Standard Summary Project Fiche for the Transition Facility

1. Basic Information

1.1 CRIS Number: 2004/16762.06.04.

Twinning: MT04-IB-EN-03

1.2 Title: Technical Assistance for the development of implementation systems for the producer responsibility directives.

1.3 Sector: Environment

1.4 Malta

2. Objectives

2.1 Overall Objective

To improve national capacity in waste management in order to assist Malta in implementing the National Waste Management Strategy (2001) in conformity with stipulated EU requirements.

2.2 Project Purpose

To ensure that the employees working at WasteServ Malta Ltd, who are responsible of the implementation of the National Waste Strategy published in 2001, as well as all the stakeholders who will be effected in one way or another by the implementation of the ‘Producer Responsibility’ principle, acquire the professional skills and expertise needed to execute their tasks properly.

2.3 Justification

According to the 2003 Commission Comprehensive Monitoring Report, chapter 22:

“In the field of waste management, legislation is in place and is in line with the Acquis, except for implementing legislation on packaging and the recent Acquis on end-of-life vehicles. Administrative capacities need considerable strengthening in order to cope with the variety of tasks in this area. The waste management plan needs to be aligned fully with the Acquis by accession. A supervision system for waste shipments, a deregistration system and permits for end-of-life vehicles, and permit conditions for landfills need to be established by accession. The collection systems (including batteries) need to be expanded, and the register of collectors of waste oils and permits for disposers of waste oils established. The established of recovery and disposal facilities need to continue in order to ensure compliance in accordance with the agreed deadlines. The time-scale for full implementation of the Acquis is particularly tight and enhanced efforts are therefore required to ensure that the Acquis in this sector is implemented by accession. Attention will need to be paid to ensuring that staff recruitment is completed in time. Transitional arrangements until 31st December 2009 for the recovery and recycling of packaging waste and until 31st December 2007 for beverage packaging, with intermediate targets, have been agreed.”

3. Description

3.1 Background and Justification

The Ministry has published a strategic plan for waste management in the Maltese islands, which is currently being implemented by WSM Ltd, which is a government owed company. The Government is adopting the view that, in line with European practice, the “producer responsibility” principle should be adopted in an eventual scheme for the financing of waste collection and disposal. Such a scheme would also need to take into account issues related to Malta’s economic realities.
Looking at the amount of waste generated in Malta, approximately 80% of the waste being landfilled is made up of excavation and construction and demolition (C&D) waste. Another substantial amount of waste disposed at Maghtab is packaging waste including beverage packaging, as well as other types of waste such as tyres, end-of-life vehicles, electrical and electronic goods, waste oils and batteries and accumulators, all of which fall under the ‘Extended Producer Responsibility’ directive.

Until now most of this waste is being landfilled. Implementing the ‘extended producer responsibility’ arrangements for the different waste streams is required in line with current thinking and practices on measures to encourage prevention, re-use, recovery and recycling across Europe. It is important that the optimum sustainable waste management policy framework for these waste streams is developed in order to reduce the amount of waste generated and collect efficiently the waste generated for recycling purposes.

The Extended Producer Responsibility policy framework seeks to extend responsibility so as to give producers appropriate incentives to reduce the amount of post-consumer waste and signals concerning the life cycle environmental impacts of the product. A policy framework for Extended Producer Responsibility should be viewed in terms of product policy (Design for Environment, Design for disassembly), where the composition of the product is taken into consideration, as well as waste management policy where the prevention and treatment of waste generated by the product must be considered.

The current situation (from information in the Solid Waste Strategy) concerning packaging and waste packaging, beverage packaging, end-of-life vehicles (ELVs), waste electrical and electronic equipment (WEEE), used tyres, waste oils and batteries and accumulators, is outlined below:

**Packaging and packaging waste.**

It is estimated that 62,000 tonnes of packaging waste was generated in 2002, comprising of 10,000 tonnes of glass, 3,550 tonnes of metal, 15,500 tonnes of plastics, 27,500 tonnes of paper and board and 5,000 tonnes of other packaging materials. This amounts to around 38% of municipal solid waste generated in 2002. It is estimated that packaging waste will increase significantly over the next 20 years, with around 85,000 tonnes in 2010 and 118,000 tonnes by 2020. Three main categories of packaging exist, the beverage sector (17-23%), household – non-beverage (38-48%) and non-household (30-45%). The majority of waste and indeed waste packaging is landfilled with no waste segregation, although small amounts of waste packaging are separately collected from industry. The directive on packaging and waste packaging, EC Directive 1994/62/EC, and its various amendments has been transposed into the Waste Management (Packaging and Waste Packaging) Regulations 2003 and are due to come into force during 2004.

Providing training and information to importers, wholesalers, retailers and other stakeholders handling packaging and packaging waste on how to reduce the amount of packaging materials used and to use alternative types of packaging that produce less waste and that could be easily recovered and recycled, is important since Malta must take measures to reduce the amount of packaging waste generated by 50 - 60% by the 31st December 2009. With the information given, importers, wholesalers, retailers and other stakeholders handling packaging and packaging waste can identify the most feasible and economic way of managing packaging materials in order to reduce, reuse and/or recycle packaging waste.

**Beverage packaging**

The Waste Management Plan for Malta of 2000 estimated the amount of beverage packaging on the islands to be in the region of 175 million units in 1999. The Strategy (2001) sets out a thorough implementation plan, set against stringent timeframes, to realize national and international obligations as far as waste management is concerned, including the return of this beverage packaging.

In Malta beverage packaging is currently regulated by the Non-alcoholic Beverage (Control of Containers) Regulations, 2001, issued under the Environment Protection Act. These regulations require that:
• Any carbonated ready-to-drink liquid or beverage which contains not more than 2% of alcohol and which is flavoured, whether with natural or artificial additives, must be sold either in refillable glass bottles or dispensed from metal kegs; and

• A mandatory refundable deposit of at least 15% of the whole price of the product, must be included in the purchase price and repaid on the return of the bottle / keg to the retailer.

A study undertaken in 2001 – ‘A Review of Malta’s beverage Packaging Practices in Context of Directive 94/62’ and subsequent estimates indicate that between 17-22% of packaging waste is beverages related, comprising of packaging for water, fruit juices, sports drinks/ice teas, soft drinks, beers, squashes, wines and spirits and milk. In 1999 it was estimated that there were around 119 million returnable containers and 75 million containers in the form of primary packaging for these types of beverages, but not including wines/spirits or dairy products and also the data was not material specific. However of the total 1999 beverages packaging, approximately 74% was glass, 18% was plastic, 5% was wood and the remainder comprised paper, board, metals and other material types. Primary, secondary and tertiary packaging represents 79%, 16% and 5% respectively. Over 93% of the primary packaging comprised glass, of which 90% was re-used, with the remainder sent to landfill. Approximately 59% of the beer and 63% of the local wines sold in Malta are sold in refillable glass bottles, which results in a re-use rate of 14.8% to 19.1% (by-weight) of total packaging in Malta. However, generally and particularly in the case of beer, the unrestricted market is moving towards non-returnable containers.

As outlined above, the Maltese mandatory deposit constitutes a financial incentive for bottles to be returned which results in a reduction, to the absolute minimum, of the quantity of bottles that are lost as waste. Additionally, given the cost of the re-usable bottles, producers have an incentive to collect used bottles for re-use. This approach thereby fulfils the criteria for re-use in line with the definition provided in Directive 94/62/EC (packaging and packaging waste). Glass packaging does not become waste until such time that it can no longer be re-used. Records provided by the principal soft drink bottling companies in Malta indicate that a typical glass bottle can be re-used over 30 times. It is estimated that as a result of these provisions, 86 million beverage containers are kept out of the waste-stream every year.

End-of-life Vehicles (ELVs)
Around 3000 (ELVs) from different means of transport and wastes from vehicle maintenance (including oil filters, air bags, brake pads, brake fluids, ferrous and non-ferrous metals etc) are currently processed each year for the recovery of spare parts, or landfilled. An appreciable amount of such vehicles are stockpiled as scrap for export, generally in poorly managed facilities. The directive on end-of-life vehicles, EC Directive 2000/53/EC has been transposed into the Waste Management (End-of-Life Vehicles) Regulations 2002 and are due to come into force during 2004.

As a pilot project, Government recently scrapped a number of vehicles following a de-registration process and the issuing of a Certificate of Destruction through the Licensing and Testing Authority. The project was intended to identify best practicable options that may be transferred and adopted by the private sector and to address concerns early in the implementation phase.

Waste Electrical and Electronic Equipment (WEEE)
Wastes from electrical and electronic equipment and off-specification batches and unused products are primarily landfilled. However some initiatives have started including the export of IT equipment for recycling and the collection of computer printer cartridges for re-use and recycling. The relevant directives for this area of ‘extended producer responsibility’ are 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment and 2002/96/EC on waste electrical and electronic equipment waste. These directives are currently in process of being transposed.

Tyres
It is estimated that around 535 tonnes of tyres were disposed to be landfilled in 2002. From published trade figures, around 193,500 tonnes of all types of tyres were imported during 2002 and in addition to this there were around 13,000 newly registered vehicles during the same period, therefore in effect an additional 300,000 tyres are placed in the market. Tyres are currently being shredded and exported for recycling. There are three directives which relate to tyres, these being EC Directive 1999/31/EC on landfill of waste, EC Directive 2000/76/EC on incineration of waste and EC Directive 2000/53/EC on ELVs.

**Waste Oils**
Currently some untreated waste mineral oils are burned in unlicensed facilities as a substitute fuel. During recent years some waste oils have been collected and stored at various locations awaiting the necessary operating permits for the operation of a privately owned oil water separation and filtration. During 2002 such a plant was issued with all the necessary permits and the treatment of waste oils is now underway. However a study on waste oils has identified that significant quantities of used oil are discharged into the sewerage system or otherwise dispersed into the environment through unknown methods. The estimated quantities amount to approximately 7,000 tonnes. The study also recommended the implementation of a Waste Oils Collection Scheme. The Waste Oils Directive, namely EC Directive 75/439/EEC, has been transposed into the Waste Management (Waste Oils) Regulations 2002 (Legal Notice 161 Waste Management (Waste Oils) Regulations 2002).

**Batteries and accumulators**
Malta currently runs a battery collection scheme in which appreciable amount of dry cell batteries (approximately 1.5 tonnes per month) have been collected from some 500 retail outlets, 160 schools and various offices and other institutions. The collected batteries are packaged in plastic drums and then partly stored and partly landfilled. Otherwise uncollected batteries generally arise as a constituent of MSW and similar commercial / industrial solid wastes exported for recycling while the rest are landfilled. The directive on Batteries and Accumulators Containing Certain Dangerous Substances, EC Directive 81/157/EEC, and its various amendments have been transposed into the Waste Management (Batteries and Accumulators) Regulations 2002 (Legal Notice 158 Waste Management (Batteries and Accumulators) Regulations 2002).

**Requirements**
In order to introduce and implement the ‘Extended Producer Responsibility’ principle in Malta, there should be an intensive awareness campaign about all the different waste streams that fall under this principle. All the different waste streams being currently generated has to be closely monitored to be able both to obtain any required data as regards to waste generated as well as being able to track any changes arising in the waste being deposited. Adding to this, the necessary disposal and management facilities for each of these waste streams has to be provided and well managed. To achieve this, waste intensive training and education must be provided both to the different stakeholders generating the different waste streams in order to minimize the negative environmental impact as well as to WasteServ Malta Ltd employees that need to manage and dispose of the different waste streams sustainably and inline with EU environmental regulations as well as reduce as much as possible the amount of waste generated in Malta.

The consumer plays a dynamic role in most EPR programmes. Thus it is imperative to inform the consumer on their role and help them understand the importance of their participation. A well-conceived communication plan can help improve consumers’ understanding and appreciation of the benefits of EPR and what is expected of them. This can instil a key sense of responsibility and increase environmental awareness.

It is important to continuously collect information and relevant data on the amount of waste being produced vis-a-vis the amount of material recovered for reporting purposes, especially after that the EU directives concerned with the extended producer responsibility are implemented and enforced. This is required to monitor the EPR programme performance. The information required to effectively monitor the programme should be reviewed in terms of the value of the information in relation to the work that
must be carried out to provide such data and information. When complex calculations of data are necessary, training and examples of calculations must be provided to increase the accuracy of the data and information collected.

Since WasteServ Malta Ltd is responsible for the organization, management and operation of the existing waste management facilities (landfill and composting plant etc) and the new/upgraded fully engineered and contained facilities, which will be a new phenomenon in the Maltese islands and which are indispensable for the disposal of the waste generated, a substantial part of the project would be dedicated to train selected staff in order to gain the required expertise to execute their duties properly. Additionally, the project will also provide advise to the government on the cost implications and how the government will implement the various requirements associated with ‘Extended Producer Responsibility’ waste fractions.

Other organisations that will benefit from this project will include the ‘Malta Environment and Planning Authority’, the Ministry of Rural Affairs and the Environment, the Ministry of Finance and Economic Affairs, the Federation of Industry, National Statistics Office, the University of Malta - Manufacturing and Engineering Department, Cleaner Technology Center, the Chamber of Commerce, the Malta National Laboratory and the Local Councils, Malta Enterprise.

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 Twinning Project. As part of this on-going twinning project, a separate service contract was successfully executed specifically to assist WSM 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 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.

- A number of seminars, workshops and experts visits provided under EU and bilateral funding have taken place since the adoption of the National Waste Management Strategy, including a TAIEX seminar on recycling initiatives, a fact finding and advisory visit by an expert team from the German Federal Environment Agency, a seminar organised by ITUT e.V. on constitution of recycling structures on the Maltese Islands, amongst others.

- Bilateral support through the provision of a full time consultant for implementing the National Waste Management Strategy by the Commonwealth Secretariat, has recently been finalised.

- Under the 2003 National Pre-Accession Programme for Malta – General Technical Assistance, two framework contracts have been 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’ for funding via the Cohesion Fund, which has recently initiated.


• A number of reports financed by the Ministry for Resources and Infrastructure during 2002-2003 on Waste Management Financing Mechanisms for
  - Batteries and Accumulators
  - End of Life Vehicles
  - Waste Oils
  - Beverage packaging

Where regulatory, volumetric and financial considerations related to the collection and disposal of the above waste streams.

3.3 Results

The anticipated results of the project include the:

1) Setting up waste management strategies in all relevant fields, in line with the acquis, and on elaboration of the necessary implementation plans and programmes, including systems for collection of information. In particular:

a) Elaboration of a series of implementation or action plans, including financial implications and awareness/information raising initiatives for ‘extended producer responsibility’ arrangements for each waste stream.

b) Elaboration of methods and practices in order to minimize the environmental impact caused by each waste stream, together with examples and options of typical situations

c) Provision of guidance and standards for importers, wholesalers, retailers and other stakeholders managing packaging and packaging waste.

2) Reinforcement of managerial capability of relevant stakeholders, in particular:

a) Increase knowledge and expertise of professional staff engaged in the operations, management and planning of waste management activities for the proper execution of their roles and responsibilities.

b) Improved managerial and technical capacity of WSM Ltd staff, particularly for field operations staff.

c) Trainers identified within WasteServ Malta Ltd, Federation of Industry and local councils are trained to deliver the future training programmes on the various principles of waste management and on a variety of technical disciplines and practices associated with waste management and Extended Producer Responsibility issues.

3) Awareness raising, in particular:

a) Development and dissemination of information about waste management issues in particular, about packaging waste, through seminars for stakeholders, site visits to commercial outlets as well as a short paper on recommendations, financial analysis, etc to Government and other stakeholders.

b) Proposals for awareness and information raising initiatives for the ‘Extended Producer Responsibility’ arrangements

3.4 Activities

The project will consist of a single Twinning Component. It will include the following:

A. Provision of technical advice
Execution of this project will require twinning assistance from the competent authority or authorities of an EU Member State. Assistance will be provided by a Resident Twinning Advisor (RTA) supported by short-term specialist advisors from the twinning institutions. The RTA will be assigned for a period of 12 months and can be primarily located at WSM Ltd. He or she will work with the staff of WasteServ Malta Ltd, but will also work with the staff of the Ministry of Resources and Infrastructure, Malta Environment and Planning Authority and other stakeholders and offer day-to-day advice and guidance.

The project will:

- Establish different small technical working/steering groups for each ‘producer responsibility’ area (with a combination of both general coverage from key stakeholders and specific interested stakeholders depending on subject area) to assist in the implementation of the project and to seek views from the main project stakeholders.
- Provide technical assistance in the development of procedures to implement the ‘Extended Producer Responsibility’ arrangements, including the monitoring of the waste generated and collected and also in the sustainable management of the waste.
- Provide technical assistance to the Maltese authorities to review the implemented ‘Extended Producer Responsibility’ arrangements for Beverage Packaging, ELVs, Waste Oils and Batteries and Accumulators and to recommend a series of options for the full development and stakeholders’ aspirations.
- Specify the databases that will be needed to be established for the purposes of storing information on the amount of waste generated in Malta and Gozo that is being deposited in WSM Ltd facilities as well as data on the different recovered waste streams sent for recycling or composting.
- Provide short-term technical assistance to the Maltese Authorities to further develop ‘Extended Producer Responsibility’ arrangements for packaging and waste packaging (household, non-beverage and non household), WEEE and used tyres.
- Review the adequacy of the proposed or implemented economic instruments to collect efficiently the waste fractions that fall under the ‘extended producer responsibility’.
- Provide advice on taxation and economic instruments that should be implemented in order to achieve the recovery targets specified in the different EU directives as regards to the ‘Extended Producer Responsibility’ framework. This is crucial in relation to the implementation of the Acquis.
- Provide management training to technical staff involved in Waste Management
- Develop training packages for the implementation of the procedures which can be delivered by WSM Ltd and MEPA personnel and provide guidance for the delivery of the first training courses.

In addition to the RTA, the following short term advice will be required from specialists from within the twinning institution

- Packaging Waste management
- Packaging Design
- End-of-Life Vehicles
- Tyres
- Waste Electrical and Electronic Equipment
- Waste Oils
- Batteries and Accumulators
- Industrial Waste
- Waste Monitoring
- Experimental Procedures

The RTA will possess the following qualifications:

- In possession of a University degree in Economics and a post graduate 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 and management of professional training.
- Proficiency in spoken and written English
- Computer literate (MS Office)

1. Packaging and waste packaging (excluding the beverage sector)

Two category II experts are required to provide assistance and strategic advice for packaging minimization and waste packaging management. The experts must have a University degree in Manufacturing/Environmental Engineering together with a good knowledge of Economics. The experts are expected to have not less than 10 years experience in practical waste management collection systems and in the development and implementation of technical standards associated with solid waste management. Moreover, experience in data collection systems and processing, together with information presentation and dissemination is required. An expert should be familiar with EU legislation and possess experience with stakeholders’ workshop organization. Computer literacy (MS Office) and proficiency in spoken and written English is a must. The required tasks must be carried out over a time span of 4 calendar weeks.

1.1. Technical Assistance to Wholesalers, retailers and other stakeholders

- Each expert will be expected to familiarize himself/herself with the operation conditions and constraints that importers, wholesalers, retailers and other traders have, with special reference to SMEs, which limit the possibility to recover, store and collect separate fractions of packaging and packaging waste.
- The expert is expected to provide advice on how best to set up a system to manage this material more effectively without placing SMEs at a disadvantage.
- Provide the necessary guidance to collectors as how best to support these individual efforts.
- Review and identify options on waste packaging collection methods and systems applicable to the Maltese situation, in the context of existing adopted and forthcoming national policy and EU requirements. This should include a review of the assumptions, options and recommendations for the previous studies on the waste packaging.
- Development of principles, limitations, methods and options for a sustainable manner and in accordance with adopted national and EU requirements and targets. Consideration should also be given to life cycle costs associated with such options etc.
- Development and execution of a workshop / seminar to the key stakeholders on the development and implementation of packaging waste arrangements.
- The expert will be asked to provide training to the different stakeholders on the type of packaging, identification systems, and reduction and re-use criteria, etc. Training sessions will also be required to waste handlers providing the collection service as well as all the necessary support links required including recyclers, etc.
- Any system must be supported and improved upon to satisfy the requirements of ‘Packaging and Packaging Waste Directive’ [94/62/EC] and subsequent amendments. To do this the necessary information infrastructure must be provided to all general retailers and traders. It is expected that all information will primarily be in the form of meetings although periodic updates through publications will also be sought.
- The roles and functions of retailers need to be clearly defined because their strategic position in the product chain can influence the operation of EPR programmes. The retailer can be the one who takes back the product, collects the charges or fees, provides the refund, or selects and stocks the products on the shelves. The retailers can be a vital component in an information dissemination strategy as they can furnish consumers with information about the EPR programme, products, and their role.
1.2 Technical Assistance to the government

- Review of data and information on the use of primary, secondary and tertiary packaging by key players in the marketplace, both economic operators’, ‘producers’ and consumer patterns.
- Recommendations on the organizational and institutional requirements for a smoother and more efficient running of the collection scheme(s) (i.e. collective or individual financing schemes), including associated running costs.
- Review and identify options associated with the recovery and recycling of packaging waste, including the potential for treatment and recovery to be carried out abroad and associated costs of such options.
- A complete life cycle analysis (LCA) with the overall recommended option(s) for packaging waste arrangements, encompassing collection, organizational requirements and facilities for recovery / recycling / treatment. Cost of recovery mechanisms should also be proposed.
- Recommendations on promotion and awareness raising activities associated with packaging waste arrangements etc.

2. Beverage Packaging

A category II expert is required to provide technical assistance for the beverage packaging waste management. A University degree in Manufacturing/Environmental Engineering together with a good knowledge of Economics is a necessary requirement. The expert is expected to have not less than 10 years experience in practical waste management collection systems and in the development and implementation of technical standards associated with solid waste management. Moreover, experience in data collection systems and processing, together with information presentation and dissemination is required. The expert should be familiar with EU legislation and possess experience with stakeholders’ workshop organization. Computer literacy (MS Office) and proficiency in spoken and written English is a must. The required tasks must be carried out over a time span of 2 calendar weeks. The required tasks are:

- Review of the implemented beverage packaging scheme, taking into account re-use, recycling and recovery considerations for various packaging types, as well as impact of one-way packaging.
- Development of and recommendations of alternative and more efficient beverage packaging arrangement (i.e. take back / deposit / refund schemes. Economic instruments and performance standards etc) to enable all stakeholders to fully implement in a sustainable manner and in accordance with adopted national requirements and targets. Consideration should also be given to costs associated with the scheme.
- A life cycle financial analysis of the overall recommended option(s) for a beverage packaging scheme, encompassing collection, organizational requirements and the extent of facilities for recovery / recycling / treatment / export abroad. Cost recovery mechanisms proposals should also be submitted.
- Propose the most appropriate funding instruments to finance the necessary investments to support the recommended systems.
- Review and identify logistics of operating the preferred option, considering beverage packaging collection methods, including direct collection points, bring-in, wider organized collection etc. applicable to the Maltese situation, in the context of existing adopted and forthcoming national policy.
- Recommendations on the organizational, institutional requirements for the smooth and efficient running of the preferred collection scheme(s) (i.e. collective or individual financing schemes), including associated running costs.
- Review and identify infrastructural options associated with the recovery and recycling of beverage packaging, including local authorized treatment facilities, the potential for recovery and recycling to be carried out abroad and associated costs of such options.
- Development and execution of a series of workshops / seminars to the key stakeholders, including waste handlers on the development and implementation of beverage packaging arrangements.
- Recommendations on promotion and awareness raising activities on the need to collect beverage packaging separately, return and collections systems, etc.

3. **End-of-Life Vehicles**

A category II expert is required to provide technical assistance for the ELVs disposal strategy. The expert must have a University degree in Manufacturing/Environmental Engineering together with a good knowledge of Economics. The expert is expected to have not less than 10 years experience in practical waste management collection systems and in the development and implementation of technical standards associated with solid waste management. Moreover, experience in data collection systems and processing, together with information presentation and dissemination is required. The expert should be familiar with EU legislation and possess experience with stakeholders’ workshop organization. Computer literacy (MS Office) and proficiency in spoken and written English is a must. The required tasks must be carried out over a time span of 2 calendar weeks. The required tasks are:

- Review of data and information on car and parts imports by key players in the marketplace, both ‘economic operators’ and ‘producers’.
- Review of the role and activities of key players responsible for ELVs, namely ‘economic operator’, ‘producers’, and vehicle dismantlers, shredders, recyclers and consumer patterns.
- Review of current ELVs disposal and collection methods. This will encompass the existing scrap yards / treatment facilities on the islands.
- Review and identify option for the establishment of adequate systems for the collection of ELVs applicable to the Maltese situation, in the context of existing adopted and forthcoming national policy.
- Development of principles, limitations, methods and options for achieving the recovery and recycling targets through an ELV collection scheme to enable all stakeholders to fully implement in a sustainable manner and in accordance with adopted national requirements and targets.
- Recommendations on the organizational and institutional requirements for the smooth and efficient running of the collection scheme(s) (i.e. collective or individual financing schemes), including associated running costs.
- Review and identify options for the establishment of adequate authorized recovery and treatment facilities in accordance with tightened environmental treatment standards. Consideration should be given to the export potential for recovered materials and the overall associated costs for the development of ELV processing facilities and any export of recovered materials.
- Review and identify options on proposals for notification of determining the end of life of a vehicle – through the introduction of a ‘Certificate of Destruction’.
- A life cycle financial analysis of the overall recommended option(s) for ELVs, encompassing collection, organizational requirements and facilities for recovery / recycling / treatment. Propose cost recovery mechanisms
- Development and execution of workshops / seminars to the key stakeholders on the development and implementation of the ELVs arrangements.
- Recommendations on promotion and awareness raising activities associated with the overall ELV ‘producer responsibility’ scheme, including collection methods and locations, scrapping of vehicles, etc.
- Provide training to waste handlers.

4. **Waste Electrical and Electronic Equipment and Reduction of Hazardous Substances**
A category II expert is required to provide technical assistance for the optimum WEEE disposal system. A University degree in Manufacturing/Environmental Engineering together with a good knowledge of Economics is a necessary requirement. The expert is expected to have not less than 10 years experience in practical waste management collection systems and in the development and implementation of technical standards associated with solid waste management. Moreover, experience in data collection systems and processing, together with information presentation and dissemination is required. The expert should be familiar with EU legislation and possess experience with stakeholders' workshop organization. Computer literacy (MS Office) and proficiency in spoken and written English is a must. The required tasks mentioned hereunder must be carried out over a time span of 2 calendar weeks.

- Review of data and information on the types of electrical and electronic equipment imports by key players in the marketplace, both ‘economic operators’ and ‘producers’ and consumer patterns.
- Review and identify WEEE collection methods, including retailer schemes, bulky waste collections, other take-back mechanisms, curbside collections, civic amenity and ‘bring’ schemes, etc. applicable to the Maltese situation, in the context of existing adopted and forthcoming national policy.
- Development of principles, limitations, methods and options for a suitable WEEE collection scheme to enable all stakeholders to fully implement in a sustainable manner and in accordance with adopted national requirements and targets. Consideration should also be given to costs associated with the scheme.
- Recommendations on the organizational and institutional requirements for the smooth and efficient running of the collection scheme(s) (i.e. collective or individual financing schemes), including associated running costs.
- Review and identify options associated with the recovery and treatment of WEEE, including the requirements for authorized treatment facilities, the potential for treatment and recovery to be carried out abroad and associated costs of such options.
- A financial analysis of the overall recommended option(s) for WEEE arrangements, encompassing collection, organizational requirements and facilities for recovery / recycling / treatment.
- Development and execution of workshops / seminars to the key stakeholders on the development and implementation of WEEE arrangements.
- Recommendations on promotion and awareness raising activities on the need to collect WEEE separately, return and collections systems, etc.
- Provide training to waste handlers.

5. Tyres

A category II expert is required possessing a University degree in Manufacturing/Environmental Engineering together with a good knowledge of Economics is a necessary requirement. The expert is expected to have not less than 10 years experience in practical waste management collection systems and in the development and implementation of technical standards associated with solid waste management. Moreover, experience in data collection systems and processing, together with information presentation and dissemination is required. The expert should be familiar with EU legislation and possess experience with stakeholders’ workshop organization. Computer literacy (MS Office) and proficiency in spoken and written English is a must. The required tasks listed hereunder must be carried out over a time span of 2 calendar weeks.

- Review of data and information on all tyre imports by key players in the marketplace, both ‘economic operators’ and ‘producers’ and consumer patterns.
- Review and identify tyre collection methods applicable to the Maltese situation, in the context of existing adopted and forthcoming national policy.
- Development of principles, limitations, methods and options for a suitable tyre collection scheme to enable all stakeholders to fully implement in a sustainable manner and in
accordance with adopted national requirements and targets. Consideration should be also be given to costs associated with the scheme.

- Recommendations on the organizational and institutional requirements for the smooth and efficient running of the collection scheme(s) (i.e. collective or individual financing schemes), including associated running costs.
- Review and identify options associated with the recovery and treatment of tyres, including the requirements for authorized treatment facilities, the potential for treatment and recovery to be carried out abroad and associated costs of such options.
- A life cycle financial analysis of the overall recommended option(s) for end-of-life tyres, encompassing collection, organizational requirements and facilities for recovery / recycling / treatment. Propose cost recovery schemes.
- Development and execution of a workshop / seminar to the key stakeholders on the development and implementation of end-of-life tyre arrangements.
- Recommendations on promotion and awareness raising activities on the need to collect tyres separately, return and collection systems, etc.
- Provide training to waste handlers.

6. Waste Oils

A category II expert is required, having a University degree in Manufacturing/Environmental Engineering together with a good knowledge of Economics is a necessary requirement. The expert is expected to have not less than 10 years experience in practical waste management collection systems and in the development and implementation of technical standards associated with solid waste management. Moreover, experience in data collection systems and processing, together with information presentation and dissemination is required. The expert should be familiar with EU legislation and possess experience with stakeholders’ workshop organization. Computer literacy (MS Office) and proficiency in spoken and written English is a must. The time span is that of 2 calendar weeks. The required tasks are:

- Review of data and information on oil imports, types of oils and usage from key players in the marketplace, ‘economic operators’, ‘producers’ and consumer patterns.
- Review and identify options on waste oils collection methods and systems applicable to the Maltese situation, in the context of existing adopted and forthcoming national policy. This should include a review of the assumptions, options and recommendations for the previous studies on the development of waste oils collection scheme.
- Development of principles, limitations, methods and options for a waste oils collection scheme to enable all stakeholders to fully implement in a sustainable manner and in accordance with adopted national requirements and targets. Consideration should include collection methods for different sources of waste oils, collection point locations, costs associated with the collection methods, etc.
- Recommendations on the organizational and institutional requirements for the smooth and efficient running of the scheme (i.e. collective or individual financing schemes), including associated running costs.
- Review and identify options for the recovery, regeneration and recycling potential of waste oils, including life cycle financial analysis associated with the various options. Consideration should be given to the existing facilities already in use.
- Development and execution of a series of workshops / seminars to the key stakeholders on the development and implementation of a waste oils collection scheme.
- Recommendations on promotion and awareness raising activities associated with the waste oils collection scheme.
- Provide training to waste handlers.

7. Batteries and Accumulators
A category II expert is required to provide technical assistance as regards to batteries and accumulators collection system. A University degree in Environmental Engineering or Chemistry together with a good knowledge of Economics is a necessary requirement. The expert is expected to have not less than 10 years experience in practical waste management collection systems and in the development and implementation of technical standards associated with solid waste management. Moreover, experience in data collection systems and processing, together with information presentation and dissemination is required. The expert should be familiar with EU legislation and possess experience with stakeholders' workshop organization. Computer literacy (MS Office) and proficiency in spoken and written English is a must. The required tasks shown below must be carried out over a time span of 2 calendar weeks.

- Review of data and information on battery imports and usage from key players in the marketplace, both ‘economic operators’ and ‘producers’ and consumer patterns.
- Review and identify options on batteries and accumulators collection methods and systems applicable to the Maltese situation, in the context of existing adopted and forthcoming national policy. This should include a review of the current battery collection scheme.
- Development of principles, limitations, methods and options for a batteries collection scheme to enable all stakeholders to fully implement in a sustainable manner and in accordance with adopted national requirements and targets. Consideration should include collection methods for different types of batteries, collection point locations and costs associated with the collection methods.
- Recommendations on the organizational and institutional requirements for the smooth and efficient running of the scheme(s) (i.e. collective or individual financing schemes), including associated running costs.
- Review and identify options for the re-use and recycling potential of batteries and accumulators, including the potential for treatment and recovery to be carried out abroad, and associated costs of such options.
- Development and execution of a series of workshops / seminars to the key stakeholders on the development and implementation of a battery collection scheme.
- Recommendations on promotion and awareness raising activities on the need to collect batteries etc separately, return and collection systems, etc.
- A life cycle financial analysis of the overall recommended option(s) for batteries and accumulators, encompassing collection, organizational requirements and facilities for recovery / recycling / treatment. Propose cost recovery schemes.
- Provide training to waste handlers

8. Industrial Waste

A category II expert is required to provide training to WasteServ Malta Ltd selected employees on methods of carrying out an Industrial Waste Inventory, including all hazardous wastes generated by Industry. A University degree in Chemistry is a necessary requirement. The expert is expected to have not less than 10 years experience in practical waste management collection systems and in the development and implementation of technical standards associated with solid waste management. Moreover, experience in data collection systems and processing, waste analysis, together with information presentation and dissemination is required. The expert should be familiar with EU legislation. Computer literacy (MS Office) and statistical computer packages as well as proficiency in spoken and written English are a must. The required tasks must be carried out over a time span of 2 calendar weeks. The Expert must:

- Provide technical advice to different industrial enterprises, both to private and public sector industries, to help them design a reporting system for the different industrial waste arising, in order to meet the reporting obligations (by industry) concerning waste management required by national and EU legislation. Sufficient information, including the ideal methodology to carry out an extensive data and information gathering exercises
on the industrial (including hazardous) waste generated must be provided. This data can be inputted to the company planning, development and on-going management of waste management facilities and services.

- Detailed information about the division of waste arising between non-hazardous, hazardous solid and liquid (i.e. sludges) elements and monitoring systems for the different industrial waste categories must be provided. Information about the EU Catalogue of Waste Classification must be given so that the industries will become familiar with the classification procedures of their waste, which have to be followed for reporting purposes.

- Recommendations on information retrieval and reporting systems for individual industrial enterprises for compliance with national and EU reporting on industrial waste arising

B. Training to selected WasteServ Malta Ltd employees on waste management and operations (Locally and abroad)

The main activities of this part of the project will be to:

- Deliver detailed training in generic ‘training the trainers’ approach as well as delivering specific technical training in a number of key waste management areas, namely:
  - General principles of waste management
  - The management of existing and planned operational waste management facilities, i.e. landfills, composting plants and Materials Recovery Facilities, waste transfer stations, incinerators, etc
  - Waste acceptance criteria
  - Shipments of wastes
  - Hazardous waste management
  - Collection of separated household waste
  - Waste minimization
  - Waste management planning
  - Management of waste related contracts

Approximately, we should have at least four employees working within WasteServ Malta Ltd, who can be trained specifically to train other employees coming from different working environments, including industries, on the general principles of waste management. Special attention has to be devoted to SMEs, who lack the funds to invest in waste management advice. Hence, WSM Ltd has to provide this service. As regards to the other operational waste management facilities, we would have approximately 40 employees trained in the operation of different waste management facilities that WSM Ltd will have to manage and operate.

- Develop training packages for the implementation of the procedures, which can be delivered by WSM Ltd personnel.
- Provide advice on tariff and fee collection associated with WSM Ltd’s roles and responsibilities.
- Provide training in communications and customer relations, which is important in implementing the communication plan that will help to strategically inform consumers of their roles and responsibilities under the EPR programme. The consumer will choose which product to buy and how to dispose of it. These factors will have a great influence on the success or failure of the project.

It is envisaged that the above activities would be delivered through a combination of on-going advice and training by a selection of waste management experts coming to Malta, as well as through ‘hands-on’ training through placements at appropriate organizations / facilities overseas.
• Provide the necessary technical and practical training to 3 professional staff working with WSM Ltd, to achieve the required expertise to act as Eco-councilors in ecological and environmental issues. The latter will be trained in the University of Malta with visits abroad for hands-on type training.

**B.1 Short term experts visits to provide Theoretical/Practical training in Malta**

• A Category II expert will be required to train all stakeholders that generate one of the various mentioned waste streams as well as WasteServ Malta Ltd employees involved in monitoring the waste generated and disposed in any of the Waste Facilities, data collection and data monitoring required in order to monitor the performance of the ‘Extended Producer Responsibility’ programme. The expert must also create a database with the required fields to be used both by the stakeholders and by WasteServ Malta Ltd in the waste monitoring process. The database must be designed in such a way to provide accurate and updated information on the different types of waste generated by all stakeholders as well as data on the different amounts of waste disposed in any waste facility for recycling and disposal.

The selected expert must satisfy the following academic requirements, being, a University degree in Information technology, with at least 8 years experience in database design for waste monitoring. Proficiency in spoken and written English as well as previous experience with stakeholders’ workshop organization is a must. The time span is that of 2 calendar weeks.

• A Category II expert will be required to train a selected number of employees from WSM Ltd., the Malta National Laboratory and other involved entities on
  - Sampling techniques (how, where and frequency)
  - Different types of tests that could be used to monitor the landfill, both during its construction and during its operation
  - Data Interpretation and analysis of results obtained from the various tests

The selected expert must satisfy the following academic requirements, being, the possession of a University degree in Environmental Sciences, with at least 10 years experience in sampling techniques and experimental procedures. Proficiency in spoken and written English is a must. The time span is that of 2 calendar weeks.

3.5 Lessons Learned

Lessons learned through the implementation of other projects include
  - Experience gained in the project implementation phase. This includes project and time management and project monitoring to make sure that the terms of reference specified in the contract are satisfied.
  - Information and guidelines in filling EU application forms for various projects including cohesion funds and structural funds.
  - Knowledge about different solutions and technologies that can be used in the waste management field.
  - Experience in workshops/seminars organization.
  - Experience gained in the transfer of funding and filing procedures of various EU projects.
  - Coordinating meetings between different governmental entities on certain waste management issues (including waste directives and regulations).

4. Institutional Framework

WasteServ Malta Ltd (WSM Ltd) is a Limited Liability Company, 100% of the shares owned by the Government. Some of the employees are directly employed by the company while others have been seconded from the civil service. As a semi-autonomous company, WasteServ was assigned the role of a
waste management co-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 Malta Ltd 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.

WSM Ltd employees in charge of waste management must gain the required expertise for the proper execution of their tasks as expected by the Maltese Government and the EU Commission. For this reason, having the right expertise is very important so that the impacts on human health and the environment, by any decisions or actions taken, are minimized. Currently, WasteServ Malta Ltd has about 30 employees working in the 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 and Maghtab and Qortin landfills, which in total amount to approximately 70 employees.

However, waste management issues are highly dependant on other organizations which are responsible for providing significant inputs in order to achieve the targets set in the Waste Management Plan, including the ‘Producer Responsible’ principle stated in the Solid Waste Management Strategy for Malta (2001) and the ‘Packaging & Packaging Waste Directive’ [94/62/EC]. These include the:

- Malta Environment and Planning Authority [MEPA] which has the responsibility to instill in individuals and organizations a sense of environmental responsibility as well as monitor and regulate the quality of the environment. For such purpose, it must establish methodologies, maintain and disseminate information related to the environment as well as promote either alone or in collaboration with others, education, training and public awareness programmes relating to environment protection and the sustainable management of the environment and natural resources.
- Local Councils whose one of their main commitments is the Municipal Solid Waste collection.

In view of the above, these organizations/entities can take part in a number of activities/workshops/seminars that will take place as part of this Twinning project concerning waste management of specified waste streams in the process of implementing the ‘Extended Producer Responsibility’ directives. They can also benefit from the free advice given by the PAA, which is the long term twinning expert that will be staying in Malta until the project termination as well as technical assistance from the various experts that will be visiting Malta during the whole implementation year.

5. Detailed Budget

<table>
<thead>
<tr>
<th>Transition Facility Support</th>
<th>Investment Support</th>
<th>Institution Building</th>
<th>Total TF(=I+IB)</th>
<th>National Co-financing*</th>
<th>IFI*</th>
<th>TOTAL</th>
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<td></td>
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<td>Total</td>
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<td>400,000</td>
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</tbody>
</table>

Breakdown of figure at Annex 4.

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 co-financing expenses will be monitored by the beneficiary and the NAO. 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. Implementing 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, the RTA of the Twinning Project together with a Project Leader from the Twinning Partner and a representative from each of the small technical working/steering groups established for each ‘producer responsibility’ area. It is intended that a meeting will be held every three months, the first meeting taking place three months from the commencing date.

6.1 Implementing Agency

Ministry for Rural Affairs and the Environment
Barriera Wharf
Valletta, CMR 02
Tel: +356 22952120
Fax: +356 21231805

Contact Person:
Mr Peter Paul Bonnici
Director (EU Affairs)
Tel: +356 22952120
Email: peter-paul.bonnici@gov.mt

Project Leader:
Mary Grace Micallef
Contracting Engineer
WasteServ Malta Ltd
Tel: +356 2385 8126
Fax: +356 21441930
Email: mary.grace.micallef@gov.mt

Contracting Authority:
Department of Contracts
Notre Dame Ravelin
Floriana CMR 02
Malta

Contract Person:
Mr. Dennis Attard
Assistant Director
Tel: +356 21247682
Fax: +356 21247681
Email: dennis.attard@gov.mt

6.2 Twinning

The beneficiary institution of the Twinning Arrangements is WasteServ Malta Ltd.
All tasks will be carried out in Malta and close co-operation will be needed with a variety of stakeholders, including:

- Public and semi-public institutions, including Ministry for Rural Affairs and the Environment – WSM Ltd, the Ministry of Finance and Economic Services, the Management Efficiency Unit of the Office of the Prime Minister, Malta Standards Authority and Malta Environment and Planning Authority (MEPA), Licensing and Testing Department, Local Councils, etc.

- Trade Associations and related bodies, namely the Federation of Industry, the General Retailers and Traders Union, Association of Car Importers (for ELVs) and other importer and exporter organizations

- Other bodies, namely representatives from the ‘economic operators’ and ‘producers’, particularly distributors and retailers / commercial outlets, and specifically for ELVs, representatives from scrap yards and second hand parts.

For the efficient running and implementation of the contract and to equally incorporate all stakeholders’ views, it is envisaged that a number of small technical working steering groups are established for each ‘extended producer responsibility’ area, with representation from the key stakeholders mentioned above. MEU in liaison with WSM Ltd will review all documentation forwarded by the Contractor as well as to prepare any submissions to Ministries and Cabinet. The contractor is also requested to provide guidance, technical assistance and close co-operation to delegates within WSM Ltd and the 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 400,000 Euro.

7. Implementation Schedule

7.1 Start of tendering/call for proposals

July-August 2004

7.2 Start of project activity

March 2005

7.3 Project Completion
8. **Sustainability**

WasteServ Malta Ltd will provide ongoing training to its employees with personal development (life-long training). The Eco-tax will be introduced as from January 2004 to provide the financial revenue for proper waste management facilities. The trained staff will be bound to remain working with the company for a number of years as stipulated in their working contract. During this period, they are responsible to share their knowledge and expertise with other employees working with WasteServ especially new recruited staff, as well as other interested stakeholders.

9. **Conditionality and Sequencing**

All necessary preparatory works have been completed. Administrative documentation (ToR and technical specifications) will be ready in a draft form by the time of the signature of the Financing Memorandum.

The beneficiary institutions of the Twinning Project will provide for the appropriate working environment of the experts.

The new five employees that will have to be trained must be recruited prior to the start of the project.

**ANNEXES TO PROJECT FICHE**

1. Logical framework matrix
2. Detailed implementation chart
3. Contracting and disbursement schedule by quarter for full duration of programme (including disbursement period)
4. Breakdown of costs
### Annex 1: TF log frame template

**LOGFRAME PLANNING MATRIX FOR**

**Programme name and number**

Technical Assistance for the development of implementation systems for producer responsibility directives

**Contracting period expires**

15/12/2006

**Disbursement period expires**

15/12/2007

**Total budget:** 400,000EUR

**TF budget:** 400,000EUR

<table>
<thead>
<tr>
<th>Overall objective</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
</tr>
</thead>
</table>
| • To improve national capacity in waste management in order to assist Malta in implementing the National Waste Management Strategy (2001) in conformity with stipulated EU requirements. | • Agreed (with Commission) recovery and recycling targets within the stipulated timeframes  
• 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 | • Malta Environment and Planning Authority  
• MRAE reports |

<table>
<thead>
<tr>
<th>Project purpose</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
</tr>
</thead>
</table>
| • To ensure that the employees working at WasteServ Malta Ltd. who are responsible of the implementation of the National Waste Strategy published in 2001, as well as all the stakeholders who will be effected in one way or another by the implementation of the ‘Producer Responsibility’ principle, acquire the professional skills and expertise needed to execute their tasks properly. | • Waste Management Strategies can be included in the management plan by the industries and governmental entities (refer to section 3.4A).  
• Reduction in the amount of packaging waste going to landfill by 50% due to better waste management  
• Increase in recycling rates (approx 20,000t pa dry recyclables, 35,000 t pa biodegradable waste, 145,000t pa mixed MSW).  
• Dissemination of information about the environment and waste | • Waste management facilities data records  
• Reports of the Beneficiaries: Ministry for Rural Affairs and the Environment, WSM Ltd |
management to the customers, producers and all stakeholders managing waste through different media.
• More help to industry on ecological and environmental issues on the various waste streams (refer to section 2.1)

<table>
<thead>
<tr>
<th>Results</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Professional staff engaged in waste management gain sufficient knowledge and expertise for the proper execution of tasks</td>
<td>• 5 seminars / workshops organized</td>
<td>• Project Leader</td>
<td>Know-how is successfully transferred to staff</td>
</tr>
<tr>
<td>2. Training packages developed for the implementation of the procedures.</td>
<td>• At least 6 case-studies / site visits</td>
<td>• Waste management experts delivering the training sessions</td>
<td></td>
</tr>
<tr>
<td>3. Trainers identified within WSM Ltd who are trained to deliver the packages.</td>
<td>• 36 flights for site visits abroad</td>
<td>• On site visits</td>
<td></td>
</tr>
<tr>
<td>4. The managerial and technical capacity of WSM Ltd staff involved in waste management is improved.</td>
<td>• 3 trained eco councillors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Long term and sustainable waste management recommendations, for the various waste streams specified in section 2.1</td>
<td>• &gt; 100 hours lecturing hours/field visits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Information seminars</td>
<td>• 9 reports on the different waste streams</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Final project report</td>
<td>• A compiled report of all the experiences gained during the visits abroad</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activities</th>
<th>Means</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Technical training in a number of key waste management areas is delivered to selected employees</td>
<td>• Organisation of workshops, case studies and site visits as well as information seminars/lectures.</td>
<td>• Workshops, seminars are carried out successfully</td>
</tr>
<tr>
<td>• Trainers are trained to deliver future training sessions on waste management</td>
<td>• Relevant training material</td>
<td>• Effective cooperation with other institutions (universities, industries) who are involved in waste management and</td>
</tr>
<tr>
<td>• Develop training packages for the implementation of the procedures, which can be delivered by WSM Ltd personnel</td>
<td>• Existing data and information</td>
<td></td>
</tr>
<tr>
<td>• Technical assistance to develop the ‘extended</td>
<td>• Dissemination of information</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Specialist consultancy advice on different topics/fields, as regards to</td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
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</table>
producer responsibility’ framework
- Provide advice on communications and customer relations associated with WSM Ltd’s roles and responsibilities.
- Provide recommendations on promoting awareness raising activities
- Review of data and information on the collection method and the amount of waste generated.
- Provide recommendations on the organizational and institutional requirements for a better and efficient running of the collection scheme of the different waste streams as well as the management of the waste collected.
- Provide a financial analysis of the overall recommended options for waste stream collection, recycling
- Provide a number of workshops / seminars to the key stakeholders
Annex 2: SUMMARY DETAILED TIME IMPLEMENTATION CHART FOR THE PROJECT

**Title:** Technical Assistance for the Development of Implementation Systems for the Extended Producer Responsibility Directives.

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
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</thead>
<tbody>
<tr>
<td>All Components</td>
<td>D</td>
<td>D</td>
<td>D</td>
</tr>
</tbody>
</table>

**Legend:**

- **D** = Design
- **C** = Contracting
- **I** = Implementation
- **X** = Closure
Annex 3: Contracting and disbursement schedule by quarter for full duration of programme

**Title:** Technical Assistance for the Development of Implementation Systems for the Extended Producer Responsibility Directives.

All figures in Euro

<table>
<thead>
<tr>
<th>Twinning</th>
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<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
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<tr>
<td>CONTRACTED</td>
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<tr>
<td>Total</td>
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</tr>
<tr>
<td>DISBURSED</td>
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<tr>
<td>Total</td>
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</table>
Annex 4: Budget Breakdown

<table>
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<tr>
<th>Expert Field</th>
<th>Per Diem</th>
<th>Fee</th>
<th>No. of nights</th>
<th>No. of Working Days</th>
<th>Total Per Diem Fee in Euros</th>
<th>Total Fee/Working day in Euros</th>
<th>Flat Rate</th>
<th>Flat Rate in Euros</th>
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<tr>
<td>General Principles of Waste Management</td>
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<td>2744</td>
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<td>5250</td>
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<td>Packaging Waste Management (incl. Beverage packaging)</td>
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<td>350</td>
<td>84</td>
<td>60</td>
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<td>End of Life Vehicles</td>
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<td>15</td>
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<tr>
<td>Waste Oils</td>
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<tr>
<td>Batteries and Accumulators</td>
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<td><strong>Total</strong></td>
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<td><strong>46648</strong></td>
<td><strong>59500</strong></td>
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<td><strong>89250</strong></td>
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</table>
### Maltese Trainees

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<thead>
<tr>
<th>Per Diem Fee *</th>
<th>Number of employees</th>
<th>No. of Days</th>
<th>Total Expense in Euros</th>
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<td>199</td>
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<td>7</td>
<td>1393</td>
</tr>
<tr>
<td>199</td>
<td>1</td>
<td>7</td>
<td>1393</td>
</tr>
<tr>
<td>199</td>
<td>2</td>
<td>14</td>
<td>5572</td>
</tr>
<tr>
<td>199</td>
<td>2</td>
<td>7</td>
<td>2786</td>
</tr>
<tr>
<td>199</td>
<td>1</td>
<td>7</td>
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<tr>
<td>199</td>
<td>1</td>
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<td>1393</td>
</tr>
<tr>
<td>199</td>
<td>2</td>
<td>14</td>
<td>5572</td>
</tr>
<tr>
<td>199</td>
<td>2</td>
<td>14</td>
<td>5572</td>
</tr>
</tbody>
</table>
**For budgetary purposes only. This is the fee when travelling to England, which is the highest fee**

<table>
<thead>
<tr>
<th>No. of Trainees</th>
<th>Course length</th>
<th>Total Cost (Euros)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>12 months</td>
<td>36,189</td>
</tr>
</tbody>
</table>

### Eco-Councillors

<table>
<thead>
<tr>
<th>No. of Trainees</th>
<th>Course length</th>
<th>Total Cost (Euros)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>12 months</td>
<td>36,189</td>
</tr>
</tbody>
</table>

**RTA fee**

<table>
<thead>
<tr>
<th>Short Term Experts expenses</th>
<th>60000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eco-councillors</td>
<td>191,828</td>
</tr>
<tr>
<td>Maltese Trainees</td>
<td>36,189</td>
</tr>
<tr>
<td></td>
<td>111,983</td>
</tr>
</tbody>
</table>

**Assuming the PAA will receive 5 000 per month**
| **Total Expense** | **400000** |
### Packaging statistics

<table>
<thead>
<tr>
<th>Type of packaging</th>
<th>1999 (imports)</th>
<th>Total (imports + local production for '99)</th>
<th>Local Prod (1999)</th>
<th>2002</th>
<th>Cons by households (Based of 1999)</th>
<th>Cons by Households (based on 2002)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass</td>
<td>3075886.68</td>
<td>39730505</td>
<td>3533196</td>
<td>3840431</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cans</td>
<td>360456</td>
<td>9629884</td>
<td>397417</td>
<td>412858</td>
<td>2848</td>
<td>3262</td>
</tr>
<tr>
<td>Kegs</td>
<td>677667</td>
<td>4810</td>
<td>645739</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4114009.68</td>
<td>49365199</td>
<td>3930613</td>
<td>4899028</td>
<td>2848</td>
<td>3262</td>
</tr>
</tbody>
</table>

Figures are obtained from the customs office. After this date, figures are held only in litres not in units. The figures obtained for 2002 were in litres and the calculations in units are based on the 1999 figures. It is not possible to obtain figures for locally produced beer because there are only 2 producers and are protected by law. In this case, the figures for local production are obtained by deducting total production less the imports. Discrepancies exist in the case of steel kegs. Household consumption is calculated through an analysis of waste disposed of in the grey bags used in Ħwieqi. The percentage acquired for household consumption of beer cans is in weight. Household consumption refers only to beer in cans.

### Wines & spirits

<table>
<thead>
<tr>
<th>Type of Packaging</th>
<th>2002 (imports)</th>
<th>1999 (Total imports + local production)</th>
<th>1999 (imports)</th>
<th>Local Prod.</th>
<th>Cons by Households 1999</th>
<th>Cons by Households 2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>TetraPak</td>
<td>639821</td>
<td>452541</td>
<td>158412</td>
<td>294129</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PET</td>
<td>222055</td>
<td>154288</td>
<td>54978</td>
<td>99310</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glass</td>
<td>17943207</td>
<td>12447622</td>
<td>4442530</td>
<td>8005092</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>18805083</td>
<td>13054451</td>
<td>4659182</td>
<td>8395269</td>
<td>849845</td>
<td>1224211</td>
</tr>
</tbody>
</table>

Figures for 2002 are available only in litres. The number of units is calculated by estimating the growth rate between 2000 and 2001 and then using this rate to obtain the total figure of 2002 by multiplying it with the figures issued by the AIS report. The division by the type of packaging is based on this report depending on the percentage quantity formed by these packs. Consumption of households is based on the analysis of the grey bags of the Ħwieqi households.

### Water

<table>
<thead>
<tr>
<th>Type of packaging</th>
<th>2002 (imports)</th>
<th>1999 (imports + local production)</th>
<th>1999 imports</th>
<th>99 Local prod</th>
<th>Consumed by households 1999</th>
<th>Cons. by Households 2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural &amp; carbonated mineral water</td>
<td>4500139</td>
<td>2224985</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flavoured water</td>
<td>473794</td>
<td>2136</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>497933</td>
<td>52156071</td>
<td>2227121</td>
<td>49928950</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The figures for water are given by the Customs department. The breakdown according to package used is based on the AIS report. The amount consumed by households is based on the analysis of the grey bags of the Ħwieqi households.

### Juice/Squashes

<table>
<thead>
<tr>
<th>Type of packaging</th>
<th>1999 aggregate data (imports + local production)</th>
<th>Consumed by households (based on 2002 figures)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PET</td>
<td>21874</td>
<td>4320</td>
</tr>
<tr>
<td>Glass</td>
<td>11031</td>
<td>2179.06</td>
</tr>
<tr>
<td>Aluminium &amp; steel</td>
<td>593542</td>
<td>117221</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>626447</td>
<td>123720.06</td>
</tr>
</tbody>
</table>

The figures for juices/squashes are given in litres by the NSO and then calculated on the 1999 figures of the AIS report. The amount consumed by households is calculated according to the figures obtained from the Ħwieqi survey.
### Non-Alcoholic beverages

1082408

<table>
<thead>
<tr>
<th>Detergents</th>
<th>Units (2002)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shampoo (majority in plastic but some glass as well)</td>
<td>1194926</td>
</tr>
<tr>
<td>Perfumes</td>
<td>291072</td>
</tr>
<tr>
<td>Hair Lacquers &amp; lotions</td>
<td>2444338</td>
</tr>
<tr>
<td>Powder clothes washing (Carton)</td>
<td>242357</td>
</tr>
<tr>
<td>Liquid washing (plastic)</td>
<td>1765436</td>
</tr>
<tr>
<td>Perfumes (glass)</td>
<td>291072</td>
</tr>
<tr>
<td>Dentifrices</td>
<td>483308</td>
</tr>
<tr>
<td>Deodorants and antiperspirants (glass/plastic/metal)</td>
<td>741987</td>
</tr>
<tr>
<td>Flakes, granules &amp; powders used as soap for industrial &amp;</td>
<td>5050</td>
</tr>
<tr>
<td>Liquid toilet soap</td>
<td>93199</td>
</tr>
<tr>
<td>Solutions for contact lenses</td>
<td>71813</td>
</tr>
<tr>
<td>Depilatories and other perfumery</td>
<td>1170965</td>
</tr>
<tr>
<td>Essential oils (dark glass)</td>
<td>14036</td>
</tr>
<tr>
<td>Shaving preparations</td>
<td>121121</td>
</tr>
<tr>
<td>Bath salts &amp; bath preparations</td>
<td>1601816</td>
</tr>
</tbody>
</table>

Figures for all detergents are given by the Customs department.