance for the study and plans as regards to the restoration and after-care of abandoned sites</td>
<td>• Study approved by the Steering Committee</td>
<td>• Reports of the TA team</td>
<td></td>
</tr>
<tr>
<td>• Tendering documentation</td>
<td>• Tendering documentation approved by the competent authorities</td>
<td>• Tendering documentation</td>
<td></td>
</tr>
</tbody>
</table>

**Total Budget:** 1.440M€
**EU contribution:** 1.30 M€

**Contracting period expires:** July 2005
**Disbursement period expires:** July 2006
<table>
<thead>
<tr>
<th>Activities</th>
<th>Means</th>
<th>Assumptions</th>
<th>Preconditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Preparing tender documentation for the designs and construction works for Larnaca/Ammochostos Landfill site and 2 transfer stations</td>
<td>• One service contract for the sanitary landfill and two transfer stations for the district of Larnaca./Ammochostos</td>
<td>• Contracts and acceptance certificates</td>
<td>• Full commitment of all the services involved</td>
</tr>
<tr>
<td>• Preparation of the EIAs and Detailed Plans</td>
<td>• One service contract for upgrading of the existing landfill sites of ‘Kotsiati” and “Vati”</td>
<td>• Contracts and acceptance certificates</td>
<td>• Budgets approved and available in time.</td>
</tr>
<tr>
<td>• Preparing tender documentation for the designs and construction works for Kotsiati and Vati</td>
<td>• One service contract for the restoration and after-care of existing solid waste disposal sites</td>
<td>• Contracts and acceptance certificates</td>
<td></td>
</tr>
<tr>
<td>• Preparation of the EIAs and Detailed Plans</td>
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</tr>
</tbody>
</table>

**Preconditions**

• Full commitment of all the services involved
• Budgets approved and available in time.
# ANNEX 2

## Detailed Time Implementation Chart for the Project

**Title: Upgrading the Solid Waste Management System (Landfill)**

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Larnaca and Famagusta Landfill sites and 2 transfer stations</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>C</td>
</tr>
<tr>
<td>2. Kotsiati and Vati</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>3. Restoration and aftercare of existing solid waste disposal sites</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
</tr>
</tbody>
</table>

D = Design  
C = Tendering, Contracting  
I = Implementation  
X = Closure
## CUMULATIVE CONTRACTING AND DISBURSEMENT SCHEDULE

**Title: UPGRADING THE SOLID WASTE MANAGEMENT SYSTEM (LANDFILL)**

<table>
<thead>
<tr>
<th></th>
<th>01/01/04</th>
<th>01/04/04</th>
<th>01/07/04</th>
<th>01/10/04</th>
<th>01/01/05</th>
<th>01/04/05</th>
<th>01/07/05</th>
<th>01/10/05</th>
<th>01/01/06</th>
<th>01/04/06</th>
<th>01/07/06</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONTRACTED</strong></td>
<td></td>
<td>0.9</td>
<td></td>
<td>1.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DISBURSEMENT</strong></td>
<td>-</td>
<td>-</td>
<td>0.455</td>
<td>0.5</td>
<td>0.6</td>
<td>0.7</td>
<td>0.8</td>
<td>1.0</td>
<td>1.1</td>
<td>1.2</td>
<td>1.3</td>
</tr>
</tbody>
</table>

*(Million Euro)*