Case study: Kala Refugee Camp,
Luapula Province, Zambia

March – August 2001

Contents

C1. Introduction

This case study is designed to provide worked examples of how the Guidelines process is applied in the field. During 2001 WEDC undertook a period of field-testing in Kala refugee camp in Zambia, with the support and assistance of Médecins Sans Frontières (MSF), Holland. During field-testing the following sections of the Guidelines were used:

- **Rapid assessment and priority setting** - completion of assessment checklists and tables
- **Outline programme design** - outline plan of action produced
- **Detailed programme design** - detailed Gantt chart, logical framework and budget produce
- **Implementation** - monitoring and evaluation exercises conducted

This case study cannot include every single detail recorded during field-testing but hopefully provides a useful overview through presenting specific examples. All examples are from actual field practice but the interpretations and opinions expressed are solely those of the authors.

C2. Rapid assessment and priority setting

The rapid assessment and priority setting process was conducted by completing the checklists for each sanitation sector. Where there are several different types of facility within one sector, a checklist has been produced for each. These have been simplified slightly for the purposes of this book. For each checklist a sector analysis table has been completed; all tables have been reproduced. All recorded data is then combined in the final priority setting table.

Checklists A-G show the recorded assessment information.

- Checklist A: Background information
- Checklist B: Excreta disposal
- Checklist C: Solid waste (SW) management
- Checklist D: Waste management at medical centres
- Checklist E: Disposal of dead bodies
- Checklist F: Wastewater (WW) management
- Checklist G: Hygiene promotion

Completed sector analysis tables follow each checklist.

Checklist A: Background information

March 2001

General description

Kala refugee camp lies in Luapula province in north-eastern Zambia. The camp was set up in August 2000 for Congolese refugees fleeing civil strife in the Democratic Republic of Congo (DRC). The current population of the camp is 14,000 and the average family size is four. There are no figures for the breakdown of the population by sex or vulnerability. The population is currently steadily increasing by approximately 350 people per week. World Vision is responsible for camp management and MSF Holland is responsible for health, water supply and sanitation, although they hope to pull out by the end of the year. The local government provides police for camp security and UNHCR co-ordinates the relief effort.

The site is gently sloping with a freshwater source which is being treated and pumped to distribution points within the camp. The soil is a clayey loam and the current (wet season) water table is at a depth of approximately 2.5m. The space available per person is approximately 45m^2. There is a large swampy area adjacent to the camp but drainage within the dwelling areas is generally adequate. The wet season lasts from November to April and there is generally no rainfall at all between June and September. Table C1 is a summary of general background information.

Table C1. General information

Location	Kala refugee camp, Zambia
Date	24/03/01
Organisation carrying out the assessment	MSF Holland; WEDC
Name of assessor(s)	Joseph N'gambi; Peter Harvey
Position of assessor(s)	Watsan Engineer; Researcher
Dates of assessment	18/03/01 - 24/03/01
Maximum level of intervention (short-term or long-term)	Long-term level
General location of affected area or site	Scrub woodland, adjacent to swampy plain
Nature of emergency and likely resolutions	Civil strife/unrest in DRC, no indication of likely resolution or return to DRC
Origin of affected population	DR Congolese refugees, few local Zambians
Seasonal/climatic implications	1000mm/year rainfall, wet season Nov.-Apr.
Government involvement	Zambia police present at camp, responsible for security
Relationship between local and displaced populations	Low local population but relationship reported to be good with minimal conflict
Other organisations working in the area	UNHCR (humanitarian co-ordination); World Vision (camp management and social affairs)

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Geographical informaton

A map of the camp layout is shown in Figure C1.

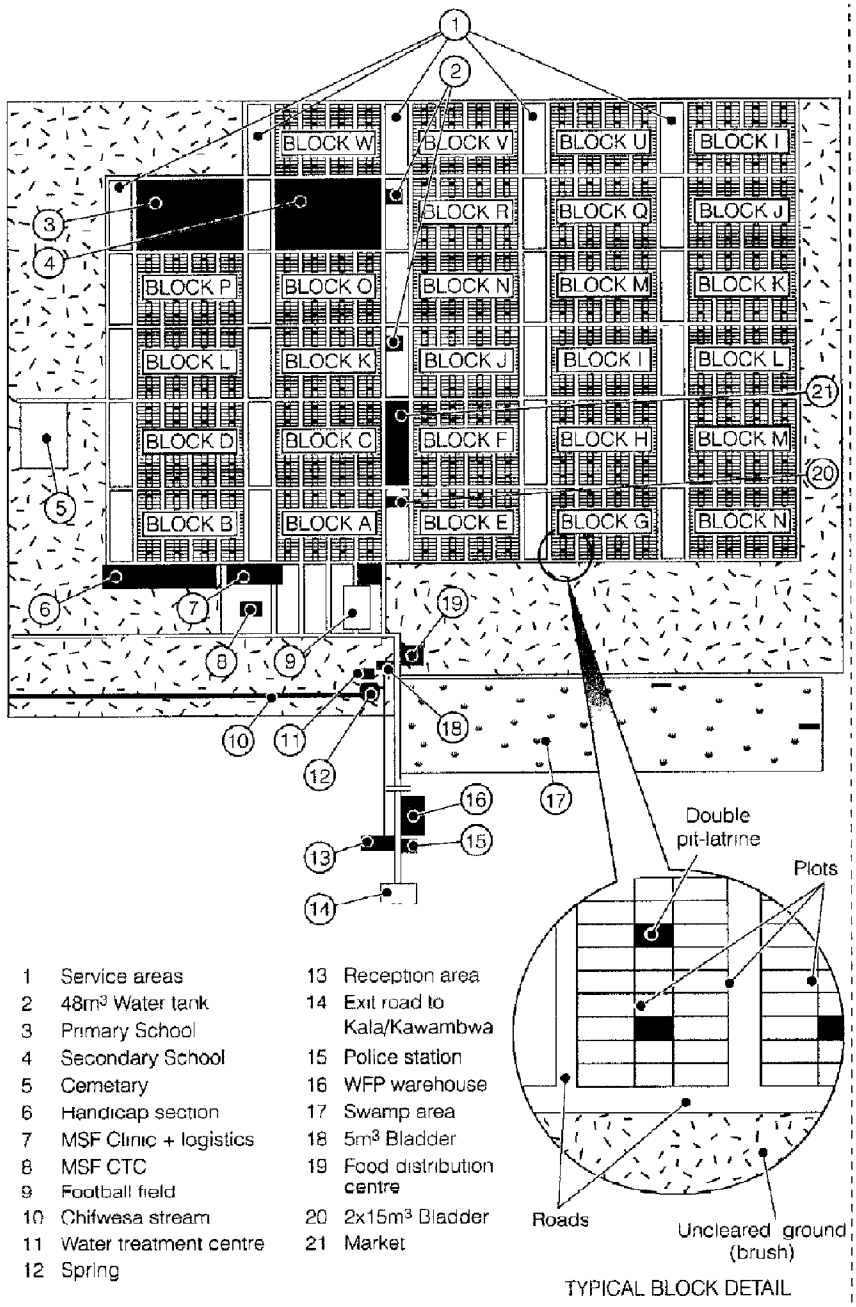

Figure C1. Camp layout

Checklist B: Excreta disposal

March 2001

General description
Good quantity and distribution of communal latrines, generally hygienically used and maintained. Low usage of covers on drop-holes, however, and plastic sheeting over superstructure produces uncomfortably hot interior. Concrete latrine slabs are thicker than necessary (approx.10cm), with no foot-rest positions, and are often poorly seated above pit. Corn-cobs are most commonly used for anal cleansing.

Family latrines (situated in Blocks A-F only) provide a better level of service in terms of quantity and quality but this distinction is not crucial. The families are responsible for pit excavation and superstructure construction (from mud, timber and grass), whilst MSF provides a reinforced concrete latrine slab. MSF workers presently construct latrines for vulnerable households in these areas.

Latrines for the disabled and at schools and health facilities are generally acceptable. The newly constructed VIP latrines at the health post are of very good quality.

Latrines at the reception centre are poorly constructed, used and maintained. Although an MSF team cleans and disinfects facilities daily, many new arrivals have to stay for several days and do not use the latrines provided, due to overcrowding.

One general checklist has been completed and a table has been completed for each of the following:

- domestic communal latrines;
- domestic family latrines;
- latrines for special groups (visually impaired);
- latrines at schools;
- latrines at the medical centre; and
- latrines at the reception centre.

Quality
1. Existing facilities are technically appropriate in general, although some spaces are too small and plastic sheeting makes communal latrines hot inside.
2. Existing facilities are generally socio-culturally acceptable to users, although there is no access for young children; and some users expressed preference for family units.
3. Potential hazards for disease transmission include contact with children's faeces and lack of drop-hole covers.
4. Current facilities and practices are sustainable for at least one year; average pit size $4m^3$ for 16 users.

Quantity
1. Ratio of domestic facilities (cubicle or space) to population is 1/16 for communal; and 1/ 4 family.
1b. Ratio of facilities in public places or institutions: 1/25 schools; 1/80 beds at medical centre; and 1/(18-70) at reception centre.
2. Maximum one-way walking distance for users: 15-30m

Usage
1. Proportion of the affected population with access to appropriate facilities: 75%-90%
2. Proportion of the affected population using the appropriate facilities correctly on a regular basis: 50% (reception centre); otherwise >90%

B. Excreta disposal

B.1-3 Domestic excreta disposal

Location of assessment: Kala camp, Zambia Date: 19/03/01 Assessor: P. Harvey

This table should be completed for each of the following as appropriate (underline or circle the relevant):

B.1 Single or shared family latrines ***B.2 Domestic communal latrines*** *B.3 Latrines for special groups*

Data	Collected data	B	Range				M	C
			10	7	4	1		
Technical appropriateness	Gen. OK but spaces small, hot interior, slab unstable	5	inappropriate	technically basic	appropriate	very appropriate	0.25	1.25
Social and cultural acceptability	Some people would prefer family latrines	5	very unacceptable	unacceptable	acceptable	very acceptable	0.25	1.25
Potential hazard to health	No drop-hole covers, not used by young children	5	major hazard	basic protection	minimal hazard	no hazard	0.25	1.25
Sustainability of facilities	4m³ pits: >1 year	1	None	1 month	6 months	>1 year	0.25	0.25
Ratio of latrine spaces to population	1/16 on average	1	None	1/100 or immediate responses	1/50	1/20	0.5	0.5
Maximum one-way walking distance	30m	2	>100m	75m	50m	<25m	0.5	1.0
% of population with access to appropriate facilities	80%	3	None	50%	75%	>95%	0.5	1.5
% of population using appropriate facilities correctly	80%	3	None	50%	75%	>95%	0.5	1.5
							Total	8.5

B.1-3 Domestic excreta disposal

Location of assessment: Kala camp, Zambia Date: 19/03/01 Assessor: P. Harvey

This table should be completed for each of the following as appropriate (underline or circle the relevant):
B.1 Single or shared family latrines *B.2 Domestic communal latrines* *B.3 Latrines for special groups*

Data	*Collected data*	*B*	*Range*				*M*	*C*
			10	*7*	*4*	*1*		
Technical appropriateness	Gen. OK but slabs often poorly seated	3	inappropriate	technically basic	appropriate	very appropriate	0.25	0.75
Social and cultural acceptability	Good privacy, traditional materials	3	very unacceptable	unacceptable	acceptable	very acceptable	0.25	0.75
Potential hazard to health	Well maintained but not used by young children	4	major hazard	basic protection	minimal hazard	no hazard	0.25	1.0
Sustainability of facilities	>1 year	1	None	1 month	6 months	>1 year	0.25	0.25
Ratio of latrine spaces to population	1/4	1	None	1/100 or immediate responses	1/50	1/20	0.5	0.5
Maximum one-way walking distance	15m	1	>100m	75m	50m	<25m	0.5	0.5
% of population with access to appropriate facilities	>95%	1	None	50%	75%	>95%	0.5	0.5
% of population using appropriate facilities correctly	>95%	1	None	50%	75%	>95%	0.5	0.5
							Total	4.8

B.1-3 Domestic excreta disposal

Location of assessment: Kala camp, Zambia Date: 19/03/01 Assessor: P. Harvey

This table should be completed for each of the following as appropriate (underline or circle the relevant):
B.1Single or shared family latrines *B.2 Domestic communal latrines* ***B.3 Latrines for special groups***

Data	Collected data	B	Range				M	C
			10	7	4	1		
Technical appropriateness	Gen. OK good additional space	4	inappropriate	technically basic	appropriate	very appropriate	0.25	1 0
Social and cultural acceptability	Gen. Acceptable	4	very unacceptable	unacceptable	acceptable	very acceptable	0 25	1.0
Potential hazard to health	Minimal	4	major hazard	basic protection	minimal hazard	no hazard	0.25	1.0
Sustainability of facilities	>1 year	1	None	1 month	6 months	>1 year	0.25	0.25
Ratio of latrine spaces to population	Apx. 1/20	1	None	1/100 or immediate responses	1/50	1/20	0.5	0.5
Maximum one-way walking distance	<15m	1	>100m	75m	50m	<25m	0.5	0.5
% of population with access to appropriate facilities	>95%	1	None	50%	75%	>95%	0 5	0.5
% of population using appropriate facilities correctly	>95%	1	None	50%	75%	>95%	0.5	0.5
							Total	5.3

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B.4 Excreta disposal for public places

Location of assessment: **Kala camp, Zambia** Date: **19/03/01** Assessor: **P. Harvey**

This table should be completed for each of the following as appropriate (underline or circle the relevant):

Medical centres ***Schools*** *Markets* *Feeding centres*

Data	*Collected data*	*B*	*Range*				*M*	*C*
			10	*7*	*4*	*1*		
Technical appropriateness	**As domestic latrines**	5	inappropriate	technically basic	appropriate	very appropriate	0.25	**1.25**
Social and cultural acceptability	**Generally acceptable but no sex segregation**	5	very unacceptable	unacceptable	acceptable	very acceptable	0.25	**1.25**
Potential hazard to health	**No handwashing facilities**	6	major hazard	basic protection	minimal hazard	no hazard	0.25	**1.5**
Sustainability of facilities	**>1 year**	1	None	1 month	6 months	>1 year	0.25	**0.25**
Ratio of latrine spaces to health centre beds / patients OR			None	1/50 beds 1/100 outpatients	1/20 beds 1/50 outpatients	1/10 beds 1/20 outpatients	0.5 OR	
Ratio of latrine spaces to school pupils OR	**1/25**	2	None	1/50 girls 1/100 boys	1/30 girls 1/60 boys	1/15 girls 1/30 boys	0.5 OR	**1.0**
Ratio of latrine spaces to market stalls OR			None	1/100 stalls	1/50 stalls	1/20 stalls	0.5 OR	
Ratio of latrine spaces to population at feeding centres			None	1/100	1/50	1/20	0.5	

continued ....

B.2 Excreta disposal for public places

.... continued

Data	*Collected data*	*B*	*Range*				*M*	C
			10	*7*	*4*	*1*		
Maximum one-way walking distance	**25m**	1	>100m	75m	50m	<25m	0.5	**0.5**
% of population with access to appropriate facilities	**All pupils**	1	None	50%	75%	>95%	0.5	**0.5**
% of population using appropriate facilities correctly	**Well maintained and used by all pupils**	1	None	50%	75%	>95%	0.5	**0.5**
							Total	**6.8**

B.4 Excreta disposal for public places

Location of assessment:.... Kala camp, Zambia ..... Date:..... 19/03/01 Assessor:..... P. Harvey .....

This table should be completed for each of the following as appropriate (underline or circle the relevant):

Medical centres *Schools Markets Feeding centres*

Data	*Collected data*	*B*	*Range*				*M*	*C*
			10	*7*	*4*	*1*		
Technical appropriateness	New latrines very good, older slabs unstable	3	inappropriate	technically basic	appropriate	very appropriate	0.25	**0.75**
Social and cultural acceptability	Generally acceptable + sex segregation	3	very unacceptable	unacceptable	acceptable	very acceptable	0 25	**0.75**
Potential hazard to health	Minimal, slippery surfaces	4	major hazard	basic protection	minimal hazard	no hazard	0 25	**1.0**
Sustainability of facilities	>1 year	1	None	1 month	6 months	>1 year	0 25	**0.25**
Ratio of latrine spaces to health centre beds / patients OR	4/80 beds = 1/20 4/250 OP = 1/60	4	None	1/50 beds 1/100 outpatients	1/20 beds 1/50 outpatients	1/10 beds 1/20 outpatients	0.5 OR	**2.0**
Ratio of latrine spaces to school pupils OR			None	1/50 girls 1/100 boys	1/30 girls 1/60 boys	1/15 girls 1/30 boys	0.5 OR	
Ratio of latrine spaces to market stalls OR			None	1/100 stalls	1/50 stalls	1/20 stalls	0.5 OR	
Ratio of latrine spaces to population at feeding centres			None	1/100	1/50	1/20	0.5	

continued ....

B.2 *Excreta disposal for public places*

.... continued

Data	*Collected data*	*B*	*Range*				*M*	*C*
			10	*7*	*4*	*1*		
Maximum one-way walking distance	**25m**	1	>100m	75m	50m	<25m	0.5	0.5
% of population with access to appropriate facilities	**90%**	1	None	50%	75%	>95%	0.5	0 5
% of population using appropriate facilities correctly	**90%**	1	None	50%	75%	>95%	0.5	0 5
							Total	**6.3**

B.4 Excreta disposal for public places

Location of assessment: **Kala camp, Zambia** Date: **19/03/01** Assessor: **P. Harvey**

This table should be completed for each of the following as appropriate (underline or circle the relevant):

Medical centres *Schools* *Markets* ***Reception centres***

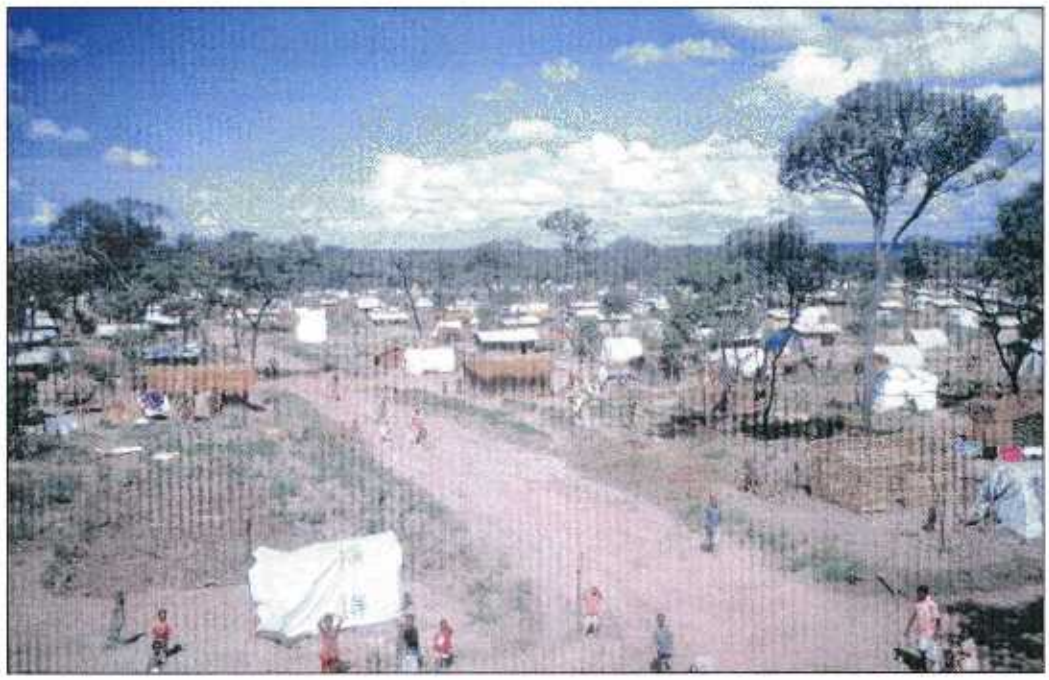
Data	*Collected data*	*B*	*Range*				*M*	*C*
			10	*7*	*4*	*1*		
Technical appropriateness	**Pits too small, erosion, slabs poorly seated**	**7**	inappropriate	technically basic	appropriate	very appropriate	0.25	**1.75**
Social and cultural acceptability	**Odour/lack of maintenance**	**6**	very unacceptable	unacceptable	acceptable	very acceptable	0.25	**1.5**
Potential hazard to health	**Strong odour, flies, open defecation**	**7**	major hazard	basic protection	minimal hazard	no hazard	0.25	**1.75**
Sustainability of facilities	**3 months**	**6**	None	1 month	6 months	>1 year	0.25	**1.5**
Ratio of latrine spaces to health centre beds / patients OR			None	1/50 beds 1/100 outpatients	1/20 beds 1/50 outpatients	1/10 beds 1/20 outpatients	0.5 OR	
Ratio of latrine spaces to school pupils OR			None	1/50 girls 1/100 boys	1/30 girls 1/60 boys	1/15 girls 1/30 boys	0.5 OR	
Ratio of latrine spaces to market stalls OR			None	1/100 stalls	1/50 stalls	1/20 stalls	0.5 OR	
Ratio of latrine spaces to population at feeding centres	**1/18 - 1/70**	**4**	None	1/100	1/50	1/20	0.5	**2 0**

continued ....

B.2 Excreta disposal for public places

.... continued

Data	***Collected data***	***B***	***Range***				***M***	***C***
			10	***7***	***4***	***1***		
Maximum one-way walking distance	**25m**	**1**	>100m	75m	50m	<25m	0.5	**0.5**
% of population with access to appropriate facilities	**75%**	**4**	None	50%	75%	>95%	0.5	**2.0**
% of population using appropriate facilities correctly	**>50%**	**8**	None	50%	75%	>95%	0.5	**4.0**
							Total	**15.0**



Kala refugee camp

Pit latrine construction

Case study

Preparation of concrete latrine slabs

Family pit latrine under construction