

The South Asian earthquake 2005:
Water and sanitation in a transitional phase
of post disaster efforts

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Abstract

On October 8 2005 an earthquake hit parts of northern Pakistan, killing over 73.000 people and rendering 3.5million homeless. Many moved to relief camps during the winter, while others stayed in shelters close to their homes. The relief phase was officially over on the 31st of March, and the reconstruction phase began on the 1st of April. The primary aim of this thesis was to study the challenges related to water and sanitation facilities in the transition between relief and reconstruction- the transitional phase. The main focus was on the health, social and cultural aspects of the facilities and how the degree of community participation played a role in them. In order to achieve this, interviews were carried out with both camp and village residents as well as relevant organizations and local government agencies. Reports, strategy and policy documents have also provided important and relevant information. A main finding in the study was that delays in the reconstruction processes were forcing village inhabitants to seek alternative and inferior water sources, such as rivers for drinking water. Delays in the reconstruction of new houses lead to a reduced capacity of temporary communal latrines leftover from the relief phase, which resulted in residents returning to the practice of defecation in the fields. This affected women in particular. The water and sanitation facilities in the camps were also of a temporary character, and the location, design and maintenance of the latrines was causing discomfort especially for the women. Dirty latrines combined with a lack of good hygiene practices caused diseases such as diarrhoea. While the latrine facilities could have been improved through simple consultation with the residents by the camp management, a change in hygiene behaviour would have required a more interactive participation approach. Lastly, it is argued that an observed tendency of negative attitudes towards the use of participatory methods could adversely affect the sustainability of the rehabilitated or reconstructed facilities. This clearly contradicts the positive wording in various central policy and strategy documents and shows the gap between paper and practice.

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Abbreviations and Acronyms

ADB	Asian Development Bank
AJK	Azad Jammu and Kashmir
CBO	Community based organization
CGI	corrugated galvanised iron
CHE	complex humanitarian emergency
CLTS	Community-led total sanitation
DRAC	District Reconstruction Advisory Committee
DRU	District Reconstruction Unit
ERP	Early recovery plan
ERRA	Earthquake Reconstruction and Rehabilitation Authority
FATA	Federally administered tribal areas
FRC	Federal Relief Commission
GOP	Government of Pakistan
HRC	Housing reconstruction centre
IDP	Internally displaced person
IUCN	World Conservation Union
MDG	Millennium development goal
MoU	Memorandum of Understanding
NGO	Non-governmental organisation
NOC	No objection certificate
NRC	Norwegian Refugee Council
NWFP	North-West Frontier Province
PHED	Public Health Engineering Department
PRSP	Poverty reduction strategy paper
SSD	Society for Sustainable Development
TAG	Technical Advisory Group
TMA	Tehsil Municipal Administration
TRC	Transitional relief cell
UC	Union Council
UN	United Nations
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
VIP (latrine)	Ventilated improved pit (latrine)
W&SD	Works and Services Department
watsan	water and sanitation
WB	World Bank
WES	Water and Environmental Sanitation

1 Introduction

The South Asian earthquake hit particularly hard 8 districts in the Pakistani provinces of the North West Frontier Province (NWFP) and Azad Jammu & Kashmir (AJK) on the 8th of October 2005. It measured 7,6 on the Richter scale and a minimum estimates of the number of deaths ranges from 73.000 – 87.000. More than 70.000 were severely injured or disabled, and more than 3,5 million people saw their homes destroyed (ADB/WB 2005; Alam & Aslam 2006; GOP 2005). Many villagers chose to spend the winter in camps and shelters as they were not able to rebuild their homes and livelihoods before the snow and cold temperatures set in at often high altitudes. Others were not willing to leave their properties in fear of losing land rights and remaining livestock and were provided with special winterized tents (Mercy Corps 2005). An estimated 77.500 households in NWFP had only partial or no water supply as a result of the earthquake, but the real figures are much higher¹ (ADB/WB 2005). On the 1st of April 2006 the relief phase was officially declared as over, initiating a rehabilitation and reconstruction phase of rebuilding destroyed private and public property. By June only 35.000 refugees were living in camps- now called transitional camps, and 90% of the original camp population in NWFP and 70% of the camp population in AJK had returned to their villages (UNHCR 2006a). The families and individuals still living in the camps had either lost their land in the earthquake or subsequent landslides or were otherwise considered especially vulnerable (orphaned children, widows and disabled) (ibid.).

In the work done to rescue, provide relief² and later to rebuild the affected communities, various challenges exist for both the affected population and those trying to help. Recent earthquakes in neighbouring countries like India and Iran (see Beck 2005; Gautam 1994) and past natural disasters in different regions of the world have provided lessons for how to best handle post disaster efforts in general and for earthquakes especially. Still, there are unique challenges related to every disaster due to the specific local context. The transition from the relief to the reconstruction phase is often mentioned as important to keep in mind as efforts change from short/medium term to long term in character. However, few studies actually focus on this intermediate state, which in the case of the South Asian earthquake almost turned into a phase of its own. This study will look at this phase with a focus on water and

¹ The number reflects only those with water supply coverage before the earthquake. About 50% of the population in NWFP did not have coverage (i.e. within 500m from their house) prior to the quake, but the probability is high that also many of these households found their water sources damaged.

² Temporary shelters, clothes, sleeping bags, food, water, and medicines, among others.

sanitation issues. By focusing on water and sanitation in the earthquake affected areas, it not only serves the purpose of illuminating some of the problems of moving from relief to reconstruction, but also provides the opportunity to look at some of the special attributes of water and sanitation facilities in such a context and how the facilities³ relate to the affected population.

Problem statement

Although transitional camps are a continuation of relief camps and are most often set up quickly in response to a disaster, the time frame of the operation is uncertain, perhaps lasting years. Water and sanitation facilities need therefore not be of an immediate relief character. Nevertheless, transitional camps continue to be set up as if they are only temporary. The facilities might or might not be constructed in agreement with local culture and practices, and the design and location of water and sanitation facilities and the daily operation of these may adversely affect the health and wellbeing of camp residents. Reconstruction efforts in affected villages are supposed to replace and improve the short term solutions of the immediate relief phase, hence necessitating long term development planning. The transition might however not be an unbroken chain of activities, and this could impact on the population. Since the objective of reconstruction is to make permanent and sustainable facilities, it may also be important to consider issues such as participation in the decision-making processes. Despite the apparently different character of the two contexts of camp and village, they touch upon common issues like cultural preferences, health and local participation.

Objective

The main objective of this thesis is to study the technical, social, cultural and health aspects of the water and sanitation systems in place or in process in transitional camps and in affected villages in a transitional phase, with a particular focus on the degree of resident participation in planning and implementation processes.

In order to address this objective an overview of the different water and sanitation solutions used in camps and the current reconstruction efforts regarding such solutions in affected villages is needed. The cultural, social and health impacts of temporary and permanent sanitation facilities will be studied by interviewing residents in transitional camps and villages

³ Understood as the physical constructions for the provision of water and sanitation services

as well as other relevant persons. It is also necessary to learn about the decision-making- and implementation processes for water and sanitation solutions in the earthquake affected area and the degree of involvement by local people in these processes in medium and long term post disaster efforts.

Organisation of the thesis

The rest of the thesis will be organised in the following way: Chapter 2 presents the characteristics of disasters and the different ways of viewing both post disaster efforts in general and water and sanitation efforts especially. In Chapter 3 a description of the area and relevant institutions is providing the context of the earthquake, while Chapter 4 presents research sites and the methodology used. Chapter 5-7 will discuss the data before a conclusion is reached in Chapter 8.

2 General background

2.1 Introduction to disasters

In a practical guide to Environmental health in emergencies and disasters, the World Health Organization defines disasters as “events that occur when significant numbers of people are exposed to hazards to which they are vulnerable, with resulting injury and loss of life, often combined with damage to property and livelihoods” (Wisner & Adams 2002, p.4). Disasters tend to be classified as either human-made or natural, where the former include complex humanitarian emergencies (CHE), a term used to describe civil conflicts. Albala-Bertrand observes that “a natural disaster impact is primarily the outcome of a physically uncompensated interaction between an unleashing natural event and a social system, whereas a complex humanitarian emergency is primarily the outcome of an institutionally uncompensated interaction between an unleashing societal event and a social system” (2000, p.215). The disaster subsequently often lead to an emergency, which is defined as “a situation or state characterized by a clear and marked reduction in the abilities of people to sustain their normal living conditions, with resulting damage or risks to health, life and livelihoods” (Wisner & Adams 2002, p.12). In other words, an emergency is a state/condition where people are overwhelmed by an extreme event and do not have the means or the capacity to protect their life or health. Albala-Bertrand (2000) talks about endogenous and exogenous response mechanisms, where the former encompasses the society’s own feedback mechanisms through institutions like the family, the market, cultural norms and customs, and psychological attitudes. Exogenous mechanisms would then be those intended to fill the gaps where the endogenous mechanisms fail to fully compensate for the impact. International assistance and aid belongs to the latter.

A great number of actors often respond to an emergency created by a natural disaster, ranging from governments, military, non-governmental organizations (NGOs)⁴, United Nations (UN) agencies and individual contributors, where special UN agencies (e.g. the Office for the Coordination of Humanitarian Affairs, OCHA) tend to assist the government in the coordination of the international response. United Nations Children's Fund (UNICEF) has

⁴ NGOs are defined by the International Federation of Red Cross and Red Crescent Societies (IFRC) to be the “organisations, both national and international, which are constituted separate from the government of the country in which they are founded” (IFRC 1994). Some NGOs are local to a certain area where their efforts are focused, while others are operating nation wide. The NGOs proper to Pakistan will be called “national NGOs”. International NGOs are often abbreviated INGOs. Both national and international NGOs will also interchangeably be referred to as “organzations”.

agreed to be the agency responsible for coordinating water and sanitation relief efforts when it is requested (UNICEF 2007), while the UN High Commissioner for Refugees (UNHCR) in some cases works with helping refugees⁵ in a natural disaster through emergency shelters and camp management (UNHCR 2006b; UNHCR 2006c). During the 1980s and 90s an increasing number of organizations were working with disaster relief without any guiding principles, and as a reaction to this the Code of Conduct for The International Red Cross and Red Crescent Movement and NGOs in disaster relief was made in 1994. The aim was to provide some universal basic standards to govern the way NGOs should work in disaster assistance (IFRC 2007). Building on the aforementioned Code of Conduct, the Sphere Project published the Sphere Handbook in 2000. The handbook contains the Humanitarian Charter that reasserts the human rights of the affected population in a disaster, and a set of Minimum Standards to be followed in any disaster response to ensure that those rights are realised in practice (The Sphere Project 2004).

2.2 Post disaster efforts: Relief vs. development

The various responses to a disaster are often lumped together in a term known as post disaster efforts. Within post disaster efforts, a distinction is usually made between relief and recovery⁶. Relief is the immediate action taken to support life and sustain the morale of the affected, while recovery refers to the rebuilding of damaged areas (buildings, infrastructure) and the restoring of economic, social and cultural activities (Wisner & Adams 2002, p.71). In the words of Albala-Bertrand, “reconstruction comprises of all those responses aimed at bringing the system back to its original state by reinstating destroyed or damaged elements and capabilities” (2000, p.221). The recovery phase often extends into what is called development activities, which deal with more long term commitments to improve the conditions in an area and reduce vulnerability to future disasters. A senior researcher at the NGO called World Vision International has claimed that the traditional way of thinking about post disaster efforts, which was a linear model leading from relief to sustainable development without breaks disrupting the progression, is outdated (Brandt 1997). This is valid in the case of complex humanitarian emergencies (CHE), where different phases tend to take place in a parallel manner, but he concludes that the old linear model might still work in a natural

⁵ Also referred to as “internally displaced persons” (IDPs) to distinguish them from those who seek refuge outside their countries. Although UNHCR concentrate on helping refugees and IDPs fleeing from conflict, they might in exceptional circumstances also help IDPs in a natural disaster setting.

⁶ In later chapters, recovery will be replaced by the more specific and technical term “reconstruction”, since this is more in line with the official term employed in the South Asian earthquake post disaster efforts.

disaster context. Brandt could be right, since a CHE represents an ongoing problem that can even worsen while a natural disaster usually is a single event that can take place under otherwise stable political conditions. Nevertheless, it is important to look critically at the different phases of post natural disaster efforts and how NGOs and other relevant actors tend to relate to them. It is certainly problematic to generalise the characteristics of natural disasters as different contexts to give different impacts, and it is not unthinkable that different phases also here take place simultaneously, although in different locations. And what about a natural disaster taking place in an area torn by social unrest? That would certainly make for a complex emergency.

Traditionally- and this seems still to be a common belief among NGO personnel- relief is mainly a technical issue and reducible to a matter of logistics and efficiency (see Brandt 1997). In addition to this, funds are burning a hole in the pockets of relief organizations as deadlines are short (Beck 2005, p.3). This might compromise more time consuming, but nevertheless important, aspects in assessments, planning and implementation. Experiences from the 2003 earthquake in Bam, Iran, showed that most of the international NGOs left the area after the relief phase was over, leaving the recovery and reconstruction to local/national Iranian NGOs (Okano & Atsumi 2004). While this might not necessarily have been entirely negative, it shows a certain attitude of “quick in – quick out”. Wisner and Adams stress the importance of thinking about the disaster-management cycle (see Figure 2-1) in an integrated way: short term goals within each phase should contribute to reaching more long term development goals. As an example they use the reconstruction of water supplies, which by using community mobilization also forms part of current development activities to further improve the water supply systems (Wisner & Adams 2002, p.3).

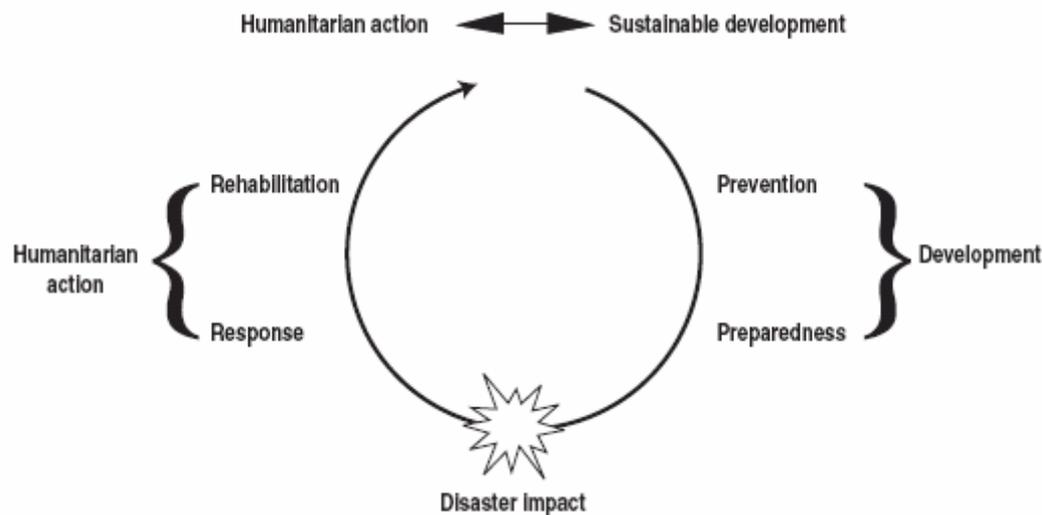


Figure 2-1: The disaster-management cycle. Source: Wisner and Adams (2002, p.3)

The authors hold that communities have to participate fully in all phases of emergency relief and development as they tend to have the best knowledge about their own kind and area, which is crucial for an appropriate response and further planning. This is one of the main reasons why an integrated approach is important, leading to actions responsive to the local needs (ibid., p.4). However, in the Bam earthquake it was seen that only a few organizations actually involved inhabitants in assessments and planning (OCHA 2004, cited in Beck 2005, p.1). In an evaluation of the disaster response to the Indian Ocean tsunami it was reported that “[t]he international community time and again descends into crisis situations in large numbers and often leaves the communities it aims to assist undermined” (Cosgrave 2007, p.iv). The Sphere Project somewhat diplomatically holds that the different approaches among humanitarian agencies as to how they carry out relief activities only means that they fulfil their responsibility to provide assistance through different so-called modes of action. Regardless, disaster response should support and/or complement existing government services, also in terms of long-term sustainability (The Sphere Project 2004, p.7). A central question to be revisited later is whether excluding the community as a general rule is an approach worth pursuing.

In a static view of the post disaster response efforts are grouped into different sectors in which organizations tend to specialize. Common sectors in relief and recovery are shelter and settlements, health services, food security and food aid, education, transportation infrastructure, livelihoods, and water, sanitation and hygiene promotion. While all the sectors

mentioned above are important to restore affected communities, water and sanitation has a special status. It is one of four key sectors in the Sphere minimum standards, and it has naturally also a major role in dealing with environmental health hazards in emergencies. Environmental health hazards are defined as the threats to human health from exposure to disease-causing agents (Wisner & Adams 2002, p.9).

2.3 Water and sanitation – an introduction

Water and sanitation are basic human needs. In 2002 1,1 billion people were using water from unimproved sources and thus did not have access to safe drinking water, while 2,6 billion people lacked access to improved sanitation (WHO/UNICEF 2004). This list of improved and unimproved drinking water sources, and improved and unimproved sanitation facilities⁷ as defined by WHO/UNICEF can be found in Appendix 1. Inappropriate water and sanitation kills about 1.8 million people every year through diarrhoeal diseases (WHO 2004), of which 68%⁸ are under 5 years of age (Rodgers et al. 2004, p.50). The numbers are startling, but an indication as to how enormous the challenges are globally within this sector. This is also reflected by the great attention given to water and sanitation issues among the international society, and efforts are often linked to the UN Millennium Development Goals formulated in 2000 (see WHO/UNICEF 2004). In addition, 2008 is declared by the UN as the International Year of Sanitation (IYS).

Sanitation is commonly understood as the hygienic disposal or recycling of waste, as well as the policy and practice of protecting health through hygienic measures (Wikipedia 2007b). In the later discussion of the findings, sanitation will be used in a narrower sense as the disposal of human excreta, vector control and drainage⁹. Hygiene and the promotion of hygiene are sometimes dealt with separately from sanitation efforts, as the former deals with the promotion of good hygiene practices through sharing of information and hygiene consumption articles, while the latter is normally a question of constructing facilities.

⁷ The definitions of what is improved and unimproved is contested. For example, the use of a public latrine can be a well kept place, while in the view of “environmental”/“ecological” sanitation, the practice of western flush toilets connected to sewers are not at all improved. This is because the sewer system requires large amounts of water and the low degree of recycling of valuable nutrients in the wastewater.

⁸ Based on estimations where unsafe hygiene is a risk factor in addition to unsafe water and sanitation

⁹ This is close to the definition employed by the Sphere Project, but excludes solid waste disposal.

Common collection facilities are varieties of the pit latrine (see Figure 2-2). The common pit latrine (A) consists of a superstructure over a substantially deep hole that is dug in the ground. Figure B shows a so-called ventilated improved pit (VIP) latrine that has a shallower pit to increase the distance to the groundwater table and a ventilation pipe. The purpose of the ventilation is to reduce odours inside the toilet, and if equipped with a fly mesh it will also reduce the risk of flies as a vector for spread of disease. The last figure (C) shows a pour-flush variety where 1-3 litres are used to flush the excreta into a pit, which can be double. The pour-flush toilet can be used in areas with good soil permeability and deep groundwater table. The main issue worth considering when constructing the described latrines is the potential risk of contaminating the groundwater as the liquid parts containing pathogens can seep through the ground. The potential hazard to health is present only if the groundwater is used for drinking purposes (Jenssen et al. 2006).

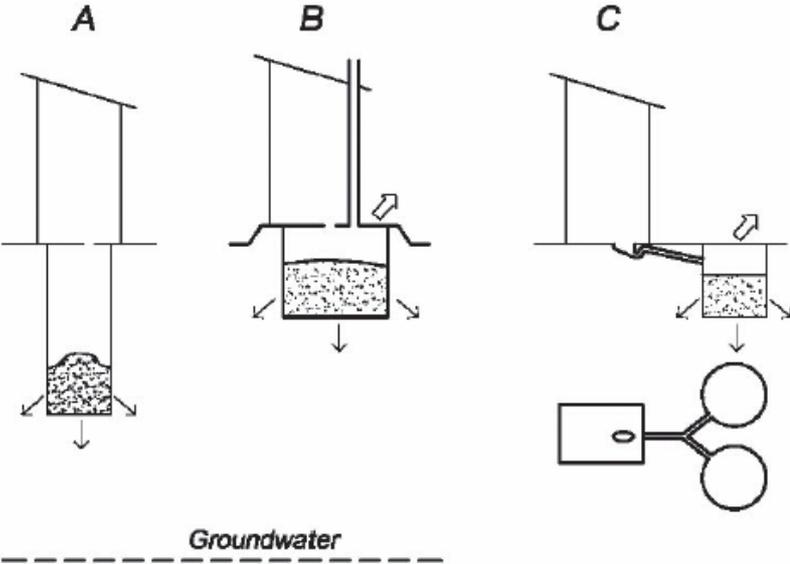


Figure 2-2: Different types of pit latrines. Source: Jenssen et al. (2006)

2.4 Water and sanitation in emergencies

Organizations that deal with water and sanitation in relief and recovery are many, national as well as international, and also here approaches to how projects are assessed, planned and implemented are diverse. Restoring a water supply scheme can easily be viewed as a purely technical issue to be solved efficiently by trained relief officers with years of international experience in the field. One might argue that the importance of having access to water can

justify a quick and efficient intervention to provide solutions that work in the short term, but Beck (2005) argues that community participation should be considered even in immediate disaster response and relief to provide more appropriate solutions. The community might be more than willing to participate in the response, and good communication with the affected people might even increase efficiency.

To give an impression of the possible impacts on water and sanitation facilities, common effects of natural disasters on water supply, wastewater disposal and home sanitation are shown below in Table 2-1.

Table 2-1: Most common effects of specific events on environmental health*

		Earthquake	Flood	Tsunami
Water supply and wastewater disposal	Damage to civil engineering structures	1	1	3
	Broken mains	1	2	1
	Damage to water sources	1	2	3
	Power outages	1	2	2
	Contamination (biological or chemical)	2	1	1
	Transportation failures	1	1	2
	Personnel shortages	1	2	3
	System overload (due to population shifts)	3	1	3
	Equipment, parts, and supply shortages	1	1	2
Home sanitation	Destruction or damage to structures	1	1	1
	Contamination of water and food	2	1	2
	Disruption of power, heating, fuel, water or supply waste disposal services	1	1	2
	Overcrowding	3	3	3

1 – Severe possible effect

2 – Less severe possible effect

3 – Least or no possible effect

* The table is a simplified version of the original. Source: PAHO (2000, p.51)

Interventions in any context require an appreciation for the distinct sanitation practices in the area and how these practices links to cultural understanding, social determinants, and habits of the people. The construction of a communal latrine in a camp or village is not a simple question of technology transfer from other physical environments or cultures where it is known to work well. The mere construction of new latrines will not improve the health and lives of people unless they are informed and understand the faecal-oral transmission route of diseases, and unless they feel some sort of ownership to the facilities through taking part in

the decision-making (The Sphere Project 2004). Among the initiatives to present approaches sensitive to these issues is the community-led total sanitation (CLTS) that originated in Bangladesh in 1999. Another is the WHO supported guide to the PHAST (participatory hygiene and sanitation transformation) method to gain control over the diarrhoeal diseases through improvements in sanitation facilities and hygiene behaviours (Wood, Sawyer & Simpson-Hébert 1998).

2.5 Gender issues in disasters

Men and women often suffer different negative health effects after a disaster, which may be due to biological differences or socially determined differences in women's and men's roles and status or a combination of these (WHO 2002b). In developing countries women are often burdened with fetching water to the family and an impact on water supply will mainly affect the women through possibly making the distance to the water source even further. Women and girls in many countries run the risk of getting violated on their way to the fields for open defecation¹⁰ (WHO/UNICEF 2004), and the protection of women and children is frequently disregarded under disaster conditions (ADB/WB 2005). This might be due to the fact that women rarely are consulted in decision-making and even more seldom involved assessment- and planning groups. Their views are often considered of much less importance than that of males and tend not to be heard.

2.6 Approaching the problem

As we have seen it is possible to apply a number of different approaches to the problem of restoring water and sanitation facilities after a natural disaster like an earthquake. Each of the approaches is typically associated with a certain group of professionals that often work parallel to each other- but without communication. Analytically, this study takes a different approach: instead of looking into one aspect (e.g. technical or social/cultural) alone it will take a more holistic approach, allowing for an understanding of the complexity of the issues. While being aware of the challenges that lie in the transition between the different phases of post disaster efforts and the multiple dimensions of water and sanitation, an interdisciplinary approach will serve the purpose of seeing a greater part of the picture, linking the different parts that often are closely related.

¹⁰ See Section 3.2 for further information on this

3 Description of the area

The aim of this section is to provide more specific background information about Pakistan, the province of the North West Frontier Province (NWFP), and the area of research - the earthquake affected areas of NWFP.

3.1 Introducing NWFP

About 160 million inhabitants live in Pakistan, of which 33% lives below the poverty line (Government of NWFP 2003). Agriculture is the main source of income and more than 20% of the GDP and 40% of the total employment is owed to this sector (GOP 2006a). Pakistan consists of four federal provinces- Punjab, Sindh, Baluchistan and NWFP- in addition to Azad Jammu and Kashmir (AJK) (the Pakistan administered part of Kashmir) and the federally administered tribal areas (FATA) and Northern Areas. Urdu is the national language of Pakistan, but it is only the first language of less than 8% of the population, while English is the official language. English tends to be a language primarily used within the Government, at colleges and universities, and in some TV-channels and newspapers. Besides Urdu and English, other major languages include Punjabi, Sindhi, Baluchi, and Pushto (Wikipedia 2007a).

NWFP borders Baluchistan and Punjab in the south, Azad Jammu and Kashmir (AJK) in the east, and the Northern Areas in the north. FATA and Afghanistan share the border with the province in the west. The northern part of NWFP is hilly and mountainous and this is where the five hardest hit districts of the province are located: Abbottabad, Mansehra, Batagram, Shangla, and Kohistan (see Figure 3-1). The affected area was large, and dispersed settlements in the mountainous terrain, sometimes without access by road, made the rescue work difficult.

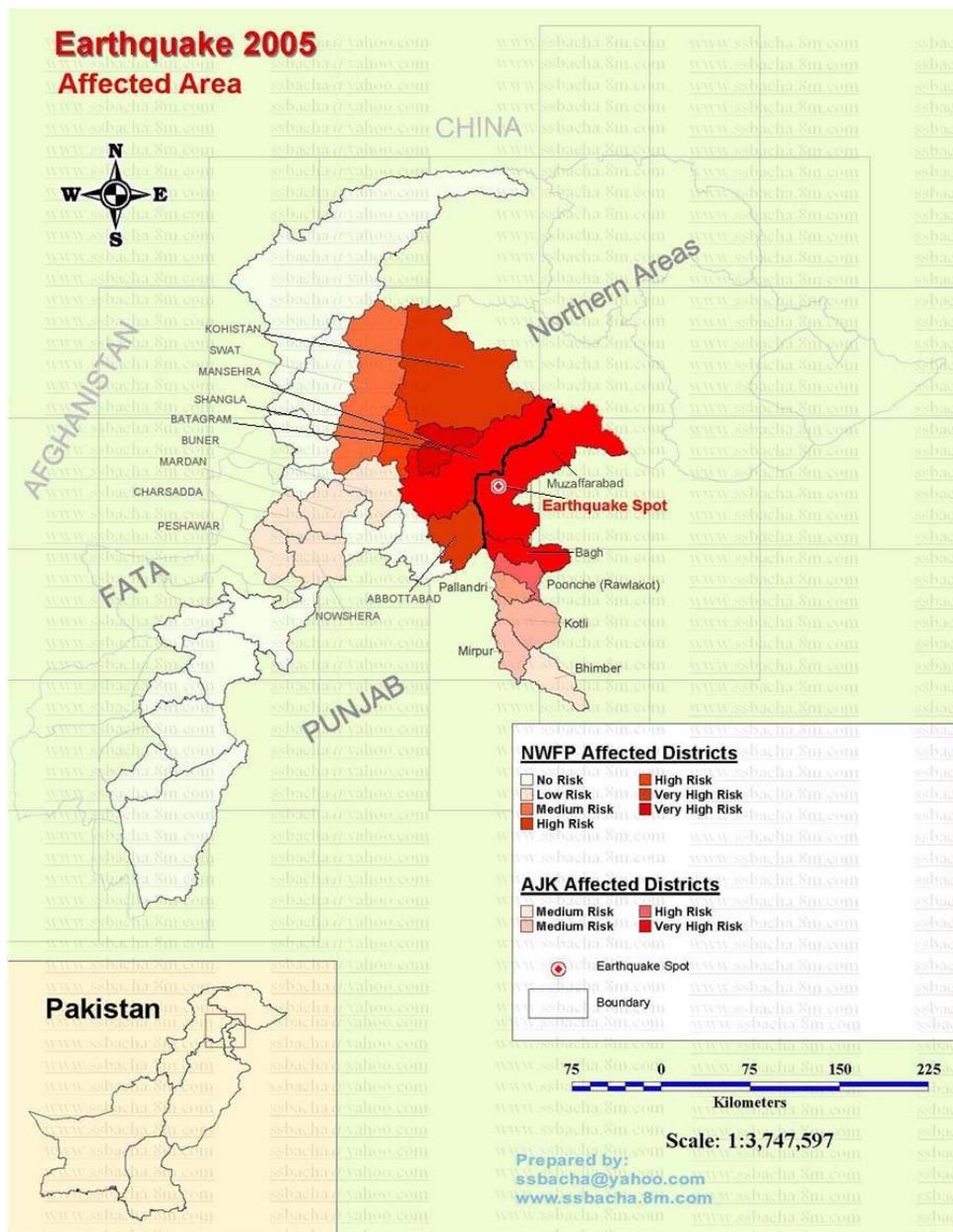


Figure 3-1: The affected area. Source: <http://www.nwfp.gov.pk/earthquake/e.php>

Approximately 22 millions reside in NWFP, of which 85% live in rural areas (Government of NWFP 2005). Among the languages spoken in the earthquake affected area are Pushto, Hindko and Kohistani, and there is a great variety of ethnic groups. Even within the same valley cultural differences can be significant. The province is the poorest of the four federal provinces, and the 1998/99 census showed that 43% were living below the poverty line (Government of NWFP 2003). The rural areas have a higher percentage of poor and illiterate people than the urban areas. The literacy rate of 33% for adults over 15 years of age in NWFP

is far lower than the country average of 43%, and gender gaps are significant in all socio-economic aspects (ibid.). The latter reflects a highly gendered society, and an Asian Development Bank paper on poverty in Pakistan (ADB 2002, p.13) says that “[p]revalent gender role ideologies in Pakistan define women’s roles primarily within the arena of the home as mothers and wives, and men’s as breadearners”.

The most dominant religion in Pakistan is Islam, and religious and cultural values are particularly strong in NWFP (Nawab 2006). Women’s restricted freedom of movement through purdah¹¹ is followed to varying degrees across the province, but is especially adhered to among the Pathans in Kohistan, Batagram and Mansehra (Government of NWFP 2003), three of the earthquake affected districts. The religious and cultural conservatism has presented challenges to the relief and recovery work in the affected areas of the province, and although welcoming the initial relief religious leaders of affected communities have turned suspicious and negative to subsequent reconstruction efforts (Fida 2006). In some incidences, the leaders claimed that the reconstruction activities were “contrary to culture and morality” (ibid.). This is in line with the observation of Nawab, who stated that the conservative communities in NWFP do not readily welcome external influences (op.cit.). A malicious campaign took place in 1999 in Kaghan Valley¹² against Sungi, a major Pakistani NGO, in which religious leaders accused it for spreading western and un-Islamic values. However, the campaign was condemned by numerous men and especially women who claimed that the organization had helped them become aware of their rights and be more self-reliant, and that the religious leaders and vested interests were only afraid of loosing control over valuable resources and services (Khan, O. A. 1999).

3.2 Water and sanitation in NWFP

On a national level less than half of all households have access to a latrine, and sewerage is almost non-existent except for in a few big cities (GOP 2006b). According to a WHO/Unicef report, 90% of the total population in year 2002 had access to an improved drinking water source (see Appendix 1 for definition), but only 23% of the households were connected to a

¹¹ Here the concept of purdah is adopted from Nyborg (2002, p.79) to be “the Muslim practice of seclusion, where women are separated from men either spatially (boundary walls, restrictions on movements) or through the use of clothing, most commonly the veil.”

¹² One of the hardest hit areas in NWFP by the earthquake

piped distribution network. For rural areas the respective numbers were 87% and 9% (WHO/UNICEF 2004).

According to the Pakistan Integrated Household Survey (PHIS 2002, cited in ADB/WB 2005) 97% of the urban households and 71% of the rural households in NWFP had water coverage prior to the earthquake. These are the official numbers, and are agreed upon by the World Conservation Union (IUCN), but they also make a note of the following: “the distribution system is outdated, inefficient and unreliable. In addition, water losses are high, owing to both leakage and illegal connections, while the user charges currently in place are obsolete, leaving the authorities with a water-budget deficit as high as 80%. Water quality is also suspect, with contamination reported in many areas” (IUCN 2006, p.27-28). Most of the drinking water in the province is taken from surface water sources such as rivers and streams, and it is mostly distributed through gravity schemes (ADB/WB 2005).

On the sanitation side, the Pakistan Integrated Household Survey (op.cit.) estimates that only 4% of the overall affected urban population has a latrine within the household, while 3% for the rural population. Open defecation is commonly practiced among the rural population, but it is also seen in more densely populated areas of the province. Open defecation simply means that people go out into fields and open areas to defecate. It might be due to the lack of something better or unawareness of the alternatives and their advantages or just because it is the traditional practice. The phenomenon is not unique to the area of research, since millions of poor people around the world lack access to adequate sanitation and defecate in the open (Satterthwaite, McGranahan & Mitlin 2005). However, it is important to understand the problems related to this practice in the context of the earthquake affected areas. In rural areas with no access to latrines – a room where you can defecate in private – women and girls have to get privacy by going into the open in the dark, either at dusk or dawn. That means they have to wait the whole day to go, and in the attempt to achieve this privacy they also run the risk of getting raped or exposed to other violence (WHO/UNICEF 2004). At the same time, open defecation poses a threat to health. Direct skin contact with faeces (e.g. walking barefoot in an open defecation area) might transmit intestinal worm infections, and defecation in or near rivers and streams can lead to the spread of schistosomiasis (known to cause liver and kidney impairment) (Wisner & Adams 2002). Pour-flush latrines of the squatting type are also used in many areas, which are then connected to a septic tank and soak pit to drain the effluents into the ground.

In general, the management of wastewater is not given the priority that the provision of clean water has had. Even though the causal relationship between clean/dirty water and the discharge of wastewater into rivers and streams are clear, the perceptions both among local inhabitants and at government level give another impression. It is viewed as the government's responsibility alone to provide sanitation services including wastewater management (Nawab et al. 2006), and the negligible taxes concerning these services are paid by no one (IUCN-ACS 2002). A Pakistani officer of the Aga Khan Rural Support Program (AKRSP) said it is a common belief that spring¹³ water and even surface water from mountain areas are clean enough to skip treatment. However, the catchment area for the water is often used for grazing livestock and open defecation, and depending on the characteristics of the soil and the distance to the groundwater table, there is a potential risk of groundwater contamination from faecal pathogens (see also Section 2.3). The previously mentioned officer would rather eat dusty fruit than fruit cleansed in that water. Nawab et al. (2006) noted that talking in public about excreta and in-house defecation is a taboo in many areas, but that discussing the issue of wastewater as it leaves the house is much easier. That is because the solids have dissolved and changed character and the smell is different, wastewater is just regarded as dirty water when it leaves the house and enters the open drains.

3.3 Who's in charge of what in the water and sanitation sector?

Villages in the area usually consist of two to up to more than three hundred housing units, with two to three households in each housing unit (ADB/WB 2005). The power of making decisions concerning common resources like water supply and sanitation services lies traditionally with the *hujra*, an assembly of village elders (Nawab 2006), but might also be handled by the somewhat newer concept of a community based organization (CBO). A group of villages make up a Union Council (UC) which is the lowest level and the smallest geographical unit within the hierarchy of local government. Local government in Pakistan has three tiers: union council, *tehsil* and district. Until 2001 the Public Health Engineering Department (PHED) under the Provincial Ministry of Public Health Engineering had been in charge of all water and sanitation projects in rural areas with offices down to district level (*ibid.*). The devolution in 2001 (see section 3.5 for more information) led to that the PHED became subordinate to locally elected *Nazims* (mayor) at district and *tehsil* level in order to

¹³ Commonly defined as a flow of groundwater emerging naturally at the ground surface

shift responsibilities from the centre to local authorities. At the same time it was intended to merge PHED with the former Construction and Works Department to form the Works and Services Department (W&SD). Confusion around the merger has however led to that PHED and W&SD now operate separately, and PHED has the main responsibility for rural water and sanitation services (Nawab pers.comm.). Hence, both PHED and W&SD are now legally under local government - the Tehsil Municipal Administration (TMA), with a somehow shared responsibility for water and sanitation services¹⁴.

3.4 Institutional structure in the reconstruction phase

To coordinate the restoration of, among others, water and sanitation facilities in the earthquake affected areas the Government of Pakistan by President General Musharraf established the Earthquake Reconstruction and Rehabilitation Authority (ERRA) on the 24th of October 2005 (ERRA 2006d). Its stated mission was to “[p]lan, coordinate, monitor and regulate reconstruction & rehabilitation activities in earthquake affected areas, encouraging self reliance via private public partnership and community participation, ensuring financial transparencies” (ERRA 2006b). On a provincial level (in NWFP) it was named Provincial Earthquake Reconstruction and Rehabilitation Agency (PERRA)¹⁵ as opposed to the State Earthquake Reconstruction and Rehabilitation Agency (SERRA) in AJK. In addition, District Reconstruction Units (DRU) were established at district level in the earthquake affected districts to make annual work plans for reconstruction activities and to coordinate and facilitate planning and execution of all reconstruction and rehabilitation projects in the district (ERRA 2005). Figure 3-2 presents a graphic of the organizational structure. The role of W&SD, PHED and the TMA became one of identifying damaged and destroyed schemes and to supervise NGOs as they were invited to take part in reconstruction activities in collaboration with the aforementioned government agencies.

¹⁴ In the ERRA strategy for water and sanitation (ERRA 2006e), the two agencies tend to be referred to as PHED/W&SD, while at other points PHED appears alone. As will be seen in the next section 3.4, W&SD took the lead in coordinating the so-called TAG meeting for the water and sanitation sector in the absence of ERRA. So there still seems to be some confusion about the roles of PHED and W&SD, considering that they are supposed to be one department. In Mansehra the two departments shared the same building. In the following sections they will continue to be referred to as two separate entities.

¹⁵ For the purpose of the thesis the distinction between PERRA and ERRA will not be relevant in the following discussion. PERRA/SERRA and ERRA will therefore all be referred to with the common term ERRA.

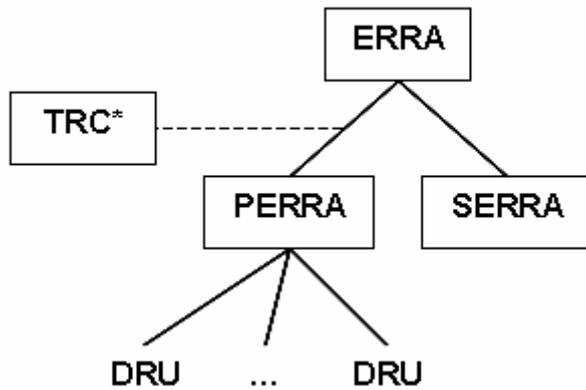


Figure 3-2: Organizational structure ERRA

* TRC (Transitional Relief Cell) will be introduced in Section 5.1

As an immediate response to the earthquake the Federal Relief Commission (FRC) was established by the government on the 10th of October to function as a central coordination office for rescue and relief, facilitating among others the flow of relief goods to the affected areas. At the official end of the relief phase on the 31st of March 2006, FRC was merged with ERRA as the focus was shifted to reconstruction (ERRA 2006d). In the relief phase short term interventions by a range of different actors¹⁶ were coordinated in clusters according to sectors, and the water and sanitation cluster was headed by UNICEF. In the reconstruction phase the coordination of the activities was to a greater extent carried out by ERRA, and sector-wise meetings, the Technical Advisory Group (TAG) meetings for Water and Environmental Sanitation (WES) coordination, was supposed to be lead by an ERRA/PERRA/DRU representative. In the absence of such a person it was lead by the Works & Services Department (W&SD). The TAG meeting had the purpose of providing a forum “for alliance building and exchange of ideas, information and experiences” (ERRA 2006e).

It was a possibility for NGOs to update the local government authorities on ongoing projects, and for the communication of proper procedures to be followed by the organizations to be allowed to start implementation of new projects. A more detailed account of the procedures and experiences related to this will be given in Chapter 5.2.

¹⁶ UN agencies, INGOs, development projects, donor agencies, national NGOs, Government officials and other rehabilitation/reconstruction agencies

3.5 The military's role in the disaster response

The Islamic Republic of Pakistan has ever since the first military coup d'état in 1958 been ruled directly or indirectly by the military (Bamforth & Qureshi 2007). Also the current President General Musharraf came to power in 1999 by military force with the aim to introduce 'genuine democracy' (ibid.). To show his commitment to democracy the Devolution Plan was introduced in 2000 to devolve political power and increase local authority through "institutionalized participation of the people at grass-roots level" (GOP 2001, p.1), and in 2005 local elections were held for Union Councils and District and Tehsil Nazims and Naib Nazims (Vice-Mayor) (Bamforth & Qureshi 2007). However, critics hold that this was rather a substitute for democratization at national and provincial level and that it undermined the established political opposition through creating a political elite. The issuance of several Orders (Provisional Constitutional Order (PCO) No.1, 1999, Legal Framework Order (LFO), 2002) by Musharraf has further centralized power and strengthened the military dominance of state and civilian parliament structures (ibid.).

The money donated by the international society for funding relief and reconstruction efforts raised demands about that it should be used in a transparent and accountable manner, but civilian control and parliamentary oversight of the process has been rejected by the military government (ICG 2006, p.2). The authoritarian and excluding attitude was made further visible by that the presidents personally invited NATO to work in the earthquake affected area for three months during the relief period. This is an act that normally only the parliament can carry out, according to the 1973 constitution, but the constitution has temporarily been out of force since the 1999 coup (Bamforth & Qureshi 2007). According to the International Crisis Group (ICG 2006), the continuation of this trend could undermine the process of reconstruction and rehabilitation, and notes at the same time that ERRA still remains under military control although formally part of the prime minister's secretariat.

After first presenting the research sites and the methods, the following chapters will go further into how the processes related to reconstruction and the operation of transitional camps affected the population in the transitional phase.

4 Methodology

4.1 Site selection

The district of Mansehra was chosen as the main area of research among the affected districts in NWFP. The reason for this was primarily of a practical nature since I was based in the city of Abbottabad, just a 45minutes south of Mansehra city. The district of Mansehra was worse hit than the district of Abbottabad as major fault lines cut through the district, and two out of the three official transitional camps in the province were also located there: Kashtra and Siran Sialkot camp. Both were part of the research.

In regards to accessing affected villages, I wanted to go to at least one village where a major international NGO was or had been working prior to the research. Through contacts in MercyCorps, an American organization, the village of Malkaan in Konch Valley was singled out as a village where they had been present since the relief phase. Households in the process of reconstruction were visited and interviewed in the upper part of Siran Valley as they were relatively close to the above mentioned Siran Sialkot camp and easy accessible. In order to compare the two parallel valleys of Siran and Konch, a village in the district of Batagram, bordering to Mansehra district in the north, was also selected: Gijbori village in the Union Council of Gijbori.

Relevant organizations in the water and sanitation sector were primarily interviewed in Mansehra city since the city served as a transportation nodule for the rest of the district and was therefore the natural location of organization district-wise headquarters. Interviews were conducted with government organizations at local government level of the district and Tehsil, United Nations (UN) agencies, and national and international NGOs.

The research took place from mid June to mid August 2006. The research sites are indicated on Figure 4-1.

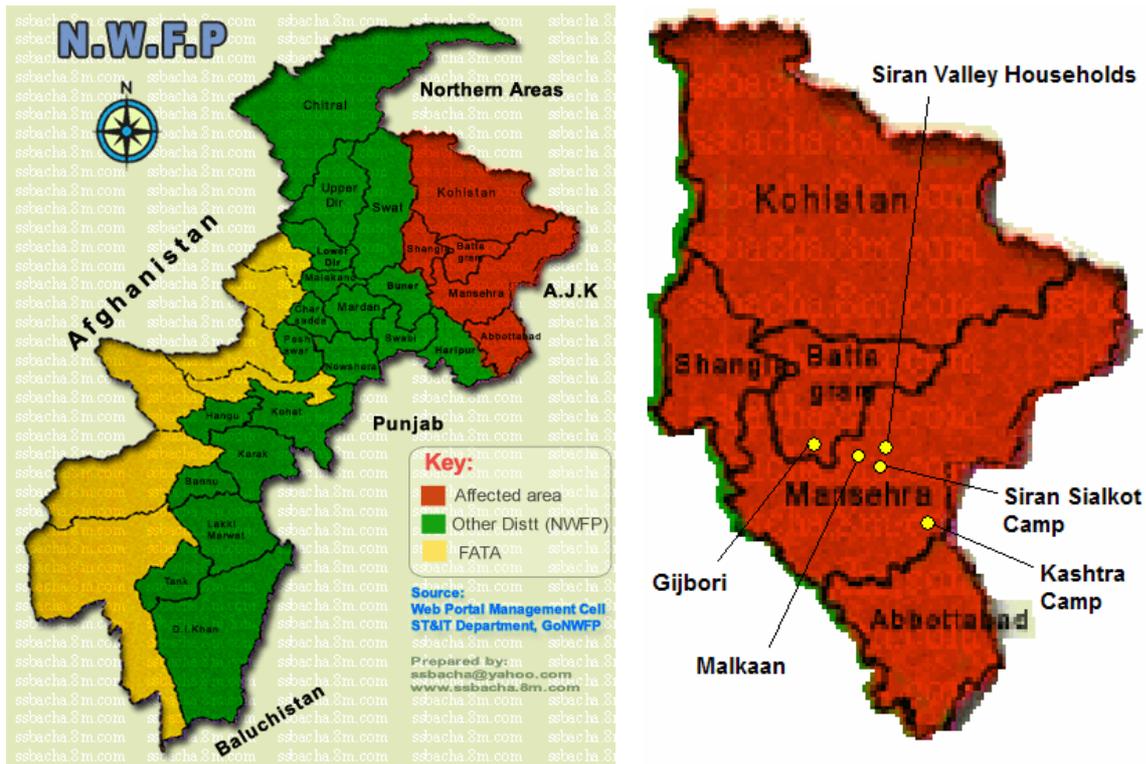


Figure 4-1: The research sites
 Source: <http://www.nwfp.gov.pk/earthquake/e.php>

4.2 Site description

4.2.1 Kashtra camp

Kashtra camp was located near the village of Garhi Habibullah, east of Mansehra city. Being constructed on an alluvial fan¹⁷, the camp was literally washed away when the monsoon arrived in mid July, and the camp and its residents were thereby forced to move to a new location. Interviews in the camp were carried out prior to the heavy rains and the subsequent relocation of the camp, but this will however not affect the validity of the findings. I will therefore use the findings from the original location in the following description and later discussions. At the time of the research the camp served a total population of 496 persons, which were from 96 families. Among these were 22 widows (most with children), 11 disabled persons of which most were women, and 68 children lacking their mother, father, or both, in addition to 31 women who were pregnant. The camp was lying on a slope with the entrance to the camp placed at the bottom, and the remaining of the original population of about 7500 was now concentrated in the lower part of the camp area. Most of the camp residents had returned to their villages when winter was over to start reconstruction. Tents were lying in slightly terraced rows in the upward slope, and on each side of the tent section were latrines and

¹⁷ Geological deposits from a river

washrooms. The latrine and washroom section on the left side of the tents (when facing the camp from the bottom) was the men's section, while the right side latrines and washrooms were serving the women. Female latrines had additional visual protection by green tarpaulin sheeting. Everyone had to bring his/her own water for anal cleansing and for washing. A separate housing section for some of the widows was located on the far right hand side, some 100 metres from the women's latrines. The water had first been taken from source just behind and above the camp, providing water to the residents by gravity. Since the source had dried up during the summer, they had started to transport water with tractors from a well source in Garhi Habibullah two kilometres away to several storage tanks inside the camp. Interviews with male and female residents in the camp were conducted separately (see Photo 4-3) in addition to camp management and involved NGOs in the operation of the camp.

4.2.2 Siran Sialkot camp

The second camp, Siran Sialkot, was located near Dharyal village at the entrance to the upper part of Siran Valley (see Photo 6-4, p.45), north of Mansehra city. A total of 430 individuals comprising 71 families were living inside the camp, and the proportion of widows, disabled persons and orphans were similar to that of Kashtra camp. The criteria, beyond being widowed, disabled or orphaned, for being allowed continued stay in the official camps after the end of the relief phase was the status as landless. That included those who had become landless after losing their land in landslides triggered by the earthquake or following aftershocks. The terrain was level, and similar to Kashtra camp, latrines and washrooms were placed on each side of the area designated for tents. However, each side had one section for men and one for women. Each of the four sections (two male and two female) consisted of 6 latrines and 3 washrooms. A school, playing ground, cooking facilities, and health unit were all quite well integrated into the camp. The source of water was a river, from which a piped gravity scheme provided water to one main storage tank. From there, water was distributed to four common taps, but they had a slight problem with siltation in the drains inside the camp. Besides talking to camp management, water and sanitation (watsan)¹⁸ officers and the doctor all belonging to NGOs working in the camp, I was also able to talk to a group of women through being present at a women's meeting for the distribution of soap.

¹⁸ The abbreviation watsan is commonly and interchangeably used with the term WES (water and environmental sanitation) to address personnel, physical objects, organizations etc. related to water and sanitation

4.2.3 Malkaan village

Located in a hillside in the upper part of Konch Valley Malkaan village is known as the Hillkot Union Council village, and the area was badly hit by the earthquake. At two-three hundred metres distance passed a river and neighbouring farmland indicated the main activity of the community. Most of the population had stayed in the village after the earthquake, but some had also spent the winter in camps to return to the village in spring. The village was divided into two parts, an upper and a lower. The lower part, which also had a lower social status, was called Malkaan Gari¹⁹. The upper part was simply called Malkaan. The water supply scheme that had earlier supplied the village through three pipes was totally destroyed by the earthquake, and an international NGO, who had been in the area since early relief phase, had fixed one of the pipes by the time of the research in mid July. The ruling elite, a powerful family with strong influences on community level activities, had first formed a committee, the Eslahi committee, to act as the link between the relief aid and the village. However, due to mal-distribution of relief items for the committee's own benefit, the rest of the village reacted by creating their own committee, the Insaaf committee (see Photo 4-1), to deal directly with NGOs working in the area and ensure fair decisions for the entire community. Interviews were conducted with both committees as well as with women inhabitants.



Photo 4-1: Interviewing members of the Insaaf committee

¹⁹ According to my research assistant, Malkaan was over all considered as one village but on the local authoritarian level (Khan-gi system), it was divided into Malkaan and Malkaan Gari. Malkaan was located somewhat near the main road whereas Malkaan Gari was a bit down the hill.

4.2.4 Siran Valley households

In order to see the process of the reconstruction of housing and private latrines in the affected area, interviews were carried out with two households in different villages in the upper part of Siran Valley. The first household, a young man with wife and one child living in the village of Kolayga Dharyal, was in the process of tearing down his destroyed house with help from relatives at the time of the interview. The second household visited was located in the village of Bhogarhmunj further up the valley. The household consisted of a sixty five year old farmer living with his wife and 5 children. Being in an advanced phase they were already seeing the end of the construction work. The next step was to build a proper toilet.

4.2.5 Gijbori village

The village of Gijbori was located in a hillside (see Photo 4-2) in the Union Council of Gijbori south west of Batagram city, and at the arrival to the village male community members were repairing the access road which was in a bad condition. The community consisted of approximately 1200 families. This area's water supply schemes and latrines were also damaged or destroyed by the earthquake, and a national NGO had constructed temporary latrines there in the early relief phase. The mosque in the village had a well for groundwater.



Photo 4-2: Gijbori village



Photo 4-3: Interview in Kashtra camp with assistant

4.3 Methods and sampling

Interviews with local inhabitants were intended to be carried out in a semi structured way, i.e. with the use of an interview guide but in a flexible way to allow for free conversation and possibly additional relevant information. This method seemed more appropriate than a questionnaire because I was interested in collecting information about aspects of water and sanitation facilities that were unknown prior to the interviews. On the other hand, focusing on water and sanitation issues made unstructured interviews potentially too broad. Interviews with local government officials and officers in NGOs were done in a more direct way with the use of so-called informant factual questions related to specific issues.

Sampling of households and interviewees in the villages and camps was carried out somehow by coincidence as there limited possibilities of making appointments in advance. Still, it was an objective to talk to a representative sample of women and men, and preferably on different social status levels. In Kashtra camp, a special effort was made to interview widows and disabled persons. The households in Siran Valley were selected on the observation of reconstruction activity, but in different parts of the valley to check for possible differences.

4.4 Challenges in the field work and lessons learned

Particular challenges in the research work were related to the unfamiliarity with the languages, Urdu and regional languages like Hindko and Pushto, the geographical area, and the relevant institutions. It was also a first experience with work in a post disaster context. The language issue made assistants necessary for interpretation during the interviews, and the lack of road signs would have made it an interesting challenge to find the research sites and the different offices without the company of someone local to the area. The volunteer assistants had varying degree of experience with the techniques of interpretation or the interview method in use, but understood quickly the rationale behind. However, the volunteer nature of the assistance reduced the desired number of trips into the field and consequently the number of interviews, since there were no formal agreements for the assistance. A lesson for further research where interpretation is needed is to spend money on hiring a local personal assistant preferably with previous experience with interpretation as well as different interview methods. This would make the researcher more in control in terms of time and place of field trips, thus enabling him/her to reach the desired number of interviews and getting enough in-depth information.

Another issue was the way the research team was perceived among the interviewees. According to one of the research assistants, a large part of the local residents could not relate to the concept of research and a researcher as many are illiterate and have no knowledge about the higher educational sector. When we were perceived in this light we were associated with an organization with no benefits in it for the population, thus making us of little interest to persons that were expecting and needing short term assistance. This was exemplified in the village of Gijbori, where several NGOs had come to carry out assessments; talking to the inhabitants and making observations without ever coming back to implement projects or make changes for the benefit of the community. At the point of our arrival they were tired of talk that did not lead to action or results, but this was not the “straw that broke the camel’s back”! Looking back, a better strategy would have been to present the team as having the task of evaluating the NGOs. This would also have been true, and it would be something that most people could understand and relate to. Furthermore, it would make us neutral in comparison to the somewhat contested role of foreign NGOs. In this way, an important lesson was learned on the potential impact of how the research team’s introduction affects the interviewees’ perceptions and cooperation.

5 The reconstruction processes and the village situation

In this section I intend to give some insights into the institutional structures and functions that contributed to delaying reconstruction in the villages, and then look into the health and cultural implications of this delay. It will provide the main argument to why the transition between relief and reconstruction after the South Asian earthquake turned into a phase of its own. The discussion in the following three chapters five, six and seven, will be based on the findings from the fieldwork.

Restoration of water and sanitation facilities differ in one main respect: Water supply schemes and the rehabilitation of such is a public matter while the reconstruction of sanitation facilities like private latrines are closely related to the private housing reconstruction. Public sanitation facilities are few and comprise of drainage systems, street paving and public toilet facilities. These did not have priority in the reconstruction efforts and will therefore not be the main focus here. At an attended TAG meeting everybody seemed to agree that wastewater is not an issue until water supply is established in the first place to make the wastewater. This view, which seemed quite acknowledged, drastically undermines the importance of proper sanitation to reduce diseases that spread even without the use of water, and leads to a down-prioritizing of the reconstruction related to sanitation. Restoration of public schemes was in principle a task of local government departments, but as they lacked both capacity and funding to take on the enormous challenge, assistance was sought among the NGOs already working in the area from the relief period. The reconstruction of public facilities like water supply schemes is therefore the story about how NGOs were allowed to carry out reconstruction projects in the villages, and where ERRA sets the rules and coordinates the efforts. The reconstruction of sanitation relates to the process of ERRA's compensation to house owners. I will deal with the public reconstruction first.

5.1 ERRA's response

Recapture that the relief phase was officially over on the 31st of March 2006. In order to address the challenges that were expected from this change in status of post disaster efforts ERRA did two things: A Transitional Relief Cell (TRC) was established to handle the residual relief, i.e. relief efforts that were still needed after the end of the relief phase, and the safe and dignified return of the refugees (also known as internally displaced persons – IDPs) from

camps to villages. Finally the cell was to provide for those still left in the (transitional) camps after the 31st of March and secure their relocation to new villages. Secondly, an Early Recovery Plan (ERP) was made in a joint effort with the UN to address the challenges anticipated in the crucial first twelve months of the reconstruction phase (ERRA 2006d), and to develop an action plan for concrete projects within prioritized sectors – among those were water and sanitation. However, ERRA admits that confusion regarding the tasks of the Federal Relief Commission (FRC) and ERRA led to the absence of a strategic framework on which to base the ERP. In addition, a change in the way the organizations were coordinated (from cluster to sector approach – see Section 3.4) created a coordination problem (ibid., p.19).

5.2 The NOC procedure

The delayed ERP and confusion about the way organizations in the sector were to be coordinated was accompanied by a set of intricate rules for how implementation of projects should take place through ERRA and its funds. To be able to reconstruct or rehabilitate a water supply scheme, the implementing partner (often a national or international NGO) first had to select one scheme (or more) from a list of water supply schemes throughout the region identified by ERRA/DRU/TMA. After a “duplication” control carried out by ERRA to ensure that no other organisation was restoring the same scheme, a project proposal was prepared in collaboration with TMA/PHED and presented to the District Reconstruction Unit (DRU) and ERRA. According to the size of the project budget, it was approved by a District Reconstruction Advisory Committee (DRAC), Provincial Steering Committee, or ERRA. The largest projects had to be approved in the ERRA council. If approved, ERRA issued a “No Objection Certificate” (NOC) with which implementation could start under the supervision of the TMA/PHED or the Works and Services Department (W&SD) depending on the type and size of the project. It is assumed that the NGO had continuous contact with the target community representatives during the whole process from assessment to implementation, although with different degrees of involvement. In July 2006, the procedure was further expanded by the implementing partner having to sign a MoU (Memorandum of Understanding) with ERRA after having presented an implementation plan and before being allowed to implement a project. All projects should be implemented in line with ERRA’s strategy papers, which, regarding water and sanitation projects, would be the “Reconstruction and rehabilitation strategy – Water and sanitation sector”, and done according to ERRA’s

motto of “Build Back Better”. When the reconstruction of a water supply scheme was completed, a “work completion certificate” for the project would be issued by W&SD, PHED, or the TMA. Finally, responsibility of the scheme would shortly after be handed over from the implementing organisation to the TMA/PHED or community organization. Figure 5-1 shows a flow chart of the NOC procedure, which also includes the additional step of the MoU.

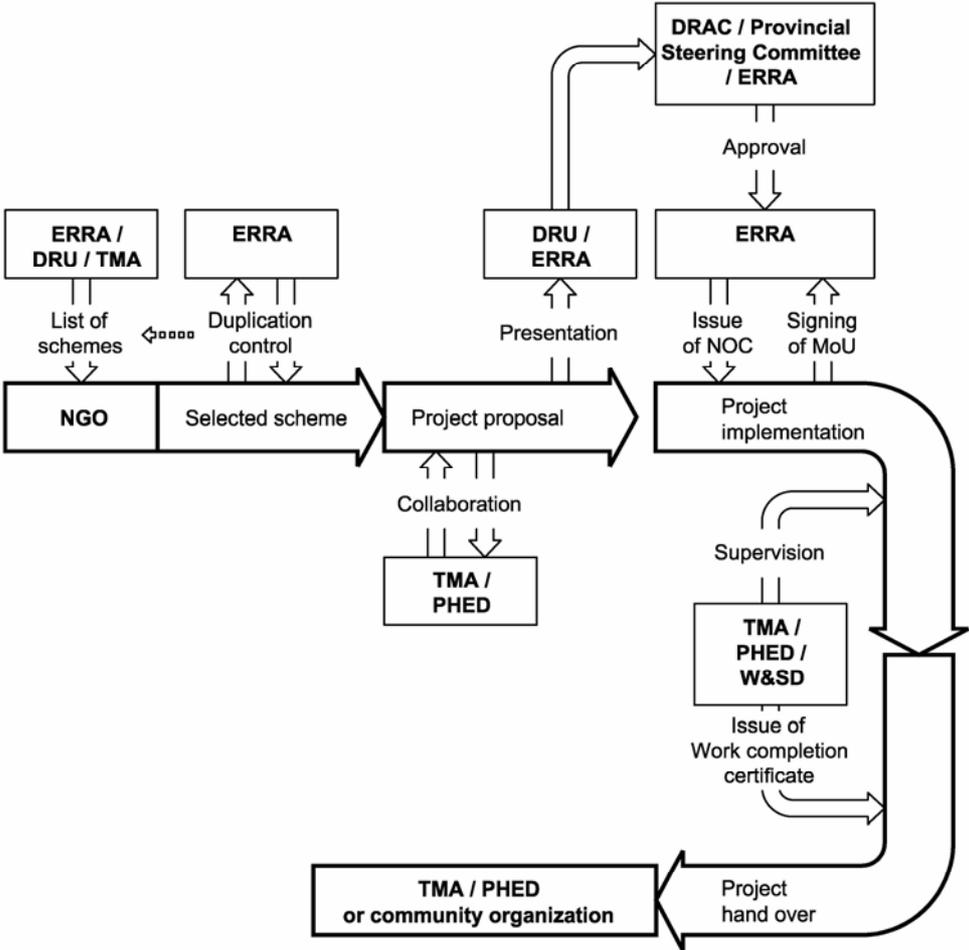


Figure 5-1: The NOC procedure

5.2.1 Problems encountered with the procedure

There was some confusion among NGOs about who in the ERRA hierarchy actually had the authority to issue the NOCs and how many NOCs were needed (Ashfaq 2006), and in the foreword of a new Operational manual made public in September 2006, ERRA describes the manual to be “an effort to compile and consolidate different rules to be followed in the planning, designing and implementation of reconstruction and rehabilitation projects” (ERRA

2006c, iii). The aim with the operational manual was to make a set of consistent rules, but the results of this is not known. However it reflects a widespread lack of communication between the different tiers and district offices of ERRA in the transitional phase, and also reveals a lack of direct communication between ERRA and the implementing NGOs to evaluate the procedures and make adjustments underway²⁰. To increase the understanding (and reduce confusion) of the process of getting NOCs from ERRA among the NGOs, WESNet, a national non-profit organization, offered DRU and ERRA to host a one day workshop for all partners to attend. At the termination of the research, the workshop had not yet been held.

Information about the procedure as it was practiced in Mansehra district was collected through interviews with central coordinating persons at the Works and Services Department (W&SD) at district level and WESNet. It shows the multiple steps of the process until actual reconstruction of a water supply scheme can take place, and watsan officers in many of the involved organisations were frustrated with the rather cumbersome procedures. The low attendance by some NGOs at the TAG (WES coordination) meetings was also interpreted by other NGO officers as a sign of this discontent – a boycott of the bureaucracy. A central coordinating officer noted in beginning of August that four months had passed since relief work was officially stopped and the reconstruction started, but still few projects were completed and many hadn't even started. At Tehsil level of local government, ERRA was criticized of being too centralized and without the local knowledge that would have made evaluations of NOCs at Tehsil administration level much more efficient. Other sources pointed out that ERRA was located in Islamabad and could have handed over more tasks to the District Rehabilitation Units (DRU), but then again admitted that the DRUs were lacking capacity in terms of human resources and would not have the sufficient capacity until after several months.

5.2.2 Coping strategies and implications of the procedure

The delay in issuing of NOCs to the NGOs working in the area led to various strategies to cope with this problem. An officer in an NGO working within the water and sanitation sector said that they were only sitting in their offices waiting for the NOC to arrive from ERRA. Time was therefore spent on designing projects in the office instead of being out in the field. Officers in other NGOs had a more proactive attitude to the problem and carried out projects

²⁰ To tackle some of the criticisms the new manual was made into a dynamic document with possibilities for making corrections as the work proceeded.

regardless of having an NOC or not. This was probably easier for the bigger international NGOs with their own funding channels and so could choose to work independently of ERRA. In its 2005-2006 review ERRA says that the direct execution of reconstruction projects in the area of some NGOs created big challenges for them in order to secure that everybody were following the same principles and implementation guidelines (ERRA 2006d). To some NGOs it seemed like the wait for the “go”-signal from ERRA was a waste of valuable implementation time as many villages still lacked proper water supply. However, the situation could also be considered an opportunity to carry out more proper assessments, having dialog with the community and preparing for their take over of the scheme. Certainly, such a utilization of time “lost” in the bureaucracy could prove to be just as valuable as the actual implementation efforts in the end.

In Malkaan village an international NGO had repaired one out of originally three water supply pipes that brought water to the village by gravity. The amount of water coming from that pipe was not sufficient for the village population, resulting in that they had to take water from the nearby river to supplement the water source. This was considered non-hygienic and an inferior solution because the river was dirty. Some drank the river water directly while others strained the water through a piece of cloth. But while straining might remove many particles and the big micro organisms such as protozoa, the cloth will not stop free floating viruses and bacteria as they are smaller than the pores in a normal piece of cloth (Sobsey 2002, p.30). Also in Gijbori village the water supply was looked upon as inappropriate as they had to rely on river water in addition to a well inside the village mosque, which provided ground water. It is unclear if women had access to the water source in the Mosque as they are normally excluded from such a building. Several NGOs had visited the village to carry out assessments, but none had come back to actually implement a proper water supply scheme.

5.3 Housing compensation and latrines

The sanitation facilities were causing negative health effects in the villages, too, but before giving examples from Malkaan and Gijbori, the following will provide a short description of the rules concerning the compensation to house owners.

5.3.1 Compensation procedures

Families whose home had been destroyed or damaged by the earthquake were entitled to compensation from the government through ERRA's Rural housing reconstruction program (see Photo 5-1). An initial payment of Rs.25,000 was disbursed shortly after the quake to all affected families to cover immediate shelter needs subsequent to initial damage assessments. Further cash grants²¹ were paid in three instalments subject to house owners participating in training and receiving technical support at Housing Reconstruction Centres (HCR) at Union council level and after assessments carried out by army groups - Assistance and Inspection (AI) teams (ERRA 2006a). These assessments were done at different stages of the construction to ensure that owners complied with the new earthquake resistant standards – building techniques and recommended materials. If the guidelines were not followed, the families would not get the remaining parts of the grants.



Photo 5-1: ERRA / NADRA²² housing cash site

Several problems were noted with ERRA's policy on housing reconstruction. One was due to the fact that only house owners were directly entitled to support. Tenants living in a house owned by someone else needed to sign a NOC with the owner agreeing to receive grants to reconstruct the house on behalf of the owner and without any interference from him/her (ibid., p.32). NGO officers said that there had been several cases where the owner had refused to

²¹ A total of Rs.150,000 for destroyed houses beyond economic repair. Rs. Structurally damaged houses within economic repair was paid Rs. 50,000 in one instalment.

²² NADRA (National Database and Registration Authority) works closely with ERRA to verify the identities of those seeking compensation

sign the contract, thus leaving the tenants in a hopeless situation without a home and without the right to land. Another problem pointed out by residents in Malkaan village, was the case in which two families shared a house prior to the earthquake. The policy then says that only the owner of the house at the time of the disaster can receive grants to rebuild the house (ibid., p.33). This would halve the compensation to each family - and halve ERRA's expenses. It is customary for multiple families to live under one roof in the affected area, and facing complaints from inhabitants at a People's Assembly in Balakot on October 8 2006 (the first anniversary after the disaster) ERRA said that all families under the same roof would be given compensation. It was however unclear how this would be carried out practically (The News 2006).

5.3.2 Experiences with the compensation scheme

The payment of the instalments seemed at times quite arbitrary (Bamforth & Qureshi 2007), and there was a great variation from area to area in how quickly the compensations were paid to the affected households. At the People's Assembly in Balakot a major concern was the fact that many families still had not received the promised funds to rebuild their homes one year after the earthquake and time was running out before the next winter set in. The inhabitants present at the assembly were representing four of the five affected districts in the province (op.cit.), and it seemed therefore to be a concern to people all over the affected area of NWFP. Many inhabitants had lost close to all their belongings in the earthquake, and a majority of the rural population was poor prior to the quake. They had now no financial means to undertake reconstruction of the house on their own. A new house depended on the compensation money from ERRA, but until then they had to manage with temporary shelters and makeshift homes as well as temporary latrines.

In Malkaan, only some had received the first instalment of the compensation, and many were still waiting. A few temporary communal latrines were set up before the first winter, but at the time of the research they were practically full. Pit latrines tend to fill up after a while as the ground lacks the capacity for rapid infiltration and liquids and solids accumulate in the pit (Heistad pers. comm.). Because of this both men and women had returned to the traditional open defecation in the fields, and the Insaaf committee, consisting only of men as is usual, said that they now let the women use the latrines for privacy. Women, however, thought the temporary latrines were inappropriate for use inside the village as the fragile construction of fabric material could fly up in windy weather (see Photo 5-2). In Gijbori village, the same

thing was experienced: A few temporary latrines were set up before the winter by a national NGO, but as they filled up the latrines became little pleasant to use. Also in Gijbori they now sought the fields, but said they had good functioning latrines prior to the earthquake. The men interviewed pointed out that the situation were causing inconveniences especially for the women.

The two households visited in Siran Valley were at quite different stages in the process of reconstructing their house. The first household (Photo 5-3) was still lacking the third instalment from ERRRA, thus so far inhibiting the reconstruction start, but the husband worried about the costs of following the construction guidelines compared the amount to be given in the instalment. At the moment they were fetching drinking water from a spring at some distance away, while water for other purposes was taken from the river. The river was also the place they now went to defecate after having used a hole as latrine for a while after the earthquake. In the new construction they wanted a latrine inside the house. The second household (Photo 5-4) too complained about that recommended building materials like wood and CGI-sheets²³ were too expensive relative to the compensation given, and now the house was built according to their own plan. This second household had already gotten the third and last instalment. A latrine separated from the house would be constructed with bricks, cement and a CGI-sheeted roof. Water infrastructure from a spring source was expected to be provided by the PHED, but until now the community had had to rehabilitate the water pipes themselves without any support from the government. They claimed that the water was good and drinkable and no change was noticed in the child health due to the water quality after the quake.

²³ CGI is an abbreviation for Corrugated Galvanised Iron and is a type of thin, lightweight steel sheets often seen on roofs (Source: http://www.bookrags.com/Corrugated_galvanised_iron, accessed 09.04.2007).



Photo 5-2: Pit latrine in Malkaan village



Photo 5-3: Siran Valley household #1

Pit latrines are relatively quick and easy to set up in an emergency situation in a village but have a given capacity dependent on the number of persons using it. As some of the village inhabitants left for camps during the winter, it is assumed that the constructed latrines lasted longer in terms of filling up more slowly than expected. Relief facilities are usually looked at as temporary, and it seems like this was also the view of the relief organizations responsible for water and sanitation, as well as the inhabitants. The anticipation of government (ERRA) compensation for damaged or destroyed houses resulted in that new latrines were not constructed when the first ones reached full capacity. The incentive for taking measures to make new temporary communal latrines would therefore somehow depend on the expected arrival of the compensation, since many families planned a private latrine in the new house. A complementary reason for the non-renewal of the communal latrines could be a rather low psychological barrier for going back to the practice of open defecation. Although both in Malkaan and Gijbori they claimed to have had good sanitation facilities prior to the quake, the shift from open defecation to latrines could have been quite recent. Nawab et al. (2006) note that elderly rural male interviewees in the southern part of the province enjoyed going into the fields and emphasized the privacy and relaxation experienced under the open sky. In this case the energy and initiative needed to dig new pits would far surpass the “unwillingness” of going back to the fields, thus making the last option the preferred one. From a female perspective it is assumed that the view is quite different: the willingness to maintain latrine capacities (and maybe improve the construction) in the village would probably be greater than the willingness to start using the fields again. The choice to go back to utilizing the fields for defecation instead of taking an initiative to renew the communal latrine capacity shows

therefore that the needs and preferences of the women were not given priority compared to other considerations.



Photo 5-4: Siran Valley household #2

5.4 Summary and discussion

A main factor causing the interruption between relief efforts and reconstruction seemed to be the bureaucratic and slow processes controlled by ERRA. Implementation of water supply projects was hindered by the slow issuance of the NOC that would allow implementation, and this was a source of frustration among reconstruction professionals as well as inhabitants. Frustration was also seen among the many house owners waiting for ERRA compensation to rebuild their house. Here, disbursement was unequal, both between and within villages, and in general slow. Meanwhile, temporary latrines were filling up and making people use the fields for open defecation again. This affected well-being particularly for the women who strongly preferred the latrines. The halt in reconstruction projects was however not complete and activity was taking place also in the transitional phase to restore facilities, although not to the desired extent. The chapter also shows that actors, both NGOs and households had different strategies for coping with the difficulties they faced. It might be said that reconstruction procedures were part of hindering an efficient and painless transition from relief to reconstruction, but the procedures cannot be looked at in isolation from who decided on the rules governing the processes. This will be brought up again in Chapter 7, where the implications of the ways in which reconstruction is administered are scrutinized. But before that, the next chapter will study the effects of temporary facilities still in use in the transitional phase.

6 Temporary facilities in the transitional phase

When talking about water and sanitation in the transitional phase of the earthquake it can be described in terms of the facilities that were already there, constructed in the relief period, and the facilities to come as a consequence of delayed reconstruction activities. The former are often characterized by being medium term in scope, while the latter is aimed at being permanent and lasting for many years to come. This chapter deals with the cultural, social and health aspects of the existing facilities and discusses the importance of participation related to these aspects.

6.1 The state of temporary facilities

Camp and village residents were during the transition between relief and reconstruction still quite dependent on the temporary water and sanitation facilities provided to them in the relief phase. The design of water supply schemes and latrines remained basically unchanged from the short/medium term solutions set up in the aftermath of the emergency, while the functioning of especially latrines worsened towards and during the transitional phase. Efforts to maintain these facilities varied some between villages and camps.

6.1.1 Sanitation facilities and local preferences

In Kashtra camp new pit latrines had been made recently prior the research, but still a male interviewee claimed that the total capacity for the camp population was insufficient and that many latrines were full. So they were continuing to use the filled up ones. An engineer from an NGO made the point that the latrines tend to fill up quickly as water is used for anal cleansing. The organization responsible for water and sanitation in the camp, informed me that they had constructed twenty new latrines on different locations on a cash-for-work basis after my last visit there which allegedly solved the capacity problem. The attraction of mosquitoes and flies to the latrines was another issue raised by both men and women. Stagnant water in parts of the drainage system was likely to have created perfect breeding spots for mosquitoes. All of the women interviewed complained about dirty latrines, and a disabled elderly woman said the facilities had been well maintained until a water shortage hit the camp a few months back. After that incidence the latrines had been in bad condition. She also found the distance to the latrine facilities too long as she had a multi-fractured leg. This made each visit to the toilet hard for her. Widows interviewed in the separate section for

widows (see Photo 6-1 and 6-2) also thought the distance to the latrines to be too long as they were placed about a hundred metres away with a long stretch of vacant land between, and it felt inconvenient to them²⁴. The situation in Siran Sialkot gave the impression of better planning concerning the location of the toilets and better protection for the female sanitation sections, including latrines and washrooms. Here the main concerns were on the cleanliness of the latrines, and there was also a problem of improper drainage around the latrines which made the ground outside muddy and allowed rainwater to enter and fill up the pit faster. An employee of the NGO responsible for water and sanitation in the camp, meant that latrines were dirty because of the lack of running water for some days. This made the cleaning more energy consuming as water had to be fetched outside the camp. With the return of the water he expected the latrines to become gradually cleaner.



Photo 6-1: Widow section in Kashtra camp, view from female latrines **Photo 6-2: Female latrines in Kashtra camp**

What is considered comfortable relates to cultural norms and preferences which influence the way people interact and the way people view their surroundings. A long distance to the latrine did not feel comfortable for the women in Kashtra camp perhaps because it is not viewed as appropriate to move around among men that are not relatives and that might even belong to another village in another area. An IUCN report on women and children in the disaster affected area confirm the worries of women in camps: in some camps female latrines were not

²⁴ According to the Sphere minimum standards, the distance to a latrine facility should not exceed 50 metres (The Sphere Project 2004, p.71).

separated from the male latrines and they were therefore shy to go to there in front of men. This resulted in that they waited until night with going, but then there was instead a risk of being raped or kidnapped and family members had to be brought along (IUCN/Khwendo Kor 2006, p.15). Sanitation facilities in both of the visited camps were separated into a female and a male section, and this might have reduced the risks and inconveniences mentioned in the report. Relating the latrines to the traditional practice, female interviewees in Siran Sialkot camp that had been practicing open defecation before the disaster said they now preferred the latrine. The latrine meant better security compared to the fields, and the women also wanted one in their future new house.

6.1.2 Water supply

Schemes made for supplying water in camps and villages also created problems, both related to health and the work load of the women. Women and children are traditionally the ones burdened with fetching water to the household in rural areas where it is common that the water source is communal and possibly located far from the household. During a short period and at the first visit to Siran Sialkot camp, the water pipe was broken by the rains and the residents had to go outside the camp to fetch water. Women walked about the same distance as to the water supply intake 3-4 kilometres away to get water from wells and springs in the nearby community. At a second visit some days later the pipe was however repaired and taps were usable inside the camp. The water seemed to be of an acceptable quality to the residents, but I will come back to this in a section below. In Kashtra camp the water provided to camp storage tanks by tractors was viewed with more suspiciousness and the residents thought the water to be too dirty to drink. This resulted in that women and children instead went outside the camp to fetch water from a private well nearby, where they regarded the water as clean and safe to drink. As for the villages, we saw in chapter 5 that both Malkaan and Gijbori had inadequate drinking water supply as they had to rely on surface water from rivers in addition to other sources, and the residents thought that the water was unhygienic.

6.2 Health and related perceptions

This section focuses especially on the views of both residents and other actors on how water and sanitation facilities affected health in the transitional phase.

Each tent in Kashtra camp was supposedly given a water filter to treat the water from the storage tanks. It shows that also camp management and the organizational partner considered the water unsafe to drink directly from the storage tanks, but residents still preferred to fetch water outside the camp rather than treating the water in the filters.

To get an indicator of the water quality in Kashtra camp at the time of the interviews, a sample of water was taken from a random water storage tank inside the camp. The results of the subsequent analysis are found in Table 6-1 below, which shows that the water quality according to these parameters is within the limits of both Pakistani and Norwegian drinking water standards. However, neither turbidity (indicating the amount of suspended particles) nor bacteriological tests were performed in this case. It is therefore impossible to conclude that the water is fit for drinking.

Table 6-1: A chemical analysis of water from Kashtra camp

Parameter measured	Quantity	Pakistani reference values	Norwegian drinking water limits ²⁵
Chloride	17 mg/L	≤ 200 mg/L	200 mg/L Cl
Sodium	15 mg/L	≤ 200 mg/L	200 mg/L Na
Nitrate	1 mg/L	≤ 10 mg/L	10 mg/L N
Sulphate	55 mg/L	≤ 200 mg/L	100 mg/L SO ₄ ²⁻
Hardness	240 mg/L*	≤ 500 mg/L	
Ca	50 mg/L**	≤ 200 mg/L	Good: 15-25 mg/L Ca
pH	8,3	6,5 – 8,5	6,5 - 9,5
Colour	Normal	Colourless	
Odour	Normal	Odourless	

* Presumably measured as mg/L CaCO₃. If so, then classified as hard water (150-300 mg/L CaCO₃)

** Moderately hard water

Chemical analysis carried out by National Health Institute (NHI) in Islamabad

In Siran Sialkot camp, the situation as noted earlier in Section 6.1.2 was somehow different. There, both water treatment filters and chlorination tablets were provided to each tent and information was given to the residents about how to use this. But unlike Kashtra residents, they regarded the provided water as clean enough (although unclear) and many did not use the treatment utensils although they were considered easy to use. According to residents as well

²⁵ Source: Helse- og omsorgsdepartementet (2001)

as organizational workers in the camp the source of water was a groundwater spring, but a walk to the actual water source showed that it was a river. A WES officer explained that they used the term spring because the source of the river was several springs up in the hills, thereby allegedly making the river water pure spring water. That might have been a reason for why they didn't use the treatment equipment. Bacteriological tests, on the other side, had shown earlier that the water was not safe to drink, and a sample taken from the storage tank at the time of the interviews showed the same result (see Appendix 2). Records at the medical unit in the camp showed that up to 40% of the registered cases of diseases in some periods were due to diarrhoea, and the cases of diarrhoea tended to decrease with rain. According to the medical doctor this was so because people drank less water when it rained as the weather turned colder, thus consuming less pathogens²⁶. Those affected were mostly under 15 years of age. He pointed out that other sources to diarrhoea could be improperly prepared food and lack of hygiene. The case of Siran Sialkot however highlights a common perception shared with authorities and NGOs interviewed that water is generally safe for consumption whenever it comes from a spring source or a groundwater well. It is not difficult to see why water that might look clean, or close to it, is regarded safe while visually dirty water is considered unhealthy. However, in spite of information about the risks of consuming the water and the provision of treatment utensils, residents kept drinking the water. An additional explanation also applicable to Kashtra camp might be that the treatment equipment did not have the desired capacity and took time (approximately 2.5 hours for filtering) before the water was clean.

The phenomenon of dirty latrines was mentioned in all the villages and camps visited, and it was obviously something that caused great troubles for the residents. In Malkaan, they claimed that the nearly full latrines (which the women were allowed to use) were causing both skin diseases and diarrhoea, and, similar to the medical doctor in Siran Sialkot camp, residents in Gijbori saw that the diseases related to lack of good sanitation affected mostly children. From a list of the diseases recorded among the camp population in Kashtra camp, most of the diseases could be related to a lack of hygiene and improper use of the latrines, according to the medical doctor in charge. Two of interviewed women in the camp said that their children

²⁶ This according to research suggesting a relationship between the dose and the response. Depending on the physiology of a person, a certain dose of pathogens will be needed to see a response in term of showing symptoms of sickness.

had suffered from vomiting and diarrhoea since the beginning of the stay. Dirtiness in latrines is commonly visible faeces- in many cases stemming from children.

The negative perception of the visually dirty latrines relates both to health experiences and to religious practices. According to Islam, contact with human excreta as something that should be avoided by all means (Nawab et al. 2006), and many inhabitants were also informed about faecal-oral routes of contamination through hygiene promotion. An initiative from the camp residents to battle the dirty latrines was experienced at a women's hygiene meeting in Siran Sialkot arranged by hygiene promoting female officers from the NGO BEST. The present women unanimously agreed to pay a small amount per month for someone to come and clean the latrines frequently. This might have been a result of that not everyone was used to using latrines before moving into the camp and therefore not used to keeping the latrines clean - including children.

6.3 The relevance of participation

The adverse effects of temporary facilities concerning health, social and cultural aspects beg the question: Why was this so? Residents, both men and women, were clear that many improvements could be made related to maintenance, design and location. Does this mean that some form of consultation with the community could have solved or even avoided many of the problems seen for example in the camps? A main question in this study therefore is whether participation practiced in varying degrees has influenced, or might have influenced, these aspects and in what ways.

6.3.1 Clarifying the concept

First of all it will be useful to clarify what is meant by participation. As Quaghebur, Masschelein and Nguyen note, it is difficult these days to find a development project that does not in some way or another claim that it subscribes to a participatory approach (2004). Nonetheless, or even more importantly, is it necessary to state clearly how the concept is understood. The following discussion will be based on the typology used by Agarwal (see Table 6-2). In a camp context, Birkeland, Vermeulen and Vågli defines community participation as being "...a planned process whereby individuals and groups from among the displaced community identify and express their own needs and where collective action is taken to meet those needs" (2004, p.46). This takes on an approach to participation basically ranging from

consultative to active in a situation where the main goal of camp management is make the camp a “safe, secure and dignified place for displaced persons to live in” (ibid., p.27).

Table 6-2: Typology of participation

Form/Level of participation	Characteristic features
Nominal participation	Membership in the group
Passive participation	Being informed of decisions ex post facto; or attending meetings and listening in on decision-making, without speaking up
Consultative participation	Being asked an opinion in specific matters without guarantee of influencing decisions
Activity-specific participation	Being asked to (or volunteering to) undertake specific tasks
Active participation	Expressing opinions, whether or not solicited, or taking initiatives of other sorts
Interactive (empowering) participation	Having voice and influence in the group’s decisions

Source: Agarwal (2001, p. 1624)

6.3.2 Participation in the research area

The persons interviewed in the camps were to a very little degree involved in decision-making concerning their close environment and water and sanitation services in specific. In Kashtra camp a couple of the male interviewees said that the men had taken part in digging the holes for the pit latrines, but that the construction of the rest of the latrines was carried out by personnel hired by the water and sanitation NGO. The women in the camp had not been asked their opinion about anything, but they had tried to suggest that every family should be provided with a new tent and their own latrine. The camp manager of Siran Sialkot informed that his policy was to give the residents the possibility to participate in the construction of every public facility in a cash-for-work manner, but an officer in the NGO responsible for water and sanitation informed that hired people had carried out the construction of new latrines in early summer. Like in Kashtra camp the women were at no point consulted about decisions concerning water and sanitation facilities in the camp, although they were able to influence the cleaning of latrines. In the villages of Malkaan and Gijbori the temporary communal latrines were constructed in the early relief phase, and from what was implied in the interviews with the village residents, it seems that the job was done entirely by the respective relief organizations. An NGO evaluating its own efforts in reconstruction can also shed light on why participation was not employed in the relief activities to a greater extent: the large scale of the project, the critical time lines, the difficult terrain prone to slope failures, heavy monsoons, extended power outages, and labour related issues made the reconstruction

work difficult (Khan, A. 2006). Under challenging working conditions the ERRA request of using participatory approach on top seems to be disregarded. There is also the expectation by authorities and donors that funding is used quickly to show effectiveness, which is reflected in the NGOs' attitude of getting the money out the door as quickly as possible, thus further entrenching the strategy of involving the local community (Beck 2005). Lastly, but maybe most important, is the fact that relief personnel are often technically skilled people without training in participatory methods. The motivation for making an effort in this direction may be further weakened by the nature of the temporary facilities, as participation might be looked at something reserved for the long term reconstruction projects.

Participation related to camp facilities and temporary solutions in the villages seems at its best to be understood among the external actors as an activity-specific type of participation, where the residents might be asked to participate in the construction of facilities that are already assessed and planned. It is important to be aware of that many organizations, typically national NGOs, are often just the so-called implementing partner of a funding agency. This relates to camps as well as to relief and reconstruction in villages. In both the camps UNICEF was the funding partner of the organizations implementing the water and sanitation projects (see Photo 6-3). The funding partner is then able to provide the guidelines for the work to be done, and UNICEF experts also carried out their own assessments forming the basis for further actions. Officers at the WES section of the UNICEF office in Mansehra (the district or province head quarter for the affected areas) revealed a rather honest view on the subject of community participation: Before the earthquake the communities in the area had participated in some projects, also financially, but after the disaster they seemed not capable of participating in the reconstruction. Because of the deadlines set for the reconstruction of water supply schemes they would rather not involve the community as this slowed down the process. If they involved the community the deadlines would have to be extended, something that they tried to avoid. In the camps they never involved the community, but in reconstruction in villages it might happen. The community would not be involved in the planning stage in any case, and PHED/TMA preferred to use their own contractors to carry out the work in order to keep the deadlines.

It is not known whether this view is representing also the higher ranked UNICEF officers, but it might reflect a certain organizational attitude among the decentralized and ground level

offices towards relief and reconstruction work. As we will see in Chapter 7 below, the UNICEF policy shows a different view on participation.



Photo 6-3: Logo on latrine, Siran Sialkot camp



Photo 6-4: Siran Sialkot Camp

Sticking to the camps, it is obvious that the above described view on community participation is a major reason for why residents were not involved to a larger extent in Kashtra and Siran Sialkot camp, although the camp manager should be able to influence this.

6.3.3 The potential gains of participation

There should however be no reason to not include the residents in administration and planning in the camp, and assuming that the period of operation is uncertain, it might as well be practiced from the start (Birkeland, Vermeulen & Vågli 2004). A camp management trainer in Norwegian Refugee Council (NRC) said that he expected the transitional camps to last for two years before everybody were ready to leave for a village. Other camp personnel again assumed that the camps would be vacated in three to four months and at the latest before the winter²⁷. Birkeland, Vemeulen and Vågli note in their Camp management toolkit that participation of displaced persons will increase the sense of control over their own life, which in turn will impact positively on their well-being. In addition it brings advantages like:

- development of a greater responsibility amongst the population, likely to improve camp maintenance, and encourage initiative within the community
- increased transparency in decision-making processes, which can decrease tensions around distribution of food, commodities and services

²⁷ At this point (May 2007), it is not known whether the camps are still running or not.

- trauma recovery of camp residents. Increased sense of responsibility will lead to a growing self-esteem and create opportunities for people to be involved in solving their own problems (2004, p.46)

Wisner and Adams (2002) point out that the success of any technical intervention depends on the reception of it among the community and how it is used. It is therefore crucial to elicit the needs and wishes of the population and include them in both planning and implementation.

With an active inclusion of the women in Kashtra camp in the planning of the female latrine section, or even just consulting them about the design and location of the latrines, the inconvenience felt by many going to the latrines could probably have been drastically reduced. Also the latrine incapacity in Kashtra could have been dealt with earlier if the community was involved in managing the facilities. A group of men said that they were more than willing to contribute with their labour in the construction of new latrines, and many were skilled and used to working with their hands. The camp manager had quite another impression of their willingness to participate since residents hardly ever showed up on the weekly meetings with all involved stakeholders to discuss the operation of the camp and to air complaints or commendations. This was also the version held by the NGO involved in water and sanitation, where an officer claimed that the residents were only interested in what they received. It is not known why the residents didn't show up at the meetings, but it raises the question about the real purpose of the meetings and how this was perceived among the residents.

Also in the villages construction of temporary facilities could have been approached in a participatory manner. As seen from the advantages listed from the Camp management toolkit above, participation can be a good way to deal with a trauma and it should not be assumed that the population is not capable of taking active part in the emergency efforts. The Sphere Project warns against seeing the affected population as helpless victims, including vulnerable groups, because “[t]hey possess, and acquire, skills and capacities and have structures to cope with and respond to a disaster situation that need to be recognised and supported. Individuals, families and communities can be remarkably resourceful and resilient in the face of disaster, and initial assessments should take account of the capacities and skills as much as of the needs and deficiencies of the affected population” (The Sphere Project 2004, p.9-10). On the other hand, it should not be assumed that the community are capable of fully participate in all

efforts, and the external actors have to be realistic about what is feasible (Beck 2005). Nevertheless, individuals within the same community have different ways of tackling a crisis, and there will probably always be someone that needs to be actively involved to cope with the situation. An intervention should therefore take these individuals into account and involve them in the efforts for the benefit of everybody.

6.3.4 Communication

Communication and camp atmosphere

Good and frequent communication between camp management and the community is another way of obtaining a safe and dignified environment for the camp residents in which they can influence the daily administration of the camp. In Kashtra camp the lack of communication between camp management and the residents created an atmosphere of suspicion and rumours. The following case will give an example:

Recall that residents didn't like the water quality in storage tanks in Kashtra camp and went instead outside the camp to fetch water. Officers in the responsible NGO Taraqee Foundation thought the residents didn't like the water because it was chlorinated, hence giving a smell and taste to the water that residents weren't used to. The residents still claimed that the water was visually dirty and held that it was inappropriate for drinking purposes. A theory among the female interviewees about the reason for the bad quality was that the local tractor drivers paid for getting water from the well in Garhi Habibullah rather filled up the tanks in the nearby and much closer river to save fuel and time. It is not known whether the women had actually witnessed this. The men on their side found it suspicious that the water sometimes was transported to the camp in middle of the night, suggesting between the lines that it might come from somewhere else than the official well. Taraqee Foundation confirmed that their tractors also were transporting water at night, but said that this was normal and necessary.

The uncertainty among residents regarding the delivery of drinking water to the camp resulted in suspicions that some people were taking personal advantage of their position as service providers at the expense of water quality. Another source of in the camp was the coming relocation of another camp population to be included in Kashtra. The initiation of the drilling of a well inside the camp where the new population was to live led to rumours that the water from this well would only serve the new population. It was said that they would also get electricity, and that work had started to fence off the area from the rest of the residents. The

camp manager told the interview team that the new well would serve to secure the water supply for all the camp in case current transportation or the source should fail to work. The fences should keep the local community away from using the camp facilities. A well-functioning forum inviting unbiased dialog could have reduced the certain tension that these issues created. This point also relates to the advantages of community participation cited from the Camp management toolkit, which holds that transparency in decision-making reduces tensions concerning distribution of goods.

Communication and health

Communication is also essential in promoting good hygiene practices, where the transmission of information enables people to make informed decisions about health related activities that link to water supply, sanitation, vector-borne disease control, and hygiene practice (Wisner & Adams 2002). This has to be coordinated with the provision of water and sanitation services, and a household in Malkaan Gari, the lower part of Malkaan village, rightly questioned how they were going to keep their shelters and children clean when the water they had to use was dirty! Improving health in a community can however not be about one way communication from external community health workers concerning what, in the eyes of the health worker, is “right” hygiene practice. Even though the physical environment can have changed subsequent to a disaster, thereby also possibly introducing new environmental health hazards, the traditional ways of keeping clean and staying healthy are based upon how health is defined in that specific area, which again is culturally determined.

A change in behaviour is obviously necessary for any improvements in health, but it has to come from an inner understanding of the problem and how good practices can be developed within the existing cultural norms. A method first developed in Bangladesh and later introduced in Pakistan is the so-called Community-led Total Sanitation (CLTS) that aim at ending the practice of open defecation. It is based upon the communities’ mapping the extension of the practice, exploring the possible transmission routes, and the final discovery that they are practically ingesting each other’s faeces. This leads to a realization that something has to be done, which ends up with motivating the construction of home made latrines (Kar 2003). The PHAST method is based on a similar mapping of the problems together with the community and the following of seven steps towards the prevention of diarrhoeal disease. The SEED-SCALE Process for Community Change was developed in the early 1990s by the organization Future Generations in collaboration with among others Johns

Hopkins University (Future Generations 2007). This approach is founded on the principles of focusing on the strengths of the community instead of all the problems they face; the use of local data that the community themselves collect and understand; a partnership with officials and outside experts; and a behaviour change in the community to allow for lasting results (ibid.).

6.4 Summary and discussion

This chapter has dealt with the temporary facilities still in use in the transitional phase and their cultural, social and health effects on residents. Some of the health effects can be related to a lack of maintenance of latrine facilities and a lack of renewing the latrines as they filled up after months of use. Related to the use of latrines as well as contaminated drinking water, diarrhoea affected a great part of the population and especially children. Other diseases point to a lack of good hygiene practices, which is a matter of communication between external hygiene promoters and the population about health hazards linked to water and sanitation. Social and cultural discomfort was especially felt by women regarding the use of communal latrines that were either far from the household or poorly designed as in Malkaan village. Both men and women felt uncomfortable with latrines that were practically filled up or that were otherwise dirty. Many of the negative effects of using temporary facilities in camps and villages could have been avoided with the use of participatory approaches in planning, designing, implementation, and operation and maintenance, but organizations have found this either difficult or are unwilling on a more general basis. Discomfort related to location and design of latrines could have been reduced significantly with involving in consultations with the beneficiaries, who then could have raised their concerns and stated their preferences. Reducing adverse health effects related to hygiene practices should however be handled with a much more interactive way of participating, as a mere consultation would not be sufficient to induce the change in behaviour necessary. We should also note that many of the health effects seen in the villages could have been avoided altogether if reconstruction of houses had happened faster as this would have led to an earlier construction of private latrines. The effects of the consumption of unsafe drinking water could be argued in the same direction, but here influenced by the implementation process related to water supply schemes.

7 Some implications for coming reconstruction

So far, the discussion has looked into the question of how the transitional phase emerged, understood as a delay in reconstruction activities (Chapter 5), and the effects of the continued use of temporary facilities by the concerned population (Chapter 6). This chapter will treat the reconstruction efforts that were starting to take shape during the transitional phase and look at how agencies, both governmental and non-governmental, were influencing this.

More specifically the chapter will deal with the underlying principles for the coming reconstruction in the area, especially regarding the use of participatory approaches to ensure the sustainability of the facilities. The concept of sustainability became familiar to most people through the report “Our common future” developed by the so-called Brundtland commission and released in 1987. There, sustainability is defined as “meeting the needs of the present generation without compromising the needs of future generations” (World Commission on Environment and Development 1987). In this study, the concept of sustainability includes considerations of the economic, social, institutional, and cultural aspects of facilities and activities.

7.1 Paving the way for participation in reconstruction

Access to safe and improved water is high up on both the Pakistani and the international development agenda, and the focus on using participatory approaches in development projects is also highly praised and promoted. The amount of literature regarding participation in water supply projects and sanitation is considerable as well as on the use of participatory approaches in general. Main arguments from this body of literature will be used in the later discussion. However, I will start off with looking into the intentions of ERRA as the central reconstruction coordinating agency in Pakistan and also how other actors in the watsan reconstruction sector intended to go about in the emerging efforts towards reconstruction.

The May 31-draft for the Reconstruction and rehabilitation strategy of the water and sanitation sector was developed to ensure that the affected population has access to essential water and sanitation facilities, with a vision to “...improve the quality of life... by reducing risks to the public health through provision of equitable, sustainable and reliable supply of sufficient quantity of safe water and appropriate sanitation services” (ERRA 2006e, p.4). One

of the seven strategies to obtain this is by involving the community and especially women, in “site selection, planning, design, implementation, monitoring and management of the schemes to promote community ownership and empowerment as well as sustainability. Active involvement of CBOs and user groups will be actively promoted in design and implementation of the community operated schemes” (ibid., p.5). The approach in the strategy is related to the national policy papers for drinking water and sanitation as well as the Pakistan Poverty Reduction Strategy, from which the strategy draws inspiration. ERRA emphasizes that the reconstruction and rehabilitation program and the funding for activities hereunder will not include regular development projects. The efforts in the reconstruction phase are limited to restore the facilities that were destroyed or damaged in the earthquake and to expand, improve and upgrade these (ERRA 2006d), hereof the slogan “build back better”.

The aim of constructing sustainable facilities is further motivated by numerous previous efforts world wide to improve water and sanitation conditions that have failed after a short time. Participation by the targeted population in such development projects is considered by a majority of actors in the development sector to be the number one way to reach the desired sustainability. Chambers notes that the rhetoric of rural development during the 1980s shifted from top-down to bottom-up, from centralized standardization to local diversity, and from blueprint to learning process (Chambers 1992, p.1). The approach also changed from being generally supply-driven (financing and constructing as many schemes as possible) to demand responsive, where the users “get what they pay for” (Kleemeier 2000). A main rationale behind using participatory approaches is that the final beneficiaries take active part in the decisions that concern them, hence being empowered through gaining control over their own life and resources. Common highlighted advantages that follow from this are that an intervention better suits local needs and preferences through the use of local knowledge, democracy is increased, costs go down and efficiency up, and a feeling of ownership of the facilities is created, which again will improve the degree of maintenance by the locals and prolong the lifetime of the project.

Also in a disaster context community participation is relevant when it comes to rebuilding societies (and in the emergency and relief phase as noted in the previous chapter): people should be consulted about their needs and wishes related to technical interventions and in general partake in all stages of decision-making that concerns them. This will stimulate the

organization of the society, which is important for sustainable development (Wisner & Adams 2002). The principle commitment number seven in the Code of Conduct for the International Red Cross and Red Crescent Movement and NGOs in Disaster Relief states that:

“Ways shall be found to involve programme beneficiaries in the management of relief aid: Disaster response assistance should never be imposed upon the beneficiaries. Effective relief and lasting rehabilitation can best be achieved where the intended beneficiaries are involved in the design, management and implementation of the assistance programme. We will strive to achieve full community participation in our relief and rehabilitation programmes” (IFRC 1994).

The code, which has a total of ten principles, is signed by many of the major NGOs working with watsan reconstruction in the earthquake affected areas. In addition to signing the above-mentioned Code of conduct, many of the NGOs also have their own policy or internal guidelines on how they should work with the communities, involving inhabitants in different parts of the process and to various degrees.

7.2 Theory vs. practice

What is said on paper might however differ from the actions taken when projects are actually planned and implemented. Through their own handbooks on Water supply and Sanitation, UNICEF gives the impression that community participation is an important part of what they do in this sector (see UNICEF 1997; 1999). This is also reflected by referring to the Sphere Handbook on the UNICEF web page on guiding principles, as the handbook stresses the use of participation as a standard common to all sectors in emergencies (The Sphere Project 2004). As seen in the previous chapter (Section 6.3.2), statements from local UNICEF WES officers seem to contradict this impression. Officers in a national water and sanitation-specialized NGO believed that the NGOs in the area were not involving communities in general, but held that it should be done, especially to facilitate conduction of surveys (!) on water sources and schemes etc. These officers reflect a type of neo-liberalist motivation of using participation as a means of obtaining higher efficiency (Mohan & Stokke 2000).

Organizations that seemed more consistent in using participatory approaches in their work included among others MercyCorps, which in Malkaan village established a water and sanitation committee consisting of ten members from the village in addition to representatives

from the organization. Through the committee village members reported that they were actually taking part in planning the location of the source of water supply and the distribution of taps in the community. The villagers were also contributing to the construction works. This shows also a significantly different approach to planning and implementation than what was seen in the relief phase regarding the set up of temporary latrines in the village. A likely explanation is that the personnel carrying out relief efforts are different from those concerned with reconstruction and long term interventions. These two types of people might have completely different backgrounds (e.g. technical/logistical vs. social/developmental), and experiences from NGOs in Afghanistan show a minimum of communication between the two within the same organization (Nyborg pers. comm.). The assumption is further strengthened by ERRA's Annual Review 2005-2006, where it is stated that a lesson learnt from ERRA's Early recovery plan is that relief organizations should not take part in reconstruction because the two phases require different sets of expertise (ERRA 2006d). This illuminates the common view that the relief and reconstruction phases demand two very different types of competences, which should not be mixed. Some organizations have specialized in relief operations, while others are big enough to cover both phases, although commonly with different personnel as noted above. The need for different competences is not questioned here, but is it really necessary to separate the two groups in time? We have seen that relief operations were taking place without the use of participatory methods, and it is plausible that reconstruction/developmental workers could work alongside relief personnel to assist in the use of participatory methods.

Other organisations, like Oxfam had a pronounced focus on involving women especially in decision-making, and Society for Sustainable Development (SSD) taught among others latrine construction techniques so that the community later could be self helped. This was said in interviews with watsan officers, but never verified through field visits and/or interviews with the beneficiaries.

7.3 Pitfalls and obstacles to participation

In spite of the many advantages of a participatory approach for communities and professionals (see also WHO 2002a), it has its pitfalls. Because of authoritarian power structures in Malkaan, initial aid to the village was distributed unequally and to the advantage of the top representatives, the extended family of a particular clan, who dealt with the relief

organizations. According to inhabitants of Malkaan Gari, the lower status part of the village (see Section 4.2.3), the people there was largely excluded from relief aid and had to obtain for example tents through personal contacts instead of as a result of equitable distribution. At some point they had joined up with the Insaaf committee and were from then on working with them to benefit from reconstruction efforts. Mohan and Stokke argue in their article *Participatory development and empowerment: the dangers of localism* (2000), that the local is often romanticised, which leads to an undermining of local social inequalities and power relations. They question the notion of the community as a unity with one voice and also the belief that local knowledge is more valuable and better suited than that of experts, western practitioners, and outsiders in general. In focusing on the local one should be aware of that people move across geographical borders and relate to other locals in other localities through family bonds, trade, etc., and there are also multiple relations between the local and the state, making the often emphasized state-society dichotomy an imaginary opposition within the study of development (ibid.).

Wisner and Adams (2002, p.207) also note several obstacles to community participation in a post disaster setting. The obstacles are summarized in four points:

- *Apathy and disempowerment*: Difficulties with involving people who are not used to taking decisions or who are not allowed to by those in authority;
- *Conflicts and divisions*: A community might include people with different social, economic, or ethnic or religious background who have different needs and interests. These aspects might be sources of conflicts between different groups and also between individual and group interest;
- *Poverty*: Poor people might have other priorities than participating as they have to secure the survival of themselves and their family. Ill-health is another obstacle to participation;
- *Cynicism*: The misuse of “participation” in projects in order to get free labour or as an alibi for the records will not motivate people to participate.

To overcome the obstacles Wisner and Adams suggest using community health workers as an entry point to sensitize the population about the risks related to environmental health hazards and also to work through individuals that are respected and able to promote action among the citizens (ibid.). Although there are ways to deal with the difficulties, the mentioned obstacles

make it a challenge to operationalise participation in the field, and ALNAP (2003) notes that the use of these kinds of approaches in humanitarian action is still very limited.

7.4 Some arguments for participation in post disaster efforts

An important assumption in post disaster assistance is that people often need what Albaladejo calls exogenous response mechanisms in order to fully recover from the impact. This contrasts an environment in a non-disaster state of mind where the society can be said to be intact, although not necessarily happy. In the latter change should ideally come from within, and from Rahnema's point of view "[n]o democratic or participatory panacea can give an ailing society of dead or conditioned persons what they individually do not have" (1992, p.126). He refuses the concept of participation as we know it on the grounds that no-one can impose lasting change in a society where this change does not come as a process that starts from within each individual. In post disaster reconstruction the communities rely on outside help in order to merely restore the system to what it was before, and then the question is: intervention with or without participation? It is, however, a fundamental difference between participation as a predefined concept imposed upon the community by external actors and the participation demanded by the community in order to influence their own lives in the way they want.

Rahnema (1992) thinks that participation is now also a concept embraced by the so-called authoritarian regimes since it no longer is viewed as threatening to their power. They have learnt how to control the processes in order to ensure that participation does not also bring about the empowerment of the people and a shift in the power relations between the ruling elite and the grassroots. However, real participation cannot take place until those participating can influence the decisions to be taken, which often assumes a loss of power for some stakeholder and increased power for others. In Malkaan village there was a change in power related to the distribution of goods from the ruling family to a greater part of the community. Participation in how relief goods were distributed and later how the rehabilitation of the water supply should take place seems to have led to a change in the traditional power relations, at least temporarily. If this change is sustained also after reconstruction efforts are over, it might have great implications for the future development of the community.

The discussion on the participation of citizens in the reconstruction efforts can also be taken to another level, to the influence of civilians and elected officials in the processes lead by the military and ERRA. We have already seen in Section 3.5 that the parliament was among others negated insight into the spending of relief and reconstruction funding, but also on local level elected politicians were sidelined by military personnel in the rescue and relief phase (ICG 2006). TMA officials as well as NGOs called for more decentralization of the coordination of reconstruction, especially related to the issuance of NOCs, to make the process more efficient through utilizing the existing local knowledge (see also Section 5.2.1). The reconstruction is regarded as a highly top-down oriented and military controlled process, marginalizing the role of local communities and a civilian leadership in shaping the processes. In this respect ICG emphasizes that the opportunity should be taken by international donors and NGOs to insist on the inclusion of local, community-based organizations and national parliamentarians to make the reconstruction process meaningful (ibid.).

7.5 Summary and discussion

Although participatory approaches are considered important for the success of reconstruction and the long term sustainability of facilities, the positive words in policies and strategies do most often not reflect the ground reality. This was amongst other shown through interviews with UNICEF WES officers and officers of a national NGO. Does this reflect that ERRA did not care so much about the participation part after all since they actually approved all projects proposals, or was it a deliberate strategy of NGOs to confuse the approving institution with positive words before business as usual in the field? Even though positive experiences with participation were seen in the field, there are also obstacles for those in favour of employing a participatory approach. Mohan and Stokke also point out the dangers of regarding the community as a discrete group of people that can easily reach consensus about public decisions, while others, like Rahnema, reject the entire concept of participation as it seems hollow and false. However, as it seems that the communities depend on external intervention to recover after such a devastating disaster, it might be a better solution to accept that participation, nonetheless, is a better alternative than not partaking in decisions at all. This does not mean that one should go about employing participatory approaches uncritically, and it is not uncommon that the concept is used by planners with highly varying motives. If carried out in a good manner where the involved community really feels they “own” the process rather than just taking part in a process with clear rules for how they are supposed to

participate, then change that it brings about might be sustained for a long time. This could again lead to social change and a shift in existing power relations for the benefit of the marginalized.

8 Concluding remarks

The primary aim of this study was to look at the technical, social, cultural and health aspects of water and sanitation facilities in the transitional phase, focusing on the extent which residents were involved in decision-making and how this affected those aspects. The aforementioned objectives were met and the central findings are highlighted below. Water and sanitation facilities have been constructed and administered with a generally low to non-existent involvement of the locals, both in the affected villages and in the transitional camps. This has adversely affected both the health and well-being of the inhabitants. The transitional phase was largely a product of the bureaucratic and centralized procedures of ERRA, which delayed the reconstruction of water supply schemes and the rebuilding of private housing. This affected the health and well-being of the village residents that were waiting for reconstruction to take place as they had to rely on temporary facilities that were constructed in the relief phase. However, these facilities were constructed with very little involvement of the local community and were based on an expectation that the facilities would only be needed for a relatively short period of time. Similarly, female residents in the transitional camps were suffering from poorly planned and designed latrine facilities, and the long walking distances needed to reach them. Diarrhoeal diseases were commonly reported among the population in both the villages and camps, which was an indication of contaminated water, improper use of latrines and a lack of good hygiene practices.

The aforementioned adverse affects of the temporary facilities could have likely been reduced through simple consultation, which could have significantly improved the situation especially for the female fraction of the camp populations. Health related effects of hygiene practices require both an understanding and ownership of the problems. The community should therefore be assisted rather than supervised in the process of changing hygiene behaviour. The consequences of a lack in participatory approaches in the reconstruction activities could have serious implications for the sustainability of the facilities yet to be constructed. A lack of ownership can in the long run reduce the motivation to maintain and repair, thus shortening the lifetime of these facilities. There are strong indications that community participation is not highly prioritized among many of the actors in the water and sanitation sector, either in the relief or reconstruction phases, even though the policy documents give a different impression to the public. It is possible that there might be obstacles for the use of participation in reconstruction, but ways could be found to overcome these.

The research was carried out in a phase of the post disaster efforts when the relief work had recently ended and reconstruction had not quite caught full speed. Is it possible that the problems observed in the camps and villages could have been eliminated with a smooth transition, i.e. a virtually non-existent transitional phase? It would probably not have affected the transitional camps to a large extent, since these camps existed independently of the reconstruction efforts in the villages. Camp residents had either no land to go back to, or they were unable to return to their village because of being either widowed, orphaned or disabled in the earthquake. In the villages, the health problems would have been reduced with a more efficient disbursement of compensation for destroyed or damaged houses. This would have resulted in private latrines replacing the temporary communal latrines at an earlier stage, maybe even before they filled up and forced residents to use the fields for open defecation. A faster and more flexible NOC procedure for NGOs would also have reduced diseases related to drinking water because residents would not have been forced to drink contaminated river water. However, the elimination of the transitional phase would likely not have changed the attitudes towards using participatory approaches; thus, female camp residents would still feel inconvenienced with the location of camp latrines and sustainability of permanent facilities in reconstruction would still have been lacking. Lastly, negative health effects related to a lack of good hygiene practices would not necessarily be reduced with the use of proper facilities unless the people at the same time understand the linkages between hygiene practices or defecation practices with the existence of disease (The Sphere Project 2004, p.56).

The previous thought experiment indicates that the existence of a transitional phase was probably causing some of the observed health, social and cultural effects, but cannot alone be blamed for the problems in the camps and villages. Starting off where the experiment ended brings us to another aspect of the reconstruction activities, namely the view on the importance of sanitation. As seen in Chapter 5, neither the NGOs nor the local authorities thought sanitation was important until a water supply, through its use, would produce wastewater. This view has several flaws; the first being that wastewater was produced regardless from water fetched from alternative water sources, although less than what would be produced with a piped scheme. In Malkaan, the wastewater was running down the hillsides freely as it left the houses with no drainage whatsoever. The second shortcoming is that there are proven negative health effects from the practice of open defecation. Ignoring this fact is to disregard the many diseases spread through the direct contact with faeces, through objects (e.g.

domestic animals) and through soil (people walking barefoot) contaminated by faeces or through contaminated water (Wisner & Adams 2002, p.127). The adverse effects of open defecation are backed up by the National Sanitation Strategy (GOP 2006b), where the objectives are, among others, to ensure an open defecation free environment and to promote Community-led Total Sanitation (CLTS). The promotion of CLTS has shown promising results in the nearby district of Mardan, where 11 villages were declared open defecation free by July 2006 (Khawar 2006). An important difference to other approaches is that CLTS invests in the human resources needed for facilitating learning processes as opposed to the conventional focus of investing in the construction of latrines. This is based on a belief that the construction itself will be enough to change peoples' behaviour. Nevertheless, there is a tendency of focusing on the supply of safe drinking water at the cost of proper sanitation not only in Pakistan but in the developing world at large.

The use of CLTS illuminates a paradigm shift when it comes to thinking about participation. The old paradigm was about treating participation as a process that local stakeholders could take part in "competition" with the preferences of other stakeholders such as researchers, local authorities, and private businesses. It was a process in which the local community was allowed a voice, giving the impression of reverse power relations, while the process itself was governed by strict rules. This paradox is dealt with by Quaghebeur, Masschelein and Nguyen (2004, p.163), where they observe that village participants in Vietnam resisted and opposed the framework of the participation process in various ways in terms of redefining the framework, changing the context and the importation of other assumptions. In the view of the authors, this opposition reflects real participation. CLTS can be seen as one of several approaches that attempt to hand the entire learning process over to the community, where outside personnel act as facilitators instead of as arbitrators that indicate the "right" way of participating. Every community has its own way of learning and adjusting to new knowledge, and an understanding of this represents the new paradigm of participation.

The disaster management cycle (see Section 2.2) shows that the humanitarian action in the reconstruction and rehabilitation phase precedes development activities that will prepare the population for the next disaster. It is not known when the next disaster will hit or what shape it will take, but developing and improving the society and its structures will clearly make it more resilient to whatever might occur. Hence, reconstruction activities evolve into developmental activities whose aim is to prepare the population for a potential future disaster.

In the water and sanitation reconstruction strategy, ERRA (2006e) makes it clear that additional development projects will not be given funding reserved for the implementation of the strategy. This can be interpreted as a wish to take “first things first”, i.e. reconstruction before development. However, there is no indication that regular development projects are a way to prepare for a disaster, and Pakistan’s National Sanitation Policy states that natural disaster management strategies and plans will be developed only to provide sanitation to the communities already affected by disaster (GOP 2006b). The National Disaster Management Authority (NDMA) is established to facilitate the coordination of policies for preparedness, mitigation, early warning, and if necessary to conduct operations (ERRA 2006d, p.11). It is difficult to make guidelines for how to react to a disaster when it is unknown when, where and how it will come. An example of the need for flexibility was indicated by an NRC officer who stated that the camp management guidelines had to be fitted to the special context of the earthquake affected areas. Taking this into consideration, it might be more relevant to develop strategies that are only general in character and that might be easily adapted to the special context of a potential future disaster.

Recommendations for handling a future disaster

Based on the findings and the conclusions that have been drawn in this study, I will try to delineate some recommendations that can be looked into for an improved disaster management in the future, should it be necessary.

Different personnel for different tasks: We have seen that it is common to use personnel with different backgrounds according to the phase. It is a common understanding that relief work is characterized by being technical and logistical while reconstruction reaches more into the sphere of social and developmental work. At the same time there is a need for introducing participatory approaches in all of the phases of post disaster efforts, not only in reconstruction, but also in rescue and relief. Instead of separating the two groups, it could be to everybody’s advantage to combine the different competences and strengths in all phases.

Communication in camps: Several kinds of problems arose in the camps, which was apparently due to a lack of communication between the camp management, partner organizations in the camp, and the camp residents. Discomfort related to the latrines, both location and maintenance, could have been reduced or eliminated with a consultation with the

affected residents. For example, in one of the camps there were signs of tension among residents as a result of misunderstandings and rumours. Providing a well working forum in which everybody feels they have a meaningful voice could prove essential for the camp well-being and atmosphere.

Procedures for reconstruction: Some of the characteristic problems to the transitional phase can be related to the rather bureaucratic and centralized procedures regarding the issuance of certificates for the implementation of projects. There were indications that a decentralization of the power to issue the certificates would have been more efficient. This would also have drawn on the extensive local knowledge that local government agencies have accumulated in relation to small and medium sized water supply schemes.

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Appendix 1: Definitions of indicators

(Source: WHO/UNICEF 2004, p.4)

Improved drinking water sources

Household connection
Public standpipe
Borehole
Protected dug well
Protected spring
Rainwater collection

Unimproved drinking water sources

Unprotected well
Unprotected spring
Rivers or ponds
Vendor-provided water
Bottled water*
Tanker truck water

Improved sanitation facilities

Connection to a public sewer
Connection to a septic system
Pour-flush latrine
Simple pit latrine**
Ventilated improved pit latrine

Unimproved sanitation facilities

Public or shared latrine
Open pit latrine
Bucket latrine

*Bottled water is not considered improved due to limitations in the potential quantity, not quality, of the water.

** Only a portion of poorly defined categories of latrines are included in sanitation coverage estimates

Appendix 2: Bacteriological test of Siran Sialkot drinking water

DUPLICATE



National Institute of Health, Islamabad Nutrition Division

Tel: (92-051) 9255110-14 Ext: 3140

Bacteriological Examination of Water

Client Name:	Amir Haider Malik	Date: 12-08-2006
Address:	Comsats Institute of Information Technology Abbottabad.	
Sample Source/ Location:	Abbottabad.	
Lab. Code:	WR-234/121-F/2006-WM	

Physical Parameters

Physical Appearance:	Particles Present
Type of Sample:	River Water
Packing:	Sterilized Glass bottle <input checked="" type="checkbox"/> Un Sterilized Bottle <input type="checkbox"/>

Laboratory Findings

Analytical Parameters	Results	Ref. Value
Total Viable Count/ ml	3×10^3	$< 10^2$ /ml
Most Probable Number of <i>Coliform</i> Organisms /100ml	240 ⁺	Nil /100ml
Most Probable Number of <i>Faecal Coliform</i> Organisms /100ml	Positive	Nil /100 ml

Results:	Satisfactory <input type="checkbox"/>	Unsatisfactory <input checked="" type="checkbox"/>
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Remarks:	
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Signature of Officer In charge	Signature of Chief: R. Aysha
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Note: Authenticity of sample rests with the applicant.