

NON TECHNICAL SUMMARY

STRATEGIC ENVIRONMENTAL ASSESSMENT ON THE SOLID WASTE STRATEGY FOR THE MALTESE ISLANDS: CONSULTATION DOCUMENT JANUARY 2009

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**Strategic Environmental Assessment (SEA) of the
Solid Waste Management Strategy for the
Maltese Islands**

2009

Non Technical Summary

**Prepared for the Ministry for Resources and Rural
Affairs**

by

**Adi Associates
Environmental Consultants Ltd**

SEPTEMBER 2009

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QUALITY ASSURANCE

SEA of a Solid Waste Management Strategy for the Maltese Islands, 2009 Non Technical Summary

Version : 2

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NON TECHNICAL SUMMARY

INTRODUCTION

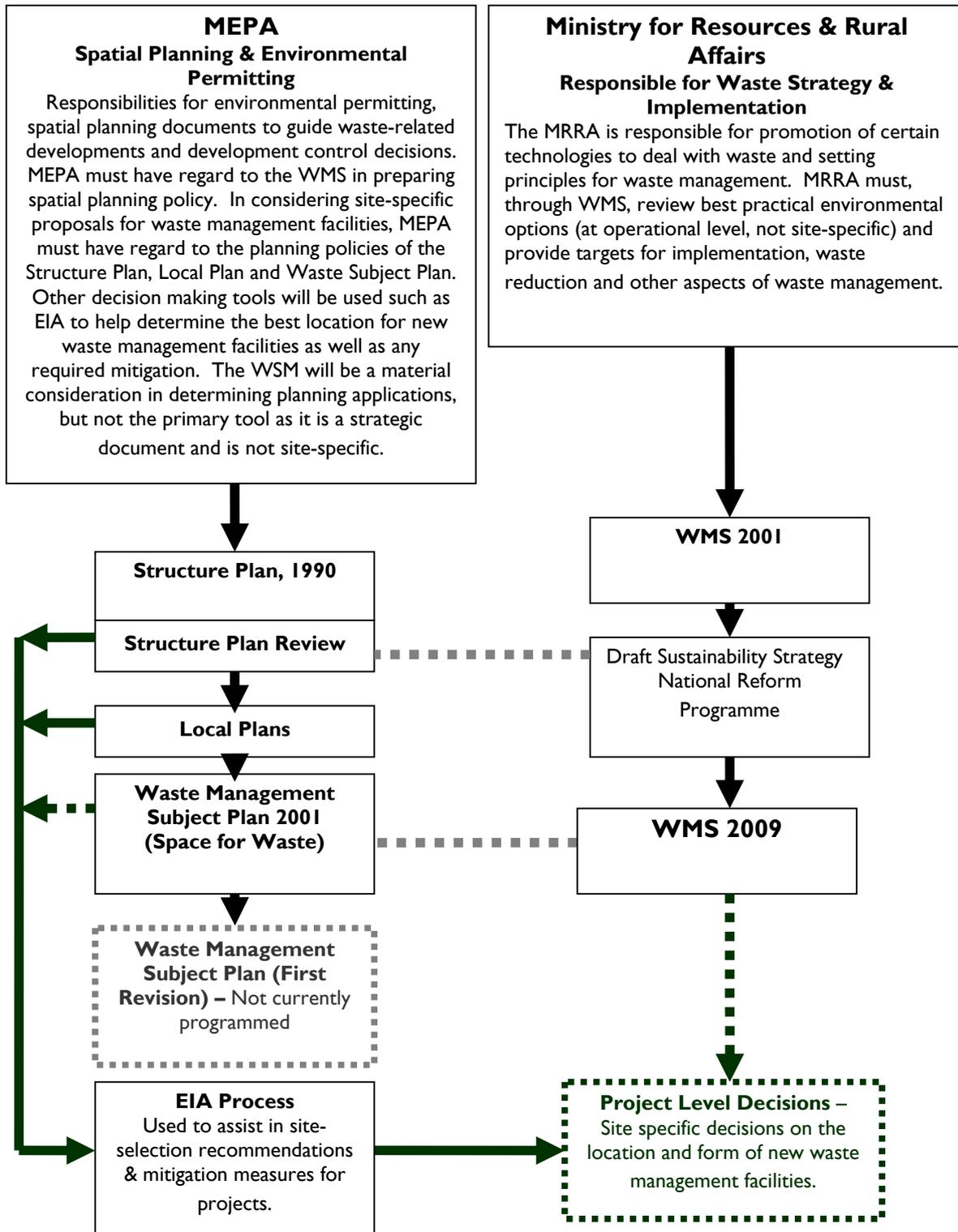
1. This non-technical summary summarises the Environmental Report, which describes the Strategic Environmental Assessment (SEA) in relation to Malta's Draft Solid Waste Management Strategy (WMS), January 2009. The WMS has been prepared by the Ministry for Resources and Rural Affairs (MRRRA).
2. The assessment was carried out in accordance with the SEA Regulations (LN 418 of 2005), which transpose the European Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment.

SOLID WASTE MANAGEMENT STRATEGY FOR THE MALTESE ISLANDS, 2009

1. To ensure the 2009 Strategy has been correctly interpreted, the SEA Consultants prepared a summary of the following measures that were gleaned from the WMS:
 - **Principles** (based on those set out in the 2001 WMS);
 - **Objectives** (based on text in the 2009 WMS);
 - **Actions** (based on text in the 2009 WMS); and
 - **Options** (based on alternatives identified in the 2009 WMS).
2. As the Consultation Draft WSM does not include paragraph numbers or highlight specific objectives and actions, this was considered the best approach. 7 Principles, 10 Objectives, 50 Actions and 4 Options are identified and form the basis for the SEA assessment¹. The SEA will specifically assess the *Objectives* and *Options* set out in the WMS. The SEA will also have regard to the principles and actions identified in the WMS and comment on how these principles and actions are likely to support the 10 Objectives. These identified Principles, Objectives, Actions and Options are set out in **Appendix 2** to the Environmental Report.
3. **Figure I** illustrates the relationship of the WMS to other strategies, plans and programmes.

¹ The Principles, Objectives and Actions were agreed, by e-mail, with the Ministry for Resources and Rural Affairs on 3rd March 2009. The Options that the SEA will assess were subsequently agreed on during a meeting held at the MRRRA on Thursday 9th March 2009.

Figure 1: Relationship of WMS to other strategies, plans and programmes



STRATEGIC ENVIRONMENTAL ASSESSMENT PROCESS

3. The objective of the SEA Directive is to provide a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans with a view to promoting sustainable development. It is the process of evaluating the environmental impacts of any proposed plan/programme likely to have significant effects on the environment. The SEA process helps to inform the decision making process and the final plan/programme with the aim of improving the final programme and promoting sustainable development. In addition, the SEA process aims to increase public involvement in decision making at a strategic level, with consultation at various stages in the SEA process being a requirement of the Regulations.

4. A Scoping Report was prepared by MRRRA and issued for public consultation in January 2009. Comments from the SEA Audit Team were received on 5th March 2009, following which the Scoping Report was revised. The revised Scoping Report was distributed by MRRRA to the following list of identified stakeholders:
 - WasteServ Malta Ltd;
 - Malta Environment and Planning Authority;
 - Department of Health;
 - Department of Agriculture;
 - Malta Maritime Authority;
 - Malta Resources Authority;
 - Ministry for Gozo;
 - Superintendence of Cultural Heritage;
 - Association of Local Councils;
 - Malta Chamber of Commerce, Enterprise and Industry;
 - Building Industry Consultative Council; and
 - Farmers' Cooperatives.

5. The Environmental Report is based on the Scoping Report. Consultation on the WMS and the Environmental Report will be undertaken by the Ministry for Resources and Rural Affairs (MRRRA). The comments received will be analysed

by the Consultants and the Environmental Report changed to reflect the comments, if appropriate.

6. The five main steps required as part of the SEA process are summarised in **Table I** below.

Table I: Key stages in the SEA process

Stage in SEA Process	Details of Process Required
Screening	Screening is required to determine whether the proposed plan/programme is likely to have significant environmental effects and whether an SEA is required.
Scoping	Scoping enables the coverage and level of detail of the Environmental Report to be determined in conjunction with the statutory consultee/s; in this case MEPA (Malta Environment and Planning Authority).
Environmental Report	The Environmental Report details the anticipated environmental impacts of the programme and any proposed amendments to the plan to mitigate its effects. It must be consulted upon.
Adoption	The Adoption report details the results of consultation; how comments have been incorporated into the programme; the final programme; and the proposals for monitoring the environmental impacts of the programme.
Monitoring	The Monitoring stage is undertaken during implementation of the programme and serves to identify the level of monitoring required and, should adverse impacts be identified, any remediation proposals.

Assessment Methodology

7. Although the SEA Directive does not specifically require the use of objectives or indicators in SEA, they are a recognised way in which environmental effects can be described, analysed, and compared. SEA objectives encompass the relevant national and EU environmental priorities that can be inferred from a number of relevant national documents as outlined below (in the absence of a national environmental strategy). The Strategy is assessed in light of the SEA objectives. The WMS's performance against the SEA objectives is generally measured by indicators. The SEA objectives are separate from the Strategy objectives, although the two influence each other and may overlap. To fulfil the requirements of the SEA Directive and the SEA Regulations, 2005, the SEA objectives must cover biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage, landscape, and interrelationships between them where these are relevant to the sector being addressed by the plan or programme. The SEA objectives were developed on the basis of the aforementioned topics and their relevance to the Strategy; these are described in **Table 2**.

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8. In developing appropriate objectives and indicators the following documents have been consulted:
- The GRDP Handbook on SEA for Cohesion Policy 2007- 2013;
 - The Commission’s “Implementation of Directive 2001/42 on the Assessment of the Effects of Certain Plans and Programmes on the Environment”;
 - A Practical Guide to the Implementation of the SEA Directive, ODPM;
 - The SEA Directive 2001/42/EC;
 - SEA Regulations, 2005;
 - The Draft Sustainable Development Strategy for the Maltese Islands, 2006-2013;
 - Malta’s State of the Environment Report, 2005; and
 - State of the Environment Indicators, 2007.

SEA Objectives & Indicators

9. **Table 2** defines the set of objectives relating to environmental issues, in support of which, relevant assessment criteria and possible data sources have also been identified.
10. The SEA indicators are measurements of trends over time. Changes in the indicators show whether the implementation of the Strategy would be or has been successful in improving the environment. It is to be noted, however, that changes in the indicators could be the result of factors outside the influence of the Strategy.

Table 2: SEA Environmental Objectives & Criteria for Assessing Impacts

Topic	Reference	SEA Objective	Criteria Does the strategy ...?	SEA Indicator	Data source
Biodiversity, Flora and Fauna	1	Protect and enhance natural habitats and wildlife, and important geological features	Conserve and enhance biodiversity? Protect and enhance most valued habitats? Conserve and enhance geodiversity?	Area of wildlife habitat/area of geological interest lost to waste management facility development. Ratio of new waste management facilities occupying brownfield sites versus greenfield sites	Nature Protection Unit, MEPA Development Control, MEPA
Population and human health	2	Protect the living conditions and amenities of local residents from the adverse effects of waste development (including noise, dust, odour and traffic impacts)	Protect residential amenity? Consider general amenity? Improve the quality of people's living environments?	Number of complaints received from residents in relation to adverse effects of waste management operations	WasteServ MEPA MRRA Local Councils
	3	Minimise adverse impacts of waste management activity on human health and wellbeing	Ensure effective protection of human health? Reduce exposure to risks?	Number of complaints received from residents in relation to adverse effects of waste management operations on human health and wellbeing Implementation of a hazardous waste management strategy	WasteServ MEPA MRRA Hospitals and clinics Local Councils
	4	Increase awareness and enhance opportunities for public and community involvement and	Improve public awareness of their responsibility regarding waste generation and disposal? Improve local business awareness regarding sustainable waste practices?	Number of schools participating in separate waste collection Weight of separate fractions	MRRA WasteServ Local Councils

Topic	Reference	SEA Objective	Criteria Does the strategy ...?	SEA Indicator	Data source
		education in waste management	Involve the community in sustainable waste practices?	collected at bring-in sites Participation rates in kerbside collection schemes	
	5	Meet local needs locally	Ensure Malta is self-sufficient for its own waste management needs? Ensure sufficient capacity for predicted population growth? Provide potential to supply local heat and/or power from waste to energy technology? Identify local uses and markets for the products of waste treatment?	% of hazardous waste exported out of Malta for treatment / disposal Energy supplied from waste to energy % of products of waste treatment used locally	WasteServ MRRA NSO
Soil	6	Protect agricultural resources from waste management activities	Take account of land contamination? Protect agricultural land from waste management activities?	% waste management facilities that contain runoff within site Loss of agricultural land to waste management facilities	WasteServ MEPA
	7	Improve soil quality	Improve soil quality?	Quality and volume of compost destined for use in agriculture and landscaping	WasteServ MEPA
Water	8	Protect water resources and minimise adverse effects on water quality from waste management facilities	Reduce ground and surface water contamination?	Emissions to water from waste management/treatment facilities Number of water pollution incidents related to waste management facilities Groundwater quality	WasteServ MEPA
Air	9	Minimise adverse effects of waste	Improve air quality? Ensure no breach of national air quality	Emissions to air from waste management/treatment	WasteServ MEPA

Topic	Reference	SEA Objective	Criteria Does the strategy ...?	SEA Indicator	Data source
		management activity on air quality	objectives?	facilities	
Climatic Factors	10	Reduce non-renewable energy consumption and greenhouse gas emissions	Increase energy efficiency? Promote energy conservation? Increase use of renewable sources? Reduce green house gas emissions?	Net energy generation from waste (energy used to process waste versus energy recovered from waste) Emissions of greenhouse gases	WasteServ
Material assets	11	Secure the sustainable management of waste, minimise its production and the wasteful use of primary resources, and increase re-use, recycling and recovery rates	Reduce the inefficient use of resources? Minimise consumption of new resources? Promote more reduction, re-use, recycling, composting and using waste as a source of energy (waste hierarchy)? Encourage recycling of wastes? Recover value from waste including composting, recycling and energy generation? Reduce landfill of waste?	Tonnage of MSW produced per capita Recycling and composting rates (annual tonnage) Percentage of waste from which value is recovered Volume and tonnage of waste going to landfill Volume and tonnage of C&D waste for disposal	WasteServ NSO
Cultural heritage	12	Minimise the impacts of waste management on places, features and buildings of historic, cultural and archaeological importance	Protect and sustain the historic environment? Discourage demolition of buildings that could otherwise be refurbished (instead of re-developed)?	Reports/complaints regarding places, features or listed buildings adversely affected by municipal waste management activity Volume and tonnage of C&D waste for disposal	Superintendent of Cultural Heritage Heritage Malta MEPA
Landscape	13	Protect the quality, integrity and distinctiveness of the	Protect the landscape?	Complaints regarding location of waste management bring-in sites in	Local Councils MEPA

Topic	Reference	SEA Objective	Criteria Does the strategy ...?	SEA Indicator	Data source
		landscape and townscapes from waste management activity, including historic landscapes of cultural significance		relation to historic townscapes or landscape Outcome of Landscape Impact Assessment where requested by MEPA, generally, as part of an Environmental Impact Assessment Incidences of fly-tipping (as recorded by MEPA)	
Transport	14	Minimise the transport impacts of waste management activity	Enable the waste to be disposed of in one of the nearest appropriate installations? Manage waste in accordance with the proximity principle? Reduce congestion?	Fuel use per tonne of waste Introduction of smaller, cleaner, waste collection vehicles	WasteServ Waste contractors

COMPATIBILITY OF THE WASTE STRATEGY OBJECTIVES AND THE SEA ENVIRONMENTAL OBJECTIVES

4. The SEA objectives chosen reflect the national environmental priorities; these were extracted from a number of national documents, including the draft National Sustainable Strategy and the State of the Environment Report. The SEA objectives were assessed against the WMS objectives (see **Appendix 2**) to identify conflicts and synergies between the SEA and the WMS. This assessment showed that most WMS Objectives were in broad conformity with the principles of sustainable waste management and did not conflict with the SEA Objectives identified at the Scoping Stage. The lack of reference to targets has meant that the impacts of the WMS objectives on many of the SEA objectives, cannot easily be identified. Because the WMS is broadly compliant with sustainable waste management principles, the SEA Assessment (see below) identifies either 'no impact' or a 'positive' impact. If targets were included in the WMS and it contained more certainty over implementation, the significance of these impacts would be more positive in many instances.

ALTERNATIVES ASSESSMENT

5. **Chapter 7** assesses alternative waste management technologies as presented in the draft WMS. The assessment highlights that continued reliance on landfill is unsustainable and that alternative waste management options should be considered. Based on environmental considerations, the SEA identifies Option 3 (identified as the 'Preferred Options' in the WMS) as the option with the most environmental benefit. This conclusion was reached, based on the information provided in the WMS and supporting documents. Further details on technology chosen would help to further inform the assessment.
6. The assessment also identifies that site selection and public consultation are two important aspects that will affect the significance of potential impacts on e.g. natural habitats, cultural heritage, residential amenity, and landscape. These impacts can only be assessed at 'project' level as detailed proposals are developed by MRRA.

ENVIRONMENTAL ASSESSMENT

7. **Chapter 8** presents the environmental assessment of all 10 identified objectives of the WMS against all the SEA objectives. The impact assessment identified that more detail is required with respect to a number of proposed actions and aspects. The most significant revisions are needed in the following areas:
 - Waste minimisation (including consideration of carbon benefits);
 - Proposed new technologies;

- Fiscal incentives;
- Management of all waste streams;
- Integrated policy management; and
- Re-use of building materials.

11. **Table 3** presents a general overview of the cumulative effects that may be expected on environmental aspects as a result of implementation of the WMS.

Table 3: Summary of cumulative environmental effects of the WMS

Environmental Receptor	Key impacts of the WMS
Biodiversity, Flora and Fauna	The implementation of the Waste Hierarchy including waste minimisation and better hazardous waste management practices is expected to result in a general positive impact on the natural environment.
Population and health	The implementation of the Waste Hierarchy including waste minimisation and better hazardous waste management practices will generally positively impact population and human health. Consulting on waste management proposals and engaging residents and businesses in waste management initiatives will help the population to feel more involved in the sustainable management of waste, which will improve community well-being. Reducing reliance on landfill as the main solution to manage waste will limit the likelihood of further landfill development and associated complaints/loss of residential amenity from this type of facility, which has the most potential to cause amenity problems to nearby residents. The WMS is less specific about how hazardous waste will be managed in the future. The operation of the Ghallis Landfill site in conjunction with early adoption of a National Hazardous Waste Management Plan will limit the likelihood of adverse amenity and health impacts and should be prioritised further in the WMS.
Agricultural resources	The use of MBT technology provides an opportunity to create compost and other by products to improve the productivity of agricultural soil, this impact could be enhanced if the WMS provides ambitious targets to direct agricultural waste to MBT plants. It is recognised, however, that until the capacity of future MBT plants are known, it may be premature to set such targets.
Water	At a strategic level, the WMS is considered to have positive impacts on water quality. It is impossible to quantify the direct impacts of the WMS on water as the final preferred technologies have not been stipulated in the WMS, nor their processing capacities. Although a preferred option (Baseline + MBT + Incineration) has been identified, the technical specifications of new MBT / Incineration plants are not yet known. The assessment of WMS objectives draws a general conclusion that the use of MBT and Incineration Technologies combined with waste minimisation measures will limit the demand for waste to landfill. This is assumed to reduce potential for pollution to water through leaching. WMS Objective 2 (Preparation of technical standards for hazardous waste and landfilling)

Environmental Receptor	Key impacts of the WMS
	will further increase the potential for the WMS to contribute towards improved water quality, although the implementation for these standards needs to be prioritised.
Air	At a strategic level, the WMS is considered to have positive impacts on air quality. It is impossible to quantify the direct impacts of the WMS on air as the final preferred technologies have not been stipulated in the WMS, nor their processing capacities. Although a preferred option (Baseline + MBT + Incineration) has been identified, the technical specifications of new MBT / Incineration plants are not yet known. The assessment draws a general conclusion that the use of MBT and Incineration Technologies combined with waste minimisation measures will limit the demand for landfill and potential for emissions to air, which are more difficult to manage for landfills. WMS Objective 2 (Preparation of technical standards for hazardous waste and landfilling) will further increase the potential for the WMS to contribute towards improved air quality, although the implementation for these standards needs to be prioritised.
Reduce non-renewable energy consumption and GHG emissions.	<p>The NRP 2008-2010 places significant priority on the development of waste to energy technology. The WMS promotes the use of waste to energy technology but does not include targets for the net generation of energy from waste.</p> <p>Production and management of packaging waste can produce significant quantities of GHG. The WMS should include linkages between the GHG benefits of promoting waste minimisation.</p>
Material Assets (Sustainable management of resources including waste minimisation and recycling)	Implementation of the Waste Hierarchy will reduce pressure on primary resources and reduce waste to landfill. The WMS should include an implementation programme including targets and assigning responsibilities to ensure effective implementation of the Waste Hierarchy.
Cultural heritage	The WMS does not include clear Actions that focus on waste minimisation from C&D. Actions that support re-use and refurbishment of buildings as opposed to demolition and development could reduce negative impacts on cultural heritage.
Landscape	Impacts on landscape are generally project specific. However, the WMS seeks to reduce dependence on landfill in favour of waste minimisation and other technologies. Landfill sites are often located in areas that are intrusive on the landscape and therefore a secondary effect of the WMS could be a reduced impact on landscape. Project specific assessment will be necessary for the development of any new facilities.
Transport Impacts	In general, the implementation of the waste hierarchy could result in additional waste collection vehicles. However, the introduction of smaller and cleaner refuse vehicles, as outlined in the WMS, will help to reduce negative impacts from waste management activities. A clear commitment in the WMS will help to ensure that positive effects are accrued.

MITIGATION MEASURES & RECOMMENDATIONS

12. When considering the need for mitigation, a hierarchy of mitigation measures was considered:
- Avoiding the implementation of unsustainable actions;
 - Reducing the extent of unsustainable actions;
 - Remedying or compensating for any negative impacts by incorporating mitigation measures into the actions to prevent or minimise the impacts; and
 - Enhancing positive impacts.

Implementation & Monitoring

13. In order to enhance positive outcomes identified during the impact assessment, the WMS should elaborate the Objectives and Actions presented. Entities that will be responsible for the implementation of Actions should also be identified. There are many Actions in the WMS that should be assigned targets. It is recognised, however, certain targets can only be set when the WMS starts to be implemented. For example, cost benefit analysis and feasibility work will provide more technical detail on the favoured technologies and the final size and processing capacity of the MBT plants. Until this is known it would be premature to set targets in the revised WMS.
14. The need to incorporate more targets in the WMS was repeatedly identified during the assessment. This is because, whilst there are many Actions identified in the WMS that conform to sustainable waste management practices, the lack of targets and details on implementation means that the positive sustainability benefits can only be inferred presenting a degree of uncertainty in the assessment. Without targets and some certainty of 'ownership' of the Action, implementation is not guaranteed.
15. The impact assessment identified that more detail is required with respect to a number aspects including:
- Implementation;
 - Targets;
 - Education;
 - Commitment to BAT & Monitoring;
 - Environmental Protection; and
 - Carbon Benefits;

16. As part of its implementation schedule, the WMS should also consider that certain aspects will involve a lengthy process such as those involving site selection, procurement, planning, construction, and commissioning. In order to ensure that beneficial results are also accrued in the short term, it is recommended that the implementation programme also focus on time bound targets for short to medium term actions such as those focussed on waste minimisation and more efficient use of primary resources.
17. The WMS should identify indicators and include a monitoring programme to identify whether targets set are being met and/or whether changes to the WMS are required.
18. The following table summarises the recommendations of the Environment Report.

Table 4: Summary of Recommendations

ISSUE	DESCRIPTION	RECOMMENDATION
Implementation	The WMS would benefit from more detail on implementation.	The WMS should include a timetable for the identified actions, specifying who is responsible for implementation of the various actions and by when. In general, the final WMS should seek to provide targets for Actions that can be monitored. These targets should be strategic in nature, but should be realistically capable of monitoring in order to benchmark the progress and success of the WMS and identify issues to be considered in subsequent reviews.
Targets	The WMS would benefit from inclusion of targets to help measure its implementation.	The WMS should incorporate targets for implementation, wherever possible, for example, with respect to renewable energy contribution, GHG emissions, waste minimisation, diversion of waste from landfill, increase in recycling, technical standards, fiscal incentives, integrated policy management and hazardous waste.
Education	The WMS would benefit from further elaboration on how the Strategy will be communicated and public participation facilitated.	The WMS should include a general principle and commitment to public consultation – seeking to go beyond ‘minimal legal requirements’ and affirm a commitment ensuring communities feel involved.
Commitment to Best Available Technology (BAT) and monitoring	The WMS should commit to the principle that in examining technologies – the proposer will be committed to	WMS should incorporate a principle that commits to BAT. In considering final technologies for MBT, consideration should be given to life cycle assessment that has already been carried out.

ISSUE	DESCRIPTION	RECOMMENDATION
	securing BAT and subsequently monitoring new waste facilities.	
Environmental Protection	Although planning policy will consider impacts at the project level, the WMS would benefit from a commitment to the principle of high standards of design and mitigation in the planning process given the strategic importance of the document.	WMS to incorporate a commitment to best practice in terms of the planning of new waste facilities to ensure protection of public amenity and environmental quality.
Construction & Demolition Waste	Further commitments to Construction & Demolition Waste are required.	Given that approximately 80% of waste produced in Malta is C&D waste, the WMS could include measures to tackle its minimisation.

MONITORING

19. **Table 5** presents a monitoring plan to monitor potential impacts identified through the SEA that may arise as a result of implementation of the WMS.

Table 5: Monitoring plan

SEA Theme	Potential cumulative significant effects	Relevant Indicators (from Table 5.1)
Biodiversity, Flora and Fauna	Improved waste management reduces risk to the natural environment. A move away from landfill can protect natural habitat from this land-hungry practice. Careful site selection is required to reduce negative impacts from the development of new waste management facilities.	Area of wildlife habitat/area of geological interest lost to waste management facility development. Ratio of new waste management facilities occupying brownfield sites versus greenfield sites
Population & Human Health	The WMS is directly relevant to population and human health. The indicators should be used to measure impacts on public amenity, public awareness and	Number of complaints received from residents in relation to

SEA Theme	Potential cumulative significant effects	Relevant Indicators (from Table 5.1)
	<p>participation, well-being, and the ability to meet local waste management and alternative energy needs locally.</p>	<p>adverse effects of waste management options</p> <p>Number of complaints received from residents in relation to adverse effects of waste management operations on human health and wellbeing</p> <p>Implementation of a hazardous waste management strategy</p> <p>Number of schools participating in separate waste collection</p> <p>Weight of separate fractions at bring-in sites</p> <p>Participation rates in kerbside collection schemes</p> <p>% of hazardous waste exported out of Malta for treatment/disposal</p> <p>Energy supplied from waste to energy</p> <p>% of products of waste treatment used locally</p>
Soil	<p>Improved waste management reduces risk to agricultural land. A move away from landfill can protect agricultural land from this land-hungry practice. Careful site selection is required to reduce negative impacts from the development of new waste management facilities. The production of soil enhancers and fertiliser from decomposition of MSW and agricultural waste can have a positive impact on soil quality.</p>	<p>% waste management facilities that contain runoff within site</p> <p>Loss of agricultural land to waste management facilities</p> <p>Quality and volume of compost destined for use in agriculture and landscaping</p>
Water	<p>Impacts on water resources as a result of waste</p>	<p>Emissions to water</p>

SEA Theme	Potential cumulative significant effects	Relevant Indicators (from Table 5.1)
	management activities should be monitored to ensure compliance and adopt corrective action if required.	from waste management/treatment facilities Number of water pollution incidents related to waste management facilities Groundwater quality
Air	Impacts on air as a result of waste management activities should be monitored to ensure corrective action is adopted as required.	Emissions to air from waste management/treatment facilities
Climatic Factors	The Waste Sector should be monitored to determine its contribution to greenhouse gas emissions and abatement	Net energy generation from waste (energy used to process waste versus energy recovered from waste) Greenhouse Gas Emissions from Waste Management Sector
Material Assets	Monitoring of waste generation will be an integral part of the WMS as well as the SEA to determine whether identified actions have been implemented effectively. This will allow the WMS 'owners' to identify if targets are being met and whether changes need to be made to ensure targets will be reached.	Tonnage of MSW produced per capita Recycling and composting rates (annual tonnage) Percentage of waste from which value is recovered Volume and tonnage of waste going to landfill Volume and tonnage of C&D waste for disposal
Cultural heritage	Impacts on cultural heritage from waste management activities should be monitored.	Reports/complaints regarding places, features or listed buildings and adversely affected by municipal waste management activity Volume and tonnage of C&D waste for disposal

SEA Theme	Potential cumulative significant effects	Relevant Indicators (from Table 5.1)
Landscape	Landscape impacts from waste management activities should be monitored.	<p>Complaints regarding location of waste management bring-in sites in relation to historic townscapes or landscape</p> <p>Outcome of Landscape Impact Assessment where requested by MEPA, generally, as part of an Environmental Impact Assessment</p> <p>Incidences of fly-tipping (as recorded by MEPA)</p>
Transport	Transport impacts as a result of waste management activities should be monitored to identify any additional measures that should be implemented	<p>Fuel use per tonne of waste</p> <p>Introduction of smaller, cleaner, waste collection vehicles</p>