

1. Background

The Water Research Commission sponsored a project from 1998 to 2000 to investigate the feasibility of establishing waste minimisation clubs (WMCs) in South Africa to promote cleaner production to industry. This project was carried out by the Pollution Research Group (PRG) and two pilot WMCs were established – one in the Metal Finishing sector in the greater Durban Metropolitan Area, and the second one a cross-sectoral club in the Hammarsdale region. These WMCs proved to be a success, with open sharing of information and ideas amongst the club members, financial benefits to the companies and a reduction in their environmental impact. The experiences gained during the course of this project are important lessons for others who wish to establish and manage further WMCs in South Africa, and for this reason, the WRC sponsored the development of Manuals to guide future facilitators.

2. Project Aims

The primary aim of this project was to develop a sustainable method of promoting and managing WMCs. This was achieved through the development of:

- A Manual for developing and managing WMCs
- Sectoral specific self - assessment guides
- Training material for Waste Minimisation Consultants

Target groups include policy makers, authorities, consultants, industries, and funding bodies. At the Project Steering Committee meeting held in March 2002, it was agreed that there was no need to develop sector specific self-assessment guides as there are many available from other sources, but that the project team should focus on collating all sources of sector-specific guidelines and use them as reference material for the Manuals.

3. Summary of Results

This section highlights the outcomes of this project in the form of the Facilitator's Manual and the Training Manual; discusses the lessons learnt in establishing and managing WMCs; and summarises the steps that should be followed to develop a strategy to promote WMCs to ensure the sustainability of the concept.

3.1 Lessons Learnt in Establishing and Managing Waste Minimisation Clubs

Since the inception of the WMC concept in South Africa in 1998, 27 WMCs have been established. Of these 4 have ended; 4 have merged; 3 have closed; 3 failed to start up; 3 are in the start-up phase; and 11 are still running. The lifetime of a WMC is generally in the region of 18 months to 2 years, after which time it will either end, merge with other activities, or change its focus to continue operating. Those WMC that closed, did so mostly due to a lack of continued support or interest on the part of the members.

The experience gained from the development of these WMCs has provided a great deal of insight into the best method of establishing, managing, and reporting on WMC, and have been used in the Facilitator's Manual to provide guidance to future WMC facilitators.

The success factors to establishing and managing a WMC include:

- A good awareness-raising meeting to highlight benefits of waste minimisation.
- A well-run recruitment programme where company managers are approached.
- The support of the local authority which provides an added incentive for companies to join the WMC.
- Easy access to funding to subsidise the cost of running a WMC.
- Charging a membership fee which ensures commitment to the WMC.
- The commitment from the WMC members to attend meetings and share information.

- Mutual site visits by WMC members to one another sites.
- A well defined constitution outlining the role of the members, facilitator etc. and the "rules" of the WMC.
- Training the WMC members in waste minimisation techniques in a step-by-step manner.
- Access to students to assist companies in determining waste minimisation opportunities.
- On-site assistance by the facilitator (or other consultant) to highlight areas for improvement.
- Frequent dissemination activities such as newsletters, web site, case-studies etc. such that the results are made known to a wide audience.
- An enthusiastic project champion within each WMC member organisation.
- Detailed record keeping of savings achieved by each WMC member, both in terms of financial savings, and environmental savings. This is important information for case studies and for selling the concept to funding organisations.

This experience has also highlighted what is still required to promote the WMC further within South Africa. These include:

- A good marketing campaign on a National, Provincial and Local level.
- Co-ordination between all organisations with an interest in WMC, such that all work together with a common goal.
- The setting of targets for WMC, such that requirements are set for reporting, etc.
- The need for a method of ensuring the quality of the training material provided, and that facilitators are competent in running a WMC. This can be in the form of an accredited training course.
- The need for a strategy to promote the WMC concept.
- The introduction of funding schemes that can be accessed by a WMC.

Many barriers are experienced in the establishment and running of a WMC. These are barriers that are encountered both on the part of the facilitator in terms of getting companies involved and ensuring their participation, and also on the part of the company in implementing waste minimisation initiatives within their organisations. It is important for the facilitator to realise the types of problems that can be encountered such that they can be addressed within the WMC. This aspect of identifying and overcoming barriers is covered in detail in the Facilitator's Manual.

3.2. Facilitator's Manual and Training Manual

The aim of the Facilitator's Manual is to provide guidance to those who wish to establish and manage WMCs in South Africa. It is divided into 11 Sections and 24 appendices, which contain supporting information and documents.

Each of the Sections address an aspect of forming and managing a WMC, with examples from closed and current WMCs to demonstrate certain points. Case study information is also provided. Each section concludes with a checklist of key points to serve as a summary for the facilitator, and a list of recommended reading. **Table 1** provides a list of each Section title.

Table 1: List of sections in the Facilitator's Manual

Section	Title
1	Improving the Bottom Line through Waste Minimisation
2	Working together in a Waste Minimisation Club
3	Motivating by Meeting – Raising Awareness; Recruitment; Organisation for Action
4	Barriers and Drivers
5	Results through Action – Audits and Implementation
6	Lessons Learnt – Analysing and Disseminating Club Results
7	Creating Momentum through Training
8	Funding a Waste Minimisation Club
9	Where to now?
10	Legislative Support for Waste Minimisation Clubs
11	Where to go for Help

A Training Manual has been prepared from the material developed by Enviro Consulting and transferred to the WRC through the pilot WMC project. This material has been collated into a number of workbooks that have been divided into sections or modules. One module is provided at each WMC meeting and homework tasks set for the members. A CD containing all the Power Point presentations, the workbooks, exercises, and answers to the exercises have been created. In order to assist the facilitator in training club members, references to other training manuals have been provided and also references to sector-specific waste minimisation guidelines.

It is important to ensure that there is some form of *quality control* system in place with respect to the facilitators of WMCs. One method of providing this quality control is through the development of a compulsory training course for WMC facilitators. This training course would be outcomes-based and a suggested syllabus is provided in Table 2 along with the criteria that could be used to assess whether or not the facilitator undergoing the training course had achieved the required outcomes. This course could be run as a 4 to 5 full-day course such that all aspects of waste minimisation are covered. It would also be useful for the facilitator to be able to enter a factory to undertake an audit as part of the qualification. It is suggested that this training course be accredited under the National Qualifications Framework.

Table 2: Suggested syllabus for waste minimisation club facilitators

Module	Topic	Outcome	Assessment criteria
1	Introduction to Waste Minimisation and Waste Minimisation Clubs	Broad understanding of the WM procedure An understanding of the WMC concept	Individual and group exercises
2	Setting up a WMC	Understanding of each stage in setting up a WMC Identification of the barriers How to determine costs associated with setting up and running a WMC	Participants to provide a proposal for the development of a WMC, how they would approach the recruitment, and the costs that would be involved
3	Running a WMCs	Understanding each stage in running a WMC Identification of barriers What to do when the WMC ends	Participants to provide an action plan of how they would run the WMCs identified in Module 2.
4	Undertaking a preliminary WM audit	How to determine the potential savings How to construct a process flow diagram How to identify costs associated with inputs and wastes	Individual and group exercises Preliminary audit undertaken in a factory situation
5	Providing training to WMC members	Be able to present the training course as provided in the Trainers Manual Able to identify needs of the WMC members and adapt the training course material as required	Individual and group exercises for each section in the training manual Participants to present an aspect of the training course to the group

3.3 A Strategy to Promote Waste Minimisation Clubs

If the WMC concept is to be used as one of the primary means of promoting cleaner production to industry in South Africa, there needs to be a strategy put in place that will provide the aims and goals of implementing WMCs and outline the responsibilities of the various stakeholders. There are a number of steps that are involved in establishing a strategy and these include:

Step 1: Identifying a Vision and Setting Goals

Identify a vision and a goal for the strategy within the context of social, environmental and economic sustainability. The definition of a WMC must be made clear at this point.

Step 2: Setting Targets

Sets targets that need to be achieved by the strategy. At this stage, it is also important to identify the possible barriers that may be experienced. Outcomes need to be identified based on the goals that were set and some monitoring and measuring system needs to be implemented to ensure that the targets are met

Step 3: Identify Implementing Instruments

Identify the implementing instruments. In other words, how are WMCs going to be implemented? Some examples of tools that are available are regulatory, economic, awareness etc.

Step 4: Stakeholder Analysis

Undertake a stakeholder analysis where tasks and responsibilities are set for the relevant government departments, on a local, provincial and national basis.

Step 5: Creating an Action Plan

Create an action plan. Put together a Gantt chart which outlines the time required for implementation.

The concepts of waste minimisation / source reduction / pollution prevention are included in a number of Acts with South African legislation. For example, the National Water Act and the National Environmental Management Act both include reference to the importance of source reduction. The National Waste Management Strategy specifically mentions WMCs as a method of promoting cleaner production to industry. In some cases, local permitting requirements request proof of waste minimisation procedures.

Other initiatives that have either been implemented, or which are planned include the initiatives under the Danida funding; the establishment of the National Cleaner Production Centre (NCPC); funding through DWAF for WMCs; the proposed Cleaner Production Centre in the Durban region; the development of a Cleaner Production Strategy for South Africa; and the initiatives underway on a provincial and local area in some regions.

This support, as well as the fact that waste minimisation is enforced through legislation and regulation, indicates that there is support for a strategy to promote the uptake of WMCs in South Africa.

4. Discussions and Recommendations

The WMC concept is one that has proved to be successful in South Africa and an appropriate method of promoting waste minimisation to industry and business in general. If WMCs are to continue, some form of strategy needs to be developed as to how this is going to be achieved. The experiences gained both in the WMCs already established in South Africa and those established in the UK, can be used to ensure that this proposed strategy is sustainable.

The two output documents, namely the Facilitator's Manual and the Training Manual, provide all the necessary documentation for the establishment and management of WMC in South Africa. A large amount of technology transfer activities and capacity building has taken place during the course of this Project and it can therefore be stated that the primary aim of this Project, i.e. *the development of a sustainable method of promoting and managing waste minimisation clubs in South Africa*, has been fulfilled. The Web page developed under the Project will also assist in disseminating the WMCs concept and ensuring that the information generated through the two WRC projects (973 and 1171) will continue to be used.

The following recommendations can be made from this report:

- A clear strategy needs to be developed to promote WMCs in South Africa. This needs to happen on a National and Provincial level, with capacitation of local government to implement the actions.
- Targets for the establishment of WMCs in South Africa need to be set and an awareness campaign needs to be initiated.
- Funding schemes to support WMCs need to be implemented to ensure the continuation of the concept.
- A training course, based on the facilitators manual, needs to be developed and accreditation for this course needs to be approved by a suitable SETA, such that participants receive a certificate / credits to prove competency. Similarly for the training material in the Training Manual.
- The Web page needs to be transferred to an organisation that is able to regularly update the information and store the Manuals, reports, case studies, newsletters, etc. that are generated.