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WATER INFORMATION NETWORK
- SOUTH AFRICA -

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**The
Northern
Cape
Operation
&
Maintenance
Project**

Lessons series - issue one

"Making knowledge work for us"

OVERVIEW

PROJECT AIM

To strengthen the capacity of municipalities in the Northern Cape as well as the provincial Department of Housing and Local Government to provide good quality services in the fields of water supply, sanitation and roads through improved systems for and management of O&M.

Key Project Objectives

- Define the levels of existing operation and maintenance within the municipal water and sanitation sector as a means to monitor and report progress
- Develop and test five generic O&M handbooks for technical managers and supervisors
- Train and mentor municipal officials for setting up O&M systems
- Assist municipalities to set up asset registers and link these to a provincial GIS system
- Raise awareness, share knowledge and build networks through study tours, site visits and the publication of O&M News, the project newsletter
- Develop a model for the establishment of O&M support units through the running of a pilot unit at the Frances Baard District Municipality
- Develop a provincial O&M management system, as well as an O&M support unit within the DHLG
- Provide an overview of career paths, learnerships and other training opportunities for water and sanitation sector staff and establish links with training providers

Partners

- Department of Housing and Local Government, which acts as the project's client (DHLG)
- Department of Water Affairs and Forestry (DWAf)
- The South African Local Government Association (SALGA) in the Northern Cape
- The Frances Baard District Municipality (FBDM)
- The Development Bank of South Africa (DBSA)
- The Swedish Agency for International Development (Sida)
- The Swedish Institute for Public Administration (SIPU)

Project structure

Steering committee

The project is driven by a steering committee made up of representatives from the partner organisations. The steering committee meets every quarter.

Project Group

The project group is made of representatives of editorial groups and task teams. The project group meets collectively once a quarter to share insights and knowledge gained from practical project activities.

Reference Group

Mayors and municipal managers make up the reference group, which meets twice a year at specially convened study visits. The purpose of the reference group is to create awareness about O&M ideas and provide opportunities for networking, sharing ideas and debating issues.

Editorial Groups

The editorial groups are made up of the scribes and municipal officials working on the development of the five handbooks.

PROJECT BUDGET

R8.09 million (as at February 2005)

DWAf 40%
SIDA 28%
DBSA 18%
DHLG 10%
FBDM 4%

PARTNERS



water & forestry

Department:
Water Affairs and Forestry
REPUBLIC OF SOUTH AFRICA



The Northern Cape Operation & Maintenance Project

This collaborative project to build capacity for sustainable service delivery in the Northern Cape highlights the importance of learning through doing.

The Northern Cape, South Africa's largest but most sparsely populated province, is home to just under a million people. It is estimated that in the first decade of democracy more than R1bn was spent on infrastructure in the province to bring clean drinking water to previously unserved communities.

Like in many parts of the country, however, the sustainability of these gains has been threatened by insufficient capacity at the municipal level to carry out proper operation and maintenance of infrastructure.

Many water and sewage treatment plants are on the brink of collapse just a few years after their completion. This is because the focus on infrastructure development has not been matched by a similar development of the capacity of smaller municipalities to run these plants properly. This has jeopardized the safety of drinking water in certain communities and in some cases required the costly refurbishment of infrastructure.

In response to this problem, a range of institutions have partnered to develop the Northern Cape Operation and Maintenance Project (the O&M project) to begin to turn the situation around.

Moira Marais Martins, Executive Mayor of Frances Baard District Municipality and chairperson of SALGA Northern Cape, explains: "We have been chasing a backlog in terms of infrastructure and because of a scarcity of resources we have tended to choose to address the needs of unserved areas over the need for maintenance. The realisation now is that unless we protect the investments that government is making we will have to repeat the cycle in five or ten years."

Marais Martins represents the province's municipalities on the project's steering committee which is made up of representatives from the Department of Housing and Local Government (DHLG), which acts as the project's client, the provincial Department of Water Affairs and Forestry (DWAF), which provides 40 percent of the budget, the Development Bank of South Africa (DBSA), the Frances Baard District Municipality and Swedish aid agency Sida, which is the second largest funder, providing 28 percent of the budget.

Refurbishment work being done at the Dikgatlong Municipality's Barkley West water treatment works



Besides SALGA Northern Cape, the institutions represented on the steering committee are the funders of the project.

Hendry Christians, the O&M project's director from the DHLG, underscores the project's philosophy of nurturing committed leadership and developing human potential through creating opportunities for people to be a part of the solution.

"What we are trying to do is to turn the situation around. Instead of being led by the crises, we want to take control of the situation and prevent these from happening.

"We want people to start thinking in a pre-emptive way. The idea is not to use the big stick, but rather to allow people to experience the benefit and hopefully this will act as a catalyst for change in other areas," says Christians.

The project in its present form grew out of a process begun in 2002 by the DHLG and DWAF which focused on developing an operation and maintenance guideline for water supply and sanitation.

In August 2004 this process gave birth to a second and more ambitious phase focused on raising awareness of the importance of O&M and strengthening the capacity of municipalities to implement it. This phase, due to be completed in early 2007, is made up of a number of innovative sub-projects which provide useful lessons for the sector.

Each of the sub-projects is focused on developing capacity for effective operation and maintenance through hands-on action learning.

"If we get this right it really begins to respond in a more holistic manner to the issues of maintenance of infrastructure. If you look at the project components, we are looking at training, we are looking at getting the right skills into the municipalities, we are looking at setting standards, producing manuals, as well as creating awareness and making people understand why it is so critical for us to think far more seriously than we ever have in the past about maintenance," Marais Martins says.

Operation and Maintenance handbooks

The production of five manuals or handbooks on aspects of operation and maintenance is a core activity of the project. As with all the project components, the principal of action learning is applied.

These manuals, covering Water, Sanitation, Roads & Stormwater, Legal & Environment and Management, reflect the careful thinking that underpins the project.

"A manual doesn't do operation and maintenance, its people who do it," says Kobus Streuders, the DWAF representative on the steering committee.

Each of the five district municipalities in the Northern Cape has been invited to become a partner in the development of one of the manuals. A scribe or writer, is appointed for each handbook and is guided by an editorial group made up of representatives from the municipalities who bring their practical experience to the drafting process.

Once a draft version of the handbook is ready, it is tested over a six month period. This testing forms part of a training process



and the final versions of the manuals are a product of a two-way sharing of information.

“Municipal officials are working on the manual, so you already have more people involved in the handbook and the other good thing about it is that when it is completed their names are there, so they will also start implementing what is written in the books. Its not something that has been developed by a consultant and just given to the municipality,” says Streuders.

The manuals and the training are not aimed at the level of plant operators, but rather at the technical managers and supervisors.

“From the start it was decided that we would aim at the managers and the supervisors, so the books are written for them. It is a guide for them to know how to do on-the-job training of their staff and so therefore it is coupled with training of the managers and the technical managers for them to understand the total picture,” says Bengt Carlsson, the project facilitator from SIPU, the Swedish Institute for Public Administration.

The aim is for the manuals, which are written and developed specifically for Northern Cape conditions, to be developed to a level where they can form the basis of accredited training in operation and maintenance. In addition the aim is to develop appropriate standards for operation and maintenance in the Northern Cape through the process of testing and finalizing the manuals.

“The books that we wrote are generic. Each of the municipalities will have to take the generic handbook and develop plant specific operation and maintenance plans. This will take place with the help of the trainer who will go with the technical manager to the site and help unpack the maintenance and operational needs of the particular site for the operator level,” says Christians.

This process driven approach to developing the resources underscores the project commitment to learning through doing.

“The important thing is how people take on the process of testing the handbooks, the quality of the final product is not the main thing. The most important thing is what people learn through the process,” adds Streuders.

Training and mentoring

Training began on the first manual in October 2005 in the Siyanda District Municipality which had been chosen as the development partner for the sanitation manual.

The training was organised in collaboration with the Municipal Training Institute of the Northern Cape (MTI). MTI was established jointly by the municipalities of the province, provincial government departments, as well as organised labour. In its initial stages it was funded by Sida, but has now registered itself as an education trust. It aims to assist service delivery through training and capacity building at municipalities.

Before the training began the trainers met with all the municipal managers from the district, who committed to being fully involved. Getting the support from the top leadership proved its worth. The first two-day training seminar registered 100 percent attendance by technical managers and their deputies.

The training consists of five modules spread over six months,

each lasting between two to four days, making up a total of 17 days of seminar training.

Carlsson explains that the bulk of the learning will take place outside the seminars, through field assignments that will be set for each individual.

“There are two types of field assignments. The first are thematic and are linked to the seminars, but there are also individual challenge field assignments, where each participant will take on something they are particularly interested in.”

He describes the aims of the training as follows: to build capacity, co-ordinate accredited training in the region, map infrastructure and practices, comply with legal requirements, begin to improve operation and maintenance and access funding for development.

“We will train people on how to do on-the-job training using the book. We will also achieve, through this process, better communication within the [technical] department, between other departments, with communities and with council and also to begin to develop a more systematic budgeting for O&M. And then at the end the book will be revised,” says Carlsson.

In addition to the seminars, the trainer will spend a total of 56 days doing site visits to assist the technical managers with addressing problems and implementing systems at the municipal level.

Setting up O&M support units

In order to provide skilled technical advice and assistance to the smaller Category B municipalities, who in almost all cases cannot afford to hire the necessary technical skills, the project plans to establish O&M support units. These units will centralise expertise and resources to provide support, advice and planning.

The technical department of the Frances Baard District Municipality has been tasked with setting up a pilot O&M support unit. Using existing capacity, the unit has been funded to assist local municipalities to deal with O&M.

“There are on-going deliberations about what form these will take and where they will be located. This is the one of the initial activities in the development of the management handbook. A lot of the issues relating these units and their staffing criteria will come into this process,” says Carlsson.

Marais Martins says that the logical place to locate the O&M support units is at the district level.

“We should look at locating the support units within the current PMU (Project Management Unit) structures and look at what additional capacity is needed to ensure effective operation and maintenance.”

Marais Martins argues that broadening the scope of the existing support units would avert duplication and also motivate the Department of Provincial and Local Government to continue their support for the Planning Implementation Management Support System (PIMSS) and the PMU programme.

Peet van der Walt, who heads up the pilot O&M unit at Frances Baard, says that their attempts to assist the local municipalities have not always been welcome, as the smaller municipalities fear that their competence is being questioned.

“If you don't have the capacity you will shy away from the

"If you don't have the capacity you will shy away from the problem. Smaller authorities will always struggle to get a competent technical person. The main problem is the lack of technical skills," VanderWalt says.

He regards a lack of funding as the major challenge to getting good O&M practices in place and suggests that a percentage of the Municipal Infrastructure Grant (MIG) should be set aside for operation and maintenance.

In addition to looking into establishing district level support units, there are plans to develop a provincial O&M support unit based in the DHLG. This unit would oversee a provincial O&M management system and provide support to the district units.

Building an asset register

Through the training component the process of mapping the infrastructure and O&M practices in each of the municipalities will be started. This will be done by the technical managers, as part of their fieldwork assignments.

"We want each and every municipality to have a complete asset register: what they have, where it is and how it is maintained. We will not be able to achieve that over five months but we will start the process, so that they will be confident in doing it and completing it," says Carlsson.

This mapping will also tie into a Geographical Information System (GIS) being developed by DWAF and DHLG.

All information that is already in the database will be given to the municipalities for them to update and complete.

"The GIS began as a planning tool, but then started to incorporate aspects of operation and maintenance. We want the municipalities to become the custodians of their information and to update it and then allow us to draw reports," says Streuders.

In addition to developing the asset register, the project has commissioned a baseline study of the status of operation and maintenance in the province. The findings of this report, which is still in draft form, will be combined with research being conducted by MTI to form a composite picture of operation and maintenance in the province.

Cllr Moira Marais Martins in conversation with MPL C Smith



Reference group field seminars

The function of the reference group, made up of the province's mayors and municipal managers, is to raise awareness of the need for and benefits of O&M.

The reference group meets twice a year at seminars that are designed to explore and raise awareness about a particular aspect of O&M.

The first of these took place in May 2005 and focused on sanitation. The seminar, that involved about 70 people, was attended by representatives from 26 of 31 municipalities, including eight mayors and nine municipal managers. Other municipalities were represented by portfolio councillors and officials, such as financial and technical managers.

Instead of being subjected to presentations on the problems of O&M, the delegates were divided into groups of four or five, given a cooler box of food, a set of instructions and dispatched to investigate the state of operation and maintenance at treatment works in the district.

Nine sites had been prepared and the groups were met by site managers who assisted the delegates in investigating the list of issues they had been given. In this way key decision-makers got first hand experience of the problems that operators were facing on the ground.

"We physically went out to specific sites and were horrified in certain cases to see what was the extent of non-maintenance and then, of course, the dangers and consequences both in terms of human health as well as cost," says Marais Martins

"If we can get to the point where we can do preventative maintenance, obviously that is much less expensive than doing this crisis maintenance that we are doing at the moment."

O&M News

Raising both the profile of the project, as well as an awareness of its aims, is O&M News, a full colour project newsletter which presently enjoys a print run of 1000 copies.

These newsletters report on high profile events within the project as well as articles related to operation and maintenance issues.

The newsletter is put together with expertise from SIPU and Frances Baard District Municipality, which has had in-house capacity developed for the production of the newsletter.

Study tour to Sweden

As part of the Swedish commitment to the project, a study tour of Swedish municipal operation and maintenance systems was organised. The tour, funded by Sida, took place in June 2005 and involved 23 people all actively involved in the project.

The purpose was to provide an opportunity for the participants to study how operation and maintenance of municipal services and infrastructure is organised, managed and financed in Sweden.

The tour revealed that the Northern Cape was not far behind Sweden in terms of technical solutions, but not nearly as strong on managing and maintaining infrastructure.

"The commitment to O&M, in terms of standards, budgets and human and other resources, demonstrated the ideal that we wish to achieve," says Christians.



LOOKING AT THE LESSONS

1 Create awareness

A successful collaborative project needs to create a high level of awareness around the issues that the project aims to address. In addition, the project itself must achieve a high profile. The O&M project has achieved this through a number of strategies:

- **Innovative reference group meetings/field seminars which are designed to give municipal leaders and decision-makers practical understanding of the benefits of the project**
- **Raising the alarm through conducting a baseline study**
- **O&M News, the widely circulated newsletter of the project raises the profile of the project among a range of stakeholders**

“There is already a change in attitude towards O&M. We saw in the budgets that were presented to us during the SALGA Budget Week that there is actually a tremendous increase in the amount that municipalities are willing to budget for operation and maintenance. But there is always the tension between addressing the backlogs and servicing the existing infrastructure, it boils down to the difficult decision of where to put the rands and cents,” Executive Mayor Moira Marais Martins, Chairperson of SALGA Northern Cape.

“The biggest achievement is that people are talking about operation and maintenance. The councillors are talking about it, the financial managers are talking about it, they see a need for it. There are quite a number of people involved in this and they want to take it forward. There is a willingness to budget for it.” Kobus Streuders, Department of Water Affairs and Forestry.

2 Build strong partnerships and networks

The O&M project has grown through establishing strong partnerships and has built useful networks. By getting the responsible institution (DHLG) to drive/champion the project with the support of the other key roleplayers, capacity is being built where it is needed. In addition the decision to strengthen the capacity of existing units (such as the technical departments of the district municipalities as well as the PMUs and MTI) avoids duplication and maximizes the benefit of scarce resources. In this way the project is not seen as a threat to the efforts of other initiatives.

- **The intensive process-driven approach to the training and the development of the handbooks helps to build lateral and vertical networks that will continue to benefit the aims of the project after the project has come to an end**
- **Drawing in the beneficiaries as partners in developing the outputs builds a two-way communication flow which increases the capacity of the project to realise its objectives**
- **Forums such as the project and editorial groups, as well the O&M News newsletter, work to keep people on board**

“I have seen the establishment of very good links between DWAF and DHLG and this has seen very good flow of information. One of the strengths of the project is the improvement of communication, both within municipalities and between them and between local, district and province, and other organisations like the DBSA and SIDA,” Dr Jan Olivier, Development Bank of South Africa.

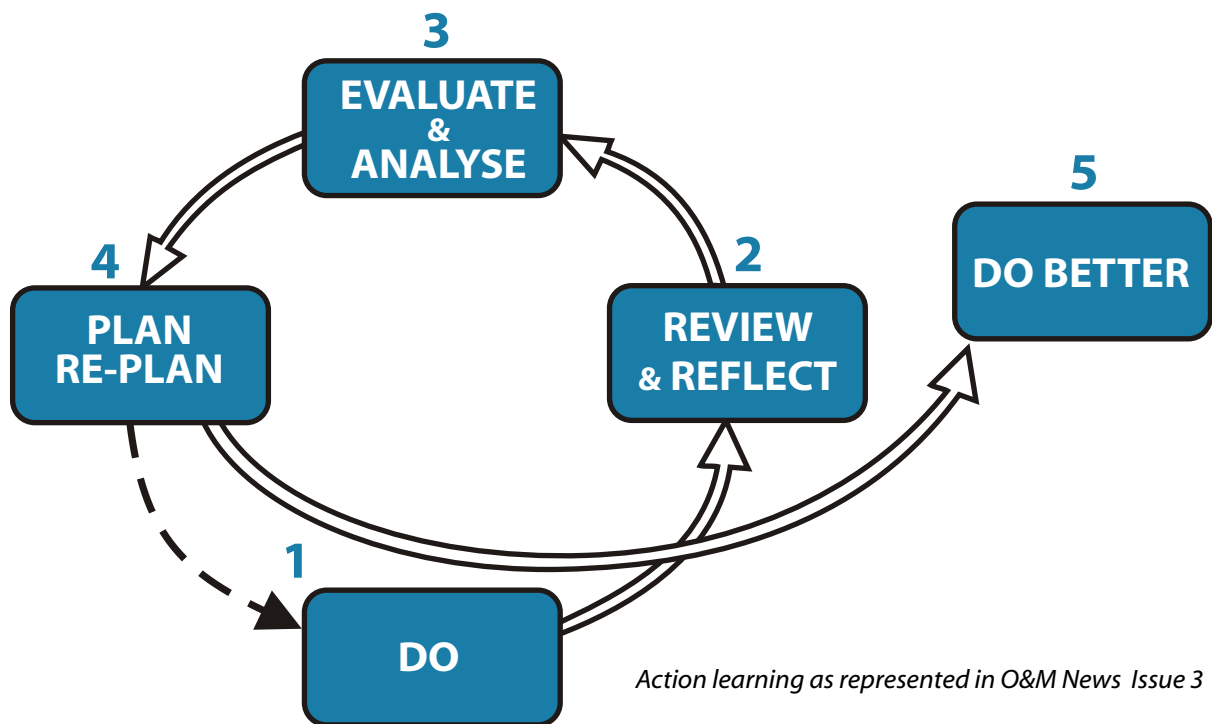
“It’s not just a single departments’ work, it’s a whole interconnected effort, a process. This is not just a question of producing five handbooks, but rather the process of how do you get there. Getting the buy-in from people is more important than the final product. We are always talking about Batho Pele and cooperative government. This is a practical expression of that. We always talk about it, but here I have experienced it in a practical way and that will, at the end, make the project a success,” Streuders.

“A project of this nature really takes a lot of commitment from all involved. You really have to keep your finger on the pulse all the time. You have to think about the involvement of consultants and to what extent you guide what they are doing so that you retain that ownership of the project.” Marais Martins

3 Learn through doing

The O&M project is underscored by a belief that real learning takes place through doing. This 'action learning' approach to developing skills and capacity is focused on developing useful outputs, but it is the process that leads to the output that is more important. Useful outputs such as manuals, asset registers, benchmarks and improved O&M procedures are a by-product of these processes. These outputs are useful precisely because the people who will use them are the people who have developed them.

People are not told what they should be doing or thinking, but are encouraged to come up with creative responses to the problems they face. They are set assignments and tasks that will encourage them to come up with solutions themselves.



"It is only through doing things that people will gain the confidence. The initial thinking behind the training was that we have a test book, we have a workshop of two days, we give this out to the technical people and tell them to come back after five months and tell us how it worked. But that would not work. We have decided to go for a much more practical way of working," Bengt Carlsson, SIPU.

Reference group seminar participants catch a ride on environmentally friendly transport



WIN-SA lessons series

The WIN-SA lessons series aims to capture the innovative work of people tackling real service delivery challenges. It also aims to stimulate learning and sharing around these challenges to support creative solutions. To achieve this, the lessons series is supported by ancillary learning opportunities facilitated by WIN-SA to strengthen people-to-people learning. WIN-SA's "Bringing in the harvest" campaign provides the vehicle for this.

To find out more about these and other WIN-SA services go to the WIN-SA portal at www.win-sa.org.za or contact the network directly.

For further information on the Northern Cape's O&M project visit www.win-sa.org.za/o&m.

WIN-SA mission

Our mission is to ensure the body of knowledge in the sector is well managed, readily accessible and applied, leading to improved decision-making and performance, especially of local government.



Contact details

Address: 491 18th Avenue, Rietfontein, Pretoria

Postal Address: Private Bag X03, Gezina, 0031

Tel: (012) 330 9076 **Fax:** (012) 331 2565

E-mail: lessons@win-sa.org.za

Website: www.win-sa.org.za