

## Wrestling with IWMP Implementation: Case Study Challenges and Lessons Learnt

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### ABSTRACT

Integrated Waste Management Planning (IWMP) was recognised as a short-term strategy initiative for the public and private sector in the National Waste Management Strategy as far back as 1999 (DEAT, 1999). Ten years later, through the Waste Act on 1 July 2009, this has become a legal requirement National, Provincial and local government. Some municipalities saw the benefit of preparing these plans, but implementation of IWMPs at local municipality level remains a concern. This study reveals that based on a small sample of local KwaZulu-Natal municipalities, there are serious concerns with how IWMP are translated into effective changes in municipal waste management. There is also concern with regards to how municipal officials keep abreast of changing legislation. Four main factors were found to influence implementation in the municipalities sampled. Human capital mobility or staff turnover is also reported by other authors as affecting implementation. Failing to get council approval of the IWMP, or a change in the municipal councils will also negatively affect implementation. Even where the IWMP has been approved by council, if sufficient detail of projects and budgets is not carried forward into the IDP, this was also identified as a potential barrier to implementation. The paper recommends that effective implementation of IWMP be investigated nationally, and also draws attention to the potential role to be played by other government agencies and the Institute of Waste Management of Southern Africa, in addressing these awareness and training challenges.

### Key Words:

IWMP, Integrated Waste Management Planning, DAEA, Waste, Lessons learnt, indicators, training, awareness, staff turnover, human capital mobility

### 1. INTRODUCTION

This paper presents a case study of four (4) local municipalities and a district municipality in the implementation of five recently completed Integrated Waste Management Plans (IWMPs). The IWMP for LM1, LM2, LM3 and DM1, were finalised in 2010, while the IWMP for LM4 was completed in June 2011. The paper explores the research question “Are IWMP translated into changes within municipalities”, and secondary to this “What factors can be identified to be hampering implementation”.

#### 1.1 Integrated Waste Management Planning

According to the constitution, waste removal and disposal is the responsibility of municipalities (RSA, 1996). The first national waste management strategy (NWMS) required that first generation IWMP were completed by all municipalities in South Africa (DEAT, 1999). The Integrated Development Plan (IDP) was identified as the mechanism through which the IWMP would be implemented by local government, because during this period there was no legal requirement for the compilation or the implementation of the IWMP. Godfrey and Dambuza (2006: 3) chronicle the history of waste planning (IWMP), from those early days, and relate various issues and challenges that are being faced by local government. These challenges include internalisation of these strategic documents, supporting data (hence the quality of these strategic IDP and IWMP documents), relevance of the IWMP in addressing strategic issues, legal requirements for the process, and public participation. Other authors cite poor governance issues such as councils not meeting for prolonged periods of time, and also delays in approving key documentation guiding service delivery backlogs (Afrika, 2010).

The situation today is that the Waste Act (RSA, 2008) has been promulgated giving legal standing to the requirement for municipal IWMP, and we have also entered the second strategic waste planning horizon in the form of the second national waste management strategy (DEA, 2011), which was recently approved by Cabinet on 09 November 2011 for implementation. Municipal IWMPs provide information on the status quo of waste (legislation, demographics, quantities, systems in place, practices and costs structures), gaps and needs, measures to address the gaps and needs, alternatives, and an implementation plan (DAEA, 2003; Godfrey and Nahman, 2007:5). The Waste Act prescribes the contents of the IWMP, and further provides a framework for reporting on the progress of implementation of these plans. This reporting is structured around section 46 of the Municipal Systems Act (Act 32 of 2000) (RSA, 2000).

In terms of the new NWMS, integrated waste management planning is listed as goal number five of eight in the strategy. The goal is to be achieved through the legal requirement for IWMP in the Waste Act, ensuring that all municipalities have

integrated their IWMP into their IDP (and have met their IWMP targets), and through ensuring that all waste management facilities report activities to SAWIS (DEA, 2011: 7).

On the first point, there is currently no provincial IWMP for KwaZulu-Natal to provide strategic guidance (i.e. to align targets) to local municipalities, although this drafting process has admittedly recently commenced, along with a provincial hazardous waste management plan. Also the NWMS (DEA, 2011: 29) and section 11(4) of the Waste Act (Act 59 of 2008) (RSA, 2008: 26) both require that municipal IWMPs are to be approved by the MEC. Discussions with provincial authorities (H. Sheard, 2012, pers. comm.ii), indicated that there appears to be some controversy around this point. The argument is that if a municipal council has already approved the IWMP, what is the point to having the same document approved by the MEC, especially where it will be the task of council to implement the document? There are also jurisdictional issues around the powers and functions of local councils which must be addressed. Taking the argument further one could ask why would a municipal council need to report progress to the same MEC? Therefore the Department of Agriculture and Environmental Affairs (DAEA) is re-evaluating this approval process and for the present time on receipt of IWMP for approval is advising municipalities to proceed with implementation of completed IWMP.

On the second point the NWMS (DEA, 2011: 30) has indicated that "DEA and the provinces will monitor the percentage of municipalities who have prepared IWMPs and integrated them with IDPs". However, there does not appear to be any indication that guidelines planned in the NWMS action plan will cover how the IWMP is to be integrated into the IDP. Nor is there currently any clarity offered for the timing of the IDP and IWMP process. Godfrey and Dambuza (2006: 3) report that the IDP guideline pack provides "the minimum requirements and suggested institutional arrangements/responsibilities for IWMP". This document was compiled in 2002 and will need to be updated with the changes to current legislation (Waste Act, NWMS) as well as the new proposed guidelines for compiling IWMP as reported in the Action Plan for the NWMS (DEA, 2011: 72). This guidance is important if integration of the two processes is to be meaningful.

Lastly on the issue of waste management facilities reporting their activities to SAWIS, there remains the problem of compliance. It is known that there are still a lot of unpermitted landfill sites, both in KwaZulu-Natal and throughout the country. A 2004 survey run in KwaZulu-Natal indicated that of the 97 known waste disposal facilities surveyed only forty nine (50.5%) of these were permitted (SiVEST, 2004). Godfrey and Scott (2010: 1) report that as of 2006, only 43.6% of the 1203 known public and private landfill sites in the country were permitted. Furthermore, "of those permitted, compliance with permit conditions is seldom audited and often unknown".

It is apparent that despite the above progress in entering the second strategic waste planning horizon, there is evidence that local municipalities have not compiled first generation IWMP by 2010 (evidenced by tenders circulated to consultants for these documents to be compiled), and even where this planning exists, are these documents meaningfully internalised in to the IDP process and guiding municipal waste management service delivery. Have these documents merely become items to be checked off to comply with legislation, these questions were also raised by other authors (Godfrey and Nahman, 2007).

## 2. METHODOLOGY

In order to explore the two research questions, five questionnaires (four questionnaires to local municipalities and one questionnaire to the district municipality) were distributed to the respondents.

### 2.1 Case Study Approach

Flyvbjerg (2006: 228) provides an argument for the contribution of case study research to the scientific understanding of the world around us. He indicates that "*formal generalisation is overvalued as a source of scientific development, whereas 'the force of example' is underestimated*". Yin (2009: 15) explains that "*case studies like experiments are generalizable to theoretical propositions and not to populations or universes*". Therefore in doing case studies the goal is to expand and generalise theories (analytical generalisation), and not to tally frequencies. It is therefore with this in mind that this paper will draw on the findings from a group of municipalities in KwaZulu-Natal, which have compiled IWMP. The findings from review of these cases will be used to address the research question for the small sample of municipalities selected and will be used to generate an understanding of what factors could be affecting IWMP implementation in other municipalities.

### 2.2 Selection of Respondents

The four local municipalities and one district municipality were purposely selected from municipalities in the province of KwaZulu-Natal. Therefore a total of five questionnaires were distributed by email, one to each of the local municipalities and one to the district municipality (see below). The KwaZulu-Natal Department of Co-operative Governance lists a total of 61 authorities (district and local) within the province (<http://www.kznlgta.gov.za/SearchResults/tabid/37/language/en-GB/Default.aspx?Search=waste>). The above municipalities were deliberately sampled for because of the rapport and previous interactions between the author and municipal officials responsible for waste management. The author had previously worked with, and assisted in compiling the four municipal waste management plans, as well as the district waste management plan. It was therefore hoped that this rapport would assist in generating buy in with the municipal officials, and also that this would help to ensure a high return rate of the questionnaire to be distributed. The official

responsible for waste management in the district and four local municipalities were followed up by telephone to provide input on each question in the survey.

### 2.3 Indicators

In order to answer the main question above, it was necessary to ask “what could we use as indicators of change” in the municipality. In his paper, Gustav Visser (2001: 29) refers to the link between the IDP (as the vision of local government) and the budgets (which make implementation of these visions possible). Therefore, the author has considered the following three main indicators:

- the formal adoption of the IWMP by council (see item 3 in Table 1),
- including the IWMP in the IDP (item 4 in Table 1),
- reporting on budget allocations in meeting measures identified in the IWMP (refer to item 8 of Table 1) and,

The awareness of municipal officials of recent changes to legislation was also surveyed. If the respondents answered that they were aware of the National Domestic Waste Collection Standards this would be discussed during the telephonic discussions to ascertain if indeed the official had a basic understanding of what the standard entailed, if the official answered that he wasn't aware of these standards this was taken as an indication that there may be a problem with keeping officials up to date with other legislation.

All of the surveyed municipalities had developed IWMPs, and it is the intention of this paper to understand if these documents potentially lead to meaningful changes where municipal waste management was concerned within these municipalities. Potential changes because it is acknowledged that it is difficult to prove cause and effect (there may have been other reasons for these changes being affected and not necessarily being due to the implementation of the IWMP).

### 2.4 Survey Questionnaire

A survey questionnaire was drawn up based on the reporting requirements imposed on the local municipality for the implementation of the IWMP. See section 13.2 of the Waste Act (59 of 2008) which outlines these reporting requirements. A copy of the questionnaire is provided in Appendix 1 of this paper. Municipal officials were assured of anonymity in the survey questionnaire. Therefore the names of the officials and the municipality are withheld.

As indicated above, five survey questionnaires were therefore distributed by email to the identified officials responsible for waste at the local and district municipalities. The questionnaire was administered in May 2011 to relevant officials by email. Following distribution of the questionnaires, these were discussed individually over the phone with the responsible official, and responses to each of the questions were recorded by the author. A summary of the responses is provided below (Table 1). Only one local municipality failed to provide a response to the questionnaire.

Table 1: Summary of Responses to Survey Questionnaire

Q	LM 1	LM 2	LM 3	DM 1
1	Yes	Yes	Yes	Yes
2	Yes	Yes	Yes	Yes
3	No <sup>1</sup>	Yes <sup>2</sup>	No <sup>4</sup>	No <sup>3</sup>
4	No <sup>5</sup>	Yes	Yes	Yes <sup>6</sup>
5	Yes <sup>7</sup>	No	Yes	Yes
6	<ul style="list-style-type: none"> <li>• Redraft IWMP <sup>8</sup></li> <li>• Five year rollout <sup>9</sup></li> <li>• Backlog study <sup>10</sup></li> </ul>	Workshop IWMP with new council <sup>11</sup>	Workshop IWMP with new council <sup>12</sup>	Projects & budgets in IDP
7	Aware & already implementing	Not aware	Not aware	Not aware <sup>13</sup>
8	Not able to <sup>14</sup>	Not able to	<ul style="list-style-type: none"> <li>• Fencing</li> <li>• Vehicle</li> <li>• Awareness <sup>15</sup></li> <li>• Buy back</li> </ul>	Not able to

Superscript Notes in the Table:

1. IWMP not adopted by council, council have requested that IWMP be rationalised to reflect capital and operational budget required on a ward by ward basis. Another reason council did not approve the IWMP was because they didn't understand that the IWMP was compiled in conjunction with officials from the municipality. They thought that the document came from the district municipality, and was being imposed on the local municipality.
2. Was adopted by outgoing council, but new council reported to be impediment to implementation of the projects identified.
3. The IWMP was submitted for approval but the councils have changed.
4. IWMP not adopted as a separate document, however projects and budgets from IWMP were incorporated in IDP. Council has changed since IWMP was sent for approval. New council are not familiar with the plan.
5. Portions of the IWMP have been incorporated in to the IDP.
6. IWMP has been incorporated in to the IDP, which has been adopted by the municipality.
7. Municipality aware of its obligations to report on implementation of the IWMP, in fact the municipality has begun reporting waste tonnages to SAWIS, despite this being an optional requirement at present.
8. Redraft the IWMP to reflect operational and capital requirements per ward.
9. Develop a 5 year roll out plan based on the ward by ward requirements.
10. Conduct a backlog study as indicated in the IWMP.
11. Have suggested a workshop of the IWMP for the new council.
12. Have suggested a workshop of the IWMP for the new council.
13. Waste officers have not been designated as yet within the district, despite this being a legal requirement.
14. No budget has been allocated pending completion of the rationalisation process.
15. Budget provisioned for new Vehicle (R350K), Awareness campaign (R20K), Fencing landfill site (R60K), Buy back centre (R150K).

### 3. RESULTS AND DISCUSSION

Four out of the five questionnaires were completed with municipal officials. In all these instances, the respondents were the line manager responsible for waste management in the municipality and were also the principal contact for the development of the IWMP. On investigation, it became apparent that the non-responding municipality lost all staff involved with the drafting of the plan either to another department or another municipality altogether. This draws attention to the problem of human resource mobility in local government (Godfrey and Nahman, 2007: 8), as a reason for failure of implemented systems, or for that matter projects and programmes. This appears to have been the exception (only one municipality) rather than the rule for these survey respondents.

#### 3.1 Results per Indicator

##### 3.1.1 Indicator 1: Formal adoption of IWMP by councils

Only one of the four completed IWMPs was formally adopted by the relevant municipal Council (Table 1). Of the other three responses a lack of detail in the IWMP (i.e. not providing sufficient operational detail at ward level) was cited as a reason for this lack of adoption. One of the respondents has indicated that the final IWMP was submitted to council for approval, however this did not occur in time for the change of political councils, and now the new council is unaware of the history of the document and is refusing to approve it.

##### 3.1.2 Indicator 2: IWMP included in the IDP

Three of the four respondents have indicated that the IWMP has been incorporated into the IDP (from Table 1)<sup>iii</sup>. After a more detailed follow up it was determined that in one case incorporation in to the IDP merely meant a reference to the IWMP and appending the document in an appendix without extracting the relevant budgets and projects. Clearly, further investigation is needed to determine the extent to which the full projects identified in the IWMP have been incorporated into the IDP<sup>iv</sup>. Further clarity of meaningful internalisation are provided when one considers what budget provisions were made to support the implementation of the IWMP, some additional clarity as to what extent the documents were internalised is provided below.

##### 3.1.3 Indicator 3: Reporting on Budget Allocations

With regards to allocation of budgets only one official was able to report on allocations as requested in the questionnaire. This was despite the fact that as was already reported previously by respondents, IWMP budgets and projects were incorporated in to the IDP.

### 3.1.4 Summary

Therefore, based on responses from officials on the survey questionnaire, it would appear that:

- Because of the poor rate of adoption of the IWMP amongst respondents into their respective municipalities (Table 1),
- Because of the questionable internalisation of the IWMP in to the IDP and
- Because of the low budget allocations (Table 1) in terms of the respondents, the conclusion is that recently completed IWMP's are poorly translated into changes within the surveyed municipalities.

While it is accepted that the above survey draws on a very small sample of respondents, and these may not be representative of the national average, the survey raises some interesting learning points for further discussion and investigation. These will be discussed below.

## 3.2 Additional Learning Points

### 3.2.1 Scheduling of the IWMP Process

The timing for the submission of one IWMP appears to have influenced why the document was not approved by municipal council (see section 3.1.1 - Indicator 1). If this is occurring in other municipalities, it is likely that IWMP will not have the intended impact. As indicated previously the NWMS action plan provides for the compilation of guidelines to be commissioned for the compilation of IWMP. For these to have a meaningful impact on waste management activities of the local municipality, it is important that the integration of the two processes (IDP and IWMP) is achieved. Some indication of how the two processes are expected to be integrated including timeframes for various activities, and clarity on the approval process for IWMP (MEC versus council as discussed previously) should be provided.

### 3.2.2 Incorporation of IWMP in to IDP

From follow up discussions with officials, it was apparent that in some cases not all of the budget items from the IWMP were adopted in to the IDP. Unfortunately the third indicator (incorporation of IWMP in to the IDP) despite being reported as having been achieved by officials, the extent of internalisation of the documents remains questionable given the above findings. Should a more extensive study be possible in the future, it will be important to make a detailed study of the IDP documents as well to ascertain to what extent the IWMP's are implemented. In addition to the above, it is recommended that clarity is provided in the proposed IWMP guidelines as to how and what the incorporation in to the IWMP should entail.

### 3.2.3 Changing Councils and Implementation

Related to the timing or scheduling of the IWMP and IDP process, is the change of political council from one term to another. As reported previously (see section 3.1.2 – Indicator 2) it is apparent that the changeover of political councils has had an impact on the implementation of the IWMP as reported by the respondents. Two of the municipal officials have indicated that they are making provision to workshop the IWMP with the new municipal councils (Table 1). Their intention is reportedly to generate buy-in for the plan so that this can move to being approved and meaningfully implemented.

The above finding points to the question of internalisation of these IWMP documents as policy instruments from one council to another. Godfrey and Nahman (2007: 8) raise this issue with regards to the documents being prepared by private (and therefore external from the municipality) waste consultants, and question the municipality's ability to assimilate the learning from these documents.

### 3.2.4 Awareness of changing policy

Three of the four municipalities have indicated that they are not aware of the requirements of the National Domestic Waste Collection Standards. After discussing this with the respondents, only one of the respondents has reported being aware of the obligations in terms of implementing the Standards. It is apparent that there appears to be a lack of awareness of the standards amongst municipal officials engaged with (in terms of the National Domestic Waste Collection Standards). This lack of awareness amongst this case study sample is worrying given the past inequalities and existing backlogs in waste services generally within local municipalities and expectations of how these issues are to be resolved (Oelofse, 2011: 1). As indicated previously the individual IWMP's for the surveyed municipalities, were completed between 2010, and 2011. The standards were gazetted in January 2011, and this may to a certain extent explain why this standard may not have been included in the IWMP, and therefore why the respondents were not aware of it. The annual review of the IWMP should make provisions for these updates to legislation, but unfortunately none of these IWMP have been reviewed since compilation, nor has any progress been reported in terms of the Waste Act requirements to the MEC. A better indicator could possibly have been awareness of the Waste Act (RSA, 2008). This awareness could also have been tested by the author during the telephone discussions with respondents.

There is a role to be played by the provincial authorities (i.e. department of co-operative governance as specified in the new NWMS) (DEA, 2011: 57) as well as the IWMSA in generating awareness of current legislation amongst municipal officials. This includes awareness and training. In further research, it will be important to determine how officials keep

abreast of developments in the practice of waste management. This could provide insight to strategic interventions in how to address this problem of continuous professional development in the waste industry. More detailed recommendations for possible interventions by national or provincial government and the IWMSA can then be made.

### 3.3 Factors affecting implementation of IWMP

The following factors are identified as hampering implementation of the IWMP:

- Human capacity mobility within the municipality, no one takes responsibility, or ownership to drive projects to conclusion.
- Council approval of IWMP. This is the first step to giving the IWMP any credible standing, to influence service delivery within the municipality.
- Change of municipal councils – mechanisms to provide continuity between one council to the next need to be utilised by officials i.e. workshopping strategic policy documents.
- Internalisation of the IWMP in the IDP.
- Failure to incorporate Projects and Budgets into IDP. The IDP is seen as the vision of the municipality, strengthened by budgets to implement that vision. This is also seen as an impediment to the implementation of the IWMP, especially where only portions of the projects or budgets are incorporated and the plan is unable to function with the desired effect.
- Scheduling of the IWMP Process so that this contributes effectively to the IDP.
- Lack of awareness of current and relevant legislation. Mechanisms to keep municipal officials up to date with recent changes to legislation need to be found. There is scope for a meaningful contribution from IWMSA and provincial government departments.

## 4. CONCLUSIONS

In summary, it is acknowledged that the findings of this paper are based on a small sample of municipalities in a single province. However, the study has uncovered some concerns which have impacted on the implementation of IWMP within these municipalities. Despite having been compiled and involving municipal officials in the drafting process the IWMP have not been adopted by municipal councils, and there may be a number of reasons for this. The officials have cited the changes in municipal council, and tailoring the IWMP to fit in with ward based capital and operational budget requirements of the municipality. Even where the IWMP was approved as a strategic document, municipal officials have reported that the new council have had problems implementing the document because they are unaware of the history and purpose of this document. Two of the respondents have recommended that the new councils attend a work shop session of the IWMP so as to generate buy in and understanding of the importance of these strategic documents. Respondents have also indicated that the IWMPs have been included in their respective IDP, but questions arise as to the significance of this internalisation.

Should any of the above be true of other municipalities, these factors may very well have a negative impact on the implementation of IWMPs. Is it enough to include a few projects in the IDP, or should all of the projects be included? Should the IWMP be appended in the IDP? Where the IWMP has been internalised by the municipality surely a budget provision would have been made to give some eminence to the intentions of the IWMP? There needs to be more clarity on how the scheduling of the IWMP process can be brought in line with the IDP process. More clarity is needed on how IWMP need to be incorporated in to the IDP. Municipal officials need to help councils understand the importance of strategic service delivery documents and the implications (legal and social) for not implementing them. This clarity and guidance can be provided through the proposed guideline documents to IWMP (provisioned through the NWMS). Also additional investigation will be necessary to ascertain if these concerns are valid at a national level.

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**Appendix 1: Survey Questionnaire**

Survey

Implementation of Recently Completed

Municipal IWMP

Date: .....

Purpose of this survey:	The purpose of this survey is to answer the questions - "Are IWMP translated into changes within municipalities", and secondly "What factors can be identified to be hampering implementation".  All responses are treated as anonymous, with no indication of the name of the responding municipality
1	Are you responsible for waste management in the municipality? (Yes / No)
2	Were you involved in developing the municipal IWMP? (Yes / No)  Explain
3	Has the IWMP been adopted by council? (Yes / No)
4	Has the IWMP been incorporated into the latest IDP? (Yes / No)  If not, please indicate any reasons why not:
5	Are you aware that progress on the implementation of the IWMP needs to be reported on an annual basis (S13.3 of the Waste Act) through existing reporting as required by S46 of the MSA? (Yes / No)?
6	List all steps or measures taken towards implementation of the IWMP (i.e. IDP projects approved, budgets allocated).
7	Please report on the progress in implementing of <b>National Domestic Waste Collection Standards</b> ?  Please indicate why National Domestic Waste Collection Standards have not been implemented (answer N.A. if these have been implemented)?
8	Please report on top 4 <b>budget Allocations</b> in meeting the measures identified in the IWMP?  R Value            Project Title 1. 2. 3. 4.  Please indicate why budget has not been allocated for IWMP implementation (answer N.A. if these have been implemented)?
9	Any other General comments:

Please return to:

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End Notes:

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<sup>i</sup> The author is a researcher for the CSIR and also a member for the IWMSA. However, the views expressed in this paper do not represent CSIR or IWMSA policy or opinion, and must be taken as the personal views of the author.

<sup>ii</sup> Ms. Heather Sheard, Heather Sheard, Deputy Manager: Waste and Chemicals Management, KZN Department of Agriculture and Environmental Affairs.

<sup>iii</sup> The response to this question raises concerns with regards to the extent of incorporation of the IWMP into the IDP, for example were all the projects incorporated or were merely those projects that the officials thought stood a better chance of being approved incorporated?

<sup>iv</sup> It was not the aim of this study to interrogate or make a study of the existing municipal IDP.