

EVALUATION OF FARM WORKER SANITATION PROJECTS IN THE NORTHERN CAPE

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Part 1: Background and context

B. Programme context

The farm worker sanitation projects in the Northern Cape must be seen in the context of a much broader sanitation programme in that province. This programme concentrated primarily on urban areas and small rural settlements. Increasingly, however, the farm worker sanitation initiative assumed greater prominence.

The sanitation programme in the Northern Cape has come a long way since its inception in 1996. During October 1996, Mvula Trust submitted a business plan for the implementation of a sanitation programme in the Northern Cape. This plan's focus was on creating *awareness* amongst communities about the importance of *health and hygiene* and the role that appropriate sanitation plays. The aim was to change the focus *from a toilet-building* programme to household demand programme where health and hygiene awareness was the key concern.

A business plan was approved by DWAF which made provision for funds from 1997 to 2000. The scope of work included the following to ensure long term sustainability:

- Participation of environmental health officers (EHO) and clinic nurses in the pilot projects and the programme
- Ensuring that the health curriculum taught at schools is relevant to Northern Cape circumstances
- Producing and supplying materials for the EHOs, nurses and teachers
- Ensuring that the toilets built by the District Councils are appropriate and that the household toilet subsidy could be accessed
- Implementing demonstration projects where communities demanded them

The Premier has taken a lead in the promotion of sanitation. A Celebration of Dry Sanitation was held in Nourivier in Namaqualand in July 2000 where the Premier was the keynote speaker. During the celebrations local community members and councillors presented their views on the implementation and operation of dry sanitation including VIPs and urine diversion toilets.

District Councils have played a key role in rural sanitation projects during the last seven years. District Sanitation Committees were established representing interested role-players (Districts Councils; Environmental Health Officers from Department of Health; Department of Housing & Local Government; Department of Welfare; and sanitation project committees). These committees initially served as sub-committees of the Districts Development Co-ordinating Committees (DDCC). However when DWAF withdrew their financial support, the DDCCs stopped functioning. The District Sanitation Committees continued and communicated their implementation progress to DWAF.

Through the advocacy programme, several newspaper articles have been published. The advocacy process also includes displays in libraries, clinics and municipalities, radio talk shows, and a sanitation newsletter (the “*Kleinhuis Koerant*”) to advocate sustainable sanitation. The *Kleinhuis Koerant* is funded by the British Government (Department for International Development), and is distributed to communities via DWAF’s social consultants.

The scale of the sanitation programme is reflected in the following table, which shows the number of funders:

Table 1: Funders involved in sanitation programmes for 2000/01 are:

Funder	Notes	R in 2000/01
DWAF	Sanitation	4 066 000
Dept Housing & LG.	Bucket eradication	9 240 000
CMIP	Sanitation only	2 147 500
Housing R15000 scheme	2700 subsidies	
Diamantveld DC		4 590 000
Benede Oranje DC	Estimated	1 000 000
Bo-Karoo DC	Estimated	500 000
Namaqualand	Estimated	500 000
Hantam	Estimated	30 000
Kalahari		490 000

In the Northern Cape, there is an equal emphasis on sanitation awareness and hardware (toilet) provision:

Box 1: DWAF Sanitation Programme

The programme is structured in two phases that encompasses the principles of the programme.

Phase A – Awareness

Phase A entails the establishing of a community committee, training of community committee in health and hygiene awareness, financial management, project planning, different sanitation options and construction of demonstration toilets.

Awareness regarding **health and hygiene** are key to the development of communities and the maintenance of a healthy environment. The awareness campaign also includes:

- information regarding the inter dependence between water and sanitation and resource management since this influences a community’s decision of the type of toilet constructed
- necessity to protect the ground water resources and water conservation
- cost of services and payment culture
- operations and maintenance of toilet options and the implication for the household

Phase B - Construction

After completion of Phase A, applications from household are received indicating interest and contributions. A R600 subsidy per household is requested via Mvula from DWAF and construction commences.

DWAF tends to focus on assisting other role-players with sanitation awareness (Phase A) only. With the budget of R11 million being confirmed in October 2000, DWAF's programme management in the Northern Cape has taken the decision to step up the tempo of implementation. Special effort has to be put into obtaining the co-operation of the District Municipalities, some of whom have limited capacity. A priority list was compiled and an agreement reached with all the District Municipalities and the Dept of Housing and Local Government on the projects and roles and responsibilities. A total of R3,5 million was disbursed to District Municipalities. These funds were distributed for the construction of toilets as some of these municipalities already had dry sanitation projects. In the Diamantveld and Kalahari Municipalities, the environmental health officers undertook to conduct awareness campaigns. In some instances the District Municipalities counter-funded local municipalities for sanitation projects (e.g. Deben in Kgalagadi District). District Municipalities' EHOs (Environmental Health Officers) were trained on PHAST (see below) to conduct the health and hygiene awareness.

Box 2: PHAST stands for *Participatory Health And Sanitation Transformation*.

This methodology is used to create health and hygiene awareness, determining the gaps that causes diseases and drafts an action plan to address the gaps.

The PHAST programme begins with a pre-planning workshop. This is undertaken in the community and a picture depicting the positive scenario. In the practical implementation of this tool, participants are urged to brainstorm ideas before deciding on what steps would be taken to reach their objectives.

In addition to stimulating a very high degree of community involvement this activity has proved particularly useful in revealing the depth and breath of local health related knowledge and providing a context for arriving at consensus on appropriate behavioural and sanitation technologies.

A National Training workshop was held in Namaqualand from 9 -19 March 1998 where three people of the Northern Cape were trained to use the PHAST methodology. Later, a follow-up PHAST course was arranged for all consultants working on the Sanitation Programme, environmental health officers and community facilitators. This ensured that all staff involved on sanitation projects used the methodology. The result of the course was that the Head of Environmental Health Services of Department of Health requested that all environmental health officers be trained in the methodology.

C. The significance of this report

This report focuses on the period 1997-2000, when District Municipalities became involved in farm worker sanitation. Some of the lessons learnt from urban dry sanitation projects were carried over into the farm worker sanitation. For example, the importance of hygiene awareness, as well as beneficiary participation in construction, were emphasized. However, other aspects had to be altered. It was not possible, for example,

to establish community committees, because farm workers are so dispersed. Instead, District Councils focused on creating supportive farmer-farm worker relationships.

In Diamantveld¹ District Council, in-house officials (Environmental Health Officers) were trained to implement PHAST. In Bo-Karoo District Council², a DWAF social consultant assisted the District Council to do the “soft” aspects of the farm worker sanitation programme. In Kalahari District Council³, hygiene or sanitation awareness training for farm workers was not a great priority, and the main focus remained on providing toilets. Nevertheless, Kalahari DC’s Environmental Health Officer has played a central role in the farm worker sanitation programme.

This report covers the experience of the three District Municipalities mentioned above, in the period 1998-2000. This is the period prior to the new demarcation of local government, which came into operation in December 2000.



*Farm worker houses in the Karoo
(a VIP toilet is situated on the right of the houses)*

In this report, the following key themes or findings emerged:

1. The three District Municipalities have utilized very different approaches to farm worker sanitation. This offers valuable opportunities to learn from best practice.
2. There is a great demand, on the part of farmers and farm workers, for toilets and sanitation, and a great appreciation for the sanitation projects.

¹ Now called Frances Baard District Municipality.

² Now called Karoo District Municipality.

³ Now called Kgalagadi District Municipality.

3. The importance of the enthusiastic contribution by the farmers cannot be overemphasized – it remains a *sine qua non* for an effective farm workers sanitation project.
4. Toilet-building has to be accompanied by sanitation awareness training, for it to be fully effective.
5. The initiative and enthusiasm of the farm worker is a key ingredient. Ultimately, toilets and awareness training relies on the “buy-in” and interest of the beneficiaries. This also helps to explain why the results of the programme differ from one farm to another. The geographic isolation of farm workers also tends to reduce “demonstration effects” from one farm to another.
6. Despite the very important role of the District Municipality, there seems relatively little awareness or involvement in the programme on the part of senior Municipal staff or Councillors. The programme has run effectively, largely due to the financial and technical support of DWAF and Mvula Trust. The “ownership” of the programme by Municipalities needs to be improved.
7. The documentation of the programme is insufficient – on the part of all stakeholders (DWAF, Mvula Trust and District Municipalities). It is very difficult to reconstruct the implementation processes of the programme. Insufficient monitoring (and collation of information) is being done. Consequently, it is difficult to compare the performance of the three District Municipalities. There is a real need for DWAF and Mvula Trust to devise relevant and uniform indicators.

D. Methodology

This evaluation study, which was funded by Mvula Trust, utilized several methods, notably documentary research, in-depth interviews, and a household survey.

1. In-depth group interview with sanitation project staff

The first step was a joint meeting with sanitation project staff from all three District Municipalities. Such staff included Environmental Health Officers (Karoo, Frances Baard and Kgalagadi District Municipalities), as well as one consultant who had assisted the Karoo District Municipality.

The table on Page 14 reflects the valuable comparative findings from this discussion.

The interviews with EHOs and Sanitation Project Staff were complemented by interviews with senior District Municipality officials.

2. Field visits

Field visits were carried out in all three Municipalities, and four teams of researchers participated in the survey.

Three of the teams were specially appointed for this project. Each team consisted of two researchers, and two of the teams included DWAF officials. The teams were accompanied by the EHOs of the District Municipalities. Each field visit consisted of 2-4 days of visits to farms, and concluded with an interview with the District Municipality. Because these field visits included relatively few farms, the findings should be regarded as impressionistic, and not a properly representative sample.

The research was complemented by a much larger field work project, conducted in the Vaalharts area of Frances Baard (previously called “Diamantveld”) District Municipality. This study is referred to as the “Vaalharts” study, to differentiate it from the “Barkly West” study. The questionnaire was largely the same as that of the three teams mentioned above, although there are some small differences where comparable information could not be obtained.

3. Documentary research

Primary documentary research was done in all three Municipalities.

There was a great unevenness in the documentation available in the three District Municipalities. In Frances Baard Municipality, documentation mainly took the form of engineering consultants’ reports, project committee minutes, and one evaluation report. In Kgalagadi, the researchers relied on project progress reports, while in Karoo District Municipality, the minutes of the Transitional Rural Councils and the Water Services Business Plans were more useful.

4. Interviews

The field researchers in the three small surveys attempted to have interviews with senior District Municipal staff. This was only partially successful, because even where senior staff attended the interviews, they tended to have very limited knowledge of the programme. Consequently, the main source of information was from middle-level staff (e.g. EHOs), who had hands-on experience and information about the sanitation programme.

This indicates a potential problem of a lack of sufficient involvement by senior municipal staff. However, it should also be noted that the projects were implemented before the municipal transformation of December 2000, and that there may have been transfers of staff subsequently. Nevertheless, this is possibly an issue to be addressed more strongly in future programme implementation.

Part 2: Farm worker sanitation in each District Municipality

A. Karoo District Municipality

1. Baseline information

Before December 2000, four Transitional Rural Councils existed in Karoo District Municipality.⁴ In the Northern Cape, the TRCs were elected on a ward basis, on a first-past-the-post system. Due to the low voting poll of farm workers, and the small number of farm workers who stood for election, this invariably created TRCs which consisted exclusively or largely of farmers.⁵

The Transitional Rural Councils each compiled a Water Services Business Plan (WSBP) during 2000. The Plans of the various TRCs tended to follow the same style, and each included basic 1996 data concerning water and sanitation. Furthermore, in each TRC, a survey of a limited number of farms was undertaken to collect more current data.

For example, the Doringberg TRC (Prieska-Marydale area), the WSBP quoted the following 1996 census data which indicates the following levels of sanitation for farmers and farm workers:

Table 2: Types of sanitation in Doringberg TRC (1996)⁶

Type of sanitation	Absolute number	Percentage
Flush toilets	714	39%
Pits ⁷	555	30%
Buckets	132	7%
None	406	22%
	1807	100%

In addition, a survey was conducted on 38 farms in Doringberg TRC, which found that 9% of the 38 farms have no sanitation, 46% have pit toilets and 45% have flush toilets. The WSDP notes: "Where water-borne sewerage is provided, it flows into French drains. Most of the pit systems are the old pit toilet and not the VIP. When the pit is full, the hole is sealed and a new pit is dug. The older pit toilets are usually smelly and full of flies. These cause health problems. Where the bucket system is used, the contents are

⁴ Doringberg TRC (Prieska area), E'boya TRC (Colesberg area), Oranje-Karoo TRC (Hopetown area), Rhenosterberg TRC (Petrusville area), and Central Karoo (Victoria West area).

⁵ This should be contrasted with the situation in the Free State Province, where electoral regulations required that 50% of the seats should be filled by farmers, and 50% by farm workers.

⁶ This includes farmers' and farm workers' sanitation.

⁷ The 1996 census did not differentiate between pit toilets and VIPs.

emptied into an open hole or the veld ... A number of flush toilets are not being used due to mismanagement, vandalism and shortage of water (boreholes are dry due to drought)".

Similarly, the following information emerged from the WSDP of the E'boya TRC (Colesberg-Noupoort area):

Table 3: Types of sanitation in E'boya (Colesberg) TRC (1996)

Type of sanitation	Absolute number	Percentage
Flush toilets	238	27%
Pits ⁸	113	13%
Buckets	37	4%
None	480	55%
	868	100%

Subsequently, a survey was done on 97 farms in the E'boya (Colesberg-Noupoort) area and the result was as follows:

- 68% of the 97 farms have no sanitation
- 18 % have pit toilets - Most of the pit systems are the old pit toilets, and VIPs. When the pit is full, the hole is sealed and a new pit is dug. The older pit toilets are usually smelly and full of flies. These cause health problems. Where the bucket system is used the contents is emptied into open hole or veld.
- 13% have flush toilets – the sewerage flows into french drains.
- 1 % of the farming population have buckets.

Generally, the 1996 Census findings, as well as the more recent surveys, indicate two important findings with regard to the Karoo District:

- A large number of farmers and farm workers have flush toilets – the highest level of sanitation infrastructure
- A very large number of farm residents (presumably farm workers) have no sanitation at all.

In Karoo district, there are therefore very large differentials in services between various farms. (In contrast, Kalahari and Diamantveld districts have more average levels of farm worker sanitation).

⁸ The 1996 census did not differentiate between pit toilets and VIPs.

2. Municipal goals

Each TRC adopted its own strategic goals concerning farm worker sanitation. In contrast to TRCs in the rest of the Northern Cape, the TRCs in the Karoo area each compiled a Water Services Development Plan. Each TRC stipulated its goals in their WSDP. Doringberg TRC, for example, had the following goals:

- To develop an awareness among land owners of the requirements and the implications of the Water Act, and to promote strategic plans for water and waste management on farms
- To provide sanitation facilities to approximately 55% of households (about 1000 households)
- To develop a strategy to train consumers on the maintenance and operations on water and sanitation systems
- To investigate alternative options to establish forums where farm workers and land owners could meet to discuss needs and solutions to problems

However, the overarching leadership role of the District Municipality is strongly reflected in the TRCs' Water Services Development Plans. The WSDPs of the five TRCs look very similar, with only a few differences in relevant statistics.

Furthermore, the Bo-Karoo District Municipality took the lead by organizing a strategic workshop for rural development was held in the Bo-Karoo District on 18 August 1999. Significantly, the minutes of this workshop indicated the important role of the farmer and his wife:

- Share their experiences with regard to infrastructure creation
- Participate in planning
- Make land available for infrastructure
- Make labour available
- Make equipment available
- Make multi-purpose venue available for meetings
- Make financial contribution
- Contribute to the security of the farm worker's residence.

Farmers were also canvassed extensively about infrastructure levels, for the purposes of compiling the TRCs' Water Services Development Plans.

Clearly, the TRCs envisaged an important role for farmers, as delivery agents. Their strong emphasis on farm worker sanitation should also be noted. This illustrates a concern by representatives of farmers for the living conditions of farm workers.

However, it should also be noted that the enthusiasm of the farmers themselves for the programme was dampened by other factors⁹, some of which were beyond the control of the Municipality:

- The declining role of the District Municipality in rural areas led to grievances, and this soured the relationship between farmers and the Municipality. This was particularly caused by the deterioration in road maintenance.
- The declining role of Provincial Departments – especially the abolition of the mobile clinics provided by the Department of Health – made farmers feel that the rural areas were systematically neglected by Government.
- The possibility of sanitation subsidies being linked to land tenure issues created anxiety and reluctance on the part of some farmers. (The same issue surfaced, much more dramatically, in Diamantveld District Municipality – see below).
- The long and slow sanitation application process, and the slow rate of subsidy pay-outs by the District Municipality, caused frustration on the part of the farmers.

Despite the enthusiasm of the TRCs, therefore, there were difficulties in the delivery process, as well as grievances emanating from the political context in which the District Municipality operated. This, in turn, illustrates a fundamental problem – that Municipalities' roles and functions in the farming area has not been clarified.

3. Choice of technology

In its sanitation programme, the District Municipality did not prescribe the toilet technology which farmers should use. The system of subsidies operated as follows: Farmers chose which type of toilet they wanted to construct. After construction, the toilets were inspected by an official of the District Municipality. If the construction was approved, then a subsidy was allocated.

Most of the farmers, however, chose to construct VIPs.

4. Financing

Subsidies of R1000 per house were initially allocated by the District Municipality for sanitation. This was funded co-operatively by the District Municipality (R400 per toilet) and DWAF (R600 per toilet). This was increased during 1999 to a maximum of R1 500 per farm worker's house, up to a maximum of 5 houses per farm.¹⁰ DWAF's contribution was increased to R900. (However, the District Municipality has recently reduced its contribution to R200 per toilet, with the result that the subsidy available is now only R1 100 per toilet.¹¹)

⁹ Interview, DWAF social consultant.

¹⁰ TRC minutes, 2 July 1999.

¹¹ Interview, DWAF social consultant, Bo-Karoo area.

During 1999-2000, the five Bo-Karoo TRCs received the following amounts of Equitable Share funding, and made allocations for farm worker services:¹²

Table 4: Funding allocated to Karoo TRCs, 1999-2000

TRC	Equitable Share	Amount allocated for farm worker water, sanitation and electricity ¹³	Amount spent on sanitation 1998-2000
Doringberg	R668 856	R264 827	R36 000
Oranje-Karoo	R679 550	R167 455	?
E'boya	R642 526	R198 061	R 8 000
Rhenosterberg	R667 230	R179 517	R 25 000
Central Karoo	R677 126	R210 000	R14 000

From September 2000, DWAF contributed a subsidy of R600 per toilet.¹⁴

5. Allocation process

Land owners erected the toilet system, on their own account.¹⁵ An application form was then submitted to the district Municipality. A development officer or EHO would then be instructed to inspect the construction of the toilet, and if it met the standards of the District Municipality, the subsidy would be paid out to the farmer.

In practice, this system did not work very well. There were long delays between applications, approvals and pay-outs. One farmer, who was interviewed, maintained that he simply “gave up”, and built farm worker toilets out of his own pocket.

6. Delivery process

For many months during 1999-2000, applications for sanitation subsidies were relatively few, or none at all.¹⁶ However, applications increased during the latter part of 2000:¹⁷

¹² Source: TRC WSDPs (2000).

¹³ Each TRC could decide how much to allocate to water, sanitation, and electricity, in relation to other priorities, such as farm security, rural development and road maintenance.

¹⁴ Minutes, Rhenosterberg TRC, 19 September 2000.

¹⁵ The same system applied to water or electricity infrastructure on farms.

¹⁶ Minutes, E'boya TRC.

¹⁷ Minutes, E'boya TRC, 13 November 2000.

Table 5: Payments of subsidies in Karoo District Municipality

TRC	Elektrisiteit, Water, Sanitasie: Number of households	Estimated number of beneficiaries
Rhenosterberg		
Toilets	48	240
Water	59	295
Electricity	87	435
Oranje Karoo		
Toilets	30	150
Water	55	275
Electricity	87	435
E'Boya		
Toilets	18	90
Water	22	110
Electricity	51	255
Doringberg		
Toilets	84	90
Water	111	555
Electricity	90	450
Sentraal-Karoo		
Toilets	54	270
Water	50	250
Electricity	150	750
TOTAL no. of toilets	234	

The following table illustrates the progress in toilet delivery in the Bo-Karoo region, from January 1999 to September 2000:¹⁸

Table 6: Installation of toilets, Karoo district, Jan 1999-Sept 2000

TRC	Type	Number of toilets: Jan 1999- Feb 2000	Number of toilets: March 2000 – June 2000	Number of toilets: July 2000 – September 2000
Oranje Karoo	Flush	7	8	9
	VIP	10	0	0
	UDS	0	0	0
	Total	17	8	9
Doringberg	Flush	21	45	10
	VIP	1	0	0
	UDS	0	0	0
	Total	22	45	10

¹⁸ Minutes, Rhensoterberg TRC, 18 October 2000.

E Boya	Flush	3	0	6
	VIP	18	5	0
	UDS	4	5	0
	Total	25	10	6
Rhensterberg	Flush	6	0	18
	VIP	3	5	0
	UDS	8	5	5
	Total	17	5	23
Sentraal Karoo	Flush	6	7	40
	VIP	0	0	0
	UDS	0	0	0
	Total	6	7	40
	TOTAAL	87	75	88

These statistics indicate that, between January 1999 and September 2000, a total of 181 flush toilets, 37 VIPs and 22 UDS toilets were built, giving a total of 250 toilets constructed. Figures for November 20001 – March 2002 are:

- Applications received from 186 farmers to built 536 toilets
- Payments have been made to 25 farmers for 83 toilets.¹⁹

Clearly, there is a large discrepancy between the number of farmers who apply for subsidies, and the delivery (pay-out) of subsidies. The reason for the long delays could not be ascertained.

7. Water Pollution prevention

In contrast with Diamantveld District Municipality, where the programme was managed by a professional engineering company, the Karoo District Municipality placed much less emphasis on water pollution. The location of toilets were generally determined by the farmers themselves, and the involvement of the EHOs only began *after* the toilet was constructed (when the subsidy application had to be approved).

8. Health and Hygiene issues

When farmers applied for their subsidies, the EHOs or Development Officers would inspect the toilets that had been constructed. This opportunity was used for sanitation

¹⁹ Figures derived from DWAF social consultant.

awareness training. PHAST methods were used. For example, in October 1999, the farm workers of Elandsheuwel Farm participated in a PHAST course. They identified problems on the farm, as well as solutions to address the problems. They were also involved in the construction of several toilets.²⁰

However, the statistics from the small survey conducted in Karoo area does not substantiate this official perspective. Of the 29 households interviewed, 13 households maintained that someone had told them how to use and clean the toilet, and 11 maintained that this did not happen. On the question: “Has an awareness programme been implemented here?”, only 4 households answered in the affirmative. It does not seem, therefore, that DWAF’s stated objectives of providing sanitation awareness training, has actually been met.

B. Frances Baard Municipality

1. Baseline information

According to information collected during 1991-1995 by the erstwhile Diamantveld District Council, only 30% of farm workers in the district had some type of sanitation facilities. Of these, about 60% tended to be in a poor, unusable or unhygienic condition.²¹ It is not clear whether the District Municipality had any additional baseline information before the start of the project. Subsequently, however, the Municipality has developed an impressive data-base of housing and infrastructure conditions on farms.

The 1996 Census gives more detailed information about the *status quo ante*, prior to the project:

Table 7: Sanitation levels in Diamantveld (Frances Baard) District, 1996 Census

Local authority	Sanitation levels ²²
Vaalrivier TRC (Barkly West area)	Flush: 295 Pit: 533 Bucket: 81 None/other: 948
Vaalrivier TRC (Kimberley area)	Flush: 626 Pit: 336 Bucket: 58 None/other: 472
Vaalharts TRC (Warrenton area)	Flush: 132 Pits: 325 Bucket: 16

²⁰ Minutes, Rhenosterberg TRC, 21 October 1999.

²¹ Document, “Plaaswerkers Sanitasie”, compiled by VKE Engineers, 1998?

²² This includes farmer and farm worker sanitation.

	None/other: 34
Vaalharts TRC (Jan Kempdorp area)	Flush 51 Pit: 139 Buckets: 0 None/other: 14
Vaalharts TRC (Hartswater area)	Flush: 1020 Pit: 3134 Bucket: 144 None/other: 237
Hay TRC (Griekwastad area)	Flush: 335 Pits: 531 Buckets: 15 None/other: 510
Vaalrivier TRC (Herbert area)	Flush: 594 Pits: 599 Buckets: 193 Non/other: 825

From these figures, it appears that the majority of farm workers had (presumably unimproved) pit toilets. A very large number had no sanitation at all.

2. Municipal goals

In the case of Diamantveld District Council, the municipal goals were strongly defined at District level, instead of Local (TRC) level. In contrast with the Karoo district, the Diamantveld TRCs did not compile Water Services Business Plans. The main role of the TRCs was to allocate the subsidy to individual applicants. The TRCs also signed the contract with the Programme Engineers (VKE Engineers).

The District Municipality intended the following: To launch a sanitation project which will offer all farm workers the opportunity to provide effective sanitation to farm workers, with the aid of the District Municipality and the government's RDP programme. Subsidiary goals were:

- To offer users a structurally acceptable and functional facility within 50 m of their homes
- To offer a facility which will promote hygienic conditions and cause a general improvement in health
- To build facilities in such a way that it will not pose a pollution danger for ground water resources.²³

By April 1999, the District Council recorded its general satisfaction with the programme. Many applications were received, and within three months 376 toilets were built. Positive feedback was received from farmers and farm workers, and emergent contractors

²³ VKE, "Plaaswerkers Sanitasie".

had been empowered to participate. The Council decided to allocate an additional R2 million to the project.²⁴ The Council was prepared to pay a subsidy of R2 500 per toilet. (It should be noted that this is a much larger subsidy than that provided by Karoo District Municipality. This is explained, to some extent, by the fact that Diamantveld Municipality made use of professional engineers and subcontractors, in contrast to the Karoo district, where farmers designed and built the toilets).

3. Choice of technology

The District Municipality decided to use VIP toilets, since it uses no water, it is easy to build, it does not require emptying, there is very little maintenance, it cannot be blocked by foreign objects, it is hygienic, and it is relatively cheap to construct.

VKE Engineers used the following specifications for toilets:

- Each household is assumed to have 6 members
- The pit must have a volume of 2,4 m and must last for 15 years
- The toilet must be well ventilated to prevent bad odours
- The floor of the toilet must be built about 200mm above the ground level, to prevent run-off water from entering the toilet
- If hard soil prevents the digging of a hole, the pit must be built slightly above ground level.
- Where the water table is near the soil level, the pit must be sealed to prevent water pollution.

The following minimum specifications were determined:

- Adequate protection against pollution
- Top structure of bricks with a steel door
- Plastic seat
- Sufficient ventilation.

4. Prevention of pollution

The District Municipality follows DWAF's "Guideline for Groundwater Protection for the Community Water Supply and Sanitation Programme" to prevent pollution of underground resources. In addition, according to DWAF's "Protocol to Manage the Potential of Groundwater Contamination from On-site Sanitation", various steps were taken to prevent water pollution, including:

- The bottom of the pit must be at least 2 m above the water table or the aquifer
- Pit toilets must not be built within the 1:50 year flood lines

²⁴ District Council minutes, 22 September 1999.

- Pit depths must be limited, to increase the zone between the outflow of the pit and the water table
- No VIP toilet may be built closer than 50 m from boreholes or fountains
- Where high usage of VIPs is expected, systems may not be closer than 75 m to boreholes or fountains
- Boreholes in the vicinity of VIP toilets must be properly sealed to prevent contact with surface water
- If new boreholes are sunk after the installation of VIP toilets, then it should be uphill from the VIPs
- Regular monitoring of ground water must be done.

5. Cost estimates

In 1999, it was estimated that toilets would cost the following:

- Type A: Areas with soft soil and no pollution danger: R1 495
- Type B: Areas with soft soil and with pollution danger (i.e. sealed pit): R1965
- Type C: Areas with hard soil, i.e. built above ground level: R2145.

In addition, VKE Engineers charged 10% engineering fee per toilet, as well as R200 for supervision. This raised the final prices to:

- Type A: R2 102
- Type B: R2 692
- Type C: R2 917.

By August 2000, prices had escalated to over R3 000 per toilet (including engineer's fee). This meant that the allocation of R2 500 per toilet was not sufficient to cover costs.²⁵ Presumably this meant that the contribution of the farmer had to be increased.

6. Financing

In 1997, the District Municipality created a fund to finance farm worker sanitation. Every year thereafter, the DM allocated resources to this fund.

The DM funds a maximum of R2 500 per unit. The remainder, which amounts to approximately 10% of the toilet's price, must be contributed by the farmer. However, this contribution may also be in the form of labour, as long as it meets the engineer's standards.

²⁵ Progress report, 28 August 2000.

During 1997 and 1988, not much progress was made, but from mid-1998 until 2000, large amounts of funding were made available to Transitional Rural Councils. In 2000, for example, TRCs in the Diamantveld District Council area received between R1 million and R1.4 million.²⁶

The documentation of the programme at the Diamantveld District Council does not provide a clear picture of financial flows. However, it seems that the following financial allocations were made:

Table 8: Funding allocations to farm worker sanitation programme, Diamantveld District Council, 1999-2000

Year	Source	Amount	Purpose
1999	Equitable share: TRCs	R 958 318	Infrastructure
1999	District Council	R 500 000	Infrastructure and awareness
1999	District Council: Additional allocation	R2 000 000	Infrastructure and awareness
2000	DWAF	R 133 000	Awareness creation

By July 2000, the following amounts had been allocated and spent:

Table 9: Amounts spent by TRCs, Diamantveld District Council area

Transitional Rural Council	Amount
Bucklands	R 120 000
Vaalharts	R 40 000
Vaalriver	R 117 000
Hay	R 88 864
Vaalharts (additional)	R 455 000
Vaalrivier (additional)	R 200 000
Vaalharts (additional)	R1 000 000
TOTAL	R2 459 963

6. Allocation process

The process was demand-driven, i.e. farmers made applications to the District Municipality. The procedure was as follows:

- Sending out application forms
- Processing information

²⁶ Minutes, Project Committee, 29 May 2000.

- Approving applications, depending on the prescribed conditions
- Recommendation by the engineer, after a site visit and inspection of the geo-physical characteristics of the area
- Requesting tenders or quotes from appropriate contractors
- Construction of toilets under supervision of the engineer.

Farmers are entitled to choose higher levels of sanitation facilities than the VIP, but must bear the additional cost themselves.

7. Delivery process

The District Municipality emphasized delivery by small or emergent contractors. Each contractor was trained to do the work effectively.²⁷

Delivery was very rapid. A publicity campaign was launched in the local newspapers. Between April and July 1999, 376 applications were received.²⁸ By August 2000, 80 VIPs had been built²⁹, and between July and October 2000, 1 100 VIPs were erected.³⁰

By 5 November 2001, 164 toilets had been erected during that financial year.³¹

Delivery proceeded as follows:

- Sanitation awareness training was done by Community Development Officers and Environmental Health Officers (EHOs).
- Infrastructure development was done by farm workers, farmers and emergent contractors. They were supervised by VKE Engineers, appointed by the Transitional Rural Councils.

Reports to Council indicate frequent positive feedback by farmers and farm workers, and that there was widespread appreciation for the programme. This led to an additional allocation of R2 million by the District Municipality, in late 1999.

A serious political obstacle intervened in 1999, when the District Council stipulated that funds should only be allocated to farmers who had given a written undertaking that they intended transferring the tenure of the land on which the farm workers are living, before funds for the erection of toilets will be granted.³² This principle elicited massive concern from the farmers' organizations and from DWAF, and delayed the programme for about

²⁷ Progress report, 29 October 1999.

²⁸ Diamantveld District Council, Department of Administration Report to Council, 22 September 1999.

²⁹ Progress report, 28 August 2000.

³⁰ Project Committee Minutes, 13 November 2000.

³¹ Project Committee minutes, 5 November 2001.

³² Document, "Diamantveld RDP proposal that the sanitation programme be linked with the extension of security of tenure", November 1999.

five months. The District Council's decision was ultimately withdrawn, and the programme continued as originally intended.

Delivery was once again delayed when the new demarcation of local authorities was instituted. The TRCs' contract with VKE Engineers lapsed, and the new Category B municipalities showed little interest in the project.³³ However, the Frances Baard District Municipality simply continued with the programme by using its own officials.

8. Health and hygiene awareness issues

Diamantveld DM launched an Awareness Programme in July 1999.³⁴ The purpose of the programme was to create awareness concerning:

- Maintenance of toilet systems
- Personal hygiene and sanitary behaviour and its influence on health
- Identification of health risks on the farms and aspects that should be addressed.

By October 1999, workshops had been held on 62 farms. The methodology included:

- An initial visit made to the applicant during which the conditions for the subsidy was explained. A data form in respect of general needs was completed. The purpose of the form is to identify all possible development needs on farms, which can be used for future projects.
- A workshop is held during which the farm dwellers can identify the water- and sanitation-related health issues which influence their health. Solutions to problems are also identified.

In 1999, the Diamantveld District Municipality conducted an evaluation of the Awareness Programme³⁵. (Remarkably, this seems to be the only real example of programme evaluation conducted by any of the three District Municipalities). The evaluation was carried out for the three-month period of July 1999 to October 1999. It found that:

- The advantages cited by farm dwellers about the benefits of sanitation facilities were: Privacy, no need to use the bush, and they are not ashamed to receive friends and family from other towns.
- Virtually all the toilets were clean and neat

³³ Project Committee Minutes, 5 March 2001.

³⁴ Information drawn from document, "Farm dwellers Sanitation Programme: Monitoring Report on the Awareness Programme for the period July 1999 to October 1999" (Authors: Elna Francke and M. Kirsten)

³⁵ Information drawn from document, "Farm dwellers Sanitation Programme: Monitoring Report on the Awareness Programme for the period July 1999 to October 1999" (compiled by Elna Francke, Africon, Kimberley).

- People who had attended the awareness programme knew about the importance of a clean environment, the need for hand-washing, and the need to counteract alcohol abuse. However, a significant number of farm dwellers had not attended the awareness workshops, which is very unfortunate.
- Initially farm owners were negative regarding the sanitation and awareness programme. However, after positive results were obtained, a change of attitude occurred.

The evaluation identified further problems which need to be addressed:

- Problems of flies
- Handling of food, and knowledge of food hygiene
- Handling of refuse around the house
- Small children often do not use the VIPs, and therefore the disposal of human waste remains a problem.

The evaluation report identified key lessons:

- All role-players must become involved, including the District Council, farm workers, farmers, Department of Health, and Department of Agriculture
- Behaviour-change requires ongoing involvement and interventions, including possible peer education
- The work programme on farms should be considered when launching a development programme, so that more workers can attend workshops
- The creation of infrastructure alone cannot improve quality of life.

The small survey, carried out during February 2002 for this report, found that only a minority of the households could remember that “someone told me how to use and clean the toilet” (5 respondents, compared to 8 who could not remember). However, the majority of respondents could remember an awareness programme (9 respondents, compared to 6 who could not remember such a programme).

C. Kgalagadi Municipality

1. Baseline information

Since 1992, the District Council has undertaken facilities and needs assessments on farms. All applications for toilet subsidies have to have an assessment completed by the EHOs. This has led to the compilation of a valuable data base, based on farms which have been visited. The data base is regularly updated in a computer.

Nowhere in Kgalagadi’s documentation was there any information on general sanitation conditions on farms. The following baseline data has been extracted from 1996 Census figures:

Table 10: Sanitation conditions on farms, Census 1996³⁶

TRC	Sanitation levels
Rooiberg TRC (Kuruman area)	Flush: 399 Pits: 330 Buckets: 12 None/other: 411
Sandveld TRC (Kuruman area)	Flush: 134 Pits: 312 Buckets: 5 None/other: 75
Langberg TRC (Kathu area)	Flush: 398 Pits: 244 Buckets: 16 None/other: 501
Blinkklip TRC (Postmasburg area)	Flush: 205 Pits: 272 Buckets: 2 None/other: 161

As in Diamantveld (Frances Baard) Municipality, the large number of (unimproved) pit toilets and numerous households without sanitation, should be noted.

2. Municipal goals

At the end of 1996, the Municipality decided to initiate a farm workers sanitation project. Initially, each Rural Council would receive an equal allocation. At this stage, there is not a clear District Municipal policy towards farm worker sanitation.

In 2001, Kgalagadi District Municipality also launched a School Sanitation project, which involved the following:

- Determine the sanitation problems experienced at farm schools
- Obtain an expression of interest from the school governing body
- Conduct a health baseline study
- Obtain 10% of the cost for the upgrading or construction of the toilets from the school governing body
- Construct the number of toilets, or upgrade toilets, according to the regulations adopted for the number of children in the school
- Ensure that an operation and maintenance plan for each school with regard to the sanitation system, is in place.

³⁶

These figures include sanitation for farmers and farm workers.

3. Choice of technology

The Municipality only provided zinc top structures. This could be used for any kind of toilet preferred by the farmer, although in practice, VIPs were constructed.

The top structures were built by the Municipality itself, and then the Rural Councils distributed them to the farmers, according to their own allocation criteria.

4. Pollution issues

The close involvement of the District Municipality's EHOs probably meant that VIPs were not built close to water sources.

5. Cost estimates

In each financial year, the municipality budgeted as follows:

Table 12: Funding allocated to farm worker sanitation by Kalahari TRCs, 1996-2000

Year	Rural Council area	Amount budgeted
1996/7	Rooiberg	R 10 000
	Sandveld	R 10 000
	Langberg	R 10 000
	Blinkklip	R 10 000
1997/8	Rooiberg	R 10 000
	Langberg	R 10 000
1998/9	Rooiberg	R 20 000
1999/2000	Rooiberg	R 25 000
	Sandveld	R 20 000
	Langberg	R 10 000
	Blinkklip	R 10 000
2000/1	Blinkklip	R 40 000
TOTAL		R185 000

The following table shows the number of toilets that have been built since June 1997:³⁷

Table 13: Number of farm worker toilets built by Kahalari TRCs

Rural Council	Number of farms	Number of toilets
Sandveld	252	552
Langberg	57	65
Rooiberg	106	135

³⁷ Information obtained from EHO.

Blinkklip	5	5
Total	420	757

6. Financing

The District Municipality's subsidy policy was as follows:³⁸

- Payment is made according to a presentation of real costs. The allocation is limited to R500 per toilet.
- If a toilet costs more than R500, the applicant must provide evidence that he has paid the balance (e.g. by purchasing the materials), *before* the subsidy is paid.
- The District Municipality places an order as soon as 30 or more toilets are approved. The TRCs bought the structures and then distributed them amongst farmers.

In 1999, the amount of the subsidy was increased to R600 per toilet. Furthermore, if the funding allocated to the Rural Council is insufficient to cover the costs of all the applications, then the Rural Councils could re-allocate their infrastructure budget from their infrastructure budget.³⁹

7. Allocation process

The District Municipality bought the toilets. Each rural area was provided with R10 000 per financial year. Initially, the Rural Council compiled a list of applicants, who were provided with toilets on a first-come-first-served basis. However, this system was changed in early 1997.⁴⁰ The District Council cancelled the system of applications via the Farmers Associations, and henceforth insisted that all applications be made directly to the Rural Council, which would forward the approved list to the Municipality. This system placed Rural Councils at the centre of the allocation process.

However, the Farmers Unions are still used to disseminate information and encourage applications.

The District Municipality's Environmental Health Officer usually visits each farm, to verify the need of the farm workers. At the same time, a data sheet about living conditions of farm workers, is completed, and this is entered into the District Municipality's database. The toilet allocations are then approved.

³⁸ District Council decision, 29 May 1996.

³⁹ District Council decision, 20 August 1999.

⁴⁰ Project Progress Report, 21 February 1997.

VIPs are allocated according to a 1 toilet: 8 person ratio. This relates toilets to number of people and not to households.

8. Delivery process

Toilets were built by the farmers themselves, after the top-structures were delivered by the Rural Councils.

The EHOs regularly visit the farms, for a variety of reasons. On these visits, they perform informal inspections of the use of the toilets. This amounts to at least a basic level of monitoring. The ongoing requests by farmers for toilets indicate general support and approval of the scheme.

9. Health and Hygiene issues

No formal Health and Hygiene training was provided, although the EHOs sometimes informally advised the beneficiaries about maintenance of the toilets.

D. Comparative perspectives between the three District Municipalities, and lessons learnt

The following table illustrates the District Municipalities' different approaches to farm worker sanitation:

Table 14: Comparative District Municipal approaches to farm worker sanitation

	Kgalagadi	Karoo	Frances Baard
Subsidy	Size of grant is based on the quote for the top structure	Two phases: <ul style="list-style-type: none"> • In the past, DC allocated various amounts. • Now R1 000 (R600 provided by DWAF, R400 by DM). 	Maximum of R2 500 per household

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Size of budget for sanitation	It used to be determined by the Rural Councils (TRC). Each VOR got an all ocation from the DC.	TRCs allocated different amounts for sanitation. E.g. this could vary between R1 000 and R500 per unit. This has now been standardized to R1000 per unit.	TRCs allocated different amounts.
Source of budget	Equitable share Levy income DWAF grants	Equitable share Levy income DWAF grants	Equitable share Levy income DWAF grants
Needs assessment	Since 1992, the District Council has undertaken facilities and needs assessments on farms. All applications for toilet subsidies have to have an assessment completed by the EHOs. This has led to the compilation of a valuable data base. The data base is regularly updated in a computer.	An <i>ad hoc</i> assessment has been done since 1996. This is not universal throughout the Karoo Municipality. A form was sent out to farmers, but there was a poor response. No proper data system. Karoo DM now uses the Kgalagadi form.	Information collected since 1996. A database is maintained of data gathered as part of farmers' applications for subsidies (water, electricity, toilets). The EHOs do a Basic Subsistence Facility Survey (BSFS) when an application is received. The info is computerized.
Social units	VIPs are allocated according to a 1 toilet: 8 person ratio. This relates toilets to no. of people and not to households.	Maximum of 5 toilets per farm (linked to households?)	1 toilet per household.
Method of payment	Toilets were paid per quote for top structure. The TRCs would buy the structures and then divide it amongst farmers.	Farmer funds and builds the unit, then claims from the TRC. EHO inspects the toilet, then pays out a maximum of R1 000 for a toilet of RDP standards.	Farmer did not handle money. The contractor delivered and built the toilet, with the materials provided by the Municipality.
Method of delivery	Top structures delivered	Self-build	Self build or contractors

Commitment of farmers	<p>The farmer initiates the application for a toilet.</p> <p>The farmer simply had to build the structure with the materials provided.</p>	Farmer applies for a subsidy.	<ul style="list-style-type: none"> Farmer can build the toilet himself, or get a contractor. If the farmer does not build it himself, then he has to pay 10% (i.e. up to R250)
Involvement of EHOs	<ul style="list-style-type: none"> Needs assessments Collect quotes 	<ul style="list-style-type: none"> Inspection of toilets before authorizing payment Awareness raising 	<p>Three visits are undertaken to each farm:</p> <ul style="list-style-type: none"> Needs assessment Awareness raising Evaluation of toilet structure after building.
Type of toilet	VIP with zinc top structure	VIP with zinc top-structure UDS Flush	VIP mostly Any type, including flush
Type of awareness training	None	<p>The DM does “informal awareness raising” and ad hoc training of families in using and maintaining the toilets, as well as some health & hygiene training (PHAST). This is done after the toilet is built, when the EHOs do a quality inspection. There can therefore be a time lag of up to a month between the building of a toilet and the inspection/ awareness raising. Awareness raising usually takes about 1 hour.</p> <p>With the DWAF funding,</p>	<p>Phase A – collect information and do awareness. This takes up to 3 hours.</p> <p>Phase B – build toilet. However, this was often not done in sequence!</p> <p>Demo toilets are also erected.</p> <p>PHAST techniques are used for awareness – including 3-pile sorting, VIP poster, and sometimes some issues regarding economic empowerment of farm workers.</p>

Quality control	Informal checks are conducted by EHOs. If it is found that the toilets were not built, the materials will be relocated to another farm. This info is included in the data system.	Inspection is undertaken before payment is made (usually around 3 months after toilet is built).	Contracting engineer signs off the project, and writes a quality report, according to formal specifications.
Involvement of category B municipalities		Some local municipalities have their own EHO, then they get involved.	The onus is now on local municipalities to budget. But Frances Baard is continuing to provide sanitation.

The following are some of the lessons which the District Municipalities have learnt:

- A larger ventilation pipe (110 mm) is preferable to smaller pipes.⁴¹
- The installation of toilets (“hard development”) must always remain synchronized with the awareness programme (“soft development”). The awareness must take place before the toilets are installed.
- A data-base of developmental needs must be continuously compiled.
- The successes of the programme need to be constantly advertised within the farming community, e.g. by means of a newsletter.⁴²
- The toilets that faced north or south were the most effective.⁴³
- Where there is one toilet per family, there is a greater “ownership” of the toilets, than where families share a toilet.
- The tempo of construction and awareness workshops declines during harvest seasons.
- Emergent contractors often do not have the right vehicles and equipment to transport large quantities of supplies.⁴⁴ This causes delays in the erection of toilets.
- Where VIPs are erected in sandy soil, a cement layer must be cast around the toilet.⁴⁵

⁴¹ Project Management Committee, minutes, 17 April 2000.

⁴² Project Management Committee minutes, 31 July 2000.

⁴³ Project Management Committee minutes, 13 November 2000.

⁴⁴ Project Management Committee minutes, 5 February 2001.

- Farmers who apply for subsidies must discuss the project with the beneficiaries. The application forms must be adjusted to reflect this.
- The critical importance of the co-operation and interest of the farmers was noted. No project can succeed without the support of the farmer.
- Sanitation is a strategic service, because it serves as an “ice-breaker” in creating a relationship between the Municipality and the farmers.
- There is a strong link between the number of visits of EHOs to farm workers, and the effectiveness of sanitation. Some EHOs also believe that subsequent telephonic follow-ups with farmers’ wives are important.
- The allocation of toilets per person or per household can have O&M, “ownership” and social relations consequences.

Part 3: The Survey

A. Methodology

The following table reflects the number of interviews conducted:

Table 15: Interview sample

District Municipality	No. of farms	No. of schools	No. of interviewees
Karoo	8	-	29
Barkly West (Frances Baard)	5	2	14
Kgalagadi	7	-	7
Vaalharts (Frances Baard)	Unclear	Unclear	146

In the majority of cases, heads of households were interviewed.⁴⁶

In Karoo and Kgalagadi District Municipalities, the majority of interviews were conducted with men, while in Barkly West, the majority were women. There are two possible reasons for this: In many cases, it indicates co-operation by the farmers with the interview process, and therefore they ensured that their workers were at home; in other cases, the workers seem to have long lunch breaks, with their main work concentrated in the early morning or late afternoon.

Table 16: Gender profile of interviewees

District Municipality	Men	Women
Karoo	20	9
Barkly West ⁴⁷	4	6
Kgalagadi	3	4
Vaalharts	88	55

B. Demographic profile

The average number of household members differs between the three Districts. In Kgalagadi, the largest category of households had 2 members; and in Karoo, the largest

⁴⁶ This includes 25 household heads in Karoo, 13 household heads in Barkly West, 7 in Kgalagadi and 126 in Vaalharts.

⁴⁷ This includes 4 blank replies.

category of households had 3 members. In Barkly West, households tend to be larger – the largest category of households had 5 members, and there were even two households which had 10 members each. In Vaalharts, the largest category of households had 3 members, although a substantial number of households had as many as 5 or 6 members.

It is possible that these housing conditions can be attributed to the type of farming in the area:

- In Karoo, for example, with its sparsely populated sheep farms, there were four households which had only one member. (Compare this to Kgalagadi or Barkly West, where there were no households at all with only a single member). Presumably these residents were shepherds on “veeposte”.
- In Kgalagadi, virtually all the households were small (between 2 and 4 members), which may reflect the fact that workers in that area are seasonal migrants on intensive agricultural farms.

Unfortunately, none of the questionnaires reflected the number of farm worker households on each farm. This is perhaps an issue to be included in future surveys, as it would indicate the level of labour-intensity of different areas.

Very few pensioners live on the farms. A total of 8 pensioners were recorded in the entire sample. This indicates that farm workers’ elderly dependents tend *not* to live with them on the farms, and presumably live in the towns.

C. Infrastructure

The level of water supply in the households interviewed in Karoo District was higher than that of the other two districts. The majority of households in Karoo have household water supply, in contrast with Vaalharts and Kgalagadi, where yard taps predominate, or Barkly West, where communal taps were more frequent.

Table 17: Water infrastructure

District Municipality	House	Yard tap	Hand-pump / Tank / reservoir	Communal tap	None/Other
Karoo	14	7	-	7	1 (Neighbour's tap)
Barkly West	3	3	1	4	3 (river)
Kgalagadi	-	4	-	2	-
Vaalharts	7	71	3	45	17 (canal)

Not all the farms visited had installed VIP toilets. Some of the farmers had used the subsidy to install higher-level toilets, such as flush systems. Furthermore, not all the households had benefited from toilet projects, since some District Councils placed a limit on the number of applications which a farmer can make. Consequently, some of the households interviewed do not have toilets at all.⁴⁸

Regarding sanitation, Karoo is the only district where some of the interviews had indoor toilets (9 out of 20 households with toilets). A significant number of households in Karoo have flush toilets. (However, there were also several households in Karoo which still used the veld for sanitation).

In most of the other areas, toilets tend to be 8-20 m from the house

Table 18: Sanitation infrastructure

District Municipality	Flush	VIP	Pit	None/Veld
Karoo	10	13	-	6
Barkly West	-	11	1	1
Kgalagadi	1	6	-	-
Vaalharts	1	127	?	3

i. Sanitation projects

Most of the sanitation projects were implemented in 2000 and 2001.

By far the most households in all districts previously used the veld for sanitation, before the sanitation projects were implemented. Only two households (in Barkly West) used to use unimproved pit toilets, and only 1 household (in Kgalagadi) had a bucket toilet.

The vast majority of interviewees felt that the VIP toilets were an improvement on what they had before.⁴⁹ The reasons included:

- “It is comfortable” (2 replies)
- “It is convenient” (4)
- “Fewer germs” (2) and “It prevents diseases” (1)
- “No facility existed before” (1)
- “There is no smell” (1)
- “It is private” (4)
- “There is protection from the rain and cold” (9)

⁴⁸ In Vaalharts, for example, the average number of occupied houses on a farm is 11, and the average number of occupied houses on a farm **without** a toilet is 1.

⁴⁹ This question was not asked in the Vaalharts survey.

- “It is secure” (1).

A few households thought that the toilets were worse than they had before. One toilet as “full and threatening to fall in” (Barkly West), one was “unsafe” (Kgalagadi), and in one case, “A strong wind flattened the toilet a month after erection” (Karoo). However, these were exceptional replies.

ii. Contributions to the project

In all districts, the majority of interviewees contributed to the construction of the toilets. In Karoo, the typical contributions were to “do the whole job” (7), dig trenches (6), and put up panels (1). In Barkly West and Kgalagadi, the involvement was more limited, with most interviewees simply being involved in digging trenches.

iii. Sanitation awareness

1. Maintenance of the toilet

In the first three surveys, of the 30 households with VIPs, 11 interviewees said that someone had told them how to use and clean the toilet. One of the school interviewees in Barkly West was also positive in this regard, but the other school interviewee maintained that no information was provided. (These poor results may include farm workers who had recently moved to the farms, and were therefore not resident when the awareness training was done).

In Vaalharts, the majority of households with VIPS (68 households) said that they someone had informed them on the use and cleaning of the toilet. Fifty-seven households could not remember such advice. This means that 53% of households could remember a maintenance message. In Vaalharts, the most prominent messages remembered were to “Keep the door closed and do not throw anything down the pit” and “Wash toilet and sweep floor”. Only one resident (in Barkly West district) maintained that the toilet’s pit had been full⁵⁰. It is not known how it was emptied.

When asked what the interviewees would do once their pit was full, 15 interviewees did not have an answer. Five interviewees said that they will approach the farmer, while 8 said that they will move the toilet. Two residents (in Barkly West) said that they will suck the pit out, and it is interesting to question whether the Municipality is aware of this expectation). Two residents said, optimistically, that they will “make a plan”. Clearly, it seems that the issue of full pits has not been adequately addressed by the farm workers, or possibly, by the municipal officials.

⁵⁰ This question was not asked in Vaalharts.

Table 19: Training regarding VIP maintenance

District Municipality	Owners of VIPs who were told how to use and clean the toilet	Owners of VIPs who were not told how to use and clean the toilet
Karoo	7	5
Barkly West	3	6
Kgalagadi	1	6
Vaalharts	68	53

Most residents took some effort to clean their toilets. In Karoo district, several residents claim to do a very thorough job, including removing the bowl and washing it (2 interviewees), removing the pedestal and cleaning it (2), and removing the seat to wash it (1). Only the residents in Karoo reported using some kind of product (e.g. Domestos, Handy Andy, Surf or washing powder). Interviewees in Barkly West and Kgalagadi tended to rely on brushes, cloths and Dip to clean their toilets. In the entire survey, only seven toilets were found to have dirty bowls and seats.

In the small surveys, four interviewees reported not cleaning their toilets at all. Curiously, all four of these residents (one in Karoo, one in Barkly West, and two in Kgalagadi) were owners of VIP toilets. In Vaalharts, the majority of residents cleaned their toilets twice a week (43 respondents), while significant numbers cleaned their toilet every day (31), or once a week (23).

Some wrong practices were also recorded. In Vaalharts, five households pour Dip (a disinfectant) into their toilets; four households put Jeyes Fluid into the toilet, and one household puts in a “special detergent”. These practices are likely to cause severe problems with using the VIP toilets, since these products destroy the bacteria. Two residents in Kgalagadi who mentioned that they received advice, said that “they must throw dip into the toilet”.

The majority of interviewees in the three small surveys districts⁵¹ maintained that their visitors approved of the toilets (21 responses), and three interviewees in Karoo even mentioned that “Their visitors also want one”.

The problems mentioned in regard to VIPs were “bad smells” (both in Barkly West), the bowl leaks (Karoo), the pit is full (Barkly West), and the wind blows the toilet over (one in Karoo and one in Barkly West). In one case (in Karoo), the respondent said that too many people were using the toilet. In Vaalharts, a significant minority (28%) of toilets had a bad smell.

⁵¹ This question was not asked in Vaalharts.

In a few cases, residents had problems with the toilet structures. Four problems surfaced in Karoo district: one toilet has a leaky bowl, one has a loose door, one gets waterlogged when it rains, and one has wall slabs which are chipped and damaged. In Barkly West, four interviewees felt that their toilets were unsafe, and one resident in Kgalagadi also reported that the toilet seemed unsafe. Broken doors also characterized one toilet in Barkly West and one in Kgalagadi. In one toilet in Barkly West, the toilet had sunk down.

Additional problems observed by the research team in isolated cases, were:

- Lid is broken
- Seat is rusted (2 cases)
- Slab is pulling away from the toilet
- Toilet is full of rainwater
- Door cannot latch closed as the wall is bent
- The pipe is not directly in the pit
- The inside of the pedestal is not flush with the hole in the slab, and therefore faeces can catch on (2 cases in Barkly West, and 7 in Kgalagadi)
- Badly built toilet on a loose slab
- Slab is broken
- The door was not closed (3 cases)
- The seat was not put down (11 cases). This indicates that some people do not adequately understand or implement the principles of a VIP.
- In a minority of cases, there was a bad odour (5 cases in Barkly West, and two in Kgalagadi).

The large survey in Vaalharts is a very valuable record of possible structural and maintenance problems which can occur with VIP toilets. This forms a very useful checklist, which can be used in future surveys. In most cases, the VIPs were well built and looked after, as the following observation evidence of 201 households indicates:

- Pit must be lined (196 out of 201 toilets complied)
- Walls and roof must be in good condition (191 toilets complied, while four toilets had broken pipes or cracked walls)
- VIP must have a door (188 complied, two did not)
- Door must be closed
- Door must function (i.e. not broken, and the hinges must work)
- Floor must be clean (103 complied, and a significant number of 85 households did not comply)
- Bowl and seat must be clean (111 complied, and a significant 71 did not comply)
- Ventilation and lighting must be sufficient (178 complied, 5 did not)
- Seat lid must be down (84 complied, and the majority – 95 households – did not; this indicates a poor understanding of the principle of the VIP)
- Size of the hole must be large enough through which faeces fall (177 complied, 24 did not)

- The inside of the pedestal must be flush with the hole so that faeces cannot catch on it (178 complied, 5 did not)
- The slab must be free from cracks, through which insects can crawl (results unclear)
- The slab must be placed on well-compacted ground or flush with the underlying brickwork to prevent entry of insects and water into the pit (147 complied, while 45 did not)⁵²
- The pit must be higher than the ground level so that water does not flow in (141 complied, 50 did not)
- The seat and the vent pipe must be the only opening into the pit (181 complied, 6 did not)⁵³
- For households intending to empty the pit in future, there should be an outside opening
- There should be gauze over the vent pipe (106 complied, and a significant 83 VIPs did not)
- There should not be holes in the flyscreen (177 complied, 16 did not)
- The ventpipe should be firmly fixed to the superstructure (185 complied, 5 did not)
- The ventpipe should be vertical and fit directly into the pit (188 complied, 13 did not)
- The height of the pipe must be at least 0.5 m above roof level (90 complied, and 100 did not – a significant number!)
- The external diameter of the pipe must be at least 10 cm (90 complied, and 101 did not)
- The pipe must be clear from buildings so that the wind can blow over the top of the pipe (186 complied, while 3 did not).

Very few interviewees had made improvements to the toilet.⁵⁴ Only two interviewees in Karoo had done so (they painted their structures), as well as one in Barkly West (reinforced the structure with zinc plates). Of these, at least two (Karoo) had flush toilets.

2. Hygiene awareness

The figures for hygiene awareness programmes are also low. In Bo-Karoo, only 5 out of 24 households could remember receiving awareness training. This compares with only 6 out of 18 in Barkly West, and only 2 out of 7 in Kgalagadi. In Vaalharts, only 29 out of 127 households with pit toilets (i.e. 22%) could remember an awareness programme.

⁵² Some of the problems mentioned were broken slabs, holes filled up, slab lifting on one side, soil caving in, soil washed away by water, stormwater drainage inadequate, and slab unstable.

⁵³ In some cases, the vent hole was open (without a mesh).

⁵⁴ The Vaalharts survey did not include this question.

These low figures are surprising, given the emphasis placed on awareness training in Karoo and Barkly West. Again, one explanation for this is the turnover of labour, and some farm workers arrive on the farms after the toilet project had been implemented. In Vaalharts, for example, almost 10% of workers had not lived on the farm when the toilets were installed.

What exactly were the residents advised? Most residents remembered some kind of message, including “We were told about diseases” (Karoo), “Keep the children clean and don’t mess with the grey water” (Karoo), and something about “hygiene” (two cases in Barkly West). The most prominent message remembered in Vaalharts was “Keep house and toilet clean”. Two respondents remembered messages regarding disposal of refuse, while only one remembered something about “How to store food and about diseases”.

The interviewees in Karoo District could remember a range of messages. The most prominent message was that the toilet should be kept clean. Other messages were that “children should not play in the toilet”, “do not throw water in”, “if there is no toilet paper, use newspaper”, “small children should be accompanied by an adult”, and “do not throw rubbish in the toilet”..

Nevertheless, many households know something about the spread of germs. In Vaalharts, for example, 35 households knew that germs are spread by bad hygiene, 26 mentioned dirty toilets, and 25 mentioned flies. Fourteen households maintained that “using the veld” spreads germs.

Virtually all respondents indicated that it helps to wash one’s hands after using the toilet. The majority of interviewees stated that hand-washing keeps germs away and prevents germs. Interestingly, in Kgalagadi district, where sanitation awareness has not played a large role, very few respondents referred to germs or disease, and simply stated that it promotes “cleanliness”. In contrast, in Vaalharts, where sanitation awareness training has been widespread, 57 interviewees mentioned that hand-washing washes away germs, and 50 mentioned that it prevents diseases.

Only a few households had hand-washing facilities near the toilets, which probably discourages hand-washing.

When asked where they had got their information about hygiene, the majority of respondents said that they had heard it from school, or from their parents. A few interviewees identified the awareness programmes as the source of their information (3 in Karoo, and 5 in Barkly West). In Vaalharts, 11 of respondents mentioned the awareness programme as their main source of information, whereas 68% mentioned school and 10% mentioned their parents

G. Use of the toilets

In the first three projects, most cases, the toilets were used by more than 2 people. The largest number of toilets (8) were used by 4 people. In contrast, in Vaalharts, many families recorded that five or more people used the toilet (33% of respondents), and in two cases, ten people used a single toilet.

The vast majority of residents reported that they had no problems in using the toilets. However, three interviewees in Karoo, and 6 in Barkly West, mentioned that they did have problems.

Curiously, in the three small field surveys, 14 households with VIPs mentioned that their children do not use the toilet. Presumably this is influenced by the age of the children, but three of these households maintained that their children use the veld. There seems to be a lingering belief that children's excreta is not harmful, and can therefore lie around the yard. The survey in Vaalharts gave additional information on this question: while the vast majority of interviewees felt that the toilets were convenient for use by children, a few respondent felt children were discouraged from using the toilet. Reasons cited were: that the toilet was too far from the house; there was high grass growing around the toilet; other children use the veld; and the toilet is too big for the children.

Interviewees maintained that flies were a problem in four toilets in Karoo, and in six in Barkly West. In contrast, the survey team found flies in 2 toilets in Karoo, 5 in Barkly West, and 2 in Kgalagadi.

The vast majority of interviewees in the three small surveys claim to use toilet paper, although several also use newspaper. However, anal cleansing materials were only found in a minority of the toilets. In Vaalharts, the majority of respondents (90) use newspapers, whereas only 24 use toilet paper.

H. Environmental health

Of all the households visited in the small surveys, 36 were characterized as neat, clean, with self-respect, and houseproud. In contrast, 9 households were described as "filthy".

The disposal of grey water appears to be inadequate in most households. A few households (13 in total) pour their grey water into the garden. Most, however, simply throw it away, either in the yard or in the veld.

Refuse removal is usually done by dumping it in a hole (especially in Barkly West and Kgalagadi), or by placing it in refuse drums or rubbish heaps (Karoo). Only one interviewee said that he threw it in the veld. Most of the refuse is eventually burnt.

In many cases, water had to be transported from the water source to the house in a bucket. These containers were generally clean, which may indicate that hygiene awareness has had some impact (although there were three households, in Karoo, which still used dirty containers).

In a few households, taps were found to be leaking, and there was some wastage of water. In general, however, there was little evidence of water being wasted.

In all areas, the majority of yards were free of litter. However, 8 households in Karoo, and three households in Barkly West, had a litter problem. Of these households, virtually all have VIPs. The Vaalharts interviews showed that some the respondents' yards had a litter problem, although the majority of cases were clean. It is not clear, therefore, whether or not the hygiene awareness programmes have had much impact on littering, since it is not known what the condition was before the awareness programmes.

b. General standard of living

A large number of households had trees growing in their yard. Some residents had planted flowers and shrubs (this was particularly the case in Barkly West). In isolated cases, residents had planted fruit trees, vegetables and lawns. Gardening appears to be the exception, not the rule.

The majority of interviewees in all districts have radios, and a significant number have TV sets. In Karoo district, especially, TVs and radios are quite prevalent.

Virtually all the interviewees in Karoo and Vaalharts have electricity. This compares well with Barkly West and Kgalagadi, where about half the interviewees have electricity. Two interviewees in Karoo had their own cell phones. The distinct impression is gained that farm workers' standard of living is higher in Karoo than in the other three districts (albeit based on a very limited sample).

In the vast majority of cases, farm workers' houses were built of brick. There were isolated cases in Barkly West, Vaalharts and Kgalagadi where houses were built of mud or zinc.

Conclusions and recommendations

The complexity of implementing sanitation programmes should not be underestimated, because of a vast range of infrastructural, environmental, economic, social, and individual variables which affect the outcome of such programmes.

In the case of farm worker sanitation, this complexity is compounded by additional variables, such as the very different relationships between farmers and farm workers; and the different types of farming (intensive or extensive farming), which have spatial and economic implications.

Six types of recommendations can be made:

(a) *Methodology*

The surveys which were included in this report only give an impressionistic perspective of the results of the sanitation programmes in the three District Municipalities. The type of research conducted on the farms (quantitative questionnaires conducted with farm workers) prevented in-depth exploration of causal factors. A key recommendation, therefore, would be additional qualitative research, which would focus on issues such as farm workers' understanding of hygiene and sanitation; their sense of "ownership" of toilets; their attitudes regarding their rights and responsibilities vis-à-vis their employers; and the "demonstration effect" of toilets built by their neighbours. The first recommendation, therefore, concerns methodology.

(b) *Monitoring and evaluation (M&E)*

It was very difficult for the researchers to obtain documentary evidence of certain aspects sanitation programmes, such as funding made available, money spent, numbers of beneficiaries, numbers of toilets built, number of beneficiaries attending awareness training, and so on.

A second recommendation is that monitoring processes should be intensified, both by Mvula Trust, and by the District Municipalities.

The complexity surrounding M&E should not be underestimated. This should include the design of key indicators, the design of information-gathering processes, building staff capacity (staff skills and staff time) for the processing of data, creating systems of data verification, and creating systems of reporting of data.

Such monitoring systems should be created at DWAF and Mvula Trust (Northern Cape) level. In addition, Municipalities should be assisted to design their own M&E systems, based on their policy goals.

(c) *Infrastructural recommendations*

Most of the toilets appear to be in good working condition. However, the survey (Part 3) does highlight potential problems in toilet construction. The most important conclusion, in this regard, is the need for the builders of VIPs to understand the basic principles of VIPs. Especially in Karoo district and Kgalagadi district, there was little guidance provided to farmers in the construction of the toilets. This contrasts with the situation in Diamantveld (Frances Baard), where professional engineers were contracted to supervise toilet construction. There is clearly a need for training of farmers and farm workers in the basic principles of toilet construction, location of toilets, and toilet maintenance, as part of the sanitation programme.

(d) Hygiene and sanitation awareness training

The District Municipalities' EHOs, and the DWAF Social Consultants, have done pioneering work in raising hygiene and sanitation consciousness amongst farm workers. In this regard, they are probably the only remaining state officials who have direct contact with farm workers (especially since the abolition of mobile health clinics). Their strategic role should not be underestimated. In fact, the role of hygiene and sanitation awareness training offers an excellent opportunity for the newly demarcated municipalities to extend their contact with farm workers. (The databases on farm worker infrastructure, compiled by Kgalagadi and Frances Baard Municipalities, are good examples of the value of the EHOs' role.)

However, the findings of the survey do not show a clear correlation between awareness training and farm workers' level of knowledge. The significance of this finding is unclear. On the one hand, it could be influenced by the fact that some households may have moved into the houses after the toilet programme was completed. On the other hand, it may reflect the fact that farm dwellers simply do not remember what they were taught. This, in turn, may be influenced by the low level of education of the farm workers. It may also imply that the methodology of the awareness training should be changed, or that follow-up courses should be provided. In the latter case, it may mean that more capacity (staff resources) should be provided by municipalities, to make regular visits to farms possible.

There is a clear need for more regular monitoring, and more in-depth studies of the effectiveness of the current forms of sanitation awareness training (e.g. PHAST).

(e) Social issues

The key issue, in this regard, is the importance of the farmer in any developmental initiative targeted at farm workers. This is not only because all such development takes place on the farmer's land; it is also because the spatial situation of farmers and farm workers creates a close working relationship between them. In addition, many farm workers still regard their employers as "more than employers", i.e. with moral and social responsibilities for farm workers' welfare. Many employers also believe that they have such responsibilities.

In the design of social services for farm workers, there is a great need for Departments to consider the importance of the social relationship between farmers and farm workers. Some Departments have down-played this relationship, and this has had negative consequences for service delivery. This matter should be addressed at policy level, since it would entail the provision of adequate incentives for farmers to "invest" in farm workers' welfare. At present, farmers feel neglected, sidelined and even threatened by

the system of local government. This undermines the willingness of farmers to become involved in development programmes.

(f) Governance issues

The sanitation programme has been one of the most far-reaching programmes directed at farm workers. Nevertheless, it is startling to find how little knowledge the District Councillors or senior District Municipality staff have of the programme. There is clearly a need for DWAF and Mvula Trust to pilot their programmes more effectively via Municipalities.

However, it should be noted that the local government context has been far from ideal. The upheavals caused by the new demarcation have been compounded by three other unresolved issues:

- The unclear responsibilities of Municipalities regarding farming areas
- The amalgamation of rural and urban local municipalities has meant that urban municipalities are now responsible for farming areas – and they have a total lack of experience in this regard
- The debates concerning the Municipal Structures Amendment Act, which postulates the transfer of environmental health functions from Local to District Municipalities.

The local government system will take some time to settle down. Nevertheless, there is a critical need for a coherent debate on the responsibilities of Municipalities regarding farming areas. What services should be provided? How much will it cost? How will such revenue be generated? Where will municipalities find sufficient human resources to perform such functions?

With the completion of municipalities' IDPs (integrated development plans), the time is now ripe for an inter-departmental debate on the role of municipalities within the farming system. This is a matter which should be taken up at national level, between DWAF, DPLG (Department of Provincial and Local Government), and the National Treasury. The debate should also be taken up at provincial and district level. It should include all stakeholders, including government Departments, SALGA⁵⁵, agricultural unions, and farm worker unions.

The experiences of DWAF and Mvula Trust in conducting the farm worker sanitation programmes in the Northern Cape, will be of inestimable value in such debates.

⁵⁵ South African Local Government Association