THE SOCIAL IMPACTS OF A LARGE DEVELOPMENT PROJECT:

LESOTHO HIGHLANDS WATER PROJECT

(LHDA, 2004)

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ABREVIATIONS

Anon. = Anonymous

BBC = British Broadcasting Corporation

BDF = Botswana Defence Force

CEO = Chief Executive Officer

CIA = Central Intelligence Agency

DBSA = Development Bank of Southern Africa

DMA = Disaster Management Administration

DSM = Demand-side management

EAP = Environmental Action Plan

EIA = Environmental impact analysis

GDP = Gross Domestic Product

HEP = Hydroelectric power

IFR = Instream flow requirement

IRN = International Rivers Network

L = Litre(s)

LEC = Lesotho Electricity Corporation

LENA = Lesotho News Agency

LFCD = Lesotho Fund for Community Development

LHDA = Lesotho Highlands Development Authority

LHWC = Lesotho Highlands Water Commission

LHWP = Lesotho Highlands Water Project

LHWRF = Lesotho Highlands Development Revenue Fund

LTB = Lesotho Tourist Board

n.d. = No Date

NEPAD = New Partnership for Africa's Development

NGO(s) = Non-Governmental Organisation(s)

NPR = National Public Radio

PV = Photovoltaic

RDP = Rural Development Plan

RDS = Resettlement and Development Study

ABREVIATIONS (cont.)

RFI = Radio France International

SABC = South African Broadcasting Corporation

SADC = Southern African Development Community

SAICE = South African Institute of Civil Engineers

SANDF = South African National Defence Force

SAPA = South African Press Association

SOLD = Survivors of Lesotho Dams

STI(S) = Sexually Transmitted Infection(s)

TCTA = Trans-Caledon Tunnel Authority

TRC = Transformation Resource Centre

TRDC = Training and Rural Development Consultants

UN FAO = United Nations Food and Agricultural Organisation

VIP = Ventilated improved pit

WASA = Water and Sewerage Authority

WCD = World Commission on Dams

WFP = World Food Aid Programme

WRN = World Radio Network

ABSTRACT

Projects are regarded as vehicles for development; developments are meant to enhance the quality of human life. Various types of development projects are carried out depending on the prevailing problems or opportunities, needs, objectives, target communities or areas, and the availability of resources and funds. Projects should have relevant activities particularly in the developing world in order that they can positively contribute towards developing mankind. Further, it is possible that some large water development projects like the Lesotho Highlands Water Project could easily be ill-considered developments resulting in extremely high costs and tremendous damage to the environment and human beings. Therefore, projects should ensure that the environmental impacts are properly mitigated, and that the distribution of benefits is fair while assuring that the underprivileged benefit well.

A successful water development project must deliver to those immediately affected and to those it is meant to develop. The 1986 Water Treaty between the governments of Lesotho and South Africa guarantees better livelihoods for affected communities. Fixed royalties from the water sale, the variable royalties from taxes on some project activities and earnings from other activities such as increased tourism are expected to generate revenue income to raise the country's economy. Simultaneously, hydroelectric power is to make the country self-sufficient in energy. However, LHWP has spawned differing opinions on whether or not it has been a successful project this far. This is because its social impacts are mixed with benefits and detriments affecting many people and societies within Lesotho particularly in the project affected areas.

The study has been conducted by holding discussions with sampled communities in dam-affected areas as well as in unaffected areas for broader national perspective. This has also afforded the opportunity to determine what Basotho locals think of LHWP. The mayhem of assets compensation, resettlement of displaced communities and the rural development programs in which LHWP finds itself in are the major determinants. Of prime importance is the compliance with the water Treaty signed by the Lesotho and the South African governments to better the well-being of affected

communities. Comparative case studies show similarities of these socio-environmental impacts.

The study focuses specifically on the rural dam development of Ha Katse and Ha Mohale in a developing country where poverty, lack of services and underdevelopment are dominant. It establishes how the negative and positive impacts affect people of the areas under study after nearly twenty years of the project's existence. Further, it aims to ascertain if social benefits engendered by LHWP *vis a vis* the cost of asset and resource losses borne by the Basotho justify the project, and whether the envisaged objectives have been met.

Therefore, the study endeavours to determine the social impacts of LHWP as experienced and told by those affected by the dams and those that it is meant to develop. It also takes cognisance of the views of the water project authority, the Lesotho Highlands Development Authority, in this respect. Furthermore, through some recommendations, it sets out to encourage ever more that the project should be successful in that the benefits of the dams should encapsulate balanced economic, environmental and social sustainability.

KEY WORDS

Affected areas, affected communities, assets loss, assets compensation, cultural loss, development projects, displaced community, environmental auditing, environmental impact, Integrated Environmental Management, legal entities, Lesotho Highlands Water Project, public participation, resettlement, royalty revenue, rural development, social impact, sustainability, variable royalties, water sale, water treaty, water war.

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CHAPTER 1

INTRODUCTION AND AIM OF STUDY

(LHDA-TCTA, 2001a)

1.1 INTRODUCTION

Projects are vehicles for development to improve human quality of life. Human development can be attained through various types of development projects big or small depending on the prevailing problems and opportunities, the needs and objectives to be met, the target communities, and the availability of resources and of funds. Thus, dam developments have been found essential for human development and as a consequence, man has been building dams for many centuries to harness the running river water for his development.

Today's advances in technology have permitted the construction of larger, more complex and impressive dams – the so-called marvels of engineering that emulate man's conquest of nature. These man made constructs are powerful and certainly more significant than their makers, the human beings:

> *"Massive constructs built on a really grand scale; they are symbols of progress, of the conquest of nature, and [of] the power of human ingenuity"* (Stott, Sack & Greeff, 2000).

Some examples include the Aswan High Dam in Egypt, Volta Dam in Ghana, Itaipu Dam in Paraguay and Brazil, and Sanxia Dam in China (Goldsmith & Hildyard, 1984), Manantali and Diama Dams in Senegal, Garafi Dam in Guinea, Kariba Dam in Zimbabwe (South African Institute of Civil Engineers (SAICE), 2004) and several others. The World Commission on Dams (WCD) (2001) reports that today there are more than 45,000 dams built on nearly half of the world's rivers.

In the early times, dams might have been built for water storage where rainfall was low and unpredictable, but with time their role in human development has evolved significantly. Today's large dams, ***the water development projects,*** are built to achieve transformation in human society by invariably developing man through irrigation, hydropower, fisheries, flood controls, domestic and industrial water usages (WCD, 2001), and increased level of economic activity.

Ronnie Kasrils, Minister of Water Affairs and Forestry, in his 2000 keynote address to **The Southern African Hearings for Communities Affected by Large Dams** in

Cape Town eloquently added on the transformation effect of large dams' construction on human society:

> *"It was out of this culture that we get our giant looping waterways slicing through arable land and changing forever the character of towns and villages and the countryside. It was this tradition that gave us massive concrete buildings, dwarfing us mere mortals in the streets below and offering spaces that often proved hostile to the human beings that inhabited them"* (Stott *et al*, 2000).

However, the Minister assiduously warned that this *'tradition'* if it is an ill-considered development, could result in extremely high costs culminating in tremendous damage to the environment and to the human beings:

> *"Dams have resulted in loss of land, forests and resources. Fresh water fish have become endangered species, and extinct. The impact downstream has been devastating, and it has been estimated that 60 million people world-wide have been flooded off their lands and out of their homes by the construction of dams. … The development is needed and we need it to conquer poverty, we need it to improve people's lives, but it needs to be properly thought through. [For a] development that has not considered the full consequences … [that] are often extremely far-reaching … we [often] find irreversible [devastating] situations"* (Stott *et al*, 2000).

The dam development is successful on the human scale if it delivers benefits to those immediately affected and those it is meant to develop. If it causes problems and/or has unpalatable implications and consequences, then it is judged to have been a poor or wrong decision. The benefits of a dam built today should encapsulate balanced economic, environmental and social sustainability (Stott *et al*, 2000).

Many literary writers have varying opinions on large dam developments. However, most agree that large dam developments substantially affect local communities with benefits and detriments whereas a few either extol or deprecate them. On Lesotho Highlands Development Project (LHWP), the International Rivers Network, IRN, (n.d.) said that when completed, Phase 1 of the World Bank-supported project would dispossess more than 30,000 rural farmers of assets (homes, fields, and grazing lands) and deprive many of their livelihoods. Goldsmith & Hildyard (1984) have pointed out that although official literature from the proponents of large dam development projects impressed on benefits good for mankind and on better environmental conditions, large dams altered and diverted river flows consequently

affecting people's existing rights and access to water. The resulting social effects usually have mixed impacts affecting many people and societies, the magnitude of which is best known and told by those affected by the dams (WCD, 2001). Cernea (1988) further said that adequate policy and purposive implementation were required to manage and reverse the negative effects on individuals and the economy. This study attempts to view LHWP comparatively in this respect.

1.2 THE RESEARCH PROBLEM

Lesotho has entered the *tradition* of dam development through the Lesotho Highlands Development Project. There were conflicting reactions both within and without Lesotho about the effects of LHWP on the Basotho people with regards to its positive and negative socio-environmental impacts. Many rural Basotho have been dispossessed of their soil and water resources and other livelihood assets. On the other hand the Lesotho Highland Development Authority (LHDA) - an autonomous statutory body entrusted to execute LHWP activities regarding the implementation, operation and maintenance in Lesotho (Rakotsoane, 2001) - claimed of benefits such as infrastructural developments, assured harvest due to compensation programme, better housing due to resettlement programme, jobs, tourism, community services e.g. water, toilets, clinics, community halls, etc., which the rural inhabitants would not have seen were it not due to the project. These unabated controversies have prompted this research on LHWP social impacts on the Basotho people.

As the project was still in its incipient stages awaiting further developments to complete it, the impacts were preliminary. This research employed a qualitative approach to establish the holistic social benefits and detriments of LHWP on the Basotho nation. It was based on the information directly provided by the Basotho people themselves, and by the water project authority inside the country.

1.3 AIMS AND OBJECTIVES

The objective was to obtain qualitative data with the aim of determining the social effects or impacts that the completed water project phases at Ha Katse and Ha

Mohale have had on the quality of life of the Basotho in general as perceived by the people themselves.

Aspects covered were quality of life in the social and environmental context and they encompassed arable land, homes, rights and access, fauna and flora, river flows, infrastructure, energy, economy, and the cultural life. Benefits and opportunities created were determined with the aim of establishing an overall impact on the local villagers and the Basotho at large.

Lastly, some recommendations are suggested based on the observations and findings made during the research. The intention is to avail ways and means of effectively improving the operation and the performance of LHWP in meeting its objectives to the Basotho people.

1.4 THE STUDY AREA

1.4.1 Affected and unaffected areas

Affected areas are the locales in which most activities of the dams occurred, directly affecting properties, resources and assets of many local communities. **Unaffected areas** are the country's regions that are not affected by the direct activities of the dams. The affected and unaffected areas are considered together in order to contrast the social impacts of the water development nationally - the latter as the control.

1.4.2 The affected areas

These areas comprise of the vicinities of Katse Dam and Mohale Dam - the major dams of Phase 1 of the highlands water project. They are situated in the Lesotho Maloti Mountains as shown on the map in Fig.1.1 next page.

1.4.3 The unaffected areas

The **unaffected urban** area considered is the village of Lithabaneng on the outskirt south of Maseru. It is populated mostly by people engaged in various civil, private and industrial occupations in Maseru. Their lifestyle is primarily urban.

The **unaffected rural** area considered is Mantsonyane Ha Leronti in the remote rural district of Thaba-Tseka, the poorest of all the ten districts of the country (Archer, 1996). In this area, the local people depend on subsistence traditional farming and some augment it by working in the South African mines.

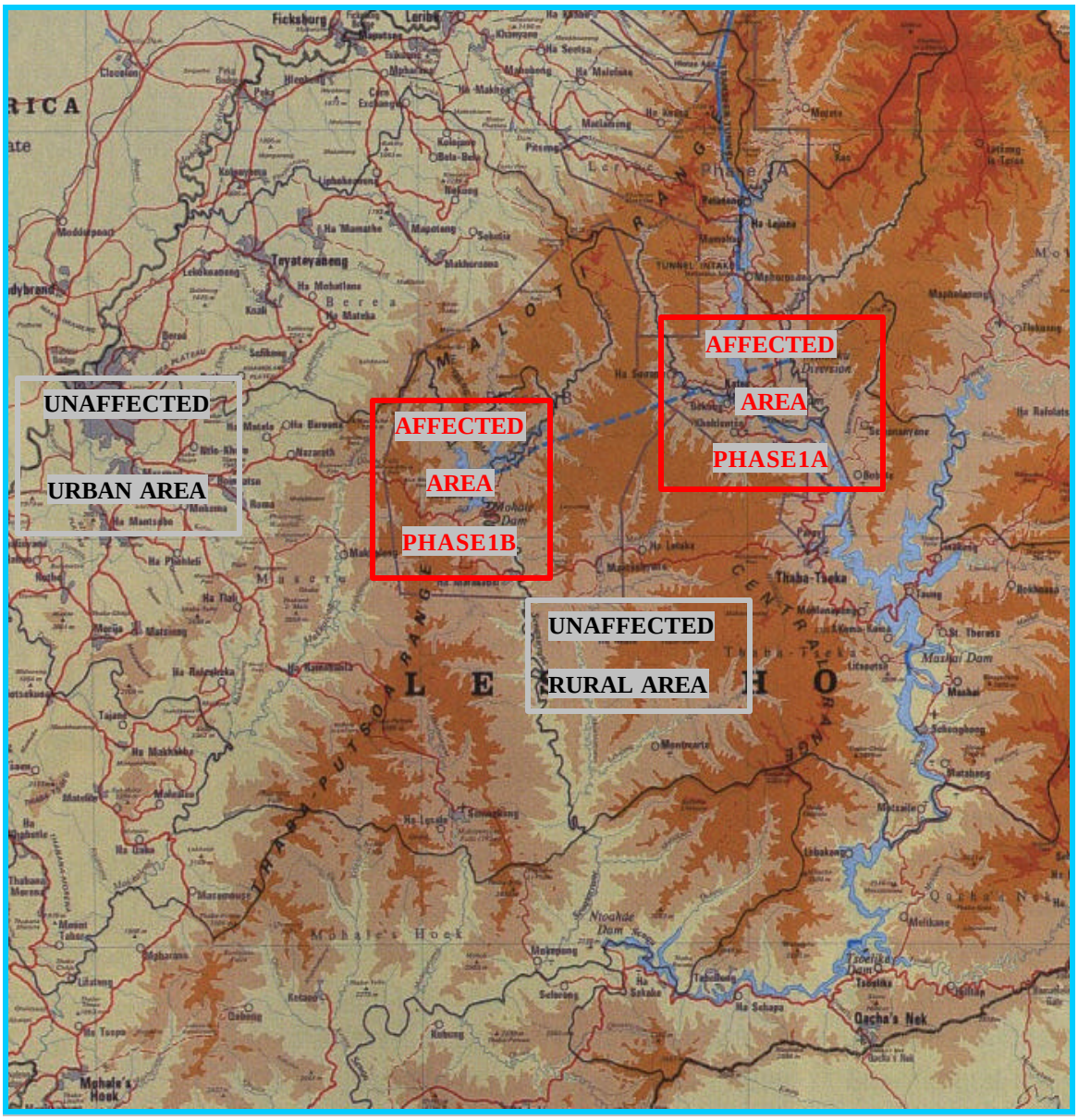


Fig. 1.1: The sampled areas for the research (LHDA, 2000a).

1.5 BACKGROUND

1.5.1 The Status of Lesotho

Lesotho's major drawbacks are political wrangling, poverty, unemployment and inequality in the distribution of income. Lesotho, a kingdom that obtained its independence from Britain in 1966, has had a turbulent and festering political system marked by political unrests, killings, political divisions and deceitful governments, culminating in the 1970 state of emergency, 1986 military coup, 1994 palace coup, 1998 political riots and the subsequent invasion by South Africa that escalated the civil riots and destruction of property. Subsequently, it was faced with deteriorating election polls such as the low voter turn-ups at the 2004 by-elections in Motete (33%), Qhoali (32%), Thaba Putsoa (27%), Motimposo (13%) and Mohobollo (24%) (Independent Electoral Commission Report, 2004; Anon, 2004a).

According to the CIA (2003) record, the unemployment rate is 45% and 49% of the population are living below poverty line. Furthermore, the extreme inequality in the distribution of household income is shown in that the lowest 10% of the population only share 0.9% of the country's total income while the highest 10% share 43.4%.

With an area of 30 345 Km^2 (*UsAfrica*, 2003) it is a small and mountainous country land-locked by South Africa. It has limited mineral resources and it is known as one of the poorest countries in the world. Because only about 10% of its total land is arable it has scarce cultivable land available as farmland (Pottinger, 1996).

Most of its fertile lands are in the lowland foothills and highlands' valleys. The livelihoods of the mountain villagers depend on agriculture and livestock. Cultivation is seriously affected by soil erosion, the problem for many Southern African Development Community (SADC) countries caused by both human activity and bad weather conditions (Longman, 2001a).

In 2002, Lesotho had a population of 2.1 million people and growth rate of 2.7% but declining due to HIV/AIDS (*UsAfrica*, 2003). It is blessed with abundance of water, the *"white gold"* (Mochebelele, 2000). Its human and business water consumption is less

than 1 cubic metre each second but with LHWP Phase 1 the country already exports 18 times this consumption to South Africa (Longman, 2001b) making LHWP to be one of the highest sources of Lesotho's income.

1.5.2 The 1986 Water Treaty

1.5.2.1 How it came about

The generally low rainfalls in most parts of South Africa coupled with increasing populations, growing industries and the rising demand for irrigation all demanded more water. In fact, studies have shown that *'South Africa consumed 80% of Southern Africa's water yet has just 10% of its water sources'* and that *'without new sources of water, South Africa's fresh water resources would be fully used up by between 2025 and 2030'* (Dixon, 1998).

For years South Africa had a high need to meet its water demands but that need was costly. The answer lied with Lesotho which had more fresh water and also an access to international funds which the then apartheid South Africa could not access due to international sanctions (Thai, 2004). According to Rothert (1999):

> *Economic sanctions against apartheid South Africa forced project proponents to devise alternative arrangements to finance the project. The World Bank, which brokered the arrangement, provided legitimacy and critical start-up funding for the scheme. By naming Lesotho as the Bank's borrower, European banks, government export-credit agencies and engineering firms could take part without appearing to violate international sanctions against the apartheid regime. The Bank's loans were channelled through Lesotho but were awarded at interest rates reflecting South Africa's economic status, not that of its poor neighbour.*

The concept of Lesotho's highlands water to flow into South Africa could be traced to the 1930s when South Africa was captivated by capturing the Lesotho high summer rainfalls by dams and transferring the water to parts of RSA. Since then the interest candled and never died and it was later re-initiated in the 1950s by the British High Commissioner to Lesotho Sir Evelyn Baring (LHDA-TCTA, 2001b; South African Institution of Civil Engineers (SAICE), 2002a).

This was followed by a series of preliminary studies of 1967-68, 1971, 1974 and 1978 and feasibility studies of 1983-85 (SAICE, 2002b). Although the ANC was opposed to

the water project in the 1980s, the World Bank paid no attention (Letsie and Bond, 2000) and that led to the *hurried* 1986 Water Treaty between the two countries. The resulting water project compelled Lesotho to pump massive amounts of water to South Africa even in times of drought in order to meet the latter's domestic, agricultural and industrial needs (Dixon, 1998).

LHWP was then started at the behest of South Africa's white minority regime to provide water to apartheid-era industries while avoiding international sanctions; a promise was included in the Treaty deal that Lesotho mountain people affected by the dams would not be left worse off than before the dams began (Smith, 2002). It was not until the Maseru NGO conference on LHWP in August 1966 that the tip-toeing in the back street by the World Bank and the sanctioned minority government of South Africa was disclosed publicly. Michael Potts of the Development Bank of Southern Africa (DBSA), co-sponsor of LHWP, then conceded to the process flaw:

> *"Given the limited access to foreign funds by the South African government and the limitations on contractors' funding proposals – export credit was not available to South Africa – a very complex treaty was negotiated to by-pass anti-apartheid financial sanctions"* (Letsie and Bond, 2000).

As water is a precious commodity in regions experiencing aridity, only desperate circumstances would cause one nation to sell its water to another. *Moeletsi oa Basotho* newspaper editorial read [translation]:

> *"Hunger can make one person a slave of another. In 1986, we witnessed when the South African Apartheid government closed its borders with Lesotho. The Lesotho military then announced it had toppled the civilian government, and we saw the borders reopen immediately. Goods train rolled in and the Basotho were jubilant. We were not surprised then that before the end of that year the Military Government signed the water agreement with the apartheid South Africa. The subsequent BCP government just swallowed the agreement bait whole"* (Anon., 2004b).

In reality, it was the desperate economic circumstances that forced Lesotho to sell its water by entering into a treaty with its only neighbour, South Africa (Pottinger, 1996). Rainer Chr. Hennig (2003) from *Afrol News* observed:

> *"Lesotho used to be an oasis of freedom in the middle of apartheid South Africa; now it's an oasis of poverty. The small kingdom however has one resource promising increased welfare for all: trickling mountain brooklets"*.

1.5.2.2 Signing of the Water Treaty

The Lesotho civilian government had resisted signing the Lesotho Highlands Water Treaty with the then South African Government for more than a decade. Rothert (1999) has stated that the South African government provided decisive support to the Lesotho military in its successful coup attempt in February 1986 to topple the civilian government with a pretext that it had harboured and supported anti-apartheid fighters. Shortly thereafter, on 24 October 1986 Lesotho and South Africa had negotiated and *hurriedly* signed a treaty that set in motion the LHWP (Fig.1.2). The negotiations on such a significant treaty and a complex project could not have been finalised in such a short period of time by the two governments - one brand new - without a level of discussion and agreement prior to the coup. Rothert (1999) concluded that it could be argued that one ulterior motive for supporting the coup was to secure access to Lesotho's water. Norman Dixon (1998) of *Green Left Weekly* commented:

> *"The LHWP was dreamed up by the apartheid regime, and accepted in 1986 by Lesotho's military regime recently installed by Pretoria."*

Fig. 1.2: 1986 Treaty Signing by Foreign Ministers of Lesotho, Col. Thaabe Letsie (left) and South Africa, Mr. Pik Botha (right) in Maseru, Lesotho (SAICE, 2002c)

However, the Treaty gave birth to one of the world's most impressive and ambitious multi-purpose water projects – Lesotho Highlands Water Project (LHWP). It became a contractual agreement governing the design, construction, operation and maintenance of the Project, as well as the export of water to South Africa (SAICE, 2002c).

For Lesotho, the Treaty purported to positively better the standard of living of the Basotho affected by the project (Hoover, 2001). This would go a long way to address the poverty status which for so long had identified Lesotho internationally as one of the world's poorest countries.

In economic and most other developments, Lesotho is an underdog to South Africa. Typically, if you offer to share your seat with a person with a big bottom, you are bound to lose that seat completely! Therefore, the Treaty documentation was unique and no easy task, for it had to take into consideration the two countries' largely *unequal bottoms* of economic development. It had to see to it that the specific concerns and interests of both countries were all accommodated (SAICE, 2002c; Water Affairs and Forestry Portfolio Committee, 2001).

The Treaty further included the volume of water to be delivered to South Africa, basis for sharing the benefits, calculation of the royalties to be paid to Lesotho, and the responsibilities of each county towards payment for the Project. Specific lengthy details are laid down in the Treaty document but in the latter case, Lesotho would finance the hydroelectric power component of the Project while South Africa footed the payment of the transfer of the water, including the implementation, operation and maintenance costs of all facilities involved, as well as compensation for the displacement of individuals and communities (SAICE, 2002c).

1.5.3 The Lesotho Highlands Water Project

This project is under the joint governance of Lesotho and South Africa through the Lesotho Highlands Water Commission (LHWC) which primarily consists of Lesotho Highlands Development Authority (LHDA) in Lesotho and Trans-Caledon Tunnel Authority (TCTA) in South Africa (Fig. 1.3).

Fig. 1.3: The Joint Authority of LHWP (LHDA-SAICE, 2003a)

With the interests of both countries at play, LHWC is responsible for monitoring the implementation of the project, providing approval on behalf of the two countries and reflecting the views of the governments of South Africa and Lesotho. LHDA is responsible for implementing, operating and maintaining the project on the Lesotho soil while TCTA implements the project on South African soil (Water Affairs and Forestry Portfolio Committee, 2001).

At the time of this study, while other phases were still on hold, only Phase 1 had been completed and officially opened by the Heads of State of the two countries (Figs. 1.8-1.10). The Phase 2 feasibility study of Mashai Dam had just belatedly been agreed upon (LHDA, 2004) (see 1.5.5). LHWC Chief Delegate, Mr. S. Tohlang, mentioned that the 20 years old feasibility study ought to be redone as it needed reviewing and the proposed developments after Phase 1 had to be reconsidered. Also it was to re-examine the hydroelectricity potential limited initially as international donors could not fund projects selling electricity to the then apartheid South Africa (Thai, 2004).

For South Africa, the water project has been a cheaper method to transfer water to augment its needs than the original South African-based Orange-Vaal Transfer

Scheme which would cost at least R2,3 billion more. For Lesotho, this was an opportunity for a development project that would bolster its ever fledgling economy (Water Affairs and Forestry Portfolio Committee, 2001). The water project was planned to be implemented in four phases comprising of five major dams in the Senqu River drainage system (Fig. 1.4).

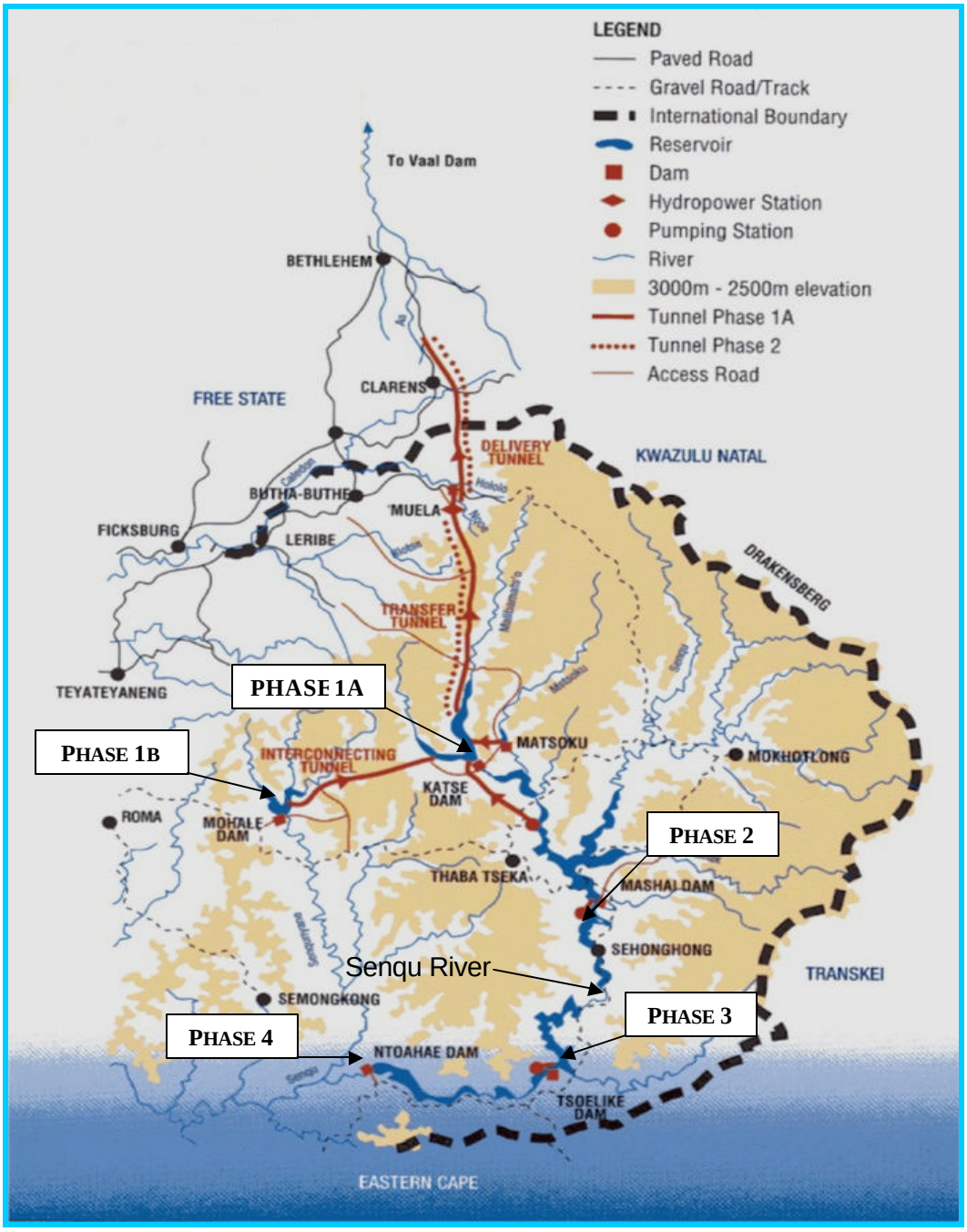


Fig. 1.4: Lesotho Highlands Water Project complete with proposed four phases and the illustration of water flow (SAICE, 2002b).

Phase 1 was designed to deliver about 540 million m^3 of water per year to South Africa and consists of two phases. Phase 1B, Mohale Dam on Senqunyane River and Matsoku Weir are tunnelled to convey water to Phase 1A Katse Dam on Malibamatso River (De Villiers et al, 2002). Katse Dam Wall (Fig. 1.5) began construction in 1991 (other works began in 1986) and was completed in 1997. The total cost of Katse Dam was R9, 5 billion (LHDA, 2002a).

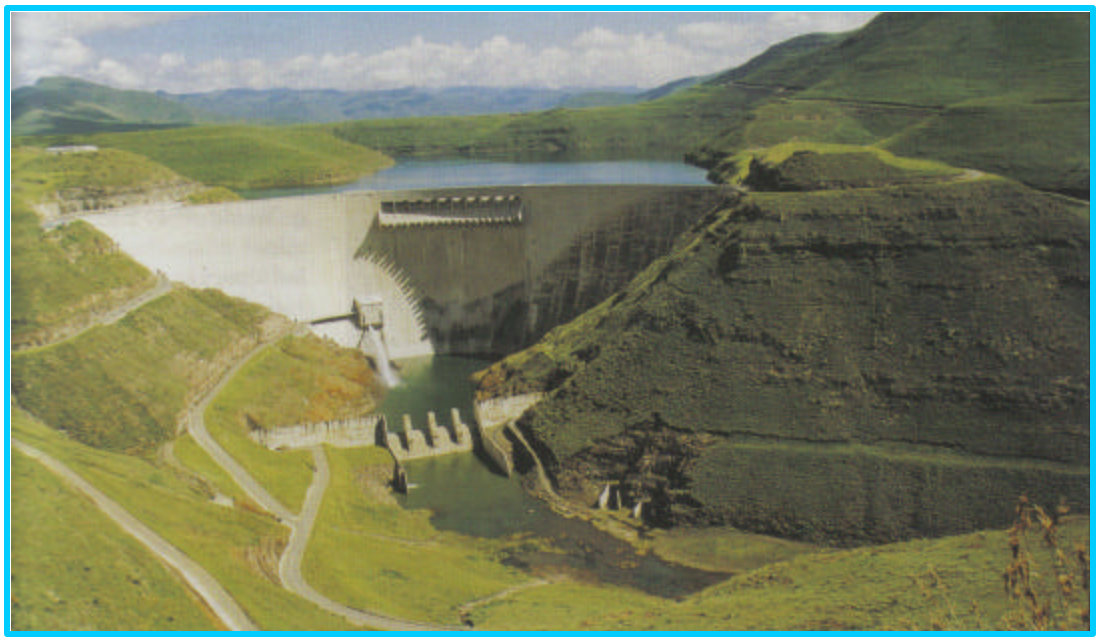


Fig. 1.5: Phase 1A Katse Dam Wall. The highest dam wall in Africa (LHDA, 2000b).

Standing at 2 000m above sea level, Katse Dam is described as *'a striking piece of modern engineering'* made of 92 000m^3 of concrete. At 185m high (the highest concrete wall in Africa) and 700m long it retains 1950 x 10^6 m^3 of reservoir water seconding Ghana's Lake Volta Akosombo Dam. This *'supreme dam'* is central to the Lesotho Highlands Water Project: all other dams connect to it in series and in turn it transfers water in a tunnel to the Vaal River in South Africa by gravity via the Phase 1A `Muela Tailpond Dam (Fig. 1.6) (Lesotho Tourist Board (LTB), 2004; SAICE, 2002d; SAICE, 2004). The 45 km tunnel has a maximum transfer rate of 36 $m^3$ per second. `Muela Dam with 55m high wall and 6 x 10^6 m^3 capacity has 3x24MW turbines for generating Lesotho's electricity (SAICE, 2002d). When commissioned in 1998 this phase was delivering water to South Africa at an average rate of 17m^3.

Fig. 1.6: Phase 1A `Muela Hydro-power Dam (72MW) (LHDA, 2005)

Mohale Dam (Fig. 1.7), south-west of Katse Dam, was started in 1998 and completed in 2003. It has a water capacity of 958 x 10^6 m^3 held by the 145m high rockfill wall (the

Fig. 1.7: Rising Mohale Dam, Phase 1B (TRC, 2004a)

highest rockfill wall in Africa) made of 7.8 x 10^6 m^3 of compacted rock prior to the addition of a concrete face. The dam's flexible outlet structure guarantees high quality water for downstream releases to ensure sustainability of aquatic life. It is linked to Katse Dam by a 32 km tunnel. Its completion has doubled the water supply to South Africa. The total cost of the dam was R6.5 billion (LTB, 2004; LHDA, 2002a; SAICE, 2004).

Phase 2, the giant Mashai Dam (3 306 x 10^6 m^3) on Senqu River in Mashai (Fig.1.4) with a transfer tunnel and a pumping station would connect and transfer water to Katse Dam (SAICE, 2002d). Also, a second transfer tunnel would be made from Katse Dam into the Vaal River to increase the transfer rate. This phase was scheduled to start in 2004 (LHDA, 1990). After some uncertainties from the South African government, plans were finally afoot in 2004 to embark on the two-year Phase 2 feasibility studies: Feasibility Studies to Augment Phase 1 of LHWP (Lesotho Highlands Water Commission, 2004).

Phase 3, Tsoelike Dam (2 223 x 10^6 m^3) on the confluence of Tsoelike and Senqu Rivers, 90k downstream of Mashai Dam, would have a tunnel and pumping station to transfer water to Mashai Dam (SAICE, 2002a). Operations were scheduled for 2017. Phase 4 Ntoahae Dam 40km downstream of Tsoelike Dam on the lower reaches of the Senqu River was the fifth biggest dam. It would transfer water to Tsoelike Dam by pumping and tunnelling. It was scheduled to start in 2020 (LHDA, 1990).

The design delivery capacity of the fully completed US$5 billion project (Transformation Resource Centre et al, 2001) would be 2.2 billion m^3 of water per year for a normal supply to six provinces in South Africa (Fig. 1.8) for irrigation, municipal and industrial purposes (LHDA, 2001).

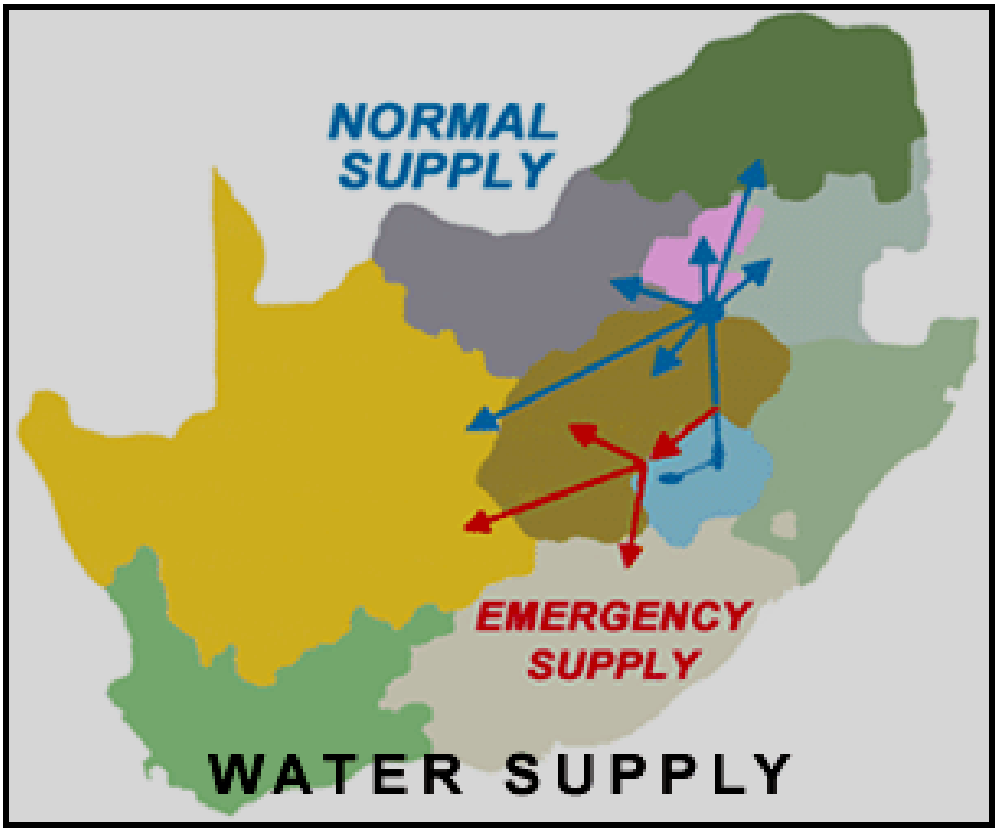


Fig. 1.8: LHWP water supply into South Africa (LHDA, 2001)

This would deliver about 70m^3 per second of high quality water into the Vaal River system sold to South Africa principally to its industrial and financial hub, Gauteng Province (LTB, 2004). Lesotho would earn royalties averaging more than US$40 million per year for at least 50 years as revenue to be used for poverty reduction and macroeconomic stability. Simultaneously, hydroelectric power would be generated to make Lesotho self-sufficient in electric power (Hoover, 2001; World Bank, 2002). For South Africa, this would provide the much needed water to the heartland industries in Gauteng Province that drive the economy of the country. The project has been funded by the governments of Lesotho and South Africa and loans from international donors e.g. World Bank, DBSA, etc. (Buyers, 2002; Jayaseela, 2002).

1.5.4 The project falters

With five separate major dams, LHWP has been *'one of the most ambitious multi-purpose water schemes in the world'* (LTB, 2004). A first-time project of that

magnitude was prone to mistakes and miscalculations. No wonder that it seemed that the dam phases after Phase 1 might not be pursued or at least not at their scheduled times. In the mid-1990s, scepticism over the future of the remaining phases then loomed and prevailed. C. Pottinger (1996) of the International Rivers Network wrote:

> *"Now the deal that Lesotho brokered to dam its rivers and sell the water to South Africa for some US$55 million per year is misfiring. As it is often the case with hurriedly planned water projects in meteorologically unpredictable arid regions, the hydrological estimates were wrong: there isn't enough water to fill all the planned dams, and as a result there is a lot less money for Lesotho. The Lesotho Highlands Water Project, originally scheduled to be a series of dams to divert the tiny nation's rivers to fuel industrial growth in South Africa's Gauteng Province, now appear to have been, quite literally, a pipe dream of over-eager engineers"* .

In other words, it was clear that subsequent research showed that the 1971 estimates to ensure the viability of the project were far off the mark. The South African Water Affairs Department contemplated to pull the plug on a large portion of the scheme and halt its involvement after the completion of Phase 1, already in the advanced stages. That was tantamount to scrapping off the remaining phases (Pottinger, 1996).

Furthermore, in his 2000 address to the Southern African Hearings for Communities Affected by Large Dams in Cape Town, the Minister of Water Affairs and Forestry, Rony Kasrils, cast doubts on LHWP's benefits to the people it displaced and the cost involved. He said that before proceeding *'another inch'* with Phase 2 of the Highlands Project, he wanted all the role-players from his department to argue the pros and cons before him:

> *"We need to know who will benefit, who will be disadvantaged, what the project will cost and who will pay. … I will view dam-building projects in terms of my tenure, but I am guaranteeing to you that I'm not going to automatically ascribe to the mechanical and the construction marvels of the engineers. I will look at the other options…," he emphasized* (Stott et al, 2000).

On these accounts, the further development of LHWP's Phases 2 to 4 were held in abeyance as ill-considered developments that did not consider the full consequences that might often be far-reaching and irreversible (Stott et al, 2000).

1.5.5 Anticipation and caution become bedfellows

A cliché of the optimistic often says that where there is despair there is hope. Amidst the ebb in the fortunes of the LHWP, and while the Basotho, the major beneficiaries of the project, scratched their heads day and night to find substantive reason for the take off of Phase 2 (Thai, 2004) the green light glittered. An important announcement was made public during the Inaugural Ceremony of Phase 1 of LHWP on 16 March, 2004 (Fig. 1.9) held at Mohale Dam by both Lesotho and South Africa.

Fig. 1.9: Inauguration of Phase 1 in Ha Mohale Dam, 16 March, 2004. King Letsie III of Lesotho (middle), President Thabo Mbeki of South Africa (right) and LHWC Chief Delegate Mr. Sixtus Tohlang (left) (SAICE, 2004).

On this occasion, King Letsie III of Lesotho (Fig. 1.10) spoke with great anticipation:

> *"Ntate Pakalitha [Prime Minister] has informed me that we can expect good news from the recent Ministerial meeting held in Pretoria on 23rd February, 2004. The two Countries have at last agreed the commencement of feasibility studies for second phase of the [Water] Project. This will be the construction of Mashai dam on the Senqu River" (SAICE, 2004).*

Fig. 1.10: King Letsie III during the Inauguration Ceremony of Phase 1 of LHWP, 16 March, 2004: anticipating the start of Phase 2 (SAICE, 2004)

However, the South African President (Fig. 1.11) treaded with caution as he spoke:

> *"For South Africa, a further phase would have to address, in the most appropriate way, the needs of the growing water demand in the Vaal River System …*
>
> *In this regard, we would need to define the most cost-effective ways of meeting the ever-increasing need for this valuable resource and ensure the correct timing for further augmentation of water supplies … Accordingly, there is no doubt that together we have to take into consideration a number of factors before proceeding with new phases.*
>
> *Acting within the context of our co-operation, our Ministers recently agreed to commence with feasibility studies to explore the possibilities for further phases of the Lesotho Highlands Water Project. These studies need to address all factors in order to compare the various options to augment the Vaal River System and meet Lesotho's own requirements. We await the results of these consultations"* (SAICE, 2004).

Fig. 1.11: President Thabo Mbeki eyeing Phase 2 with caution during Phase I Inauguration Ceremony speech, 16 March, 2004 (SAICE, 2004).

The President's address was in agreement with Kasrils' Cape Town speech in 2000 and concomitant with LHWC Chief Delegate's recent explanation to *Public Eye* newspaper about the agreement between RSA Minister of the Department of Water Affairs and Forestry and Lesotho Minister of Natural Resources on 23 February, 2004. The agreement was that feasibility studies would go ahead to determine whether Phase 2 would be the best scheme for augmenting Gauteng's increasing water supply requirements. The agreement was endorsed by the Right Honourable Prime Minister of Lesotho and His Excellency the President of South Africa in a meeting in Lesotho at the Phase 1 Inauguration Ceremony on 16 March, 2004 (Thai, 2004).

1.5.6 Mixed public feeling

The true fact is that large dam projects certainly affect local people and communities positively and negatively. While the Lesotho Highland Development Authority proclaimed benefits due to the project, public feelings in Lesotho on LHWP were mixed with praise and condemnation. Even for the contemplated phases, agitations from some Basotho were simmering due to unpleasant experiences from the previous phases. Some people were drumming up resistance against further LHWP

developments. On the other hand some people were over the moon with the prospects of the second phase raising their hopes for the remaining future phases. At this point and time the Basotho seemed confused over the further water developments in the Highlands of the Mountain Kingdom. The Basotho had to experience the bitterness and the sweetness of large dam developments. Only time would tell for the rest of the Basotho because the authorities were poised and determined to proceed with the rest of the phases. It did not matter how many liked or disliked the project, the fact was that it was there; most important was its impacts on the people.

1.5.7 Problems on the horizon

The principle embraced by project authorities and the World Bank was that those people affected by LHWP should be retrained at a centre run by project authorities to equip them to find new sources of income. But the difficulties were that the training program had been poorly managed, started five years late, and it did not provide guarantees since retraining did not ensure employment. The opportunity for finding decent jobs or entrepreneurial niches for all affected persons was hampered by Lesotho's high unemployment and very low standard of living (Pottinger, 1996).

A further complication was that exactly what to train people to do was a source of confusion. This was illustrated by the difficulty that the Training and Rural Development Consultants (TRDC), responsible for retraining, encountered in trying to find new sources of income for the first 25 households relocated by Katse Dam. Fifteen of them were too poor to be able to run a sustainable income-generating activity from within their homesteads:

> *"Even households showing high income-generating potential will be hard-pressed to develop sustainable income-generating niches,"* TRDC reported.

It appeared unlikely to restore all of the livelihoods that had been lost and according to the World Bank's supervision mission, this spelt that problems were looming on the horizon for local people relying on the training centre's offerings. Thus, it would be difficult to wean people off the short-term cash, grain and fodder compensation already set up (Pottinger, 1996).

Hoover (2001) said that over 20,600 rural farmers had been dispossessed of their resources of livelihoods yet the 1986 Water Treaty had promised an uplifting of the standard of living of the affected people. This was the antithesis of LHWP at play on the Basotho.

1.6 Why Social Impacts Matter

Developments of large magnitudes such as the Lesotho Highlands Water Project affect individual people and communities particularly those living in the development areas. The effects or impacts could either be positive, negative or a combination of both coming in various significant ways. Experience has shown that lack of clear objectives, consistent procedures and adequate resources by the developers and governments pursuant to addressing the consequences of developments result in various adverse effects on the directly and indirectly affected people, and on the environment as well (Shale and Modo, 2002).

LHWP has a significant economic gain for the country in terms of money made from the sale of water. However, it is imperative that the social engineering processes should not leave the indigenes of the dam site impoverished, or deprived of their rights, livelihood or resources. Compensations due should be developmental rather than being short-lived handouts, i.e.: *'the standard of living of the indigenes prior to the project's inception must not be lowered and should normally improve'* and must be sustainable; so should *'the regional economy of which they are part of'* (Shale and Modo, 2002). This is the loudest call to and the foremost social responsibility of large developments like the Lesotho Highlands Water Project. A grand project failing to meet this is but valueless and wasteful.

The basic idea is that people must neither feel threatened by the environment nor by the developments occurring thereto; rather, the developments should serve at least those communities in which they have emerged. One of the tasks in this study is to establish the social impacts that can translate into this statement.

CHAPTER 2

METHODOLOGY

(Thaba Promotions, 2003a)

2.1 HOUSEHOLD CHARACTERISTICS

The methodology of the study has been on the affected rural and the unaffected urban and rural communities. The rural and urban locales surveyed are of contrasting household characteristics.

2.1.1 Rural community households

Traditional lifestyle is still steadfast even though Western influence is apparent. People follow their traditional practices such as circumcision, witchcraft, venerating the dead ancestors, *letsema* (working together in labour intensive activity), etc.

Majority of households have residential sites and own one to two pieces of land as crop fields, fewer own three or more. These constitute private land. Ownership of private land is administered by the chief for the household to live on and to be supported by it. Such private land customarily passes to the male children through inheritance down the generations. Female children are not considered for inheritance because they get married to boys who already have inherited land. Communal land and communal resources mostly grazing land, rivers, firewood, thatching grass, wetlands, springs and wells are under the jurisdiction of the chiefs. Each household has an equal opportunity to access them as a means of livelihood.

People lead simple rural life and are largely unemployed with no regular cash income. Household cash income depends largely on selling wool, livestock, crops, vegetables and the illegal marijuana. Crop farming is based on the inadequate traditional peasant methods of production resulting in poor food sufficiency and inability for some households to sell their harvest. These household resource-based incomes vary from area to area. Research by the Food and Agricultural Organisation (FAO) of the United Nations (n.d.) has shown that about 36% of the rural community households are able to earn their income in this manner; less than 1% of households make additional income from businesses such as the village cafés; about 39% are the poor who depend on the land resource alone and live from hand to mouth; and about 1% do not have any resource-based incomes – these are the ultra-poor who rely on relatives, friends and neighbours for a once off meal. According to FAO (n.d), migrant labour

into South Africa is another major source of household income, taking up 24% of the rural community households. The study by Elköf and Molapo (n.d.) has indicated that the lowest 25% and 75% of the rural households have 1.4% and 27.7% of the area's total income respectively whereas the highest 25% enjoy 72.3%.

Services are generally poor. Households use *patsi* (firewood), *khapane* (dried cow droppings) and *lisu* (dried compacted cow dung from the kraals) for cooking, heating and lighting. Some households use paraffin or candle for lighting when they can afford them. During winter and evenings, cooking is done in the sleeping house to economise heating resources. Drinking and cooking water is drawn from open wells and the washing of clothes is performed in the rivers and rivulets out of the villages. There is little or no road networks and people travel on foot or on horseback.

On cultural norms, household work is clearly defined by gender. Women and young girls collect firewood; draw water for the household; cook and serve food to other household members and during funerals and also brew beer during cultural festivities; wash clothes and dishes; sweep, clean and decorate the houses and the surroundings; look after children, the sick and the aged; monitor household supplies to advise the men for replenishing or restocking; run activities and support movements for the well-being of their families; and hoe and harvest the fields. Men and young boys do all the work that demand physical strength in the household e.g. cut and chop trees for firewood, thatch houses, hew stones for building; look after animals if any; do fieldwork e.g. ploughing with oxen, carrying the harvest home; make sure the household has food and other needs such as clothes and money for children school fees, and medical needs, etc.; dig graves to bury the dead; keep order in the family; and help the chief in the general community management. Clearly, most of the household work is done by women and young girls.

2.1.2 Urban community households

Unlike in the rural community households where the lifestyle is more traditional, in the urban community households the lifestyle is more Western than traditional. People's day-to-day life is influenced by the city environment which they work in allowing them to intermingle with people of foreign cultures. They fumble about in search of new

selves or identities. Therefore, while some have adopted other cultures which they believe to be more modern and better rather than being different, others are the stand-in-betweens bestriding the African, Western, Muslim, Chinese and Indian cultures. This makes them indecisive people who are unable to appreciate what their country may offer them. This is more prevalent in the urban Maseru than in other urban areas.

As most urban household members are engaged in full time daily activities such as employment, schooling, etc. they do little or no labour intensive fieldwork and/or shepherding of animals. The main source of household income is employment and/or own business from which regular earnings are received. There are the rich, the middle incomes, the poor and the ultra poor who beg for food and money in the streets. Elköf and Molapo (n.d.) have found that in urban Maseru, the lowest 25% and 75% of the population receive 3.8% and 35.5% of the area's total income respectively whereas the highest 25% have 64%.

Essential services are generally good and abundant. Households have tap water for drinking, cooking and washing; electricity, gas or paraffin for lighting, cooking and heating; medical services; convenient flushing or VIP toilets; road network and vehicles for easy travelling; easy communication through telephone and cellphone links; television and radio for home entertainment; entertainment centres; various government and shopping facilities; schools and other educational centres; etc. Communal land is usually for outdoor entertainment and consists of parks, various sports and entertainment grounds under the jurisdiction of the local municipality.

Although household work still has gender connotations, it is becoming more of the shared responsibility balanced between the genders. This is because of the employment obligations, influence of foreign cultures and human rights calls, and levels of education which have introduced different concepts of human relations.

2.2 METHODOLOGY

In the ***affected areas***, the dams form a typical 'Y' shape (Fig. 2.1). Therefore, each of the three sides was sampled using hat-draw random sampling, i.e. per individual side; the names of the villages were randomly drawn out of a container.

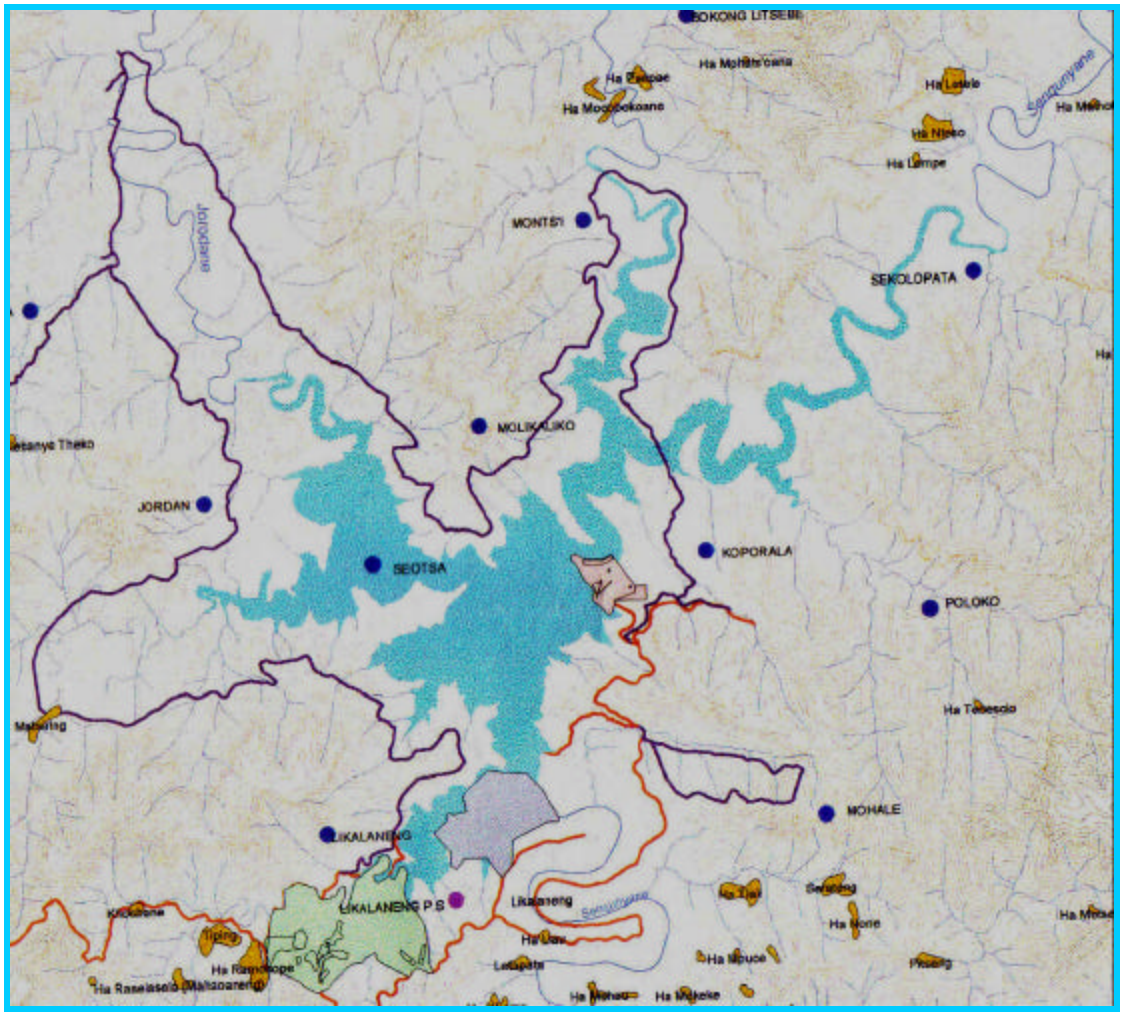


Fig. 2.1: Typical "Y" shape of dams: Ha Mohale Reservoir
(LHDA Environmental Information Unit, 2001?)

Because of dispersed villages, few households and the repetitiveness of responses and views from the villagers, 10% of villages per area and 10% of families per village were taken except in urban Lithabaneng. For the vast and denser Lithabaneng Township compared to the rural villages, systematic sampling of the households was employed. On either side along the Main South 1 Road, the township is about 3km long and about 1km wide. Due to work engagements in town and other activities such as schooling, there were fewer household heads and youth available during the daytime. Also the respondees showed no interest on the water project which they regarded as of less or no value to them; the few responses from the people were quite similar. For these reasons, at approximately 1km distance lengthwise and 500m width grid, a household was realistically represented.

The rural people in Lesotho often got preoccupied with extensive traditional land farming and livestock rearing keeping them away most of the times from their homes. This research was made in winter time when they were busy harvesting their crops before the season's first snowfall. Finding them at any given daytime was difficult. Therefore, although discussions per village were anticipated to take about a day or two, they lasted three or more days instead.

To establish a broader view on the country, the ***unaffected*** urban and rural communities were also surveyed. In both the affected and unaffected areas sampled, the names of villages and numbers of persons contacted are listed (Table 2.1).

Table 2.1: Villages surveyed

Village name	Phase	Area	Status	Households	Persons
Ha Leronti	-	Rural	Unaffected	5	10
Lithabaneng	-	Urban	Unaffected	15	42
Ha Maphutseng	1A	Katse	Affected	5	11
Ha Mohale	1B	Mohale	Affected	7	16
Mphorosane	1A	Katse	Affected	6	13
Ha Nyakane	1B	Mohale	Affected	5	9
Ha Ramokoatsi	1A	Katse	Affected	5	12
Ha Sepinare	1A	Katse	Affected	4	8
Ha Theko	1A	Katse	Affected	7	15
Ha Tšiu	1B	Mohale	Affected	6	12
Total				65	148

As Ha Katse area had a larger number of villages, five villages were sampled there whereas Ha Mohale area had three. Inclusive of the unaffected areas, a total of ten villages were surveyed from which 148 persons in sixty five households partook in the discussions.

The research was conducted through discussions of approximately 40-50 minutes per session held with household heads, families and/or individuals covering both genders.

In urban Lithabaneng where people were uninterested and conscious of time and because there were more households, the sessions were about 10-20 minutes long.

For a reliable and uniform perspective all villagers were presented with an identical discussion topic: **"Which are the benefits and/or difficulties that LHWP has brought in your area? You may also say your views or how you feel about the project and LHDA"**. Respondees were not guided or coerced to give specific answers but were let free to say what they wanted or felt on the topic. Their responses, suggestions and views were then recorded. These suggestions or views were sought to make the research contributory and meaningful to all concerned.

LHDA offices were also visited to elucidate views on the same topic and to obtain related publications. On this regard, they were not briefed on what the villagers had said; rather their own responses and views without self-defence and prejudice to the villagers were sought.

2.3 DATA COLLECTION

The main data was the villagers' responses on the discussion topic, consisting of their opinions and attitudes on their current experience of the water project together with their additional views as told by themselves. LHDA's response was also sought and data from their publications relating to the project was also used.

Supplementary data consisted of publications from the current media such as radio broadcasts, television and newspapers. Other data sources were the reports and the internet for the case studies. These case studies were used as comparative studies to Lesotho Highlands Water Project. As there is no perfect water project, there was no preferable or ideal case study. Therefore, their choice was not based on any merit but on availability.

2.4 THE RESEARCH DESIGN

The research was concerned with observing impacts of Lesotho Highlands Water Project by visiting the study areas. Q*ualitative analysis* of the impacts on the

communities was done by compiling what the communities and the project authority said rather than the statistics of how many said this or that. It consisted of their views and responses and of visual observation of physical presence or absence of the promised developments. These were then interpolated to obtain a national scenario. Responses from the people themselves in the discussions provided primary data; secondary data was from related publications of various sources. Based on the study, some recommendations have been suggested for improving the water project. The flowchart in Fig. 2.2 below summarises the method used in the research.

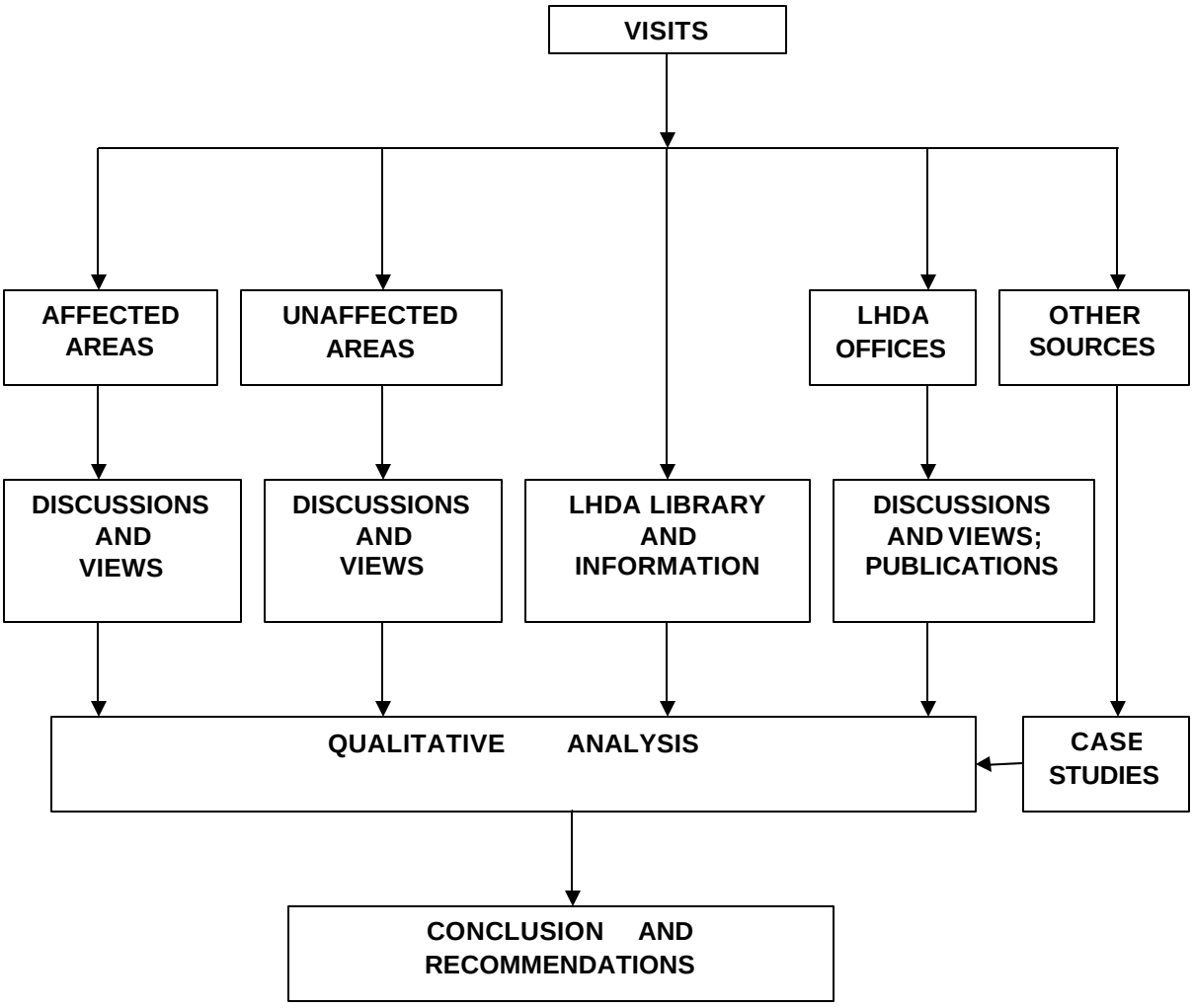


Fig. 2.2: Diagram of Research Method

CHAPTER 3

THE RESPONSES ON THE SOCIAL IMPACTS OF LESOTHO HIGHLANDS WATER PROJECT

(LHDA-TCTA, 2001c)

3.1 SOCIAL PROBLEMS CAUSED BY LHWP

This first section of the chapter provides the concerns on social problems as told by the affected villagers, the unaffected villagers and the water project authority.

An overwhelming response on the problems caused by the water project came from the affected villagers themselves. Discussions held with villagers in the affected areas of Ha Katse and Ha Mohale revealed their attitudes on the highly controversial issues associated with large dams. Most villagers were discrete and touchy regarding the water project.

The affected villagers were more apt to talk about hardships brought into their lives by LHWP than about the benefits they might be enjoying. In this way, they were indicating that they were more afflicted and less embraced by the water project. This typified the incessant cry by communities afflicted by large developments particularly in the Developing World.

3.1.1 Affected communities

On the cultural, social, environmental and physical aspects, affected villagers complained of hardships such as ecological losses, dams being physical obstacles, property losses, cultural losses, health problems, infringement on their rights and access to resources, the unjust treatment by LHDA and the government, and other social problems.

3.1.1.1 Ecological losses caused by the water project

Respondents mentioned natural resource losses which included crop fields, grazing land, trees, thatching grass, bamboo reeds, herbs, sand, soil, springs and fish, and the disturbance to wildlife natural habitats as well as the downstream effects.

The valleys of Malibamatso and Senqunyane rivers provide fertile arable land ideal for crop fields within the rugged mountain terrain. The local dwellers felt that crop fields submerged by the dams (Figs. 3.1a and 3.1b) or filled with rocks from road blasting

were a big loss now and in the future in supporting their families. Other villagers complained that they had no fertile soil left, hence any reliable fields to till were on the marginal slope lands; others even said that they had no fields left at all and they were not employed to earn a living. They claimed that the dams had curtailed their harvest and the benefits it used to bring to their livelihood.

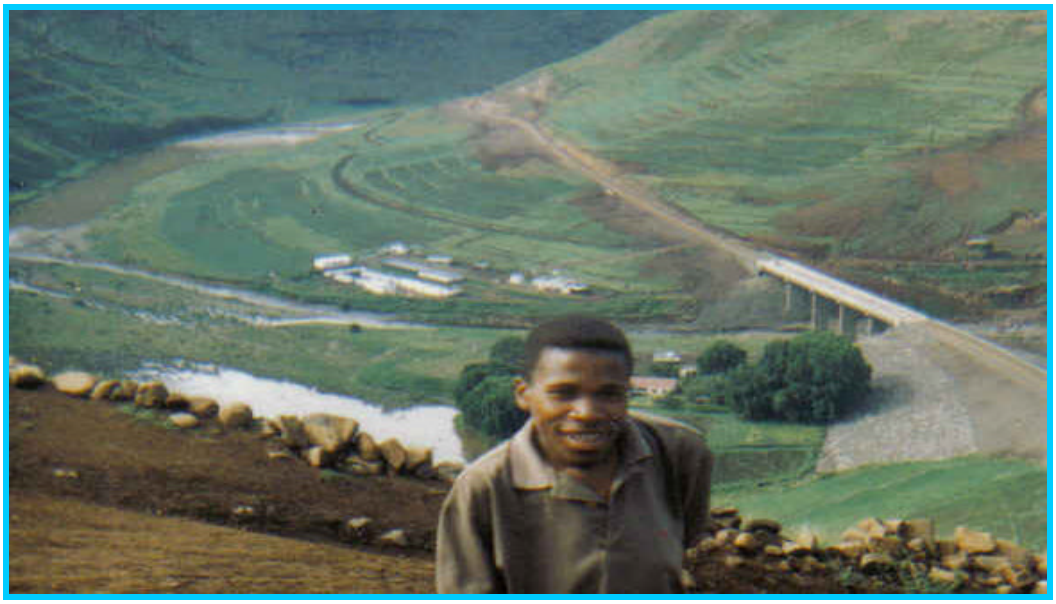


Fig. 3.1a: Fertile crop fields in Pelaneng River valley before inundation in Ha Katse area

Fig. 3.1b: Same Pelaneng crop fields gradually being submerged during inundation (Pelaneng Bridge is on the right in both pictures.)

The inundated valleys also had cost them the warmer and strategic winter grazing grassy valleys where their animals used to hide away from the snow and harsh mountain cold (Fig. 3.2). As a result there were more animals being lost in winter than in the previous times but there was no compensation for it.

Fig. 3.2: Snowy, harsh and cold mountain condition in Lesotho (Lesotho Tourist Board, 2004)

The herdboys (Fig. 3.3) also grieved over the loss of their valuable winter sanctuary as most of their parents were poor and could not afford them all necessary warm winter clothing. The caves that used to provide them with shelter against the uncompromising weather were lost for good. They said that they and the animals they herded were suffering from the cold for the comfort of somebody in Gauteng. In addition, they mentioned that they had lost the rat hunting (*ho khoasa litali)* near the

rivers, within the maize fields and among the bamboo reeds as both a pastime and a source of food to them just like fishing was to other people; but nobody cared about it.

Fig. 3.3: Winter: Big Boys don't cry! But it's cold
(Thaba Promotions, 2003b).

Villagers asserted that house building had become a problem due to the loss of natural materials such as trees, thatching grass and bamboo reeds which were used for roofing and thatching houses. To buy roofing timber and corrugated iron from the far away towns was impractical and costly in terms of transport and materials because they did not have the money. This only remained as a privilege of the wealthy few. Wood from trees was again used for energy to warm the houses and to cook. For many households the winters had become more menacing than ever before and the women said that they found it more difficult to cook for their families.

Sangomas or traditional healers (Figs. 3.4a & 3.4b) also had had their fair share of unhappiness. They complained of the loss of many important medicinal plants and deplored the notion of having to purchase them from the protected gardens anticipated by LHDA:

> *"These were supplied free by nature in the river valleys to everyone rich and poor and now we will be forced to buy them. Our traditional medical practices will decline and eventually disappear. It is a sad thing to us and to the people we used to help".*

Fig. 3.4a: Rural male sangoma (Wild Africa Art, 2000)

Fig. 3.4b: Typical female sangoma (Thaba Promotions, 2003c)

They also stressed that their medicines were cheap and affordable in money terms or animal payment; they wondered how in the future people would afford the expensive White man's medicine practices (i.e. the clinics) for which they could not even offer a hen or a goat as payment. At the same time, they said that they were losing their source of income to the Whiteman's way of healing but which they were not against.

In addition, villagers said that useful shrubs, important and rare essential plants such as the endemic Spiral Aloe (Fig. 3.5) that grew lush in the valleys had been destroyed. They claimed that LHDA made little attempt to re-grow the shrubs and other plants

they were dependent upon except for those of interest for LHDA's publicity and accused it of taking their interests and needs like *'dead horse's bones'*. *"You must tell them about what we say"*, they said; *"On our own land, they treat us like kindergarten children"*. This furious response was delivered by ranting and raving villagers spelling out their hurt and unhappiness about what they perceived as LHDA's *'foul play'*.

Fig. 3.5: The Spiral Aloe is endemic to Lesotho (LHDA-TCTA, 2002a)

However, villagers agreed that LHDA had made efforts to transplant some of the medicinal plants for replanting at secure places but to be available at cost to them and other people. Like the sangomas, the villagers deemed it unjust to buy herbs that were free from their communal land just because of the water which they did not even use. However, the medicinal plants' replanting had not yet been successful in many places.

The loss of fresh water fish caught for food was mentioned by very few villagers. That was because levels of fish in rivers of the Water Scheme Area were anyhow very low. Fish, such as the rock catfish and the endangered Maloti Minnow, were diminishing due to abnormally low or high stream flows in the downstream regions of dams. There were further problems created which the villagers also mentioned. Sand for building and plastering houses was fetched from the rivers by women on their heads or by men

using animals. That by itself was a hard work. To some the dams had made this difficult task even more difficult and more torturous as they then must go for longer distances to get sand; to others it had become a mission impossible.

The irregular, unseasonal and strong floods were destructive and made washing or crossing downstream areas perilous. Trees, animals and crops also suffered from these floods. The reduced flow especially during the low rainfall season was equally uncompromising to downstream ecosystems.

Some burrowing animals like porcupines and polecats had had to flee from the water and others were feared to have been killed in their burrows by water or by fleeing people. Snakes too had fled from the water into homes, fields and higher grazing lands menacing and biting people, herdboys and animals. In addition, habitats for cliff birds like swallows, hammerheads, crows, eagles, bearded vultures (Fig. 3.6), and other threatened species were destroyed in the valley cliffs that had slowly been covered by the dam water.

Fig. 3.6: Bearded Vulture also fled from the valley cliffs to become ever more an endangered species (TCTA, 2003a).

Some villagers sadly said that their wildlife had disappeared and maintained that those birds, animals and the like were part of the environment that made their bustling world habitable and alive. Things were getting different and lifeless except for a new comer – the vast and silent monotonous water mass only admired by foreign people that came and went, none of them willing to stay with it for life. This was the feeling that the villagers portrayed making it true that one man's meat could be another man's poison.

Livestock selling, which was previously augmented by crop and marijuana sales, was on the increase because people were increasingly selling their animals in order to buy food and to secure some cash in times of need. The effect has been a rapid reduction in the amount of livestock.

Their livestock decline was exacerbated further by the loss of pastureland. An old man of Ha Theko village said that he was forced to go to the fields regularly to mown maize stock as fodder for his cows or else they would starve to death. *"I am too old for this kind of work but what can I do?"* he asked. In both Ha Ramokoatsi and Ha Sepinare the additional outcry was that the fodder compensation lasted for the first three years from 1990 and thereafter, nothing was forthcoming.

Similar sentiments on pastureland were shared by other villagers from different places. The major concern was that their livestock was suffering particularly in winter and they were losing them to crows and vultures of the wild:

> *"Imagine this: our fields are gone and we are starving to death; our pastures are gone and our animals are starving to death. It is death to us and our animals! Ntate [Sir], we are at a loss!"* exclaimed one villager from Mphorosane.

Another ecological loss reported was the reduction of wetlands (*mekhoabo*) resulting in elimination of reliable water supply sources during serious droughts and the decline of vegetation growth notably bamboo reeds and *leloli*. The latter is the medium-tall dark green supple grass used for making *lithebe* (hand mats) for collecting flour from *leloala* (a traditional grinding stone) or for hand décor during *mokhibo* (the traditional dance by women).

3.1.1.2 The dams as physical barriers

Disruption of daily life by dams had been more articulated at Katse. The extensive dam had divided the villages, impeding interdependence of movement between them. Villagers could no longer cross to see their relatives, attend to their fields, go about their routine activities, or cross their animals for auctioning, ploughing or for other purposes; it was taking them a long way around the reservoir or to a far bridge in order to reach a place just across (Fig. 3.7) making movement long and tedious at times. A Ha Maphutseng villager justifiably complained:

> *"We have been deceived that there were going to be bridges near us here. The bridge at Mpohorosane [Malibamatso Bridge] is too far".*

Before the dam, Ha Maphutseng villagers walked about 2 Km from their village to cross the Malibamatso River; but, with the dam, they were obliged to walk 10 -12 Km to Malibamatso Bridge, i.e. taking at least 5 times the normal distance or time.

Fig. 3.7: Katse Dam: Nowhere to cross – heading for a bridge 'too far' (Longman, 2001c)

Because inexperienced people had suddenly been exposed to large and unprotected masses of water, villagers claimed that there were high incidents of human and animal fatalities caused by drowning. Many villagers estimated that to date more than one

hundred people, including children, had fallen into the Katse dam and drowned. (No official record could be found to support or disprove the estimate). The dam was like a death-trap to the locals. Moreover, LHDA had not provided divers to rescue drowning people or to recover drowned bodies as promised during the pre-dam *lipitso* (public gatherings) when it was courting them for their land. (The chiefs and the communities could not produce records on the said promises to them by LHDA during the *lipitso*.)

The Ha Theko village chief grieved about how LHDA deceived his people when it wanted their land for construction of the dam by promising free ferry boats to carry people and their animals across the dam (LHDA-TCTA, 2002b). His account was that LHDA had initially provided two small boats which within a short time vanished into thin air. Later, LHDA told them that some larger ferry boats were available each costing R15 000 and that they should buy them. That complete about-face by LHDA surprised them because they had been promised free ferry boats as part of the deal in persuading them to give up their land.

Eventually, the villagers had to make do with a couple of privately owned small, lightweight and canvas-like ferry boats that were in poor condition, hence unsafe and often capsizing causing more human fatalities. Each person paid R5 per crossing or R10 return crossing at Katse. The chief went on to say:

> *"Where do we get such money from because there are no jobs here? Our people must make daily crossings but they cannot afford the money, so they are obliged to walk a whole day for long distances around the dam from here to those villages you see across there. They may even be forced to stay overnight. Truly, this is sad and unjust to the people".*

3.1.1.3 Loss of property caused by the project

Ha Sepinare villagers accounted that several houses, and in some cases the property inside, had been damaged or lost from road works vibrations or dam earth tremors. In Ha Theko, a demolished primary school building had not been rebuilt. These damages had repeatedly been reported to LHDA and the government in writing three years ago but all in vain. Some similar damages that occurred during the Ha Mohale road and dam construction phases had also not been repaired. Ha Mohale villagers said when

they toyi-toyied in protest, police beat them up despite it being a legal demonstration. On the other hand, some people have had their houses repaired or rebuilt to their satisfaction despite delays of up to ten years in some cases.

Other property lost during road construction as accounted by Ha Maphutseng and Ha Nyakane villagers included gardens, kraals and animal stands. According to the villagers these were not considered for compensation whatsoever. A Ha Nyakane resident, who forfeited her large vegetable garden because the road to Mohale Dam passed through it, recounted how an LHDA officer had the audacity to tell her that prior to the start of the road she did not have her garden listed or registered as a property that would be affected, therefore, she should forget about any compensation for it.

Ha Nyakane's chief and her people were unhappy that they were not provided with a replacement school after theirs (less than 3 Km from the village) was closed down due to inundation. They said that they were told to use a school in Likalaneng (almost 10 Km away) which was too far and inaccessible because there was no bridge across the dam except for one at the far upper end of the reservoir (nearly 5 Km away). They also reiterated that LHDA's goods delivery was lagging far behind its promises.

3.1.1.4 The impact of the project on customs and culture

The traditional Basotho, particularly those living in the rural areas, regard graves as sacred. There were villages in these areas that lost their graves due to the project. They were sad that their ancestors' graves had been buried under deep water for ever. Even though LHDA had transferred some graves to new locations, the villagers regarded that as merely a token which was culturally unconvincing and not substantive. The affected villagers said that they felt uneasy and out of touch with their *balimo* (the ancestral spirits).

Further, some villagers were quite concerned that LHDA had taken up land inclusive of villages near the reservoir as reserve area for the project. They pointed out that this made them answerable to LHDA even for traditional rites such as land acquisition and land development rather than to the chiefs. Ha Ramokoatsi villagers said it was

contrary to cultural leadership and the land tenure system where the chief allocated land to people. By all intents and purposes, they said that the power of the chief had been usurped and their cultural rights trampled on.

Furthermore, they argued that their cultural family structures and village unity had been cut asunder by the sudden new cash economy system. Some individuals were baffled by large sums of money they began to handle for the first time and were not sure what to do with it. Some women said male household heads with lot of money in their pockets neglected their families for younger and prettier women or for city life causing many family breakdowns. More so, the cultural bond of familyhood was breaking down because those resettled in far away semi-urban areas were detached from fellow family members.

Even the traditional way of helping needy people without extra charges was disappearing. For example, a starving household would be helped say, with two bags of grain which would be returned in the next harvest still as the two bags, nothing more. Since money had replaced fields and it was loaned out with interest, poor people were hit hardest. Delays in compensation payments delayed debts repayments resulting in frequent quarrels and fights between individuals, families or villagers.

With all the above they were simply saying that their cultural values, functions and roots had been destroyed.

3.1.1.5 Inaccessibility of the dam water to affected villagers

On the issue of rights and access, Ha Mohale and Ha Tšiu villagers wondered what good was a plentiful resource that they could not access or use. They were referring to the mass of reservoir water that was in their midst but was not for them to utilize freely as it used to be. They said that that water was no longer communal as it now belonged to LHDA and a foreign country while they, the actual and original people of the land producing the resource, were shut out and left in the cold. With repeated and frequent emphasis they kept on asking why was it that they could not freely access the very water which had caused them so much hardship. They wondered if it was just.

Villagers also complained that their rights had been taken away without their consent. They added that they had forfeited their rights on other property near the reservoirs e.g. trees, natural grass, building stones, firewood, etc. They wished that they could only be allowed to use these because they still needed them because they made up much of the essential resources they had depended on for so long. A Ha Theko villager further remarked:

> *"Do we really have to wish and beg for the resources we have owned and depended on for so many generations just for the sake of somebody else we do not even know or for the benefits we are ever promised but are never realized?"*

3.1.1.6 Health problems

From Ha Theko, some villagers said that they were perturbed by the unusual cold conditions caused by the vast water mass. With fuel sources of trees and brushwood reduced, the effects were more severe. LHDA had promised to resettle them since the dam inundation in 1995 but there had been no action. Concerned about their health, they were forced to flee and resettle elsewhere, less suitable for their needs.

Their greatest worry, however, was the rapid spread of transmittable deceases particularly HIV/AIDS that had heightened with the project. Prostitution had spread as a result of the presence of the project and was blamed for the increased rate of deaths and orphans resulting from HIV/AIDS. SABC AFRICA TV (2004) reported that the country had over 90, 000 orphans due to the increased HIV/AIDS scourge.

3.1.1.7 Compensation injustices by LHDA

The most resounding and resonating outcry by villagers from all quarters at both the major dams was on the unjust compensations for their farming and grazing lands, trees, communal resources and damages to their personal property. They complained that grain or cash compensation for annual crop yields or property was insufficient, delayed or never paid and LHDA was not bothered to give them an explanation. The following excerpts per village depict the dimension of the injustice from the villagers' point of view.

Ha Maphutseng: Some villagers said that they had not been compensated for their *'eaten up'* fields, trees, gardens, kraals and *lipatlollo* (animal stands). One villager complained that for an average maize harvest of *sabusabu* (six 80kg bags) he was compensated with two small bags (50kg) of maize.

Ha Mohale: Villagers also maintained that grain compensation was too small compared to what they were harvesting before the project. Some of the villagers that were dissatisfied changed to cash compensation but they found no joy both because the money was too little and was only paid once a year whereas their crops benefited them twice a year, *hoetla* (autumn green harvest) and *mariha* (winter harvest).

Other Ha Mohale villagers mentioned that their livelihood was based on fields and animals. Most of these life supports had been lost to the project from which they found no succour. They further said that LHDA told them to form a committee and make project proposals to facilitate for communal compensation. Accordingly, all of these had been complied with; their projects included dairy farming, a filling station, piggery and a botanical garden but regrettably there had been no help from LHDA. Until then the promised maternity clinic, electricity, and sanitary pits had also not been realized and some villagers were still without water and toilets. However, the promise from LHDA on compensation and provision of services was so strong that they could only remain hopeful.

Mphorosane: The villagers expressed their dismay at what they metaphrased *'economic sanctions'* because of the small quantities of compensation, be it either grain or cash. Some also mentioned that their houses had been structurally weakened during road construction and threatened to fall on them. They claimed to have received no assistance from the authorities for these damages.

Ha Nyakane: An elderly lady claimed that her field had partially been *'consumed'* by the project's road, her willow trees destroyed and her house damaged by explosives and stones, but she had received no compensation whatsoever. Even the disabled were not compensated; others had died before receiving compensation for their fields.

Villagers further told a saga of some LHDA officials who had asked them to contribute money for potato seed in 2002 but had since then disappeared into thin air.

Ha Ramokoatsi: The immediate response by most villagers was that LHWP had taken them headlong into poverty because the best of their soil resource in the valleys had been lost for meagre rewards. *"This thing has brought us problems"*, some said. Like other villagers, they associated this with low and short-term compensations. They reiterated that cash payment for trees had ceased yet trees were a longer-term resource and were also multi-purposed. An apprehensive man said:

> *"I have been paid R500 for my trees only once yet with those trees I could roof houses and earn money by selling them to others; I could make firewood and even make useful gadgets like selei [an ox-drawn v-shaped wooden gadget about 2m long with cross members] to haul building stones and to move my ploughs from one place to another. I could engage in these for years!"*

Ha Sepinare: In general, villagers complained that the compensations were not extended far enough because they were short-termed whereas their crop fields and trees would last for many more generations to come. Others pointed out that they still had not been compensated for their crop fields or damaged houses and household property due to seismicity despite repeated claims to LHDA.

Ha Theko: Without exception, the villagers here complained vehemently about inadequate compensation. They also mentioned some damaged and/or fallen houses during road construction for which nothing had been done despite many requests and appeals to LHDA. They said that other houses had been given quick fixes with a promise that they were temporary and permanent ones would be built, but since construction in 1986, nearly 18 years had gone by without any action from LHDA.

Ha Tšiu: A villager who expected a matching compensation of six 80kg bags of maize for her two fields said she was given five small maize bags instead. She then changed to cash compensation:

> *"I was told that I would get R2 000 for two fields per annum"*, she related, *"but when the payment came I was given R900 only without any explanation. My family is now starving. This is foul play by LHDA and the government"*.

An extreme case was of a villager who said she was promised R7 000 per year for her large field but received R300 in the first year, R500 in the second and was awaiting the third. Having lost her mother-in-law and being a widow, she said that she had no food, no money and did not know what to do as her livelihood was ruined.

Besides the above related outcries, the affected villagers had more to say about their debacle on the project's compensation procedures. Regarding the determination of the compensation, they said that they were just told without their participation and without explanation by LHDA on how much their fields were worth in grain or money terms and often these values were inconsistent. In other cases fields of about equal size in the same area were given vastly different money values; or a small field earned higher money than a larger one. At times, field measuring was estimated. This resulted in smaller fields being made bigger than bigger fields. In some places field owners were told that a field the size of football pitch was worth R1800 per annum but when it came to actual payment, the money was less. No explanations were given by LHDA officials who were reported to be always in a hurry to attend to villagers' queries. An enraged villager said:

> *"This project has turned us into a bunch of lunatics; when we want an explanation, the LHDA official tells us to see so and so, then that so and so also refers us to another so and so until we return to the first and then back again in circles until we give up. But their homes are mansions and they drive classy vehicles while we starve."*

They further complained that compensation for their lifetime land resource and for their trees was too limited. They argued that soil was a long term resource inherited from parents to children from generation to generation, well beyond fifty years.

Again, villagers were unhappy that decisions were made for them by LHDA on how much compensation money to take and even interfering on how to use it. If compensation was lower than R10 000 for a field, the owner was paid all at once in cash but if larger, the owner was told he/she could not have it and instead he/she must come up with some planned project acceptable to LHDA to spend the money on. They felt that they had been treated like children and were oppressed into forming community co-operatives they did not understand let alone want.

Furthermore, some villagers said that LHDA had not paid them the compensation for communal resources which it had initially promised although it had determined it unilaterally. Others had neither any idea of how much money they had, where it was, nor knew that there was such money being raised from community co-operatives. Ha Tšiu community claimed that their potato farming project had been successful and it had generated a lot of money for the community but they did not know where it was or who had it as they had no bank account. To open bank accounts, village communities said that LHDA told them to contribute R500 per village so that their community funds could be deposited. They felt that in doing so it was like buying their rightful money.

3.1.1.8 Further social problems

Most villagers felt that LHDA was not being sincere on improving their well-being. They also had little or no trust in the community liaison committees which were ineffective, corrupt, or less keen because they were not paid. LHDA refused to change committee members in that current members were trained and feared that new ones without training would be worse off.

In strong and tense words, they said that they felt ignored and abandoned by the government while they starved after being cheated on compensations over their land and resources by LHDA. They wondered why the government was taking so long or was so indifferent to respond to their grievances.

Other related complaints and detriments were also brought to the fore. A villager of Ha Maphutseng on responding to the discussion topic and obviously referring to the water project retorted: redemption

> *"There are no benefits! I am unemployed and hungry. We have been cheated, deceived and destroyed!"*

His response showed the ugly face of LHWP impact on some local Highlanders: hopelessness of lost livelihood and unforthcoming deliverance from LHDA and the government. Fellow villagers echoed his sentiment by saying that loss of fields and no employment coupled with low or unfulfilled compensations had left them in the doldrums of poverty increasing the statistics for the destitute of the country. Others

added that alongside the compensations there were indeed other promises which went unaccomplished such as supplies of tapped water, electricity, fodder, toilets, bridges, boats, all of which were intended to bolster their standard of living.

Regarding the problems caused by LHWP to affected communities, Ha Theko villagers said they had voiced their concerns with regard to the water project to over two hundred different people coming from offices in Maseru and elsewhere but in vain. Therefore, they trusted no one anymore. Ha Sepinare villagers confirmed that their requests had been forwarded to LHDA in writing but they had fallen on deaf ears. Mphorosane`s dejected villagers said that they had been given empty and false promises because fulfilments were hard-coming and their community was in distress. Many of the responses had no *khotso* in them:

> *"You are not the first person we tell our concerns to on the problems caused by the water project hoping that something will be done";*
> *"If you are not coming to solve our problems, we do not want to talk to you";*
> *"We are tired of talking and yet nothing happens"; etc.*

Villagers would say so ready to walk away if the reply did not meet their expectations. The unpeaceful reception encountered from the affected villagers was indicative of the local indignation and desperation towards the project. It was strongly articulated and more reverberated in Ha Katse villages than in Ha Mohale.

One lady of Ha Mohale told of her debacle with LHDA: when she asked for her grand compensation of 50 years for her fields, LHDA told her to propose to them a project instead. She presented a sewing project because she was skilled in sewing. She said that she requested for a sewing machine, sewing material, cost estimates and some floating cash to meet the immediate needs and transport. They kept her proposal for more than three years without responding, after which they sent it back to her to revise the costs. She would have to re-travel inside Lesotho and also to South Africa for quotations but because she had no travel money which they would not provide her with, she was unable to obtain the quotations again. Her project was now staying defunct with LHDA and she said that she was then stuck with the kind of life she did not choose or desire: no fields and no regular source of income despite her trained skills – worst of all, there was still no compensation.

Ha Ramokoatsi community said that their village was delineated into the LHWP reserve area making them a physical part of the project but there was nothing done to improve or develop them for a better livelihood. Further in 1998, they had formed a dairy farming project per LHDA requirement and each member paid R50 registration per cow followed by a gradual payment to buy a cow. Regrettably, by then there were no cows delivered and LHDA seemed benumbed on the issue. They then had requested for refunds but to no avail. Finally, they said that when job opportunities arose, they were disfavoured for foreigners from South Africa.

Further, many villagers said that they were then being told by LHDA field officials to contribute some money per household to release their fodder money from the bank. A poor household which failed to make the contribution would have no share from that money even if it was directly affected. The villagers argued that the compensation was now being purported for the rich ones only. That was unfair to the poorer people because the pastureland was communal to all i.e. it was for both the poor and the rich alike. Even more confusing was that the contribution money demanded from the villagers differed: it was said to be R50 for Ha Theko, R10 for Ha Sepinare and R7.50 for Ha Maphutseng. Ha Maphutseng villagers were further disturbed by the fact that that fodder money was being diverted for an unnamed community project.

Many villagers were concerned about their security around the massive dam saying that a lot of human life was being lost although no figures could be provided. However, most of the problems mentioned were basically the same in the other villages visited and there is no necessity to recount them.

3.1.2 Unaffected communities

Responses of this group were collected from the urban and the rural communities as indicated in the methodology. This was because their lifestyles differed and the impacts reported were expected to portray different responses that would be typically representative of the Basotho society nationwide.

3.1.2.1 Urban communities

In Lithabaneng, a location south of Maseru, most urban dwellers knew LHWP and its regulatory body, LHDA. However, the majority of them did not know the impacts of the water project on their community. But, many grumbled that their urban domestic water service was a problem. A frustrated resident said:

> *"Those big mountain dams should be used to solve our urban water shortages rather than solving a foreigner's problem while we are left gaping like fools here*".

Others felt that at the moment the dams were good for nothing except bringing back memories of 1998 or even inviting another possible invasion by South Africa. They were referring to the September 22, 1998 SANDF attack (Matlosa, 1999) which many ordinary Basotho saw as a crude move by South Africa to save an unpopular, autocratic government, and to defend Pretoria's political and economic dominance of the tiny country including its water (Dixon, 1998).

On this incident, Rosenberg (2003) concurred:

> *President Bush's intervention [in Iraq] undeniably got rid of tyranny and corruption. Mandela invaded Lesotho to stifle democracy and maintain a corrupt, tyrannical and fraudulent ruler in power over an unwilling population at gunpoint.*

Carried out by the 'New' South Africa, with at least 113 (134 unconfirmed) people killed, the invasion was described as 'much bloodier than the Apartheid Regime's notorious 1982 commando raid on Maseru, in which 42 people were massacred, including 30 African National Congress members' (Dixon, 1998). It carried indelible memories in most minds of the urban Basotho mostly against the South African government whose current ruling party they believed they had helped so much and for so long against the onslaughts and afflictions of the white Apartheid Regime.

Most urban youth seemed more ignorant and less interested in the LHWP issues because they said that they saw no benefit from it whatsoever in their youth life. However, some could only relate it to the unfortunate politics of the country remembering the 1998 episodes. It was reflective of Norman Dixon's 1998 report:

> "*Angry youth and women taunted the invaders, yelling 'go home' and denouncing them as 'aggressors'. They brazenly erected roadblocks to slow the SANDF's armoured cars".*

Others added that it was just the politicians' façade to call for international attention at the expense of naïve Highlanders.

3.1.2.2 Rural community

Ha Leronti villagers of the Mantšonyane rural area in the Thaba Tseka district knew of the water project but said that they benefited little only in terms of a few short-term employments. They were least impressed by the project which they said had neglected them in its developments. Some had not forgotten the Prime Minister's inaugural speech of `Muela Hydroelectric Power Station in January 1999 when he said that electricity would be so plentiful, readily available and cheap for all the Basotho that even their chicken dens would be lit! A candid villager drove home his point with humour:

> *"This is not so even to-day. We light our homes with firewood; outside we still cannot see if all the cows were in the kraal let alone chickens in their dens!"*

A local electrician warned that politicians just talked and promised people without providing money yet technicalities and costs for electricity were so gigantic.

> *"I can tell you*, *electricity will not be cheap and readily available before material and equipment costs installed at `Muela Hydropower are cleared; maybe after then"*, he assured.

Roads were said to be so full of ditches that in some places passengers had to get off to fill them up with earth for the vehicle to pass. Miners from the area underscored the necessity of telephones. They said that in the past some of them had even lost their jobs because when they had problems delaying them from home, they had no way of informing mine authorities due to absence of telephones.

Other developments that they wished LHWP could have helped them with included community projects training in a broad band covering job creation, crop production, animal rearing, electrification, handicrafts and tourism. Some even went overboard to say the project should consider making a large dam in Mantsonyane River or in the nearby Senqunyane River. The aim of such wishful thinking was for employment and improvement of the Likalaneng -Thaba Tseka road which had deteriorated badly.

3.1.3 The Water Authority (LHDA)

LHDA conceded that the water project had some disadvantages to the affected communities with respect to compensation, structure damages, property losses and downstream effects. On compensation, it said that people in the rural areas were not exposed to a cash economy and were, therefore, faced with lots of social problems e.g. family breakdown. At the same time compensation money was never enough to them because they used it for many other reasons other than for food and therefore, they always wanted more. At times there were delays in compensating people.

Some structures e.g. buildings, were damaged during road blasting on the construction stages. Communities also complained regularly about cracks or unsatisfactory repairs to their buildings. Major property losses were the arable land, grazing land and trees.

The downstream effects posed a dual problem: ecosystem survival and social impact. Fungal growth had increased resulting in the destruction of the ecosystem life which in some cases was useful to the people e.g. reduced fish and other riparian growth. By then, there was no instream flow requirement (IFR) policy in force and one was as yet being developed for the downstream effects. Furthermore, the unexpected flooding due to unscheduled opening of the dam sluices when the water level was too high caused inconveniences to the locals who were finding it difficult to plan their routine activities. Notwithstanding such negative effects, there was no approved clear policy for downstream compensation.

3.2 SOCIAL BENEFITS BROUGHT BY LHWP

This second section of the chapter deals with the social benefits as mentioned by the communities and by the water project authority. The summary of benefits is shown in Table 3.1 and the villagers' views are summarised in Table 3.2.

Having spat out their venom of complaints, frustrations and problems with the water project, the affected communities were slow and loath on benefits. The majority had to be persuaded to discuss the benefits they enjoyed from the project and they were quite brief about it. On the other hand LHDA was quick and long-winded on the benefits while it had been slow and brief on the negative impacts above.

However, the benefits received affirmed a Sesotho proverb that there is no bad without some good. Despite the vicissitudes of the project there were indeed some worthy benefits to the communities.

3.2.1 Benefits according to the communities

The benefits mentioned by affected communities included assured harvest, infrastructural developments, water supply, toilets, community halls, clinics, schools and community projects. However, the unaffected communities both urban and rural were barely aware of LHWP benefits.

3.2.1.1 Assured harvest

A Ha Ramokoatsi villager came out of the closet by saying that even though they were complaining bitterly about the aggravations brought by LHWP, the truth was that in the fields the yields were often reduced because crops were destroyed by regular frost and droughts not experienced in the compensation scheme. In general, most communities agreed that through annual grain compensation (Fig. 3.8), the project had given them an assured harvest for the next 50 years come frosts, good rains or droughts. They concurred that this was one of the prime benefits of LHWP and was the surest way to tackle hunger for a while. However, they believed greater caution was needed as the compensations were low, irregular and finite.

Fig. 3.8: LHWP grain compensation in the affected areas (LHDA-SAICE, 2003b)

3.2.1.2 Lead infrastructural developments

LHDA accordingly accounted that Lesotho Highlands pre-dam livelihood conditions lacked roads and the isolated rural settlements were accessible only by rough dirt roads and footpaths; but with the dams came the roads. The infrastructural lead projects undertaken included the restructuring and reconstructing of major existing roads, the construction of new ones (Fig. 3.9) and their ancillary feeder roads.

Fig. 3.9: LHWP rural access gravel road (TCTA, 2003b)

Gleeful villagers of Ha Theko had this to say about the new roads: *"We just catch taxis nearby"; "We never dreamt of a road let alone a tarred one"*. Some villages of Ha Mohale also have gravel or tarred road access as shown in Fig. 3.10 below. Sceptical villagers felt that the roads were not for them but were made to provide for LHDA purposes, e.g. to access the dam working areas and to move people for resettlement. Optimists believed that the roads had provided easier travelling and goods transportation in their remote areas.

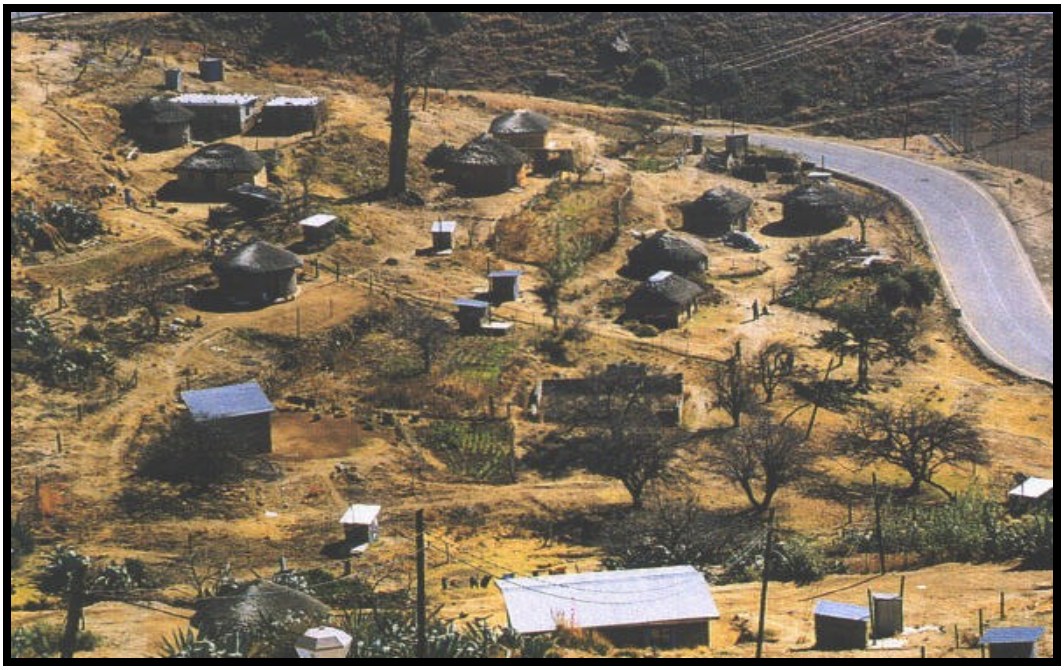


Fig. 3.10: Ha Mohale: Tarred road and other facilities such as toilets, tap water trenches and some electric poles in a village (LHDA, 2000c)

For the Ha Maphutseng community, the benefit of the new road was recognized but it was overshadowed by the absence of compensation payment for fields lost to the road. Ha Ramokoatsi villagers believed that the road into the village could have been more welcomed and useful if it were kept in good condition.

These major developments were aimed partly at facilitating the dam's construction activities and partly at serving the Highlands communities and opening the mountain interiors for tourism. Bridges were also built to facilitate pedestrian, animal and vehicular crossing of rivers and dams (Figs. 3.11 & 3.12).

Fig. 3.11: Malibamatso Bridge, the tallest in Africa, crosses all traffic over Ha Katse Reservoir (LHDA –TCTA, 2001)

The local communities felt that, although sparse, bridges like Bokong Foot Bridge (Fig. 3.12) had facilitated them a safe all-year-round crossing of rivers for the first time.

Fig. 3.12: Ha Katse: Bokong Foot Bridge (TCTA, 2004a)

Most locals believed that more bridges were essential particularly across the reservoirs in order to ease the crossing problem caused by the large water masses. Not necessarily content with the present number of bridges, they said that half a loaf was better than no bread at all but a full loaf would have served the purpose best.

Similarly, communities of Mphorosane, Ha Tšiu and others welcomed the toilet facilities (Table 3.1). Women and girls were more delighted because they no longer had to walk long distances away from their homes to relieve themselves in dongas where naughty boys at times booed them. They said that it was then safer at night and they no longer had problems when it rained or snowed.

3.2.1.3 Community infrastructural developments and services

Some accomplished community infrastructural projects included the building of a mortuary at `Mamohau in Katse; community markets in Butha Buthe, Ha Lejone, Ha Katse and Ha Mohale; taxi ranks in Butha Buthe town and en route to Katse Dam; building of new public schools e.g. a Secondary School at Bokong Ha Kenene; sanitation improvement, addition of classrooms and offices in existing public and church schools; various water sanitation and protection of springs; local chief's offices at Makhoabeng, Ha Lejone and Mphorosane; water supply structures and the testing and analyzing of water in villages and schools; and the construction of ventilated improved pit (VIP) toilet services (LHDA, 2002b).

Few communities had health services nearby like Ha Mohale villagers who were pleased with a close clinic at Tiping in Likalaneng rather than travelling half a day to Ha Marakabei into the Maloti interior. However, villagers generally felt that enough clinics were not yet in place and most communities were still to see these promised services in their areas.

Nurseries, primary or secondary schools had also been built in some villages. Ha Ramokoatsi parents were happy for a nursery school but were worried that it might sooner or later close down for lack of money to pay for fees and teachers' salaries

allegedly because they no longer had marijuana (illegal cash crop) and enough crop yields to sell for raising money for these and other purposes.

Mphorosane and Ha Theko communities were elated with the multi-purpose community halls built in their villages to facilitate unimpeded all-weather conditions community functions and gatherings. Gratified Mphorosane people showed how the building was apportioned for various uses such as the Chief's Office and other public services. In other villages, they were used as classrooms (Fig. 3.13). A number of VIP toilets had also been provided for each of these halls.

Fig. 3.13: Multi-purpose Community Hall at Makhoabeng near Katse dam wall

During the research, villages like Mphorosane, Ha Ramokoatsi, Ha Theko, Ha Tšiu and Ha Mohale (partially) and various other affected villages had water supply services to their respective communities in varying degrees (Fig. 3.14 and Table 3.1). Women and children there welcomed the cleaner tap water which they fetched nearby saving them time and energy. However, the service of Ha Theko was reported unreliable because the water dried out regularly; also the tap installation was shoddy and could not last for many years. The remainder of visited villages had no water supply service as yet.

Fig. 3.14: Village water supply near LHDA campsite (TCTA, 2003c)

Sanitation conditions in the affected rural areas, according to the 1995 Resettlement and Development Study (RDS) carried out by LHDA, were found appalling to say the least. The report found that in all villages most privately owned latrines were incorrectly installed and either were not fly proof, not water tight, fitted with broken or misfit vents or their doors were in poor repair. Communal facilities for hygienic disposal and school toilets were not at all present. In such a case, health problems existed and sanitation required immediate attention (LHDA, 1997).

To address this state of affairs, LHDA set out to encourage and make villagers aware of hygienic living. To this effect it constructed hygienically built VIP toilets and conducted education on their use (Fig. 3.15) (LHDA, 2002c); it also introduced sanitation pits in the communities and schools for hygienic refuse disposal. Like the supply of tap water, there were still many villages without these toilet services.

LHDA added that arrangements were underway to finish up works e.g. tap water supply, toilets and additional schools and clinics in Phase 1A and Phase 1B villages.

Fig. 3.15: `Muela: Typical VIP toilet, a convenience near the house (LHDA, 2002d)

3.2.1.4 Community projects

Through community projects, LHDA meant to provide sustainable livelihoods to the affected communities by engaging in agricultural and non-agricultural activities. Several communities said that these projects were not yet widespread or fully functional. They blamed that on LHDA's delay in paying out communal compensation funds earmarked for the projects. However, in Ha Mohale area, there were successful projects such as the growing of potatoes which the local communities were satisfied with.

Villagers at Ha Tšiu were proud of their potato harvest but said that the selling price was rather low. However, they were making profit for themselves and their community fund, and also had enough for their families to eat. Moreover, they said that they grew cabbage for vegetables, garlic as herbs and cash crops, and fruit trees. Seedlings were being subsidized by LHDA.

There were more projects expected to start in these and other villages as and when communal compensation funds were available from LHDA. These projects were however awaited with mixed feelings as there were people who were enthusiastic about them, others were neutral or subdued.

Table 3.1: Summary of results per affected village on the degree of benefits or impact condition

	Phase 1A Villages					Phase 1B Villages		
Condition	Ha Maphutseng	Mphorosane	Ha Ramokoatsi	Ha Sepinare	Ha Theko	Ha Mohale	Ha Nyakane	Ha Tšiu
BENEFITS (SERVICES)								
1. Boats (LHWP)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2. Bridge	**0**	**4**	**0**	**0**	**0**	**0**	**2**	**4**
3. Clinic	**0**	**0**	**1**	**0**	**1**	**2**	**0**	**0**
4. Community Hall	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**
5. Community Project	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**3**
6. Electricity	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7. Fodder	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8. Life Savers	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
9. Mortuary	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**
10. Right to Dam Water	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
11. Road	**3**	**5**	**4**	**3**	**5**	**4**	**4**	**4**
12. Sanitary Pits	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
13. School	**0**	**0**	**3**	**0**	**0**	**3**	**0**	**0**
14. Security of Dam	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
15. Skills Training	**1**	**1**	**1**	**1**	**1**	**2**	**1**	**2**
16. Toilets	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**4**
17. Village committee	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**3**
18. Water Supply	**0**	**3**	**5**	**0**	**3**	**2**	**0**	**3**

Table 3.1: Summary of results per affected village (continued)

	Phase 1A Villages					Phase 1B Villages		
Subject	Ha Maphutseng	Mphorosane	Ha Ramokoatsi	Ha Sepinare	Ha Theko	Ha Mohale	Ha Nyakane	Ha Tšiu
DAMAGES RECTIFIED								
19.Buildings	**0**	**1**	**n.i**	**0**	**1**	**1**	**1**	**0**
20. Household items	**n.i**	**n.i**	**n.i**	**0**	**n.i**	**0**	**0**	**n.i**
21. School	**n.i**	**n.i**	**n.i**	**n.i**	**0**	**n.i**	**n.i**	**n.i**
PROBLEMS								
22. Dam crossing	**5**	**2**	**5**	**5**	**5**	**5**	**3**	**2**
23.Downstream flow	**n.i**	**n.i**	**n.i**	**n.i**	**n.i**	**n.i**	**n.i**	**3**
24. In LHWP reserve	**n.i**	**n.i**	**4**	**n.i**	**n.i**	**n.i**	**n.i**	**n.i**
25. Seismic effect	**4**	**n.i**	**n.i**	**4**	**4**	**n.i**	**n.i**	**n.i**
26. Family breakdown	**3**	**4**	**4**	**3**	**3**	**4**	**3**	**3**
27. Cultural loss	**2**	**3**	**3**	**2**	**2**	**3**	**2**	**2**
28. Resources loss	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**
29. Cold condition hazard	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**

Table 3.1: Summary of results per affected village (continued)

	Phase 1A Villages					Phase 1B Villages		
Subject	Ha Maphutseng	Mphorosane	Ha Ramokoatsi	Ha Sepinare	Ha Theko	Ha Mohale	Ha Nyakane	Ha Tšiu
COMPEN-SATION								
30. Communal Fund	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**2**
31. Crop Fields	**1**	**1**	**2**	**2**	**1**	**2**	**2**	**2**
32. Gardens	**n.i**	**0**	**n.i**	**0**	**n.i**	**1**	**0**	**n.i**
33. Kraals and stands	**0**	**0**	**0**	**n.i**	**0**	**0**	**0**	**0**
34. Public participation	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
35. Trees	**1**	**1**	**2**	**2**	**2**	**2**	**2**	**2**
36. Satisfying	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ATTITUDE								
37. On LHDA	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
38. On LHWP	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**1**
QUALITY OF LIFE								
39. Improving	**1**	**2**	**1**	**1**	**1**	**2**	**1**	**2**
40. Potential for improvement	**3**	**4**	**3**	**3**	**3**	**4**	**4**	**4**

Legend for the degree of condition:

5 = Highest; 4 = Higher; 3 = High; 2 = Low; 1 = Lower; 0 = Nil; n.i = no information

The results were based on the respondees' information and on the researcher's visual observation of physical presence or absence of the promised developments and services to the communities. Ratings relate to the strength of a particular response and the availability or unavailability of a particular development. (Also see section **4.2.1**, pp82-112 for discussion and interpretation details).

3.2.2 Some opinions from the villagers

Communities' views (Table 3.2) were critical on LHDA and underpinned the need for a better well-being.

Table 3.2: Summary of communities' views

Community	Views
Ha Maphutseng	Would be satisfied if LHDA: - Gave them their due cash compensations without dictating to them on how to spend their money – LHDA only acting as an adviser; - Should permanently repair and/or rebuilt fallen buildings; and - Bituminized village roads to entice public transport operators.
Mphorosane	Current skills training for self-help was insufficient and narrow-minded. More training of wider scope was requested. LHDA officials played too much chicanery (*ke makutu-kutu*) and were not to be trusted. LHDA had introduced the water project and its troubles in their midst but had proven itself untrustworthy - it must fulfil promises and provide jobs for crop fields losers. Otherwise LHWP was like a roulette gambling on their livelihoods.
Ha Mohale	LHDA are not standing to their initial word that affected people would live better life. Those who benefited are few and the losers are many!
Ha Nyakane	A good project but useless to locals because it was run by a bunch of crooks! Land resource Compensation to be longer than LHDA's time limits.
Ha Ramokoatsi	Paying R500 yearly for lost trees would be better and realistic. The payment of compensation should not be delayed unduly.
Ha Sepinare	LHDA should introduce ways of employment in the affected areas to create the needed jobs. Communal resources were accessed by all including the poor people alike. Therefore, excluding the poor from communal fund for being unable to contribute for release of community money was not only unfair but condemned them to live and die in poverty.
Ha Theko	Had no faith in LHDA – it was foxy and deceitful: *"LHDA came like a fox in a sheep's skin".* Community projects would collapse because they were forced on people who did not know about them.
Ha Tšiu	'*LHDA officials are snakes and slippery. They should be changed or else local people will suffer even worse'.*

3.2.3 LHDA's additional views on benefits to the Basotho

A LHDA official of Ha Mohale Dam was quick to point out how the many developments from LHWP were benefiting the affected communities and the nation as a whole. He accounted for every benefit the villagers had said and more. Only the additional benefits stated by LHDA in the discussion and in their publications are outlined hereunder.

3.2.3.1 Public health services

The Public Health Plan established the outreach clinics (Fig. 3.16) that were visited monthly by qualified nurses, and they distributed copious amounts of free condoms. Health Monitoring and Disease Surveillance enhanced public health by carrying out testing of HIV and syphilis, treatment of sexually transmitted diseases, the provision of anti-natal care service, nutritional monitoring and immunization of under-fives, health education and health campaigns. Health teacher councillors, peer educators, first aiders, home-based care givers, and contraceptive distributors were trained to work with the public. An advanced health trauma clinic, Leribe Trauma Unit, was established to serve the public on most trauma cases (LHDA, 2002b).

Fig. 3.16: LHWP public health clinic in Ha Mohale
(LHDA -TCTA, 2002)

3.2.3.2 Compensation

By the terms of the 1986 Water Treaty, Lesotho was responsible for the social losses emanating from the project with respect to land, natural resources and livelihood for the affected households. In The Compensation Plan, lost assets in affected areas were compensated to individual people or households by the compensation programme itself and to communities through the development programme (LHDA, 1997).

LHDA's role was to monitor the manner in which individual and communal resources such as property, structures, crop fields, pastureland, medicinal plants, natural fuel wood, bamboo and thatch grass, and other natural resources were impacted by the project. It would then provide appropriate compensation for the loss of such resources to the affected individuals or communities (LHDA, 1997).

For example, trees were in paid cash for a ten-year period based on the average survival of a tree. Further, LHDA, aware of the important multi-purpose use of trees, encouraged and supported further strengthening of the resource through a forestry programme. In this programme, nursery productions availed trees and the holding centres (Fig. 3.17) distributed them for planting around homesteads, in woodlots, orchards and other specific places (LHDA, 1997). This in time would provide the wood energy for heating and cooking lost during dam construction and inundation.

Fig. 3.17: LHDA Distribution Holding Centre for rural forestry (TCTA, 2003d)

Arable land was compensated in one of the two ways: either with cash or if the individual chose to, with grain (Fig. 3.8) for 50 years based on the guaranteed lifespan of the dams. (Preliminary estimate of soil losses had predicted that the tunnels and the `Muela outlet would be completely blocked in 50 years (Pottinger, 2000a)).

Cash options to individuals were in lump sum if asset values were below R10 000 or if a person had a reasonable livelihood (i.e. earned above R3 960 a year); or in annual payments if asset values exceeded R10 000 or if a person had a vulnerable livelihood. Grain compensation was in terms of maize and pulses (beans and lentils). Communal compensation was payable to legal entities such as the community co-operatives and was for communal resource losses e.g. grazing land, thatching grass, etc.

The objective of cash compensations was to improve lives sustainably. The proposed individual or communal project needed to be a viable business enterprise of low risk such as flats, grinding mill, etc. but not shops whereby competition from the Chinese community did not favour the Basotho. LHDA would assist in determining the class of the project and in supporting the survival skills training like sewing and knitting, carpentry, and agricultural projects e.g. poultry, piggery, dairy, etc.

3.2.3.3 Resettlement

Although resettlement was a hot and contentious issue, LHDA had the flip side of the coin about it. It claimed that affected communities (Fig. 3.18a) had been resettled and afforded better housing than before the project (Fig. 3.18b).

Fig. 3.18a: Communities affected by LHWP in need of resettlement (LHDA-SAICE, 2003b)

Fig. 3.18b: A resettlement home (LHDA-SAICE, 2003b)

Resettled villages were those in hazardous areas affected by power lines and inundation. Villages incurring heavy losses of land and other natural resources were not resettled because they were not physically at risk of construction hazards; instead, they had roads and bridges constructed to improve access in their area (LHDA, 1997).

A LHDA official explained that resettlees were further granted a disturbance allowance to assist them to settle at new places. The allowance amounted to R12 000 over three years issued at a 3:2:1 ratio so that in the first year a resettlee earned the highest amount sliding down to the lowest in the third year. The allowance was considerate to the vulnerable groups in that it not pay them less than the minimum threshold of R3 960 per annum. This allowance provided the much needed cash by any community member resettled and was much desired by those not resettled.

Moreover, to better the well being of resettlees, they were followed up with improvements in agriculture, schools and public health. Subsidies for fruit tree seedlings and for intensive domestic livestock farming e.g. poultry, dairy and piggery were provided. To lessen overcrowding in schools, additional classrooms were built.

3.2.3.4 Job creation

With the numbers of the Basotho working in South Africa falling, especially in the mines, LHWP was ideal for providing jobs for the returnees as well as for others still in the country. The project's main contracts created a high number of job opportunities generating up to 22 000 person years of employment in Phase 1A and 15 400 in Phase 1B of which the affected people were mostly considered (LHDA-TCTA, 2001d). During peak construction at Phase 1B there were more than 8 000 jobs for local and regional workers (South Africa.info, 2004).

3.2.3.5 Economic uplift

Lesotho benefited from royalties on the sale of water to South Africa. ***Revenue estimates from the project ranged from US$40 million to US$55 million per year for at least 50 years*** (World Bank, 2002, Hoover, 2001, Pottinger, 1996). The South

African Government paid the royalties to the Lesotho Government through its agent, Trans-Caledon Tunnel Authority (TCTA). These were deposited into the Lesotho government's account. ***About 40% of the revenue was for the social fund to support poor communities*** i.e. it was allocated to the Lesotho Fund for Community Development (LFCD), a social fund aimed at the general development of the country with the mandate and responsibility for development of rural communities; and ***60% was stashed into the country's general budget*** for other government activities (TCTA, 2004b; World Bank, 2004).

The royalties brought the country additional revenue in its economic Development Fund for use in agriculture, disaster management administration (DMA) and labour-based poverty relief projects (*fato-fato*) for more job creation (Fig. 3.19). All were meant for improving the standard of living of the Basotho.

Fig. 3.19: Typical *fato-fato*, a labour-based activity to create jobs. Here the activity was for local road maintenance (LHDA-TCTA, 2002d)

Lesotho also had economic benefits from the hydropower generation initiative. The hydroelectric power generated at 'Muela Dam was distributed through a number of substations to urban areas and other parts of the country. The local generation of

hydroelectricity would not only make the country self-reliant in energy but would also generate further revenue. This would be achieved through the savings made by not purchasing electricity from South Africa anymore and by exporting the surplus hydropower. This would then avail more funds for use in other economic developments of the country.

3.2.3.6 Tourism

LHDA made an input into the country's economic growth by developing tourism within Lesotho to its higher echelons. Principal developed tourist areas were in Phase 1A area in the north of the country (Fig. 3.20). LHDA improved existing roads and constructed new ones for enhanced tourist transport to these places.

Fig. 3.20: Location of LHDA principal tourist areas in Phase 1A (TCTA, 2003d)

These tourist attraction areas were Bokong Nature Reserve (Fig. 3.21a), Tšehlanyane National Park (Fig. 3.21b), Liphofung National Environmental Heritage (Figs. 3.21c and d), and Katse Alpine Botanical Gardens (Fig. 3.21e).

Fig. 3.21a: Bokong Nature Reserve. Left: Tourist information centre (LHDA, 2002e); Right: Steep valley below the grassland plateau (LHDA-SAICE, 2001)

Fig. 3.21b: Tšehlanyane National Park benefited local communities from tourists' visits (LHDA, 2002e).

Tšehlanyane National Park and Bokong Nature Reserve respectively have rugged mountain terrain with picturesque valleys providing scenic beauty with waterfalls, mountains, vast grasslands and extensive afro-alpine wetlands. The Vaal Rhebuck, the Bearded Vulture and other bird species are some of the endemic wild life (TCTA, 2003e).

Fig. 3.21c: Liphofung Cultural Village with overhang cave containing San rock paintings (insert) and other art (Thaba Promotions, 2003d).

Liphofung National Environmental Heritage (Fig. 3.21c) is a cultural and historical site that lies in the tributary stream of Hololo River in the north of the country. It is notable for a large overhang cave (Fig. 3.21d) used originally by the San and other Stone Age people then later by The Great King Moshoeshoe I, the founder of the Basotho nation. It contains original San rock art, a rich archaeological deposit of Stone Age implements and historical Basotho cultural artefacts. It is managed by people from the local community. For the community participation programme, purchases made on the site become revenue generated for the original crafts provider (TCTA, 2003f).

Fig. 3.21d: Liphofung overhang Stone Age and San cave (LHDA, 2002e)

The Botanical Gardens in Ha Katse (Fig3.21e) were launched by LHDA in 1995 over and above communal compensation for loss of medicinal and other culturally valuable plants.

Fig. 3.21e: Ha Katse Botanical 'Malotine' (instead of 'Alpine') Gardens preserving medicinal and other 'Maloti' plant species (LHDA-TCTA, 2002e)

In May 2004, LHDA injected R27 million into this eco-friendly project. The purpose was to preserve the indigenous 'maloti' plants and the natural environment which had been affected profoundly by the water project to the communities affected by Ha Katse Dam construction and operation; and to develop a national conservation strategy to restore flora paying special attention to local needs for plants. This strategy by LHDA concurred with ecological experts' view that such plants should be gathered and re-

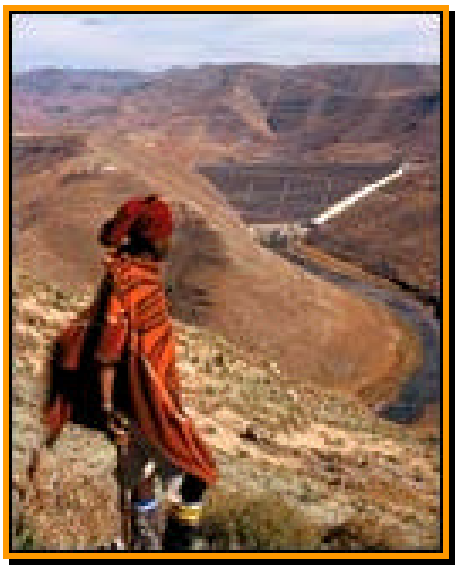
planted elsewhere in order to spare them from being totally annihilated. The Botanical Gardens contain medicinal plants and plant species endemic to the major ecosystems of Lesotho (Khotle and Caswell, 2004; LHDA-SAICE, 2003c).

3.2.3.7 Technological future outlook

A further benefit mentioned was that there was a good future outlook for children and youth in the project area. They had been exposed to a lot of technology and this was destined to change their education and livelihood for the better.

CHAPTER 4

VIEWING THE WATER PROJECT



(Mail & Guardian, 2004)

4.1 THE SOCIAL IMPACTS OF LARGE DAMS

4.1.1 Case Studies

Water development case studies in the Developing World have been specifically selected in order to make comparative studies of somewhat compatible developments. Case studies of projects from Highly Developed countries like USA or Japan would not favourably compare to that of Lesotho because the levels of national economic and social developments were vastly incompatible, therefore, the impacts on the communities would not necessarily be similar or comparable. The following summaries of some water project case studies from Argentina, Brazil, Guatemala, Pakistan, Thailand and Zambia-Zimbabwe have been presented in this section as comparative studies to Lesotho Highlands Water Project.

4.1.1.1 Argentina Yacyreta Dam

One of the world's largest hydroelectric projects, the Yacyreta Hydroelectric project, was entered into between Argentina and Paraguay in 1983 for generating 2,700 MW of electricity for use entirely by Argentina and for irrigation purposes. The 67 Km long dam on Rio Parana (Parana River) covered 1,650 Km^2, inundating approximately 80,000 hectares in Paraguay and 29,000 hectares in Argentina beyond the original river bed (The Whirled Bank, 2003; Peña, 1999).

The Yacyreta Hydroelectric project forced more than 5 000 people to move from the flooded Parana River banks resulting in enormous social disruption, as well as other yet unmitigated environmental and economic impacts. Communities were forced to abandon their homelands and their livelihood sources of sustenance from the river. Many low income families had to live near the polluted stagnant water from the reservoir and frequently had their houses flooded, their domestic water sources lost by pollution, their sanitary systems destroyed by raising groundwater levels and their children exposed to water-bound diseases. Diseases flourished because there were no working sewers and health-care facilities were few. Workers struggled to reach

their jobs and children often failed to reach their schools due obstruction and crossing problems (The Whirled Bank, 2003; Peña, 1999).

The project's implemented social, economic and environmental impact mitigation plans including the compensation and relocation programs were inadequate because of insufficient information about the real magnitude and extension of the affectations and the population affected (Peña, 1999).

4.1.1.2 Brazil case study

Mandatory relocations of 14 000 rural residents for Tucurai Dam adversely affected the structure of their lifestyles. Resettlement process took place with little or no consideration of their livelihood patterns. Semi-urban relocation denied them of their pastoral activities important in maintaining the integrity of their indigenous reserve. In addition, they were harassed by former owners (Aylward & Khagram, 2000).

Affected communities were merely forced to accept arbitrary compensation. Assets assessment for compensation only took material aspects into consideration and neglected to include the value of work invested in the land, the symbolic values, cultural logic, and social and historical conditions of these communities (Aylward & Khagram, 2000).

Communities staying around the project area did not receive the promised electricity. Downstream communities faced impacts of disruption of fishing activities due to water quality and quantity changes, changes in farming activity, and disruption of crossing due to unexpected floods (Aylward & Khagram, 2000).

4.1.1.3 Guatemala Chixoy Dam

The Chixoy Dam project, financed by the World Bank in 1978, was constructed in Alta and Baja Verapaz where 75 000 displaced indigenous Maya Achì Indian group had lived for hundreds of years, and was completed in 1982. The community of Rio Negro village had refused to relocate from their ancestral lands to new settlements provided for by the government. The army went into the village to force locals to move killing some 400 people (The Whirled Bank, 2003; IRN, 2001; IRN, 2000).

Regarded as a financial disaster, the project had cost from US$1.2 billion (521% higher than predicted) to US$ 2.5 billion. The country's energy needs were not met and it was spending US$150 million a year to produce electricity. The energy costs rose in the last few years with only 30% of the population benefiting from electric power. For more than a decade, the displaced communities were put into a program that provided them with inferior lands on the grounds that their 1980 standard of living had been restored (The Whirled Bank, 2003; IRN, 2001; IRN, 2000).

4.1.1.4 Pakistan case study

Tarbela Dam has 120 villages submerged resulting in 96 000 people resettled. Further negative social impacts include inadequate and often delayed compensation payments, corruption of compensation officials seeking *'facilitation'* payments, downstream reduction of fish, and landless farmers having no other skills for employment. However, due to health and other developmental improvements, life expectancy and literacy rate increased significantly (Asianics Agro-Dev. International Ltd, 2000).

4.1.1.5 Thailand Case Study

Benefits of Pak Mun Dam are the hydropower and irrigation scheme. Negative impacts are many, few are mentioned here. Downstream fish catch declined for both households and commercial villagers. As food security and incomes destabilized, families broke up seeking various ways to cope including migrating to urban areas for wage labour. Compensation money was not enough and permanent loss of fisheries could not be replaced by once-off cash payment. Cropping incomes declined and livestock reduced drastically as owners sold them due to reduced grazing land and shift from farm occupation. Access to common property such as forests and grazing land was lost. Resettlement brought many social and cultural problems as new social arrangement disrupted former social relations and changed patterns of interaction among villagers (Amornsakchai et al, 2000).

4.1.1.6 Zambia-Zimbabwe case study

Before Kariba Dam, the indigenous Tonga people of Zambezi River basin were preoccupied with riverine and upland farming, livestock rearing, hunting and fishing. Fertile alluvial valley soils yielded maize, sorghum and other crops, and produced greatest part of annual crop harvest resulting in the reduction of hunger and famine. However, the dam construction period was marked by high number of sexually transmitted infections and steep increase in number of HIV/AIDS cases (Soils Incorporated et al, 2002).

With resettlement the Tonga people suffered psychological, cultural and social losses. They lost access to their ancestral grounds, agricultural areas, and easy access to friends and relatives across the river. The dam had raised concerns on people's safety by causing numerous earthquakes. Because the dam project prejudiced the living standards of people displaced, it has not been entirely effective (Soils Incorporated et al, 2002).

4.2 VIEWING THE LESOTHO HIGHLANDS WATER PROJECT

4.2.1 Social impacts in the affected areas

The affected indigenous people of Argentina, Brazil, Guatemala, Paraguay, Pakistan, Thailand, Zambia and Zimbabwe had their lives changed dramatically by water projects which caused them enormous social disruptions. Equally, the Highlanders of Lesotho have been impacted with the overall disruption of their social life by the presence of the large water development project in their midst. Mahlape Mothepu, Deputy General Manager of LHDA's Environmental and Social Services Group acknowledged that previously the extended families used to be self-sufficient but now the flipside was that the social fabric has been torn (Smith, 2002).

LHWP made noticeable impacts on their livelihood in the short and long terms. This was no surprise because construction of large dams always brings benefits and causes problems to local societies (WCD, 2000). In such a case the concern should be rested on the effects on the welfare of the communities relative to a noticeable and sustainable general improvement in their well-being.

From the results in Table 3.1, Phase 1A seemed worse off in LHWP impacts. This could be because LHDA was still inexperienced in dealing with the project which incidentally had no environmental impact analysis (EIA) and did not afford displaced people choice of settling places. Improvements in Phase 1B meant that LHDA had learned from its first mistakes. It could then be inferred that with subsequent phases more improvements would accord the affected people more contentment and less grievances. Further explanations of the results in Table 3.1 will be apparent in the subsequent sub-sections.

The impacts of the project on the affected highlanders were obvious in their social streams of culture, economy, health and land use. The impacts were brought in part by elements of compensation, community projects, down stream flow, the physical divide, resettlement and seismicity. These are all examined hereunder.

4.2.1.1 Culture

The Tonga of Zambia were said to have suffered psychological and cultural losses because among other things they had lost access to their *ancestral grounds*. In Guatemala, 400 affected indigenes were killed in a forced movement because they had refused to relocate from their *ancestral lands* to new settlements. The Basotho and most Africans too have a high regard and reverence for *Balimo*, their *ancestors* or dead relatives. That was why affected highlands locals were also hesitant to leave their place of birth or their *ancestral grounds* where there were *mabitla* (graves of the dead) and *lithotobolo* (household ash dumps for burying the bereavement cloth, bereavement hair, and foetal corpses and placentae). *Balimo* are believed to be intermediaries to the Supreme Being and to take part and lively interest in the affairs of their living families. They live in the invisible world of the dead. The family land is their property, and they must be consulted when land is left or let out to other people (Rakotsoane, 2001).

Indeed, changes to cultural identity of the rural communities have resulted and they will occur on a continual basis (LHDA, 1998) because the Compensation Plan of LHDA had failed to take into consideration their African identity much as it was with the Tonga. Compensation on material things, the visible world, without due respect to the traditional *spiritual dimension*, the invisible world, resulted in cultural disruption.

Divorced from their *ancestors*, the resettled communities had been forced and placed onto foreign ancestral spirits in the new resettlements. That disturbed their spiritual world which they regarded as source of blessings in life, and jeopardized their future. LHDA compensation being silent on these spiritual ties and values was therefore, incomplete and unsatisfactory for the land lost (Rakotsoane, 2001).

Lefa, the inheritance, is the cultural identity pertaining to fields, livestock and other worthy property which are passed on to children by parents if alive or by family consent if parents are dead. Traditionally, the eldest son gets most of it if not all but nowadays younger sons even daughters are considered. This constitutes both an

important traditional pride and a sustainable livelihood which keeps family bonds intact from generation to generation.

During boyhood, male children are taught and groomed to be responsible in caring for their family wealth of fields and livestock for it is from these that they will maintain the welfare of their own families when they too become men. In the affected communities where fields were lost and livestock was diminishing, this tradition was dying and the family closeness was weakening as there was no hope for the future life. As education, skills and employment levels were minimal in rural communities, inheritance was the artery of future life for each family generation.

In Table 3.1 (p. 65) each affected village showed a magnitude of cultural crack. There were other factors that consummated the cultural family bond break up. As in Thailand, destabilized food security and income forced families members to break up in search of ways and means to cope including migrating to urban areas for wage labour. A further malignant factor was prostitution. Girls and young women from near and afar who could not be employed went for their share of the project's money by means of prostitution. Prostitution also disrupted families resulting in shameful family breakdowns within the traditional communities of the highlands.

In 3.1.2.5 villagers accounted on how bonds of cultural oneness were severed among individuals, families and villagers by the new cash economy brought about by cash compensations. It had induced inter-quarrelling due to debts and the irresponsible male households with itching pockets. Resettlement was equally blamed as a new social order that tore families apart by detaching some family members from fellow members. Resettlement further decremented culture as resettlees in urban and semi-urban areas found themselves unable to exercise their cultural rituals lest they be laughed at and ridiculed by the urban elites who had lost most of their customs. Therefore, the new cash economy order like in Thailand was a new social arrangement which brought cultural problems by disrupting former social relations and changing patterns of interaction among families and villagers.

Furthermore, the Basotho are traditional in their community leadership as embalmed in their chieftainship. Village chiefs and headmen form the basis of traditional administration system which was strengthened by the Great King Moshoeshoe I in the late 18th and early 19th centuries. Chieftainship is still regarded as the unifying factor particularly among the rural traditional Basotho (Mashinini, 2000).

Village chiefs and headmen play an important role as grass-roots leaders (Mashinini, 2000) in performing day to day administrative tasks such as land use allocation, dispute settling, law enforcement, keeping of order and peace, and issuing of administrative documents. Village chiefs also monitor livestock movements and transhumance, and authorize ownership changes. They need to make appearances in ceremonies and burials; they are concerned with unification of people under local rule, holding of public gatherings (*lipitso*), organising public participation in communal issues, etc.

Denuding them of some of these functions disrupted the cultural social order of the Basotho and paved the way for disunity, disorder and loss of national coherence. As an example, Ha Ramokoatsi villagers said that soil erosion was increasing in their gardens because their chief could not act above the instruction of LHDA.

4.2.1.2 Rural economy

The Highlands have always been Lesotho's poorest and least-developed region (Smith, 2002). Lesotho Highlanders' economy is dependent on livestock, subsistence farming (Fig. 3.23), marijuana and earnings from South African mine workers that form the major income sources.

Cattle played an important role in the farming systems (Fig. 4.1). Staple crops were grown for household consumption and when yields were good, some of the cereals and pulses were sold for cash or exchanged for some livestock. Vegetables formed the best market during summer to early autumn high season. Notably, large amount of crop, particularly maize and peas was consumed in the green state (*lehoetla*) mainly because most households had very little or nothing left in the house from the previous year's harvest (UN FAO, n.d.).

Fig. 4.1: Livestock and subsistence farming in Lesotho Highlands form the major props of rural livelihood (LHDA-SAICE, 2003b)

On average, nearly 60% of households might be self-sufficient with food for three months after harvest and about 10% for eight months. When food supplies ran out, households brewed and sold local beer, and sold wood and marijuana (*matekoane*) to survive (UN FAO, n.d.). Those who owned some livestock sold some cattle, sheep, etc. and also relied on wool and mohair sales.

All these regional income sources were losing their economic magnitude because the water project was destabilising them. Therefore, loss of animals and land meant reduced livelihood resource.

However, some of the main supports of healthy economy are education, skills and employment. From the 1995 Resettlement and Development Study in Phase 1B, LHDA found that education level was generally low in the subject rural communities. The results were that only 1.27% of sampled community population had been in matric, 0.15% in vocational education, 0.10% in college or university and 0.08% had police, military or prisons insight. Such low educational level prohibits and reduces employment prospects resulting in little or no regular incomes. This was reflected by the high incidence of unemployment found by the study (LHDA, 1997).

The employment survey showed that there was 7.7% of surveyed household population that was recorded as wage earning i.e. 92.7% were unemployed (UN FAO study estimated 90% were unemployed). This then revealed that there was a dependency ratio of 1:13, meaning that thirteen mouths were dependent on one wage labourer to feed, clothe, etc. It was further found out that there were limited skills available. Only 19% had skills other than in agriculture (LHDA, 1997).

It goes without saying that the aforementioned three economic props proved inadequate to form the basis of rural economy of Lesotho. Therefore, by destabilising the former existing supports LHWP had shaken loose the real foundations of the economy of the affected rural communities. However, in reality, nearly half of Lesotho's people are poor, and poverty is concentrated in the rural areas where they live on subsistence farming and in most severe Highlands conditions. To support their households, most of these Highlanders travel to South Africa to work especially in the mines. But that income from migrant labour is falling as there are fewer jobs in the mines for non-South Africans and retrenchment rates are high (Archer, 1996). In September 3, 2003, in *Makumane a Mona le Mane* program of the SABC Lesedi FM Radio it was said that from the 150 000 Basotho miners in 1987, there were only 50 000 in June 2003. See Fig. 4.2.

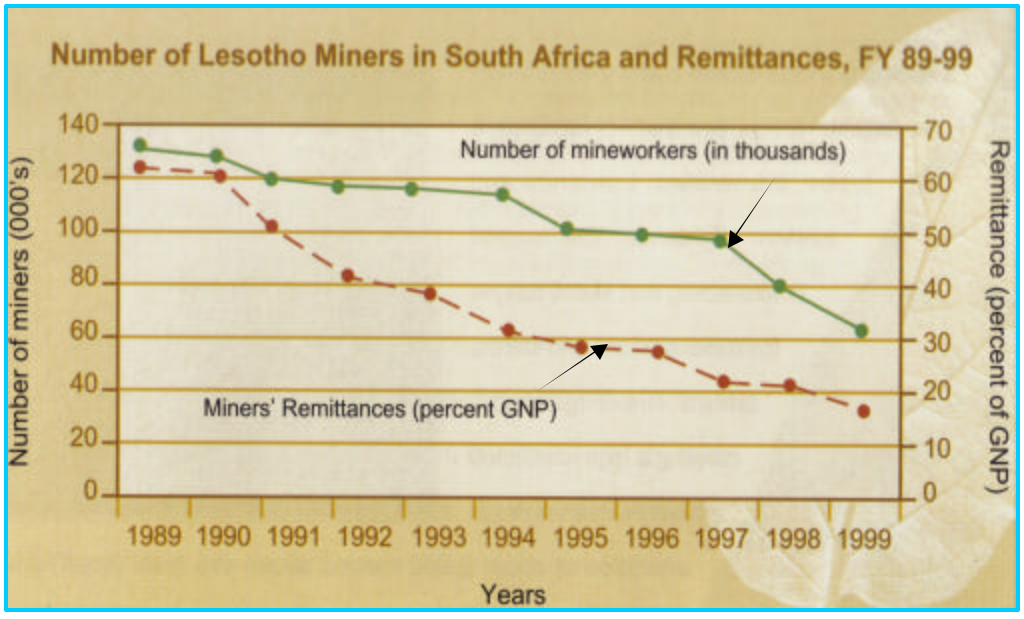


Fig. 4.2: Decline of Lesotho mineworkers and remittance from SA mines (LHDA-TCTA, 2002f)

The Task Manager of World Bank in Lesotho, Andrew Macoun, while admitting that Lesotho and the Highlands had been hit hard by mine layoffs in South Africa, argued that the Highlanders would actually be worse off without the dams (Smith, 2002).

Additionally, yields from subsistence farming had been falling and high soil erosion and imperfect farming methods had been degrading the little arable land left. Subsistence farming could not indefinitely sustain the rising population and sustainable methods of livelihood would eventually have to adapted (Smith, 2002).

These trends painted a bleak economic future spelling unsustainable rural life. They must be considered when weighing the present impacts of the project because it implies that LHWP was not destabilising an existing social economy that would restabilise itself if LHWP did not exist (Archer, 1996).

4.2.1.3 Health

In developing countries where employment was still a problem, large construction developments, irrespective of type, attracted huge labour force. The result was an increase in outside worker population that begot increased health problems.

In the case of LHWP, approximately 20 000 people moved in to work on the project resulting in many squatter camps that caused decline in health standards; prostitution became the order of the time (Yonge Nawe Environmental Action Group, 2001). In the Kariba Dam project, such an influx had brought about a high number of sexually transmitted infections and a steep increase in number of HIV/AIDS cases. Without exception, HIV/AIDS and other sexually transmitted diseases were introduced within the project area of the Lesotho Highlands (LHDA, 1999a).

This has resulted in an increase in the national HIV/AIDS infection rate. Worldwide, there was an estimated 43 million HIV infected people, close to 40 million (about 90%) were living in Africa where influx of developments was occurring; of these 28 million (about 70%) were in SADAC region. In Lesotho the increased infection rate had affected 31% of the 1.25 million adult population, contributing 0.9% of world's affected and making it to be the fourth highest in the world (SAPA, 2003).

The increased HIV/AIDS excess mortality resulted in lower life expectancy (36.81 yrs), higher infant mortality (85.22 deaths/1 000), higher death rate (24.79 deaths/1 000) and lower population growth rate (from 1.1% to 0.14%). This dropped the population from 2.1 million in 2000 to 1.86 million in July 2004 (CIA, 2004a, Population Reference Bureau, 2003, Rapolaki, 2001).

On the other hand, the increased services through clinics and advanced medical centres like Ha Mohale and Hlotse had improved public health. Also, as in Pakistan, life expectancy was anticipated to improve significantly in the coming years.

4.2.1.4 Land use under cover

Lesotho has a total of 394 500 hectares of arable land (Fivas Report) from which nearly 4 800 households (Archer, 1996) of more than 30 000 people have been displaced (BBC News, 2003). About 4 635 ha of grazing land and 1 500 ha of extremely good cropland containing some of the best soils in the region have been lost in both Phase 1A and Phase 1B (Letsie and Bond, 2000). More than 1% [about 1.6%] of the total population had lost their farmland or other asset to the water project (Smith, 2002). The following table compares amounts of arable land between Lesotho and the case study countries.

Table 4.1 Comparative arable land

	* Hectares per Capita		**Arable Land (%)
Country	**1979-1981**	**1997-1999**	----------
Argentina	0.89	0.69	9.14
Brazil	0.32	0.32	6.30
Guatemala	0.19	0.13	12.54
Lesotho	0.22	0.16	10.71
Pakistan	0.24	0.16	27.81
Paraguay	0.52	0.42	5.54
Thailand	0.35	0.25	32.88
Zambia	0.89	0.54	7.08
Zimbabwe	0.35	0.27	8.40

(**CIA, 2004b; *World Bank, 2002)

The 1979-81 World Bank estimates showed Lesotho as one of the countries with low arable land of 0.22 hectares per capita. Almost twenty years later, this had dropped to 0.16, ranking Lesotho among the lowest three countries. With a low net population growth of 0.14% p.a. (CIA, 2004a) compared to1.3% for the world (Population Reference Bureau, 2003), this could mean that Lesotho, apart from being one of the countries with the lowest total available arable land, had an increasing arable land loss through soil erosion and other land degradation processes. Commenting on this Letsie and Bond (2000) said that following erosion of much of Lesotho's arable land over the past three decades, only 9% of the country's soil was presently available for cultivation and that Phase 1B had exacerbated this situation further. Lori Pottinger (2000) from IRN elucidated:

> *"Soil erosion, already a major problem, has been aggravated by the construction of the dams and will be worsened still further as displaced villagers are forced to cultivate and overgraze steeper hillsides."*

The above information, coupled with the facts that the country had limited mineral resources and was among the world's poorest and starving countries of the decade, have made every hectare of arable and pasture land very important. While the other countries might have sufficient land, natural resources, technology and economic development to absorb arable land loss, it was a different matter for the mountainous Lesotho.

The Tongas and the rural Basotho alike cropped in fertile river valleys and the latter additionally grew potatoes, pumpkins, and marijuana while the produce from fruit trees and vegetables improved nutritional balance of their household diet (Tshabalala, 2001). They have lost these to the dams and roads. Also, like the indigenes of Argentina and Paraguay, they have been forced to abandon their homelands and their livelihood sources of sustenance from the river valleys.

Cultivation is confined to marginal land on the slopes which did not produce sufficient yields. Slopes were being subjected to more soil erosion as people looked for new fields and as more animals congested for grazing. As in the case of Pak Mun Dam project in Thailand, eventual results were the reduction of livestock and decline in crop

yields. Major losers in this respect were the poor, disabled, widowed or orphaned. This could spell out more vicious poverty and famine in years to come. All these aspects reflect the grim realities of life in a marginal agricultural region.

Farmland was a valuable commodity in Lesotho where only 9-11 percent of the land was arable but nearly 90 percent of the population still farmed (Smith, 2002). Therefore, because Lesotho has very little arable land upon which it was economically dependent in the form of agricultural subsistence and pastoralism, any loss of farming land resource was significant (Schulze et al, 2001). It could not afford to have its productive land for food shrinking when it had no equivalent farming or grazing land on which thousands of families uprooted by these dams could be relocated (Weisfelder, 1997). In 5th Annual International Day of Action Against Dams and for Rivers, Water and Life on 14th of March 2002, Swaziland Yonge Nawe Environmental Action Group (2002) reported that most villagers decried that their land where they grew food was taken but not replaced. This increased the need of foreign aid for development programs and to feed the growing population.

By August 2003, Lesotho was among the seven Southern Africa countries (Angola, Malawi, Mozambique, Swaziland, Zambia and Zimbabwe) requiring 2 million tons of food aid for the period September-December 2003, averaging 6 million tons per year (SABC AFRICA TV, 2003) due mainly to drought; in October 2004, this was estimated at US$63 million for the first quarter of 2005 alone (SABC AFRICA TV, 2004). According to World Food Programme announcement of August 19th 2003 in Maseru, the country needed over 38 000 tons of food aid to feed an increasing 375 000 vulnerable households (SAPA, 2003). Even on good harvest, many poor farmers produce enough food to feed their families for only half the year, for the other half they must buy food on their minimal income mainly gained by selling livestock and/or working for richer farmers. Because of poor farming practices and women heading many of the poorest families particularly in rural areas, food production is also poor (Bookstein and Lawson, 2002). Lesotho will be among countries more in need of growing international assistance particularly when crop compensation for inundated arable land ends after fifty years.

The pastureland flooded by the reservoirs (Fig. 4.3) was mainly used for grazing in winter when higher ground was too cold for animals and shepherds. It also provided the scarce and valued thatch grass (*mohlomo*) (Jayaseela, 2002), and access to communal assets like medicinal plants, brushwood fuel, trees, wild vegetables and other useful grasses (LHDA, 1997).

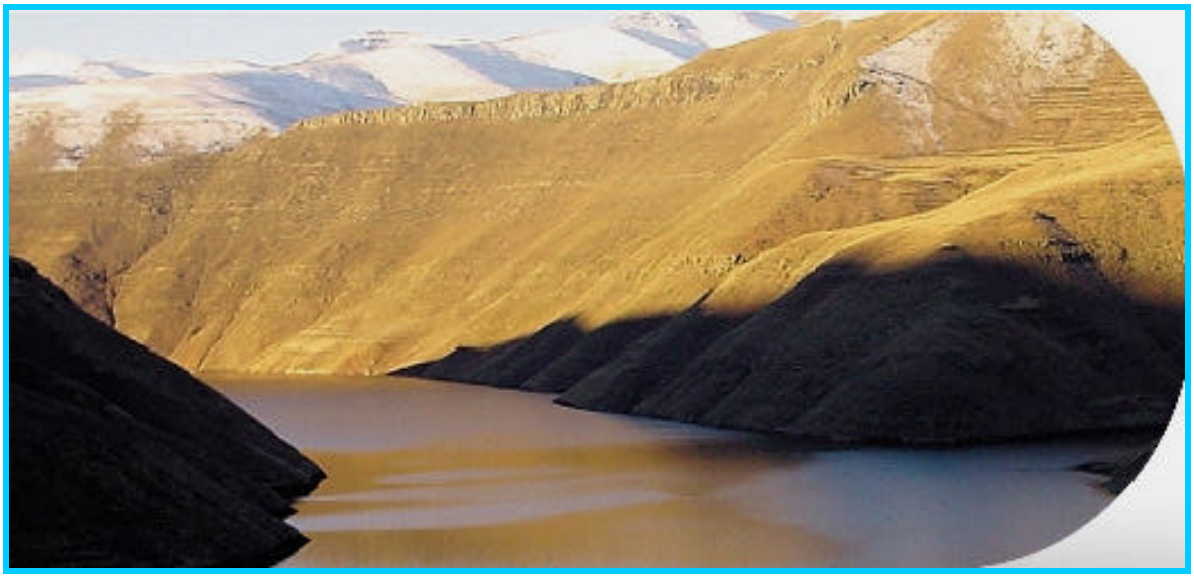


Fig. 4.3: Malibamatso valley winter pastureland slowly being inundated by Katse Reservoir. Highland surfaces are covered with snow (LHDA-SAICE, 2002).

As in Thailand, access to these communal assets has been lost. Further, loss of livestock is estimated at R88 million p.a. due to reduced grazing land and botanical infestation caused by ecological disturbances (Van Wyk, 2000).

Therefore, the two critical life supports of the Lesotho Highlands economy were under threat, mainly, arable land and livestock. As with Thailand, cropping incomes were declining and livestock was reducing drastically as owners sold them due to reduced grazing land and shifted from farm occupation (Amornsakchai et al, 2000). This has placed food security and incomes in the already precarious mountain conditions of Lesotho to be at even higher risk (Matlosa, 1998) than ever before.

4.2.1.5 The physical divide

The dam crossing tribulations that caused Argentinean and Paraguayan workers in affected communities to struggle to reach their jobs and children to reach their schools, and the indigenous Tongas of Zambezi River basin to lose their easy access to friends and relatives across the river were aggravations yet to be experienced by their community counterparts in the Lesotho Highlands. Initially in Ha Katse Dam, the project had undertaken to provide the communities a means of access across the dam with bridges and ferry boats (LHDA-TCTA, 2002b). When the latter failed, the communities were presented with a new option of commercial taxis which they could not afford given that they had no regular means of earning money; moreover, the taxis could not ferry them across the vast dam because crossing it was the problem not the inter-community road transport. Even the bridges proved too sparse to be satisfactory.

Therefore, family and social networks built up within and between their villages elucidating a particular cultural value were disrupted severing many of these networks; movement patterns of individuals, families and even whole villages became constrained, destroying their whole livelihoods. Thus, Lesotho Highlands communities that used to share social ties were now cut off from each other by the reservoirs (Pottinger, 2001). They could no longer access services, travel routes and other villages across the river easily. Such social changes facing the affected communities might lead to intra- and inter-household conflicts and undermine their social stability (Hunting-Consult, 1997). Details of dam obstruction as accounted by the villagers have been given in section 3.1.2.3 Dams as physical barriers.

4.2.1.6 Resettlement

Large dam developments are notorious for displacing the local peoples who end up resettled somewherelse away from their normal living places. Tarbela Dam displaced 96 000 people in 120 villages; Chixoy Dam dislodged 75 000 indigenous Indians; Tucurai Dam relocated 14 000 rural residents; and Yacyreta Dam forced more than 5,000 people to move. These displacements have resulted in impacts of varying natures and magnitudes as depicted in the case studies.

The Mail & Guardian of August 6, 2004 reported that Ha Katse Dam relocated 78 families and an additional 110 households were resettled due to development of advanced infrastructure and possible hazardous locations. For Ha Mohale Dam the newspaper further reported that 99 families were resettled before construction and at least a further 226 families were relocated as a result of impoundment of the dam. However, the post-inundation resettlement was not mentioned for both dams. Pottinger (2001) from International Rivers Network (IRN) said that approximately 24 360 people were affected by Phase 1A loosing about 312 homes, and a further 7 400 were affected in Ha Mohale.

Unlike in most large dam developments, LHWP resettlement was credit-worthy. Ha Mohale Dam villagers (but not Ha Katse) were allowed choices of destination - an important psychological step in easing relocation traumas. Families relocated by the building of Mohale Dam had to choose either to move within the Highlands, or to rural lowlands villages or to [the capital] Maseru (Mail & Guardian, 2004).

Importantly, resettlement was dispersed thus relieving sudden and heavy demand on resources, services and facilities at relocation places. Nevertheless, other resettlement problems were similar to those described in the case studies: disruption of social structure and lifestyles resulting in various social, environmental and economic impacts; disregard of livelihood patterns; dislocation of indigenous reserve; and harassment by former dwellers in resettlement areas.

LHDA was too slow in its responses. For example, replacement housing took years to carry out, and in some places it was still pending. In Phase 1A in particular, many homes that were lost to power-line construction, road works or seismicity still had no replacement housing (See Table 3.1, pp. 64-66). In 1997 a local NGO, Highlands Church Action Group, made a survey on affected households with filed grievances on the project in 1993-94 and found that 41% had not been addressed at all; 55% were partially addressed; and 4% were fully addressed. Of those not addressed in any way whatsoever, 68% had received no reason from LHDA as to why that was the case, and 26% received promises of compensation but in vain (Pottinger, 2001).

Given the recent plight to the Ombudsman by those affected as well as their responses in the 1997 survey, and the results drawn in Table 3.1 (pp. 64-66) of this research, the situation could have changed very little if at all. Pottinger (2000c) has claimed that evidence showed that standards of living for the majority of project-affected people were in fact declining and few had been able to re-establish livelihoods while other displaced people had been hurried into resettlement sites without access to water and other resources. Chris Smith (2002) put it crudely:

> *"A scheme to build dams in the Lesotho Highlands is watering South Africa's thirsty cities while making beggars of the region's already impoverished residents."*

Personal accounts from resettled people in part also substantiated this sentiment. They have mentioned that officials from Maseru had told their families to abandon their homes and fields in the villages to make way for the dams. In exchange they promised them clean water, new housing, cash, etc. but *'many moons and years have passed'* and many of the promises have not materialised. The promises were a cynical means to an end:

> *"What it did was [to] pacify a local people and get them to be excited about the scheme and cooperate with LHDA",* said Ryan Hoover, the IRN Africa program manager (Smith, 2002).

The years have dragged on and the reservoirs behind dams continued to fill. For many Highlanders there was no hope of the authority following through on its promises. A resettlee worried for the future once said listlessly*:*

> *"Life has deteriorated. Before, we had land, [we had] our fields. Now our fields are gone"* (Smith, 2002).

The semi-urban resettlees accounted that they found it difficult to continue with their traditional practices the way they used to in their rural environment. For example, they could not use *leifo* (an in-house ground fireplace used as family sit-around during heating and cooking) because LHDA said they would dirty the modern houses. Coverdale and Pottinger (1996) described the situation:

> *"All 34 replacement houses required for the 25 households under Katse Reservoir relocation have been completed and the beneficiaries moved in ... The major*

concern is the absence of a cooking space in 21 of the 24 homes visited. Also, no appropriate arrangements have been made for heating during the winter months. More wealthy homes are planning to buy paraffin stoves for heating their homes during winter months".

Another family from Phase 1B village was happy to be resettled at last, but said their old life was better:

> *"Even though this house is beautiful, we were more satisfied with our old life - we liked our houses, we had good fields and a garden, and we were part of a community. We are generally satisfied with the house, but all other promises have been broken"* (Coverdale and Pottinger, 1996).

Again, their house did not have a cooking and heating area, and LHDA did not supply paraffin or coal as they had promised (Coverdale and Pottinger, 1996).

Resettled people could not decorate their new houses with *litema* (the traditional art form) to add flair of personal design and liking (Fig. 4.4). The resettlement houses were "*grey and monotonous brick constructions*" (Hennig, 2003). Therefore, they complained that though the houses were somewhat modern they were unsuitable because they were cold and lacked owner's personality or proprietary identity. To live happily, one should be content with what one has to live with rather than different lifestyle or perceptions suited to the tastes of someonelse.

Fig. 4.4: Typical rural house decorated with *litema* (LHDA, 1996?)

Resettlees could not freely practice their rural cultural ways as urban people did not tolerate them. For example, little girls could no longer dress *lithethana* (Fig. 4.5).

Fig. 4.5: Rural little girls in traditional *lithethana* (LHDA, 1996?)

In the present urban areas resettled children wore out clothes faster and dirtied them quickly, *lithethana* were ideal as they were cheap to make and durable requiring little money for decoration unlike cloth dresses bought frequently and demanding regular washing. Because they were not even employed, life support and maintenance costs had suddenly become dearer.

Other traditional practices that resettlees had to forego were *mokete oa balimo* (ancestral worship feast), *lebollo* (initiation) (Figs. 4.6a & b), traditional dressing and *letsema*.

Fig. 4.6a: *Bale*: Basotho girls while at initiation school dressed in *lesira* (face cover mat), *kholokoane* (round rope), and *matatana,* (goat skins) (TRC, 2004b)

Fig. 4.6b: *Litsoejane*: traditional Basotho girls from initiation school, titivated in *letsoku* (red ochre) and *lifaha* (beads) (Mwanza, 2005)

Lebollo was used to educate young boys and girls for future manhood and womanhood as husbands and wives. Doctrines and technicalities of *lebollo* were *koma*, a secret and sacred dogma not to be disclosed in public or published in any media.

Letsema was a food and local beer community come-together for helping one another on labour-intensive work. But after resettlement, for such help one had to employ someone else, and then paying was a problem because they themselves unemployed and poor. In their real homes where they had been forced to leave, their work philosophy was *letšoele le beta poho* (unity is strength); the poor benefited too. Things had changed to individualism and money; that oneness which was shared by the community as a whole was no more. The poor bore it alone – they felt the real pinch of not having anything in life.

Other problems included absence of animal grazing land; being denied burial places by original communities; lack of placement for their children in schools due to overcrowding; marginal clinical services due to overcrowding; unemployment; and payment of land rates, water, sewerage and electricity. They felt that had LHDA told them of these conditions before hand, they would not have moved.

"People never stop complaining", once said an LHDA official. Amidst their complaints, some resettlees actually had more improvements than before resettlements. LHDA had bettered their standard of living by providing modern housing and service facilities they could not have owned. For example, some were serviced with through roads, toilets, electricity, water and/or fenced yards. (Compare Fig. 4.7 with unserviced rural homes Fig. 4.8.)

Fig. 4.7: Ha Makhalanyane: Fenced resettlement houses for affected communities (LHDA-SAICE, 2003b)

Fig. 4.8: Typical Sesotho village in Ha Mohale Dam area (LHDA, 2002).

For those remaining in the project area some of these services had also been provided although not to all. These services were most lacking in Ha Katse Dam (Table 3.1: Summary of Results, pp.64-66) for the reasons previously stated.

Coverdale and Pottinger (1996) agreed that resettlement was probably the most traumatic aspect of this project in which people were being moved from their home villages. In addition to the pain of being moved away from their land and community, many relocated people have had the additional distress of living in a compromised situation for some years. LHDA had been aware of this from the start and unlike with other large water schemes, it was vigilant enough to provide resettlees with a financial compensation known as disturbance or settling-in allowance (See 3.2.3.3 Resettlement, p. 70). In addition, the resettlement houses were built according to design preferred by the resettlee. All these resettlement characteristics distinguished LHWP from other contemporary water schemes in addressing the affected communities. Unfortunately, the progress toward relocation of houses in the Katse valley was still very slow and well behind schedule (Coverdale & Pottinger, 1966).

4.2.1.7 Compensation

The most notable aspect of compensation has been the crop fields compensation either in a form of grain or money. The annual supply of grain assured food availability as the villagers said: come frosts, good rains or droughts. However, this did not sway them to accept it totally because it lacked variability and healthy nutrition; it also lacked sustainability due to the diminutive quantities given and the time limitation of 50 years i.e. two generations. Some people were careless with compensation money due to lack of experience in handling large sums, but others invested it wisely.

Other compensations such as damaged structures (houses and schools), household property, firewood, thatch grass, pastures and medicinal plants caused general outcry because of delayed payment. There were a few compensations that had been well settled, but in general, compensation was not well appreciated (See Table 3.1, p. 66). The following paragraphs explain the irks, pains and pangs of compensation and why it fell out of communities' favour despite some of its good aspects.

Since its inception, LHWP compensation program had been marked by fundamental flaws, both in terms of the policy itself and implementation (Coverdale and Pottinger, 1996). Recent surveys indicated dissatisfaction on the part of Lesotho residents with resettlement schemes and provisions for reimbursement (Letsie and Bond, 2000). Compensation payment problems that were attested by the affected Basotho communities and confirmed by the Ombudsman were to a greater extend similar to those of the affected communities of Brazil, Pakistan and Thailand. There were people who still lamented for their compensation being determined unfairly, too small, delayed, or never received without any explanation given. Like in Brazil, they were obliged to accept arbitrary compensations. They had voiced their grievances against LHDA through village community representatives, chiefs, NGOs, courts and to the Ombudsman but with limited success if any.

This lack of effective communication and explanation on compensations, coupled with recent corruption scandal by former LHDA Chief Executive Officer for allegedly receiving R12 million in bribes from international companies involved in the project from 1985 to 1995 (Rothert, 1999), further stamped a stigma of mistrust towards the project and LHDA (Table 3.1). It had led villagers, and indeed the public at large, to believe that there were some corrupt officials who were busy helping themselves on compensation funds resulting in said payment inefficiencies.

Compensation recipients had for long complained of insufficient and lack of diversity of the food grain they were given. The basic food package consisted of 97 percent maize and 3 percent pulses. NGOs, the World Bank and the Panel of Environmental Experts had for several years urged LHDA to diversify and improve it. For example, a strong recommendation to this effect was made by World Bank mission in 1994 for the 1995 delivery but to date there was still no change. Again, assets of fields, trees and gardens rates were grossly undervalued in cash compensation. The compensation policy was irregularly implemented at best. Replacement seedlings for lost trees in early 1988 had still not been supplied, and fodder and compensation foods continued to be either late or never. All these compounded to a theatre of shocking maladministration of compensation policy. It was no wonder that many affected people

had lost confidence that their needs would be viewed with any real concern by the project authorities (Coverdale and Pottinger, 1996).

Even when this research was conducted in 2003/2004 there were communities and individuals still left gaping in the sun for their compensations (See 3.1.2.9 Compensation injustices by LHDA and Table 3.1: Summary of Results). Follow-up on requests and complaints was weak where it existed and there were people who claimed to have been waiting for either this compensation or that. In other cases they were sold seed rather than given as free compensation.

In addition, compensation was paid inconsistently once a year, making it impossible for people to plan ahead. It blatantly ignored that harvest was twice a year; that during the course of the year villagers had pressing needs of life such as school fees, funerals and medical expenses that required money; and that there were crop varieties such as maize, sorghum, wheat, beans, lentils, peas, potatoes or pumpkins grown for healthy diets. There was no compensation for all these and people were forced to live on maize and beans/lentils. This could lead to increased malnutrition, the problem which has already beset Africa and needed remedying not perpetuating.

4.2.1.8 Community development projects

Agricultural and non-agricultural projects embodied in *The Rural Development Plan (RDP*) of the Environmental Action Plans (EAP) were drawn up to address and mitigate the identified impacts in the EIA, and to enhance the positive impacts. The Rural Development Fund of the RDP was intended to compensate communities for lost communal assets through supporting development projects devised by the communities. Therefore, the RDP was meant to restore and increase agricultural productive capacity and household income to maintain and improve the level of welfare of communities affected by the project (Mochebelele, 2000).

Skills training programs were introduced by LHDA for traditional farmers and local populace because they lacked non-agricultural skills. The training was not as diverse and as wide spread as one would anticipate regarding the spread of poverty and the extent of affected areas. But training the locals for skills to enable them to establish

community projects for themselves from which they would earn a reliable living was one of the best ways to achieving sustainable livelihood for these rural communities. The trouble was that there would always be a fly in the soup. As indicated by some villagers, the current skills training program was not wide enough in scope to cater for their diverse needs. This point by itself spelled out that community participation for identifying local needs to set up appropriate training was either little, improperly done or not engaged. However, there were many promising prospects for the community projects introduced by the water project.

In 2001/2002, 43 communities in Ha Katse and Ha Mohale Dam areas were trained to qualify as legal entities i.e. official community projects that would receive communal compensation for developmental projects. By March 2003, an amount of R1 117 320 was then paid to Ha Lejone communities in Ha Katse Dam area to be shared in proportion to the amount of land lost by six different community projects representing six areas (LHDA-SAICE, 2003d) (Fig. 4.9).

Fig. 4.9: LHDA officials handing over communal compensation payment to Ha Lejone communities (Lerotholi, 2003).

The envisaged community projects varied from area to area with agricultural and non-agricultural combinations of poultry, dairy cows, breed rams, piggery, improved farming systems, grinding mill, tourist leisure boats, sewing and knitting, candle making, carpentry, water and electrification (Lerotholi, 2003).

Other compensations to communities which complied with the water authority's requirement to form the legal entities included R6 million to Bokong communities in August 2003 as compensation to be used in their projects for a cultural village, filling station and mortuary (Mncina, 2003); and R10 million granted to indirectly affected communities of twelve development societies living downstream of Ha Katse Dam in Thaba Tseka in May 2004, making it the first water project to compensate communities outside the designated development area (Khotle and Caswell, 2004).

In the other areas, other community run projects were the growing of paprika, garlic and asparagus, and production of fruits, growing of potatoes for local markets, pottery, grass work and woodcarving (Mohapi, 2003). The successful virus-free potato grown in Ha Mohale area even had a store built for the seed potato (Fig. 4.10).

Fig. 4.10: Ha Mohale: Highlands seed potato Storage in Likalaneng (LHDA, 2002b)

Due to the scourge of famine in Southern Africa, food security and food production were important not just in the Highlands but throughout the country. Therefore, encouraging and assisting subsistence and commercial farmers to plant maize, wheat, beans, peas, and other types of crops particularly high yield crops was very important and had become the project's grand slam. The irony was that the best land for this activity had been swallowed up by the very project – only if there was alternative land.

Nevertheless, the crop improvement and production approach orchestrated by LHDA maximized productivity on the remaining resources by promoting high value crops, and by adopting production techniques for higher and diverse food production in both the highlands and resettlement areas. High yield crops and vegetables produced were potatoes, asparagus, cabbage, spinach, onion, tomato, beans and peas (LHDA, 1997). Cabbage production was flourishing in some homestead gardens. Therefore, nutrition further undermined by grain compensation could be improved.

Farmers were also encouraged to improve the remaining rangelands and were supported for livestock rearing especially dairy cows, goats and wool-producing sheep. A further important spin-off project from LHWP was fisheries. To maintain subsistence fishing, Maloti Minnow (Fig. 4.11) was cultured in Mohale Dam where its predator, trout, was not present.

Fig. 4.11: Maloti Minnow is a small fish about 5cm long. Its presence indicates high quality water and it is more abundant in Phase1B catchments (LHDA, 2002f)

But of greater importance in fisheries was the culturing of indigenous trout fish, yellow fish, mudfish and rock catfish in Ha Lejone in the Katse Reservoir providing one of the essential diets to the locals and to other communities afar. It was only unfortunate that future existence of this project seemed to hang in the balance as the consultant JLB Smith was pulling out. The project could not be financed by the government because it had not been designated under the Ministry of Agriculture. However, plans were being taken by LHDA and the government to save the situation.

Several projects that could not have been realized were carried out due to LHWP revenues. For example, LENA (2002) reported that during parliament briefing in 2002, the Minister of Finance and Development Planning, Mr. Tim Thahane, said that in the physical year 2002/2003, LFCD had approved 63 projects, 54 of which were carried out during that financial year and the remaining nine in the next financial year after their budget had been approved by Parliament.

Of the approved projects, 39 were construction of roads under the department of Rural Roads and the Maseru City Council and were to be financed with over M122 million, while 24 projects under conservation and would take M14, 733, 328.00; there were three water projects under the Rural Water Supply and the Water and Sewerage Authority (WASA) which would cost over R3 million. Such community-based projects were submitted before the LFCD board for appraisal and approval either by the communities themselves or by members of Parliament on behalf of the people they represented. After being approved by the Board, the projects were then tabled before the Ministry of Finance for funding (LENA, 2002).

With all the aforementioned developments LHDA's aim was to attain a means of sustainable livelihood in the affected areas (LHDA, 2002b). But would these programs, particularly crop improvement, reach down to or be affordable by even the very poor? For the poor, the stakes of survival were marginal: they lived from hand to mouth and when compensation help stops, then the chips were down. If they did not have own piece of land anymore by which they could negotiate survival means with the haves, then it was game down. If that piece of land was no longer available because it had been replaced by the new economy system where the wealthy became Shylocks that

overshadowed the poor without cash, then it was doomsday. If told to contribute money to release community funds, the poor were faced with a choice to do just that or they would get nothing from the funds – that was Hobson's choice dilemma for them. Therefore, LHWP food production strategy would be best if affected people still had own land on which they could exercise the new crop production practices.

4.2.1.9 Downstream flow

When large dams are to be built, World Commission on Dams requires that *"dams should provide for an environmental flow release to meet specific downstream ecosystem and livelihood objectives,"* and that *"a basin-wide understanding of the ecosystem's functions, values and requirements, and how community livelihoods depend on and influence them, is required before decisions on development options are made"* (IRN, 2002). But LHWP initially was commenced without any study to meet these requirements.

The greatest worry was that the construction of Phase 1A dams was made without an explicit environmental impact assessment (EIA) (Pottinger, 2001), an indicative problem of *hurriedly* made project (see 1.5.2 The 1986 Water Treaty). Therefore, expected impacts for downstream flows would not be known implying that there were no pre-emptive actions devised for undesirable impacts. However, an after dinner EIA study had been commissioned recently by the two governments in order to assess the present and future impacts of the dams and to adapt the present dams to the international instream flow requirements (IFR) which were apparently not met.

The study then found that the river systems would be reduced to *"something akin to wastewater drains"* if the project were to continue as proposed; and that the next phase dam would reduce the amount of water flowing into South Africa by 57% (IRN, 2002). This could result in some unmitigated social and environmental harm in downstream South Africa. Moreover, Gauteng's Rand Water had suggested that Phase 2 dam be delayed for 17-20 years to allow for their water system efficiency improvements through the use of demand-side management (DSM). About 50% of the water was being wasted through leakages in the Rand Area. But the World Bank overrode all these with the argument that Gauteng's need for water was foremost and that any delay would push the dam's cost high (IRN, 2002). In reality, the social and

environmental costs that could result due to this kind of decision could cost higher in a long run. It would be prudent for decision-makers to be guided by a wider range of aspects and not be one-sided.

In the meantime, Ha Katse Dam downstream communities were faced with two opposite extremes: smaller flows or instantaneous big floods (Figs.4.12a and 4.12b). The downstream impacts experienced and affecting people in Katse Dam were that there was less water available for people and their animals; unexpected dangerous high floods when the dam was opened or overflowed; reduction in dam fisheries and disruption of fishing activities; high accumulation of ecologically malignant green algae and cessation of seasonal flooding.

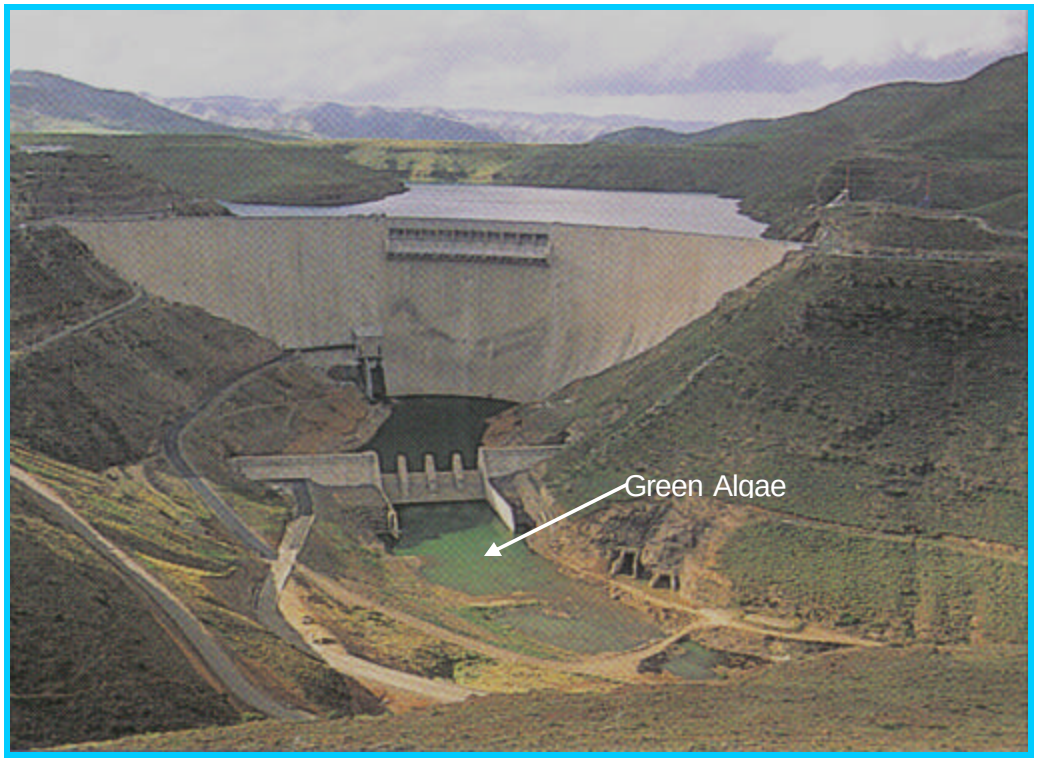


Fig. 4.12a: Katse Dam small downstream flow results in accumulation of green algae downstream (Longman, 2001b).

Fig. 4.12b: Katse Dam downstream flood (LHDA, 2002g).

However, EIA made on Ha Mohale Dam revealed that flows in lower Senqunyane River would become lower or much lower than under pre-project conditions (LHDA, 1998) but floods would be experienced once the dam reached full capacity. Although by itself this was a bad condition for people and life downstream, at least something was known and pre-emptive actions were devised to sustain people's safety.

Whether or not EIA was made downstream communities always faced replicate impacts of Brazil due to water quality and quantity changes resulting mainly in changes in farming activities and disruption of crossing due to unexpected floods. Like in Pakistan and Thailand, the project also posed serious threats to Lesotho's mountain river systems because of reduced flow rates and less-frequent floods that disrupted ecosystems and people's livelihoods.

Increased mortality rate of people and animals downstream could be blamed in part on lack of reliable and effective communication to give early warnings to the people. Warnings broadcasted over local radio could not effectively reach the mountain interior and river valleys because of the rugged terrain (Fig. 4.13) and also because very few people owned radios in these remote Highlands. However, LHDA, in

conjunction with the Ministry of Communications and Broadcasting, had undertaken to improve existing radio communication coverage for areas downstream of the project dams. This would ensure that communities received warning messages in case of water spilling and flood events (LHDA, 2002h). Left unaddressed was how then these communities would hear of the warnings because they lacked radios.

Fig. 4.13: Lesotho mountains have earned it its pseudonyms 'Mountain Kingdom' and 'Kingdom in the Sky' but they have made radio communication difficult (Thaba Promotions, 2003e)

4.2.1.10 Seismicity

The Kariba Dam had raised concerns on people's safety by causing numerous earthquakes. Similarly, the large volumes of water at Katse Dam had caused seismic activities mystifying the Basotho with unusual deep cracks in the ground (Fig. 4.14). As a result houses and/or property were damaged at Mapeleng, Ha Maphutseng, Ha Sepinare, Ha Theko and other nearby villages (Table 3.1). Communities were

Fig. 4.14: Reservoir induced seismicity caused some unusual ground cracks in Ha Katse area (LHDA-SAICE, 2003b).

subjected to fear and insecurity and even made up mystic stories of some large water snake in the dam which had come to terrorize their peaceful land.

Seismicity had occurred at Kariba Dam as an expected phenomenon with large dams. In such a case, LHDA ought to have taken advance measures to inform the communities near and around Katse Dam before hand about what to expect and would have at least been conditioned to deal with it. However, as similar earth tremors were expected at Mohale Dam, LHDA had made people aware of it this time.

4.2.2 Social impacts in the unaffected areas

Countrywide the impacts of the water project had not been felt and the benefits of the development fund through EAP had not been realized. This was noticeable in the remote rural areas. Generally, the fund was meant to improve people's well-being through activities earmarked for agricultural assistance, self-help projects popularly known as *fato-tato*, disaster management, health, education and other developments aimed at creating jobs and relieving poverty. But few of these were applied in

unaffected rural areas except during natural disasters e.g. relief during heavy snowfalls, and usually done under the auspices of party politics. This brainwashed most people to believing into a particular ruling political party while remaining ignorant of the actual provider, LHWP.

In lowlands urban areas and foothills, some developments had been funded e.g. electricity power supply, *fato-fato* for community roads, and improvement and reconstruction of main roads. As in the case of rural communities, people were not made to know where the money came from but rather that it was the fund of a particular political party. This was why during the research most people did not know of any benefits from LHWP. Urban areas in the Highlands towns were yet to see these benefits fully, but some like Thaba Tseka were enjoying them partially by means of electricity and road works. It would perhaps only be a matter of time for the project fund to take root and people knowing of it in both rural and urban sectors rather than being hoodwinked into party politics.

4.2.3 National benefits

Critics of LHWP had been cynically questioning that if there was so much confusion and maladministration in delivering the benefits in the affected communities alone, what could then be expected for the rest of the country? LHWP had made and was continuing to make some major developments aimed at improving the livelihoods of the Basotho and reducing poverty (LHDA, 2002c). During the celebration marking the end of Phase 1 construction on March 16, 2004, King Letsie III proclaimed that LHWP had helped his country to upgrade its status from being one of the world's least developed countries. He continued:

> *"Now we have the most beautiful roads. We also have the royalties paid by South Africa"* (Mail & Guardian, 2004).

The most obvious and major national benefits brought by the project were energy, the infrastructure, tourism, royalty revenue and employment earnings.

4.2.3.1 Energy

With the longest headrace in the world, `Muela Tailpond Dam had capacity to supply 72MW of hydroelectric power for the country. More than 150Km of electric power transmission lines were erected in the Maloti areas. A number of power substations (Fig. 4.15) were installed ensuring delivery system of power to different points in Lesotho to give a substantial degree of independence in energy supply for the country (LHDA, 2002d). Just over half of Lesotho towns including the capital, Maseru were supplied by the LHWP hydropower from `Muela Dam.

At every power line substation erected by LHDA, there was a spare feeder to distribute power through the service utility of the local electricity distributor, Lesotho Electricity Corporation (LEC), to the local customers. Although it was anticipated that the electricity connections made by the local LEC would be cheaper and the consumption tariffs would be based on ESKOM's, there was no guarantee that electricity was going to be any cheaper for the Basotho (LHDA-SAICE, 2003c). In fact, it proved to have been demanding too much from their flat wallets.

Fig. 4.15: Khukhune Electric Power Substation ensuring electricity to urban areas (LHDA, 2002d).

Therefore, besides the fact that full-scale distribution by LEC had not yet been realized, this benefit was limited in the rural areas because connection fees of LEC were unaffordable to the many poor people. This was echoed by one household head in Ha Mohale village:

> *"LEC wants R500 from each of us, plus we must still pay for installation labour and materials, and the electricity we will use every time. Where do poor and unemployed people like us get this money?"*

Electricity had proven to be costly because the Hydropower Station was financed with Lesotho Government guaranteed heavy loans of at least R525.9 million from ten local and international financiers to be repaid (Appendix 1). During the hydropower station's inaugural opening in 1999 the CEO of LHDA explained:

> *"Since the station was intended to run as a commercial operation, the servicing of such loans would be met out of the revenue accruing from the sale of electricity"* (LHDA: *Water for Life*, 2002).

Extra costs required from village residents to pay for new electric appliances and for utility poles added to the rural electrification failure as in the case of Ha Kennan in Katse where US$2 000 was required from the villagers for the poles (Hoover, 2001).

An appropriate tapping of LHWP hydroelectric potential could over time make Lesotho self-sufficient in electricity and perhaps give another valuable product to sell to South Africa to earn more revenue. The fear was that even if Lesotho became self-sufficient in hydropower generation, the investment to connect all towns and villages to national distribution grids was unlikely to be forthcoming for some time (Lekhetho, 2003).

However, reports have indicated that LEC was experiencing difficulties as it was not making profit in its current commercial operations. Therefore, Lesotho Department of Energy was seriously looking for alternatives in power generation due to the lack of transmission and distribution of hydroelectric power (HEP). This would offer an added diversity needed to limit the inability of LEC to install sufficient generating capacity, and would provide options for the many Basotho without HEP. The latest project that utilized photovoltaic (PV) solar power systems was one alternative initiated by the German company known as ENERGY (Lekhetho, 2003).

Other form of energy, e.g. wood energy from trees and brushwood, normally utilized by the rural communities had been affected negatively by the project. Trees and natural bushes grew mostly in the valleys now inundated with water. LHDA's response to this problem was unconvincing. There was no immediate compensation to afford replacement for the natural energy which rural people needed daily. Further, the planting of trees provided by the project was delayed in starting. Nevertheless, it takes a long time for trees to grow to usefulness. During that waiting time cooking and heating were necessary on a daily basis and there was no provision for that. Additionally, because the valleys were inundated there was no appropriate land available to plant the trees.

This has compromised the welfare of the affected highlands communities who, as already stated, were unable to install electricity in their homes as an alternative energy. The project would have been better planned if lengthy activities like growing of trees were done years ahead of time. It was unfair to take action when people were already suffering. *Hurriedly* implemented massive projects without comprehensive EIA are susceptible to such predictable problems.

4.2.3.2 The infrastructure

LHWP made road constructions and improvements and built some bridges in the Lesotho Highlands changing the pre-dam conditions of lack of roads and bridges. Roads through or near villages connected villagers to towns in the lowlands and to the unaffected areas. This has been an important development because peoples' mobility was enhanced allowing them to travel easier and quicker. This ended their tribulation of having to walk half a day or more to reach the nearest public transport point.

The major roads were bituminised resulting in 193Km and 72km of tarred roads in Phase 1A and Phase 1B respectively (LHDA-TCTA 2002). Major road works included (LHDA *Partners for Life*, 2001):

- The construction of Northern Access Road (Mandela Road) from Hlotse to Katse Dam (Fig. 4.16);

- The upgrading of Southern Access Road from Maseru Border Post to Mohale Dam and from Thaba Tseka to Ha Katse Dam; and
- Upgrading of road from Fouriesburg station to Caledonspoort border post.

Fig. 4.16: Mandela Road passing high at Mafika-Lisiu Pass, 3090masl, is the highest in Southern Africa (TCTA, 2003h)

The bridges and border posts at Caledonspoort, Ficksburg, Fouriesburg and Maseru were upgraded and operations at Ficksburg and Maseru were opened 24 hours. In the project area, three bridge types were built to facilitate crossing of dams and rivers:

- Foot bridges for crossing people and animals (Fig. 3.12, p. 58);
- Mini bridges away from main dams for crossing vehicles; and
- The larger and higher bridges over the main dams for all traffic (Fig. 3.11, p. 58).

Even though for the first time these bridges provided an all weather all year round crossing of the rivers, the vastness of the reservoirs did not make their effectiveness felt by the locals. In such a case, LHDA had underestimated the local need and the number of the bridges required. More bridges were necessary across these reservoirs particularly that LHDA had dishonoured its promise and obligation to make available powered boats for crossing the vast reservoirs.

Communications network in the affected areas is like a fable. While the foreign contractors came to work in the Lesotho Highlands, telephone and cell phone communication was made abundantly available. But when they left at the end of their contracts, communication system deteriorated. Remnants of landline phone operations are highly unreliable.

4.2.3.3 Tourism

The increased tourism potential created by the project coupled with improved roads into the highlands that were built and upgraded as part of the project saw an increase in the numbers of international tourists into Lesotho since the start of LHWP Phase 1 construction in the late1980s (TCTA, 2004). From the graph (Fig. 4.17), tourists in the period 1989-98 increased from about 18 000 to 42 000 per year. The palace coup of 1994 caused political instability which decreased tourism but it increased thereafter.

Fig. 4.17: LHWP more than doubled tourism (Longman, 2001d)

Tourism revenue was generated by visits to the dams and the nature reserves. Nature reserves were part of the physical, biological and heritage aspects of LHWP under EAP's *Natural Environment and Heritage Plan* (Mochebelele, 2000) meant for preserving the cultures, endangered wildlife and plants affected by the project activities while at the same time providing scenic attraction for tourists. In August 2004, LHDA ardently advertised over local media to tourists that nominal fees would be charged on individuals and groups for presentations and guided tours at Katse, Mohale and `Muela Dams and the Botanical Gardens for the upkeep of these places. This both earned LHDA revenue and provided employment to more Basotho.

The nature reserves offered various tourist attractions and served as rural income enhancement activities providing employment as well as tourist market opportunities for local communities' handicrafts and other products (Fig. 4.18). This was commendable of LHDA to lay ground for the Highlands locals to earn income.

Fig. 4.18: Rural income generation: Pottery and woodcraft (TCTA, 2002)

At the Botanical Gardens, the local communities were to generate income to their community coffers by selling medicinal plants amongst themselves and to people from other areas. It would take time for these communities though to get used to buying plants they used to obtain freely before the dams disrupted this natural gift.

4.2.3.4 Royalty Revenue

Water, the *'white gold'*, is the major natural resource of Lesotho. Therefore, the impact of LHWP on Lesotho's economy was undeniably profound. The royalty revenue primarily from the sale of water to South Africa (LHDA, 1997) was LHWP's most important economic benefit for the Basotho.

The intensity of Phase 1A construction in 1995-1997 boosted the country's economic performance so impressively that the actual GDP growth rate ranked Lesotho in the top ten best economic performers in Africa and in 1998 it accounted for 13.6% of national GDP while royalties from water sale and project-related customs dues were 27.8% of all government revenue (Pottinger, 2000c). In 2000/01 fiscal year (period from April to March of the following year), Ha Katse Dam alone had generated royalty revenue of R158 million for transfer of 1 685 million m^3, and R183 million for cumulative of 2 269 million m^3 by 2001/2002 (LHDA, 2002b).

Lesotho received both fixed royalties (from water sale, hydroelectricity, tourism and construction structures) and variable royalties (from tax revenues such as income tax, sales tax and company taxes) due to water transfer to South Africa (Fig. 4.19). These royalties increased with advancements in project phases. However, the political riots of 1998 which brought about invasion by South Africa's SANDF and later by Botswana BDF stopped the project's progress due to the political instability which caused the foreign constructors to leave the country temporarily. The country lost revenue resulting in a slump. Under normal conditions, on average Lesotho earned revenue of R15 million per month on Phase 1A alone. By July 2002, it had received a total of about R937 million in such revenues (LHDA-SACE, 2003).

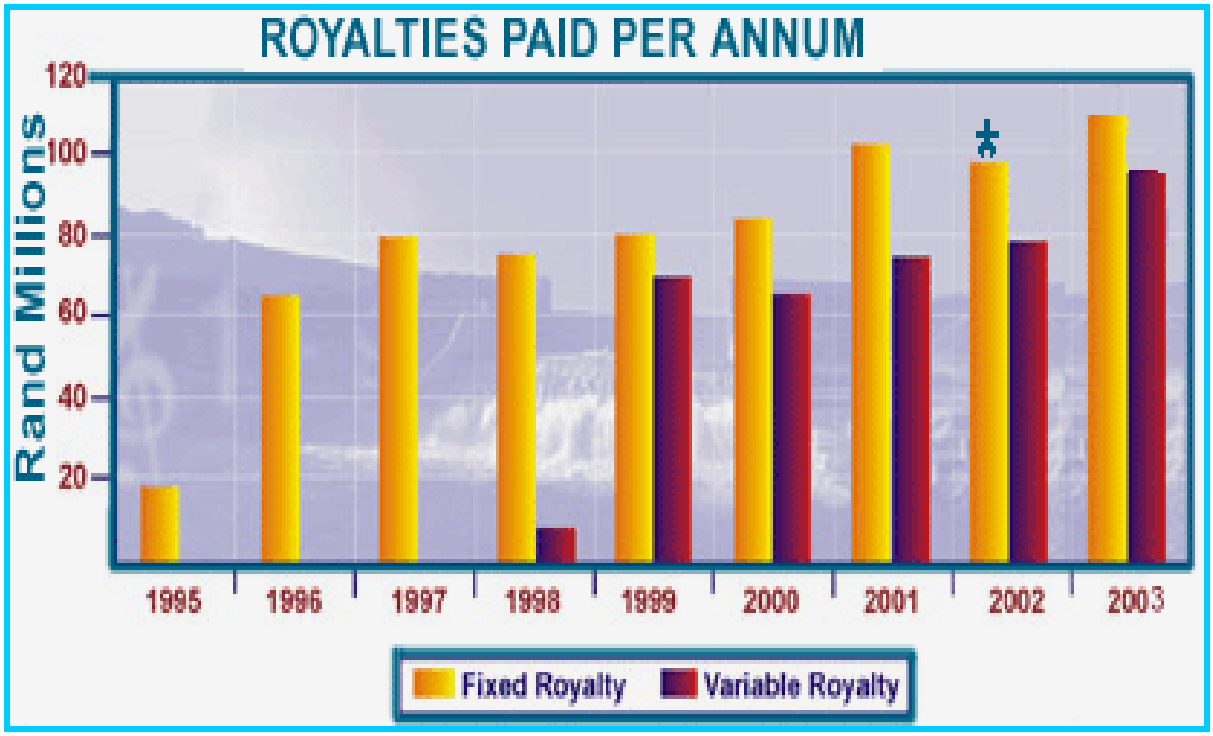


Fig. 4.19: Lesotho fixed and variable royalties increased with completion of project phases (TCTA, 2004)

With Ha Mohale Dam completed at the end of 2003, water deliveries to South Africa amounted from 17 000 litres (17m^3) per second to 29 000 litres (29m^3) per second (Letsela, 2004) and therefore, the revenue figures were expected to increase. For 2003 alone, 551.9 million m^3 of water was delivered against the treaty value of 585.0 million m^3 and the actual total amount of water delivered then to South Africa was 3 315 million m^3 against the treaty amount of 2 874 million m^3. The total royalties to Lesotho Government by January 31, 2004 were R1 220 million (TCTA, 2004) ending the year at R1 452 million for 4 062.04 million m^3 (LHDA, 2005).

Based on the World Bank 1995 prices (1US$ = R3.65), the additional water from Ha Mohale Dam from the end of 2003 had incremental royalties of at least R30 million per year equalling to at least 1% of the GDP of Lesotho. This water sale from Phase 1 alone would raise the country's GDP by an equivalent of at least 4%. The project-related tax revenues in 1998 when the dam construction began (and in 2003 when construction ended) were 6.5% (3.9%) of GDP; 21.4% (12.3%) of value-added in building structures; and 7.4% (9.3%) of government revenues before the permanent benefits of royalties and hydropower came into play. The completed Ha Mohale Dam was expected to add an

incremental benefit of R12 million per year in hydropower generation alone (Letsie and Bond, 2000).

Therefore, the royalty revenue has by no means been an economic watershed for the tiny Kingdom. The tax revenues generated also helped to sustain sound government finances and the Lesotho Government was able to turn a deficit of 17% of GDP in 1987 into a surplus of 3% in 1994 (Letsie and Bond, 2000).

Some observers and economists were optimistic that:

> *'The economic activity generated by the project will help Lesotho sustain its unprecedented growth boom of the past five years where, with substantial assistance from the construction activities of Phase 1A, GDP growth averaged more than 8% per year, making it one of the fastest-growing economies in the world'* (Letsie and Bond, 2000).

The royalties revenue was expected to a greater extend to improve the well-being of the poor Basotho particularly in the affected communities through compensation oviducts. The crux of the matter was whether this occurred as anticipated in the treaty. It is often said that all that glitters is not gold. Sometimes things might not be as grandiose as they seem.

The Minister of Natural Resources in call-in program, *Seboping*, in March (Radio Lesotho, 2004a) mentioned that most of the revenue was channelled to *fato-fato* (labour-based projects) where it was earned by the Basotho. These projects were engaged in small-scale developments within the country such as repair and making of low construction roads and dams. The Minister referred to mini-hydropower stations at Qhoali in Quthing, Tsereoane and Qalabane as having been constructed through *fato-fato*. The money was also used to supplement the R1 200 million '*free education'* cost to the government.

Analytically, the reality on the ground was that the country's poor had seen little of this economic boom: Lesotho still stayed in the world's top ten greatest income disparities; in the north-eastern mountain region, household income figures for the LHWP fell 65% faster than the national average during the LHWP's initial years yet a national revenue fund, the Lesotho Highlands Water Revenue Fund (LHWRF) was established for the

purpose of distributing the project's royalties to the nation's poorest. In Lesotho, as in many places particularly the developing countries, corruption and poverty have a tendency to go together. The corrupt local politicians used the money to reward supporters of their ruling party. This forced the World Bank to intervene and restructure the LHWRF in part (Pottinger, 2000b). Weisfelder (1997) explained World Bank's concern:

> *"The World Bank has been dismayed by Lesotho's neglecting to expend funds appropriated for resettlement and other compensatory programmes for communities and individuals adversely affected by the project, and by gross maladministration of project revenues designated for community-based development projects throughout the country".*

It stands to reason that these funds were not meaningfully translated into development funds to be realistically realized and felt by the Basotho at large.

In response to the economic benediction given to LHWP by its patriots and to Lesotho's political staccato on the funds, the spokespersons for the Transformation Resource Centre and the Highlands Church Solidarity and Action Centre in Maseru had this to say in 1999:

> *"Unfortunately, this is not our perception here on the ground. The fund has been and continues to be a tool of opportunistic politicians. Although the committee designated to select projects to be supported by the social fund has not met even once yet, money from the fund has been used to support ill-conceived projects built by workers hired according to political party affiliation. In Lesotho, we see the same stretch of road repaired; torn up the next week; repaired again the following week; and then torn up once more at the end of the month. We see workers increase the height of unused dams, and then cut spillways in them that effectively reduce their carrying capacities to their original levels. These projects are supported by the LHWP's social fund. Is this how large development projects "serve the poor"? … Help us to challenge the existing power and economic relations that keep us "poor"* (Pottinger, 1999).

With proceeds from the dams reaching up to 14% of Lesotho's GDP, it was undeniable that the Lesotho Highlands Water Project had been a real windfall for Lesotho. But the country still remains dirt poor with about 43% of its population living in extreme poverty of less than US$1 per day because little of the benefits trickled down to them. (United Nations uses a threshold of US$1 a day as an indicator of poverty levels.) Indeed, mountains of scientific studies accompanied by millions of

dollars have been invested in LHWP high profile rural development programs but the project has turned the displaced Highlands people and kept the nation at large to remain as beggars (Smith, 2002).

Lesotho Prime Minister confirmed this during the launching of Lesotho Document on Vision 2020 in June 2004 at `Manthabiseng Convention Centre in Maseru. In a speech he admitted that despite his announcing of the state of emergency for famine in the country due to the resilient drought:

> *'…it was a shameful thing for a country like Lesotho with a mere 2 million people to be asking for food aid from countries such as China and India with billions of people'* (Radio Lesotho, 2004b).

On the SABC AFRICA TV news of 23 October, 2004, World Food Aid Programme (WFP) spokesperson, Lovsall, stated that over 900,000 people in Lesotho required food aid between then and the next planting season. Ironically, this meant that over half of Lesotho population of 1.8 million people was reaching out their hands for food aid even though the country economically had a highly successful water project purported to improve their general well-being. Concerned about this continuing food problem, one of the local newspapers, *Moeletsi oa Basotho* (Anon., 2004c) while deliberating on the Minister of Agriculture's call for summer cultivation, urged that under any circumstances Lesotho must produce its food and not depend on begging for food aid year after year. Sadly, this has become the government's habit if not culture to stand on the international podia every year and ask for food aid. Was this really what the acclaimed economic performance brought by LHWP yielded for almost twenty years since the start of the project?

Therefore, it is obvious from the above facts that LHWP was potentially able to better the social well-being of most Basotho particularly those in the affected areas but it had not done enough. The economic performance figures were impressive on paper but if they were meant to impress World Bank and other international bodies and not translated into significant socio-economic doings, then they were worthless.

LHWP took or in some cases damaged individuals' or communities' land and/or other assets which were their whole livelihood. The fact that in return it only rewarded them the lowly reparation of 40% of the royalty revenue to share amongst themselves and with many other social fund activities nationwide showed less regard for the affected people. This also explains why the communities felt and complained that compensation amounts were insufficient. But with a little more consideration, care, dedication, self-examination and re-organizing LHDA could meet the project's social obligation per the 1986 Water Treaty on the affected communities more effectively.

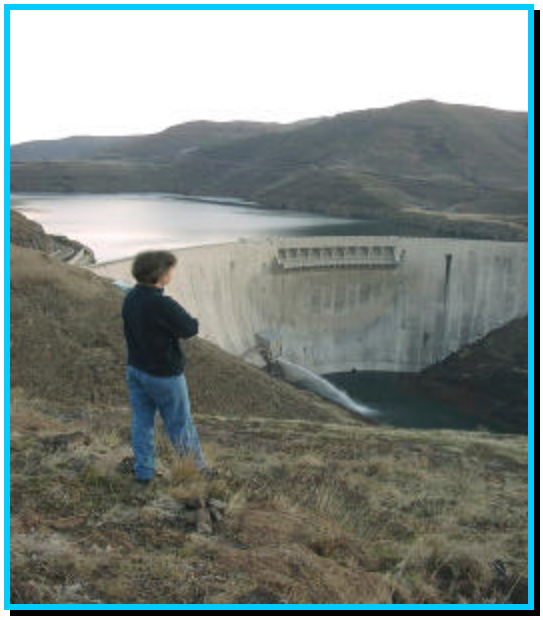
4.2.3.5 Employment earnings

Although most of the employment had been temporary lasting for the construction works, a lot of money went into the Basotho pockets in that time. During the construction period of the project in the first phase, LHWP construction companies generated about 3 000 jobs for Basotho, yielding a total of about R275 million in wages. For the same period, LHDA employed about 300 Basotho with total earnings of R200 million. Over and above this, the Basotho companies which were engaged in sub-contracting and supply opportunities earned themselves about R140 million (TCTA, 2004).

After the construction works of Phase 1, LHDA still retained some permanent employees for the operation and maintenance of the project. Most of these were among the best paid employees in the country who in turn have been able to employ many otherwise unemployed Basotho.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS



(LHDA-SAICE, 2003b)

5.1 CONCLUSION

The social impacts of Lesotho Highlands Water Project are manifest in two major categories: the environmental and social aspects. Environmental perspective concerns the project's sustainability and alternative application to Lesotho in view of the current and anticipated environmental conditions; the social aspect is dominated by the distribution of benefits within the Basotho community and the sustainable socio-economic benefit thereof.

In many countries, a large scale development project that uses up large areas of land is bound to include the areas inhabited and/or developed by indigenous people. Such has been the case with the Lesotho Highlands Water Project. The decision that governments and concerned developers make to proceed with the proposed development on the selected area usually depends on the merits of the development. However, it is ironical to develop an occupied land and yet destroy the natural ecosystem and destabilise the existing communities.

Studies show that large dam developments have a delicate balance between development on one side and the natural and human environments on the other. To reach a preliminary conclusion on the above and based on this study, some pertinent questions can be asked about the social impacts of LHWP. These include: What are the strengths and weaknesses of the project? What are the effects of the impacts on the Basotho? What ought to have been better addressed? Who gained, who lost? Can LHWP be judged successful on the human scale?

The greatest strength of this water project is the economic advantage it has brought to Lesotho. Without any shred of doubt, LHWP has boosted the country's revenue earnings through customs tariffs and water sale. The biggest question is how this revenue is allocated and spent nationally – this is a subject of further study.

As Mochebelele (2000) pointed out, opportunities for economic development have been made possible by the infrastructure provided through the project in the once inaccessible mountainous hinterland. Simultaneously, this infrastructure has increased tourism development which is linked to economic development and thus, has paved

the way for both to thrive. Besides enjoying the benefit of new infrastructure which includes roads, bridges and expanded communication and electricity systems, the Basotho have been provided with job opportunities that earn them valuable income (SouthAfrica.info, 2004).

The positive effects emanate from a number of notable achievements which could not have been realised were it not for the project, no matter how limited or ill-managed some of them have been. Examples are: i) the guaranteed earning or harvest from the project compensation scheme; ii) the provision of medical facilities such as clinics and hospitals; iii) the availability of hydro-electric power; v) the facilitation of agric- and non-agric-based development programmes; vi) improved water supply and sanitation to many communities, and many additional secondary benefits. The effect of these impacts is to improve the livelihood of the Basotho.

LHWP weakness is multi-fold and rests in its incipient design and social operations. This lies in the managerial or administrative aspects; bountiful promises partially or not fulfilled; imposed compensation on affected communities that is often inadequate and short-lived as opposed to long-term assets such as land; lack of transparency mainly due to little or no public participation in project planning and implementation; hurried decisions; officials' unreliability; falling standards; poor resolve of social problems; lack of clarity on water policy and the unanswered problems. In addition to these is the donor-preference syndrome prevalent in the funded developments in Developing Countries.

Perhaps the greatest weakness of the project is in its initial design. The idea of planning a commercially oriented dam is good where land is not an issue, but to construct it in a place where it takes up the only little available agriculturally productive land which can never be replaced except to rely on compensating it is another matter. As land is precious and priceless to the local communities whose livelihood depends on it, there is no amount of compensation money that can replace it. Unfortunately, in the Lesotho Highlands areas, the project has taken up and will continue to take up the best portions of the only valuable arable and pastoral land forcing the Highlanders to take the compensation price they did not accept and compelling them to till the marginal slopes

much against the modern environmental norms. This is particularly contrary to the response of the Southern African Development Community (SADC) (1997) to the 1992 Rio de Janeiro Summit on sustainable development:

> *We must not forget the majority of people and countries in the SADC Region and the world are poor. If the poor sometimes behave in a way that degrades the environment it is not because they chose to do so. They only do so when they have no other choices... The Earth Summit and Agenda 21 must expand the development choices and opportunities for the majority of poor people, communities and countries... The Earth Summit and Agenda 21 must provide a new basis for a new deal for the majority of poor people and countries in order to secure and sustain our common future.*

Smith (2002) confirms that the Highlands are Lesotho's bread basket as much of the country's richest farmland is found deep in the mountain valleys; most of the region's residents depend on it for survival and the dam construction projects are predictably disastrous for there is no other land available to farm and to live on. The loss of life-support resource of arable and pastoral land together with other dependable resources has resulted in reduced income and livelihood and has greatly harmed the affected Highlands communities. The food they produced has lessened; the compensation food and money are insufficient and unsustainable; and to crown it all, the compensation money cannot be guaranteed that it will purchase the grain to substitute the forgone harvest due to the project. This is neither expanding the development choices and opportunities for the majority of poor people and communities nor providing the new basis for the new deal for the majority of poor people.

To understand the gravity of the land resource loss, one ought to weigh the difference between compensation and the land. For this, consider that a Highlander is given, say, R50 000 to live on; in less than five years it will be finished and his first generation of grandchildren will only know about it from the stories re-told. But if he is given an arable land to live on, he will utilise it for life and it will pass on from generation to generation. Therefore, the effect of land loss (coupled with the problem of tormenting droughts) has made more Basotho to be more obliged than ever to depend on foreign food hand-outs. The numbers of households depending on food aid are increasing every year, hence the appropriate concern of the Prime Minister about such a tiny population asking for food aid from the big populations.

Management or administration may be the key to the success or failure of a project. The poor administrative capacity and corruption by governments and authorities in charge of projects prompt inefficiency and projects' failure. Prior to implementation, in the early stage of project evaluation (preparation and analysis), the managerial or administrative aspects need to be considered in two aspects. First, that there is the ability of anticipated project staff to manage or administer such a large-scale public sector activity as a water project. Second, that there is the availability of appropriate arrangements to train the necessary personnel for the continued efficient and effective operation of the project.

Gathering from how LHDA officers handled LHWP matters among the affected communities, it seems that these aspects had not been properly considered and arranged. There is a poor project staff proficiency to handle and convey the project's issues in the communities; e.g. delaying to respond or not responding to communities' questions, queries and requests and frequently avoiding confrontations; failure to organize meaningful and practical public participation of affected Highlands communities to assess their damaged or lost assets; and the ineptitude to explain compensation pay delays. These are some of the reflections of a chronic lack of administrative skill. They have resulted in misunderstanding, misconceptions and dislike of both the project and LHDA by most local people in the affected areas as reflected in Table 3.1 (pp. 64-66).

Delaying to overcome these managerial or administrative problems causes delays in necessary project implementations. This has contributed to reduced chances of successful investment to create new wealth to the affected communities and the nation as a whole.

The 1986 Water Treaty purported to alleviate Lesotho national poverty; to maintain a standard of living for affected Basotho no worse than before the project (Hoover, 2001); and to make the country energy-independent from South Africa. Have any of these three goals really been met so far or have some been harboured under the broken promises?

Part of the answer lies between what the project-affected people feel and say and the response of government. The testimonies of the local people both in the affected areas and afar and the standpoint of LHDA have already been mentioned. In Addition, in BBC News (2003) while those affected people who felt aggrieved and angry against the government voiced their affliction that they were hungry after being cheated over their land, the Minister of Natural Resources branded them liars.

The majority of affected people visited have indicated that the project has made them a bountiful of promises, but brought them a handful of benefits and a bagful of problems. Their concerns have already been stated in Chapter 3. In the unaffected areas, most people visited have no idea of intended benefits they ought to receive.

Therefore, it is apparent that at the beginning LHDA got too ambitious and had overly promised grand compensation packages to communities to be affected by the project. However, many of them did not come to fruition and the accruing benefits were not meaningfully translated into development funds to be realized and appreciated by the Basotho at large.

Hastily planned projects and hurriedly signed treaties beget ill-conceived projects. Embarking on a multi-million dollar project affecting about 1.6% of the country's population in its first phase and yet without a total or thorough EIA is bizarre. This puts the project to all kinds of problems and criticisms. One of the most debilitating end results is that those who lost a great deal in the fulfilment of the project were the ones that got the least of their fair share from the project proceeds.

Other aspects have been the unmitigated environmental, economic, social as well as political impacts already outlined in the study. LHWP has excelled in the engineering feat to win numerous awards (Appendix 2) which are yet to be converted into more worthy benefits to the nation it needs to serve. It is expected that this fame should result in national benefits corresponding to the acclaimed revenues and the magnitude of the project.

Unreliability of officials seems to be a general problem in most projects if money or physical goods are involved and exchange hands. It is a characteristic of human greed

in which the poor are undermined. Corrupt compensation officials in the Tarbela Dam Project in Pakistan wanted *'facilitation'* payments from the desperate affected poor people (Asianics Agro-Dev. International Ltd, 2000).

According to Rothert (1999), the NGOs working with affected communities claimed that project authorities established unrealistic high application standards and provided little assistance in preparing applications. In this way, they have made it impossible for communities to access the Rural Development Fund. As a result, few community-proposed projects have received funding. It is also claimed that some of the fund has been used for self-enrichment and to support bogus projects proposed by friends of the fund managers.

The allegations of bribery and corruption are not new in global dam building operations and in some cases involve large sums, e.g. the money lost to corruption for Yacyreta Dam (Argentina/Paraguay) amounted to more than $6 billion However, the bribery scandal involving the former director of LHDA and more than 20 international construction companies and individuals working on the project has set it apart in that the perpetrators have been exposed and brought to justice (IRN, n.d.; Ngqiyaza, 2001 & Rothert, 1999). The scandal could negatively affect the World Bank's future funding of the involved companies now familiar and experienced on Lesotho conditions. This could jeopardise efficient and on-time construction of the remaining phases of the water project if ever approved.

The falling standards of services set up as part of the project is causing concern. LHDA had installed advanced cellular and landline telephone communication network as well as television reception into the mountain interior of the water project area and the surrounding places. They also had built clinics to provide medical services in these areas. Unfortunately, these high standard services lasted only as far as the end of the dam construction works. Most of them deteriorated to an extend that some have had to close down.

It is either that there were not enough trained Basotho within LHDA to keep these services and facilities running when expatriates left, or that they were handed over to

unprepared or careless government hands. It is a crying shame to waste these investments which could have been beneficial for many years to such a needy nation.

It has been indicated by LHDA that medical facilities were handed over to the government through the Ministry of Health and Social Welfare. The latter had to maintain the level of service to the local communities affected by the water project. It can be anticipated that communications services had also been handed over to the government through the Ministry of Communications and Broadcasting. With such falling standards, the government, amidst its propagations of bringing services closer to the people, has shot itself in the foot. At the same time LHDA knew when they would pull out and they should have devised ways and means to assure that the establishments and services would stand.

Regarding the poor resolve of social problems, the Basotho are concerned that even though they have heard that the project is making a lot of money, they are still wallowing in a quagmire of social problems which the project proceeds ought to have addressed. For example, electricity installation remains too high and unaffordable to many households; and while pensions are too low at R150 per month, they are limited from the age of 70 years yet the retirement age is from 55 years for women and 65 years for men.

It is recognizable that for the first time Lesotho has a pension scheme for the aged and this has been made possible by LHWP revenue earnings from the water sale. This is at least a start but if the aiming is low, so will be the shot – for the best results, there is no need to aim below the poverty threshold of US$1 per day.

The excuse given for the high electricity installation costs is that unlike in South Africa, Basotho villages are characteristically unplanned and scattered making installation logistics to become difficult and demanding on material such as poles, cables and transformers. However, the major reason is that the loan expenses of `Muela Dam and Hydropower installation are too high and have to be paid first (See Appendix I). On the other hand, if LHDA and the government had made proper feasibility studies without rushing into starting the project, this problem could have been identified before

hand and solutions worked out for lowering domestic electrification costs. After all rural indigenes are known to have poor incomes and unsound economy.

The lack of clarity on water policy is confusing. In March 2004 on Radio Lesotho's *Seboping* (The Morning Talk Program) the Minister of Natural Resources acknowledged that the 2003/2004 drought was the worst experienced by the country for more than 100 years. The Basotho were concerned that the water released in that period from Ha Katse Dam into their local rivers of Hololo and Caledon had been sold to Lesotho by South Africa. That caused confusion and it bewildered the nation whether Lesotho was actually paying for the water and if so whose resource was it anyway. The actual source of the confusion was that amidst allegations of water being sold to Lesotho, the government repudiated them but it gave no clear explanations whereas LHDA remained stone quiet in that it was a political matter.

On the same *Seboping* program, three months after the water had been released, the belated explanation given by LHWC Chief Executive was that the treaty allowed for negotiations in times of drought in Lesotho. He explained that Lesotho was selling water to South Africa for R10 per cubic meter (1 000 L) and when the 2003/2004 drought tormented Lesotho, it was negotiated that it should buy the water for 7 cents per cubic meter from South Africa. As to how much water was released there is still no certainty. People believe that their government has lost control of things and they still seek more explanation on how much water was released, how much money is to be paid and how is Lesotho paying for it. Answers are not clear.

It should also be noted that the Basotho are enjoying the project spin-off benefits that are unsustainable rather than the long-term design benefit enjoyed by the South African citizens – i.e. an improved access to fresh water which will continue to flow for longer than 50 years of the compensation threshold. In April, 2005 RFI (Radio France International) announced that the World countries as well as NEPAD were convening in Paris to sign an agreement to have 80% of their populations – particularly the rural communities – accessing clean water by 2015. But with LHWP, the rural water supply from the main drainage system of the Senqu River is seemingly overhauled to supply South Africa. Therefore, while Lesotho is nodding its head and waving its hand high to

international agreements to improving the livelihood of its citizens, on the other hand it is practicing the opposite – it is denying the Basotho this water for the benefit of its neighbour while promising them to live on the spin-off benefits. This is tantamount to taking the bread of own children and giving it to the neighbour's.

There are many ensuing problems left unanswered by the authorities. It has been noted that affected communities find themselves unable to grow other types of crops especially wheat. Lack of wheat straw coupled with loss of bamboo reeds and thatching grass in the inundated valleys has made house thatching increasingly difficult to accomplish. There is no solution given to this problem.

Some issues have not been addressed at all, e.g. cultural damage, loss of livestock, damage to household property, loss of building sand, etc. Others had been fully or partially dealt with depending on areas, e.g. compensation, resettlement, livestock fodder, planting of trees, schools, clinics, and community services such as water, toilets, sanitation pits and community projects. Still there are some promised services but are just being given a blind eye, e.g. powered boats and life saving swimmers. People can only hope that the mills of a project grind slowly but fine.

In general, Developing Countries rely on international donors to finance most of their development programmes. Rural development in these countries is usually hampered by donor-preference syndrome – every donor wants their own thing, resulting in a lot of false project starts. Donors tend to perceive developments the way they want to spend their funds assuming that the recipients will develop their liking and find out how they are supposed to benefit from them. On the contrary, it is the projects that must reach out to people with the benefits. In most cases high tech projects fail to match the indigenous standard of living and become white elephants.

All the above problems have caused many Basotho not to benefit accordingly from the project. This fact together with the various afflictions endured by the affected communities has put the project on a delicate balance of success.

One less understood impact effect is the seriousness of the disruption of the African spiritual life. Rakotsoane (2001) rightfully states that removing an African from his

original place to resettle him in a new place breaks the ontological link between him and his ancestral and other beneficial local spirits with whom he has established strong friendly ties. This can expose him to various problems and may upset his well-being. Therefore, his land of origin is important and he owes his being to it. This is the kind of being and belonging which spurred Thabo Mbeki to proudly pronounce in the speech regarded as one of the best by an African politician (Rakotsoane, 2001):

> *I am an African.*
>
> *I owe by being to the hills and the valleys, the mountains and the glades, the rivers, the deserts, the trees, the flowers, the seas and the ever-changing seasons that define the face of our native land. …*
>
> *The dramatic shapes of the Drakensberg, the soil-coloured waters of the Lekoa, iGqili noThukela, and the sands of the Kgalagadi, have all been panels of the set on the natural stage on which we act out the foolish deeds of the theatre of our day. …*
>
> *I owe my being to the Khoi and the San whose desolate souls haunt the great expanses of the beautiful Cape- …*
>
> *I am the grandchild of the warrior men and women that Hintsa and Sekhukhune led, the patriots that Cetshwayo and Mphephu took to battle, the soldiers Moshoeshoe and Ngungunyane taught never to dishonour the cause of freedom…*
>
> *I am the child of Nongqause. …*
>
> *Being part of all these people, and in the knowledge that none dare contest that assertion, I shall claim that - I am an African* (Office of the Deputy President, 1996).

An African, being part of his land of origin and of the ancestral spirits thereon, communes with both the visible world which provides him with the material needs and the invisible world which is the source of everything that the visible world provides (Rakotsoane, 2001). Therefore, the resettlement and compensation programmes of the water project have affected the Highlanders in the project area negatively for it did not regard this spiritual dimension.

A further negative effect of the water project is what can be termed the water instigated war. When a country or a government proposes and initiates a development project, the primary purpose is that its people must benefit from such a project. When the South African government proposed and initiated the water project to have Lesotho's water to flow to its country, it stood to benefit its people with abundant clean water for their needs. Moreover, it would benefit from the reduced cost by using

Lesotho as an escape goat for international funding of the project which was meant to supply it with the water.

Smith (2002) points out that when the white minority rule ended in 1994, the dams did not end – they continued to rise and to increase bringing profound changes to the isolated and landlocked Lesotho for the greater benefit of the initiator, South Africa. He asserts that that was why in September 1998 when SANDF troops intervened in Lesotho to restore a government practically ousted in a coup, their top priority was to protect their country's interest by gaining control of Ha Katse Dam located in the tranquil of the country about 100 km up the mountains far away from the riot areas. Rosenberg (2003) observes thus:

> *Some leftists can argue, however idiotically, that oil was Bush's real reason for going into Iraq; however, a South African government official has stated in no uncertain terms that cheap water was Mandela's reason for invading Lesotho… South Africa intervened to protect certain South African interests such as the Katse Dam water scheme. This is the reason given by Mandela's special adviser Fink Haysom in an article he wrote for The Star, October 14, 1998, p. 6.*

According to O'Grady (quoted by Neethling, 1999), for the Basotho people, *Operation Boleas*, as it was called, has been wrongful incursion. During the two months of political protest against the May 1998 election results and prior to the intervention, there were only five deaths and not a single window was broken. Because of the intervention by SANDF and BDF there were angry protests resulting in several deaths, increased arson and looting (Neethling, 1999). The effect was the greatest tragedy in which the country lost more than seventy lives including all the sixteen soldiers who were guarding the Ha Katse Dam and the displacement of about 4,000 people (Rosenberg, 2003). From the interviews conducted it can be concluded that the Ha Katse rural villagers and the Maseru urbanites remember this tragedy with an awesome grief and anger. It has created more widows and orphans – some of the best recipes for poverty.

Another effect is that the damages estimated to more than US $0.5 billion could take Lesotho almost a decade to get back to where it was before the intervention. Nelson Mandela, then President of South Africa, refused to pay a single cent for the damages

blaming the Basotho to be responsible for destroying their capital. Ironically, the Prime Minister of Lesotho, Pakalitha Mosisili, has agreed to reimburse South Africa the US$4 million per day as costs incurred to finance the invasion (Rosenberg, 2003). Lesotho cannot settle a foreign debt of such magnitude except perhaps by supplying South Africa with water at reduced price thus giving some impression as to why the much acclaimed and robust income from the sale of water isn't that conspicuous. The effect of this is the reduced national income resulting in a somewhat retarded economic growth.

On the other hand, when the American President asked Congress for US$84 billion to rebuild Iraq following his invasion of that oil-rich nation, the whole world seemed satisfied. Internationally, it would not be judged just if President Bush told the Iraqi people that they (the Iraqis) had destroyed Baghdad and they should pay the damages themselves; and furthermore that they should pay the US for the costs of the invasion perhaps with oil in kind (Rosenberg, 2003). Comparatively, the invasions of Lesotho and Iraq are similar but it was surprising that when the South African President subjugated the Basotho to pay his invasion costs the international world did not object. It is peculiar that the two similar international cases should not be judged the same.

Neethling (1999) in quoting Cornish points out that the Apartheid South Africa was known for being cruel and arrogant towards the tiny mountain kingdom of Lesotho. By this intervention, the Basotho perceive that the New South Africa is in every bit as arrogant towards them as the old South Africa was. Again from the interviews it is clear that this has sown a seed of resentment and great bitterness towards South Africa by many Basotho both in the rural and urban echelons of the country. This anti-South African feeling will take long to wane as the intervention will be in history books and will be told from generation to generation.

Therefore, it is clear that South Africa's vested interest in the water means that the project is primarily to serve its citizens at all costs. From this it can be seen that the Basotho are but bridesmaids bearing the pains for the bride's comfort – for many the benefits are so few, so hard to receive and at times borne with tears and bloodshed.

Further undesirable effects are the health-related problems due to increased rates of STIs (sexually transmitted infections – e.g. HIV/AIDS, syphilis, etc.); loss of morals and family breakdowns due to increased prostitution; and negative attitude towards the project because of compulsory resettlements, loss of assets and unfulfilled promises. Moreover, as the first two dams were built without fully understanding the needs of the river's ecosystem for water i.e. the in-stream flow (Rothert, 1999), the result has been the adverse socio-environmental effects on both the people and the environment.

Large dam developments seem more successful in the official documents of the proponents than on actual communities they are intended to help. This is because projects take up useful land and the proponents persuade the locals to relinquish it by brandishing wonderful development promises which later may not be all fulfilled.

In addition, as it has been mentioned, the distribution of the project costs and benefits is usually not fair. It is the project officials and the decision-makers that benefit more while those who bear the cost of forced resettlement, suffer the loss of assets and are made to tolerate the pain of many other hassles are the least to benefit. This is confirmed by IRN (n.d.) in that out of 538 dams the World Bank had funded in 92 countries for $75 billion by 1994, there was only one dam that improved the income of oustees. When evaluating LHWP on sharing benefits, IRN (2000) has observed that the people who bore the social and environmental costs and risks were not the same people who received the social and economic benefits. Among other reasons, it is because when governments weigh whether or not to construct a dam they fail to give social and environmental aspects the same significance as technical, economic and financial factors. Letsie and Bond (2000) also reiterate that the planning of the social aspects of the LHWP has been subordinate to the technical planning (Appendix 3). This has been one of the great weaknesses of the project.

Some of the ways in which the human scale can be used to judge the success or failure of the national project is the people's attitude towards it and their reaction in dealing with their social needs. Tables 3.1 (pp. 64-66) and 3.2 (pp. 67) summarise the communities' attitude which is generally negative. This is not surprising since during the contact discussions no locals that on the onset directly, specifically or voluntarily referred to the

project's benefits except to complain. This implies a large degree of unhappiness with the project. The resulting desperate movements are the societal reactions indicative of the disturbed social environment in part stirred up by poorly planned, ill-managed or ineffective projects. When the society complains and takes to desperate measures to address the social needs the project ought to have addressed, then that project has not been effective and therefore, it is considered not successful on the human scale.

Some of the social problems of affected communities emanating from the negative impacts of the water project have had little or no attention and resolve from LHDA and the government. The reported evasion of questions on compensation by LHDA field officials and even by LHDA Chief Executive Officer and his Assistant (Khotle and Caswell, 2004) has left many social issues not discussed between the communities and the authorities. This has been an important opportunity missed by LHDA.

Obviously, LHWP, like other large dam developments, has brought many benefits and difficulties to the country. From its mixed package of positive and negative impacts, the rural people affected by the construction of the dams talk more on detriments than on benefits signalling that they are more burdened with detriments than awarded with benefits. They still claim that their complaints and requests to LHDA and the government on many social problems which have been created mainly by the project itself have gone unanswered just for too long.

Realising that they did not have a forum to influence the decision to build these dams or even to effectively negotiate how the project's dams would impact them, they resorted to holding toyi-toyis, petitions and community meetings where they often pressed for a greater voice in project decision-making and for more equitable distribution of benefits (SouthScan, 2002). Recently, they have formed associations such as Survivors of Lesotho Dams (SOLD), asked for help from NGOs, resorted to court cases and appealed to the Ombudsman against the project authorities. Their anger was further provoked by LHDA proceeding to Phase 2 *'leaving behind a trail of shattered hopes and unfulfilled expectations'* in Phase 1 (Khotle and Caswell, 2004). These are the signs and desperate movements of disturbed communities. The pain of

losing out to the lesser profitable enterprise by deceit, and the agony of being unheard when expressing that pain, is excruciating.

In 2003, two years after they had protested demanding ten-percent share of royalties generated from the dams and a commission of inquiry on how the project has impacted them, the disgruntled communities affected by Ha Katse Dam appealed to the national Ombudsman for intervention. The resulting Ombudsman's report rebuked LHDA for failing to pay compensation and the accruing interest at rate prescribed by law. It urged LHDA to review its policies immediately to bringing them in line with laws governing compensation for property compulsorily taken from owners (Qacha, 2003 & Mafisa, 2003). A year later in August 2004, the Office of the Ombudsman announced a second public inquiry to be held in September 2004 *'due to huge number of complaints from people living in the Mohale area and affected by the construction of the Mohale Dam and related activities by LHDA'* (Ombudsman's Office, 2004).

All of the above clearly mean that the LHWP development is not lending itself well to the aspirations and needs of the Basotho people. For the two dams there has been two interventions by the Ombudsman – does this imply that for the third dam there could be a third inquiry? What about the fourth and the fifth dams, inquiries as well?

Another example of a desperate social movement, this time from unaffected urban communities in the so-called Vision 2005/6, is the move for **Incorporation of Lesotho into South Africa.** Concerned about the appalling state of Lesotho ever being branded one of the poorest and least developed countries in the world, they propose that something needs to be done with immediate effect. The proponents advocate that to take Lesotho to the level of a developing world class nation it must be unified with South Africa as one country under the same flag and constitution. They believe that this will benefit and improve the general well-being of the Basotho (which LHWP has failed to do) citing that old age pensions, workers' salaries and several other benefits would be improved (Vision 2005/6, 2004).

Almost twenty years have passed since the project started. Yet LHWP has not been able to improve the welfare of the Basotho significantly. If as late as September 2004, local

newspapers could still make headline reports like: "*Poverty reaches alarming proportions in Lesotho"* (Lekhetho N. 2004), then project LHWP has made little impact on poverty. Low pensions of R150 (US$25) per month have forced pensioners to live below US$1 a day poverty threshold. Almost 5.5% (over 65 years) of the population is pensionable (CIA, 2004a) and some of these pensioners are actually crossing the borders to South Africa for better pension estimated at around R700 (US$117) per month. This implies that in some cases the expected benefits of LHWP are not felt in the society.

Although public participation in the project has been highly documented, in actual fact, it has been minimal in practice. This is supported by Michael Potts of DBSA in his remark that in Lesotho the credibility of the treaty was questionable because the military government ruling Lesotho at the time did not permit open debate on the treaty (Letsie and Bond, 2000). There should be a platform for negotiations allowing all stakeholders to have equal opportunity to influence decisions as early as the planning process of the project and the people whose livelihoods and human, property and resource rights are affected by the dams must have meaningful participation (IRN, 2000).

The flurry of complaints and court cases by affected people against LHDA has indicated that local participation is more of paperwork than of reality with LHWP. How else can people complain, seek courts' or Ombudsman's interventions against their own involvement?

Lastly, from this study, it can be concluded for the moment that the Lesotho Highlands Water Project is cause célèbre with an antithesis of effects and many contentious socio-environmental features. Coverdale and Pottinger (1996), perhaps a bit too blunt, have concluded that the results on the social side are distressing. Therefore, it can be concluded that by the time of this study LHWP was still suffering from the conclusion of purpose and if its success were to be celebrated judged purely on the human scale, the champagne would probably have to be kept on ice a lot longer.

5.2 RECOMMENDATIONS

If a development has been decided for implementation, it should not destroy the natural existences drastically or deprive, impoverish, reduce or lower the livelihood of the indigenes to below pre-development - it should rather strive to enhance them. The decision makers should bear in mind that man and all the living and the non-living things are created to be in the environments they naturally exist so that the great works of the Creator can be displayed in them. Therefore, nobody has the better right to diminish their existence or force them off their natural environment.

Since this water project is real in the midst of the Basotho and there is no turning back about it, it must be made the best use of to protect the environment and to enhance the indigenes livelihood. This is the soul of this research's recommendations. From the onset, the 1986 Water Treaty by itself is a fine document which needs to be amended as and when demanded by changes in natural and national conditions. However, the promises to affected communities, the management of costs and benefits, fair compensation, public participation and many other project-related issues must be looked at objectively in order to uphold an acceptable measure of sustainable livelihood to the Basotho. Therefore, LHDA and the Government need to re-examine themselves (the benefactors) in relation to the Basotho (the beneficiaries) and the project as a whole with greater attention paid to the beneficiaries.

With regard to the water project, communities' ratings on LHDA and the Government are very low because they are perceived to have been unreliable and insensitive to the needs of the people particularly those affected by the project. The benefactors must remember that the communities never asked for the project but it was imposed upon them dressed with many enticing promises. In order to have this project sustainable and socially acceptable, they must first improve their own image among the communities and win their trust. To achieve this, the following are recommended:

- Provide initial and recurrent training and workshops for LHDA personnel particularly those who get into contact with people to render project services. Emphasis should be on project management and personnel administration.

LHDA could also facilitate and encourage best employee achievements annually to stimulate higher degree of workmanship. This could help to improve the chronic lack of administrative skills existing among many project officers in delivering the goods, handling people on project-sensitive issues and managing the fair distribution of costs and benefits.

- LHWP is known to have high calibre employees in its technical department and the results are obvious. However, the poor results in the social and environmental sections prompt the suggestion that in these sections LHDA ought to consider employing personnel who are more understanding and familiar with the living conditions and the social habits in the Highlands. Such personnel should be more objective and resolute rather than mere embracers of the project aspiring for better benefits for themselves at the expense of the environment and the communities. This will enhance and strengthen the socio-environmental policies and operations of LHDA; furthermore, it will help to strike the balance between dam development and the indigenous reserve. Unlike in the past years, such university graduates specialising in these fields are now available and LHDA should have no difficulty in recruiting them.

- Project and Government personnel should show respect, compassion, care, dedication and consideration to affected people when dealing with them. Above all, they should have time to listen to their complaints and views – after all it is their land and water resource at stake and thus, their livelihood. In turn this will win them respect and appreciation from the communities.

- Corruption has been the greatest scourge of LHWP traversing from the Executive seat to the Field Officers level. The Government ought to nip this malpractice in the bud and root it out totally if this project is to attain further success and remain sustainable. One effective way to combat this would be that during training, workshops and organisational meetings emphasis should be laid on reliability, transparency and loyalty. Furthermore, the Government should consider instituting an anti-corruption unit (similar to the revered and

infamous South African Anti-corruption Scorpion Unit) to control corruption and other prevalent problems within the water project.

The bottom line is that LHDA should seriously look into the reliability of its officials so that people can get what they really deserve from LHWP.

- There is no need for pipe dreams. LHDA and the Government should make realistic and achievable promises and then honour them. This means that they should increase their effort to fulfil promises made to affected people bearing in mind that when introducing a large development project in an area there should be a commitment to the better the indigenes as well. Fulfilling promises will win them trust and reliability from the communities.

- The benefactors should avoid going into or implementing hurried projects purely perhaps for political reasons. Projects must be well thought of and they require careful planning and analysis. A proper environmental impact assessment (EIA) is vital to predict, identify and evaluate social and biophysical impacts so as to develop the necessary action plan to mitigate them. This is one of the main factors for the success of the future phases of LHWP.

- To sustain ancillary developments, e.g. health centres, communication infrastructures, etc., LHDA and the government need to train people who will operate and maintain them for the local and national good thus avoid the prevailing wanton waste. Avoid embarking on developments that will collapse as soon as construction developments cease in the subsequent project phases.

- Social and environmental aspects are equally as important as the technical, economic and financial aspects in the project. When weighing the factors and allocating funds for the project they should not be subordinate to the technical planning but should be viewed equally so that the project is balanced in its sectional inputs and operational outputs.

Despite some of the negative perceptions, poor implementation measures and the apparent mismanagement surrounding it, the Lesotho Highlands Water Project has

some substantial social and economic viability. Its benefits to the local communities and the nation in general can be significant provided it is operated effectively and efficiently. Certain considerations need to be in place and where necessary corrections or adjustments be made. The following recommendations, based on the data of testimonies from the rural and urban communities, are additional to the current principles and policies of the water project to increase local incomes, raise the total economic welfare and uplift the targeted Highlands groups to improve their livelihood.

- **Dam crossing**

The absence of an EIA for the Ha Katse Dam has resulted in poor mitigation measures to counter the adverse impacts. This, perhaps, has caused the building of fewer bridges thus making the dam to become an obstacle for the locals whenever they travel across the Malibamatso River. Due to the extent of the dams, additional bridges should be built at selected dam points; and to facilitate safe dam crossing and quick rescue operations, LHDA should supply powered boats at strategic points of the dam. These boats should be serviced properly and maintained regularly by qualified personnel to ensure their maximum safety and reliability. The number of boats required can be determined by LHDA and the communities.

- **Security and Rescue Operations**

Since these large dams will be there for a long time, drowning and other accidents resulting in unnecessary deaths are bound to occur. To improve on the dam safety conditions, LHDA should consider two things: dam security and casualty recovery. In the first case, many accidents have happened simply because of inexperienced people being exposed to vast and deep water masses. Dam safety should be taught to villagers within affected areas. Moreover, investing in security fence and dam patrolling would save many human and animal lives and ensure cleaner water with less dead bodies in it.

In the second case, there are increasing incidents of people drowning with others looking helplessly. Investing in dam rescue operations will save lives and at the

same time generate employment. Therefore, LHDA should consider running a swimming school to train locals in deep water diving and water rescue operations in order to have life savers at the project dams. This, together with powered boats and secured dams, could avert many drownings and deaths which in some cases might put LHDA into unnecessary and expensive law suits.

- **Enhancing community participation**

Public participation is well documented by LHDA but in practice it is lacking. Otherwise there would be no reason for all villages visited to have so many grievances including complaints of imposed assets assessment and compensations. These unanimous community comments sent a clear message to LHDA that public participation was not properly engaged.

At this point, LHDA ought to bear two things in mind i.e. no man is good enough to govern or to decide for another man without his consent, and that sustainable development relevant to rural communities and local resource can only be achieved through incorporation of local knowledge and local control into resource management. This can be attained through effective and meaningful community participation in planning and management and utilizing proper and acceptable mechanisms including co-management of rural natural resources. This implies the empowerment of local communities through conditional devolution of power and rights to communities (De Villiers, 2003a). Furthermore, participation of the affected people ensures that their interests with regards to their opinions, objectives, values, local knowledge and the biophysical and socio-economic development are incorporated into the project for their improved livelihood. This also creates a feeling of ownership by the locals and thus secures the project.

With regard to elected community representation, affected communities should have the mandate to vote out any untrustworthy or failing committee member within the term of office to replace him/her with another. LHDA should not refuse them this right with the pretext that new members would have no training; it is its responsibility to train them within its training schedules which it should have

because it cannot successfully run such a multimillion rand project for several years without continual training of personnel. Even the unaffected communities need representation to enable their participation in the rural development programs.

All community council members should have a duration in office, say three years and then new members should be elected. To give them an incentive, they should be paid a nominal salary in order to be motivated in their work, unlike at present when they are not. Therefore, public participation needs to be improved for better performance in order that it can truly represent the aspirations of both the affected and the unaffected communities because all the Basotho people deserve the benefits of the water development project functioning on their land.

In addition, LHDA cannot successfully function alone; team work is a prerogative to success. It needs to team up, not just with the communities but, with NGOs rather than fight with them over the affected communities' issues. The NGOs are important because they interact between the people and the government and other benefactors. NGOs are able to reach donor funds for community developments and seemingly have greater influence on the people. Therefore, they can assist greatly in motivating communities towards LHWP development programs. Collaboration with them is important both in the current and future project phases.

- **Community education**

While most Basotho people might have heard of The Highlands Water Project, commonly known as *Morero oa Metsi a Lihlaba*, they do not know what it really means for themselves where they live and for the country. All they know is that, instead of harnessing the water for national uses such as domestic and industrial consumptions and irrigation for food production, LHDA and the government took away their country's clean water to sell to South Africa leaving them behind in the doldrums of poverty and hunger. Such negative attitudes do not mean well for a

national project as large as LHWP. This means that a comprehensive and nationwide public education is required.

Therefore, bearing in mind that sitting in nice and comfortable offices will not advance a project of this nature and magnitude amongst the people it is supposed to serve, LHDA should reach out to the people nationwide and educate the Basotho about LHWP. The Basotho must know the importance of the water project, i.e. why it was implemented and what they should expect or should gain from it. They must also know that it is a national project not a party politics attaché. In schools LHDA should introduce books, learner topics in school syllabi and run competition quizzes and essays to reach the academic youth. For older people and non-academic youth, LHDA could run *lipitso* (public gatherings) and seminars in villages and towns for all. It could also run scheduled regular TV and radio programmes flavoured with competitions such as winning prizes of scholarships, free tours of the project, LHWP caps and/or T-shirts, etc.

It is also apparent that people in the affected areas have no idea of sustainability, hence their resisting attitude towards LHWP developments such as the formation of community corporatives. Some villagers lost their case against LHDA before the Ombudsman when claiming for community funds because they had refused to form the community corporatives classified as legal entities by LHDA (Qacha, 2003 ; Mafisa, 2003) due to lack of understanding. The onus is on LHDA to educate them in order to appreciate sustainable development and, therefore, EAP programs and to comprehend sustainable development concept within the context of LHWP and their area. Further, they need to understand assets compensation, public participation and many other important aspects of the project.

Finally, transparency is essential: people need to know what LHDA is doing in their country, the developments it is funding countrywide through Environmental Action Plan programs and they must be party in drawing up these developments. In all the country's ten administrative districts, LHDA should have representatives perhaps within existing national structures in order to foster LHWP objectives

throughout the country. At present, LHDA sphere of influence is severely limited within the affected areas.

- **Revision of the compensation method**

What ought to have been better addressed once the project was decided to be carried out is the pragmatic implementation of mitigation measures i.e. the application of realistic process to compensate the affected communities justly and honestly as well as the proper management and the fair distribution of benefits.

The once-pay-off or the 50-year compensation method is not a sustainable option at all for replacing the land resource lost to the project. LHDA needs to employ a sustainable and comprehensive compensation system because the land resource is sustainable. An option to be considered is the shareholding system in which property owners are made shareholders of the water project. They would receive short periodic royalties from the project's revenue either quarterly or four-monthly for as long as the project exists. Because payments would be long-term, periodic payment rates would be lower making it easier for the project to pay. For property owners the system would be more desirable because it would assure them of a more regular income than before; provide them with better ability to meet their families' monetary requirements; provide flexibility to plan ahead; take care of multiple harvests; and its longevity would mean that their grandchildren stood to benefit as well.

This system would yield two positive outcomes: (a) it would ensure that indigenous people removed from the land they once occupied were better rewarded with profits of that land and (b) it would encourage communities to develop priority interest in the project, to have a more positive attitude towards LHDA and the LHWP and look well after the dams and other project assets.

If the above suggested compensation system is envisaged to take too long to implement, then as a stop-gap all the related compensation amounts need to be reviewed; compensation on lost assets such as trees, thatching grass, river sand, etc. and cultural disruptions should be improved or introduced; more reliable and

trusted standard way for current compensation payouts should be sought; and dependable procedures of communicating with communities if abnormalities or difficulties arise in payments should be devised.

- **Food production**

The current food aid program run by the government is no answer to food shortages in the country. The irony is that Lesotho authorities wail of hunger due to poor harvest caused by drought and then beg for food aid yet on the other hand claim that the country has abundant water which it even exports to South Africa. It is true that crops do not necessarily need rain to grow – they need water. Lesotho is blessed because while other countries in the world have their mountains erupting with the devastating volcanoes, its mountains are dispensing out plenty of placid water. Why can they not source up the good technology for irrigating crop fields just like they have done for delivering the dammed water to South Africa? Maybe the Basotho and their leaders prefer to be happy beggars for life because they seem content with their ineptitude to turn this abundant resource into producing what they need most – food. In stead, the leaders prefer to stand on the international podia and beg for food aid.

A worthy consideration should have been how to deal with food production amidst the declining arable land. Taking the latter away and offering short-term compensation is no solace. More rigorous measures for food production should be established using a combination of methods to increase harvest. These considerations include but are not limited to measures of retarding the soil erosion; seeking expertise to train the Basotho and to assist them in intensive food production; proper identification and introduction of crops tolerant and suitable to the harsh Maloti conditions; and engaging in other successful farming methods including an introduction of the technology that can facilitate irrigation infrastructures (after all, if water can reach Gauteng from Lesotho, it can reach many places within the country).

- **Environmental Auditing System**

In administrating the water project, LHDA must comply with regulations, policies and standards it has declared to follow. But based on the testimonies of visited communities and the many complaints sent to the office of the Ombudsman coupled with the response of the latter thereon, LHDA is side-walking some of the very regulations and policies it laid down itself in managing community compensations, resettlements and other activities.

Therefore, it is important that an autonomous Environmental Auditing System (EAS) be established preferably consisting of internal and external auditors composed of specialists in the economic, financial, health, environmental, legal and other related aspects. The auditing should be a periodic reassessment of the project and proposed policies to ensure LHDA's socio-environmental performance and compliance during implementation and operation. It will help to monitor and foster the following (De Villiers, 2003b):

(a) **Compliance** with regulations, policies and standards;

(b) **Performance** improvement of environmental, health, and safety activities;

(c) Aiding overall level of **environmental awareness** in the project areas;

(d) Improving **environmental risk management** system;

(e) Overall enhancement of **environmental management control** systems;

(f) Optimisation of **environmental resources** in a sustainable manner; and

(g) Protection of LHDA from **potential liabilities**.

- **Integrated Environmental Management (IEM)**

Perhaps an entire stronger environmental management tool, the Integrated Environmental Management program, could be considered as well in order to complement and supplement the existing planning procedures and requirements (Retief, 2000) and strike harmony between environment, community and development. This would guide and direct LHWP so that while development

processes are considered, both the environmental factors and long-term human interests are enhanced (Hugo, Viljoen, & Meeuwis, 2000).

- **Impact Survey**

LHDA should consider having an intensive village to village survey aimed at verifying the predicted impacts and re-examining associated mitigation measures in order to alleviate the severity of effects caused by the project's impacts in the affected areas. It should further investigate impacts LHDA has ignored or missed in its predictions and make recommendations for their satisfactory mitigation measures. The survey should be autonomous and needs to work in tandem with NGOs, the Government, the Ombudsman, community leaders and the communities. It should include but not be limited to:

- Investigating the plight of affected Highlanders and all the promises initially made to them but were partially or never fulfilled. The Government and the NGOs should take lead in enforcing recommendations and corrective measures made on LHDA.
- Damages to property, e.g. buildings, household utensils and other belongings, animal kraals and stands, gardens, fields, schools, etc;
- Consideration of the herdboys whose cold winter suffering has been exacerbated by the project;
- Relocation of post-inundation homes that are prone to hazards related to the dams;
- Aggressive addressing of sexually transmitted infections (STIs) such as HIV/AIDS that were introduced or increased during project construction;
- Effective and affordable means of increasing and improving rural livestock that is reportedly decreasing due to lost pasturelands;
- Finding the easier ways for communities to open bank accounts without households contributions;

- Delivery of community project commodities or goods, e.g. dairy cows, crop seed, etc. which people or communities have long contributed for but were never delivered;
- Expediting of service facilities, e.g. water supply, toilets, etc. promised for enhanced well-being of the affected locals;
- Introducing ways of creating employment in affected areas to create the much needed jobs to augment reduced incomes due to lost assets;
- The means of strengthening the shaky start of community and individual projects encouraged through the Rural Development Programs, and the revision of the current skills training program to better distinguish or identify local needs suitable to the Highlands people;
- Intensified fish farming mainly to be run by the nationals rather than foreign companies or personnel who are interested in harvesting and exporting the fish to make themselves more money rather than feeding the nation as well.

This study is not a conclusive assessment of the impact of LHWP on the affected rural communities and the Basotho nation as a whole. It only offers a study of how the Basotho feel about the project issues important to them and how these have progressed in nearly the first 20 years of the project. It also makes some suggestions which could help to improve the project to be socially more beneficial and acceptable to the Basotho by alleviating negative impacts and enhancing the positive ones. Some further studies are recommended to be undertaken as outlined below.

- It is true that LHWP wage opportunities during the construction stages and the current compensations cannot replace the productive resource base lost by the people. But it is the revenue earned from customs tariffs and water sale that plays an important role. Besides the said corruption within LHDA, the Government too is alleged to have corruptly used the project revenue for different agendas than poverty alleviation. Therefore, it is imperative to make a research to establish how the earned revenue has been spent as its impact on overall poverty alleviation is not quite evident. An account of the actual revenue

earned from the project and how it has been used by the authorities and the suggestions for its better control should be made.

- Certain adjustments could be necessary to have improvements in the overall performance of the project as underpinned in the section of recommendations. Therefore, further research is required to monitor the project's impacts on the quality of life of the Basotho.

- It is also necessary that future research be made on the improved utilization of the dammed water in order to benefit the country in food production and alleviation of domestic and industrial water shortages currently plaguing Lesotho. Possibility of irrigation on suitable irrigable land through better use of the excess water that is often dumped downstream causing damaging floods could be investigated. Irrigation would have better impact in enhancing quality of life through increased food production, thus, lessening Lesotho from being a beggar and full-time recipient of foreign aid.

  Also, the urban and rural water supplies could be improved to meet the domestic and industrial demands. If current water supplies should appear insufficient, the future expansion of the project based on the existing plans or others can be made to augment water supply to the country. It should be noted that the suggested changes on the improved utilization of the dammed water may require amendment to the 1986 Water Treaty with South Africa.

- Finally, because the Lesotho Highlands communities are known to be poor and their basic means of livelihood of peasant and pastoral farming have been curtailed, Lesotho government, LHDA, NGOs and donor agencies need to consider some alternative developments as means of maintaining rural welfare. Research should be devoted to possibilities of establishing production firms in these areas to make Sesotho products as well as other goods, e.g. clothing. However, such firms might not be limited to affected areas only but should be poised to serve and provide labour to all rural communities.

Within this term of project existence, LHWP still displays mixed fortunes and its utter condemnation or pure praise would be unjustifiable at present. However, present

indicators are less favourable to LHWP for an incontestable improvement of the living standards of people especially those it has displaced. But LHDA (1997) has indicated that benefits from large development projects are often not immediately evident yet play a significant role in shaping the future. This raises a new vision of hope for the future that the scientific prestige brought by LHWP could make the Basotho to become one proud nation living in a country '*where the quality of life is matched by the quality of technology'* (NPR, 2005).

Appendix 1

List of `Muela Hydropower Station Investors (LHDA, 1999b)

Investor	Amount(R m)	Type	Purpose of Investment
Banque Nationale de Paris	57.8	Export credit loan	Underground power house
Dept. for International Development (UK)	39.1	Grant	Turbines and generators
Development Bank of South Africa	45.0	Concessionary loan	Underground power house, `Muela Dam and Administrative items
Dresdner Bank of Germany	30.2	Export credit loan	Underground power house
European Union, European Investment Bank	69.5 + 23.9	Concessionary loan	`Muela Dam + Switchgear and transformer
French Government	15.7	Concessionary treasury loan	Transmission lines
Hill Samuel /ABN-AMBRO (UK)	12.8	Export credit loan	Underground power house
Lesotho Bank	40.0	Commercial loan	Underground power house
Lesotho Government	180.0	Direct contribution	Administration
Nedbank Lesotho	80.0	Commercial loan	Underground power house
SED of Sweden	30.0	Export credit loan	National Control Centre SCADA
Swedish Government	59.3	Export credit loan	Turbines and generators
Svenske Hendelsbaken of Sweden	59.3	Export credit loan	Tunnels and generators
West Merchant Bank (UK)	29.2	Export credit loan	Turbines and generators

Appendix 2

Lesotho Highlands Water Project Awards (LHDA-TCTA, 2001e)

Year	LHWP winning division	Award description	Source of award
1990	Northern Access Road	Most outstanding Civil Engineering Achievement	SA Institute of Civil Engineers
1991	Malibamatso Bridge	Excellence in Concrete Construction	Fulton National
1997	Katse Dam	Civil Engineering Achievement in Technical Excellence	SA Institution of Civil Engineering
1998	Katse Dam	Excellence in Concrete Construction	Fulton National
		Special Recognition	SA Association of Consulting Engineers
1995	Delivery Tunnel North	Excellence in Concrete Construction (Runner-up)	Fulton National
1997	Delivery Tunnel North	National Premium Award for Integrated Environmental Management (Runner-up)	Environmental Planning Professions Interdisciplinary Committee
1998	Delivery Tunnel North	Excellence in Commercial and Community Paving	Cement Manufacturers' Association
		National Premium Award for Integrated Environmental Management	Environmental Planning Professions Interdisciplinary Committee
1999	Delivery Tunnel North	Integrated Environmental Management	Project Management Institute
		Excellence in Consulting Engineering in the Civil Engineering Category	SA Association of Consulting Engineers
		Most Outstanding Civil Engineering Achievement	SA Institution of Civil Engineering

Appendix 3

LHWP Cost comparison of the Engineering and Socio-Environmental Programs (Mochebelele, 2000)

Table A: Engineering Costs

Engineering Activity	Cost R(000)	
	Phase 1A	Phase 1B
Dams	1 629 794	551 198
Tunnels	1 859 907	1 157 102
'Muela Hydropower	404 201	---------
Advanced Infrastructure	639 079	484 021
Total Engineering Costs	**4 532 981**	**2 192 321**

Table B: Socio-Environmental Costs

Socio-Environmental Activity	Cost R(000)	
	Phase 1A	Phase 1B
Compensation	64 578	57 750
Rural Development	175 044	112 430
Natural Environment and Heritage	69 432	62 761
Public Health	25 373	79 031
Resettlement	25 702	81 982
Feeder Roads	157 502	145 900
Total Socio-Environmental Costs	**517 631**	**539 854**
Percent of Engineering Costs	**11%**	**25%**

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