

COMMENT

‘WASTE NOT WANT NOT’- SUSTAINABLE WASTE MANAGEMENT IN MALTA

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1

MODERN WASTE ISSUES IN MALTA

The Maltese archipelago is situated in the centre of the Mediterranean Sea and comprises a number of islands. The main islands are Malta, Gozo and Comino. The three main islands are inhabited, while Filfa, Cominotto and St. Paul's Islands and other lesser islands are uninhabited. The archipelago covers a total area of 315 km² with a total coastline perimeter of 271 km and has a population of 413,609 with around 1,313 inhabitants per km²,¹ making it one of Europe's most densely populated countries.²

The post independence period (1964 onwards) was marked by a rapid growth in the areas occupied by settlement, accompanied by a decrease in the number of full time farmers and of registered cultivated land. The agricultural area declined by eighteen per cent between 1957 and 1983. New developments were often located and designed without any concern for topographical and landscape features. Major landmarks in the rural landscape such as windmills, churches and urban skylines were increasingly engulfed or mostly hidden by haphazard developments.

As reflected by Boissevain '...as tourist arrivals topped one million annually, the Maltese began to feel oppressed by the effects of pressure on the social and physical environment. The chaos in the planning system was the result of the lack of a strategic plan and widespread abuse of (...) building regulations (...) resulting in disorderly, unsightly, and often jerry-built construction'.³ This problem was also emphasised in 2002 by the European Parliament's Environment Committee Delegation to Malta who mentioned that the general lack of tough planning controls had contributed to many of Malta's environmental problems and required urgent attention.⁴

In such a densely populated nation, land degradation, habitat destruction and increased traffic and waste⁵ caused by the rising standard of living lead to pressure on the environment.⁶ Environmental decay and landscape deterioration were further exacerbated by quarrying.⁷ Prior to joining the EU, the levels of consumerism increased and, with it, the related waste disposal. Everything from construction, medical, hazardous and domestic waste, all ended up at the 'Maghtab', which was an 'illegal' landfill site, currently undergoing rehabilitation.⁸ The exact composition of waste is unknown because adequate records were not kept.⁹ An average Maltese family produced around 1.5 tonnes of waste per year. However, the building industry alone disposed of more than one million tonnes of excavation and construction waste per year.¹⁰ It was estimated that construction and demolition waste alone totalled up to 80 per cent by weight of all the solid waste dumped at 'Maghtab'. This 'national tumour',¹¹ or 'toxic nightmare'¹² as it was then called, received well over one million tonnes of inert waste every year until 1998, and was estimated to be on the increase.¹³ In Gozo, a

1 National Statistics Office, Demographic Review 2008 (Valletta: National Statistics Office, 2009).

2 European Environment Agency, The European Environment - State and Outlook 2005 (Copenhagen: EEA, 2005).

3 J. Boissevain and N. Theuma, 'Contested Space. Planners, Tourists, Developers and Environmentalists in Malta', in S. Abram and J. Waldren eds., *Anthropological Perspectives on Local Development* 96,119 (London: Routledge, 1998).

4 European Parliament, Committee on the Environment, Public Health and Consumer Policy, Summary Note of the Environment Committee Delegation to Malta, 18-19 April 2002.

5 Government of Malta, Malta National Report to the World Summit on Sustainable Development (Valletta: Government of Malta, 2002), available at http://www.um.edu.mt/_data/assets/pdf_file/0006/63699/Malta_WSSD.pdf.

6 F. Mallia, Environmental Problems in the Central Mediterranean: Malta a Case with a View to Sustainable Development, Conference on Social Dimensions of Environment and Sustainable Development (Valletta: Government of Malta, 1992).

7 F. Camilleri, The Structure Plan for the Maltese Islands, (Paris: CIHEAM, 1993), available at <http://resources.ciheam.org/om/pdf/b07/93400009.pdf>.

8 Malta Environment and Planning Authority (MEPA), Maghtab Landfill to be Rehabilitated (Floriana, Malta: MEPA, 2010), available at <http://www.mepa.org.mt/news-details?id=578>.

9 D. Pace, 'At the Mountain of Madness', Malta Today Online, 3 June 2010 available at <http://archive.Maltatoday.com.mt/2001/0603/opinion.html>.

10 Media Publication, Ministry for Resources and the Infrastructure, Works Division (Floriana: Government of Malta, 2002). See also V. Buhagiar, Sustainable Development and Building Design in Malta (Faculty of Architecture and Civil Engineering, University of Malta: Msida, 2005), available at <http://www.comarchitect.org/BEPICdocs/Sustainable-Development-and-Building-Design-in-Malta.pdf>.

11 The Malta Council for Science and Technology (MCST), *State of the Environment Report 1998* (MCST: Malta, 1998).

12 H.A. Lanham, 'The Effect of EU Enlargement on the Environment: A Look at Malta', 16/2 *Colorado Journal of International Environmental Law and Policy* 467,494 (2005).

13 See Buhagiar, note 10 above.

similar situation developed at the Qortin landfill in Xaghra, currently initiating rehabilitation.¹⁴

To understand the issues behind the development of Maltese Waste Management Strategy, we first need to look at how it has evolved from sustainable development policies.

2 IMPLICATION OF SUSTAINABLE DEVELOPMENT POLICIES TO WASTE MANAGEMENT

In 1990, the government produced a 20 year Structure Plan, a policy for the planning of human settlements, as land degradation became one of the most urgent problems for the Maltese Islands.¹⁵ This planning policy was created with a view to incorporate economic, social and environmental issues.¹⁶ In 1991, the government took its first step towards modern environmental protection through the Environment Protection Act, 1991, which obliged all Ministries to take preventative measures to protect and improve the conditions of the environment.¹⁷ In 1992, it not only created a specific Ministry for the Environment, but also approved a Structure Plan and adopted the Development Planning Act. It established a Planning Authority with a remit to implement and update the Structure Plan.¹⁸ It is important to stress that these measures collectively created a framework for the implementation of sustainable development and, consequently, on waste management. Surprisingly, they did not directly refer to sustainable development or mention it as a specific

target.¹⁹ This reflects the fact that Malta was only just starting to fully understand the implications and changes required to embrace sustainable development and its application.

From 1992, the Maltese government was at the forefront of many international sustainable development policies²⁰ through its involvement in various international environmental agreements and treaties, e.g. the Rio Declaration on Environment and Development, 1992,²¹ the Programme of Action for the Sustainable Development of Small Island Developing States, 1998 (SIDS Programme of Action),²² and even the establishment of the Mediterranean Commission on Sustainable Development in 1996.²³

The first law that specifically referred to sustainable development, albeit couched in vague terms, was the Environment Protection Act (EPA), 2001.²⁴ It had, as its main aim, the protection of the environment and the management of natural resources in a sustainable manner. The EPA also saw the creation of the National Commission for Sustainable Development (NCSD) in 2002, which put into operation, at a national level, Malta's international sustainable development obligations.²⁵ The main remit of this body was to advocate national sustainable development across all sectors, to review progress in its achievement and to build consensus on action needed to enable further progress. The Government also charged it with the identification of relevant processes or policies that could undermine sustainable development and the proposal of alternative ones.

One of the specific tasks of the Commission was 'to prepare a National Strategy for Sustainable Development (NSSD)'.²⁶

14 Gozo News, 'MEPA Approves Rehabilitation of Qortin Landfill Site', Gozo News Online, 13 May 2010, available at <http://gozone.com/13332/mepa-approves-rehabilitation-of-qortin-landfill-site/>.

15 Malta Environment and Planning Authority (MEPA), The Structure Plan, available at <http://www.mepa.org.mt/lpg-structureplan>.

16 Ministry for the Environment, A Strategy for Sustainable Development, Malta Country Strategy Plan, PS/E/3/93 (Malta Valletta: Ministry for the Environment, 1993).

17 See Malta, Environmental Protection Act V 1991, Art. 2-3.

18 Malta Development Planning Act 1992 (as amended in 2001 and 2002), Part II, Section 1 (3).

19 J.R. Kotzebue, *Sustainable Development Policy -The Case of Malta* (Groningen: University of Groningen, Faculty of Arts, 2005).

20 *Id.*, at 25.

21 United Nations, The Rio Declaration On Environment and Development, in *Elementair International Recht* 71- 73 (Den Haag: Strichting T.M.C Asser Instituut: 2001).

22 L. Briguglio ed., *The Sustainable Development of S.I.D.S in the Indian Ocean, Mediterranean and Atlantic Regions* (IMA-SIDS) (Malta: University of Malta, 1999).

23 D. Kasriel, The Mediterranean Commission on Sustainable Development (Athens: UNEP / MAP, 2001).

24 See Environmental Protection Act XX 2001, note 17 above, Chapter 435, Art 3.

25 *Id.* Article 8.

26 *Id.* Part IV, Article 8 (7f).

The novelty brought by the NSSD was that it provided a framework for a systematic approach to the institutionalised process of consultation and consensus building. It was to serve as a guide in prioritising actions that would be undertaken by all members of society 'to ensure the prudent use and management of resources in a way that meets the needs of the present without compromising the needs of future generations, thus contributing to a better life for everyone'.²⁷ This strategy addressed social, economic and environmental concerns in a coherent manner, permitting policy makers to assign relative priorities to the three pillars of sustainable development. It afforded an opportunity for identifying specific initiatives and for committing authorities towards their implementation within defined periods. From this point on, the Maltese government was striving to put into application the polemic Brundtland²⁸ definition of sustainable development.²⁹

Domestic sustainable development policies were further strengthened by the amendment, in 2001, of the Development Planning Act 1992. This gave the planning authority responsibility for the promotion of planning and sustainable development.³⁰ In March 2002, just before the UN Johannesburg Conference on Environment and Development, the government merged the Environment Protection Department and the Planning Authority,³¹ renaming them the Malta Environment and Planning Authority (MEPA).³² At the Johannesburg Conference, the Maltese government confirmed its commitment to sustainable development and promised further implementation of Agenda 21.³³

It admitted that there were gaps in the application of its sustainable development policies owing to several factors.

Chief amongst them was the fact that different policies were pulling in different directions, instead of reinforcing one another, and that there was a lack of integration of environmental concerns in its socio-economic policies.³⁴ A recurring topic in their submission to the Johannesburg Conference was health and environment implications caused by the increased production of solid and liquid waste, indicating a lack of sustainable waste management practices. In his keynote speech in 2002, Dr. Lawrence Gonzi (then Deputy Prime Minister and Minister of Social Policy of Malta), stressed that the newly created National Sustainable Development Commission had identified four main priority projects, which needed urgent action, one of them was waste management.³⁵

3 MALTESE WASTE MANAGEMENT POLICIES PRIOR TO JOINING THE EU

The first Waste Management Policy (WMP) to go beyond public cleansing and littering was issued in 1998.³⁶ This strategy proposed that waste management:

- should be based on principles that had been established on a global level, e.g. those of sustainability and the polluter pays principle;
- that local constraints should be taken into account in implementing such a policy: the small size of the Maltese Islands, the density of the population and the fact that most raw materials are imported;

27 National Commission for Sustainable Development, *Sustainable Development Strategy for the Maltese Islands 2007 - 2016* (Malta: NCSD, 20 Dec 2006).

28 G.H. Brundtland, *Our Common Future, World Commission on Environment & Development* (Oxford: Oxford University Press, 2001).

29 S. Bell and D. McGillivray, *Environmental Law* (Oxford: Oxford University Press, 7th ed. 2008) and S. Tromans, 'Sustainable Development', 10 *UKELA E Journal* (March 2004).

30 See Malta, Development Planning Act 1992 (amended by Act No XXI of 2001), Article 3.

31 M. Camilleri, 'Environmental Capacity of a Small Island State Planning for Sustainable Development In Malta', 75/1 *Town Planning Review* (2004).

32 L. Briguglio, 'Malta National Report to the World Summit on Sustainable Development' (Valletta: Government of Malta, 2002).

33 UN Department of Economic and Social Affairs (DESA), Agenda 21: Earth Summit - The United Nations Programme of Action from Rio (New York: UNDESA, 1993).

34 *Id.*, at 37.

35 L. Gonzi, Speech at the World Summit on Sustainable Development on 3 September 2002 organised by United Nations, Johannesburg, South Africa, 26 August - 4 September 2002.

36 Ministry for the Environment, A Solid Waste Management Strategy for the Maltese Islands (Floriana, Malta: Ministry for the Environment, Sept 2001).

- that sustainable waste management should be achieved via the hierarchy of options:
 - minimisation of waste generation
 - separate collection, reuse and recovery of unavoidable waste and disposing of waste in sanitary landfills;
 - that policy and economic instruments were implemented as a prerequisite.

The implementation of this policy was compromised owing to several factors.

Firstly, due to the fact that the legislation at the time did not reflect state-of-the-art waste management technology found in more developed countries. Secondly, due to the lack of accurate quantitative waste management data.

Thirdly, the legislation at the time was archaic, fragmented and lacked effective incentives to encourage preferred waste management options, rather than landfilling. Fourthly, the controls that existed were incidental and not conducive to the sustainable management of waste. It was suggested that there was an urgent need to adopt measures that had been developed by other EU Member States. The situation was considered so serious that it prompted one commentator to state: 'Waste practices in Malta cannot be referred to as waste management, as this term is defined in developed countries. Such practices in the Maltese Islands are unsustainable in so far, that material and land resources are not being conserved, and future generations are being burdened with waste-related problems created by this generation'.³⁷

During the pre-accession period the EU required several issues to be resolved by the Maltese government, chief amongst them was the waste management problem. The Commission reports of 1999 – 2003 indicated that Malta had to make substantial effort in order to bring its legislation into line with the environmental *acquis*

communautaire.^{38 39} A detailed programme had to be prepared for legislative transposition, implementation and enforcement. It was also a requirement that investment plans for environment related sectors to be clearly focused on the implementation of the *acquis*.

In 2001, the Government finalised a Solid Waste Management Strategy (SWMS).⁴⁰ The policy provided a framework not only to remedy the defects of the old strategy but also to enable the government to put in place the much-needed changes required by the EU. This new policy was built upon the old 1998 WMP. It set out the key principles for waste management, and figures on waste deposits over a period of years. It established the facilities and measures required in order to modernise the waste management system within the Maltese Islands and to help it comply with national and European targets for waste reduction, recycling and recovery. It also considered the range of facilities required to specifically meet the EC Landfill Directive's⁴¹ targets, and recognised that substantial landfilling would still be required for the foreseeable future.

Amongst the facilities identified were new landfills for the disposal of inert wastes, non hazardous wastes and hazardous wastes. It provided waste projections for the period up to 2020 and anticipated that non-inert waste arising from Malta to be around 400,000 tonnes by 2010. The non-hazardous landfill would have to accommodate 200,000 tonnes of waste in 2004 and 230,000 tonnes in 2013. In addition, a composting facility able to handle 95,000 tonnes per annum and another for recycling

38 Environmental *acquis* communautaire, in the context of accession, is the acceptance by the new Member state, without reservation, and from the commencement of its formal membership, of the body of common rights and obligations that bind all EU member states together- a candidate country is required to accept all of EC/EU law and its basic political principles. See A. Kaczorowska, *European Union Law* (Abingdon: Routledge-Cavendish, 2009).

39 Summary of All European Commission Reports Covering the Period 1999- 2003 Regarding Malta's Adoption of the *Acquis* Communautaire. Ref -European Commission, Malta - Adoption of the Community *Acquis*, 2004, available at http://europa.eu/legislation_summaries/enlargement/2004_and_2007_enlargement/malta/index_en.htm.

40 See Government of Malta, note 36 above.

41 European Council Directive on the Landfill of Waste, Council Directive 1999/31/EC, 26 April 1999, available at http://www.central2013.eu/fileadmin/user_upload/Downloads/Document_Centre/OP_Resources/Landfill_Directive_1999_31_EC.pdf.

37 J. Sammut, Municipal Solid Waste Management - Malta's Experience, Proceeding of the 1999 Inter-Regional Workshop on Technologies for Waste Management Held in Alexandria, Egypt (Egypt: CEDARE/EITC,1999).

materials capable of handling 115,000 tonnes per annum, would also be required by 2004.

In October 2001, another document called 'Space for Waste' – The Waste Management Subject Plan (WMSP)⁴² was published. It gave details of how the policy would be executed from 2001 up to 2010. The policies in the Waste Subject Plan re-stated the need for a range of waste management facilities on Malta with strict environmental controls. Both the SWMS and the WMSP recognised the need for non-hazardous landfill facilities on Malta. It was clear that none were available on Gozo, and the only non-hazardous landfill on Malta had a remaining life of around one year. Therefore, there was an obvious and immediate need for the establishment of a medium–long-term non-hazardous waste landfill in Malta.⁴³ The Government also stated that there were plans to set up a waste transfer station in Gozo, to upgrade the incineration plant for abattoir waste at Marsa, and to replace incineration plants in hospitals by a central microwaving plant. However, the reality of the situation in March 2009 was that mixed waste was being processed at the Marsa Incineration Plant. This factor has thrown up several problems, the most important of these was the increased emission levels as this incinerator was not designed to cope with such high volumes of mixed waste.⁴⁴ The government also assured its commitment to treating all sewage produced in the Maltese Islands by 2007. It must be noted that up until 2002 the sewerage system directed most of the effluents untreated into the marine environment, resulting in microbial and chemical pollution, degradation of marine flora, fauna, and eutrophication. It was considered by many to be a health hazard to bathers and divers.⁴⁵

A year later the effectiveness of the 2001 SWMS and the WMSP was brought into question by the European

Parliament's environment committee delegation, who went so far as to declare that the most acute of environmental problems facing Malta was waste management.⁴⁶ This was unsurprising, owing to the fact that the earlier application of the WMP was considered defective, as many of the aforementioned problems had not been resolved.⁴⁷ Equally important was the lack of public awareness⁴⁸ with regard to waste management. In this period most waste was disposed of in uncontrolled landfills, there was minimal recovery, and recovery operations that did exist were mainly limited to industrial waste and composting. In response to the Commission and European Parliament's criticisms, the government established in 2002, a semi-autonomous company responsible for organising, supervising and controlling the provision of major waste management facilities called WasteServ Malta Limited.⁴⁹ Even though the performance of WasteServ has been subject to criticism,⁵⁰ its establishment was an important step in increasing the administrative capacity with regard to waste management.

In 2003, the Commission was confident of the fact that EU waste legislation was being correctly transposed and that it was in line with the Community acquis. However, EU reports until Malta signed the Treaty of Accession in 2003,⁵¹ continued to underline the need to enhance the administrative capacity according to EU policy. Furthermore, they pointed out certain issues that needed resolving:

46 European Parliament, *Summary Note of the Environment Committee Delegation to Malta on 18-19 April 2002* (Strasbourg: European Parliament, 2002).

47 *Id.*, at 37.

48 V. Axiak et al., *State of the Environment Report for Malta 1998* (Malta: Environment Protection Department, 1998).

49 SLR Consulting Ltd, *Hazardous Waste Treatment Facility at Ghallis Ta'gewwa, Naxxar, Malta Technical Specification Issue 1* (Venera, Malta: WasteServ Malta Ltd, 12 April 2006).

50 Ministry for Resources and Rural Affairs (MRR), *Waste Management Plan for These Maltese Islands 2006- 2010, Consultation Document* (Floriana, Malta: Government of Malta, 2006).

51 Decision of the Council of the European Union (EU) 2003 of 14 April 2003 on the admission of the Czech Republic, the Republic of Estonia, the Republic of Cyprus, the Republic of Latvia, the Republic of Lithuania, the Republic of Hungary, the Republic of Malta, the Republic of Poland, the Republic of Slovenia and the Slovak Republic to the European Union [2003] OJ L236) and Europa, *Malta - Adoption Of The Community Acquis* (2004), available at http://europa.eu/legislation_summaries/enlargement/2004_and_2007_enlargement/malta/e15112_en.htm.

42 Planning Authority, *Final Report on the Waste Management Subject Plan* (Malta: Planning Authority, 2001).

43 S. Wilson, *Development of Rehabilitation Strategies Maghtab, Qortin and Wied Fulija Landfills Summary Report* (Venera, Malta: WasteServ Malta Ltd, March 2004).

44 Alternattiva Demokratika, *AD Visits Marsa Incinerator - Emphasises Public Disclosure And Openness*, 09 March 2009, available at http://ad-south.com/index.php?option=com_content&view=article&id=306:ad-visits-marsa-incinerator-emphasises-public-disclosure-and-openness-&catid=1:latest-news&Itemid=62.

45 L. Briguglio, *Malta National Report to the World Summit on Sustainable Development* (Government of Malta, Valletta, 2002) and Lanham, note 12 above at 482,483.

- a system for monitoring waste transport needed to be introduced;
- a register of end-of-life vehicles and conditions for the authorisation of discharges needed to be established;
- the waste collection systems needed to be developed further;
- a list of collection points and authorisations for the stockpiling of used oil needed to be introduced;
- there was the need to continue building installations for the recovery and disposal of waste;
- administrative capacity in the waste sector needed to be developed.

4

MALTESE WASTE MANAGEMENT POLICIES AFTER JOINING THE EU

The long awaited revision of the 2001 SWMS and the WMSP came in 2009 in the form of two new consultation documents published by the Ministry for Resources and Rural Affairs. The first was titled, again, 'A Solid Waste Management Strategy for the Maltese Islands' (SWMS 2009).⁵² The second was the updated 'Waste Management Plan for the Maltese Islands for the period 2008-2012' (WMP 2009).⁵³ They were issued in a time when arguably dramatic changes were taking place with regard to waste management in EU by the introduction of the new Waste Framework Directive Dir.2008/98/EC⁵⁴ (WFD 2008).

52 See Ministry for Resources and Rural Affairs (MRRRA), A Solid Waste Management Strategy for these Maltese Islands (Floriana, Malta: Government of Malta, 2009).

53 Ministry for Resources and Rural Affairs (MRRRA), Waste Management Plan for the Maltese Islands for the Period 2008-2012 (Floriana, Malta: Government of Malta, 2009).

54 Directive of the European Parliament and of the Council on Waste and Repealing Certain Directives, Dir. 2008/98/EC, 19 November 2008, available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:312:0003:0030:en:PDF>.

The SWMS 2009 came under scrutiny from several sources; amongst them were Friends of the Earth Malta, Alternattiva Demokratika (Green Party)⁵⁵ and MEPA.⁵⁶ Their main criticisms were: its lack of direction; the fact that it downplayed the importance of waste minimisation; its lack of discussion of the decoupling of municipal solid waste (MSW) from gross domestic product (GDP) growth; the fact that it tackled the current situation by simply looking at waste disposal figures in recent years, but not questioning the relevance of the data; the emphasis on technology-based end-of-pipe solutions instead of promoting prevention.

Other questions that arose were that the SWMS 2009 did not refer to financial analysis of the waste to energy solution; that the strategy did not specify how much waste was planned for incineration, recycling and landfilling; that even though the document mentioned the Recycle Tuesday initiative, it did little to explain the cost to the Maltese taxpayer and the pressure that it would cause to the Sant' Antnin Waste Treatment facility,⁵⁷ that it did not mention the impact of the low price of local limestone with regard to construction and demolition waste stream; it discussed the ongoing program of achieving the 400 bring-in sites target, but it only mentioned that WasteServ had been allocated funding from structural funds for only 300 sites, and that it was silent with regard to specific targets and methods for monitoring them.⁵⁸ It is interesting to note that the document recognised defects of the previous strategy by acknowledging that MSW only succeeded in

55 C. Cacopardo, *Alternattiva Demokratika* – The Green Party's Response to 'A Solid Waste Management Strategy for the Maltese Islands' - Consultation Document (Swieqi, Malta: Alternattiva Demokratika, 2009).

56 ADI Associates Environmental Consultants, Response to Consultation Comments: Strategic Environmental Assessment on the Solid Waste Strategy for the Maltese Islands (San Gwann, Malta: ADI, 2009).

57 Times of Malta, 'No to 'Half-Baked' Waste Separation', *Times of Malta Online*, 20 April 2008, available at <http://www.timesofmalta.com/articles/view/20080420/local/no-to-half-baked-waste-separation> and C. Calleja, 'Waste separation postponed', *Times of Malta Online*, 30 March 2008, available at <http://f1plus.timesofmalta.com/articles/view/20080330/local/waste-separation-postponed>.

58 Malta Star, 'Where is the Management of Waste in Malta Heading?', *Malta Star Online*, 27 April 2009, available at <http://www.maltastar.com/pages/r1/ms10dart.asp?a=1334>.

attracting 28 per cent of the full potential of recyclable material.⁵⁹

Unfortunately, the completion of the Sant' Antnin Waste Treatment facility in January 2010 has not contributed to improving the situation because it does not have the correct permits to enable them to operate and this continues to be an ongoing planning issue. This plant would be able to treat an estimated 35,000 tons of municipal waste every year and could reduce the amount of rubbish disposed of at the engineered landfill. It is also estimated that 22 per cent of waste will be disposed of via engineered landfill.⁶⁰ It is suggested that this will defeat the aims and objective of the current Waste Framework Directive (WFD 75).

The WMP 2009 stated that Malta would have transposed the recent WFD 2008 by 2010, however to date it is still undergoing an updating process. This waste consultation document was very comprehensive with references to the different waste streams and plans dealing with waste recycling, minimisation and energy recovery. However, it recognised that it was built on what was attempted by the pre-accession waste management policies of 2001-SWMS and WMSP.

It is important to note that the new Waste Framework Directive 2008/98/EC requires all Member States to avoid waste generation and that they should aspire to become a 'recycling society', where waste becomes a resource to the State rather than a burden on the environment.⁶¹ In the face of these new EU policies, a number of green initiatives were initiated by the Office of the Prime Minister. A notable success was the establishment in 2005 of 'Green Leaders' in every Ministry, which has brought about major developments in greening of public buildings. These 'Green Leaders' are expected to create environmental awareness and act as promoters of environmentally friendly measures within their respective Ministries.

59 See Ministry for Resources and Rural Affairs (MARRA), note 52 above.

60 Times of Malta, 'Municipal Waste Treatment Plant Installed at Sant'Antnin', Times of Malta Online, 24 November 2009, available at <http://www.timesofmalta.com/articles/view/20091124/local/municipal-waste-treatment-plant-installed-at-santantnin>.

61 European Environmental Bureau (EEB), *Climate Protection Potentials of EU Recycling Targets* (Brussels: EEB, February 2008) and European Environmental Bureau (EEB), *How Recycling Can Fight Climate Change* (Brussels: EEB, February 2008).

These measures range from training, recycling, waste separation, energy auditing, water conservation, utilisation of energy efficient lighting, installation of solar photovoltaic systems, consideration of green features for all public procurements and the use of electric cars for short official day trips.⁶²

The SWMS and WMP of 2009 contains the Maltese government's current position with regard to waste streams,⁶³ that private industry is either not interested in taking over, or lack human knowledge, or resource capability to do so. It seems puzzling that one ministry should produce two complementary documents in the same year, which according to MEPA, were prepared in parallel and ought to have been merged.⁶⁴ What is more disconcerting is that the SWMS (or strategy document) omitted to include a number of related EC Directives, did not take a holistic approach, failed to tackle some of the more serious issues e.g. packaging waste away from landfill, and the location for siting of the waste facilities appeared to have been made without the consultation of MEPA.⁶⁵

5

IMPLICATION OF THE NEW EU WASTE LEGISLATION

In recent years there have been a host of directives, under the Waste Framework Directive Dir.75/442/EC,⁶⁶ dealing with specific waste 'streams'. These laws

62 C. Yousif, Energy, Transport and Waste Management 2009, Proceedings of the 10th International Association for Energy Economics (IAEE) European Conference, Vienna, Austria, 7-10 September 2009, Paper Reference No. 171.

63 Waste streams refer to the process by which waste is grouped together to identify where it comes from and how it should be treated and disposed of safely without risk to human health. Key waste streams include municipal, hazardous, commercial and industrial waste (C&I), and construction, demolition and excavation (CD&E) waste.

64 See ADI Associates Environmental Consultants, note 56 above.

65 *Id.*, at 1.

66 Council Directive on Waste, Doc. Dir.75/442, 15 July 1975 (as amended by Dir. 91/156(1991) OJ L78/32 and replaced by a codified version in 2006, Doc. Dir. 2006/12/EC).

have been criticised at domestic and European levels⁶⁷ due to their ineffectiveness in dealing with the growing waste problem in the EU.

According to the figures gathered by Eurostat,⁶⁸ in 2002 Europe produced well over 1.3 billion tonnes of waste per year. This included waste from the construction sector (510 million tonnes), manufacturing (427 million tonnes), municipal waste (241 million tonnes) and waste from energy production and water supply (127 million tonnes). These numbers did not account for the gaps caused by the lack of data from the mining, agriculture, forestry, fisheries and public sectors.

Focusing on Municipal Waste generated in EU, we find that in 2002 the average was 530kg / person, which equates to 570kg / person in EU-15 and between 300 to 350kg in EU-10. In 2005, of the municipal waste created, 49 per cent was disposed of through landfill, 18 per cent was incinerated, and 27 per cent recycled or composted.⁶⁹

The above figures are in themselves overwhelming, but the gravity of the problem is shown by the fact that they keep increasing year on year, and they do so at the same pace or faster than the economy. The Total waste generated in the period 1990 - 1995 increased by ten per cent whilst GDP increased by 6.5 per cent. Between 1995 - 2003 municipal waste was the single fastest growing waste stream.⁷⁰ In this period municipal waste generated and GDP increased by nineteen per cent in EU-25. Smaller waste streams also grew, e.g. hazardous waste increased by thirteen per cent between 1998 and 2002 whilst GDP grew by ten per cent.

With the current levels of economic growth, this trend is predicted to continue. The European Environment

Agency has forecasted that paperboard, glass, and plastic waste would increase 40 per cent from 1990 levels by 2020.⁷¹

When turning to Municipal Waste generated in Malta the figures draw an even more dramatic situation. Data indicates that in the period 1997-2004 waste increased by 37 per cent. In 2003, it amounted to 625kg person per year, rising from 593 Kg/person in 2001, which equated to a total of about 250,000 tons per year.⁷² Furthermore, a recent report produced for the EEA in 2008 showed that, since 2004, the volume of municipal waste increased by 46kg/ person, confirming that the existing waste strategy required radical overhauling.⁷³

As mentioned earlier, in recent years the EU put more stress on the challenges of finding a sustainable waste management policy with the ultimate aim to reduce the amount of waste produced, as opposed to the regulation of the final disposal of waste. This approach called for the shifting of the emphasis on waste, from being an environmental 'bad' that needs controlling, to a resource management issue, where recycling and waste prevention was seen as a desirable goal. The Thematic Strategy for the Prevention and Recycling of Waste, published by the European Commission late in 2005, was an attempt to promote this shift.⁷⁴ Although it was vague in certain areas, it put forward some significant legislative proposals. In particular, the Commission proposed major amendments to the EC Waste Framework Directive – Dir. 75/442/EC,⁷⁵ which included the reform of the definition of waste and required Member States to produce national waste prevention programmes. Their aim was to make Europe a recycling society, broadening the definition of 'end-of-waste', rebranding of certain

67 M. Lee, *EU Environmental Law* (Oxford: Hart Publishing, 2005) and D.C. Wilson, 'Stick or Carrot? The Use of Policy Measures to Move Waste Management up the Hierarchy', 14/4 *Waste Management & Research* 385-398 (1996).

68 W. Kloek et al., *Waste Generated and Treated in Europe – Data 1995-2003* (Luxembourg: EC, 2005).

69 European Parliament (EP), *MEPS Give Green Light For New EU Waste Legislation with Binding 2020 Targets*, Plenary sessions, 17 June 2008, available at <http://www.europarl.europa.eu/sides/getDoc.do?type=IM-PRESS&reference=20080616IPR31745&language=EN>.

70 EurActiv Network, *Waste Prevention and Recycling*, *EurActiv*, 25 February 2010, available at <http://www.euractiv.com/en/sustainability/waste-prevention-and-recycling-links dossier-188286>.

71 J. Hontelez, *Campaign Guide to the Waste Framework Directive Transposition – Opportunities and Actions for NGOs* (Brussels: European Environmental Bureau, 2010).

72 Ministry for Resources and Rural Affairs, *Waste Management Plan for the Maltese Islands 2008-2012* (Floriana, Malta: Government of Malta, 2009).

73 European Environment Agency (EEA), *Improved Waste Management Delivering Climate Benefits* (Denmark: EEA, 2008).

74 *Taking Sustainable Use of Resources Forward: A Thematic Strategy on the Prevention and Recycling of Waste*, Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, 21 December 2005, Doc. COM (2005) 666 final.

75 See Council Directive on Waste, note 66 above.

incinerators as recovery and promoting life cycle assessment to waste management. All of the above would require an approach that considers and reduces environmental impacts over a full life cycle of a product, from raw materials through to production, distribution and use to final disposal.⁷⁶

In 2007, the Maltese Government produced a progress report on European Sustainable Development Strategy Implementation in Malta stating that it broadly supported the aims of the EU Thematic Strategy. The government considered that this strategy would promote a positive framework for a holistic review of *aquis communautaire* with regard to waste management. It would also contribute towards the goal of becoming a recycling society, using waste as a resource, which would promote the utilisation of natural resources in a more efficient and sustainable way.⁷⁷

In June 2008, the European Parliament sought to address the failings of the existing waste laws and policies and agreed to back the Thematic Strategy on Waste⁷⁸ in the creation of the new and improved version of the Waste Framework Directive⁷⁹ (WFD 2008) mentioned above. The purpose of this new directive was to clarify the existing legal framework i.e. to tackle definitions that were insufficiently clear and precise, in particular the definition of waste and the distinction between recovery and disposal.⁸⁰

It would also streamline existing waste laws, incorporate directives on waste oils and hazardous waste into the revised WFD 2008.

Article 1 of the WFD 2008 introduces a key objective, which 'lays down measures to protect the environment

and human health by preventing or reducing the adverse impacts of the generation and management of waste and by reducing overall impacts of resource use and improving the efficiency of such use'. It is important to note that the impact of waste disposal on human health is something that was stated in Dir.75/442/ EC, Dir.2006/12/EC⁸¹ and later in Dir.2008/98/EC⁸² (WFD 2008). The main aim of these directives is to look at waste minimisation and resource management. This was achieved by stressing the relationship between waste, environment, and human health and by linking 'waste' and 'resource efficiency'.⁸³ It could be argued that the breadth of the linkage created will interfere with the clarity of the definition of what constitutes waste and, therefore, with the interpretation of the law.

Another development in the WFD 2008 is that Article 4(1) establishes for the first time in law the waste hierarchy. It introduces a more comprehensive waste hierarchy, which is to be considered a priority order for waste management (on the European Parliament's insistence, as opposed to the Council's preference for the hierarchy to be a 'guiding principle').⁸⁴

This implies that what in the past (WFD75 onwards) was a desirable goal, now is prescriptive. The hierarchy gives clear preference - in this order- to: prevention, re-use, and recycling, over recovery and landfilling (disposal). It must be noted that, in the waste hierarchy, energy-efficient incineration is classified as recovery, rather than disposal. The intention behind it is to promote resource efficiency by encouraging energy recovery through the incineration of waste in order to reduce consumption of fossil fuels.

While the hierarchy is welcome, it is often confusing and questionable as to what the idea of promoting 'measures to encourage the options that deliver the best overall environmental outcome' means. Furthermore, the balance between the environmental costs and the benefit to the environment vary from sector to sector.⁸⁵

76 D. Hunkeler and G. Rebitzer, *The Future of Life Cycle Assessment*, 10, 5 *International Journal of Life Cycle Assessment* (2005).

77 C. Ciantar, Ministry For Rural Affairs and Environment, *EU Sustainable Development Strategy Implementation National Report For Malta* (Floriana, Malta: Government of Malta, July 2007).

78 European Parliament Legislative Resolution on the Council Common Position with a View to the Adoption of A Directive of the European Parliament and of the Council on Waste and Repealing Certain Directives (11406/4/2007 – C6-0056/2008 – 2005/0281(COD)).

79 See Directive of the European Parliament and of the Council on Waste and Repealing Certain Directives, note 54 above.

80 H. A. Nash, *The Revised Directive on Waste: Resolving Legislative Tensions in Waste Management?* 21/1 *Journal of Environmental Law* 139, 149 (2009).

81 See Council Directive on Waste, note 66 above.

82 See Directive of the European Parliament and of the Council on Waste and Repealing Certain Directives note 54 above.

83 Croner, *Environmental Management* (Surrey, UK: Wolters Kluwer, 2009).

84 See Directive of the European Parliament and of the Council on Waste and Repealing Certain Directives, note 54 above.

85 See Council Directive on Waste, note 66 above.

In principle the hierarchy has to be a priority for Member States unless they can provide evidence to justify that it is not feasible by 'life-cycle thinking' and for reasons of technical feasibility or economic viability or environmental protection (Art.4(2)).⁸⁶ This creates another source of controversy, as the WFD 2008 does not define the concept of 'life-cycle thinking', leaving room for varying interpretations and undermining the legally established waste hierarchy. The EEB expects that Member States (MS), municipalities, and organisations responsible for waste management will apply life-cycle assessment (thinking) to determine the best option available to them for different types of waste streams.⁸⁷

In the case of Malta, this function would most likely fall to MEPA and WasteServe. This reliance on life-cycle assessments may cause further complications as there is no agreed EU approach or methodology towards life-cycle analysis in waste management.⁸⁸ Furthermore major flaws have been identified with regard to life-cycle analysis. Firstly, it does not take into account social and community benefits.⁸⁹ Secondly, its process is based on past data, where questions have been asked regarding its level of reliability and accuracy of inventory datasets, particularly where there is a dearth of thematic historical data such as in Malta.⁹⁰

Another crucial legal question emerges from Art. 4(2), through the possibility that MS may have an option of 'departing from the hierarchy where this is justified by life-cycle thinking on the overall impacts of the generation and management of such waste'. The wording leads one to ask whether waste policies adopted by MS could be legally challenged by the ECJ on the basis that the article imposes mandatory obligations. If it could be challenged, would it be the task of the ECJ to assess the merits of life-cycle thinking relied upon

by the Member State?⁹¹ If this was the case and the ECJ ruled against the MS, it would mean that their choice to make waste management decisions could be overruled.

In sum, this expanded waste hierarchy in Art. 4 reflects the new objectives in Art. 1 of the WFD 2008 and its all encompassing environment and human health goals. In doing so, the waste hierarchy's new clarified ordering is quickly disordered by the broad and contingent environmental ambition of the directive, leaving ambiguous policy direction to member states and posing new legal questions that may result in policy gaps.⁹²

Per Art 2 of WFD 2008 a number of elements have been excluded from the scope of its application namely:

Gaseous emissions emitted into the atmosphere; land in situ including unexcavated contaminated soil and buildings permanently connected with land; uncontaminated soil and other naturally occurring material excavated in the course of construction activities where it is certain that the material will be used for the purposes of construction in its natural state on the site; radioactive waste; decommissioned explosives; faecal matter and straw and other non natural non-hazardous agricultural or forestry material used in farming or for the production of energy from such biomass through process or methods which do not harm the environment or endanger human health.

Looking specifically at the exclusion of Land in situ, including unexcavated contaminated soil and buildings, which are permanently connected with land, Kramer has suggested that the WFD 2008 is a reaction to the European Court of Justice's judgment, which declared that unexcavated contaminated soil and buildings constitutes waste.⁹³ He suggests that this exclusion was the result of MS's fears that this judgment might have obligated them to take positive action of having to cleaning up such contaminated sites⁹⁴ and under these

86 E. Scotford, 'The New Waste Directive: Trying to Do it All...' ,75/11 *Environmental Law Review* (2009).

87 J. Hontelez, Campaign Guide to the Waste Framework Directive Transposition – Opportunities and Actions for NGOs (Brussels: European Environmental Bureau, Jan 2010), available at <http://www.eeb.org/?LinkServID=D685FA1A-D1F3-89D7-7769022E8317FF70&showMeta=0>.

88 European Environmental Bureau (EEB), Response on the Extended Impact Assessment on the Thematic Strategy on the Prevention and Recycling of Waste (Brussels, Belgium: EEB, October 2004).

89 See Scotford, note 86 above.

90 See Hontelez, note 87 above.

91 See Scotford, note 86 above.

92 *Id.*

93 Criminal Proceedings Against Paul Van de Walle, Daniel Laurent, Thierry Mersch and Texaco Belgium SA (Case C-1/03) ECR, [2004] I-07613.

94 L. Krämer, 'Remarks on the Waste Framework Directive', 1 *Environmental Law Network International* 2, 6 (2010).

circumstances, the exclusion of uncontaminated soil⁹⁵ is perfectly understandable. However, in practice soil excavated from construction activities are not usually examined with a view to establishing whether or not they may be tainted. It is suggested that contaminated excavated soil may constitute waste and as such ought not to be utilised in construction work. Unfortunately, it is common knowledge that such contaminated soil are quite frequently used in construction or infrastructure projects in Europe.⁹⁶

In Malta, there are indications of high levels of contamination in soil from car exhaust, paint, used in gun shells and emissions from industrial areas. Due to lack of definition of what constitutes contaminated soil, it seems highly likely that construction companies will use soil regardless of its origin, hence making a mockery of the aims and objectives of the WFD 2008.⁹⁷ In fact, references in monitoring studies only refer to soil preservation and erosion and rarely to soil contamination.⁹⁸ The 'Space for Waste' Topic Paper, which was part of the Structure Plan Review process mentions in passing the term 'Disposal of chemical wastes on or in the soil' as part of its Guidance on Information to Accompany Development Permit Applications for Waste Management Facilities (Category 1 projects).⁹⁹ This said, Malta has embarked on an environmental monitoring project through European Regional Development Funds (ERDF 156)¹⁰⁰ which includes the development of a monitoring strategy inclusive of soil.¹⁰¹

As a result what we are seeing is a dangerous trend in the European Union, shifting away from harmonised EU Waste management policies toward the deharmonisation and re-nationalisation of waste management. It is opined that these changes would create a situation where, in place of EU wide waste stabilisation and reduction targets, we get Commission studies on waste prevention instead of clear and ambitious targets for waste reuse and recycling. Along with this, we get non-binding targets for 2020 - which many MS's have already achieved- instead of life cycle assessment we have to contend with the vague concept of life cycle thinking.

In addition to these aforementioned defects, another source of problems could raise from the lack of clarification of the meaning of 'discard'.¹⁰² Overall, it seems that European policy makers have set high-level objectives, but they are leaving it to Member States to decide how to fulfil them by whatever methods suit their local conditions, and leaves the EU Commission with the unenviable and difficult task of ensuring that they deliver.

This follows the new development in the regulation of EU law, which emphasises the need to give states and key players greater freedom to pursue environmental protection, in ways that they consider most appropriate.¹⁰³ Sadly, this approach will not assist new member states like, Malta, whose problems lie not with the transposition of the European Aquis, but with application and enforcement of their objectives. This is evidenced by their actions on what is now the engineered landfill of 'Maghtab' located nearby to the previous landfill site, and also through the creation of several landfilling sites for the sole purpose of receiving waste, such as quarries that take up the large volumes of construction wastes which has mushroomed due to the development of multi-storey underground basements, necessitating major excavation works. It is suggested that this is in contrary to the aims and objectives of the WFD 2008. This fact is further supported by the EEB report of 2010,¹⁰⁴ which indicated that Malta is one of the countries in the EU that uses landfill as a primary method of disposing their waste, second only to Cyprus.

95 See Art. 2(1)(c) of Directive 2008/98/EC on Waste and Repealing Certain Directives OJ L 312/3.

96 Planning Authority, *Structure Plan Review Monitoring Report: 1990-95* (Floriana, Malta: Planning Authority, March 1997).

97 Malta Environment and Planning Authority, *The Environment Report – Land Sub-Report 4* (Floriana, Malta: MEPA, March 2010), available at <http://www.mepa.org.mt/ter08-land>.

98 See Planning Authority, note 96 above and Planning Authority, *Structure Plan Review Monitoring Report: 1996-97* (Floriana, Malta: Planning Authority, January 1999).

99 Planning Authority, *Final Report on the Waste Management Subject Plan 115* (Malta: Planning Authority, 2001).

100 Planning and Priorities Coordination Department, *European Regional Development Fund Malta - List of Beneficiaries of EU Funding Through Structural Funds*, available at www.ppcd.gov.mt/file.aspx?f=369.

101 Malta Environment & Planning Agency (MEPA), *Developing National Environmental Monitoring Infrastructure and Capacity, ERDF 2007-2013*, available at http://www.mepa.org.mt/sf_monitoring.

102 D. Pocklington, *The Significance of the Proposed Changes to the Waste Framework Directive*, *European Environmental Law Review* 75-87 (2006).

103 See Bell and McGillivray, note 29 above.

104 See Hontelez, note 87 above.

Malta has to its credit, implemented SWMS and WMSP 2001 which enabled her to join the EU. Over the period of the last six years, Malta has been grappling with the challenges, and the reality of the application of EU sustainable waste management legislation. This is despite the fact that its 2001 policies and plans were built on historically flawed and ineffectual policies.

The WMP 2009 was built on what was attempted by the pre-accession waste management policies of 2001-SWMS and WMSP, and inevitably carried their inherent defects. Malta has implemented its own Solid Waste Management Strategy of 2001 and 2009; it is currently attempting to put in place a Waste Management Strategy and a Waste Management Plan as well as preparing a strategy for monitoring.

What this amounts to is that all relevant EU waste management legislation (including the WFD 2008) are in place or will be in place by the agreed deadlines, which in itself is a remarkable achievement.¹⁰⁵ This strategy provides recommendations and targets for upgrading their waste management system to conform to EU legislation. This was achieved through changes in their legislative framework and improvements in infrastructure, including upgrading the standards of landfill facilities e.g. the rehabilitation of the Maghtab waste disposal site, the constructions of composting plants and the introduction of collecting centres for recycling.¹⁰⁶

Furthermore, Malta is keeping pace with the recent European Union developments with regard to waste, as can be seen from the following examples;

- The creation of the Eco Contribution Act, 2004,¹⁰⁷
- The introduction of a tax on various products aiming to promote awareness of the costs associated with the management of waste generated and to create an incentive for a more sustainable consumption.

105 K. Koneczny and D.W. Pennington, Life Cycle Thinking in Waste Management: Summary of European Commission's Malta 2005 Workshop and Pilot Studies, 27 *Waste Management* 92, 97 (2007).

106 S. Wilson, Development of Rehabilitation Strategies Maghtab, Qortin and Wied Fulija Landfills Summary Report (Malta: WasteServ Malta Ltd, 2004).

107 See Malta, Eco-Contribution Act, 2004, Act XII of 2004.

- The lower VAT rate on second hand products or repair services, as defined in VAT Act, 1998 Schedule Eight,¹⁰⁸ were implemented with a view to promote reuse in consumption.
- The provision of disposal facilities for dry recycling plastic and paper across Malta to promote recycling of products and lifecycle thinking in consumption.¹⁰⁹

6 CONCLUSION

Malta however, cannot afford to be complacent. As has been demonstrated, it is a laggard with regard to contaminated soil and recycling of waste¹¹⁰. Furthermore, there are many other areas where Malta is struggling to cope, which are not within the scope of this paper e.g. the reduction of greenhouse gas emissions, measures on climate change and halting biodiversity loss.¹¹¹ Like all the new Member States Malta, has less of a tradition of environmental regulation. Therefore, it needs a great deal of help to face the challenges of implementing EU waste legislation. Perhaps the greatest of these challenges may well be the need to get citizens more involved in the development and implementation of these new waste laws, something that has seen self-defeating activities implemented (such as encouraging separation at home, then recombining at the transportation phase (mid-late 1990s) but which eventually took off (mid-late 2000s).¹¹² The implementation of the new EU waste

108 See Malta, Value Added Tax Act, Act XXIII of 1998, (as amended in 2008).

109 *Id.*, at 62.

110 European Environment Agency (EEA) 2008: Improved Waste management Delivering Climate Benefits, (Denmark, EEA, 31 January 2008), available at <http://www.eea.europa.eu/highlights/better-management-of-municipal-waste-will-reduce-greenhouse-gas-emissions>.

111 Commission of the European Communities Commission Staff Working Document Accompanying the Communication from the Commission to the Council and the European Parliament 2007 Environment Policy Review COM (2008) 409.

112 EP Draft Recommendation for Second Reading on the Council Common Position for Adopting a Directive of the European Parliament and of the Council on Waste 2005/0281.

laws will require the development of new relational capacities both between social agents in the form of learning how to collaborate and understand others roles and capacities differently- and between social-ecological systems.¹¹³

New Maltese institutional arrangements will also be required to facilitate more sustainable relationships, based on new Community-based frameworks regarding the issues related to stakeholders and agents involved.

This will necessitate the development of new identities, as well as institutions and individual capacities that are more socially and environmentally robust with the common goal of sustainable waste management.

In the face of fundamental problems thrown up by the new Waste Framework Directive 2008, it is worrying that senior figures have stated that the package of reforms agreed was the best possible option for Europe.¹¹⁴ This sentiment was also echoed by the EU Commissioner Stavros Dimas for the Environment, when he welcomed 'the directive as it signalled a modernised approach to waste management with clear definition and greater emphasis on prevention of waste and ambitious new recycling goals'.¹¹⁵ Malta's efforts on this scale are commendable but they are heavily burdened by issues of capacity and economies of scale, something that legislators at EU level have to take into account as the strategic-EU level risks becoming isolated from the tactical-country level of operations. The reforms might throw overboard Malta's major strides towards conformity which have been managed in spite of the inherent hiccups that were created prior to, during and "after" the process of transposition.

It is suggested that, under the guise of modifying the current waste management system, so as to improve competitiveness and minimise the burden and cost on business, regulators and stakeholders, Malta is one of those countries which will bear the brunt of the reforms

resulting in a worst-case scenario. We have obtained a directive, which lacks clarity in policy direction thus leaving member states to make waste policy choices that potentially and controversially may be constrained by ECJ.¹¹⁶

113 C. Pahl-Wostl et al., The Importance of Social Learning and Culture for Sustainable Water Management, 64/3 *Ecological Economics* 484-495 (January 2008).

114 EU Parliament, MEPs Give Green Light for New EU Waste Legislation with Binding 2020 Targets. 17-06-2008 Press office, Directorate for the Media.

115 EU Commission Brussels, 'New Waste Strategy: Making Europe a Recycling Society' 21 December 2005, IP/05/1673.

116. See Scotford, note 86 above at 9.

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