Standard Summary Project Fiche for the Transition Facility

1. Basic Information

1.1 CRIS Number: 2005 017-511.04.01. Twinning MT05-IB-EN-01

1.2 Title: Assistance to explore long-term projects to manage specific waste streams in a more sustainable manner

1.3 Sector: Environment

1.4 Location: Malta

2. Objectives

2.1 Overall Objective(s):

Support the administrative capacity to implement the National Waste Management Strategy (2001) and the subsequent updates in conformity with EU requirements.

2.2 Project purpose:

To promote long-term sustainable waste treatment facilities in the Maltese Islands for construction and demolition waste, municipal solid waste as well as waste similar to MSW and some commercial waste.

2.3 Justification:

According to the 2003 Commission Comprehensive Monitoring Report, chapter 22, ‘Community environment policy aims to promote sustainable development and protect the environment for present and future generations, and is based on the integration of environmental protection into other Community policies, prevention action, the polluter pays principle, fighting environmental damage at source, and shared responsibility’. The Report adds that ‘The establishment of recovery and disposal facilities needs to continue in order to ensure compliance in accordance with the agreed deadlines.’ Furthermore ‘Greater efforts are needed to ensure that collection systems and recovery and disposal facilities are established in accordance with Malta’s commitments.

This new Community Waste Strategy (1996) published by the Commission confirms the original waste hierarchy: prevention of waste is the first priority, followed by reuse and recovery and finally by safe disposal of waste. The strategy emphasises that ‘particular care should be taken to avoid as much as possible incineration options without energy recovery’. It suggests that only wastes above a certain calorific value should be considered as wastes for energy recovery. Landfill is viewed as an option of last resort: the Strategy recommends pre-treatment of all wastes prior to landfilling, and proposes that only non-recoverable or inert wastes be landfilled.

As stated in the ‘Solid Waste Management Strategy for the Maltese Islands’ (2001), even after introducing source segregation and separate collection of Municipal Solid Waste (MSW) and similar wastes and the upgrading the Sant’
Antnin Waste Treatment Plant¹, a facility for thermal treatment with energy recovery from non-recyclable, non-hazardous combustible wastes and process residues will be required in order to meet the later targets (in 2013 and 2020) in the Landfill Directive for reducing the amount of biodegradable waste going to landfill.

As was also stated in the ‘Solid Waste Management Strategy for the Maltese Islands’ (2001), for both economic and environmental reasons, the scope for restoring and reclaiming quarries using surplus inert materials will be pursued and fully exploited in preference to schemes involving the reclamation of land from the sea.

3. Description

3.1 Background and justification:

These two projects will promote a long-term sustainable waste management scheme for the Maltese Islands for specific types of waste streams that have been insufficiently catered for in Malta. The current waste disposal means available in Malta for most of the Municipal Solid Waste and other non-recyclable waste is landfiling without energy recovery. The focus of the projects will mainly be on the long-term disposal/recovery system for two types of waste streams, which are construction and demolition (C&D) waste and waste including residual waste generated from municipal solid waste.

- Renewable Energy

As a EU member state, Malta has the obligation to reach the national renewable target of 5% share of overall energy consumption by 2010. One form of renewable energy is the utilisation of biomass from waste. Biomass means the biodegradable fraction of products, waste and residues from agriculture (including vegetal and animal substances), forestry and related industries, as well as biodegradable fraction of industrial and municipal waste.

The EU Directive 2001/77/EC states clearly that the promotion of electricity from renewable energy sources is a high Community priority for reasons of security and diversification of energy supply, of environmental protection and of social and economic cohesion.

- Construction, Excavation and Demolition Waste

Most of the two million tonnes of inert waste (including inert material from excavation) generated in 2004 from the construction industry is being used to rehabilitate disused quarries, which is a form of land reclamation. Land is a very scarce resource on the Islands and therefore the rehabilitation of quarries to reclaim land and space is of immense importance in Malta. At present, due to the enormous volumes generated annually, it is estimated that the disposal capacity in the disused quarries will expire within the next 5 years.

The core principle of sustainable development lies in the ecological efficiency of material and goes in line with the thought of recycling and returning valuable raw material to good use. In addition to avoiding waste production, recovery must, be given high priority to advanced sustainable development. Waste

¹ This Waste Treatment Facility is further described in section 3.1.3
management includes in the first place waste prevention, recovery of unavoidable waste and the optimisation of final disposal. Greater efforts are needed in the sector of prevention, reuse/recycling of construction and demolition waste, comprehensive treatment options, as well as in the establishment of final disposal possibilities.

3.1.1 The Size of Malta and its Restrictions

Malta is one of the smallest countries in the world, with a surface area of 315.36km² and having one of the highest population densities, with over 1,200 persons per square kilometre. The population of the Maltese Islands in 2003 stood at 399,867 individuals and this figure is expected to increase to 434,000 by 2020. Apart from this, Malta has a high influx of tourists. Tourist arrivals in 2003 reached a figure of 1,089,089. In addition to this, the density is not uniformly spread over the whole area and varies over the regions making up the islands as well as between the islands themselves. This makes waste separation at source more problematic in these high densely populated regions.

Land is probably the scarcest resource in Malta. Therefore, given the size and natural constraints of Malta, it is evident that dumping of large volumes of waste is ultimately unsustainable as a primary method of disposal. This means that, while there will be a need for landfilling of some kind, a sustainable system for disposing of wastes will need to incorporate facilities either for recovering and/or pre-treating wastes, both to minimise their final volume and reduce their pollution potential. It also means that the capacity of future engineered landfill sites will be a scarce and valuable resource that should be reserved for the disposal of those wastes for which no other technically feasible or economically viable disposal route exists.

3.1.2 The Amount of Waste Generated in Malta

During the year 2003, a total amount of 240,000 tonnes of municipal solid waste (MSW) was deposited at the Maghtab waste deposit site while during the same year, 18,160 tonnes of MSW was deposited at the Qortin waste deposit site in Gozo. Another 30,000 tonnes of MSW was deposited at Sant’ Antnin Solid Waste Treatment Plant for treatment and composting.

WasteServ Malta Ltd closed down the old dumpsites at Maghtab, Wied Fulija (Malta) and Qortin (Gozo), by the 30 April 2004 and introduced a new engineered Temporary Waste Facility at Ta’ Zwejra, within the Maghtab footprint. This area, which had the permit for use as a waste deposit site, was developed to the engineering standards of the Landfill Directive. This state-of-the-art waste facility has been in operation from 1 May 2004, upon the accession of Malta into the European Union. The waste deposited in this site is monitored and controlled. Hazardous waste has been banned and large volumes of recyclable material are being deviated for recycling. However, the current waste treatment facilities in Malta depend heavily on landfilling. It is a fact that Malta still needs to invest heavily in more infrastructure to be compliant with the targets stipulated in the EU Council Directive 1999/31/EC on the landfill of waste, as well as other obligations arising out of Malta’s accession to the EU.

3.1.3 The Upgrading of Sant’ Antnin Solid Waste Treatment Plant

The EU Council Directive 1999/31/EC on the landfill of waste sets targets for the reduction of biodegradable waste sent to landfill as 75% of the 1995 level by
2010, 50% of the 1995 level by 2013 and 35% of the 1995 level by 2020. The landfill directive also stipulates that measures taken to reduce the landfill of biodegradable waste should also aim at encouraging the separate collection of organic waste, sorting in general, recovery and recycling.

The current facility at Sant’ Antnin that was built in 1993, had been designed to cater for a throughput of 80,000 tons of MSW per annum. However, the plant has never achieved its design capacity, and has been beset by a series of technical and environmental problems throughout its history. Faced with the fact that the current Sant’ Antnin Waste Treatment Facility is not capable of treating the biodegradable waste fraction produced in Malta due to the outdated 1993 technology as well as to the strict and tight schedule that the Government of Malta has for reaching the goals set in the national waste management strategy, WasteServ Malta Ltd applied for Cohesion Funding to upgrade this facility.

The new Waste Treatment Plant will constitute two facilities, a Material Recovery Facility in which selectively collected dry recyclables are processed by further hand sorting. The Second part of this plant will consist of a Digestion Plant with a mechanical pre-treatment stage to remove contaminants. The anaerobic digester converts the biological waste into biogas and a usable digestate. The final products from the digester will be compost and biogas, which will be used for energy production.

The upgraded Sant’ Antnin Waste Treatment Plant is designed to cater for the treatment of 36,000 tonnes per annum of separated collected dry recyclables and 35,000 tonnes per annum of source segregated and separately collected bio waste that can undergo simple pre-treatment prior to digestion. All rejects from this plant together with the other 129,000 tonnes of waste will be directly deposited in a landfill. The identified throughputs of these facilities compare well to the percentages of recovery and separation achieved in other countries with similar conditions. However, this state of the art plants are designed in modular units so that they can be easily upgraded in capacity to meet increased throughputs as the recovery of separate waste streams increases.

3.1.4 Waste Separation

For Malta to be capable of managing all the waste sustainable and in accordance with national and European standards and regulations, WasteServ Malta Ltd applied for other Pre-Accession Funds, European Structural Funds, European Social Funds and Transition Funds (2004 programme) to get funding to:

- Invest in infrastructure to introduce waste separation in the Maltese Islands both for dry-recyclables and organic waste. Dry Recyclables, which include plastic, paper, glass and metal, will be collected by the provision of several bring-in sites in each locality in Malta and Gozo. The collection of the required amount of clean organic fraction will be a door-to-door collection scheme operating in carefully selected zones to minimise inconvenience.
- Invest in an intensive Educational Campaign to educate both the children and the households on the need to separate waste and how this can be done.
- Invest in more staff that can provide individual education to households on waste separation.
- Invest in Educating waste collectors, waste haulers, waste managers and the personnel within the Public and the Private sector involved, in some way or another, in waste management/treatment.
3.1.5 Waste from the Construction Industry

Construction, excavation and demolition waste constitutes the major fraction of the solid waste generated in Malta. Between 1997 and 2002, Maghtab alone received approximately 6 million tonnes of this type of waste. Over this six-year period under consideration the amount of such waste disposed of, was increasing steadily with an average increase of 13% annually (by weight). The main factors are that due to height restrictions, the trend is to excavate and utilise this space economically. Apart from this, the cost of the Globigerina Limestone is still very cheap and easily found and hence there is no incentive to recycle this raw material. Specific research still needs to be carried out on this material for recycling purposes since the natural properties differ from other building materials utilised in other countries.

To avoid the further contamination of this large quantity of inert material, with 80% by weight resulting from excavation of the soft Globigerina Limestone, the Government issued a tender to contract the management of the inert waste. This contract, known as Package 1, is projected to be of a five-year duration that, above others, will assist the rehabilitation of land by infilling of quarries for agricultural purposes.

WasteServ Malta Ltd is currently managing the contract Package 1 providing sufficient void for the deposit of this material. However, at present it is estimated that the disposal capacity in the disused quarries will expire within the next 5 years. To encourage the recycling of C&D waste, a recycling target was specified in this contract. Package 1 comprises also a step-by-step reduction of state subsidies and from 1st January 2005 no subsidies will be granted. Due to the natural properties of the local stone, only the Lower Coralline Limestone is being recycled. Unfortunately, no records are available of the actual amount of C&D material that is being recycled. When one considers that the available void under Package 1 is about 4.5 million cubic metres and that the report on disused quarries commissioned by the Works Division in 2001 identifies a void of 5.4 million cubic meters in total, then, if all this potential void is available for the management of C&D material, it is comprehensible that additional solutions subsequent to Package 1 need to be identified before the end of March of 2008. Though it was assumed that the projected annual tonnage of this waste stream stabilizes at 1.2 million tonnes, the weight registered during the first year of operations was 1.57 million tonnes and projections show a rising tendency (3.75% at 2005 and 4.25% per annum at 2010). This is mainly due to offering a more efficient service by having a number of waste reception sites located in the northern and southern parts of the island. All preparatory work must be carried out at the earliest whilst an interim solution, through Package 1, is being implemented.

During the next 20 years, it is envisaged that there will be a significant amount of urban redevelopment in the Maltese Islands, especially as spatial demands have increased. This will lead to several structures no longer being utilised and in most cases demolished, lead to more quarrying and more limestone waste.

While marine deposition of limestone waste is increasingly seen as a necessary option, this option is considered as an end-of-pipe solution with considerable impact on the local marine environment, as well as on the multitude of uses of the coastal area, including navigation, fisheries and recreation.
Although the Solid Waste Management Strategy and the Waste Subject Plan both call for recycling and re-use of construction and demolition material, and the Minerals Subject Plan is calling for the investigation of alternative construction material, Malta is still in its rudimentary stages at achieving a long-term economically feasible, practical and effective strategy for recycling such material. The economic potential of construction & demolition material has not yet been recognized or even tapped into effectively.

It is believed that so far proactive options for reducing C&D waste generation and for the sustainable management of C&D waste have been insufficiently explored.

3.1.6 Waste-To-Energy

As mentioned in section 2.3, this project addresses specific requirements in order for Malta to implement the ‘Solid Waste Management Strategy for the Maltese Islands’ (2001). This Strategy (which also encompasses the implementation of the solid waste related requirements of the EU environmental acquis) was adopted in October 2001 and sets out a series of measures that require implementation in the 20 years to follow. Of particular relevance is that Malta should have had some thermal treatment for special waste already by the end of 2004, as mentioned in the “Solid Waste Management Strategy for the Maltese Islands’ (2001). The construction of a waste-to-energy facility for the Maltese Islands will provide a long-term sustainable solution for the disposal of certain types of waste.

Considering that for the year 2000, Malta imported 472,606 metric tonnes of heavy fuel oil to run the Marsa and Delimara Power Stations from which 1,932 GWh of electricity was generated for local consumption, the possibility of electricity generation from mixed municipal solid waste needs to be seriously considered. Apart from this, considering the limited space in Malta available for waste disposal facilities, Malta needs to find long-term alternative solutions.

With the upgrading of the Sant’Antnin Solid Waste Treatment Plant, it is estimated that out of the 200,000 tonnes/annum mixed household waste (including similar commercial, industrial and institutional waste as mentioned in chapter 20 of the European Waste List) 36,000 tonnes/annum which is separate collected dry recyclables will be sorted for recycling at the MRF while 35,000 tonnes/annum separate collected organic waste will be passed through the Digestion Plant for energy recovery prior to composting. With the Digestion Technology and the above-mentioned 35,000 tonnes of biodegradable waste, approximately 10 GWh/a of electricity will be generated and provided to about 1,400 households. The remaining 129,000 tonnes/annum together with all the rejects generated from the MRF and Mechanical Treatment Plant (MTP) will be deposited at a landfill.

Considering that more than 50% of the mixed household waste is of organic origin from which renewable energy can be generated, Malta cannot afford to keep dumping this waste. It is important, that for a small country like Malta that is 100% dependant on the import of fuel oil for power generation, to utilize this organic waste wisely for energy recovery. Further it is essential that the possibility of investing in a waste-to-energy plant or some other type of technology is seriously considered and worked upon to minimize as much as possible the amount of waste prior to dumping at a landfill. For a small island
like Malta, wasting valuable land space for dumpsites is not economically and environmentally sustainable.

Apart from the municipal solid waste, one can also consider the dewatered sewage sludge that will be generated from the sewage treatment plants in Malta after the mechanically dewatering process. It is estimated that approximately 10,000 tonnes/year of sewage sludge will be generated once the new sewage treatment plants for Malta and Gozo are completed. Possibilities need to be explored as to whether this sewage sludge should be utilized as a means of biomass for energy recovery.

### 3.1.7 Coordination/avoidance of overlap with other EU assistance instruments, including Structural and Cohesion Funds

Attention has been paid to avoiding overlaps with other EU assistance instruments that came into force in 2004, in particular the Structural and Cohesion Funds. Maximum synergies between all sources of financing were considered.

The Cohesion Fund will finance the project of the upgrading of the Sant’ Antnin Solid Waste Treatment Plant, which includes actions on energy recovery. This Transition Facility project will concentrate on actions or activities that are not already implemented in the Sant'Antnin plant.

The implementing body retains the responsibility for reviewing all measures under the Single Programming Document, the Strategic Reference Framework Document (for Cohesion Fund) and Rural Development Plan on one hand and the projects funded under this Transition Facility programme on the other to ensure consistency and compatibility and removing the risk of overlap.

### 3.2 Linked activities:

Relevant linked activities have included:

- Development of an Integrated Solid Waste Management Strategy for the Maltese Islands (LOC No. de Angelis-004-MA/MEDA/SCR/A2-00), which was adopted in October 2001 as the National Waste Management Strategy.

- ‘Establishing Institutional Capacity in the Environment Sector Project’ (2002/000 – 268 (MT2002NP) Project 01). MEPA was the main beneficiary of this project through which its staff obtained expert advice on institutional setup, permitting and training in regulatory matters. Moreover, a service contract was successfully executed specifically to assist WasteServ Malta Ltd on the set up of the company (although this was also in liaison with the Management Efficiency Unit of the Office of the Prime Minister) and to provide both general and specific advice on waste management matters. An international waste management consultant provided 90 days input between July 2002 and March 2003.

- Under the 2001 and 2003 National Pre-Accession Programmes for Malta – General Technical Assistance: two framework contracts were launched by the European Commission to provide technical assistance on the ‘Upgrade of the Sant Antnin Composting Plant and Material Recycling and Recovery Facility’
(MRF) and on the development of ‘Waste Segregation and Separate Collection of Household Waste’.

- Component 2 of the NPAA 2003 project “Integrated Permitting and Monitoring Systems” is being led by MEPA and its activities (twinning light and service contract) are due to commence in 2005.


- Transitional Facility 2004 project “Building capacity to introduce the Polluter Pays Principle through economic instruments to implement the EU environmental Acquis” will commence in 4th Quarter of 2005 and will result in a package of economic environmental instruments.


- A Structural Funds project under the ERDF programme called ‘Establishing Civic Amenity and bring-in sites, separate waste collection and an integrated communication strategy’. As the name implies, this project is aimed at the introduction of new waste facilities for the separate collection of materials for recycling or disposal. This project shall commence in 2004 and finish in 2006.

- A Structural Funds project under the ERDF programme called ‘Aerial Emissions control for Maghtab, Qortin and Wied Fulija Landfills’. This project shall commence in January 2005 and finish in 2007. This project will be the first milestone in the rehabilitation process of the three old and closed landfills.

- In 2005 WasteServ Malta Ltd and MEPA will be benefiting from a Twinning project under the Transitional Facility 2004 (MT04-IB-EN-03). This is to consist in technical assistance for the development of implementation systems for the producer responsibility directives. The aim of this project is to ensure that WasteServ and MEPA employees as well as all the stakeholders who will be affected by the implementation of the ‘producer responsibility’ principle acquire the professional skills and the necessary expertise to execute their tasks properly.

### 3.3 Results

1. A long-term, sustainable waste strategy for waste streams including Construction and Demolition waste and non hazardous waste drawn up;
2. Waste managed according to national and EU standards;
3. Waste facilities designed to reduce the land required for waste disposal;
4. The Solid Waste Management Strategy for the Maltese Islands implemented to ensure coherent waste management;
5. Detailed feasibility analysis of each project, including a site selection exercise, carried out.
3.4 Activities

Execution of this project will require twinning assistance from a competent authority or authorities of another EU Member State. A Resident Twinning Advisor (RTA) supported by short-term experts will deliver the assistance. The RTA will be assigned for a period of 18 months and shall be primarily located at WasteServ Malta Ltd. The RTA will work primarily with WasteServ Malta Ltd, and, as needed with the Malta Environment and Planning Authority, the Ministry of Rural Affairs and the Environment (MRAE) and other stakeholders that may be involved in the execution of this project. A provision of €250,000 is being made in the Budget in respect of the RTA.

The RTA will possess the following qualifications:

- A University degree in Environmental Engineering with at least 10 years experience in the development, practice and implementation of waste collection practices and systems and in the development of technical standards associated with waste management in the European Union.
- Experience in project management
- Proficiency in spoken and written English
- Must be Computer literate (MS Office)
- Experience in drafting of contracts for the procurement of the new waste treatment plant

The main tasks of the RTA:

- Formation of two technical working groups with representatives from governmental and non-governmental stakeholders (MEPA, Building Industry Consultative Council (BICC), Malta Resources Authority (MRA), Malta Maritime Authority (MMA), University of Malta and expertise from the Twinning Partner) that will be responsible for the implementation of the two central activities, that on “Construction and Demolition Waste” and on the “Renewable Energy from Waste”.
- Provision of advice on administrative, regulatory and permitting issues.
- Provision of advice for the evaluation of possibilities for waste minimization and identification of the energy potential of the waste generated for Renewable Energy and documentation of the obtained results.
- Provision of advice in developing a communications strategy to disseminate information on the Construction and Demolition waste and waste-to-energy.
- Assistance to WasteServ, MEPA and the Ministry for Rural Affairs and the Environment in order to achieve better waste management practices in reduction and recycling/reuse of waste.

Additional tasks of the RTA:

**Renewable Energy from Waste**

The expected main activity includes technical assistance in the planning and commissioning phase of a waste-to-energy facility operating on renewable energy from waste. More specifically, the following activities are considered necessary:
- Technical assistance in formulating a waste-to-energy strategy and provide support for all relevant documentation required;

- Assistance in preparing a communications campaign to disseminate information to interested stakeholders and to the general public on the new waste-to-energy Technology;

- Assistance in the setting up of guidelines to gather relevant information and in compiling the necessary documentation for planning and procurement of a waste-to-energy facility;

- Technical assistance in the commissioning of the new waste treatment facilities related to this project. This may include training on project management and quality assurance;

- Organisation of workshops for WasteServ and MEPA employees regarding the state of the art technologies in waste to energy in order to be able to carry out the activities related to this project. Further training will be provided to prospective plant operators in facilities abroad in order to gain experience in the operation of such a facility locally once developed.

**Activity A: Construction and Demolition Waste (€305,825)**

**Sub Activity A1**

The expected activity includes the study to analyse the possibility of reducing the consumption of natural resources (Globigerina Limestone) and the recycling and reuse of construction and demolition material. More specifically, the following tasks are expected:

- Technical assistance for the formulation of a strategy for the long-term possibilities of reuse/recycling of C&D waste. The strategy should take into consideration the current best practice of C&D waste prevention and management in the EU and internationally and should identify and evaluate alternative practices relative to the generation and management of C&D waste in Malta. The strategy should also contain an outline management and implementation plan for the management of C&D waste in Malta, including reduction and recycling targets, timeframes, administrative measures; as well as propose ways how these targets may be achieved, including incentives, legislation, etc. It should also identify the potentials to prevent the generation of waste, data gaps and indicate additional studies to be carried out and measures to be implemented relative to the achievement of sustainable management of C&D waste. Duration: **40 working days (€45,300).**

- Technical Assistance to WasteServ, MEPA and BICC in compiling appropriate environmental and technical standards for the recycling and disposal of inert waste in accordance with EU standards and best practices. Duration: **107 working days (€115,525).**

- Provide technical assistance to the Government of Malta and the Ministry of Rural Affairs and the Environment on financial and other instruments to encourage C&D waste reuse/recycling and formulating a communication strategy to disseminate information to the public and relevant entities. Duration: **25 working days (€28,500).**
- Provide required training in recycling/reuse of Construction and Demolition waste and in financial instruments to encourage recycling, to WasteServ and MEPA employees as deemed necessary in order to be able to carry out any of the activities related to this project. Duration: **28 working days (€32,000)**.

Two Category II experts are required. The experts must have a University degree in Environmental Engineering and Civil Engineering. The experts are expected to have no less than 10 years experience in practical Construction and Demolition waste management. The experts should be familiar with EU legislation and possess experience in similar projects. Computer literacy (MS Office) and proficiency in spoken and written English are a must. (Total duration: **200 man-days, €221,325**).

**Sub-Activity A2**

- Assist WasteServ and MEPA in preparing the relevant studies and documentation for each recycling possibility, including the financial, economic and environmental implications. The results should be published in a catalogue that can be distributed to interested stakeholders. Duration: **75 man-days, €84,500**.

A Category II expert in Economics is required to provide technical assistance on the financial aspects of the proposed projects. The selected expert must satisfy the following academic requirements, being, a University Degree in Economics specializing in Environmental Economics with at least 15 years experience in similar projects. Proficiency in spoken and written English and computer literacy (MS Office) is a must.

**Activity B. Communications Strategy (€101,300)**

The communications strategy will disseminate information to interested stakeholders and to the general public on new waste-to-energy technologies and on possibilities for the reuse and recycling of construction and demolition waste. The aim is to demonstrate that waste can serve diversely as raw material and energy source with the aid of different technologies. The Transition Facility funding will be used for financing the communications expert, who will provide us the required knowledge. The actual campaign will be financed through national funds.

A Category II expert is required to provide technical assistance and strategic advice in designing and developing two communications strategies regarding the implementation of the new waste facility for the residual waste which may be either a waste-to-energy facility or a waste treatment plant producing renewable energy from waste. The second communications strategy will focus on the reuse and recycling of construction and demolition waste.

The selected expert must satisfy the following academic requirements, being, a University Degree in Communication specializing in Environmental Communications. The selected expert should have at least 15 years experience in similar communication campaigns. Proficiency in spoken and written English and computer literacy (MS Office) is a must.

Duration of anticipated expert mission: **90 man-days, €101,300**.

An allowance of **€17,875** is being made for Audit and Contingency.
The total cost of the Twinning is estimated at \( \text{€675,000} \).

3.5 Lessons learned:

Lessons learned through the implementation of other projects include:

- to allocate proper costing at the design stage of the project so as to avoid having savings or over-budgeting at later stages.
- the preparation of adequate project proposals as required by EU-standards and experience in the management of EU-funded projects.
- to gain knowledge about the rules and procedures involved in EU-funding.
- to acquire experience in the identification of the appropriate indicators.
- to identify all the relevant stakeholders at the planning stage and to discuss all issues related to the project.
4 Institutional Framework

WasteServ Malta Ltd (WSM Ltd) is a Limited Liability Company, 100% owned by the Government. The company directly employs some of the employees while others have been seconded from the civil service. As a semi-autonomous company, WasteServ was assigned the role of a waste management coordinator and facilitator for the islands. It is responsible for the management of the existing waste management facilities (landfill and composting plant etc), together with planning the implementation of new/upgraded facilities in accordance with national laws and regulations and EU directives, regulations and standards. WasteServ was established in November 2002 and was delegated the responsibility to implement the Solid Waste Management Plan that covers the generation, storage, collection, transportation, treatment, reuse, recovery and disposal of waste according to EU legislation.

Currently, WasteServ has about 30 employees working at Head Office, responsible for the implementation of the Solid Waste Management Strategy for the Maltese Islands (2001). Other employees are working at Sant Antnin Solid Waste Treatment Plant, Ta’ Zwejra Waste Facilities and Qortin Temporary Transfer Station, which in total amount to approximately 70 employees.

The Malta Environment and Planning Authority (MEPA) was established in 2002 by the amalgamation of the former Planning Authority and the Environment Protection Department. MEPA has a two-fold responsibility, that of processing, issuing and enforcing land-use permits, and also processing, issuing and enforcing environmental permits linked to activities that have an impact on the environment. Waste management is included amongst these activities. MEPA has a current staff complement of 400 employees, of which 70 are within the Environment Protection Directorate. An integrated permitting system has recently been established and is in the process of being implemented. A restructuring process within the Environment Protection Directorate is also under way.

5 Detailed Budget

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<tr>
<th>Transition Facility Support</th>
<th>Co-financing</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td>Investment Support</td>
<td>Institution Building</td>
<td>Total TF (=I+IB)</td>
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<tr>
<td>Twinning</td>
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<tr>
<td>Total</td>
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<td>€ 675,000</td>
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(*) Contributions from National, Regional, Local, Municipal authorities, FIs loans to public entities, funds from public enterprises
(**) Private funds, FIs loans to private entities

The amounts for co-financing indicated in the table correspond to cash co-financing. In addition, in-kind contributions from the Maltese administration for a good implementation of the twinning may be developed in the covenant.

The beneficiary and the NAO will monitor the co-financing expenses. For the earmarked co-finance, a clear and verifiable set of costs will be provided. The beneficiary will define which budget lines are the source for co-finance.

The cost of air tickets of Maltese officials participating in study visits will be paid out of the Travel vote of the beneficiary.
The beneficiary together with the NAO commits to sound financial management and financial control.

6 Implementation Arrangements

An overall steering group shall be established with a representative from the Ministry for Rural Affairs and the Environment, which is the implementing Agency, WasteServ Malta Ltd which is the beneficiary institution, a representative from PPCD, MEPA, the RTA of the Twinning Project together with a Project Leader from the Twinning Partner.

6.1 Implementing Agency

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6.2 Twinning

The beneficiary institution of the Twinning Arrangement is WasteServ Malta Ltd.

Contact Details:
WasteServ Malta Ltd, will provide for the appropriate working environment of the experts.

All tasks will be carried out in Malta and close co-operation will be needed with a variety of stakeholders, including the Malta Environment and Planning Authority, the Public and semi-public institutions, including Ministry for Rural Affairs and the Environment, the Ministry of Finance and Economic Services and the Management Efficiency Unit of the Office of the Prime Minister.

MEU in liaison with WSM Ltd will review all documentation forwarded by the twinning partner as well as to prepare any submissions to Ministries and Cabinet. The twinning partner is also requested to provide guidance, technical assistance and close co-operation to delegates within WSM Ltd, and other key stakeholders.

6.3 Non-Standard Aspects

N/A

6.4 Contracts

This project will be implemented through one Twinning Contract for the value of €675,000.

7 Implementation Schedule

7.1 Start of tendering/call for proposals
   July 2005

7.2 Start of project activity
   June 2006

7.3 Project Completion
   November 2007

8 Sustainability

WasteServ Malta Ltd has considered the need to provide the necessary training to its employees in order to be able to manage the new waste facilities that WasteServ will invest in. For this reason, it has applied for a Twinning Project under the Transitional Facility 2004 to train all the employees to gain the required expertise. If more training is required due to the recruitment of new staff, WasteServ Malta Ltd is ready to pay for such training.

WasteServ Malta Ltd is also seeking to manage the new waste facilities in an economic sustainable way, to reduce any financial burdens on central Government. For this reason,
it has drawn up a ‘detailed financial, economic and social analysis including a cost recovery strategy’ for the two projects under the Transition Facility in order for WasteServ Malta Ltd to be in a position to discuss it and provide recommendations to the Government.

9 Conditionality and sequencing

All necessary preparatory works have been completed. Administrative documentation (Terms of Reference and technical specifications) will be ready in a draft form by the time of the adoption of the programme.

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 (including disbursement period)
Annex 1: TF log frame

<table>
<thead>
<tr>
<th>LOGFRAME PLANNING MATRIX FOR Project</th>
<th>Programme name and number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical assistance to explore long-term projects to manage specific waste streams more sustainable.</td>
<td>Contracting period expires: 15/12/2007</td>
</tr>
<tr>
<td></td>
<td>Disbursement period expires: 15/12/2008</td>
</tr>
<tr>
<td></td>
<td>Total budget: €675,000</td>
</tr>
<tr>
<td></td>
<td>TF budget: €675,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall objective</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
</tr>
</thead>
</table>
| • To provide the technical assistance to the Ministry for Rural Affairs and Environment in the planning phase for long-term waste management projects required in accordance with the National Waste Management Strategy (2001). | • Satisfy the set targets in the ‘Solid Waste Management Strategy for the Maltese Islands’ (October 2001) within the stipulated timeframes found on pages 82-86 and 94-99. | • MRAE Reports  
• Malta Environment and Planning Authority  
• WasteServ Malta Ltd |
| • The provisional renewable energy target stipulated by the European Commission by 2010 (3% by waste) achieved. | | |

<table>
<thead>
<tr>
<th>Project purpose</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
</table>
| • To promote a long-term sustainable waste disposal system in the Maltese Islands for inert waste and non-inert waste including some hazardous waste streams. | • Proposals for the disposal and treatment of both inert and non-inert waste will be prepared and submitted to Government.  
• Funding applications.  
• Training and Information about waste treatment technologies for the different waste streams to any stakeholders involved in | • Reports of the beneficiaries: Ministry for Rural Affairs and the Environment, WSM Ltd.  
• Office of the Prime Minister reports on projects submitted. | |
<table>
<thead>
<tr>
<th>Results</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
</table>
| • Ensure a long-term sustainable waste strategy for all waste streams including inert and non-inert waste and ensure that all waste is being managed according to local and EU standards.  
• Design waste facilities to reduce the land required for waste disposal.  
• The implementation of the Solid Waste Management Strategy for the Maltese Islands to ensure coherent waste management.  
• Detailed feasibility analyses of each project, including a site selection exercise. | • The set up of two working groups for the management of the two projects, one for the disposal of inert waste while the second one is for evaluation of waste-to-energy or some other waste treatment facility from which renewable energy could be gained.  
• Communication plan for the dissemination of information for these projects.  
• Commissioning of the waste-to-energy plant or some other waste treatment plant.  
• Two final reports on the results achieved from this project.  
• One/two memorandums about the results of this project to be given to the cabinet. | • Project Leader  
• Resident Twinning Advisor  
• Waste management experts working with the working groups and delivering the training or providing the assistance for the materialisation of the project activities  
• Twinning contract  
• Twinning Quarterly Reports  
• Implementation Status Report to be submitted by the NAC twice a year  
• Monitoring Reports to be considered by SMSC | • Available funds from state government.  
• Support from other relevant institutions. |
<table>
<thead>
<tr>
<th>Activities</th>
<th>Means</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Review of the current waste being generated and select the preferred technology</td>
<td>• Twinning</td>
<td>• Any technical staff required to carry out all this work will be employed by WasteServ, MEPA, MRA, etc.</td>
</tr>
<tr>
<td>• Set up two working groups</td>
<td></td>
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<td>• Prepare a feasibility study for each proposed project</td>
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<tr>
<td>• Prepare relevant documentations for the disposal of C&amp;D Waste and waste-to-energy</td>
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<tr>
<td>• Prepare an EIA for each project proposed after the site selection exercise</td>
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<tr>
<td>• Provide any training required in order to carry out these activities.</td>
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</tbody>
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<thead>
<tr>
<th>Preconditions</th>
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<tbody>
<tr>
<td>To have all the necessary documentation ready in time.</td>
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</table>
Annex 2

SUMMARY DETAILED TIME IMPLEMENTATION CHART FOR THE PROJECT

Title: Assistance to explore long-term projects to manage specific waste streams in a more sustainable manner

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<tbody>
<tr>
<td>Twinning</td>
<td>D</td>
<td>C</td>
<td>C</td>
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<td>X</td>
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</table>

D = Design  
C = Contracting  
I = Implementation  
X = Closure
Annex 3

CUMULATIVE CONTRACTING AND DISBURSEMENT SCHEDULE OF EU FUNDING

Title: Assistance to explore long-term projects to manage specific waste streams in a more sustainable manner

(a) Cumulative Contracting

<table>
<thead>
<tr>
<th></th>
<th>30/06/2006</th>
<th>30/09/06</th>
<th>31/12/2006</th>
<th>31/03/2007</th>
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<th>30/09/2007</th>
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<tbody>
<tr>
<td>Twinning</td>
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(b) Cumulative Disbursement

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</thead>
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<tr>
<td>Twinning</td>
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<td>607,500</td>
<td>675,000</td>
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