

Case studies

1.1 Introduction

These case studies have been collected as part of a project to bring issues of social exclusion in the practical development of infrastructure in low-income countries into the core of project planning and design. They have been used to influence and illustrate the guidelines that have been produced as part of the research.

The case studies are being set out here to provide a resource for engineers and the trainers of engineers. They can either be used as a supplement to the training notes produced under the project or used separately to provide illustrations of the overlap between gender issues and the development of infrastructure.

One of the problems in collating the case studies has been the lack of *engineering* issues. There are many case studies of the importance in considering the needs of men and women in the development of infrastructure, but these have come from gender studies rather than mainstream civil engineering. This leads to the impression that gender issues lie outside of the core of project development and design, forming a specialist area requiring specific expertise. In contrast, many engineering examples do not bring out social issues explicitly, so there is a gap between “gender” knowledge and “engineering” knowledge that these case studies and associated books and booklets aim to bridge.

1.2 The studies

The case studies have been kept short, to make them accessible and useful as part of larger initiatives. They have been edited slightly to bring out the engineering issues, rather than other aspects, such as politics or rights based actions. A comment is provided to expand on some the lessons that can be drawn from the case study.

The studies are grouped according to sectors:

- water resources;
- water supply
- sanitation
- solid waste
- transport
- irrigation
- construction
- management and organization
- emergencies
- hygiene activities

Within each section, the case studies are grouped according to the project cycle (planning, feasibility, design, construction, operation and maintenance, evaluation).

1.3 Other project outputs

- For a short introduction on infrastructure and its impact on people, see *Building with the Community* (WEDC 2002)
- For guidelines on how on engineers can include gender issues in their work see *Infrastructure for All* (WEDC 2002).
- To train engineers and technicians to meet the needs of men and women see *Developing Engineers and Technicians* (WEDC 2002)
- Website: <http://www.lboro.ac.uk/wedc/projects/msgender/index.htm>

1.4 Referencing

The case studies have been provided by a wide ranging group of people over several years. Some are personal observations or have been extracted from published or unpublished reports. Attempts have been made to identify the originator of these extracts, but this has not always been possible. If you know the original source of a case study, please contact Brian Reed (details below), in order that credit can be given.

1.5 New Case studies

If you have examples of engineering issues that have a gender or social exclusion aspects, that you think would be useful additions to these case studies, please contact Brian Reed (details below).

1.6 Acknowledgements

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Case study 1

Equity in sanitation provision

1.1 Background

In Zaire a development programme was being run by a large international agency. It was working through local NGOs. Two visitors were taken to an all boys school and shown two immaculate new toilet blocks of six toilets each. As they were about to leave the representative of the funding agency asked the head of the local NGO if they were now to be taken to the girls school to see their toilets. The response was given that 'they don't have any as we ran out of money'.

1.2 Comment

- Priorities for development programmes are still mainly set by men. Positive actions are needed to ensure that the programmes provide for men and women's needs equitably.
- Women should have priority for sanitation as they have a greater need for privacy.
- Clean, safe sanitation is one factor that can encourage girls to attend school. Proper sanitation should be provided equally, but lack of good facilities can impact more on girls than boys.

Case study 2

Nomads demand latrines

2.1 Background

In 1989 a sanitation consultant visited Port Sudan on behalf of the Save the Children Fund. Beja nomads from the Red Sea Hills had settled on the outskirts of Port Sudan, and some men had obtained work locally. From 1986 SCF had been working among the Beja people living in the district of Deim El Wohda on the outskirts of Port Sudan.

2.2 Action

Deim El Wohda receives very little support from the local government, and the government does not provide water connections to houses, rubbish collections or electricity supplies. Culturally the Beja value and jealously protect the women, who are generally sheltered within their residential compounds. As nomads the Beja had not used latrines, so in Port Sudan their domestic compounds lacked latrines. The Beja were therefore very concerned that women had to relieve themselves either within the compound or in public on areas of open ground. In order to prevent further embarrassment and to protect the privacy of the women, the Beja formed a health group and asked SCF for assistance and advice so that latrines could be provided.

2.3 Comment

Concerns about privacy and protection of women can, in some societies, be a strong motivating factor for the provision of household latrines.

Case study 3

Demand for latrines

3.1 Background

In Hyderabad, India, it was reported in 1990 that there was demand for household latrines in order to provide security for women. Open defecation was common, and women feared going to relieve themselves at night because of possible attack or rape.

3.2 Comment

Concerns about privacy and security of women can, in some societies, be a strong motivating factor for the provision of household latrines.

Bingham, A (1984) Conference Report, Women 'invisible' to world planners, World Water, Nov 1984

Case study 4

Assessing priorities for sanitation

4.1 Background

Mary Elmendorf observed that women do not always welcome 'appropriate technology' which has the approval of engineers. An example of this was from the Yucatan Peninsula of Mexico, where pit latrines had been recommended by an engineer who was normally well attuned to social considerations. Yucatan women did not want pit latrines - they wanted a flush latrine which they thought was more modern and convenient. Mary's conclusions were that instead of assuming that we know what people want we should listen to them and find out what they really want and why.

4.2 Comment

Assumptions should not be made as to what people want. They should be asked and listened to.

Case study 5

Privacy and convenience

5.1 Quotes

‘In some places women without latrines have to defecate before dawn or after sunset. From an early age women in rural Bangladesh are trained to control themselves during daylight hours’

Agarwal (1985)

‘A story that is often repeated concerns a young woman who became an important beautician in Bombay. She still lived with her family in a slum with no latrine and told a woman’s magazine ‘every morning I control the urge with a great effort and rush to the toilet once I reach the beauty parlour’

(Agarwal & Anand, 1986).

‘Because of the purdah system, some Muslim women can only defecate on *rooftops*’

(Moser, 1991)

‘In Yemen ‘a corner of the roof next to a wall offers sufficient privacy for the act’

(Al-Eshawi, 1992)

‘Forty years ago it was reported that in villages around Cairo quite a large proportion of the people used the ‘animal room’ in the house’

(Weir et al, 1952).

‘This practice still applied in the 1980s when I was entertained by a villager near Cairo and his male friends. The householder proudly showed me his latrine. Watching and excluded from the conversation were my lady interpreter and the householder’s wife. As we walked away the interpreter told me that the wife was not allowed to use the latrine. ‘What does she do?’ I asked. ‘Oh she has to use the cowshed’

(Pickford, 1995)

5.2 Comment

- Women often are restricted in their movements by cultural or social traditions. These restrictions should be identified and responded to during the project process.
- Privacy and convenience are important factors to consider when designing sanitation programmes.

Pickford, J (1995) Low-cost Sanitation, A survey of practical experience, Intermediate Technology Publications

Case study 6

Women's use of latrines

6.1 Quotes

'Sixty years ago some tribes in Uganda believed that females who use pit latrines become infertile. So only men used the pit provided in a UNICEF project' (*Ssozi, 1991*).

'Other tribes do not allow pregnant women to use pit latrines; they must go to the bush' (*Bo-mukama, 1983*)

'In some villages in southern Ethiopia women were not allowed to defecate in the same place as men. So they could not use new latrines built by the Ministry of Health' (*Davis et al, 1993*).

'On the other hand, in many Muslim communities women are the main beneficiaries of latrine provision. For example, it has been reported that latrines in Egyptian villages are mainly used by the women, although some prefer to defecate on the roof. Men are more inclined to use the facilities at the Mosque' (*El-Katsha et al, 1989*).

'Similarly in Bangladesh, it was claimed that women particularly favour the use of latrines because of the privacy they give' (*Aziz et al, 1990*).

'Convenience is a commonly felt reason for using sanitation. In a Maharashtra village the women who were most interested in having their own household latrines were those living in the village centre. The reason was that they had to walk further to defecation areas outside the village' (*Sundaraman, 1986*).

'Gender issues' are often mentioned in relation to sanitation, emphasising the importance of the 'role of women'. So it is interesting to read that most men in a sanitation programme in a sanitation programme in the Philippines admitted that they had been convinced to join by their wives or mothers' (*Cairncross, 1992*).

'Men in northern Pakistan said that the reason for installing latrines was to provide privacy for women rather than for health or hygiene considerations' (*Cairncross, 1992*).

Pickford, J (1995) Low-cost Sanitation, A survey of practical experience, Intermediate Technology Publications

Case study 7

Identification and targeting of vulnerable groups

7.1 Background

A project in India aims to reduce poverty in the urban slums of Cochin. As part of the poverty strategy of in-slum improvements, impacts of the improvements were desegregated for identified vulnerable groups. These groups included:

- single female headed households;
- widows;
- Muslim 'talak' wives;
- households with the head sick or disabled;
- households facing irregular and seasonal employment,
- households with tenure insecurity;
- large families;
- households without access to services;
- ethnic minorities and
- others.

7.2 Action

For groups identified as vulnerable on a gender basis, targeted impacts included reduced time spent in accessing services e.g. water, both for women and their children; improvements to health leading to less time lost due to sickness in the family; and improved safety through security lighting. The targeted impacts were then translated into a menu of objectives for development activities. The improvements are to be implemented through community partnering (the involvement of community groups in the short and long term development of their areas) while targeting expenditure at the most vulnerable people.

7.3 Comment

Vulnerable groups can be identified at the project planning stages, potential impacts of the project identified and funding targeted appropriately.

Case study 8
Cultural considerations for location
of toilets and design of plots

8.1 Background

A slum area in Vijayawada, Andhra Pradesh, India, had been upgraded but the community were not using the new toilets provided on their house plot. This was not immediately apparent, but when a local women resident was asked by a speaker of the local language (Telegu) if there were any problems with the recent developments, she explained that most of the residents had not been using the toilets provided. The reason she gave was that the toilets are located on the north-east corner of the house plots, and according to Hindu astrology, this is a bad place to locate the toilet. The north-east corner is preferential for items such as the water source, the prayer room or the main door. Toilets should be located at the south of the plot. As a result, many residents do not use the toilets provided, and go to the edge of the upgraded area to defecate in the open areas.

8.2 Action

It appears that the aspect of Hindu astrology which was being followed in this example has become more popular in the last few years. Because of its recent (re-) emergence as an important issue to consider, it appears that it was missed by the project staff. The beliefs appear to have received particular attention in the south of India, and has reached the stage where the astrology is considered when buying a new house. If your house does not conform to this astrological pattern, then the value plummets as few people will wish to buy the property. This is a consideration for house buyers even in cosmopolitan centres such as Hyderabad. A 'western' oriented, American educated, colleague at a college in Hyderabad said that although he did not actually believe it himself, he had to pay attention to it when searching for a new property, as the sell-on value would be very much lower if he brought a property which did not conform with the requirements.

8.3 Comment

Sanitation facilities will not be used to their full capacity if cultural or religious requirements and beliefs are not taken into account.

Jeremy Parr - field visit to Vijayawada, India, 1996

Case study 9
Design parameters

9.1 Background

A water and sanitation project had built some public latrines in the market place.

9.2 Action

Despite the fact that many of the shopper and traders in the market were women, there were more toilets for men than women in the block.

9.3 Comment

The mismatch between the facilities provided and the needs of the users of the market show a failure in the design process. Asking the users what was required should have demonstrated the needs for more female toilets than male toilets.

Paul Deverill

Case study 10
Vulnerabilities and preferences of
women regarding sanitation
provision

10.1 Background

Communal latrines are not favoured by women as they can be targets for attack, specifically rape, around the latrine area.

10.2 Comment

- Communal latrines are not favoured by women as they can be targets for attack, specifically rape, around the latrine area.
- Vulnerabilities must be considered when designing sanitation facilities.

LSHTM

Case study 11

Cultural considerations in the
provision of sanitation facilities

11.1 Background

Care is needed when implementing sanitation facilities: in the Giriama community of Mgarini district of Kenya, it is taboo for the parents-in-law to use the same sanitation facilities as the son's wife. This was not fully appreciated at first, and led to under-use of facilities.

11.2 Comment

Planners and designers should be careful to identify cultural and religious needs and requirements when working on sanitation projects.

CWSS project 1996 - Wamira Appollo, Kenya