

MEPA's comments on the SEA Environmental Report on the National Waste Management Plan (2013 – 2020)

17 December 2013

1. Introduction

- 1.1 MEPA's comments on the SEA Environmental Report (ER) on the National Waste Management Plan (2013 – 2020) are provided below. MEPA also provided comments on the draft Waste Management Plan in November 2013. It is recommended that these comments are taken into consideration together with the findings of the strategic environmental assessment in the revised plan.
- 1.2 The draft plan includes various proposals to improve the current situation and improve progress towards Malta's sustainable waste management. However, MEPA considers that the strategic environmental assessment of these proposals was significantly constrained due to the lack of details in the draft plan, including projections in terms of the amounts of different types of waste that are expected to be generated in the future and how the proposals in the draft plan will, in combination with each other, effectively reduce the amount of waste going to landfill and increase the reuse, recycling and recovery of waste in a sustainable manner, without having consequential significant adverse impacts on other environmental factors.
- 1.3 In summary, MEPA considers that the ER should provide:
- a non-technical summary as a separate document or a dedicated section at the beginning of the ER;
 - a dedicated section which examines other relevant environmental plans and programmes and their relationship to waste management;
 - a section on environmental regulation particularly since waste management is regulated through various other environmental legislation, including environmental assessment, protection of biodiversity, air quality, etc;
 - a more consistent and robust environmental baseline for the assessment of environmental impacts;
 - a more thorough assessment of alternatives, including the implications of having one new landfill;
 - a more thorough assessment of the potential cumulative and synergistic impacts of the proposals, which also takes into consideration existing and planned waste management facilities; and
 - clear guidance for locating new strategic waste management facilities in order to ensure that the most sensitive environmental areas and sensitive receptors are not at risk from such facilities/operations.

2. Relationship with other plans and programmes

- 2.1 The ER needs to provide a clearer analysis of the relationship between the draft plan and other relevant environmental plans and programmes. In particular, it is important to highlight that also the proposals in the draft plan are required to comply with other relevant environmental objectives. MEPA's scoping response already highlighted the relevant plans and policies, which include:
- The National Environment Policy (2012);
 - The National Climate Change Adaptation Strategy (2012);

- The National Strategy for Policy and Abatement Measures relating to the reduction of Greenhouse Gas Emissions (2009);
- The National Biodiversity Strategy and Action Plan (2012);
- The Water Catchment Management Plan (2011);
- The Air Quality Plan for the Maltese Islands (2010);
- The proposal for a Soil Framework Directive; and
- The Marine Strategy Framework Directive, including the description of Good Environmental Status for Malta and the environmental targets.

3. Environmental regulation

- 3.1 The assessment needs to take into account the applicable project-level regulatory mechanisms that are in place to protect the environment, such as environmental permitting and environmental assessment. These mechanisms are important to ensure that the waste management proposals in the draft plan are implemented without having, individually or cumulatively, significant adverse environmental impacts. This analysis should highlight which environmental issues are better addressed at project-level and which issues need to be addressed strategically in the plan and the strategic environmental assessment, to ensure that important decisions regarding the proposed waste management facilities are not taken in a fragmented and *ad hoc* manner.
- 3.2 At this stage, it is also important to highlight that project-level environmental assessment for waste management projects could also require a detailed Environmental Impact Assessment in line with the EIA Regulations (L.N. 114 of 2007). Any projects which are likely to have a significant adverse impact on Special Areas of Conservation (SACs) and/or Special Protection Areas (SPAs) will also require an Appropriate Assessment in line with the Flora, Fauna and Natural Habitats Protection Regulations (L.N. 311 of 2006).

4. Environmental baseline

- 4.1 MEPA considers that the ER should provide a more robust environmental baseline. The main concerns regarding the current baseline are as follows:
- (i) The section on air quality provides too much detailed information as opposed to the other sections. This technical bias gives the mistaken impression that air quality is the main environmental issue associated with waste management facilities irrespective of the type and location of the facility;
 - (ii) Simultaneously, various other sections do not highlight national environmental targets and objectives and how these objectives relate to waste management. For example, the section on water does not take into account the Water Framework Directive, the Marine Strategy Framework Directive, the Water Catchment Management Plan and the objectives for coastal waterbodies. In particular, the Marine Strategy Framework Directive addresses the following relevant issues:
 - contamination in the marine environment which the SEA should consider in relation to waste disposal at sea and shipment of waste;
 - physical loss of, and physical damage to, the marine environment which the SEA should consider in relation to disposal of waste at sea;
 - introduction of litter in the marine environment which the SEA should consider in relation to reduction/reuse/recycling of municipal solid waste and packaging waste, including risks of accidental 'escapes' from waste

- management sites, during collection, as a result of surface water runoff and/or during transportation of waste;
 - nutrient enrichment which the SEA should consider in terms of management of biodegradable waste, particularly animal manure; and
 - interferences with hydrological processes which the SEA should consider in terms of risks of leaching and runoff-induced contamination from waste sites, disposal of waste at sea and any possible thermal effluents.
- (iii) It is unclear why information on public transport is included in the ER, but no data or information is provided on waste-related transport issues and on the ports that are used for the shipment of waste, etc;
- (iv) The ER should take into consideration the location of all existing and planned strategic waste management facilities in relation to the road network and sensitive receptors such as the coast, valleys, protected natural and cultural heritage sites, residential areas, etc. This information will provide the basis for a more robust assessment of the potential environmental impacts of the proposals contained in the draft plan, particularly on biodiversity and landscape;
- (v) The lack of waste management sites collecting waste fluorinated greenhouse gases could potentially lead to emissions to the atmosphere. This needs to be acknowledged in the ER and possible solutions need to be included in the proposed measures for implementation of the plan;
- (vi) The section on waste also needs to include data on industrial hazardous wastes for which no local disposal site is available;
- (vii) The ER needs to address landscape as a separate issue and should not be amalgamated with other environmental themes;
- (viii) The section on biodiversity requires significant revision, since most of the information provided focuses on Natura 2000 sites only. A more accurate account is required of other equally important natural areas and features, including marine protected areas. Apart from the Habitats and Wild Birds Directives, the ER also needs to consider the relationship between biodiversity and the requirements of the Water Framework Directive and Marine Strategy Framework Directive. The latter adopts a more holistic approach to the protection of marine ecosystems;
- (ix) It is to be noted that Special Areas of Conservation (SACs) are designated in line with the Habitats Directive, whereas Special Protection Areas are designated under the Birds Directive;
- (x) The section of biodiversity needs to take into account the risks associated with the transportation and disposal of waste material (e.g. soil and rubble) which may include tolerant weedy plants, their seeds, etc. and which may end up in the surrounding environment with consequential adverse impacts on indigenous plant species;
- (xi) The ER highlights that the main impacts of waste on biodiversity are site-specific, e.g. habitat destruction due to the construction of new facilities. However, it does not provide a strategic account of the impacts that the existing and planned waste management facilities had or still have on biodiversity. For example, it is important to highlight that the Biological Treatment Plant in Gozo required an Appropriate Assessment in view of its sensitive site context. Also,

no information was provided on the amount of land area occupied by the existing facilities;

- (xii) Waste management facilities may also result in the proliferation of scavenger species in the area such as rats, pest insects and gulls. An increase of such species may negatively impact the local species as a result of ecological imbalances, for example it is known that the Yellow-legged gull has a negative impact on the population of other seabirds, and give rise to health concerns;
- (xiii) Section 4.6 should take into account the linkages between water and ecosystems, including those related to the Marine Strategy Framework Directive which addresses a wide range of marine characteristics and pressures and impacts on the marine environment;
- (xiv) The water indicators included in the environmental assessment are considered to be insufficient, since:
 - coastal water quality considered in the report is limited to bathing water quality and therefore incomplete; and
 - Urban Waste Water Data, Water Framework Directive generated data pertaining to coastal waters and nitrate directive data are not included;
- (xv) Section 4.7 regarding the developed coast requires substantial revision. In particular, reference to vacant dwellings could be integrated with the section on construction and demolition waste in order to highlight the importance of reusing the current vacant housing stock and therefore, reduce C&D waste. Other issues addressed in this section are better relocated to the section on biodiversity;
- (xvi) With respect to section 4.7, it is also important to highlight that coastal land does not amount to 0.1km of land. The context of this indicator in relation to waste management has not been included or explained in the report; and
- (xvii) The environmental baseline also needs to address Population & Human Health, Soil and Cultural Heritage.

4.2 These issues are also important for the identification of the relevant SEA indicators against which the potential environmental impacts of the draft plan are assessed.

5. Alternatives

5.1 The alternatives assessed in the ER are the same options for municipal solid waste which are considered in the draft plan, i.e. Option 1 (status quo); Option 1A (expansion of Sant' Antnin plant from 71,000 tonnes to 100,000 tonnes per annum and increase in the collection of dry recyclables); and Option 2 (improvement of existing waste management facilities and construction of additional ones). Option 2 also considers three different scenarios for residual waste, i.e. option (a) local energy recovery, option (b) export for energy recovery or option (c) a new engineered landfill. However, no further details were provided on these proposals.

5.2 The ER concluded that Option 2 has the most positive environmental impacts of the three options presented in the draft plan. Essentially, this option is the only one which proposes further substantial investment to deal with Malta's municipal solid waste through different solutions as opposed to the current situation which relies significantly on landfilling. However, MEPA considers that waste management solutions which focus on reuse, recycle and recovery depend significantly on investment in complex

infrastructure and technology, which are likely to give rise to other environmental concerns. Therefore, the ER should focus on the least environmentally damaging option.

- 5.3 Moreover, further clarification is required on the differences between the proposals for a new landfill under Options 1 and 2(c). The assessment in the ER concludes that under Option 2, the new landfill will have a longer lifespan than that under Option 1. Option 2 includes various other measures to reduce the amount of waste going to landfill and therefore, if the main difference relates to their lifespan, then it can be concluded that the required capacity and total land area required for the new landfill are the same under both Options. This implies that the adverse impacts on the environment, as a result of all proposed waste management infrastructure under Option 2, in combination with the existing and planned facilities, are likely to be the most significant if it will result in the construction of a new landfill to deal with residual waste (i.e. option 2c). Possible solutions need to be examined strategically in terms of Malta's potential for local energy generation from waste and export of such material for energy generation, i.e. a combination of options 2(a) and 2(b).
- 5.4 With respect to commercial and industrial waste, it is considered that the initial step should be to carry out a detailed "Compositional survey to determine the nature of this waste stream" and the availability of disposal sites. Once this is carried out, then options and strategies can be assessed.

6. Cumulative and synergistic impacts

- 6.1 MEPA considers that the assessment of cumulative and synergistic impacts of the draft plan on the environment should be more meaningful, particularly since various strategic waste management facilities are already in place or planned. For example, the assessment needs to take into account the existing and planned facilities at Tal-Kus, the Magħtab/Ghallis/Zwejra area, civic amenity sites, Sant' Antnin Plant, etc. and assessed whether the further expansion of these areas to accommodate additional facilities is appropriate (or otherwise) in view of the environmental carrying capacity of the affected areas and in terms of their proximity to sensitive receptors (e.g. residential areas, coast, the sea, protected natural sites, valleys, etc).
- 6.2 The additional cumulative storage space for waste and similar ancillary facilities which will be required in order to increase the separation, reuse and recycling of different types of waste also needs to be taken into consideration.

7. Environmental criteria affecting the location of waste facilities

- 7.1 MEPA considers that the ER should evaluate important environmental factors which normally influence the location of all new developments, in order to identify strategic areas where new waste facilities should not be considered further. For example, the assessment could examine strategically the potential environmental impacts of locating the additional waste management facilities within protected areas/landscapes or in close proximity to sensitive receptors (e.g. cultural heritage sites, residential areas, etc.). Moreover, it would be useful to understand the traffic patterns from existing waste management facilities to determine whether the new facilities need to be located closer to the strategic road network or whether it would be more sustainable to transport certain types of waste by sea to reduce air emissions from road transport.
- 7.2 With respect to section 8.3.1 of the ER, it is important to highlight that site selection exercises could also be required as part of the environmental assessment of projects which is taken into consideration by the Environment Protection Directorate of MEPA.

8. Detailed environmental impacts

- 8.1 Generally, the lack of analysis of the relationship between the draft plan and other relevant environmental plans and programmes creates a vacuum in terms of assessment of the likely impacts of the proposals on other environmental objectives, measures and targets.
- 8.2 It is unclear whether reference to disposal of waste at sea is considered within the context of the current Waste Management Plan which states that, when considered appropriate, inert or non-hazardous waste can be disposed of at the national designated spoil ground, or whether it actually refers to the disposal of waste elsewhere. This issue needs to be clarified.
- 8.3 Moreover, MEPA considers that the ER should take into consideration the following issues:

Impacts on landscape

- A new section is required to evaluate the potential significant impacts of the proposals and options in the draft plan on the landscape.

Issue 1: impacts on biodiversity

- Risks to biodiversity resulting from potential contaminated surface water runoff from waste management sites, soil contamination and impacts from waste-related air emissions.
- The importance of the day-to-day management of waste facilities in order to reduce incidents of spillages, leakages and spillover effects into the surrounding environment with consequential impacts on biodiversity and water resources.
- The reduction of the frequency of waste collection as well as measures to introduce fees for the collection of waste from small commercial activities could increase risks of illegal dumping and littering in the countryside and on the coast. This outcome, attributed to broadly similar factors, has in fact been observed in parts of Sicily recently.
- It is unclear whether the regionalisation of collection systems and the storage of C&D waste will require significant additional storage infrastructure, which would result in further pressure for development in the countryside.
- Minimisation of packaging waste and increase in the reuse, recycling and recovery of such waste could be beneficial to biodiversity since there will be a lower risk of having such waste finding its way into sensitive environmental areas such as valleys and the sea.
- Addressing illegal scrapyards could also be beneficial to biodiversity since those having a sensitive site context should be relocated and the affected land decontaminated.
- It is agreed that waste disposal at sea should be the last resort. However, MEPA considers that even where this is necessary, it should focus mainly on excavated clean material which was not possible to recover rather than demolition waste.

Issue 2: impacts on population and human health

- It is unclear whether the increase in the capacity of Sant' Antnin, the regionalisation of waste collection, the recovery of C&D waste from construction sites, amongst other proposals, could result in a significant increase in traffic of heavy vehicles to and from waste management plants, leading to further air emissions and elevated noise levels in the affected areas.
- The ER need to highlight that appropriate site-specific mitigation measures should ensure that the benefits of reusing excavated stone on site outweigh concerns regarding potential nuisances (e.g. noise, dust generation) resulting from such an activity.
- Community composting could increase claims from residents related to odour problems and therefore, the ER should clarify this matter in order to explain whether such potential concerns could be easily addressed and whether composting will be carried out at household level or at a central place within the locality.
- Regularisation of scrapyards will not result in less cars on the road as these are likely to be replaced with new ones.

Issue 3: impacts on climate change

- GHG emissions from the refrigeration sector seems to have been overlooked. The lack of waste management sites collecting waste fluorinated greenhouse gases (especially small quantities collected by refrigeration technicians and operators of industrial installations) could potentially lead to emissions to the atmosphere.

Issue 4: impacts on soil and land contamination

- MEPA considers that most of the proposals in the draft plan could contribute to significant take-up of undeveloped land and therefore increase the rate of soil sealing. No reference was made to the need to minimise the impact of soil sealing through reuse of existing development and brownfield land as much as possible to minimise impacts on undeveloped land and biodiversity.
- Prevention of land contamination depends on sustainable day-to-day management of waste management facilities and adherence to permit conditions. No reference was made to any potential contamination at existing facilities and whether any such sites require remedial action.
- The ER should also make cross-reference to the objectives and measures of the Water Catchment Management Plan in view of the possible linkages between land contamination and water pollution (e.g. from illegal scrapyards or sites handling waste oils).

Issue 5: impacts on water

- MEPA considers that the ER should take into consideration the objectives of the Marine Strategy Framework Directive (MSFD) and the Water Framework Directive (WFD), and in particular the linkages between water and ecosystems.
- It is important to highlight that the potential impacts of waste management facilities on the aquatic environment also depend on the location of such facilities in relation to water resources, e.g. wetlands, floodplains, watercourses and the coast.
- The impacts of current collection systems and existing facilities depend on the day-to-day management adopted at these sites and their compliance with permit conditions in order to ensure that any risks of spillages, contaminated runoff, etc are contained and addressed directly on-site.

- The proposal related to the anaerobic digester in Gozo for organic waste including manure and sewage sludge could have positive impacts on the water quality given that animal waste is treated and no longer dumped in fields, near watercourses or in the sewerage network.
- Effectively increasing the collection of dry recyclables and minimisation of packaging waste, including its reuse and recycling, could have a positive impact on the water environment since there will be less risk of having such waste finding its way into watercourses and into the sea.
- Environmental regulation of waste management facilities, including discharges into the environment, contributes to minimisation of risks to the water environment.
- No reference was made to the risks of marine pollution and impacts on marine ecosystems associated with the shipment of waste.

Issue 6: impacts on cultural heritage

- In view of the scale and nature of the development that will be required to implement the proposals in the draft plan, MEPA considers that the choice of the location for such facilities is crucial to ensure that protected cultural sites and their context, heritage features of national interest and Malta's rural landscape are not significantly impacted.
- With respect to C&D waste, the proposals regarding the reuse and recycling of stone will not encourage the preservation of old properties. On the contrary, it could encourage the unnecessary and inappropriate demolition of heritage buildings as long as the stone is reused/recycled, unless this in-principle positive measure is supplemented by reasonably foolproof safeguards.
- The relocation of existing scrapyards away from sensitive areas toward sites chosen on the basis of environmental compatibility (as opposed to the sanctioning of current locations on the sole basis that the site is already committed, irrespective of its suitability) could also be beneficial to cultural heritage and the rural landscape.
- With respect to the marine environment, the impact of waste disposal at sea will also depend on any potential marine archaeology.

Issue 7: impacts on transport and infrastructure

- Most of the proposals in the draft plan could increase transportation of waste material to and from waste management facilities. Therefore, the siting of such facilities in appropriate locations is important to ensure that waste-related transport trips are reduced as much as possible, without resulting in consequential adverse impacts on other environmental factors. For example, the location of certain facilities in the countryside is likely to result in significant adverse environmental impacts associated with site modifications, possibly widening of roads, damage to or destruction of natural and cultural features (e.g. rubble walls), trenching works, etc. On the other hand, siting of compatible facilities in designated industrial sites would be more beneficial since most of these sites are already located close to the strategic road network and the required ancillary infrastructure is already in place or could be upgraded without significant adverse environmental impacts. Alternative modes of transport for waste material could also be considered. This issue needs to be addressed strategically rather than on a case-by-case basis at project level.

Issue 8: impacts on air quality

- It has been indicated that most atmospheric emissions from facilities are within thresholds. However, MEPA notes that the environmental baseline highlights various exceedances of air emissions. The reasons for such exceedances need to be highlighted in the ER. The role of environmental regulation and on-going systematic monitoring at these sites need to be highlighted in the ER.
- Various proposals in the draft plan could increase vehicular trips and therefore, air emissions from road transport. In this regard, it is unclear why the ER is stating that the reduced collection of municipal soil waste will be beneficial in terms of air quality since this would need to be replaced by additional trips to collect recyclables and compost waste. Likewise, the increased capacity at Sant' Antrnin is also likely to increase vehicular traffic from and to this plant. Moreover, the transportation of C&D waste could also increase as a result of measures to recover, reuse and recycle such waste. Therefore, it is recommended that the ER should explain what types of measures could be adopted in order to minimise the risks from emissions to air resulting from the transportation of waste. Examples include avoidance of transportation of waste during peak hours, replacement of old heavy vehicles, etc.

Issue 9: impacts on renewable energy sector

- Every effort should be made to ensure that the consequential environmental impacts of energy from waste projects do not outweigh their benefit.
- Moreover, waste management sites should make every effort to utilise their land and space effectively and contribute to Malta's targets in terms of renewable energy generation including solar energy for their sustainable operation.

9. Monitoring

- 9.1 MEPA notes the proposed actions for monitoring and recommends that clearer indicators and timeframes for monitoring are required. At present, the ER does not explain which data/information and their sources will be used to ensure effective monitoring of the implementation of the proposals in the plan.
- 9.2 Reference should be made to existing monitoring programmes which are relevant to the monitoring of the implementation of the plan and which are already required or carried out as part of: environmental permitting; environmental assessment; and/or other national monitoring associated with the implementation of other environmental obligations. This will reduce duplication of efforts for monitoring.
- 9.3 Important data gaps are not clearly highlighted in section 6.1 of the ER, and therefore it is difficult to determine whether new data or information needs to be collected to ensure effective monitoring.
- 9.4 The monitoring programme in the ER should ensure more consistent data/information is collected with respect to waste management and its potential adverse impacts on other environmental factors as identified in the ER and these comments.
- 9.5 With respect to the section on water, it is not clear whether the SEA is identifying a need to go beyond what is currently being monitored nationally in order to gauge the impacts of the proposed waste management strategy. Also, the ER should make specific reference to marine waters in this section, since this goes beyond coastal waters.