

# The regulation of domestic solid waste management in local government: perspectives from the Limpopo Province

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## **Abstract**

In general, the improper disposal of waste may hinder the constitutional guarantee of a right to an environment not detrimental to human health or well-being. This is especially true of domestic solid waste, a particular area of the waste stream frequently disposed of on South Africa's vacant land, rivers and streets amongst others. There is need therefore for municipalities as locally based authorities that are constitutionally bestowed with specific functions and duties in relation to waste,<sup>1</sup> to ensure effective domestic solid waste management.

The aim of this study is to investigate the content and design of some legal instruments aimed at domestic solid waste management in two municipalities of South Africa's Limpopo Province namely the Lephalale and Greater Tzaneen Municipalities. The investigation and critical analysis of the selected instruments are based on the content of South Africa's national waste law and policy with respect to domestic solid waste management specifically.

The study concludes with a number of observations and recommendations with respect to the investigated instrumentation of Lephalale and Greater Tzaneen Municipalities.

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1 See s 7(2) and 24 of the Constitution read with the chapter 7 objectives of local government and division of governing powers in Schedules 4B and 5B of the *Constitution of the Republic of South Africa, 1996* (the Constitution).

## List of abbreviations and acronyms

DNNSSW	Draft National Norms and Standards for the Storage of Waste
DSW	Domestic Solid Waste
DSWM	Domestic Solid Waste Management
GTM	Greater Tzaneen Municipality
IWMP	Integrated Waste Management Plan
LGMSA	Local Government: Municipal System Act
LGMSA	Local Government: Municipal Structures Act 117 of 1998
LLMC	Lephalale Local Municipal Council
LM	Lephalale Municipality
LP	Limpopo Province
MEC	Member of Executive Council
NDWCS	National Domestic Waste Collection Standards
NEM: WA	National Environmental Management Waste Act 59 of 2008
NEMA	National Environmental Management Act 107 of 1998
NNSDWLS	National Norms and Standards for Disposal of Waste to Landfill Sites
NWIR	National Waste Information Regulations
NWMS	National Waste Management Strategy
REG	Regulation

## 1 Introduction

Globally significant quantities of waste are generated annually.<sup>2</sup> Waste has been described as a universal problem and not only as a problem that is confined to less developed neighbourhoods and developing or poorer nations, for example.<sup>3</sup> National economies all over the world through diverse activities and human conduct generate large quantities of waste<sup>4</sup> which is and remains a serious problem to society in terms of its environmental and health effects<sup>5</sup> and related management challenges.<sup>6</sup> In the United States of America (USA) as but one country specific example, a total of approximately 250 million tons of waste is generated annually.<sup>7</sup>

In South Africa, as a result of industrial development, population growth and a growing economy waste is also increasingly causing problems.<sup>8</sup> Some of these problems are intensified given the years of inequitable development and the waste service delivery backlog as a spill-over from historical apartheid rule.<sup>9</sup> South Africa's upsurge in industrialisation and population growth<sup>10</sup> accounts for the generation of different types of waste namely: solid, liquid and gaseous waste.<sup>11</sup> These diverse types of waste place different forms of pressure on the

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2 See Ahmed and Ali 2004 *Habitat International* 468; Muzenda *et al* 2012 *WASET* 149; Global Waste Management Market Assessment Report 2007 <https://www.researchandmarkets.com/report/461875/...>

3 See Muzenda *et al* 2012 *WASET* 149.

4 Nkosi *et al* "The current waste generation and management trends in South Africa" 303.

5 See Asante-Duah *Hazardous Waste* 1.

6 Mangizvo and Wiseman 2012 *JSSR* 125. See also Naidoo *An analysis of municipal solid waste management* 1.

7 See Schultz "Trashed". Available online at: <http://www.theinternational.org/article/353-trashed-can-we-stop-global-waste-before>.

8 South Africa generates in excess a total of 42 million m<sup>3</sup> of solid waste every year which appears to pose serious problems in terms of its effect and management. See further Simelane and Mohee 2012 *Africa Institute of South Africa Policybrief* 3; Muzenda *et al* 2012 *WASET* 149.

9 Muzenda *et al* "Reflecting on Waste Mngagement Strategies for South Africa". Available online at: <http://www.iaeng.org/wcecs2011651-656.pdf>.

10 Nkosi *et al* "The current waste generation and management trends in South Africa" 303. According to Statistic South Africa, the population of South Africa increased from 44.8million in 2001 to 51.77 million in 2011. Population growth results in increased consumption of goods and resultant generation of different waste types that must be disposed of and managed, generally.

11 Bosman "Integrated waste management" 699.

environment, soil, land, biodiversity, water, and air for example. Although, some waste may be recycled or re-used, there is some remnant of waste that eventually find way into the environment, causing different types of pollution and degradation of the natural resource base.<sup>12</sup>

Domestic solid or household waste constitutes one form of waste in the waste stream.<sup>13</sup> Domestic solid waste (DSW) is frequently improperly disposed of on vacant land, public space (e.g. streets and parks) and rivers amongst others.<sup>14</sup> Given its environmental impact, the uncontrolled disposal of DSW understandably poses threats to *inter alia* the protection of the constitutional right of everyone in South Africa to an environment which is not harmful to health or well-being.<sup>15</sup> Given the fact that the constitutional environmental right creates both rights and duties it follows that DSW that is not properly disposed of may also have legal implications *inter alia*, on the part of the government.

The South African government has an enforceable mandate to address all environmental and health risks that occur considering its range of constitutional and legislative environmental duties<sup>16</sup> including such duties belonging to municipalities.<sup>17</sup> By virtue of the fluid nature of the areas of competence of the

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12 Bosman "Integrated waste management" 699 and Muzenda *et al* 2012 *WASET* 149.

13 S 1 of the *National Environmental Management Waste Act* (NEM: WA) 59 of 2003 defines domestic waste as waste that does not pose significant threat to the public or the environment. According to Pipati *et al*, domestic waste is the day to day rubbish, garbage and other forms of waste such as kitchen waste and food packaging amongst others that originate from household activities. See further Pipati *et al* "Waste Generation, Composition and Management Data" Available online at: [http://www.ipcc-nggip.or.jp/2006gl/pdf\\_volume5\\_ch2\\_waste\\_data.pdf](http://www.ipcc-nggip.or.jp/2006gl/pdf_volume5_ch2_waste_data.pdf) 4.

14 Medina 2007 "Informal collection and recycling of solid waste" 5. It has been argued that the improper disposal of domestic solid waste poses management problem. See Oelofse *et al* "The Status of Waste Information in South Africa". Available online at: <http://www.researchspace.csir.co.za/dspace/.../6470>.

15 See s 24 of the Constitution and Bosman "Integrated waste management" 699.

16 See s 24(1)(a) of the Constitution. In most developing countries this responsibility is primarily that of local government, see Simelane and Mohee 2012 *Africa Institute of South Africa Policybrief* 4.

17 See s 152(b) and (d) of the Constitution. In the *White Paper on Integrated Pollution and Waste Management for South Africa* published in GG 20978 of 17 March 2000, certain responsibilities of local government are clearly outlined that relates to refuse removal. These include *inter alia*: implementing public awareness campaigns, providing general waste collection services and managing waste disposal facilities with their area of jurisdiction, implementing and enforcing appropriate waste minimisation and recycling initiatives such as promoting the development of voluntary partnerships with industry,



three spheres of government and the principle of cooperative government<sup>18</sup> effective domestic solid waste management (DSWM) should in essence be regarded as a shared responsibility of all three spheres of government. Provincial authorities for example have provincial legislative competence over matters including cleansing and refuse removal, refuse dumps and solid waste disposal.<sup>19</sup> These powers are shared with local government. Although the spheres of government are distinct; they function together on the basis of interdependence and interrelation with other spheres.<sup>20</sup> National and provincial law, policies, norms and standards relating to DSWM are therefore meaningful at the local level.<sup>21</sup> Nationally, the existing waste management law and policy framework generally is embedded in the *National Environmental Management Act (NEM: WA)*<sup>22</sup> and the *National Waste Management Strategy (NWMS)* of 2012.<sup>23</sup> Although designed and adopted at national level, these laws and policies effectively trickle down to municipalities especially in as far as implementation is concerned.<sup>24</sup>

The Limpopo Province (LP) remains known for provincial-wide difficulties as far as DSWM is concerned.<sup>25</sup> It has been observed that municipalities in this province experience a range of interlinked DSWM challenges which include waste service delivery backlogs and a culture of poor waste management practices among local communities. These challenges have a direct impact on the province's contribution to the realisation of waste management and environmental protection objectives of South African law generally. At the practical level this *status quo* also hinders the realisation and protection of local communities in the Limpopo Province's constitutional environmental right and direct towards a failure of local government to achieve its legal duties in relation

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including the introduction of waste minimisation clubs where possible, regional planning, establishment and management of landfill sites. See further Schedules 4B and 5B of the Constitution.

18 See s 40(1)(h) of the Constitution.

19 See the 2012 *National Waste Management Strategy* 9.

20 See s 40 of the Constitution.

21 See s 9(2)(a) of NEM: WA and Schedules 4 and 5 of the Constitution, ss 146(2)(b)(i) and (2)(c)(iv) of the Constitution. See further ss 6(1) and 7 of NEM: WA.

22 59 of 2008.

23 Published in GN R35306 in GG 344 of 12 May 2012.

24 See the discussion in chapter 3 below.

25 See the 2011 "Limpopo Department of Economic Development, Environment and Tourism Waste Disposal Site Status quo" 3.

to the provision of basic municipal services as per the Constitution<sup>26</sup> and local government law.<sup>27</sup>

The NEM: WA requires of all municipalities to prepare a number of compulsory instruments at the local level including Integrated Waste Management Plans (IWMPs) and local waste collection standards.<sup>28</sup> It however also allows municipalities to develop and use a number of voluntary instruments e.g. waste by-laws. It could be inferred that these plans and by-laws may act as catalyst for effective DSWM in local government. This is especially true of an IWMP caters for a municipality's assessment of the quantity and types of waste generated,<sup>29</sup> a description of the municipal waste services provided<sup>30</sup> and the number of people in the municipality not (yet) receiving waste collection services.<sup>31</sup>

Against the background of the above, this study seeks to identify and analyse the legal framework for DSWM as it applies in the LP. Specific attention is paid to the NEM: WA and its regulations. As a secondary objective and based on an analysis of two municipalities (Greater Tzaneen Municipality (GTM) and Lephalale Municipality (LM)), this study determines to what extent the existing waste law and policy framework reflect the required IWMP and waste management by-laws of the two local authorities under investigation. The study is divided into four chapters. Chapter 2 examines the NEM: WA's compulsory and voluntary requirements for local government in terms of DSWM. Chapter 3 analyses the content and scope of available DSWM instruments present in the integrated waste plans and waste management by-laws of the two mentioned Limpopo

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26 See s 152(b) and (d) of the Constitution. In terms of s 156(a) of the Constitution, a municipality is specifically mandated to take responsibility for the matters listed in Part B Schedule 4 and Part B of Schedule 5. One of these responsibilities is refuse removal.

27 See s 8(1) and (2) of the *Local Government: Municipal System Act* 32 of 2000 (hereafter referred to LGMSA). S 83(1) of *Local Government: Municipal Structure Act* 117 of 1998 (hereinafter the Structure Act), explicitly provides that a municipality is under an obligation to perform the function(s) assigned to it in terms of s 156 of the Constitution. In an effort to effectively discharge this function, s 229 empowers municipalities to impose surcharge on fees for services provided on and on behalf of the municipality.

28 See s 11(4)(i) and (ii) of NEM:WA. See also s 156(2) of the Constitution which empowers a municipality to make and administer by-laws for the effective administration of the matters it has the right to administer.

29 S 12(1)(ii) of NEM: WA.

30 S 12(1)(iii) of NEM: WA.

31 S 12(1)(iv) of NEM: WA.

municipalities. Chapter 4 concludes the study and contains a number of recommendations.

In the course of the research process, relevant literature based on the Constitution, national and provincial legislation, regulations, standards, municipal by-laws and plans, case law, text books, journals and electronic materials were consulted.

## **2 National waste law applicable to domestic solid waste management in local government**

### ***2.1 Introduction***

NEM: WA is an environmental sector specific law that gives effect in part to the section 24 environmental right in the Constitution.<sup>32</sup> The NEM: WA is also a sector specific product of the legislature, aimed at the implementation of the overarching section 2 principles<sup>33</sup> of the *National Environmental Management Act*.<sup>34</sup> The main objective of NEM: WA is to protect health, well-being and the environment through the provision of reasonable measures that *inter alia* avoid and minimise waste generation;<sup>35</sup> reduce, re-use, recycle and recover waste;<sup>36</sup> prevent pollution<sup>37</sup> and ecological degradation and promote and ensure the effective delivery of waste services.<sup>38</sup>

In order to achieve this objective, the NEM: WA contains a range of compulsory and voluntary requirements for the management of waste generally and specifically also for DSW, as a waste stream category. These requirements are

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32 See s 2(d) of NEM: WA. S 2 of NEM: WA unpacks the objectives of the Act in relation to the protection of human health, well-being and the environment.

33 S 5(1) and (2) of NEM: WA provides that the NEM: WA must be read together with the *National Environmental Management Act* 107 of 1998 (NEMA) and that the application and interpretation of NEM: WA must be guided by the s 2 principles of NEMA. See s 2 of NEMA for a detail outline of the principles.

34 107 of 1998.

35 See s 2(a)(ii) of NEM: WA.

36 See s 2(a)(iii) of NEM: WA.

37 See s 2(a)(v) of NEM: WA.

38 See s 2(a)(vii) of NEM: WA.

applicable to, *inter alia* local government. Norms and standards have also been put in place that aim to guide the effective delivery of waste management services by municipalities.<sup>39</sup> A number of regulations have also been promulgated in terms of the NEM: WA which municipalities must consider when executing their DSWM functions. In general municipalities are expected to comply with the provisions of the Act when executing their waste services delivery functions. In what follows, attention is paid to the NEM: WA's compulsory and voluntary requirements, as well as NEM: WA's regulations and norms and standards applicable to local government in order to ascertain what these determine with respect to municipalities' performance of their DSWM duties.

## **2.2 Compulsory requirements**

### **2.2.1 NEM: WA**

NEM: WA defines domestic waste as:

Waste excluding hazardous waste, that emanates from premises that are used wholly or mainly for residential, educational, health care, sport or recreation purpose.<sup>40</sup>

What is immediately clear from this definition is that DSW is waste that originates from households or residences. The regulation of this type of waste as per the Constitution is the duty of local government, specifically.<sup>41</sup> Section 9 of NEM: WA lends support to the DSW constitutional duty of local government, by obliging municipalities to exercise their executive and legislative authority relating to the delivery of waste management services.<sup>42</sup> These services include amongst other

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39 S 8(2) of NEM:WA empowers the relevant member of executive council (MEC) to set provincial norms and standards aimed at regulating waste in the province and these provincial norms and standards must not be in conflict with national norms and standards provided for in ss 6 and 7 of the Act. Provincial norms and standards seek to: facilitate and advance planning and provision of waste management services in a province (s 8(3)(a)), regionalise waste management services in the province (s 8(3)(b)), minimise, reduce, re-use and recover waste (s 8(3)(c) and treat and dispose of the waste (s 8(3)(d)).

40 See s 1 of NEM: WA.

41 See s 156 of the Constitution.

42 See s 9(1) and (2) of NEM: WA.

refuse removal and disposal.<sup>43</sup> In exercising the duty of refuse collection and removal, municipalities must further adhere to all applicable national and provincial norms and standards.<sup>44</sup> These norms and standards may relate to different aspects of waste management and may *inter alia* be directed at access (provision of waste delivery services) for all to such services.<sup>45</sup>

In order to enable municipalities to effectively discharge the function of refuse collection and removal, section 10 of the Act requires every municipality to designate a waste management officer.<sup>46</sup> This officer is charged with the responsibility of coordinating the waste management affairs of a municipality. A municipality's waste management practices and efforts must for example, be aligned with the objectives of the NWMS of 2012<sup>47</sup>-task one may expect to be fulfilled by the waste management officer.

The *Local Government: Municipal System Act* (LGMSA)<sup>48</sup> requires of all municipalities to develop an integrated development plan (IDP). The purpose of this plan is to enable municipalities to undertake developmental oriented planning<sup>49</sup> that represents the objectives of local government as provided for in section 152 of the Constitution.<sup>50</sup> DSWM is a critical function of municipalities,<sup>51</sup> and municipalities are under an obligation to develop its IDP to *inter alia* explicitly

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43 S 9(1).

44 S 9(2)(a).

45 S 9(2)(c).

46 S 10(3).

47 See s 6(1)(a) of the *National Waste Management Waste Strategy* (NWMS) published in GN R344 in GG 353606 of 12 May 2012. The NWMS contains objectives, plans, guidelines, systems and procedures that specifically relate to the protection of the environment. It could be argued that these plans, objectives and guidelines act as appropriate measures to give effect to the central objective of NEM: WA. See further in this regard s 10(5) of NEM: WA.

48 32 of 2000.

49 See s 23(1)(a) of the LGMSA.

50 In terms s 152(1) of the Constitution, the objects of local government include: to provide democratic and accountable government for local communities; (b) to ensure the provision of services to communities in a sustainable manner; (c) to promote social and economic development; (d) to promote a safe and healthy environment; and (e) to encourage the involvement of communities and community organisations in matters of local government. Similarly, s 153 of the Constitution obligates municipalities to structure and manage their administration, budgeting and planning processes in a way that gives priority to the provision of basic services of the community as well as promoting economic and social development of the community (see s 153(1)(a) of the Constitution).

51 See Schedule 4 B and Schedule 5 B of the Constitution.

indicate how waste and DSW will be managed.<sup>52</sup> Section 11(4) of NEM: WA requires every municipality to develop and submit for approval an IWMP to the MEC.<sup>53</sup> The IWMPs must align with the NWMS in order to be approved.<sup>54</sup> It seems reasonable to suggest that the management of DSW at the local government level cannot be effective without an IWMP,<sup>55</sup> especially in view of the fact that the NWMS as a tool for DSWM sets and provides for necessary targets,<sup>56</sup> priorities,<sup>57</sup> objectives,<sup>58</sup> implementation<sup>59</sup> and financial arrangements.<sup>60</sup> For example, an IWMP must provide for a description of the population and development profile of the area to which the plan relates,<sup>61</sup> an assessment of the quantity and types of waste generated in the area,<sup>62</sup> a description of the service available and that are provided,<sup>63</sup> and a description of the number of people who are not receiving municipal waste collection services.<sup>64</sup> An IWMP must also be monitored and its progress of implementation reported to the MEC.<sup>65</sup> Monitoring of the progress of implementation is to ascertain amongst others, the extent to which the plan has been implemented during the reporting period,<sup>66</sup> the level of waste management initiatives undertaken by a municipality during the reporting period,<sup>67</sup> the level of services provided by a municipality,<sup>68</sup> the level of compliance by a municipality<sup>69</sup> and the financial resources necessary for a municipality to give effect to its IWMP.<sup>70</sup>

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- 52 S 11(4)(ii) of NEM:WA requires that an integrated waste management plan (IWMP) forms part of a municipality's integrated development plan (IDP).
- 53 S 11(4)(i) of NEM:WA.
- 54 See s 11(4)(b)(i)(aa) and (bb) of NEMW:WA.
- 55 According to the NWMS all municipalities have to include an IWMP in their IDPs by the year 2015 (NWMS 30).
- 56 See s 12(1)(e) of NEM:WA.
- 57 See s 12(1)(d) of NEM:WA.
- 58 See s 12(1)(b)(ii) of NEM:WA.
- 59 S 12(1)(b)(iv) of NEM:WA.
- 60 NWMS 29.
- 61 See s 12(1)(a)(i) of NEM:WA.
- 62 S 12(1)(a)(ii) of NEM:WA.
- 63 S 12(1)(a)(iii) of NEM:WA.
- 64 S 12(1)(a)(iv) of NEM:WA.
- 65 See s 13(1) of NEM: WA.
- 66 S 13(2)(a).
- 67 S 13(2)(b).
- 68 S 13(2)(c).
- 69 See s 13(2)(i).
- 70 S 13(2)(g).

Moreover, in ensuring the successful realisation of the constitutional environmental right to a healthy environment void of pollution and environmental degradation, section 16 of NEM: WA explicitly requires any person in possession of waste (which also include DSW), to take reasonable measures to:<sup>71</sup> avoid waste generation or better still minimise the toxicity and amount of waste generated,<sup>72</sup> reduce, re-use, recycle and recover waste,<sup>73</sup> and dispose of waste in an environmentally sound manner.<sup>74</sup> A municipality may be one such "person" when considering the definition of a municipality in section 1 of the LGMSA. Therefore a municipality is bound by the section 16 requirement to the same extent that industry and others may be bound by it to take reasonable measures to protect the environment.<sup>75</sup> These measures may *inter alia* include: an investigation, or assessment and evaluation of the impact of the waste *vis-a-vis* human health and the environment,<sup>76</sup> to cease, modify or control any act or process that causes pollution, environmental degradation as well as health impact,<sup>77</sup> comply strictly with the applicable norms or standards or prescribed waste management practices,<sup>78</sup> eliminate the source of pollution,<sup>79</sup> and rectify the effect of pollution or environmental degradation.<sup>80</sup>

To the extent that DSW could potentially have a detrimental impact on human health and the environment if not properly disposed, it follows that, it is important for every municipality to cease, modify or control the rate and manner of DSW disposal or adhere to the applicable waste management practices so as to encourage and ensure environmentally sound disposal of such waste. Section 17 further requires anyone (which also includes a municipality) undertaking an activity that involves the recycling, reduction and re-use of waste to actually ensure that before undertaking the activity that the reduction, re-use, recycling or

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71 S 16(1).  
72 S 16(1)(a).  
73 S 16(1)(b).  
74 S 16(1)(c).  
75 This corroborates with s 28 of NEMA.  
76 S 16(3)(a).  
77 S 16(3)(b).  
78 S 16(3)(c).  
79 S 16(3)(d).  
80 S 16(3)(e).

recovery of the waste uses less natural resources than it will generate<sup>81</sup> and also that the waste be properly disposed of to the extent that it will be less harmful to the environment.<sup>82</sup>

Against the background of the above, it is necessary to understand the categories or lists of waste management activities that may pose significant harm to the environment and human health. Section 19 of the NEM: WA obligates the Minister to publish in the Gazette a list of waste management activities that have or may likely have a significant detrimental impact on human health and the environment.<sup>83</sup> It follows therefore that a municipality's waste management list may be amended depending on the potential impact of the waste to the environment. This can either be by removing<sup>84</sup> or adding a particular waste.<sup>85</sup> Section 20 further compels nobody to commence, undertake or conduct a waste management activity without strict adherence to the requirements or standards contemplated in section 19.<sup>86</sup>

Section 21 of the Act obliges any "person," which equally includes a municipality, who stores waste to ensure that the container used for storing such waste is intact,<sup>87</sup> the waste cannot be blown away,<sup>88</sup> offensive odours are prevented, nuisances, visual impacts and breeding of vectors are eliminated<sup>89</sup> and that pollution of the environment and harm to human health is prevented.<sup>90</sup> In terms of section 22, municipalities are also under an obligation to provide designated containers for waste collection to all.<sup>91</sup> It may be mentioned in this regard that this continues to challenge municipalities across South Africa, because designated

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81 See s 17(1)(a).  
82 See s 17(1)(b).  
83 See s 19(1).  
84 See s 19(2)(b).  
85 See s 19(2)(a).  
86 See s 20(a) of NEM: WA.  
87 S 21(1)(a).  
88 S 21(1)(c).  
89 S 21(1)(d).  
90 S 21(1)(e).  
91 See s 22(1).



municipal waste containers are not provided to all.<sup>92</sup> This is especially true of those living in rural areas.<sup>93</sup>

Section 24 of the Act continues by prohibiting the removal of waste from any premises unless the person is a municipal waste provider<sup>94</sup> or has been authorised by law to remove the waste.<sup>95</sup> This implies that should anyone remove waste from premises other than a municipality, such person will be committing an offence under section 67(1) and upon conviction such person may be liable to a fine of R5 million or 5 years imprisonment.<sup>96</sup>

Section 25 places an obligation on transporters of waste. It requires transporters (which could also be a municipality) to register with the waste management officer<sup>97</sup> of the relevant municipality.<sup>98</sup> Such registration is to enable the officer to keep track of the monitoring and reporting records of the state of waste management in its municipal area. In this regard a waste management officer determines if a transporter employed reasonable measures or steps to prevent any spillage of waste or littering from the vehicle used in transporting waste, for example.<sup>99</sup> Also, the registration helps a waste management officer to ascertain whether transported waste will be disposed of in an authorised waste facility.<sup>100</sup>

Furthermore, section 26 dictates that no person may dispose of waste on land or any facility except when authorised to do so.<sup>101</sup> Similarly, waste must not be disposed in a manner that would likely cause pollution of the environment or pose

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92 See CSIR "Municipal Waste Management- good Practice" Available online at: [http://www.csir.co.za/nre/docs/waste\\_management\\_toolkit.pdf](http://www.csir.co.za/nre/docs/waste_management_toolkit.pdf) 13.

93 See Oelofse and Godfrey 2008 "Towards improved waste management services by local government" 2. A total of 39% of households or 50% of the South African population do not have regular waste municipal collection services.

94 See s 24(a).

95 See s 24(b).

96 See s 68(2).

97 A waste management officer in terms of the NEM: WA means "a waste management officer designated in terms of s 10".

98 See s 25(1)(a).

99 See s 25(2).

100 See s 25(3).

101 S 26(1)(a).

a significant threat to human health and well-being.<sup>102</sup> However, section 26(2) provides some exceptions namely that waste can be disposed of on land or any facility if the waste was generated as part of 'normal household activities'<sup>103</sup> and a municipality does not render a waste collection service in that area,<sup>104</sup> and the disposal was to protect human life or was a result of an emergency.<sup>105</sup> This exception is however potentially problematic. It fails to state what constitutes emergency waste disposal which begs the question what degree of emergency could possibly permit someone to improperly dispose of waste when it is known that it has the potential of causing serious pollution and environmental degradation.<sup>106</sup>

In addition, to safely protect the environment from pollution and environmental degradation, the Act prohibits littering.<sup>107</sup> NEM: WA requires no person to throw, drop, deposit any litter onto any public place, land, vacant erf, watercourse, and street<sup>108</sup> or allow any person to do an act that could potentially pollute the environment.<sup>109</sup> The regulation of which is the duty of the municipality in terms of Regulation 6 of the *National Domestic Waste Collection Standards* (NDWCS). Hence, anyone who litters constitute an offence under section 67(1)(b) and upon conviction, the person is liable to a fine of R5 million or 5 years imprisonment or both.<sup>110</sup>

Premised on the fluid content of the areas of competence of the three spheres of government and the principle of cooperative government,<sup>111</sup> section 44 requires coordination among different organs of state (i.e government departments in the three spheres of government) when making a decision on the granting of a waste

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102 S 26(1)(b).

103 S 26(2)(a).

104 S 26(2)(a)(i).

105 S 26(2)(b).

106 The requirement of emergency in s 26(2)(b) fails to take cognisance of the long and medium impacts of improper waste disposal. This emergency requirement may undermine the very essence of the NEM: WA as well as contravene the s 24 constitutional environmental right.

107 See s 27 of NEM: WA.

108 S 27(2)(a).

109 S 27(2)(b).

110 S 68(2).

111 See in this regard s 40(1)(h) of the Constitution.

management license.<sup>112</sup> It could reasonably be inferred that an application for a waste management licence may be rejected if there is no consensus on the matter can be reached.<sup>113</sup> However, the relevant issuing authority could issue an integrated licence for purposes of achieving coordination with the other spheres and organs of state.<sup>114</sup>

The state or level of waste information has the potential of speeding measures or reforms for waste management, generally. This is especially in view of the fact that, waste information provides facts on the current state of waste management services in a particular locality and indicates loopholes amongst others. It is on this basis that section 63 requires the Minister<sup>115</sup> or the MEC<sup>116</sup> to request by notice in the Gazette information from anyone or an organ of state either on a regular basis or within a reasonable time period. For this reason municipalities may be expected to provide information regarding the level of waste management delivery services in their areas of jurisdiction.

Where a person fails to comply with the condition of a waste management licence<sup>117</sup> and conducts an activity that might have a detrimental impact on human health and the environment, section 66 requires an environmental management inspector to demand a waste impact report.<sup>118</sup> If the person equally fails to submit the report, the waste management inspector may appoint an independent person to write the report<sup>119</sup> and recover the cost from the relevant person.<sup>120</sup>

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112 See s 44(1).

113 S 44(1).

114 S 44(2)(a).

115 See s 63(1).

116 See s 63(2).

117 S 1 of NEM: WA defines a waste management licence as: "A licence issued in terms of section 49."

118 See s 66(1).

119 S 66(7)(a).

120 S 66(7)(b).

## 2.2.2 Regulations

### 2.2.2.1 Waste Classification and Management Regulations of 2013<sup>121</sup>

The Waste Classification and Management Regulations (WCMR) deals with hazardous waste and do not apply to DSW collected by municipalities,<sup>122</sup> and will for purposes of this study not be discussed.

### 2.2.2.2 National Waste Information Regulations of 2012<sup>123</sup>

The central objective of the National Waste Information Regulations (NWIR) is to regulate the collection of data and information relating to waste.<sup>124</sup> Annexure 1 provides a list of persons and categories of waste that must be registered<sup>125</sup> with the national waste information system in terms of section 5 of the Regulation.<sup>126</sup> As a category of the waste stream, DSW has to be registered with the national waste information system in view of the fact that it (DSW) is defined to constitute part of general waste.<sup>127</sup> The relevance of registering waste information lies in the fact that the collection of information seems to be a useful mechanism to assist provincial authorities in particular for better preparedness and planning towards more effective waste management.

Furthermore, the submitted information must be accurate and based on an estimation of the quantity of waste expected to be generated over a period of five years.<sup>128</sup> Inaccurate and misleading information constitute an offence in terms of section 12(1) of the Regulation and upon conviction the person is liable to an

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121 Published in GN R634 in GG 36784 of 23 August 2013.

122 See reg 3(2).

123 Published in GN R625 in GG 35583 of 13 August 2012.

124 See reg 2 of the Standard. This is in order to achieve the objective of the national waste management system as provided in s 61 of NEM: WA.

125 See reg 3(1) of the Standard.

126 S 5 of the Regulation clearly provides that: any person conducting an existing activity listed in Annexure 1 must apply to the relevant department to be registered on the South African Waste Information System (SAWIS) within 90 days.

127 See s 1 of NEM: WA which defines general waste as waste that does not pose an immediate hazard or threat to health or the environment, and includes: (a) domestic waste; (b) building waste and demolition waste; (c) business waste; and (d) inert waste.

128 See s 8(5) of the Reg.

appropriate fine or imprisonment or both.<sup>129</sup> It is on this basis that information submitted must always be verified.<sup>130</sup> Section 9 obliges a municipality submitting its information to retain a copy.<sup>131</sup> Should verified information be found faulty, the provincial competent authority has the right to request the municipality submitting the information, to either submit an audit report prepared by an independent person<sup>132</sup> or undertake a waste quantification survey and submit a waste quantification report which must equally be prepared by an independent person.<sup>133</sup>

### 2.2.3 Norms and standards

#### 2.2.3.1 National Norms and Standards for Disposal of Waste to Landfill Site of 2013<sup>134</sup>

The central objective of the National Norms and Standards for Disposal of Waste to Landfill (NNSDWL) is to determine the requirement(s) to be complied with when disposing waste on landfill as provided for in regulation 8(1)(b) and (c) of the WCMR.<sup>135</sup> This standard is an important instrument in managing DSW as it is applicable in all provinces. Hence, given that section 9 of NEM: WA obliges municipalities to adhere to national norms and standards in order to deliver waste management services including refuse removal,<sup>136</sup> it is argued that these standards along with provincial norms and standards<sup>137</sup> are binding instruments needed to effectively manage waste and in particular DSW in the local government sphere. Consequently in order to properly deliver waste management services, the standards require municipalities to make provision for

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129 See s 12(2) of the Reg.

130 See s 10(1)(a).

131 See reg 9(1) of the Standard.

132 See reg 10(1)(a) of the Standard.

133 See reg 10(1)(b) of the Standard.

134 Published in GN R636 in GG 36784 of 23 August 2013.

135 The section provides that waste disposed on landfill, must be done in accordance with the norms and standards for disposal of waste to landfill provided in s 7(1) of NEM: WA.

136 See s 9(1) of NEM: WA.

137 S 8(1) empowers an MEC to set provincial norms and standards for the effective delivery of management waste services including refuse removal, and disposal so long as they do not conflict with national norms and standards set under s 7(1) of NEM: WA.

the classification of different waste landfill and containment designs.<sup>138</sup> This implies for example, that the engineering requirement for DSW landfill disposal sites must be different from that of hazardous waste landfill sites.<sup>139</sup> It follows further that different waste streams types are disposed of differently,<sup>140</sup> for example, DSW can only be disposed of in landfill meant for that purpose.<sup>141</sup>

### 2.2.3.2 National Domestic Waste Collection Standards of 2011<sup>142</sup>

In accordance with section 7 of NEMW: WA,<sup>143</sup> the aim of the National Domestic Waste Collection Standards (NDWCS) is to address the inequitable DSW service delivery that existed under apartheid rule.<sup>144</sup> The Standards acknowledge the need for equitable DSW collection services to be provided to all households under the jurisdiction of a municipality.<sup>145</sup> The performance of DSW services by a municipality also suggests the execution of related duties which *inter alia* include separation of DSW at source,<sup>146</sup> collection of recyclable waste,<sup>147</sup> provision of receptacles,<sup>148</sup> bulk containers provision,<sup>149</sup> allocation of a communal collection point,<sup>150</sup> and the frequency of DSW collection.<sup>151</sup>

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138 See reg 3(1) of the Standard.

139 See reg 3(1) of the Standard. This is evident from the landfill classification groups in the Standard into landfill A-D.

140 Reg 5(1) and (2) of the Standard.

141 S 3(1)(2) requires DSW to be disposed of in landfill Class B. See further reg 4(2) of the Standard.

142 Published in GN R21 in GG 33935 of 21 January 2011.

143 S 7(1) requires the Minister to publish by notice in the Gazette national norms and standards that provide amongst others for the classification of waste (s 7(1)(a) and planning for waste management services (s 7(1)(b)). Similarly, at the provincial level s 8 obligates the MEC to set provincial norms and standards and these norms and standard must not in any way conflict with national norms and standards. This implies the setting of provincial norms and standards in a way that aligns with national norms and standards in so far as DSWM is concern.

144 For a discussion of the inequitable service delivery under apartheid rule see Muzenda *et al* / [www.laeng.org/wcecs2011651-656.pdf](http://www.laeng.org/wcecs2011651-656.pdf).

145 See reg 4 of the Standard.

146 See reg 4(1) of the Standard.

147 See reg 4(2) of the Standard.

148 See reg 4(3) of the Standard.

149 See reg 4(4) of the Standard.

150 See reg 4(5) of the Standard.

151 See reg 4(6) of the Standard. According to s 9(a) it is the responsibility of a municipality to ensure that DSW is collected at least once every week.

It is trite that the provision of DSW collection services may generally improve the quality of life of all South Africans. Despite the fact that the level of DSW collection services may be different with respect to different localities based on the *status quo* and the cost efficiency of the service,<sup>152</sup> it is however important to underline the fact that the NDWCS applies to all levels of DSW collection services.<sup>153</sup> In terms of section 4 of the standard it is a requirement that all DSW must be separated at source.<sup>154</sup> This places a responsibility on municipalities to provide households with information and guidelines regarding the various types of wastes, sorting of the waste, and appropriate containers amongst others.<sup>155</sup> Similarly it is the duty of a municipality to ensure the provision of an enabling environment conducive for the recycling DSW by households.<sup>156</sup> This can be created for example through separate kerbside collection<sup>157</sup> or the making of appropriate arrangements with the private recycling sector for recyclables to be dropped and collected at communal collection points.<sup>158</sup>

Section 4(3) imposes an obligation on municipalities to supply households with appropriate containers to store DSW ready for collection. These containers may have to differ. For example, containers for the storage of recyclable must be different from the ones used to store non-reusable and non-recyclable DSW.<sup>159</sup> Furthermore, it is the duty of a municipality to clearly demarcate communal collection points for DSW. Such points must be easily accessible to all waste collection vehicles<sup>160</sup> and should encourage waste separation at source.<sup>161</sup> In order to give effect to the minimisation of waste objective, section 4(6) requires municipalities to frequently collect DSW drop-off at communal collection points.

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152 See reg 3(a)-(d) of the Standard.

153 See reg 3 of the Standard.

154 See reg 4(1)(a) of the Standard. The emphasis of the need to separate DSW at source lies in the fact that s 10(a)(iii) requires no DSW will be collected by the municipality if it is not separated at source.

155 See reg 4(1)(b) of the Standard.

156 See re 4(2) of the Standard.

157 See reg 9(a)-(g) for a detailed discussion of the kerbside collection requirement.

158 See reg 4(2)(a) of the Standard.

159 See reg 4(3)(a) of the Standard. S 4(1)(b) further provides conditions used for the storage of non-reusable and non-recyclable DSW.

160 See reg 4(5)(a) of the Standard.

161 See reg 4(5)(b) of the Standard.

This requires that vehicles used for collecting DSW must be appropriate and well equipped for the task, for example.<sup>162</sup>

In view of the fact that DSW may be a threat to human health and the environment, the NDWCS specifically imposes an obligation on municipalities to protect the health and safety of DSW collection workers.<sup>163</sup> This includes ensuring that DSW collection workers undergo systematic medical check-ups relating to their health and well-being,<sup>164</sup> make provision for protective equipment to DSW collection workers,<sup>165</sup> and ensuring that DSW collection workers receive regular ongoing training in terms of health and safety issues.<sup>166</sup> Linked to the requirement of ongoing training, is the obligation on municipalities to create awareness and dissemination of information regarding the generation and impact of DSW,<sup>167</sup> awareness on the type of waste collection provided,<sup>168</sup> awareness on the need to separate DSW at source,<sup>169</sup> awareness of the impact of illegal dumping and littering,<sup>170</sup> awareness of measures taken against people who illegally dump and litter DSW,<sup>171</sup> awareness of the costs of cleaning-up illegal dumping and littering and the implications such may have on household refuse collection rates,<sup>172</sup> and awareness of the need to report instances of illegal dumping and littering.<sup>173</sup> It may be inferred from the foregoing that awareness measures could considerably aid municipalities to ensure sound DSWM in their area of jurisdiction.

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162 See reg 6 of the Standard.

163 See reg 7 of the Standard.

164 See reg 7(a)(i) of the Standard.

165 See reg 7(a)(ii) of the Standard. This include for example: gloves, masks and gumboot amongst others.

166 See reg 7(a)(iii) of the Standard.

167 See reg 8 of the Standard. See further s 8(c) of the Standard.

168 See reg 8(a)(i) of the Standard.

169 See reg 8(a)(ii) of the Standard. In terms of s 10(a)(iii), municipal waste collectors are not oblige to collect DSW which is not separated.

170 See reg 8(a)(iv) of the Standard.

171 See reg 8(a)(v) of the Standard.

172 See reg 8(a)(vi) of the Standard.

173 See reg 8(a)(vii) of the Standard.



### 2.2.3.3 Draft National Norms and Standards for the Storage of Waste<sup>174</sup>

The Draft National Norms and Standards for the Storage of Waste (DNNSSW) have three main aims. Firstly, it seeks to provide from a national perspective, a unanimous approach to the management of waste storage facilities.<sup>175</sup> It also seeks to ensure best management practice for stored waste<sup>176</sup> and to provide standards for the design and operation of both new and existing waste storage facilities.<sup>177</sup> To achieve these objectives, implies that, provisions of this standard must be observed by anyone who stores waste in a waste storage facility including municipalities.<sup>178</sup>

Section 5 requires municipalities to locate a waste storage facility in an industrial demarcated area,<sup>179</sup> while taking into consideration existing servitudes.<sup>180</sup> The location of storage areas from residential premises may achieve two aims. In the first place, it could serve as an appropriate measure of handling and storing waste by municipalities<sup>181</sup> and secondly, it could provide access for emergency response.<sup>182</sup> In view of this, municipalities have to ensure that the construction of a waste storage facility is done by an approved and qualified engineer and in conformity with a construction plan.<sup>183</sup> This is to ensure that the waste storage facility is safe for the storage of waste.<sup>184</sup> For example, a liquid storage area ought to have a second containment system.<sup>185</sup>

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174 Published in GN R436 in GG 34418 of 1 July 2011.

175 See reg 2(1)(a) of the Standard.

176 See reg 2(1)(b) of the Standard.

177 See reg 2(1)(c) of the Standard.

178 See reg 4(1) of the Standard. The standard defines a waste storage facility from the perspective of both general and hazardous waste. In terms of general waste, a waste storage facility means a storage facility that has the capacity to store in excess of 100m<sup>3</sup> of general continuously. From the perspective of hazardous waste, a waste storage facility is any facility that has the capacity to store in excess of 80 m<sup>3</sup> of hazardous continuously.

179 See reg 5(2) of the Standard.

180 See reg 5(1) of the Standard.

181 See reg 5(3) of the Standard.

182 See reg 5(4) of the Standard.

183 See reg 6(1)-(6) of the Standard.

184 See also reg 9(1)-(11) of the Standard.

185 This may include for example bund and drip tray. See reg 6(6) of the Standard.

Section 7 requires municipalities to ensure effective control of municipal waste storage facilities.<sup>186</sup> This refers for example, to the restriction public access to waste storage facilities. Furthermore, section 13 enjoins municipalities to provide adequate environmental training and safety programmes to all municipal waste workers.<sup>187</sup> The training programmes include issues relating to: precautionary measures,<sup>188</sup> applicable procedures for particular types of waste,<sup>189</sup> procedures dealing with spillage and accidents of waste transportation,<sup>190</sup> and training on use of protective clothes,<sup>191</sup> amongst others.

In addition, because DSW may be dangerous to the environment and human health if not properly handled, section 14 obligates local governments to develop emergency preparedness plans when constructing municipal waste storage facilities. These plans must include emergency preparedness measures regarding *inter alia* hazard identification,<sup>192</sup> preventive measures,<sup>193</sup> emergency planning,<sup>194</sup> emergency response,<sup>195</sup> and the necessary remedial actions,<sup>196</sup> aimed at preventing spillage from entering storm water and/or the environment.<sup>197</sup> Similarly, it is the responsibility of municipalities to ensure that where environmental pollution or water pollution is occurring or likely to occur on the storage facility, the problem must be immediately investigated and addressed.<sup>198</sup>

Section 16 provides for auditing.<sup>199</sup> It requires a municipality to conduct a bi-annual audit. The main aim of the audit is to determine whether the conditions of this standard are adhered to,<sup>200</sup> as well as ensuring the interpretation of every

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186 See reg 7(1)-(3) of the Standard.

187 See reg 13(1) of the Standard.

188 Reg 13(2)(a) of the Standard.

189 Reg 13(2)(2)(b) of the Standard.

190 Reg 13(2)(c) of the Standard.

191 Reg 13(2)(d) of the Standard.

192 Reg 14(1)(a) of the Standard.

193 Reg 14(1)(b) of the Standard.

194 Reg 14(1)(c) of the Standard.

195 Reg 14(1)(d) of the Standard.

196 Reg 14(1)(e) of the Standard.

197 See reg 14(2) of the Standard.

198 See reg 15(6) of the Standard.

199 The section makes provision for both internal and external auditing.

200 Reg 16(2)(a) of the Standard.

data in terms of the smooth functioning of the waste storage facility,<sup>201</sup> amongst others. Lending support to the above is the requirement of section 18 which enjoins municipalities to report every incident as contemplated in terms of section 28 and 30 of NEMA.<sup>202</sup> Again, section 20 provides that when a particular waste management facility is no longer in use by the municipality, the municipality has a duty to apply for decommissioning or closing of the waste management facility. This implies that when a municipality fails to apply for decommissioning of a waste management facility, it could be inferred that the municipality is still running or using the particular waste management facility and hence liable for any pollution and ecological degradation that the facility may cause.

### **2.3 Voluntary requirements**

Voluntary requirements denote those requirements which municipalities may either choose to adhere to or implement in terms of DSWM. Voluntary requirements give a municipality some options as far as it concerns its management of waste. Voluntary requirements hence are different from compulsory requirements because in terms of the latter, municipalities are obliged to comply with the stated provision for waste management. NEM: WA contains some voluntary requirements which municipalities can adhere to when managing DSWM within their jurisdiction. However, the national waste Regulations and Norms and Standards canvassed above contain no voluntary requirements as far as DSWM is concerned. This may be indicative of the fact that municipalities are under an obligation to observe all requirements provided in the existing and relevant Regulations and Norms and Standards.

#### **2.3.1 NEM: WA**

Although a municipality is supposed to adhere to most national waste laws and national and provincial norms and standards for the delivery of waste

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201 Reg 16(2)(b) of the Standard.

202 See reg 18(1)-(4) of the Standard. See further s 19(1)-(3) of the Standard.

management services,<sup>203</sup> a municipality "may" voluntarily undertake certain additional activities in terms of DSWM.<sup>204</sup> This implies that a municipality may go beyond its "enforceable" and explicit call of duty as outlined in waste law and norms and standards, for example. In order to effectively manage DSWM within a municipal area, a municipality may for example, voluntarily set local standards for DSWM. This is true, especially in terms of section 9 of NEM: WA,<sup>205</sup> which provides that a municipality *may* set further measures (in terms of waste service standards) for the effective regulation of waste within its jurisdiction. This include for example, local standards for the separation, compacting and storage of DSWM,<sup>206</sup> local standards for DSWM for disposal by municipalities,<sup>207</sup> local standards for DSWM collected by municipalities,<sup>208</sup> as well as local standard for controlling littering,<sup>209</sup> amongst others.

In addition, because different waste types do not pose the same impacts on human health and the environment in all instances, section 14 provides that an MEC may, based on the impact of a waste type on human health and the environment, request the Minister to declare by notice in the Gazette, a waste to be a priority waste. The declaration of a waste as a priority waste *may* require municipalities to set specific waste management measures to address the waste,<sup>210</sup> in order to reduce or minimise the impacts from the waste.<sup>211</sup> Within the context of this study, this implies that if an MEC reasonably believes DSWM poses serious threats to human health and the environment in a municipal area, the MEC *may* request the Minister to declare it a priority waste in order to set and use specific waste management measures to regulate the waste within the municipal area.

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203 This is in terms of ss 9(1) and (2)(a) of NEM: WA.

204 See s 9(3) of NEM: WA.

205 See s 9(3) of NEM: WA.

206 S 9(3)(a) of NEM: WA.

207 S 9(3)(b) of NEM: WA.

208 S 9(3)(c) of NEM: WA.

209 S 9(3)(d) of NEM: WA.

210 See s 14(1)(a) of NEM: WA.

211 See s 14(1)(b) of NEM: WA.

## **2.4 Observations**

From the analysis presented above, it is evident that NEM: WA gives impetus to the section 24 constitutional environmental right. NEM: WA achieves this via sound compulsory measures that municipalities must observe to regulate pollution and ecological degradation resulting from *inter alia* DSW. The NEM: WA further provides for regulations as well as norms and standards necessary to give effect to the sound management of DSW by municipalities. Most of these instruments' provisions are compulsory. Yet, some voluntary requirements have been included in the NEM: WA which may enable a municipality to go beyond the minimum thresholds for good DSWM. Table 1 below outlines a summary of the compulsory and voluntary requirements of sound DSWM.

**TABLE 1: SUMMARY OF COMPULSORY AND VOLUNTARY REQUIREMENTS**

COMPULSORY REQUIREMENTS		VOLUNTARY REQUIREMENTS	
NEM: WA			
S 9(1) and (2)	Municipality must provide waste service standards	S 9 (3)	Municipalities may set waste service standards
S 10(3) and (5)	Municipality must designate a waste management officers	S 14 (1) and (2)	Municipalities may develop waste management measures
S 11 (4) and 7 (b)	Municipality to prepare an integrated waste management plan		
S 12 (1)(a)-(f)	Municipality to provide details of the content of the IWMP for waste management		
S 13	Municipality to report on the implementation of the IWMP		
S 15	Municipality to declare waste priority areas		
S 16	Municipality to provide general duties for the management of waste		
S 17	Municipality to re-use, reduce, recover and recycle waste		
S 19	Municipality to provide waste management activities		
S 21	Municipality to provide standard requirements to store waste		
S 22 (1)	Municipality to develop waste storage facility		
S 23(1) and (2)	Municipality to provide waste collection services		
Ss 24(a) – (c)	Municipality to collect waste from premises		
S 25	Municipality to transport waste		
S 26	Municipality to prohibit unauthorised disposal of waste		
S 27(1) and (2)	Municipality to prohibit littering		

COMPULSORY REQUIREMENTS		VOLUNTARY REQUIREMENTS
S 44	Municipality to ensure cooperative governance in its managing of waste	
S 63	Municipality to provide information on waste management	
S 66	Municipality to prepare and submit waste impact reports	
<b>2. Regulations</b>		
<b>2.1 National Waste Information Regulation</b>		
S 5(1)-(4)	Municipality must register information of waste management with the south african information waste system, immediately after commencing a waste management facility	
S 8(1) and (2)	Municipality must report information regarding the leve of waste management in the municipal area	
S 9(1)	Municipality to issue waste management licence	
S 10(1)(a)	Municipality to ensure record keeping of waste information	
<b>(3)Standards</b>		
<b>3.1 Draft National Norms and Standards for the Storage of Waste</b>		
S 5(1)-(4)	Municipality must locate and construct a waste management facility	
S 6(1)-(6)	Municipality to adhere to the design of waste management facility	
S 7(1)-(3)	Municipality to properly manage waste storage facility	
S 8(1)-(3)	Municipality to operate a waste management facility	
S 9	Municipality to set general requirement for waste storage containers	
S 10	Municipality to set requirement for ground waste storage facility	

COMPULSORY REQUIREMENTS		VOLUNTARY REQUIREMENTS
S 14	Municipality to prepare emergency preparedness plan	
S 15	Municipality to monitor and inspect waste management facilities	
S 16	Municipality to provide for auditing	
S 18	Municipality to provide reports on waste management	
S 19	Municipality to provide and keep records on waste management	
S 20	Municipality to decommission waste management facilities	
<b>3.2 National Domestic Waste Collection Standards</b>		
S 4(1)-(6)	Municipality to provide for collection of DSW	
S 5	Municipality to establish drop-off centre for recyclable DSW	
S 6	Municipality to provide DSW collection vehicles	
S 7	Municipality to provide and ensure health and safety measures for workers	
S 8	Municipality to raise deals with awareness on waste issues	
S 9	Municipality to provide waste collection customer service	
<b>3.3 National Norms and Standards for Disposal of Waste to Landfill</b>		
S 3(1) and (3)	Municipality to provide for landfill classification and containment barrier design	
S 4(1), (2) and (5)	Municipality to set standards for the disposal of waste to landfill	
S 5(1) and (2)	Municipality to restrict access to waste storage facilities	



### **3 Analysis of the domestic solid waste management instruments of two municipalities in Limpopo Province**

#### ***3.1 Introduction***

The purpose of this chapter is to critically assess the DSWM instrumentation (waste management by-laws and IWMPs in particular) of two municipalities in the LP against the legal requirements contained in national waste law, discussed in the previous chapter. This chapter investigates the DSW instruments of GTM and LM specifically. These municipalities were chosen because of the particular challenges they are known to face with in relation to DSWM.<sup>212</sup> Both municipalities for example, face significant challenges in terms of the provision of DSW receptacles to households.<sup>213</sup> In Lephalale, DSW service delivery is for example, only provided in urban areas while the rural areas remain neglected.<sup>214</sup>

#### ***3.2 Municipality 1: Tzaneen***

##### ***3.2.1 Background to the Greater Tzaneen Municipality***

The GTM is situated in the eastern quadrant of the LP within the Mopani District municipality. Together with Greater Giyani, BA-Phalaborwa, Maruleng and Greater Letaba Municipalities, it forms part of the Mopani District Municipality. GTM has a surface area of 3243 square kilometers with a population of 390 095 people and it encompasses the towns of Tzaneen and Haenertsburg with their suburbs, three townships and 125 villages (found mostly in the south-east and north-west of the area). 80 percent of the population resides in these rural areas. There are 108 926 households in GTM, of which only 10 895 receive waste management services.<sup>215</sup> GTM is characterised by farming activities, retail and tourism as the main economic sectors.

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212 See for example the 2013 Tzaneen Municipal IDP 59.

213 For example, the Ga-Seleka area (see s 5 of IWMP of LM).

214 For example, the Ga-Seleka area (see s 5 of IWMP of LM).

215 See 2013 Tzaneen Municipal IDP 59.

The vision of GTM is to: “stimulate economic growth through sustainable, integrated service delivery and partnerships.”<sup>216</sup> This vision of the municipality is clearly reflected in its IDP which states that the municipality aims: “to be the fastest growing economy in Limpopo, where all households have access to sustainable basic services.”<sup>217</sup> This vision is equally reflective of the municipality's refuse by-law, which is to provide a service for the collection and removal of waste from premises.<sup>218</sup> What follows is an analysis of the municipality's refuse by-law and IWMP in order to determine whether these meet the requirements for DSWM as set by the Constitution and local government and waste law.

### 3.2.2 Refuse by-law (2004)

The objectives of the GTM refuse by-law are amongst others to provide a service for the collection and removal of business and domestic refuse from premises.<sup>219</sup> This objective of the municipality's refuse by-law resembles section 24 of the NEM: WA<sup>220</sup> which makes waste (including DSW) collection a duty of municipalities. Section 24 restricts any person from collecting waste from premises, unless such a person is a municipal service provider, which includes a municipality.<sup>221</sup> This objective of the municipal refuse by-law speaks to Regulation 4 of the NDWCS which requires municipalities to provide equitable waste (DSW) services to all households within the jurisdiction of the municipality.

In order to efficiently and effectively provide DSW collection services, section 4 of the by-law states that the municipality shall provide refuse collection bins to all households.<sup>222</sup> This seems to imply a mandatory requirement by the municipality created in terms of its own law. The essence of collecting DSW is to avoid or reduce the environmental and health impacts DSW could pose.<sup>223</sup> However, given that municipal waste receptacles and service delivery is not being provided

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216 2013 Tzaneen Municipal IDP 8.

217 2013 Tzaneen Municipal IDP 8.

218 See s2(1)-(3) of the by-law.

219 See s2(1)-(3) of the by-law.

220 S 24 read together with ss 23(1)(a)-(d) and 23(2) of NEM: WA.

221 See s 24(a) of NEM: WA.

222 See s 4(1) of the by-law.

223 See CSIR “Municipal Waste Management-good Practice” 4.

to rural areas in the GTM,<sup>224</sup> implies that the collection of DSW in the rural areas is a challenge the municipality faces with regard to DSWM.

Section 18 prohibits littering,<sup>225</sup> by restricting the discarding of refuse onto public space, vacant land; vacant erf; a stream; or a watercourse.<sup>226</sup> This requirement of the by-law extends to include the prohibition of sweeping refuse into a gutter<sup>227</sup> or onto a public space or in the wording of paragraph (c) prohibit "any person under his control to do any of the acts referred to in paragraph (a) and (b)."<sup>228</sup> This requirement of the by-law resembles section 27 of NEM: WA relating to littering.<sup>229</sup> The by-law explicitly prohibits dumping.<sup>230</sup> The by-law requires nobody to abandon or cause to abandon DSW.<sup>231</sup> This seems to create a mandatory duty of the municipality to ensure that nobody abandons or cause to abandon DSW.<sup>232</sup> Should the municipality dispose of any abandoned or dumped property; the owner of the property is liable for any costs incurred by the municipality.<sup>233</sup> The abandonment of any property or DSW amounts to non-compliance with the provisions of the by-law. Such non-compliance constitutes an offence and upon conviction, a person is liable to a fine of R2000-00 or imprisonment of 1 year.<sup>234</sup>

### 3.2.3 IWMP (2003)

In terms of NEM: WA, municipalities are under an obligation to develop and implement IWMPs.<sup>235</sup> An IWMP indicates explicitly how waste and DSW in a municipal area ought to be managed.<sup>236</sup> This section examines DSWM within the framework of the GTM's IWMP. The aim of an IWMP is to provide a

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224 See 2013 Tzaneen Municipal IDP 59. See further CSIR "Municipal Waste Management-good Practice" 13.

225 See s 18(1) of the by-law.

226 See s 18(1)(a) of the by-law.

227 See s 18(1)(b) of the by-law.

228 See s 18(1)(c) of the by-law.

229 See ss 27(1) and (2) of NEM: WA.

230 See s 19 of GTM by-law.

231 See s 19(1) of GTM by-law.

232 See s 19(1) of GTM by-law. See further s 20 of the by-law.

233 See ss 21(1) and (2)(a) and (b) of the by-law.

234 See s 28 of GTM by-law.

235 See s 11(4)(i) of NEM:WA.

236 See s 11(4)(ii) of NEM:WA.

comprehensive and integrated waste management service which is equitable, effective and sustainable to manage the impact of waste on the environment.<sup>237</sup> Integrated waste management could be achieved through waste minimisation projects like: recycling; re-use; rural waste; minimisation; treatment and disposal projects.<sup>238</sup> However, recycling at source is at present problematic because of the withdrawal of local recycling collectors, for example.<sup>239</sup>

Section 12 of the IDP provides that the mandate of GTM is to provide all households with a basic refuse removal service in order to protect human health and the environment.<sup>240</sup> This duty aligns with regulation 4 of the NDWCS which requires municipalities to effectively perform their duties of refuse collection in areas within their jurisdiction.<sup>241</sup> To achieve this mandate, the municipality provides full kerbside refuse removal service to five towns<sup>242</sup> which represent 11 percent of all households.<sup>243</sup> This in terms of section 12 also represents public-off-loading facilities.<sup>244</sup> Furthermore, municipal waste collected must be disposed of in municipal landfill sites fully constructed in accordance with construction plans. Section 12(9) makes provision for a well-constructed municipal landfill site which suites the construction requirements envisaged in regulation 6 of the NNSSW.<sup>245</sup>

With the goal of the GTM being to give effect to the constitutional requirement of a healthy environment that is not harmful to human health and well-being,<sup>246</sup> the municipality's IWMP is built around five principles which include: the polluter pay, duty of care, precautionary principle, hierarchical approach and best practical environmental option, public participation and education.<sup>247</sup> In addition, the IWMP

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237 See Bosman "Integrated waste management" 725.

238 See Chap 3 of the IDP of Tzaneen Municipality 2013. See further s 12(15) of the by-law.

239 See s 12(4) of GTM IDP.

240 See s 12(2) of GTM IDP.

241 See reg 4(1) of the Standard.

242 These include: Nkowankowa; Lenyenye; Letsitele; Haenertsburg and Tzaneen suburbs.

243 See s 12(5) of GTM IDP.

244 See s 12(11) of GTM IDP.

245 See reg 6(1)-(6) of the Standard. See further reg 3(1)-(3) of the *National Norms and Standards for Disposal of Waste to Landfill* (NNSDWL).

246 See s 1(2)(b) of the GTM IWMP.

247 See s 1(2)(e) of the GTM IWMP.

employs the waste management hierarchy<sup>248</sup> in order to effectively and efficiently manage waste in the municipality. The IWMP requires that waste in the municipality be managed in an integrated fashion.<sup>249</sup> Integrated waste management refers to "the integrated planning, implementation, monitoring and review of waste management measures in order to ensure sustainability and prevent detrimental impacts on human health and the environment."<sup>250</sup>

### 3.2.4 Observations

It is evident from the exposition of GTM's existing waste instrumentation that the municipality strives to accomplish its developmental duties as mandated by the Constitution, local government law and waste law. It is observed from the above analysis that the refuse by-law and IWMPs of GTM share considerable similarities with the national waste law, and norms and standards as far as DSWM is concerned. The IWMP for example is built around five principles which are relevant for the DSWM. Some of these principles also speak to the section 2 principles of NEMA, which are important and applicable principles of waste management in terms of NEM: WA.<sup>251</sup> Similarly, the IWMP provides for the management of DSW in an integrated manner,<sup>252</sup> this correlates with section 6 of

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248 The waste hierarchy refers to option for waste management. The hierarchy is arranged in descending order of priority and includes: waste avoidance and reduction, re-use and recycle, recovery and treatment and disposal as the last resort. Whereas the first three steps deal with measures necessary to avoid to the extent feasible the generation of waste at source, the last two steps deal with measures taken to reduce the potential risk posed by waste in an effort of protecting the environment. This implies that waste management could be divided into two groups namely waste management aimed at minimisation and waste management aimed at final disposal or discharge (see Bosman "Integrated waste management" 708).

249 See s 1(2)(f) of the GTM IWMPs.

250 See Bosman "Integrated waste management" 701. McDougall *et al* defines integrated waste management as: "An overall approach to waste management; it combines a range of collection and treatment methods to handle all materials in the waste stream in an environmentally effective, economically affordable and socially acceptable way" (see McDougall *et al Solid waste management* 143).

251 See s 2 of NEM: WA.

252 See s1(2)(f) of the GTM IWMP.

NEM: WA which obliges the development and implementation of a NWMS.<sup>253</sup> This strategy requires that waste be managed in an integrated fashion.

In terms of the by-law, section 18 speaks to section 27 of NEM: WA as far as littering is concerned. It places a restriction on the discarding of refuse onto public space, and vacant land amongst others. Furthermore, section 2 of the refuse by-law requires the municipality to provide refuse collection and removal services from premises within its area.<sup>254</sup> This section equally speaks to regulation 4 of NDWCS, which obliges municipalities to provide equitable waste collection services to all households within its jurisdiction.<sup>255</sup>

### **3.3 Municipality 2: Lephalale**

#### *3.3.1 Background to the Lephalale Municipality*

The Lephalale Municipality is located in the north western part of the Limpopo Province within the Waterberg District. The municipality borders Thabazimbi, Modimolle, Mogalakwena and Blouberg municipalities and is the biggest in the province.<sup>256</sup> The town is located 280 km from Tshwane and is a gateway to Botswana. The economy of Lephalale<sup>257</sup> is dominated by mining, electricity production, tourism, agriculture and game farming. The Waterberg District Municipality comprises of six local municipalities.<sup>258</sup> In accordance with requirement of municipalities to develop an IDP, the IDP of LM sets the municipality's vision, targets, and goals of achieving local government's developmental planning duty. The vision of LM is to: "build a vibrant city and be the hub of Africa."<sup>259</sup> This vision is equally reflected in the IDP's mission

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253 The central objective of the NWMS is to set plans, guidelines, systems and procedures relating to the management of waste with emphasis on re-use, recycle, recovery, treatment and disposal of waste as a last resort.

254 See s 2(1)-(3) of GTM refuse by-law.

255 See also s 24 of NEM: WA.

256 It has a total area of 14000km<sup>2</sup>.

257 The name was changed from Ellisras (originally named after Patrick Ellis and Piet Erasmus who settled in the area in the 1930's) to Lephalale in 2002.

258 These are the Lephalale, Bela-Bela, Mookgopong, Modimolle, Mogalakwena and Thabazimbi Municipalities.

259 See the LM IDP 8.

statement which is: "we are committed to rural development, provision of quality, sustainable and affordable, financial viability and good governance, local economic development and job creation". In fulfilling the objective of this mission statement, the municipality strives to protect certain values which include among others environmental protection.<sup>260</sup>

### 3.3.2 Refuse Management By-law (2008)

The objective of LM's Refuse Management By-law is to regulate the generation, storage and collection of DSW.<sup>261</sup> The by-law applies to all local areas under the control of LM that is, the areas within its demarcated area of jurisdiction. Section 3 of the LM waste by-law makes the collection of DSW from all households under the control of LM, a mandatory duty of the municipality.<sup>262</sup> This duty however, is subject to the payment of a fee<sup>263</sup> which the municipality must inform the service users of the locality about.<sup>264</sup> This duty of DSW collection in the municipal by-law, resembles the requirement of section 23 of NEM: WA which requires municipalities to provide waste (which may also include DSW) collection services to the inhabitants of its area.<sup>265</sup> The duty of waste collection is further illustrated by section 24 of NEM: WA, which explicitly restricts the collection of waste (equally DSW) from any premise except by a service provider, which in this sense implies the municipality.<sup>266</sup>

Furthermore, section 3 of the LM refuse by-law corroborates the provision of regulation 4 of the NDWCS. This regulation requires that a local municipality provides equitable waste collection services to all households within its jurisdiction.<sup>267</sup> Unlike section 4 of the GTM by-law which requires the municipality to provide refuse collection bins to all households, section 6 requires every household to provide at its "own expense a sufficient number of portable covered

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260 See the IDP 9.

261 See s 2 of Lephale's by-law.

262 See s 3(1) to be read with s 11 of the by-law.

263 See s 3(2)(a) of Lephale's by-law.

264 See ss 3(4) and 4(1)(a)-(c) of Lephale's by-law.

265 See ss 23(1)(a)-(d) and 23(2) of NEM: WA.

266 See s 24(a) of NEM: WA.

267 See reg 4 of the Standard.

receptacles of a size and design approved by the municipality<sup>268</sup> or it is insufficient for the storage and collection of DSW.<sup>269</sup> In addition, all DSW must be disposed in the refuse receptacles meant for that purpose.<sup>270</sup> It could be inferred from this that, the disposal of DSW other than in refuse collection receptacles constitute littering, which is an offence under the by-law.<sup>271</sup> In terms of the by-law, it is also the duty of households to ensure that the size of DSW refuse collection receptacles does not hinder municipal employees from collecting waste,<sup>272</sup> or is likely to cause nuisance to the municipal waste employee.<sup>273</sup> Should any of the above happen, the municipality has a duty to serve households with a written notice requiring them to provide adequate DSW receptacles<sup>274</sup> or "racks or other means of storing receptacles or packages/bundles of waste."<sup>275</sup>

The by-law explicitly prohibits littering.<sup>276</sup> Section 23 requires that DSW must not be discarded anywhere in the municipality other than in the approved receptacles for storing DSW,<sup>277</sup> or disturb anything or remove anything which has been placed in a receptacle for collection,<sup>278</sup> or sweep any waste into a gutter or public place.<sup>279</sup> This implies that anyone who litters or causes to litter waste is committing an offence under the by-law<sup>280</sup> and upon conviction the concerned is liable to a fine or imprisonment.<sup>281</sup> It is important to note that, this resembles section 27 of NEM: WA which equally prohibits littering.<sup>282</sup>

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268 See ss 6(1) and (2) of Lephalale's by-law.

269 See s 6(4)(b) of Lephalale's by-law.

270 See s 6(5) of the Lephalale's by-law.

271 See s 36 of the Lephalale's by-law.

272 See s 6(4)(a) of Lephalale's by-law.

273 See 6(4)(d) of Lephalale's by-law.

274 See s 6(4)(d)(i) of Lephalale's by-law.

275 See s 6(4)(d)(ii) of Lephalale's by-law.

276 See s 23 of Lephalale's by-law.

277 See s 23(1)(a) of Lephalale's by-law. See further s 11 of the by-law.

278 See s 23(1)(b) of Lephalale's by-law.

279 See s 23(1)(c) of Lephalale's by-law.

280 See s 36 of Lephalale's by-law.

281 According to s 36, the penalty is a fine (with no amount stated), and in default of payment to an imprisonment (still no year(s) stated) or to such imprisonment without the option of a fine of both such imprisonment and fine.

282 See s 27(1) and (2) of NEM: WA.



Moreover, the LM refuse by-law prohibits dumping of waste (including DSW).<sup>283</sup> According to the by-law, no person is allow to dump, accumulate, place, or deposit any DSW on road, public footway, pavement or any road verge,<sup>284</sup> or on any commonage land or any other public place to which the public has access,<sup>285</sup> or on any drain or watercourse, street<sup>286</sup> or on private or municipal land.<sup>287</sup> It could be inferred from this that any of the above acts constitute dumping. Dumping is an offence in terms of the by-law and upon conviction, the concern is liable to a fine or imprisonment.<sup>288</sup>

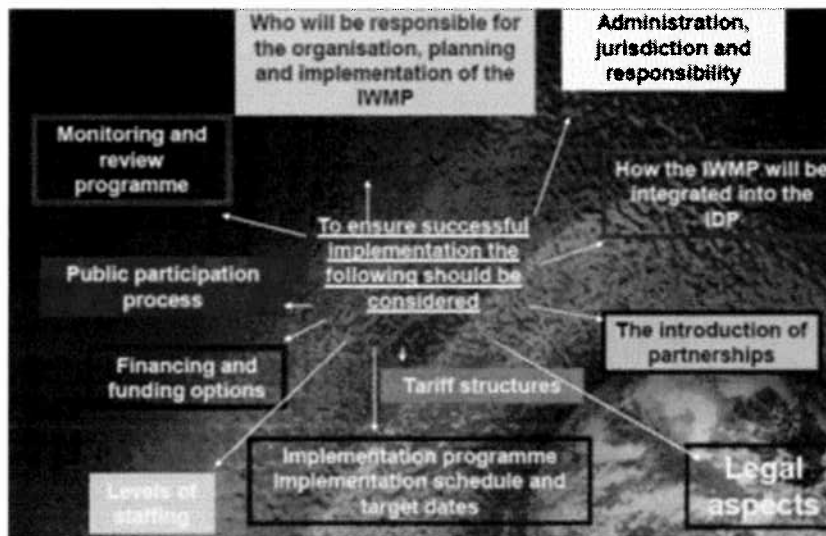
### 3.3.3 IWMP (2011)

Waste disposal in LM is a serious problem.<sup>289</sup> This is as a result of unavailable land for disposal. There is need therefor to promote and ensure waste minimisation and recycling in order to sustain the current waste disposal site's lifespan. However, the 2011 IWMP of LM strives to provide for proper waste management in the municipality as shown below.

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283 See s 24 of Lephalale's by-law.  
284 See s 24(1)(b)(i) of Lephalale's by-law.  
285 See s 24(1)(b)(ii) of Lephalale's by-law.  
286 See s 24(1)(b)(iii) of Lephalale's by-law.  
287 See s 24(1)(b)(iv) of Lephalale's by-law.  
288 See s 36 of Lephalale's by-law.  
289 2011 IWMP for LM 4 (on file with the author).

Figure 1: Schematic representation of the IWMP implementation strategy<sup>290</sup>



The IWMPs provides for the storage of waste.<sup>291</sup> In order to store waste both urban and rural areas use the plastic bag system.<sup>292</sup> Similarly, specialised bins for example, AZTECA, are placed in strategic places for people to discard recyclable items.<sup>293</sup>

Section 5 of the IWMP requires the LM to collect DSW from all households within its jurisdiction.<sup>294</sup> However, this duty of the municipality appears to pose serious problems as only urban areas are provided DSW collection services.<sup>295</sup> This is evident from the fact that the DSW's collection service represents only 30 percent of the municipality's boundaries implying that rural areas for example, Ga-Seleka, are currently not serviced.<sup>296</sup> It could be inferred from this that, there is need for the LM to expand its DSW collection services to include rural areas.

290 Taken from Lephalale's IWMP (2011) 4.

291 See s 3 of Lephalale's IWMP.

292 See the IWMP 10.

293 See s 3 of Lephalale's IWMP.

294 See s 5 of Lephalale's IWMP.

295 See s 5(2) of Lephalale's IWMP.

296 See s 5(2) of Lephalale's IWMP. See further the IWMP 17 for a tabular representation of the level of DSW collection service provided in the LM.

As required by NEM: WA and the NWIR, a municipality must develop a waste information system.<sup>297</sup> The waste information system constitutes a requirement of the IWMPs. This system enables the municipality to set targets on how to manage waste within its jurisdiction. However, the LM seems to lack a waste information system in its IWMP.<sup>298</sup>

#### 3.3.4 Observations

From the above it would appear that there is considerable provision for the management of DSW in the LM. However, the municipality's refuse by-law fails to, for example; spell out appropriate penalty for non-compliance with the provisions of the by-law. It only states that, defaulters will be liable to a fine or imprisonment without any precision on the amount of the fine or the term(s) of imprisonment. It is suggested that the by-law be reviewed to make provision for this precision. Another worrisome issue is the fact that, the by-law fails to expressly create with a duty with respect to refuse receptacles to households.

#### 3.4 Final remarks

The analysis above indicates how DSW is managed in GTM and LM. These instrument of these municipalities share several similarities in terms of DSWM with national waste law. However, these two municipalities appear to face some problems with the effective management of their DSW service delivery of some duties as mandated by the Constitution, waste law and local government law. In both municipalities there is for example, no provision of DSW receptacles to be provided to all households,<sup>299</sup> although this may be a national problem.<sup>300</sup> In addition, NEM: WA and the NWIR compel municipalities to develop a waste information system as it enables them to set targets on how to manage waste

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297 See s 60(1) of NEM: WA and ss 2 and 4 of the National Waste Information Regulation (NWIR).

298 See s 8 of the IWMP.

299 The LM for example does not provide DSW collection services in rural areas, let alone the provision of DSW receptacles.

300 See CSIR "Municipal Waste Management- good Practice" 13. See further Polokwane IDP 12. The Lephalale's by-law for example, instead requires households to make provision for their own receptacles at their own expense.

within its jurisdiction. However, the clear absence of a waste information system in the LM<sup>301</sup> may illustrate the difficulty this municipality specifically faces with regard to DSWM, generally.

### ***3.5 Recommendations***

#### ***3.5.1 Recommendations in with respect to GTM***

The analysis of the GTM canvassed above illustrates the extent to which the municipality strives to execute its duties of DSW service delivery as mandated by the Constitution and applicable waste law. The refuse by-law and IWMP of GTM provides for considerable provisions for the regulation of DSW within its municipal jurisdiction. These provisions are similar to the national waste law, regulations and national norms and standards. For example, section 2 of the refuse by-law requires the municipality to provide for the collection and removal of DSW services to all households in the municipal area. Given that DSW receptacles may ease its collection and removal, section 4 obliges the municipality to provide refuse collection bins to all households.

However, the provision of DSW refuse bins or receptacles appears to be a significant problem to the municipality and by extension the whole of South Africa.<sup>302</sup> It is recommended that the municipality address this problem, especially with respect to the rural areas where financial constraints impede the provision of receptacles to some households. This could be achieved through IDP review and budgeting processes for example whereby, the municipality request for funding from the government to execute this duty. It is important to underline the fact that the rationale for DSW collection is "to separate the generated waste from the community for health reasons."<sup>303</sup> It could be argued that because the provision of DSW receptacles is inextricably linked to effective collection of DSW implies the need for GTM to provide them. DSW receptacles may curb the illegal dumping of DSW and in this way assist the municipality to properly manage this

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301 See s 8 of the LM IWMPs.

302 See CSIR "Municipal Waste Management- good Practice" 13.

303 See CSIR "Municipal Waste Management- good Practice" 4.

waste category. The provision of receptacles to all households could have a snowball effect in that it could potentially serve as an example for other municipalities to follow in the province

In addition, recycling of DSW may constitute an important strategy to minimise the impact of DSW on human health and the environment. It is on this basis that the aim of the GTM's IWMP is to provide a comprehensive and integrated waste management service which is equitable, effective and sustainable via minimisation projects which includes among others, recycling.<sup>304</sup> However, recycling of DSW remains a major problem in the municipality.<sup>305</sup> It is suggested that the recycling of separated waste at source could play a significant role in DSWM. Like the provision of DSW receptacles, the development and implementation of recycling measures in the GTM, will serve as a sound measure of DSWM, which could be followed by other municipalities in the province.

### *3.5.2 Recommendations with respect to LM*

The LM sets measures for DSWM which reflect the ideals of the national waste law, regulations and national norms and standards. For example, the municipality's refuse by-law provides that the collection and removal of DSW from households is a duty of the municipality. However, this service is only provided in urban areas while rural areas are excluded.<sup>306</sup> It is suggested that the municipality expands its DSW service delivery to include rural areas. In view of the fact that DSW receptacles may ease collection of the waste, the provision of DSW receptacles appears to act as an effective measure for DSWM. The provision of DSW receptacles therefore becomes a compulsory requirement for the LM to meet. However, the municipality instead requires households to make provision for their own DSW receptacles at their own expense. This condition of the municipality is contrary to national waste law which provides for equitable and affordable service delivery. It could be inferred from this that, because some

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304 See Chap 3 of GTM IDP and s 12(5) of the refuse by-law.

305 See s 12(4) of GTM IDP.

306 See s 5 of the IWMP of LM.

households in rural areas due to financial constraints may be unable to afford these receptacles, the implication is a continuous dumping of DSW, for example, on vacant land and streets.<sup>307</sup> This arguably demonstrates that DSW management in the LM will continue to be a problem. It is suggested that the municipality should provide DSW receptacles to residents in the rural areas, as some of them may not afford to buy them.

In addition, the LM municipal refuse by-law requires the municipality to institute stringent measures for the management of DSW in the municipal area. One important aspect of this by-law is the imposition of fine or imprisonment or both on anyone who fails to comply with the provision(s) of the by-law. However, a noticeable flaw of this provision in the by-law is that, the fine or imprisonment is imprecise.<sup>308</sup> The lack of precision of a penalty may prevent the by-law from resulting in the punishment of defaulters. In order to avoid this, there is a need for the revision of the by-law, to include a precise penalty clause applicable to anyone who does not comply with the provision(s) of the by-law.

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307 See Medina 2007 "Informal Collection and Recycling of Solid Waste" 5 and Bosman "Integrated waste management" 699.

308 The refuse by-law only states that upon conviction, the concern will be liable to a fine or imprisonment or imprisonment without fine or both. The impreciseness lies in the fact that the by-law does not state the amount of the fine or term/period of imprisonment.

**TABLE 2: COMPARATIVE SUMMARY OF COMPULSORY REQUIREMENTS IN NATIONAL LAW AND THE LM AND GTM'S DSWM INSTRUMENTATION**

COMPULSORY REQUIREMENT	BY-LAW: LEPHALALE MUNICIPALITY		BY-LAW: GREATER TZANEEN MUNICIPALITY		WASTE MANAGEMENT PLANS: LEPHALALE MUNICIPALITY		WASTE MANAGEMENT PLANS: GREATER TZANEEN MUNICIPALITY	
	NEM: WA	Corresponding provision	Corresponding provision	Corresponding provision	Corresponding provision	Corresponding provision	Corresponding provision	
S 9(1)	Municipality must exercise its executive authority to deliver waste management services	S 2 Municipality to regulate waste generation, storage and collection	S 2 Municipality to provide waste delivery services to all people in the municipal area		No corresponding provision	No corresponding provision	No corresponding provision	
S 9(2)	Municipality to exercise its executive authority and perform its duties in relation to waste services e.g by adhering to all national norms and standards for waste management	No corresponding provision	No corresponding provision		No corresponding provision	No corresponding provision	No corresponding provision	
S 11 (4)	Municipality to develop and submit an integrated waste management plan	No corresponding provision	No corresponding provision		No corresponding provision- although the existence of a plan makes for compliance with the national law provision	No corresponding provision- although the existence of a plan makes for compliance with the national law provision	No corresponding provision- although the existence of a plan makes for compliance with the national law provision	
S 11 (7)(b)	Municipality must follow a consultative process in finalising its integrated waste management plan	No corresponding provision	No corresponding provision		No corresponding provision	No corresponding provision	No corresponding provision	

COMPULSORY REQUIREMENT		BY-LAW: LEPHALALE MUNICIPALITY	BY-LAW: GREATER TZANEEN MUNICIPALITY	WASTE MANAGEMENT PLANS: LEPHALALE MUNICIPALITY	WASTE MANAGEMENT PLANS: GREATER TZANEEN MUNICIPALITY
S 12 (1)(b)	Municipality to provide details of the content of the integrated waste management plan	No corresponding provision	No corresponding provision	No corresponding provision	No corresponding provision
<b>NEM: WA</b>		<b>Corresponding provision</b>	<b>Corresponding provision</b>	<b>Corresponding provision</b>	<b>Corresponding provision</b>
S 13 (1)	Municipality to provide annual report on the implementation of the integrated waste management plan	No corresponding provision	No corresponding provision	No corresponding provision	No corresponding provision
S 16 (1)	Municipality to avoid the generation of waste	No corresponding provision	No corresponding provision	No corresponding provision	No corresponding provision
S 17 (1)	Municipality to recycle waste	No corresponding provision	No corresponding provision	Municipality to recycle waste	Municipality to recycle waste
S 21	Municipality to meet general standards for storage of waste e.g. with respect to containers for storage and adequate measures to prevent spillage or leakage	S 8	S 5	S 3	S 2.4 (d)-(e)
S 23 (1)	Municipality to provide equitable waste collection services to all people in the municipal area	Municipality to provide affordable refuse collection services to all households	S 2 (1)-(3)	Municipality to provide affordable and equitable refuse collection services to all households	No corresponding provision
S 23 (2)	Municipality to provide as far as reasonably possible	No corresponding provision	S 4	S 6	S 2.4(d)



COMPULSORY REQUIREMENT	BY-LAW: LEPHALALE MUNICIPALITY	BY-LAW: GREATER TZANEEN MUNICIPALITY	WASTE MANAGEMENT PLANS: LEPHALALE MUNICIPALITY	WASTE MANAGEMENT PLANS: GREATER TZANEEN MUNICIPALITY
containers or receptacles for recyclable waste that are accessible to the public		households in the municipal area		(i)

COMPULSORY REQUIREMENT		BY-LAW: LEPHALALE MUNICIPALITY		BY-LAW: GREATER TZANEEN MUNICIPALITY		WASTE MANAGEMENT PLANS: LEPHALALE MUNICIPALITY		WASTE MANAGEMENT PLANS: GREATER TZANEEN MUNICIPALITY	
NEM: WA		Corresponding provision		Corresponding provision		Corresponding provision		Corresponding provision	
S 24	Municipality to collect waste from all households	S 11 (1)-(9)	Municipality to provide waste collection services to all households in the municipal area	S 2	Municipality to provide refuse collection services to all people in the municipal area	S 5	Municipality to provide refuse collection services to all households	S 12(5)	Municipality to provide refuse collection services to all households
S 25	Municipality to transport waste	S 16(1)	Municipality to transport waste	S 23	Municipality to transport waste		No corresponding provision	S 2.4 (e)	Municipality to transport waste
S 26 (1)-(2)	Municipality to prohibit unauthorised disposal of waste e.g. the disposal of waste on land, water body	S 24	Municipality to prohibit dumping of waste on land, streets and gutters	S 19	Municipality to prohibit dumping of waste on land and streets		No corresponding provision		No corresponding provision
S 27 (1)-(2)	Municipality to prohibit littering	S 23(1)	Municipality to prohibit littering	S 18	Municipality to prohibit littering	S 4	Municipality to provide for street cleaning	S 2.3 (g)	Municipality to provide for street cleaning
S 44	Municipality to ensure and promote cooperative governance with regard to waste management		No corresponding provision		No corresponding provision		No corresponding provision		No corresponding provision
S 63 (2)	Municipality to provide information regarding the status of waste management in the municipal area		No corresponding provision		No corresponding provision	S 8	Municipality to develop waste information system		No corresponding provision
S 67	Municipality to prosecute for non-compliance with waste management measures	S 36	Municipality to prosecute for non-compliance	S 28	Municipality to prosecute for non-compliance		No corresponding provision		No corresponding provision

COMPULSORY REQUIREMENT	BY-LAW: LEPHALALE MUNICIPALITY		BY-LAW: GREATER TZANEEN MUNICIPALITY		WASTE MANAGEMENT PLANS: LEPHALALE MUNICIPALITY		WASTE MANAGEMENT PLANS: GREATER TZANEEN MUNICIPALITY	
		Corresponding provision		Corresponding provision		Corresponding provision		Corresponding provision
<b>NEM: WA</b>								
<b>NATIONAL WASTE INFORMATION REGULATIONS</b>								
S 8(1)-(9)	Municipality to provide waste information on the level of waste management in the municipal area	No corresponding provision		No corresponding provision	S 8	Municipality to develop waste information system		No corresponding provision
S 9(1)-(2)	Municipality to keep records of submitted information	No corresponding provision		No corresponding provision		No corresponding provision		No corresponding provision
S 12	Municipality not to provide incorrect or misleading information	No corresponding provision		No corresponding provision		No corresponding provision		No corresponding provision
<b>DRAFT NATIONAL NORMS AND STANDARDS FOR THE STORAGE OF WASTE</b>								
Reg 5 (1)-(4)	Municipality to locate and construct a waste storage facility	Municipality to provide standards for storage of waste receptacles	S 5	Municipality to provide standards for the storage of refuse bins	S 3	Municipality to develop waste storage facility	S 2.4 (d)-(e)	Municipality to provide waste storage facility
Reg 6 (1)	Municipality to construct a waste storage facility under the supervision of a registered engineer	No corresponding provision		No corresponding provision		No corresponding provision		No corresponding provision
Reg 7(1)-(3)	Municipality to control access to waste storage facility	No corresponding provision		No corresponding provision		No corresponding provision		No corresponding provision
Reg 8(1)-(3)	Municipality to manage its waste storage facility in a way that is free from	No corresponding provision		No corresponding provision		No corresponding provision		No corresponding provision

COMPULSORY REQUIREMENT		BY-LAW: LEPHALALE MUNICIPALITY		BY-LAW: GREATER TZANEEN MUNICIPALITY		WASTE MANAGEMENT PLANS: LEPHALALE MUNICIPALITY		WASTE MANAGEMENT PLANS: GREATER TZANEEN MUNICIPALITY	
	odour								
Reg 9 (1)-(11)	Municipality to meet general standards for storage of waste e.g. with respect to containers for storage	S 8	Municipality to provide standards for storage of waste receptacles	S 5	Municipality to provide for standards for the storage of refuse bins	S 3	Municipality to develop waste storage facility	S 2.4 (d)-(e)	Municipality to provide waste storage facility
Reg 10	Municipality to meet with the minimum requirements for ground waste storage facility		No corresponding provision		No corresponding provision		No corresponding provision		No corresponding provision
Reg 11	Municipality to meet with the minimum requirements for underground waste storage containers		No corresponding provision		No corresponding provision		No corresponding provision		No corresponding provision
Reg 13 (1)	Municipality to provide training for employees		No corresponding provision		No corresponding provision		No corresponding provision		No corresponding provision
Reg 14	Municipality to provide emergency preparedness plan on waste storage facilities		No corresponding provision		No corresponding provision		No corresponding provision		No corresponding provision
<b>NATIONAL DOMESTIC WASTE COLLECTION STANDARDS</b>									
Reg 4(1)	Municipality to provide equitable waste collection to all households in the municipal area	S 3-4	Municipality to provide affordable refuse collection services to all households	S 2 (1)-(3)	Municipality to provide affordable and equitable refuse collection services to all households		No corresponding provision		No corresponding provision
Reg 4(2)	Municipality to provide for collection of recyclables		No corresponding provision	S 4	Municipality to provide refuse bins to all	S 6	Municipality to recyclable waste	S 2.4 (d) (i)	Municipality to recycle waste

COMPULSORY REQUIREMENT		BY-LAW: LEPHALALE MUNICIPALITY		BY-LAW: GREATER TZANEEN MUNICIPALITY		WASTE MANAGEMENT PLANS: LEPHALALE MUNICIPALITY		WASTE MANAGEMENT PLANS: GREATER TZANEEN MUNICIPALITY	
				households in the municipal area					
Reg 4(3)	Municipality to meet standard specification for refuse storage containers	S 8	Municipality to provide standards for storage of waste receptacles	S 5	Municipality to provide for standards for the storage of refuse bins	S 3	Municipality to develop waste storage facility	S 2.4 (d)-(e)	Municipality to provide waste storage facility
Reg 4(5)	Municipality to provide for communal collection points		No corresponding provision		No corresponding provision		No corresponding provision		No corresponding provision
Reg 4(6) and reg 9	Municipality to provide for frequency of waste collection		No corresponding provision		No corresponding provision		No corresponding provision		No corresponding provision
Reg 6	Municipality to meet requirement for waste collection vehicles		No corresponding provision		No corresponding provision		No corresponding provision		No corresponding provision
Reg 7	Municipality to ensure health and safety measures for municipal workers		No corresponding provision		No corresponding provision		No corresponding provision		No corresponding provision
Reg 8 (1)-(2)	Municipality to provide education and awareness on dealing with waste e.g separation at source, illegal dumping and littering		No corresponding provision		No corresponding provision		No corresponding provision		No corresponding provision
<b>NATIONAL NORMS AND STANDARDS FOR THE DISPOSAL OF WASTE TO LANDFILL</b>									
Reg 3 (1)-(3)	Municipality to classify landfill		No corresponding provision		No corresponding provision		No corresponding provision		No corresponding provision
reg 4(1)-	Municipality to meet		No corresponding		No corresponding		No corresponding		No corresponding

COMPULSORY REQUIREMENT		BY-LAW: LEPHALALE MUNICIPALITY	BY-LAW: GREATER TZANEEN MUNICIPALITY	WASTE MANAGEMENT PLANS: LEPHALALE MUNICIPALITY	WASTE MANAGEMENT PLANS: GREATER TZANEEN MUNICIPALITY
(5)	minimum requirements for the disposal of waste to landfill	provision	provision	provision	provision
Reg 5 (1)-(2)	Municipality to provide prohibition and restriction for the disposal of waste to landfill	No corresponding provision	No corresponding provision	No corresponding provision	No corresponding provision

**TABLE 3: SUMMARY OF THE CORRESPONDING PROVISIONS: VOLUNTARY REQUIREMENTS AND MUNICIPAL BY-LAWS AND IWMPs**

VOLUNTARY REQUIREMENT	BY-LAW: LEPHALALE MUNICIPALITY		BY-LAW: GREATER TZANEEN MUNICIPALITY		WASTE MANAGEMENT PLANS: LEPHALALE MUNICIPALITY		WASTE MANAGEMENT PLANS: GREATER TZANEEN MUNICIPALITY	
		Corresponding provision		Corresponding provision		Corresponding provision		Corresponding provision
<b>NEM:WA</b>								
S 9(3)	Municipality may set further standards for waste management in the municipal area	No corresponding provision		No corresponding provision	S 37	Municipality may make exceptions to the provision of municipal services		No corresponding provision
S 14(2)	Municipality may request the declaration of a particular waste as a priority waste	No corresponding provision		No corresponding provision		No corresponding provision		No corresponding provision

### 3.5.3 *General recommendations*

The table above illustrates the corresponding compulsory and voluntary provisions contained in the national waste law, norms and standards, the refuse by-laws and IWMPs of GTM and LM. It would appear that there are more compulsory requirements than voluntary ones. This is suggestive of the fact that municipalities are obliged to adhere to the compulsory provisions contained in the national waste law as far as DSWM is concerned. However, given that the refuse by-laws and IWMPs of both GTM and LM lack corresponding provisions to the national waste law is worrisome. The reason for this is that, provisions in refuse by-laws and IWMPs which speak to the national waste law and norms and standards is indicative of how municipal obligations (which include developmental duties) are for example, translated into municipal practice. The fact that these by-laws and IWMPs which are meant to guide the municipalities in effectively discharging their mandates of DSWM lack meaningful and corresponding provisions to compel and enable them to perform their duties raises serious concerns about DSWM in the focus of at least the municipalities whose instrumentation were considered.

## **4 Conclusion**

The aim of this study has been to investigate the legal requirements for DSWM as applicable in the LP. The rationale for this being that, municipalities in the LP appear to face considerable challenges as far as DSWM is concerned.<sup>309</sup> The challenges for example, include service delivery backlogs and a culture of poor waste management practices especially in local communities. To achieve the aims of this study, the study critically analysed the refuse by-laws and IWMPs of GTM and LM against the content of the national waste law in order to determine the extent to which these by-laws and IWMPs speak to the national waste law and norms and standards as far as the management of DSW is concerned.

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309 See for example s 5 of IWMP of Lephalale Municipality, which provides for the removal and collection of refuse from urban areas, while neglecting rural areas.



Chapter 1 provided an introduction into the problem of waste with a particular focus on the challenges with the management of DSW as a specific kind of waste in LP and South Africa, generally. Chapter 2 provided an overview of the compulsory requirements contained in NEM: WA which are mandatory for municipalities to adhere to when managing DSW within their jurisdiction. Chapter 3 provided a detailed analysis of the refuse by-laws and IWMPs of GTM and LM in order to illustrate how and to what extent the existing waste law framework seems to have infiltrated the level of DSWM in the LP. Chapter 4 provided some recommendations. The recommendations relate to the extension of DSW service delivery, provision of DSW receptacles to reflect a commitment of municipality's regulatory instrumentation, development of a waste information system to enable municipalities to understand the status of DSW service delivery via statistical data, review of refuse by-laws and IWMPs to include compulsory corresponding provisions that resemble those of the waste law and norms and standards as far as DSWM is concerned. The adoption of these recommendations may significantly assist municipalities to effectively execute their developmental duties and DSWM most especially at the local sphere of government.

Although for example, the LM has a duty to provide for the collection and removal of DSW in premises within its jurisdiction, it is observed that this duty/service is only provided in urban areas, while exclusively excluding rural areas, for example, Ga-Seleka. This is contrary to the national waste law which requires municipalities to provide equitable and affordable services.<sup>310</sup> It could be inferred that "equitable" in the words of the national waste law implies equal without discriminating. However, since for example LM only provides DSW collection and removal services to urban areas neglecting the rural areas, it could be argued that the municipality fails to meet the requirement of "equitable" in the national waste law. It is suggested that the municipality should expand its DSW services to include all areas within its jurisdiction, including rural areas.

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310 This is also contrary to s 5 of IWMPs of LM which mandates the municipality to provide DSW collection services to all households within its jurisdiction.

In addition, both municipalities do not meet the requirement of providing refuse collection receptacles to all residents within their jurisdiction. This further illustrates the challenges the municipalities face with regard to DSWM. Refuse receptacles may ease DSWM collection as they assist to ensure that DSWM are not improperly discarded in the first place. The absence of receptacles implies the promotion of the practice of illegal dumping of DSWM on vacant land, streets, and rivers for example. This is especially true of the rural poor who because of financial constraints may be unable to afford to buy themselves these receptacles and as such continue to dump DSWM illegally. It is suggested that there is a need for the municipalities to provide DSWM receptacles especially to residents in their rural areas.

Furthermore, in terms of the NEM: WA and the NWIR, it is a requirement for municipalities to develop a waste information system within its area. A waste information system assists a municipality to set targets on how to manage waste within its jurisdiction as well as providing statistics on the level of waste management in the country. However, the LM, for example, does not have a waste information system. This highlights the considerable difficulty the municipality faces with regard to DSWM due to lack of information and statistical data on the status of waste management in its municipality. It is suggested that it is important for the municipality to develop a waste information system, because waste information could aid the municipality to effectively manage DSWM within its jurisdiction, generally.

Moreover, the lack of compulsory corresponding provisions in the refuse by-laws and IWMPs of GTM and LM are suggestive of lack of determination on the part of the municipalities to translate their developmental obligations into their own practice and regulatory instrumentation. The fact that the by-laws and IWMPs are meant to guide the municipalities in properly executing amongst others their duty of DSWM seems to imply that these by-laws and IWMPs ought to have compulsory provisions which speak to the national waste law and norms and standards as far as DSWM is concerned. However, the above analysis reveals a conspicuous absence of relevant compulsory corresponding provisions in both the by-laws and IWMPs of GTM and LM. There is need therefore for a review of

these by-laws and IWMPs to at least make provision for the compulsory requirements contained in the discussed national waste law and norms and standards applicable to DSWM.

It is important to note that the provision of refuse receptacles entails funding. Consequently, it will be interesting to research on the budget allocations to municipalities to enable them to effectively perform their duty of DSWM service especially in indigent municipalities. This would be to ascertain whether there is poor financial management on the part of the municipalities or inadequate finance that is restraining them from providing comprehensive DSWM, especially in rural communities. Another issue worthy researching in future will be the potential environmental implications of waste management projects in municipalities that have not been discussed in this dissertation.

To sum it all, GTM and LM need to extend their DSW services to all areas within their municipal jurisdiction. This would act as a catalyst for sound DSWM. It should be noted that the above two municipalities need to revise their by-laws and IWMPs to include compulsory provisions for effective DSWM. These provisions would indicate the municipalities' commitment to sound DSWM and assist to curb the challenges the municipalities face with regard to DSWM. This may have a snowball effect for other municipalities in the LP and South Africa, generally, to develop and adhere to sound DSWM measures.

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