

Water security with specific reference to the Kingdom of Lesotho

by

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ACRONYMS AND ABBREVIATIONS

AAP	Africa Adaptation Programme
ANC	African National Congress
BBC	British Broadcasting Cooperation
BDF	Botswana Defence Force
CDC	Centre for Disease Control and Prevention
COW	Commissioner of Water
CSS	Critical Security Studies
DMA	Disaster Management Authority
DRWS	Department of Rural Water Supply
DWA	Department of Water Affairs
EWN	Ecumenical Water Network
FAO	Food and Agriculture Organisation
FEWS NET	Famine Early Warning Systems Network
GNI	Gross National Index
HDI	Human Development Index
HDR	Human Development Report
HIV/AIDS	Human Immune Virus/Acquired Immune Deficiency Syndrome
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IFRC	International Federation of Red Cross and Red Crescent Societies
JBCC	Joint Bilateral Commission for Cooperation
JPC	Joint Permanent Commission
JPTC	Joint Permanent Technical Commission
KOL	Kingdom of Lesotho
LDF	Lesotho Defence Force
LEA	Lesotho Electricity Authority
LEWA	Lesotho Electricity and Water Authority
LHDA	Lesotho Highlands Development Authority
LHWC	Lesotho Highlands Water Commission
LHWP	Lesotho Highlands Water Project
LLWS	Lesotho Lowlands Water Scheme

LMPS	Lesotho Mounted Police Service
MCA	Millennium Challenge Account
MCC	Millennium Challenge Corporation
MDGs	Millennium Development Goals
NGO	Non-Governmental Organisation
NSDP	National Strategic Development Plan
NWRMP	National Water Resources Management Policy
ORASECOM	Orange-Senqu River Commission
RSA	Republic of South Africa
SADC	Southern African Development Community
SANDF	South African National Defence Force
SOLD	Survivors of Lesotho Dams
TB	Tuberculosis
TCTA	Trans-Caledon Tunnel Authority
TRC	Transformation Resource Centre
UN	United Nations
UNCERF	United Nations Central Emergency Response Fund
UNFCCC	United Nations Framework Convention on Climate Change
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission for Africa
UNEP	United Nations Environment Programme
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
WASA	Water and Sewerage Authority
WASCO	Water and Sewerage Company
WFP	World Food Programme
WHO	World Health Organisation

Chapter One

INTRODUCTION

1.1 General introduction

Water has become a scarce global resource. Twenty five African countries are expected to experience water scarcity or water stress by 2025, and fourteen countries in Africa are already experiencing water stress (African Studies Centre 2012). In sub-Saharan Africa, 334 million people lack access to clean drinking water, and around 600 million lack access to sanitation (Greve 2013).

The significance of water resources in the lives of humans cannot be disregarded. Water is an environmental issue which has come to occupy an important position on the international security agenda. The link between fresh water and security is the result of water's central importance to human life and economic development (United Nations Water 2013:5). Water plays a crucial role in the economy, health, education, cultural and religious practices of individuals and human collectives. Any disruption of water supply negatively affects the quality of human lives.

The amount of water resources vary from one geographical location to the other. These disparities in water resources necessitate the transfer of water resources from where they are in abundance to where they are scarce. Since the natural water resources as well as water infrastructure development are highly varied within Southern Africa, these disparities necessitate that countries cooperate in order to share available resources. For example, Lesotho, a water-rich country, transfers water to South Africa through the Lesotho Highlands Water Project (LHWP).

Against this background, this study investigates water as a security issue in Lesotho. Apart from national security concerns, and given the significance of water to human life, the impact of water security on human security in Lesotho is considered.

1.2 Identification of the research theme

This study recognises security as an essential prerequisite for the consolidation of democracy, good governance, economic development and social upliftment. Attempts to achieve any of

the aforementioned will be unsuccessful if issues pertaining to security are inadequately addressed. The neglect of security at a national, international or individual level can negatively affect multiple sectors of human interaction.

National security is influenced by and influences what is defined as national interest. Different states identify different national interests and diverse threats to those interests; this in turn determines what action is taken to secure the national interests. Accordingly, national security, national interests and identified threats to security are not similar among states. What is considered a threat to national security by one state may not be identified as such by another. In addition, the perception of threats to national interests and the significance of such threats evolve over time. Considering that the identification of threats to national security depends on the perception of the state, the identified threats may not necessarily be actual threats.

During the Cold War the focus was on protecting states from an external military attack, and resources were channelled to strengthen the military capacity of the state to counter such attacks. The end of the Cold War brought about 'new' thinking in security studies, which represents a move away from 'old' military and state-centred view of security. Traditionally, security was defined in geopolitical terms, confined to relationships among nation-states. The 'new' thinking on security propagates that policy-makers recognise non-military security threats, and that the security agenda is diversified to include economic, societal and environmental security issues along with military and political issues (Buzan, Wæver and de Wilde 1998:7). This 'new' security thinking is closely linked to the concept of human security which encompasses threats in the areas of economic security, food security, health security, environmental security, personal security, community security and political security (UNDP 1994:23).

Water affects every facet of human life. It is a component of the discourse on human security and the availability, supply and management of water resources affect the relations among communities, states and regions. Due to the important role that it also plays in human development, economic activity and political relations, water is a strategic resource (Houdret 2004:1).

The countries of Southern Africa are increasingly experiencing declining water resources. However, unlike most countries in the region, Lesotho has excess water resources.

Nevertheless, Lesotho is not immune to water related problems. In 2003, 2004, 2007 and 2008 it experienced recurring droughts. Thirty per cent of water points, boreholes, wells and springs in rural areas dried up in 2008 (Irin News 2008). From the aforesaid it is evident that Lesotho, at times, also experiences water stress. The question, however, is the extent to which this constitutes a security issue and more specifically a threat to national and/or human security.

Most previous research on water related issues of Lesotho focused on the Lesotho Highlands Water Project (LHWP), especially on the cooperation between South Africa and Lesotho with regards to the project. Research on the intra-state dimension of water security in Lesotho has been neglected. As such, this study aims to investigate water as a security issue in Lesotho. It focuses on the theoretical meaning of the concepts security and water security in the field of Security Studies; on the current water security status of Lesotho; on the inter-state ramifications of the LHWP for Lesotho's water and national security; as well as the intra-state effects of water security on human and national security.

1.3 Literature overview

The literature on which this study is based can be divided into four fields, respectively concerning security as a concept within Strategic Studies and International Relations; 'new' security thinking which supports a diversified security agenda; the concept of water security; and water security in Southern Africa and in Lesotho.

Firstly, security is a contested concept. The concept pertains to perceptions of what is to be protected, against what dangers. What security is taken to mean determines the identification of threats. This act of identifying threats provides a general idea of how to guard against these threats; it has implications for policy fields (Dimitrov 2002:679).

In his article, *The Renaissance of Security Studies*, Walt (1991:212) argues that Security Studies, and by extension security itself, be defined as the study of the threat, use and control of military force. This definition is state-centric and restricts the application of security to threats in the military sector. Walt and other traditionalists such as Freedman (1998:53) equate security with peace and the prevention of conflict using military resources. These traditional concepts are mainly concerned with protecting the integrity of the state against an external armed offensive, and means through which security is maintained is building offensive and defensive military capabilities (Dimitrov 2002:681). Accordingly, unless a

threat intrudes into the military domain, it is not considered a national security concern. This traditional definition identifies the state as the referent object, thus excluding sources of insecurity at the individual level.

Secondly, concerning ‘new’ security thinking, it is argued that the traditional militaristic approach to security overlooks the reality that individuals and communities that make up the nation are affected by threats in the political, economic, societal and environmental sectors (Buzan 1991a:15). Security should not be confined to traditional military understandings of the concept (Buzan 1991a:116). This requires a shift in what is defined as threat to national security.

Traditionally, national security threats were defined as "developments that threaten the sovereignty or independence of a state in a particularly rapid or dramatic fashion, and deprive it of the capacity to manage itself" (Wæver 1995:54). As a neorealist conception of conflict, this definition neglects domestic challenges to state survival and threats to individuals that come from the state itself. The idea of state sovereignty and territorial integrity as referent objects of security neglects threats emerging from the economic, environmental and societal sectors as national security threats. Alternatively, national security threats must therefore be defined to include “action(s) or sequence(s) of events that threaten drastically and over a relatively brief span of time to degrade the quality of life for the inhabitants of a state or threatens significantly to narrow the range of policy choices available to a government of a state, or to private, non-governmental entities within the state” (Ullman 1983:133). Therefore, non-governmental entities and individuals within the state should be identified as part of the security notion and security threat assessments should include non-military threats in the political, economic, societal and environmental sectors.

National security relates to an action or organization, or both, designed to preserve or to create conditions considered to be the most conducive to the optimization of national interests (Dutton 1977:102). The identification of national interests and action taken to secure and preserve such interests are central to national security. The state (through its government) is traditionally the institution that is responsible for taking these actions. Also, since national security is affected by a combination of issues in several sectors – political, military, economic, societal as well as environmental – national security strategy needs to take into consideration these sectors in order to optimise national interests.

Considering the aforesaid, the theory of securitisation – presented by the so-called Copenhagen School – is relevant for studying non-military issues such as water. The Copenhagen School is mainly associated with the work of Buzan, Wæver and de Wilde. Securitisation as defined by Buzan, Wæver and de Wilde (1998:23) is the inter-subjective establishment of an existential threat that demands urgent and immediate attention as well as the use of extraordinary measures to counter this threat. Accordingly, the aim of securitisation studies is “to gain an increasing precise understanding of who securitises, on what issues (threats), from who (referent objects), why, with what results and, under what conditions (what explains when securitisation is successful)” (Buzan, Wæver and de Wilde 1998:32). The advocates of securitisation both horizontally broaden (with reference to non-military security issues and threats) and vertically deepen (with reference to other referent objects of security than the state) the traditional security concept.

Broadening the concept of security means inclusion of a wider range of potential threats, such as economic issues, environmental issues and issues concerning migration and human rights, within the security agenda. In this respect, Buzan (1991:19-20) identifies five sectors of security, namely military, political, economic, social and environmental. Water security, which is the core subject of this study, affects all facets of human life and potentially affects or is affected by all of these sectors.

Deepening the agenda of security studies means moving either down to the level of individual or human security or up to the level of international or global security, with regional and societal security as intermediate points. Deepeners embrace the concept of human security that also transcend state boundaries and argue that the chief referent object of security should not be the state or certain sub-state groups, but the individuals constituting these entities or groups (Hough 2004:8).

Human security as a distinct and new concept was introduced in 1994 by the United Nations Human Development Programme Human Development Report (HDR). This report defines human security as “safety from such chronic threats as hunger, disease and repression, and protection from sudden and hurtful disruptions in the patterns of daily lives, whether in homes, jobs or communities” (UNDP-HDR 1994:23). The UNDP definition of human security contends that the scope of global security should be expanded to include threats in seven components: economic security, food security, health security, environmental security,

personal security, community security, and political security. Human security propagates a shift in the focus of security from the protection of the state and its borders by military means to the protection of individuals.

The focus on the security of individuals (human security) does not diminish the importance of national security. National security and human security are mutually beneficial (Olivier, Neethling and Mokoena 2009:15). A secure state is a means of security for its people. It would be impossible to achieve the security of individuals when there is anarchy and where the state as the provider of security is insecure. The pursuance of national security or human security should not compromise the other since the achievement of one will benefit the other.

Thirdly, concerning water security, already two decades ago it was predicted that four domains would be the source of future conflicts, namely energy (oil) reserves, strategic minerals, food reserves and water resources (Rogers 1994:5). In his message on International Day for Preventing Exploitation of Environment in War and Armed Conflict, the United Nations Secretary General Ban Ki-moon reflected that since 1990, at least 18 violent conflicts have been fuelled by the exploitation of natural resources such as timber, minerals, oil and gas (United Nations 2012). As with other natural resources, water is unevenly distributed, and water stress increases the risk of instability, disputes, and can ignite political ambitions and military action (Kreamer 2012:90).

Water is a complex and versatile subject of the Social Sciences which is discussed in a variety of contexts, for example with reference to public policy, economic development, environmental scarcity, migration, food security, human security and human rights (Dimitrov 2002:677). Against this background, water security involves the sustainable use and protection of water systems, the protection against water related hazards, the sustainable development of water resources and the safeguarding of access to water functions and services for humans and the environment (Schultz and Uhlenbrook 2007:1). Water security concerns therefore cut across other sectors and are linked to energy, food, health and the environment. A comprehensive view of water security involves taking into account the water needs of all sectors that consume or harness water, including industry, agriculture, the energy sector and domestic water users in both urban and rural settings (Grobicki 2009). This requires consideration of the core constituents of water; availability, access, and addressing conflicts of use (Wouters, Vinogradov and Masig 2009:126).

To the extent that water correlates with instability, Turton (2000:35) identifies five different discourses on water and conflict. These are the Malthusian discourse, the virtual water discourse, the structural inequality discourse, the environmental scarcity discourse, and the social scarcity discourse. Of these, the social scarcity discourse and structural inequality discourse are relevant for understanding the dynamics of resource scarcity (especially as far as Lesotho is concerned).

Finally, concerning Lesotho's water security in a regional context, the literature points to the abundance of water as a natural resource, but also to problems with the quality and distribution of water. The situation in Lesotho is what is classified by Turton and Ohlsson (1999:4) as structurally-induced social scarcity. Structurally-induced social scarcity is a condition that exists when a social entity simultaneously has both first-order resource abundance and a second order resource scarcity. A first-order resource is a natural resource (such as water) which may be scarce or abundantly available. A second order resource is a social resource (such as competent management of available water resources), which may be either scarce or abundantly available (Ohlsson 1999:161).

Competition for resources can be a cause of conflict. Gleick (1998:107) identifies four major links between water and conflict: water as a military and political goal; water as a weapon of war; water resources as targets of war; and water as source of tension and dispute due to inequalities in the distribution, use and consequences of water resource management. For the purpose of this study, the focus is on the latter, namely on inequalities in the distribution, use and consequences of water resource management as source of tension and dispute in Lesotho.

Detractors such as Deudney (1990:461-464) however, critique the securitisation of environmental issues (and by implication of water) and argue that it is difficult to identify specific links between environmental problems and threats to security. He offers three reasons why linking environmental issues to national security is analytically misleading. Firstly, military threats are deliberately imposed and the cause of the threat is easily identifiable, whereas environmental threats are accidental and their causes are often uncertain; secondly, linking environmental issues to national security may not have the effect of mobilizing more attention and action on environmental problems, but, rather, it may serve to strengthen existing security logic and institutions; and thirdly, environmental change is not likely to cause wars between countries (Deudney 1990:461-464).

Bearing these opposing viewpoints in mind, the relationship between water and security in Lesotho – also considering its position in the region – is a contentious issue. There are fifteen international river basins in Southern Africa (SADC 2005). Southern Africa is classified as a relatively water scarce region and is included in the world’s hydropolitical ‘hot spots’ (UNECA 2011:7). This has influenced most studies to focus on the management of international river basins in the region (Green Cross International 2000; Solomon and Turton 2000; Turton and Henwood 2002). The disparities in the distribution of water within the region necessitates water transfer from areas that have abundant water resources to those that experience water scarcity. A case in point is the LHWP, one of the largest water transfer schemes in the world (Conley and van Niekerk 2000:137). The majority of water related studies on Lesotho concentrate on the LHWP and the issue of cooperation between Lesotho and South Africa, and most commend the project as highly effective (Mochebele 2000:111; Conley and van Niekerk 2000:137). Lesotho although water rich experiences water stress due to recurring droughts and excessive rains. The management of water resources for human security and national security in Lesotho is an under-researched field. Therefore, there is a need to focus on the intra-state and inter-state effect of water security in Lesotho.

1.4 Formulation and demarcation of the research problem

The underlying research question of this study is: *What are the effects of water (in)security on human security and national security, with specific reference to the Kingdom of Lesotho?*

The sub-questions underlying the basic research question are:

- How is water security defined and conceived by the government of Lesotho?
- What is the current status of water security in Lesotho?
- What are the effects of the LHWP, especially the water-related inter-state relations between Lesotho and South Africa, on the water security of Lesotho?
- How does water (in)security affect the national and human security of Lesotho?

The assumption or thesis statement in response to the above is that water affects economic, health, societal, political and military security – this makes it central to human and national security. The government of Lesotho is therefore responsible for the ensuring the realisation of water security for individuals, communities, districts and the nation.

Accordingly, the main objective of this study is to determine the meaning of water security and the effects of water (in)security on national security of Lesotho. The study therefore

investigates the impact of water (in)security on the country's national security. In this respect, the objectives of the study are to:

- clarify the concepts water security and the securitisation of water;
- identify factors that contribute to water (in)security in Lesotho;
- determine ways in which water (in)security affects the different sectors of security.
- and assess how water security issues of a local and regional nature (including the LHWP) interact with other source of conflict to exacerbate, prolong or complicate the existing disputes and national security problems in Lesotho.

The study is demarcated in conceptual, spatial and temporal terms. Conceptually and as previously indicated, the main emphasis is on water security. However, water security is contextualised with reference to the concepts security, national security and human security. In spatial terms the geographical scope is the Kingdom of Lesotho, a small mountainous country surrounded by the Republic of South Africa. Since the Lesotho Highlands is the source of the Orange-Senqu river system, which is flows into South Africa and eventually into the Atlantic Ocean, the international river basin is not excluded and the scope of study therefore includes the regional context of Lesotho, specifically South Africa. The time frame of the study covers the post-Cold War period from 1990, a period that prompted the move towards the broadening and deepening of security, to the present. In the regional context, following the ending of the apartheid regime in South Africa (1994), it is also a period characterised by the normalisation of relations between Lesotho and South Africa and by increased regional cooperation at a multilateral and bilateral level. However, the time-frame is not be limited to the above but includes pre-1990 historical reflections as a background context.

1.5 Research methodology

The study is a non-comparative single-state case study, based on an analysis of official and non-governmental (policy) documents, and on a few selected unstructured interviews as primary data sources. In addition, the theoretical foundations are literature based, whereas secondary published sources are used to supplement the primary sources. A descriptive-analytical approach is used. Following a critical analysis of theoretical literature (for purposes of developing an analytical framework), the descriptive section of the study is based on an examination of official documents, non-governmental reports and secondary literature on water issues in Lesotho.

As such, the study encompasses a comprehensive analysis of primary and secondary data and literature on water security in Lesotho. Primary literature includes the *Water Resource Act*, the *National Water Resources Management Policy*, the *Water and Sanitation Policy*, the *Lesotho Highland Water Project Treaty* and official reports on related issues available in the public domain. Secondary sources include journals, books, newspapers and magazines on the topic of water security in general and specifically on Lesotho. Unstructured interviews with relevant experts in the field of water management and with representatives of the Lesotho and South African water sectors to further supplement the documentary and literature sources.

1.6 Structure of the research

The study is subdivided into an introduction, a theoretical framework, the Lesotho case study and a concluding evaluation. Accordingly, as an introduction, Chapter 1 identifies the research theme, provides a literature survey, formulates the research problem, describes the research methods used and indicates the structure of the study.

Chapter 2 presents the theoretical framework for the study. The chapter clarifies key concepts such as water resources, security, water security, national security, human security, security threats, securitisation and conflict. The relationship between resource scarcity and conflict (or instability) and the human and national security implications thereof are discussed in this chapter.

Chapter 3 provides a contextual overview of water resource management in Lesotho. The official conceptualisation of water security is analysed by discussing the policy and institutional frameworks of water management in Lesotho. The status of water resources and the securitisation of water in the country are therefore the main focus.

Chapter 4 analyses the inter-state relations of Lesotho and South Africa in the context of Lesotho Highlands Water Project. The chapter gives an overview of the history of the project and the institutional framework of LHWP. The chapter further interrogates the security implications of LHWP on bilateral relations as well as national and water security.

Chapter 5 analyses the intra-state effects of water security in Lesotho. The effects of water security are discussed within the framework of the water security-human security-national security nexus in Lesotho.

In conclusion, Chapter 6 summarises the key findings of the study. As an evaluation it also addresses the research question formulated at the outset. Based on this evaluation the chapter makes recommendations on the management of water resources for water security, human security and national security in the Kingdom of Lesotho.

1.7 Conclusion

Lesotho is a water rich country but is faced with multiple challenges with regards to water resource management. Based on the importance of water for human life and the fact that water issues cut across energy, food, health, economic and environmental sectors, a comprehensive view of water security has to take into account the impact that water has on human and national security. The management of water resources in Lesotho have intra-state as well as inter-state effects that need to be considered within the context of water security, human security and national security. Being under-researched, this research focuses explicitly on water security with specific reference to the Kingdom of Lesotho and the human and national security effects thereof. However, to enable the description, analysis and evaluation of the Lesotho case study, a conceptual framework has to be developed in order to provide a theoretical basis to the study.

Chapter Two

WATER AND SECURITY: A THEORETICAL FRAMEWORK

2.1 Introduction

States exist within a constantly changing international environment, which determines and influences the challenges they face such as inter-state foreign relations, trade relations and defence strategies. During the Cold War the sphere within which states existed was defined by the bi-polar nature of the international system. The security of states was therefore framed by the nature of the Cold War politics. Since the end of the Cold War the focus of states shifted away from bi-polar politics, and states increasingly recognise that they are affected by factors other than external military threats. Additionally, states are interlinked and interconnected within the web of globalised inter-state relations that includes non-state actors. As a result, the neglect of important security issues by one state can have a negative effect on the security situation of other states. This interconnectedness of states as well as non-state actors within the international system is crucial to understanding the nature of security.

Since the end of the Cold War, non-traditional threats to security have become more prominent in Security Studies. Increasingly, threats emerging from the economic, societal and ecological sectors are acknowledged as having a significant impact on security. The availability and accessibility of water resources have thus become an important issue of International Relations. States have become increasingly aware that the availability and accessibility of water resources have an effect on multiple issues, such as economic productivity, food production, and health and energy production, within and across states boundaries. Water security therefore needs to be given attention as a national security, a human security and an international security issue.

This chapter addresses the concept of security and related concepts. It provides a conceptual overview of security, the non-traditional approach to security, the broadening and deepening of security, the nature of and relationship between national security and human security, and theoretical approaches to security. Its core focus is the concept of water security and the chapter concludes by discussing the relationship between resources scarcity and conflict (or instability), and the human and national security implications thereof.

2.2 The concept of security

Security results from a complex web of interactions among individuals in different spheres of social life, such as the political, economic, social, military and environmental (Zacarias 1999:xiii). Security does not exist in a vacuum; it is a result of the interaction of actors within these different spheres. The concept of security is highly contested within International Relations and Security Studies. There are varying approaches to the definition of security, and to the methods that actors can use to respond to security threats. The differences in these approaches centre on the relations of objects/subjects in the international environment and on the identification of threats.

Core values, threats and capacities define the security of any entity (Asberg and Wallensteen 1998:169). Core values refer to aspects such as sovereignty, territorial integrity, national unity and democracy. States differ on the core values that they identify with – some core values are inter-linked and some are incompatible with each other. Threats can be divided into two categories, namely perceived threats and actual threats. The more intense a threat (perceived or actual), the more legitimate the invoking of national security as a response to it (Buzan 1991a:134). Capabilities refer to means that are used to protect fundamental values and principles from threat (Asberg and Wallensteen 1998:175-176). Although other actors such as individuals and sub-units (e.g. non-governmental organisations) are relevant to International Relations and Security Studies, they lack the autonomy, resources and ability to provide security. Therefore, the state remains the principal provider of security, although the international system (and the institutions thereof) is also strengthened for the role of providing security (Buzan 2006). In order to provide an understanding of the contemporary meaning and understanding of the concept security, it has to be considered in the context of changing approaches and definitions as forthwith indicated.

2.2.1 Changing approaches to security

The theoretical perspective of realism provided the foundation for the traditional approach to security. At its core realism equates security with the survival of the state and the promotion of its national interests (Hough 2004:2-4). Essentially, the traditional approach identifies the state as the referent object of security. From realism emerged a specific narrow focus which expresses security as “the study of the threat, use and control of military force” (Walt 1991:212). Security is therefore defined as a “relative freedom from war, coupled with a

relatively high expectation that defeat will not be a consequence of war that should occur” (Bellany 1981:102). Similarly, Walt defines Security Studies, and by extension the concept of security, as the study of the threat, use and control of military force, especially of the specific policies that states adopt in order to prepare for, prevent, or engage in war (Walt 1991:212). These definitions, that are mainly outward looking, represent the realist and traditional approach which places the military at the centre of security — the focus is on military threats that originate outside the borders of a state and the emphasis is placed on the state as the referent object of security.

This traditionalist approach to security overlooks legitimate non-military threats and threats emerging from within the state (Ullman 1983:133). While solely focusing on military threats, other threats emerging in areas such as the economic and sociological arenas of and especially within the state are ignored. The focus on the external threats also ignores the fact that issues such as environmental degradation, disease and economic decline can have damaging effects on the security of any state. Non-traditional threats to security cannot be addressed by military force, yet these threats can have a detrimental effect on the security of the state as a result of social instability or the inter-state effect of an issue such as water insecurity. The traditional approach to security, although it overlooks non-military threats, nevertheless remains important for the national security complex.

However, traditional and non-traditional approaches to security need to be juxtaposed in order to address national security concerns effectively. Therefore, the recognition of the limitations of the traditional approach to security has prompted a move towards the non-traditional approach to security. The challenge to the traditional approach to security is not a new phenomenon. In the 1960s Robert McNamara, the United States Secretary of Defence, already defined security as development; as economic, social and political progress (McNamara 1968:109). This linking of security to development is a crucial shift that makes human lives central to security. Also, development is not a single faceted process; it is a process that requires a balance amongst multiple components such as the economy, education and health. Therefore, underdevelopment is a threat to the security of individuals, communities and states. The development-security nexus recognises that security cannot be achieved by focusing on only protection from external attack, and that all components that affect human life and the functioning of the state and the lives of the inhabitants of the state form part of the security agenda. Any action or sequence of events that threatens to degrade

the quality of life of the inhabitants of a state, or that threatens to reduce the range of policy choices available to the government of a state, is a threat to security (Ullman 1983:123). This non-traditional security approach, that gained momentum after the ending of the Cold War, departs from realism and is influenced by and is representative of liberal-plural perspectives and also of what has become known as Critical Security Studies (see section 2.3.2). In its post-Cold War context and at both a conceptual and a practical level, new security thinking has been accompanied by and found expression in the broadening and deepening of the security concept.

2.2.2 The broadening and deepening of security

The Copenhagen School presents an alternative to the realist or traditional approach to security; it encompasses broadening and deepening of security. The Copenhagen School's approach is mainly defined by three elements: a sectoral approach to security, a regional approach to security studies and a social constructivist theoretical understanding of security that specifically emphasises securitisation (see Section 2.3.1).

Firstly, the Copenhagen School proposes that security threats be observed in five sectors, namely the political, military, economic, societal and environmental (Buzan 1991b:432). All these sectors are interconnected; events in one sector can have effects on the other sectors. Secondly, the regional focus to security issues recognises the interconnectedness of the security dynamics of regions. States cannot totally disengage themselves from the system of states; security issues of states in close proximity can have a spill-over effect. Thirdly, the social constructivist theoretical understanding of security through securitisation focuses on how threats to national security are constituted and socially constructed.

The broadening of security agenda refers to the inclusion of non-military threats such as environmental scarcity, pandemics and mass refugee movement in the security agenda (Le Gloannec, Irondelle and Cadier 2013:4). The broadening of the security agenda recognises both military and non-military threats to security (in the five sectors identified above). The five sectors are interconnected and threats to one sector will have an impact on other sectors. It is therefore important that when assessing threats within a sector, consideration be given to the effects of the same threat in other sectors.

Deepening the agenda of security refers to moving either down to the level of the individual (in terms of human security) or up to the level of international or global security, with regional and societal security as possible intermediate points (Krause 1996:230). The deepening of security is therefore concerned with the question of for whom security is provided, and it put greater emphasis on the security of individuals (human security). Thus, this deepening with its emphasis on transnational and sub-national objects of security transcends the state as the referent object of security.

The broadening and deepening of security, to the extent that it resulted in a greater emphasis of human security, compromised the traditional notion and understanding of national security. Hence, it is necessary to clarify the concepts linked to and related to security, and the distinction and relationship between national and human security.

2.2.3 National and human security

Traditionally, national security refers to the ability (of the state) to withstand aggression from abroad (Luciani 1989:151). Essentially in the traditional sense, a nation is secure to the extent to which it is no longer in danger of having to sacrifice core value if it wishes to avoid war, and is able, if challenged, to maintain them by victory (Buzan 1991a:16). The state (and the political regime in the state) is identified as the referent object — it is the object that experiences insecurity and is to be secured. This realist approach to security is militarised and focuses on organised violence, it prioritises a concern with armed threats to and by the states. Defining national security purely in military terms focuses on the state and government.

The non-traditional approach to security, which offers a more contemporary and extended understandings of national security, relates national security to the preservation of a way of life acceptable to people and compatible with the needs and legitimate aspiration of others (Macnamara and Fitz-Gerald 2002). It includes freedom from military attack and coercion, freedom from internal subversion, and freedom from the erosion of political, economic and social values which are essential for the quality of life (Macnamara and Fitz-Gerald 2002). The centrality of individuals and the harmonisation of their different aspirations and needs is an important factor for national security. Disjointed or conflicting need and aspirations can result in insecurity.

In a contemporary setting, national security is affected by threats in the political, military, economic, societal as well as environmental sectors. Identifying threats to national security within these sectors recognises that threats to national security are not solely confined to threats to the states. Essentially, a threat to national security is an action or sequence of events that threaten to degrade the quality of life for the inhabitants of a state or that threatens significantly to narrow the range of policy choices available to a government of a state, or to private, non-governmental entities within the state (Ullman 1983:133). As such the quality of life of inhabitants of a state is an important indicator of national security. Since the insecurity of individuals (in terms of fear, want and human dignity) can create unstable social conditions that affect the security of the state, the security of individuals, namely human security, is an essential and important component of national security.

The broad approach to human security is articulated by the UNDP Human Development Report (HDR) of 1994. The report defined human security as people's "safety from chronic threats and protection from sudden hurtful disruptions in the daily patterns of life" (UNDP 1994:23). Chronic threats refer to conditions such as hunger, disease and repression. The HDR provides a conceptual structure by proposing seven main categories of human security, namely economic security, food security, health security, environmental security, personal security, community security and political security (UNDP 1994:24).

It is obvious that human security goes beyond the traditional notion of security. National security, in a narrow sense, nevertheless remains important for human security since it creates conditions under which people can be protected from disruptions. Conversely, human security is a component of national security – human insecurity creates conditions that are not conducive for the pursuit of national security.

In summary, human security propagates a shift in the focus of security from the protection of the state and its borders by military means to the protection of individuals; to a wider range of threats to the well-being and security of individuals; to a wider range of measures and policies to counter these threats; and to the local and community levels as well as to the regional and international arenas.

2.3 Theoretical approaches to water security

The shift from the traditional to the non-traditional approach to security, which propagates the deepening and widening of the security agenda and identifies the individual and region alongside the state as referent objects of security, is accommodated in two related theoretical constructs, namely in the theory of Critical Security Studies (CSS) and in Securitisation Theory.

2.3.1 Critical Security Studies

Critical Security Studies (CSS) is concerned with the challenging of traditional understandings of the dynamics of societies, states and international systems. In the context of security and Security Studies, CSS critiques traditional security thinking by questioning its referent object of security. While it acknowledges that states remain important, individuals are also considered as referent objects of security. Being representative of new security thinking, CSS considers security as more than military security and recognises that the means for achieving security go beyond the traditional military agenda (Peoples and Vaughan-Williams 2009:22-23). In addition, CSS is influenced by post-positivist theorising of a more critical and reflective nature, hence its doubt of the metanarrative of traditional security thinking (Collins 2013:71).

According to CSS, people are threatened by a multitude of issues such as war, poverty, famine, political oppression and environmental degradation (Peoples and Vaughan-Williams 2009: 23). It furthermore acknowledges that people are threatened by diverse types of threats and that these need to be taken into consideration when dealing with security. Thus CSS recognises the broadened agenda to security and presents the individual as the referent of security. Accordingly security should refer to the physical, material existence of human beings (Wyn Jones 1999:23).

A key principle of CSS is emancipation. As articulated by Booth (1991:539) of the so-called Welsh School, “security and emancipation are two sides of the same coin; both are needed, in theory and practice, to create a stable security”. Emancipation refers to the freeing of peoples from physical and human constraints, such as war, poverty, education and political oppression, which prevent them carrying out what they would freely choose to do (Booth

1991:319 & 539). Therefore, emancipation in the context of security requires the removal of structural security barriers which either obstruct certain groups from total political participation or create situations of insecurity for individuals (Booth 2005:181).

By implication, CSS is a non-traditional and questioning outlook in response to the dominant social and power structures, institutions and ideologies, by advocating a move away from the state-centric focus of security. CSS is therefore considered to be useful and appropriate for studying water security because it provides an approach that focuses on the insecurities of individuals and on how security policies can address (water) insecurity. CSS advances the study of water security in two ways. Firstly, it recognises water security as being a concern that secures vulnerable populations from structural violence caused by the political, social and natural constraints that impede access to adequate water supplies needed for a good life. Secondly and simultaneously, it emphasises the means through which water security is achieved, in the process not depriving others of it or destroying the affected ecosystems (Harrington 2013:20).

2.3.2 Securitisation Theory

The concept of securitisation is generally associated with the Copenhagen School of Security Studies, amongst others represented by theorists such as Buzan, Wæver and de Wilde. Similar to CSS, Securitisation Theory goes beyond the traditional conceptualisation of security by establishing the existence of an existential threat that demands urgent and immediate attention as well as the use of extraordinary measures to counter this threat (Buzan, Wæver and de Wilde 1998:23).

According to Wæver (1995:55) securitisation is a speech act. By labelling an issue or development as a security issue the securitising actor 'positions' the issue outside 'normal' politics. Securitisation therefore moves an issue from politicisation, where it is dealt with as a 'normal' political issue, to securitisation where it is dealt with through extraordinary measures. The securitising actor's utterance of an issue as a security issue does not complete the securitisation process; the audience must respond to this call by accepting it. If the audience does not accept the issue as a security issue then the securitisation process has failed. Power is an important element of the securitisation process. Individuals and groups who do not have power may speak out about a security issue. However, if they do not have

the capacity to securitise the issue, then it will remain politicised (Buzan, Wæver and de Wilde 1998:27).

According to Securitisation Theory an issue becomes a security issue not because it constitutes an objective threat, but rather because the securitising actor has defined it as an existential threat to an identified object's survival and the audience has accepted it as such. When the issue is accepted as a security issue, the securitising actor then gains the right to move the issue from 'normal politics'. This allows for the use of emergency measures and a breaking of normal procedures (Buzan, Wæver and de Wilde 1998: 31-32). Accordingly, securitisation involves three steps, namely the identification of existential threats, emergency action and effects on inter-unit relations by breaking free of rules (Buzan, Wæver and de Wilde 1998:6).

Desecuritisation is the reversal of securitisation, whereby issues are moved out of the sphere of exceptionality and into the ordinary public (political) sphere where they can be dealt with in accordance with rules of the political system (Buzan, Wæver and de Wilde 1998:29). Desecuritisation renders the extraordinary measures to gain control over an issue no longer necessary. Desecuritisation essentially refers to the reversal of securitisation process; to an issue no longer being talked about in security terms; to not utilising extraordinary measures to address the issue; and to moving the issue back to the domain of normal politics.

Securitisation and Securitisation Theory can nevertheless offer solutions to water problems. In addressing water issues, security can be provided and be accompanied by change and transformation (Mirumachi 2013:311). This will allow water to be recognised in terms of human security and encourage cooperation over water issues. The securitisation of water could also have the effect of framing it as an issue that requires special attention, rather than an emerging or developing threat or defence problem. As such, securitisation can contribute to and even result in a positive transformation of the water sector.

2.4 Water security

As indicated at the outset, water is an important resource for the existence and survival of human life. Water is required for the development of nearly every area of life, not only of human beings but of all life on planet earth. Food production, health, education, manufacturing, energy and many other facets of human existence require water in order to

function properly. In addition, water as a subject is versatile and is discussed in a variety of contexts such as public policy, economic development, environmental scarcity, migration, food security, human security and human rights (Dimitrov, 2002:677).

Unlike most resources, water has no substitute in most of its uses. Water resources are also not equally distributed geographically. Some areas have excess water while others have acute shortages. Water resources are also not confined to political borders and need to be given special attention and be judiciously managed taking into consideration its importance to the survival of humans, nations and states (United Nations Water 2013). Although water is not intrinsically and in principle a security issue, owing to its centrality to human life, water occupies a special place in politics. In terms of CSS, the broadening of the security concept and if securitised, water may become a security issue. Hence the reference to and use of the concept water security; and the inquiry into the relationship between water resource scarcity and conflict.

2.4.1 The concept of water security

Water security refers to safe water supply and sanitation, in order to meet the basic food, energy and other requirements essential for leading a healthy and productive life (Falkenmark 2001; Jansky Pachova and Kanayama 2008). As such water security hinges on the availability of an acceptable quality and quantity of water (Grey and Saddoff 2007:54). The economic cost of water is also an important element of water security since water must be available at an affordable cost (Jansky, Pachova and Nakayama 2008). In addition, water security requires action to protect people from water-related disasters and diseases, and the protection of vital ecosystems (Jansky Pachova and Nakayama 2008) Hydro-solidarity and cooperation between those living upstream and those living downstream in a river basin, and water pollution avoidance are important for achieving water security (Falkenmark 2001).

Considering the aforesaid and for the purpose of this study, water security is defined as access to sufficient quantity and quality of water to meet basic needs and other requirements for healthy and productive living, and the protection from water-related disasters and diseases, while ensuring the protection of vital ecosystems. Water security requires coordinated activities undertaken by the state, institutions of water management, communities and individuals. Amongst others, these actions that are required for water security include the sustainable protection of water systems (conservation); protection against water related

hazards (floods and droughts); the sustainable development of water resources (investment in infrastructure); and the safeguarding of (access to) water functions and services for humans and the environment (water supply as service). Therefore, water security concerns cut across many sectors and are linked to energy, food, health, economic productivity and the environment. A comprehensive view of water security involves taking into account the water needs of all sectors that consume or are connected to water, including industry, agriculture, the energy sector and domestic water users in both urban and rural areas.

2.4.2 Resource scarcity and its relationship with conflict

The management of natural resources is a critical governance and international relations challenge. The extraction and distribution of resources can trigger, escalate or sustain conflict (UNEP 2012: 14). Resource scarcity describes a situation where the supply of renewable resources, such as water, is not sufficient to meet the demand. This is what Ohlsson and Turton (1999:3) refer to as first-order resource, namely the natural resource that is becoming either scarcer (or more abundant) relevant to population over time. The scarcity of resources results in competition among users. Responses to the competition can include migration, technological innovation, cooperation and even violent conflict (UNEP 2012:14). These adaptive behaviours that are drawn from the broader social context are referred to as second order resource (Ohlsson and Turton 1999:3).

Three types of resource scarcity can be identified namely supply-induced scarcity, demand-induced scarcity and structural-induced scarcity (Homer-Dixon 1994:10). Supply-induced scarcity is caused by the degradation and depletion of resources. Demand-induced scarcity is the result of population growth or increased *per capita* consumption. Structurally-induced scarcity is the consequence of the unequal distribution of resources within and between countries (Ohlsson and Turton 1999:5).

Responses to water scarcity can result in either conflict or cooperation. Conflict in this sense is not limited to violence or armed conflict. Conflict also occurs when two or more parties believe or perceive that their interests, needs or values are incompatible, and they express hostile attitudes and/or take action that damage the ability of other parties to pursue their interests (Bildhaeuser 2010:7). Conflict often takes place when people are deprived of basic human needs, resulting in demands for improved services or opportunities, such as security,

fair access to political institutions and economic participation (Gehrig and Rogers, 2009:vii). Conflict becomes violent when parties no longer seek to achieve their goals peacefully, but resort instead to violence in one form or another (Bildhaeuser 2010:7). Conflict is a dynamic process; it changes over time and can take different forms in different places. Conflict is also multi-dimensional and multi-causal since it results from a combination of factors. Therefore, conflict needs to be analysed within the context in which it occurs.

The environment-conflict link can be analysed by using two theoretical approaches; the environmental security perspective and the common property theory (Turner 2004:864). The environmental security perspective is characterised by the view that many sub-national conflicts are shaped or driven by resource scarcity, be it physical or socially induced, and that an increasing demand or decreasing supply is an important predictor of conflict (Turner 2004:864). The common property theory agrees with the aforesaid but focuses on institutional failure due to ill-defined occupancy systems, weak institutions or failure to mediate conflicts (Turner 2004:864).

In the context of the above, water is one of four resources which Rogers (1994:5) predicted, in the 1990s, would be sources of future conflict (others were energy resources, strategic minerals and food reserves). Conflict over water resources may be a result of tightening supplies, an unstable increase in demand, distributive inequalities, or any combination of these factors (Renner 2006:6). Water conflict may be violent or non-violent, and can occur at different levels be they local, national, regional and international.

Deudney (1990:461-476), however, criticises the securitisation of environmental issues (and by implication of water) and argues that it is difficult to identify specific links between environmental problems and threats to security. He offers three reasons why linking environmental issues to national security is analytically distorted. Firstly, he argues that military threats are deliberately imposed and the cause of the threat is easily identifiable, whereas environmental threats are (mostly) accidental and their causes are often uncertain (Deudney 1990:463). Secondly, he argues that it is unlikely that linking environmental issues to national security can generate inter-state violence (Deudney 1990:469). Thirdly, he poses the question as to why it is necessary to appeal to war (i.e. the coercive use of armed force) for a problem that in fact requires cooperation for its resolution or management (Deudney 1990:475).

Despite this criticism, it is impossible to ignore issues related to water and their link to instability or conflict. Water forms and integral part of the everyday existence of people and the availability and access to water resources affects the existence of human beings at every level. The scarcity of water resources in combination with other resources such as food and energy obviously can be a source of discontent, a focus of contestation and a cause of conflict. Therefore, the argument that environmental threats are accidental and their causes often uncertain does not necessitate the exclusion of environmental threats from the security spectrum. Environmental threats require that a multi-dimensional approach to environmental security be employed, where specialists from different fields apply their expertise in order to develop a clear picture of environmental threats and of their potential actual effect on security (Fraser, Mabee and Slaymaker 2003:8). The argument that the linking of environmental threats to national security may strengthen existing security logic and institutions is not necessarily true. An increased awareness of environmental security issues may and often does result in (social) movements. In most cases communities that respond to environmental security problems coordinate their efforts with those of state and government in combating these threats (Kumari 2012). Finally, the argument that environmental change is unlikely to cause wars between countries does not make environmental threats to security irrelevant. The fact that a state is not at war does not make it a secure state because conflict is not only related to violent actions. Environmental factors ultimately underpin all socioeconomic activities and hence political stability. When environmental resources are degraded or depleted, security also declines (Myers 2001:5).

2.4.3 Human and national security implications

Human beings, as previously indicated, are affected by military, political, economic, societal and environmental threats. Threats to water security affect the security of the individual and communities, and cut across multiple sectors essential for human existence such as food production, economic productivity and energy production (Grobicki 2009:14). The inaccessibility or unavailability of the necessary quantity and quality of water for individual and communal needs can result in competition over water resources. Therefore, water insecurity compounds other human security challenges, such as disease, hunger and famine, economic unproductivity and unemployment, and water therefore negatively affects development (Barakat 2011:5).

In summary, these human security challenges that arise due to water insecurity create discontent which can result in social and political instability in the form of protests, large-scale migration and intra-state violence and conflict. If water-related instability is not effectively addressed, it can escalate to a level where it threatens the national security of a state. For example, water-related human insecurity impacts on and can threaten national security when clashes within the population of a state are sustained or when the discontent is directed towards state and government institutions. Such actions can cause a further decline in the ability to govern effectively. If water and water transfer is central to a country's foreign and economic relations with other states, water-related insecurity may also seriously compromise cooperative water security and thus have an even more direct impact on the national interests and national security. As a result, the impact of human-centred water insecurity on intra-state security, and by implication on inter-state or regional security if the insecurity is of a transnational scope, is complex due to the fact that it is interrelated with various other factors that impact on security.

2.5 Conclusion

The aim of this chapter was to provide a theoretical framework to address the concept of security; the recent broadening and deepening of security; the difference and relationship between national and human security; and to discuss the relationship between resource scarcity and conflict (or instability) and the human and national security implications thereof. For the purpose of this study security is viewed outside the traditional-realist approach and a non-traditional approach to security is adopted that links security to human development and identifies threats to security other than external military threats. This broadened and deepened approach to security emphasises human security and recognises threats to security in the military, political, economic, environmental and societal sectors.

In the context of human security and for analytical purposes, water security is defined as the availability of an acceptable quality and quantity of safe water supply and sanitation at a reasonable cost, to meet the basic needs including food, energy and other requirements essential for leading a healthy and productive life. Water security requires the protection of people from want, water related hazards, disasters, and diseases, as well as protection of ecosystems from pollution and degradation. Water security is furthermore also recognised as a national security issue due to the impact that human water insecurity may have on the national interests and therefore the national security of state and government. As a human and

national security issue, water security requires a multi-sectoral, multidisciplinary approach in order to be effectively and efficiently addressed.

The theory of Critical Security Studies (CSS) and Securitisation Theory provide a framework to define, explain and assess water security. On the one hand, CSS recognises the importance of vulnerable people and promotes the vision that people should not be deprived and be in want of water and that the environment is not destroyed. On the other hand, Securitisation Theory explains the process of the securitisation of water and, to the extent that it may be justifiable and acceptable, offers a solution to address water insecurity by framing water as requiring special attention and extraordinary measures. This conceptual framework provides the selected theoretical basis for the subsequent description, analysis and evaluation of water resource management, water security and the securitisation of water in the Kingdom of Lesotho.

Chapter Three

A CONTEXTUAL OVERVIEW OF WATER RESOURCE MANAGEMENT IN LESOTHO

3.1 Introduction

Water resource management is the activity of planning, developing, distributing and managing the optimal use of water resources. This process, however, does not take place in a vacuum and is affected by a range of political, sociological, economic and environmental factors. Therefore, the management of the use of water resources and the resultant water (in)security must be analysed within the broader context in which it occurs. In addition, since current and future water usage is influenced by its history, the contextual overview of water resource management in Lesotho must take previous developments into account.

Water is Lesotho's most significant resource, hence the reference to water as 'white gold' (Daily Express 2011). The LHWP is Africa's largest water transfer scheme and since its inception, it has had a major impact on Lesotho's socioeconomic as well as infrastructural development (Irin News 2004). For this reason the history of water resource management in Lesotho is often associated with and overshadowed by the history of the LHWP. Although significant, the impact of the LHWP needs to be considered within the overall context of water resource management in Lesotho, also taking into account its domestic ramifications.

The aim of this chapter is to contextualise water as a potential security issue against the background of water resource management in Lesotho. Accordingly and in respect of Lesotho, this chapter provides a short history of water resource management; discuss the official conceptualisation of water resource management; analyse the status of water resources and water security in Lesotho; and assesses the securitisation of water in Lesotho.

3.2 An historical overview of water transfer projects in Lesotho

Lesotho, a former British protectorate, became independent in 1966. Before independence and apart from providing basic water and sewage services at a local level, water resource management in Lesotho was dominated by the ideal of capturing and transferring excess water that eventually culminated in the LHWP. As early as 1950 the High Commissioner of the United Kingdom (UK) to Lesotho, Sir Evelyn Baring, requested a survey of the water

potential of Lesotho. Ninham Shand, a Cape Town based engineer was appointed to determine the viability of exporting water from Lesotho to South Africa and produced the *Report on the Regional Development of the Water Resources of Basutoland*, 1959. The report considered the feasibility of transferring and exporting water of the Orange-Senqu River in Lesotho to supply gold mines of the then Orange Free State (now the Free State). One element of the study was called the *Oxbow Scheme*, a multipurpose project with a hydropower and water supply component (Meissner and Turton 2003:118).

The Ninham Shand *Oxbow Scheme Consolidated Proposal* was eventually presented to the Lesotho government in 1967 (Mohamed: undated). The study proposed reservoirs at Oxbow and Pelaneng on the Malibamat'so River with tunnels northward to convey water to and to augment the Vaal Dam in South Africa. From 1967 to 1976 bilateral discussions were held between Lesotho and South Africa on this project but these discussions were unsuccessful. Nevertheless, in 1978 a Joint Technical Commission was formed to conduct, between 1983 and 1986, a joint pre-feasibility study of the LHWP. This study produced proposals for a new multiphase layout for the LHWP. As a result, Lesotho and South Africa signed the *Treaty of the Lesotho Highlands Water Project* on 24 October 1986, paving the way (at the time) for Africa's largest water transfer scheme. The LHWP comprises of a system of several dams and tunnels in Lesotho and South Africa. In conjunction with the LHWP which also in part provides for Lesotho's domestic water needs, the Government has also undertaken other water sector projects such as the *Lowlands Water Supply Scheme* to supplement the internal water supply. These water sector projects in Lesotho were undertaken within the framework of the following policies, legislation and institutions.

3.3 Lesotho's official conceptualisation of water resource management

Water related policies and legislation provide the framework within which water resource management is undertaken. Water resource management comprises planning, developing, distributing and managing the use of water resources, and can result in water security or water insecurity. Investment in infrastructure to store, transport, treat and re-use waste water is important for ensuring and improving water security. A government's water resource management policies and legislation therefore determine the activities that are undertaken to protect, develop, manage and deliver water resources.

Water policy is the set of decisions made at the highest political level of government after a process of dialogue and consultation, which determine the actions taken by institutions within the water sector (Abrams 2001). Water policy is the instrument through which broad goals and objectives of government are articulated and translated into specific strategic plans and programmes to execute legislated responsibilities. Water strategy is the plan which outlines how water policy is to be implemented (Abrams 2001). In the context of water policy and strategy, water legislation plays an important role in establishing a legal basis for the provision, use, development and management of water.

The water related policies and legislation of Lesotho embody the official conceptualisation of water security in Lesotho. This policy and legislative framework is furthermore supported by the institutions of water management. Institutions of water management refer to organisations aimed at addressing issues of water allocation, water quality, water rights, water pricing, asset management, service delivery, and performance of organisations within the water sector (Grey and Saddoff 2007:550). Lesotho's water related policies, strategies and statements by policy-makers provide an indication of how Lesotho harnesses the productive potential of water and how it limits the destructive effect of water. These official actions translate to the level of water security in Lesotho.

3.3.1 The policy and legislative framework for water resources management

There is an array of policies (including strategic plans) and legislation which directly or indirectly address water and the management of this natural resource in Lesotho. These include the *Constitution of the Kingdom of Lesotho*, 1993, the *Water Resources Act*, 1978 (Act 22 of 1978), the *Environment Act*, 1998 (Act 10 of 1998), the *Disaster Management Act*, 1997, (Act 2 of 1997), the *Water and Sanitation Policy*, 2007, the *Treaty on the Lesotho Highlands Water Project*, 1986, the *Lesotho Vision 2020* launched in 2003, and the *National Strategic Development Plan 2012/13-2016/17* launched in 2012. These directives provide strategic direction to and guidelines for the water sector in Lesotho.

(a) *The Constitution of the Kingdom of Lesotho*: The *Constitution of the Kingdom of Lesotho*, 1993 (hereafter the Constitution), which is the supreme law of the country, does not expressly address the management of the water sector. Within the Constitution water resources are covered by Section 36 on the protection of the environment which states that “Lesotho shall adopt policies designed to protect and enhance the natural and cultural

environment for the benefit both present and future generations and shall endeavour to assure to all citizens a sound and safe environment adequate for their health and well-being” (KOL 1993). The Constitution addresses the protection of water as a natural resource, but does not go any further to address the development of water resources.

Furthermore and more importantly, the Constitution does not mention water rights. There is no constitutional clause that binds the state and government on the matter of providing water as a right of or service to its people. Although the recognition of a constitutional right to water does not ensure that the service will in fact be provided, it nevertheless assists water management in that access and use will not be determined based purely upon market forces without regard to equity or need (Gutierrez 1999). Enshrining the right to water in the Constitution could protect people from practices that may erode their enjoyment of the right. To include the right to water is not an end in itself. It is however an indispensable first step to ensure government addresses harmful practices and adopts concrete and effective measures to recognise human need for and rights to water.

(b) *The Water Resources Act:* *Water Resources Act, 1978* (Act 22 of 1978) provided the initial legislative framework to develop water resources (KOL 1978). The Act made provision for the use, control, protection, conservation and related purposes of water resources. The Act was amended in 2008. Among the amendments effected in 2008 are the following: the introduction of the general principles applicable to the effective management, conservation and protection of water resources (Article 3); the provision for the establishment of the Office of the Commissioner of Water (Article 8) and the Water Tribunal (Article 9); the formulation of the Water and Sanitation Strategy (Article 10); public access to information regarding water (Article 31); and pollution control (Article 26).

The amended Water Act (KOL 2008b) furthermore states that all water resources in Lesotho are vested in the Basotho Nation (Article 4). The Act also prioritises domestic use in case of conflict among users (Article 2). The Water Tribunal is to adjudicate over disputes arising from water resource management (Article 9). The Act also distinguishes urban water supply from rural water supply, including sanitation. Whereas the Act delegates the latter to local (rural) authorities, including the responsibility of rural authorities to operate and maintain water supply systems, such as the communal water standpipes (Article 17.2), it does not similarly delegate responsibility for the provision of water services and sanitation in urban

centres to urban authorities. This creates a gap in terms of who is to be held accountable for urban water supply.

Although the Act does not delegate urban water supply responsibility to any specific institution, it provides for the regulation of water and sanitation service providers in urban areas. According to Article 17.1 of the Act, these service provider(s) of water and sanitation services in the urban and rural areas are regulated by the *Lesotho Electricity and Water Authority Act, 2008*, taking into consideration the *Water and Sanitation Policy*. Similarly, the Act does not delegate the responsibility of pollution control to any specific ministry or institution, and does not provide for regulation of rural water supply.

(c) *The Water and Sanitation Policy:* The *Water and Sanitation Policy* (hereafter the Policy) was approved by the Ministry of Natural Resources in 2007 (KOL 2007a). The Policy provides strategic guidelines for water management by laying out seven policy statements which respectively address sustainable water resource management; effective water supply and sanitation services; the protection and conservation of water resources; the management and use of trans-boundary water resources; the coordination of all sectors and stakeholders; and the institutional and legislative framework of the water sector (KOL 2007a).

The Policy recognises the need for the conservation and protection of water resources as well as the continuous monitoring and assessment of available water resources (KOL 2007a:2). It furthermore recognises the need to develop and implement drought relief strategies and flood management measures for risk reduction and the effective mitigation of the impact of these natural disasters (KOL 2007a:2). This is especially important in Lesotho which is prone to extreme weather conditions. Other strategies include rainwater harvesting and the formulation of water allocation principles and guidelines for different uses. The Policy makes it categorically clear that all Basotho should have access to a sustainable supply of potable water and basic sanitation, and proposes that the principle of water management and development should be based on a participatory approach involving users, planners and policy-makers (KOL 2007a:8). The Policy declares water an economic resource and recognises the importance of the management of the competing uses in order to achieve the equitable, efficient and sustainable utilization of water while simultaneously encouraging its conservation and protection (KOL 2007a).

(d) *The Environment Act:* The *Environment Act*, 2008 (Act 10 of 2008) provides for the protection and management of the environment, as well as the conservation and sustainable utilisation of natural resources (KOL 2008a). The Act also addresses water resources management within the framework of general natural resources management. It sets out principles of environmental management (Article 3.2) which are based on sustainable development, conservation and a participatory approach. The Director of the Department of Environment is responsible for preparing guidelines concerning the conduct of environmental impact studies and the preparation of environmental impact statements (Article 21.4). The Director is also responsible for establishing water quality standards (Article 8.1). Water pollution prohibition (Article 31) as well as the protection of rivers, riverbanks and wetlands (Article 61) is also addressed by the Act.

(e) *The Disaster Management Act:* The *Disaster Management Act*, 1997 (Act 2 of 1997) established the Disaster Management Authority (DMA). The DMA has the responsibility of preparing the National Disaster Management Plan which covers requirements for disaster management such as mitigation, preparedness, response and recovery measures (Article 2.1). The DMA has a permanent working group on Water and Sanitation (Article 12). The Principal Secretary of the Ministry of Natural Resources, by virtue of his/her appointment, is a member of the DMA Board of Directors (Article 17). Functions of the DMA are critical to Lesotho due to its vulnerability to the impact of water related natural disasters such as drought and excessive rain.

(f) *Lesotho Vision 2020 and the National Strategic Development Plan:* The *Lesotho Vision 2020*, launched in 2003, articulated the framework within which future government policy in Lesotho was to be developed. Vision 2020 envisioned that “by the year 2020 Lesotho shall be a stable democracy, a united and prosperous nation at peace with itself and its neighbours. It shall have a healthy and well-developed human resource base. Its economy will be strong, its environment well managed and its technology well established” (KOL 2003:02). Essentially, Vision 2020 envisaged a secure Lesotho, politically, socially and economically. With regards to water, Lesotho Vision 2020 also envisaged that by 2020 all Basotho will have access to drinking water and basic sanitation (KOL 2003: 6).

The *National Strategic Development Plan* (NSDP) 2012/13-2016/17 serves as an implementation strategy for Vision 2020. The NSDP recognises that although Lesotho has water in relative abundance, the collection and distribution thereof for industrial and household consumption is still limited, and that industrial effluent treatment and disposal capacity also needs to be augmented (KOL 2012a:30). According to the NSDP there is an urgent need for pre-treatment. This requires the development of water recycling facilities for industry and other purposes (KOL 2012a: ix). This furthermore requires innovative financing solutions in order to augment infrastructure (KOL 2012a: ix). The NSDP also envisages that growth in Lesotho will be driven by direct investments into diamond mining, the Metolong Dam Project, as well as Phase II of the LHWP (KOL 2012a: iv).

The NSDP is the only document of the Lesotho government that categorically refers to ‘water security’. It states that the “creation of water reserves for national water security will be taken into consideration” (KOL 2012a: ix). In order to address water security, the NSDP recognises the need, firstly, for the expansion of water and sanitation distribution services to industries, commercial centres, household and other institutions; and secondly, for the expansion of water harvesting infrastructure (KOL 2012a:115). The NSDP also proposes the review of institutional framework to improve coordination and accountability (KOL 2012a:115).

In conclusion, Lesotho’s official perceptions on water and water management is encapsulated in the legislation and policy documents as indicated. The Lesotho government recognises the importance of integrated water resource management, the sustainable use of water resources, the equitable distribution of water and sanitation services, a public participatory approach and a sector wide approach to water resources management. The *Constitution of Lesotho* does not address and include the right to water. However, through the *Water Resources Act* the Lesotho government recognises the importance of domestic water users and prioritises domestic use in case of conflicting uses. Water resource protection is addressed by the *Water Resources Act* and the *Environment Act*. The latter places the responsibility of pollution control on the Director of Environment. Water supply in rural areas is delegated to traditional authorities, while urban water supply is not delegated to any specific authority. The regulation of urban water supply is delegated to the Lesotho Electricity and Water Authority, while rural water supply is unregulated (albeit under control of local communities).

The policies and legislation related to water resource management in Lesotho are essential and instrumental for addressing water security threats to economic activity, energy production, food production and human health. The translation of these policies and legislation into implementable programs is dependent on capacity as well as resources (human and financial) of the relevant institutions of water resource management.

3.3.2 The institutions of water resource management

Institutions of water resource management provide a structure for activities related to water management. The purpose of water management institutions is to organise the provision of water services so as to accord with the collective wishes of society (Fox 1976:743). The Ministry of Energy, Meteorology and Water Affairs is the umbrella institution under which most water resource management institutions in Lesotho operate. The institutions include the Office of the Commissioner of Water, the Department of Water Affairs, the Department of Rural Water Supply, the Water and Sanitation Company, the Lesotho Electricity and Water Authority, the Lesotho Lowlands Water Scheme, and the Lesotho Highlands Water Authority.

(a) The Ministry of Energy, Meteorology and Water Affairs: The Ministry of Energy, Meteorology and Water Affairs (hereinafter the Ministry), previously and until 2012 the Ministry of Natural Resources, is responsible for administering the *Water Resources Act* and implementing the *Water Resources Management Policy* (Nthathakane 2013). The Ministry oversees the activities of the Water Commission, the Department of Water Affairs, the Department of Rural Water Supply and the Lowlands Water Supply Unit (Nthathakane 2013). In addition to water affairs, the Ministry is also responsible for the energy and meteorology sectors.

Although the mining sector – which until 2012 resorted under the Ministry, is now independent, the Ministry continues to have vast responsibilities with the combination of the energy and water sectors. The Ministry is over-stretched and cannot effectively and efficiently execute all its duties according to the responsibilities accorded to it. The Ministry nevertheless insists that its different responsibilities are sufficiently covered by the various departments within the Ministry (Nthathakane 2013).

(b) The Office of the Commissioner of Water and the Commissioner of Water: The Office of the Commissioner of Water (hereafter the Office) is located within the Ministry of Energy, Meteorology and Water Affairs. The Office is headed by the Commissioner of Water (COW) who is mandated to promote improved coordination of programmes and activities within the water sector (KOL 2007a). The COW is also responsible for the Departments of Water Affairs and Rural Water Supply. In addition, the COW oversees the Lesotho Highlands Water Development Authority as well as the Water and Sewerage Company.

The functions of the COW, as stipulated in the *Water Resources Act, 1998*, are to provide policy direction to the departments (Department of Rural Water Supply, Department of Water Affairs) within the Ministry of Energy, Meteorology and Water Affairs; implement water and sanitation policy; develop water and sanitation strategies and plans; act as custodian of the national water resources data on behalf of the Minister; coordinate all water management activities including activists relating to international waters; produce state of water resources reports once every year; carry out regulatory activities in respect to water resources as are provided for under the Act; and advise the Minister concerning the management and utilization of water resources (KOL 2008b: Article 8.1).

The COW as per the *Water and Sanitation Policy* is also mandated to produce regular reports showing the state of water resources and sectoral programmes, and to present these reports to Parliament (KOL 2007a:12). The first State of Water Resources report was produced by the Office in 2012. The Office is currently in the process of completing the second report (Nthatakane 2013).

Although the Office of COW is mandated to cover many areas of responsibility, it is not sufficiently resourced in human and financial terms to execute its duties (Nthathakane 2013). The Office's role of coordination and policy making is critical for the water sector in Lesotho. Therefore, the Office needs to be adequately resourced to enable it to effectively execute its mandated role as coordinator of the water sector (Nthathakane 2013). Hence, the Lesotho government needs to commit more resources to enhance the capacity of the Office and to enable it to execute all its responsibilities.

(c) The Department of Water Affairs: The Department of Water Affairs (DWA) operates within and under the Ministry of Energy, Meteorology and Water Affairs. The COW is

accountable for the DWA. The responsibility of DWA is to implement the *Water Resources Act*. Accordingly, it is responsible for the general administration of the water sector, as well as policy formulation and data collection (KOL 2007a:11). The DWA is furthermore responsible for the monitoring, evaluation and analysis of water resources as well as the enforcement of legislation and implementation of national water and wastewater policies and guidelines (KOL 2007a:12). The DWA is not involved in raw water extraction, treatment of water, or in revenue earning services. The DWA keeps records, information and results of monitoring activities, and does research on and analyses of water resources in Lesotho. It plays a supporting role to the COW by providing water related data. The DWA has however been reported to be short of critical skills needed to perform its role within the water sector, as well as of the equipment needed to execute its duties.

(d) The Department of Rural Water Supply: The Department of Rural Water Supply (DRWS) is responsible for providing water and sanitation to the rural areas of Lesotho. The DRWS is entrusted with the supply of rural water infrastructure, while the operation and maintenance of the water supply schemes are the responsibility of local authorities and local communities. The DRWS has its headquarters in Maseru and operates in three regions and ten districts. The Lesotho government is responsible for funding the DRWS. The DRWS does not charge tariffs for water supply and maintenance in the rural areas. Rural water systems are subsidized by the Government. Recent reductions in donor funding has negatively affected the functioning of the DRWS (Ntlama 2013). The current budget allocation of the Government does not cover all the needs of the DRWS (Ntlama 2013).

Rural water infrastructure is maintained under the Government subsidy (Ntlama 2013). The DRWS oversees the completion of infrastructure completion and once completed, hands the responsibility for operation and maintenance of systems over to the communities. The communities are responsible for the operation and maintenance of small items. For example, in the case where a system uses electricity or diesel, the communities contribute to monthly purchasing of electricity or diesel to run their system (Ntlama 2013). This shared responsibility between the DRWS and rural communities complicates rural water supply. Where communities lack the means or commitment to manage the systems, the DRWS has to extend its involvement in and support to the communities beyond its delegated responsibilities.

Villages in rural areas appoint a Village Water and Health Committee which is responsible for the management of water systems (Ntlama 2013). The lack of capacity (skills and resources) of these committees to manage water systems is a challenge for rural water supply. In addition, the lack of accountability on the part of these committees has been reported to have led to some water users' unwillingness to pay for operation and management costs (Ntlama 2013). These committees also do not have a legal status and are therefore not able to take action against defaulters, e.g. against households not paying water fees or misusing water (Ntlama 2013).

In summary, the DRWS experiences the following challenges: increased demand for piped water in rural areas; diminishing natural water resources since the springs which serve the rural communities are declining in performance and have low yields, resulting in communities rationing water supplies; and a shortage of human resources and skilled manpower, often linked to a high vacancy ratio (Ntlama 2013). These challenges and the limited means to address them negatively affect the delivery of water as a service and the ability of the DRWS to execute its duties.

(e) The Water and Sewerage Company: The Water and Sewerage Company (WASCO), previously the Water and Sewerage Authority (WASA), is the operational authority for managing water supply and wastewater collection, conveyance and treatment. It is the custodian of the *Lesotho Water and Sewerage Authority Order of 1991* and the *Lesotho Water and Sewerage Authority Regulations*. The authority (WASA) became a company (WASCO) in 2010, following the formulation and as an outcome of the *Water and Sanitation Policy*. It was established through the *Water and Sewerage Company Act, 2010* (Act 13 of 2010) (KOL 2010). The establishment of WASCO as a company enabled the Government to regulate it as required by the *Water and Sanitation Policy*.

The functions of WASCO, stipulated by the *Lesotho Waste and Sewerage Authority Order of 1991*, are to extract water, undertake studies, design, construct, operate and maintain waterworks and distribution systems and sell water from such schemes; undertake studies, design, construct, operate and maintain sewage and sewerage treatment schemes, store collect, charge for and discharge and disuse treated effluents and waste from such schemes; and secure the supply of water and the treatment and disposal of effluents at reasonable prices (KOL 1991).

WASCO is also responsible for promoting economic and efficient water use, conducting research in order to improve its functions, as well as monitoring urban water supply. WASCO is authorised by the Order (section 39.1) to charge water related tariffs. These tariffs include deposits for services provided, connection and re-connection fees, and rent for apparatus provided by WASCO (KOL 1991). WASCO was not regulated until May 2013 when the Lesotho Electricity and Water Authority (LEWA) commenced with the regulation of urban water supply.

(f) The Lesotho Electricity and Water Authority: The Lesotho Electricity Authority (LEA) was established in 2004 through the *Lesotho Electricity Authority Act, 2002* (Act 12 of 2002). The sole focus of the LEA until 2007 was on the electricity sector (KOL 2007a). As previously indicated, Lesotho did not have a water sector regulatory framework until 2007 when the Government transformed the LEA into a multi-sector body with additional powers to regulate urban water and sewerage services in Lesotho (KOL-LEA 2013).

The *Lesotho Electricity Authority Act* was amended in 2011 to include the regulation of water and sewerage services (KOL 2011). In terms of this Act the LEA is responsible for the following in urban areas: water treatment and production; transmission of water; distribution of water; supply of water to premises; storage of water for purpose of treatment, distribution or onward supply; delivery of water to main poles; and the treatment and disposal of waste water by sewerage systems (KOL 2011). In April 2013 the Minister of Energy, Meteorology and Water changed the name of the LEA to the Lesotho Electricity and Water Authority (LEWA) (KOL 2013a). The LEWA commenced with the regulation of WASCO on 1 May 2013.

(g) The Department of Environment: The Department of Environment, situated within the Ministry of Tourism, Environment and Culture, is responsible for the formulation of environmental policy, legislation and guidelines as well as for monitoring the state of the environment including water resources (KOL 2008a:41). According to the *Environment Act, 2008* (Act 10 of 2008), the Director of the Department of Environment is responsible for establishing criteria and procedures on water quality; and for establishing minimum quality standards for all waters of Lesotho and for different water users such as water for industrial, agricultural, recreational, fisheries and wildlife purposes (Article 28.1). In addition, the Director is responsible for carrying out investigations of actual or suspected water pollution (Article 2.1). The Department of Environment also administers the *Environment Act* which,

amongst others, provides for a centralised system for the establishment of environmental criteria, standards and guidelines for water, effluent, radiation and solid waste (KOL 2008a:42).

(h) The Lesotho Lowlands Water Scheme: The Lesotho Lowlands Water Scheme (LLWS) was established to address the water shortages in Maseru and the Lowlands district. The LLWS is planned to give more than 1.2 million people access to clean water by 2020. The scheme is also planned to improve water supply for industrial production, and to promote investment in the textile sector. The LLWS centres on the construction of the Metolong Dam and Water Supply Programme. This project also includes water treatment works and a downstream conveyance system. The project is mainly financed by the Millennium Challenge Corporation (MCC), South Africa, the World Bank, the Kuwait Fund, the OPEC Fund for International Development (OFID) and the Saudi Fund for Development (MCA: Undated).

(i) The Lesotho Highlands Development Authority: The Lesotho Highlands Development Authority (LHDA) is responsible for the Lesotho Highlands Water Project (LHWP) in Lesotho. The LHDA was established through the *Lesotho Highlands Development Order* of 1986 (KOL 1986). Since it has a direct bearing on the inter-state dimension of Lesotho's water security, the function and responsibilities of the LHDA will be discussed later (see section 4.2.2).

In summary, the institutions of water resource management in Lesotho mainly function under the Ministry of Energy, Meteorology and Water Affairs as the umbrella institution. The responsibilities relating to water management are distributed to multiple institutions. As a result the current division of water resource management distributes related functions over too many institutions. Although the Office of the Commissioner of Water plays an important role in coordinating programmes and activities of the different institutions, the fragmented nature of the distribution of functions between institutions affects the efficiency of institutions in executing their responsibility. The existing overlaps in responsibilities also results in duplication of functions. In addition, the most common challenge for the water resource management institutions – considering that Lesotho is a very small, land-locked and developing country – is the shortage of human and financial resources. Merging some institutions of water management would assist in pooling resources (financial and human) and improving the functioning of the water sector.

3.4 The status of water and water resources in Lesotho

According to the Lesotho government access to water and sanitation in the country is improving and more households have access to better water sources and sanitation facilities (KOL 2012). In 2013 rural water coverage stood at 65 per cent, considering that in accordance with the United Nations (UN) MDGs, the objective is to reach 75 per cent by 2015, and full coverage of 100 per cent, as expressed by the *Lesotho Vision 2020*, is planned for 2020 (Ntlama 2013).

Despite the abundance of water and the existence of political, legislative and institutional frameworks that have as their major goal the assurance of water security, water resources in Lesotho are unequally distributed. The Lesotho Highlands have the greater amount of water while the lowlands, where two thirds of Lesotho's population reside, have fewer water resources. This uneven distribution of water resources necessitates the capture and transfer of water resources from where they are concentrated in the Highlands, to where they are most needed in the Lowlands.

A further complicating factor is that Lesotho, as also classified by the Food and Agricultural Organization (FAO), is a country that is vulnerable to the effects of climate change; that is prone to natural disasters and liable to drought and desertification; that has areas with fragile ecosystems; and that is landlocked (FAO 2011:2). As a result the current degradation of wetlands where rivers originate, as well as water pollution, pose a particular challenge to water resource management in Lesotho (Nthathakane 2013).

For example, Lesotho experienced severe droughts in 2002, 2007 and 2012 (BBC News 2007; UN 2012). The greatest impact of these droughts has been on Lesotho's food production. In 2012 there was more than a 70 per cent reduction in Lesotho's domestic agricultural production (UN OCHA 2012). This meant that more than 225 000 people – a third of Lesotho's population – were at risk of food insecurity (UN WFP 2012). Droughts are also a test of the ability of the water sector to mitigate effects on the general functioning of communities and states. Droughts affect states, communities and individuals through decreased agricultural production, decreased industrial production, loss of livestock, a decline in soil fertility, and extreme shortages of drinking water. Although water is not the only factor that contributes to food security and by implication also to health, economic and

energy security, water security is closely linked to all of these (in)securities. Droughts have the capacity to destroy and erode human development gains (UNDP 2006:156). The severe impact of droughts, especially on food security in Lesotho, points to the failure of water management institutions to put in place plans for dealing with water contingencies and emergencies.

The shortage of water is not the only water risk that confronts Lesotho. Paradoxically, excessive rainfall is another form of water risk experienced by Lesotho. For example, in 2006 Lesotho experienced the heaviest rains in 20 years (News24 2006). Bridges, houses and crop fields were swept away by floods or buried under rock slides, property damage was estimated in tens of millions of Lesotho Maloti (Mail and Guardian 2006). Similarly in December 2010 and January 2011 Lesotho experienced heavy rains (World Bank 2011). The estimated value of damage and losses caused by the floods was 464.7 million Maloti, the equivalent of US\$ 66.1 million. Five of Lesotho's ten districts were without water when a pipe burst due to the floods. As a result of this burst pipe, Maseru, Butha-Buthe, Leribe, Mohale's Hoek and Quthing had to rely on water from unprotected wells (Sunday Express 2011). Water stations in Butha-Bothe, Leribe, Mohale's Hoek and Quthing were submerged by the floods, making it impossible to purify and pump water (Sunday Express 2011). As a result of the flooding 26 people died, over 5 000 people were displaced and 672 houses were destroyed (IFRC 2011). Water related disasters in Lesotho have a negative impact on security at different levels, namely at the levels of regional, national and human security. Water related disasters aggravate already existing insecurities within, amongst others, the health, education, food, energy, infrastructural development and housing sectors. As a result human security issues worsen during water related disasters.

In summary, Lesotho is a water rich country but the water resources are unevenly distributed; the less populated Highlands has the higher concentration of water, while the Lowlands areas which are the most populated have less water resources. Although water coverage has improved, climate related weather extremes have a negative effect on the supply of natural water resources in Lesotho. Water challenges in Lesotho are mainly to due to droughts and excessive rainfall. The current status of water resources in Lesotho requires investment in infrastructure to capture, store and distribute water.

3.5 The politicisation of water in Lesotho

Water in Lesotho is a strategic commodity with broader political, security and national interest implications. As indicated, water resources in Lesotho have an impact on energy production, food production, the environment, health, the economy and politics. Unless properly managed, water resources can be a major source of strife, thereby affecting economic and social progress (USA 1996). The recognition of threats to water resources as threats to human security and national security is part of the politicisation and by implication also of the securitisation process.

Considering the political, legislative and institutional frameworks of water in Lesotho, it is evident that the policy-makers of Lesotho have politicised rather than securitised water. Water in Lesotho has been placed on the political agenda and has not been explicitly securitised in the official perceptions of and in policy documents and legislation in the sense of it being labelled a security issue and imposing uncontested emergency measures that would have otherwise not seemed legitimate (Trombetta 2011:140). The potential and most probable securitising actors, namely the Prime Minister (also the Minister of Defence), the Minister of Energy, Meteorology and Water Affairs and the Minister of Environment, have neither labelled water as a security issue *per se* nor promoted water issues as part of security-related politics and policies.

Currently, at a policy and legislative level, the Government of Lesotho does not perceive threats to water security as existential threats, and have not taken water out of the 'normal political agenda' into the '(national) security agenda' (Buzan, Wæver, and de Wilde 1998:23). Water in Lesotho is dealt with as a functional, sectoral (water) and political issue within a non-securitised framework. However, this does not imply that water in Lesotho is not a strategic commodity with broader security or national interest implications. Since water issues in Lesotho have an impact on economic development, urbanisation, migration patterns, disease outbreaks, natural disaster vulnerability, and regional cooperation and stability (Glass-Royal and Simmons 2002:117), it obviously has human security ramifications. The extent, to which these also become national security implications, is the focus of the more detailed discussions on and analyses of the inter-state and intra-state dimensions of water security in Lesotho (see Chapters 4 and 5).

It suffices, in the context of the political, legislative and institutional frameworks of water in Lesotho to indicate that it is recognised as an economic good, which is often and widely referred to as 'white gold'. The value that the Lesotho government places on water as an economic good is reflected in the following statement made by the former Prime Minister of Lesotho, Pakalitha Mosisili: "In our country we call water white gold. That's how we treasure water and that's how we see the use of the precious water for industrial, agriculture, domestic and export. For us in Lesotho water is a very important resource, one that holds great potential for investment and development" (Daily Express 2011). It is thus evident that water is not only directly linked to the national interests of Lesotho but that arguably it is a primary national interest of the country.

Firstly, water is recognised as important for economic productivity and development. For example, the textile industry, which constitutes twenty per cent to Lesotho's economy, is a water intensive industry. Water thus has a value-adding property to the textile industry. Secondly, Lesotho is an exporter of water to South Africa. In the first phase of the LHWP, Lesotho received R450 million per annum from South Africa (RSA 2012). Furthermore, in the context of the LHWP the Lesotho government views water as a resource that enhances regional cooperation. As stated by the former Chief Executive Office of the LHDA, Makase Marumo, "this project (LHWP) promotes cooperation and even though it looks like we are dealing with a Goliath in many respects it is a win-win partnership in which each country benefits and we support each other" (World Report 2002:6). Thirdly, the direct and indirect benefits of the LHWP to Lesotho are critical for its economy. Therefore, the Lesotho government has demonstrated its continuous commitment to honouring the water transfer Treaty it signed with South Africa, mainly on account of its economic benefits. Finally, Lesotho views water as a social good. As articulated by Prime Minister Thabane, water projects improve the quality of life and people's livelihoods through economic growth (KOL-WASCO 2013). In the spectrum of securitisation, such a statement is a political speech act; the security action taken to ensure that water is available to all is what will eventually determine whether water is securitised or not. Currently, the delivery of water to all Basotho is not done through uncontested and exceptional emergency measures, even in cases where communities are vulnerable to water crises and threats.

In addition to the above, the communities in Lesotho as the audience of possible securitising acts, do not view and discuss water resources as a security issue. Water-related civilian action

in Lesotho is mainly limited to dam-affected communities that have been negatively affected by the construction of the LHWP dams. Resettlement and compensation have by far been the main issues that these communities organised themselves around. Their activities culminated in protest action that took place in 2001, 2005 and on a smaller scale in 2013 (see section 4.3.2). The coordinated manner in which these protests simultaneously occurred in different parts of the country necessitated the Lesotho government to respond by using law enforcement agencies to maintain law and order. In some instances the conduct of the protestors and the response of the Lesotho Mounted Police Service (LMPS) sparked violence, as was the case during the 2001 protests in Maseru where the LMPS were reported to have responded violently, in the process injuring three elderly women (International Rivers 2001). However, as a norm, water-related protests in Lesotho are not frequent and do not tend to be violent.

At a transnational level, international civil society organisations have also been active in promoting water rights and the rights of dam-affected communities in Lesotho. Among these are the Ecumenical Water Network (EWN) and International Rivers. The EWN is a transnational non-governmental organisation formed by a network of churches and Christian organisations and is aimed at promoting people's access to water and creating awareness on the issue of justice with regards to water supply (EWN: undated). The EWN has held an international conference in Lesotho and publishes accounts with a human security and justice approach to water in Lesotho (EWN 2008). International Rivers mainly focuses on the LHWP, as well as on promoting the water rights and interest of individuals and communities in Lesotho. Amongst others, and under the title of 'Lesotho Campaign Articles', it publishes articles on its website categorised under the topics of affected people/social issues, environmental impacts and technical aspects (International Rivers: Undated).

These organisations mainly create international awareness on the water related issues of Lesotho, mainly of the LHWP. The focus of these organisations is mostly human rights based and their target audience is mainly the international community, with the aim to create solidarity with affected Lesotho communities. These organisations could however have a destabilisation effect if they are to change their approach to one of coercive activism and frame water security issues in Lesotho within the security agenda.

In summary, at a political, legislative and institutional level, water resources in Lesotho have not been securitised. The Lesotho government has not taken water out of normal politics and

placed it on the security agenda. Water management and water challenges in Lesotho are still handled through normal political procedures and institutions. Although international civil society organisations actively engage in activities to create an awareness on issues involving the dam-affected communities in Lesotho, they do not promote water related rights within a security framework but rather operate within the activist context of human rights.

3.6 Conclusion

The aim of this chapter was to contextualise water as a security issue against the background of water resource management in Lesotho. Water resource management refers to the activities undertaken by institutions of water management to plan, develop, distribute and manage optimal use of water resources for diverse needs including household, agricultural and industrial needs. Water resource management in Lesotho is undertaken within the framework provided by policies, legislation and institutions of water management. However, responsibilities for water resource management are dispersed over many institutions and this decentralisation of functions to different institutions overstretches the already limited human and financial resources available.

Water resources in Lesotho are managed as a social and economic good, with emphasis on cooperation over water resources especially in the context of the LHWP. Although Lesotho is water rich, climate change and adverse climate conditions negatively affect water resources in the country. The challenges to and problems of water resource management and water resources are not securitised by the Lesotho government in terms of the official perceptions thereof as articulated and implemented in terms of policy, legislative and institutional frameworks. Within these frameworks, water resources are handled through normal political procedures and are not part of the security agenda of Lesotho. Although the Government and the elites as securitising actors have not elevated water issues out of 'normal politics', water related issues especially related to the LHWP have the potential to be securitised. The international dimension of the project draws the interests of civil society organisations internationally and the focus of these organisations is currently on the human rights of displaced communities. The methods pursued by communities in Lesotho with the assistance of these organisations mainly involve peaceful engagement with water resource management institutions and the Government. However, the possibility of violent conflict is not improbable if water is not properly managed to the common good. Hence it is necessary, in greater detail, to analyse and assess the impact of water resource management on water

security, human security and national security in Lesotho, within the context of respectively the inter-state and intra-state dimensions as will be done forthwith in the next chapters.

Chapter Four

THE INTER-STATE DIMENSION: THE LESOTHO HIGHLANDS WATER PROJECT AND THE SECURITY OF LESOTHO

4.1 Introduction

The Kingdom of Lesotho is an enclave and due to geographic location its economy, trade, transport and communication infrastructure are interlinked to those of South Africa. Historically, Lesotho and South Africa have complex interconnections and relations at social, cultural, economic and political levels. These interrelations are both formal and informal. The bilateral cooperation between Lesotho and South Africa covers a wide range of areas including trade and investment, security, energy, transport, tourism, the environment and water (RSA 2013). Most important to both countries, and as previously indicated (see Chapter 3), is the bilateral cooperation over water through the LHWP.

The LHWP is important to the two countries for different reasons. South Africa has complex water challenges; it is semi-arid, with low rainfall and limited underground aquifers (Boccaletti, Stuchtey and van Olst 2010). These challenges compel South Africa to depend on water projects such as the Komati River Basin Development Project and the LHWP to meet the water demand in the country. In contrast, Lesotho with its relatively small economy, receives much needed foreign currency from water royalties paid by South Africa. The implementation and functioning of the LHWP have an impact on the bilateral relationship between Lesotho and South Africa. These relations, although characterised by cooperation, are not static and there have been periods of negotiations and renegotiations. As such the LHWP not only influences Lesotho's relations with South Africa, but it has the ability to redefine these relations at periodic intervals (Berman and Wihbey 1999).

Against this background, the aim this chapter is to discuss the security implications of the LHWP by analysing and assessing the effect of the LHWP on the inter-state relations between Lesotho and South Africa; and the corresponding effect of the LHWP on Lesotho's water security and national security. However, as a point of departure, it is necessary to take cognisance of the nature and scope of the LHWP and its institutional framework.

4.2 The Lesotho Highlands Water Project

The Orange-Senqu River rises in the mountain region of Lesotho. In Lesotho the river is known as the Senqu River and in South Africa as the Orange (or Gariep) River. It flows westwards through South Africa into the Atlantic Ocean. The Orange River is the longest river in South Africa and in places also forms the border between South Africa and Lesotho and between South Africa and Namibia (although in the latter case the exact delimitation of the international boundary is disputed). The LHWP diverts water from the Orange-Senqu River into the Vaal River in South Africa. Although the riparian states of the Orange-Senqu river basin are Lesotho, South Africa, Namibia and Botswana, the LHWP is a bi-national project between Lesotho and South Africa only.

The LHWP (also known as the Project) came into existence through the *Treaty of the Lesotho Highlands Water Project* in 1986 (hereafter the Treaty). The purpose of the Project as stipulated in Article 4 of the Treaty is to “enhance the use of the water of the Senqu/Orange River by storing, regulating, diverting and controlling the flow of the Senqu/Orange River and its affluent in order to effect the delivery of specified quantities of water to the Designated Outlet Point in the Republic of South Africa and by utilising such delivery system to generate hydro-electric power in the Kingdom of Lesotho” (KOL-RSA 1986). In order to understand the impact of the LHWP on the relations between Lesotho and South Africa it is important that the origins and development as well as the institutions of the LHWP be examined.

4.2.1 The origins and development of the Lesotho Highlands Water Project

As previously indicated (see Chapter 3) the prospects of a project to transfer water from the Lesotho Highlands to South Africa were investigated as early as the 1950s (LHWP: Undated). Over the next three decades various activities involving feasibility studies, reports and bilateral negotiations formed part of a complex set of processes that eventually culminated in the LHWP. In 1967 the Lesotho government commissioned the study on the Oxbow Scheme. In 1978 Lesotho and South Africa formed a Joint Technical Commission to conduct a joint pre-feasibility study of LHWP. The various activities and processes involving feasibility studies and negotiations are part of the complex processes that took place over a period close to three decades. These culminated in the signing of a Treaty between the two countries.

The *Treaty on the Lesotho Highlands Water Project* between the Governments of the Kingdom of Lesotho and the Republic of South Africa was signed into law on 24 October 1986. The Treaty spelled out the complex arrangements with regards to the technical, economic and political facets of the project. The water transfer component was entirely financed by South Africa, which would also make payments for the water that would be delivered, and the hydropower and development components were undertaken by Lesotho (Trans-Caledon Tunnel Authority: undated). The Project was planned to take place in phases. Phase 1A, completed in 1998, consisted of the construction of the Katse Dam, the Matsoku weir and tunnel, the transfer tunnel between the Katse reservoir and the Muela hydropower station, the hydropower plant at Muela, and the delivery tunnel from Muela to South Africa (LHWP: undated). Phase 1B, completed in 2002, consisted of the construction of the Mohale Dam and a transfer tunnel between Mohale and the Katse reservoir.

After 1994 and in the context of domestic and regional change and transformations, the South African government raised concerns over the original treaty of 1986. South Africa complained that the Treaty was skewed in Lesotho's favour. After bilateral negotiations and mutual agreement, Protocol V and Protocol VI to the Treaty were signed in 1999. *Protocol V to the Treaty of the Lesotho Highland Water Project: Supplementary Arrangements with Regard to Project Related Income Tax and Dues and Charges Levied in the Kingdom of Lesotho* was signed in June 1999. Under this Protocol Lesotho agreed to refund South Africa money paid in taxes regarding Phase I of the Project. The refund covered the period from 1986 to 1999. (Lesotho Times 2012). Lesotho repaid R341 million accrued in tax to South Africa (Tlali 2013a). *Protocol VI to the Treaty of the Lesotho Highland Water Project: Supplementary Arrangements Regarding the System of Governance* was also signed in June 1999. In accordance with this Protocol institutional arrangements in the Kingdom of Lesotho were restructured – the LHDA was to be managed and controlled by a Board instead of the Lesotho Government as in the case of the Trans-Caledon Authority, which is managed and controlled by the government of South Africa. The Board responsible for LHDA was to be appointed by and accountable to the LHWC (Protocol VI, Article 3).

Subsequent to the completion of the first phase, the Governments of Lesotho and South Africa signed the *LHWP Phase II Agreement* on 11 August 2011 (RSA 2011). Phase II, scheduled to be completed in 2020, involves the construction of the Polihali Dam along with a transfer tunnel to the Katse Dam. This phase is expected to increase the supply of water to

South Africa from the current 24.6 cubic meters per second to 45.5 cubic meters per second. South Africa undertook to bear the full cost this phase, estimated at R12 billion (RSA 2013).

Phase II of the LHWP, however, was heavily criticised by civil society organisations (such as the Transformation Resource Centre) and the media in Lesotho. This criticism centred on the shift away from the original arrangements of the 1986 Treaty and on the adoption of the arrangements of the 1999 Protocol VI. The latter was a major concern since it stipulated that the LHDA was to be managed and controlled by a Board of Directors appointed by the Lesotho Highlands Water Commission (Article 33) instead of the Government of Lesotho – an arrangement which the Lesotho government (as articulated by Prime Minister Thabane) viewed as ‘belittling’ (Tlali 2013a).

In 2012, following the general elections, the Lesotho Coalition Government resolved to scrutinise and review the *LHWP Phase II 2 Agreement* of 2011. The reason for this, as cited by Dr Thabane, Prime Minister of Lesotho, was to “make sure that the project will benefit Basotho and the next generation” (KOL 2013b). The first concern raised by the Lesotho government about the 2011 agreement was the long-standing problem regarding the control of the LHDA. The Lesotho government demanded that as per the 1986 Treaty, the LHDA be under the control of the Government and not the LHWC. The government of South Africa conceded to the demand made by Lesotho – the LHDA is now under the control of the Government of Lesotho.

In summary, the LHWP is a long term project which is based on the 1986 *Treaty of the Lesotho Highlands Water Project* as amended and revised through further protocols and agreements. The Project is affected by the evolving political, economic and environmental conditions under which it is implemented. During the course of its history, numerous changes were made to the agreements that govern the LHWP. The 1986 Treaty nevertheless established the institutions responsible for the implementation of the LHWP and which are currently functioning.

4.2.2 The institutional framework of the Lesotho Highlands Water Project

The transnational nature of the LHWP requires cooperation on and coordination of functions that are performed both in Lesotho and South Africa. This requires legitimate, effective and efficient institutions to ensure and oversee the successful execution of the Project in the two

countries. Broadly defined ‘institutions’ are bodies or organisations, often in the form of international commission and committees, established by formal and legal agreements such as treaties (Kliot, Shmueli and Shamir 2001:207). The 1986 *Lesotho Highlands Water Treaty* established institutions that perform different functions in and between Lesotho and South Africa. Article 6 of the Treaty makes provision for general duties regarding the Project and provides for the establishment of the three responsible institutions; the Lesotho Highlands Development Authority (LHDA), the Joint Permanent Technical Commission (JPTC) and the Trans-Caledon Tunnel Authority (TCTA).

Respectively, the TCTA in South Africa and the LHDA in Lesotho are the localised independent implementing authorities which in accordance with Articles 6 and 7 of the Treaty are entrusted with the implementation, operation and maintenance of the Project (KOL-RSA 1986). The LHDA in Lesotho was established by the *Lesotho Highlands Development Order* of 1986 which also stipulated its functions and purpose. According to the Order the LHDA is responsible for the following: undertaking studies; design, construct, operate and maintain water storage schemes; supply, sell, export and distribute water from such schemes; secure the supply of water at reasonable prices; promote and encourage the economic use of water; and promote and encourage works for drainage, flood control and the protection of catchment areas (KOL-RSA 1986).

The TCTA in South Africa manages and maintains the delivery tunnel which transfers water from Lesotho to South Africa, as well as all related aspects concerning the infrastructure in South Africa (LHWP undated). The TCTA was incorporated into the South African *National Water Act*, 1998 (Act 36 of 1998). In 2000 a revised *Establishment Notice* was published in the *Government Gazette* (South Africa), which broadened the scope of the TCTA and extended its role within the water sector of South Africa (RSA 2007a). This meant that the TCTA’s mandate is no longer linked solely to the LHWP, but also to broader water management in South Africa. The TCTA is now responsible for the development of bulk raw water infrastructure and to provide treasury management and financial advisory services to water boards in South Africa (RSA 2007a:12). The Minister of Water Affairs is also enabled to allocate additional functions to the TCTA insofar as these would not compromise its ability to discharge its primary functions, those in respect of the LHWP in particular (RSA 2007a). Such functions could include but are not limited to management services, financial services, training and other support services.

The JPTC, established in 1986, comprised of six delegates with equal representation (three each) from Lesotho and South Africa (Article 9.1). Article 9 of the 1986 Treaty outlines the functions, powers and obligations of the JPTC (KOL-RSA 1986). According to the Treaty the JPTC has a monitoring and advisory role relating to the activities of the TCTA and the LHDA (Article 9). The JPTC has the right to subject the TCTA and the LHDA to management audit (Article 10). The JPTC is to be consulted by the LHDA and the TCTA on a continuous basis with regards to corporate management matters such as the appointment of external auditors, all budgets for expenditure, annual as well as short term operational plans, and annual maintenance plans.

In 1999 Article 9 of the 1986 Treaty was amended through Protocol VI. The JPTC was renamed the Lesotho Highlands Water Commission (LHWC). Under Protocol VI, in addition to having monitoring and advisory powers as indicated above, the LHWC is responsible and accountable for the LHWP. In addition, the Commission was given power to act on behalf of and advise the respective governments (Article 13.8). The most controversial amendment made by Protocol VI, and as previously indicated (see Section 4.2.1), was with regards to the authority of the LHWC over the LHDA. According to the amendment in terms of Article 3 of the Protocol the LHDA was to be managed and controlled by a Board of Directors appointed by the LHWC. This was in contrast to the 1986 Treaty which stated that the LHDA should be managed and controlled by a Board of Directors appointed by Lesotho (Article 7.33). Protocol VI made the Board of Directors accountable to the LHWC.

Under Protocol VI, the LHDA was to be managed and by the Board which would then account to LHWC while the TCTA remained under the control of the Government of South Africa. The provision that the LHDA be managed by a Board of Directors was contrary to the 1986 Treaty (Article 6.4) which states that the LHDA shall be an “autonomous statutory body under the laws of the Kingdom of Lesotho”. The Lesotho government, when renegotiating Phase II of the LHWP, challenged this arrangement. The South African government conceded on this point and the Protocol arrangement of 1999, as previously indicated, has been reversed to that of the 1986 Treaty, bringing the LHDA back under control of the Government of Lesotho (KOL 2013).

In summary, the institutions of the LHWP, established for the implementation of the LHWP, provide for delegation of authority, joint monitoring, conflict resolution, and treaty

enforcement. The rules and procedures that accompany these institutions were created in order to manage relations between Lesotho and South Africa (Jagerskog 2001:1). The ability and willingness of Lesotho and South Africa to meet their obligations and responsibilities according to the Treaty and related agreements affect the relationship between the two countries. Essentially the international agreements and the related institutions thereof constitute a bilateral water regime which facilitates cooperative relations between Lesotho and South Africa over water sharing.

4.3 The security implications of Lesotho Highlands Water Project

The LHWP cuts across many niche areas including international relations, international law, water resource management, environmental management and ecosystem protection, peace and political stability, human rights, and regional development and integration (UN Water 2013:7). The LHWP produces effects that manifest simultaneously in sectors that affect human security and national security in Lesotho. This section considers the impact of the LHWP on the bilateral relations between Lesotho and South Africa; the internal water security situation in Lesotho; and the national security developments in Lesotho.

4.3.1 Impact on bilateral Lesotho-South Africa relations

The LHWP, due to its strategic importance to both Lesotho and South Africa, affects the inter-state relations of the two countries. Lesotho-South Africa interactions over the LHWP are inherently political-diplomatic-technical processes determined by their broader political context (Zetoin and Warner 2006:445). Accordingly, the security implications of the LHWP are analysed within the broader context of inter-state relations between Lesotho and South Africa.

(a) Asymmetric power relations: Power – the material capacity of one party to gain the compliance of the other – plays an important role in the relations between Lesotho and South Africa (Zeitoun and Allan 2008:7). The disparities in territorial size, economic capability and productivity, and military might affect their bilateral relations, also and especially within the context of the LHWP. Asymmetric power relations have been a feature of the bilateral relations between the two countries since Lesotho's independence. Lesotho, with its smaller territory, population size and economy, is vulnerable to actions undertaken by South Africa, irrespective of whether they are punitive or beneficial. Decision makers in Lesotho are aware of this vulnerability and face the challenge of finding a balance between protecting Lesotho's

national interests and ensuring that such protective actions and measures do not invite or precipitate a negative reaction from South Africa.

Preceding the negotiations of the 1986 Treaty, the relations between Lesotho and South Africa were mainly defined by the then apartheid South African government's strategy of aggression and destabilisation. Coercion and the use of the 'proverbial stick' by South Africa created and perpetuated unequal relations between South Africa and neighbouring states, Lesotho included. In the 1980s Lesotho was subjected to frequent cross-border raids by South African security forces, mainly due to Lesotho's sympathetic stance of accommodating members of the African National Congress (ANC) in its territory (Time Magazine 1982). The use of force and military might was a clear demonstration of South Africa's ability to destabilise Lesotho. In 1986 South Africa imposed a border blockage which resulted in Lesotho conceding to South African demands by expelling ANC members from its territory (Los Angeles Times 1986). The negotiations on the 1986 Treaty thus took place at a time when Lesotho's sensitivity and vulnerability to South Africa's negative actions were heightened.

(b) Cooperative relations: The 1986 Treaty generated conditions and promoted a climate for cooperative relations between Lesotho and South Africa. The success of the project depended and continues to depend on cooperation between the two countries. The three institutions of the LHWP, to the extent that they individually and collectively represent Lesotho and South Africa, can only be effective when there are cooperative relations between them and between them and other institutions of water resource management in the respective countries. The LHWC, for example, comprises of members from both Lesotho and South Africa and the LHWC requires cooperation of the implementing authorities of both Lesotho and South Africa, namely the LHDA and TCTA, to function effectively.

The relations between Lesotho and South Africa are high in apparent cooperation intensity and low in explicit conflict intensity. Cooperation between Lesotho and South Africa over the LHWP is driven by the calculation and balance of costs related to non-cooperation and the benefits of cooperation. The LHWP has a significant impact on the economy of Lesotho. Water transfer royalties and hydropower sales are the main permanent benefits of the LHWP, while some job opportunities and other small scale economic benefits are temporary and linked to construction periods. In addition to these benefits, the infrastructure developments such as the access road which have been built as a result of the Project, also benefits Lesotho.

Hence the continued and sustained importance of the LHWP to the economy of Lesotho necessitates the maintenance of cordial relations between the two countries.

The catalyst of the cooperation between Lesotho and South Africa has metamorphosed from denial strategies (previously predominantly used by South Africa), to strategies of co-optation and reassurance (Chan 2006:3). Denial strategies, with the inclusion of actions such as sanctions, boycotts and blockages, are incompatible with the implementation of the LHWP. The nature of the Project and its strategic significance requires that there be some level of mutual respect and benefit sharing in order to ensure the longevity of the project. The relations between Lesotho and South Africa have gradually shifted towards strategies of co-optation and reassurance. These include preferential treatment, compensatory side-payments, loans and other forms of financial assistance both related and unrelated to the LHWP (Chan 2006:4).

Among these is the Joint Bilateral Commission for Cooperation (JBCC), established in 2001 between Lesotho and South Africa, whereupon the two countries agreed on a strategic partnership that would assist Lesotho to graduate from its least developed country status to that of a developing country. In addition, the JBCC seeks to promote political, economic and social cooperation between Lesotho and South Africa (RSA 2007b). The JBCC has, amongst others, initiated and implemented a geo-chemical mapping and a hydrological project (Metolong Dam Project), as well as the construction of the Sani Pass-Mokhotlong road as part of the Maloti-Drakensberg Trans-frontier project. The road and the construction of the Metolong Dam are funded through the African Renaissance Fund, according to a commitment made by South Africa (RSA 2010). The JBCC in itself encourages cooperation and enhances positive relations between Lesotho and South Africa.

In addition to projects undertaken within the context of the JBCC, South Africa offers assistance on other projects. A recent example is the response of South Africa to the deteriorating food security situation in Lesotho. During a working visit to South Africa in October 2012, Prime Minister Thabane briefed President Jacob Zuma on the deteriorating food security situation in Lesotho. President Jacob Zuma responded by committing to humanitarian assistance to Lesotho in order to ease the food crisis. South Africa pledged R180 million for food aid to Lesotho (RSA 2013). Another example is related to Phase II of LHWP. During the renegotiation of Phase II of the Project, the Prime Minister of Lesotho, Thomas Thabane, appealed to President Jacob Zuma of South Africa to finance the part of the

project related to hydropower in Lesotho, a request to which South Africa responded positively (Tlali 2013b).

Although unrelated to the LHWP, the JBCC related and other projects undertaken by South Africa reduce the possibility for Lesotho decision makers to act unfavourably towards South Africa. This is mainly due to the fact that although the LHWP was negotiated and signed separate from other projects, it is implemented and continues to be negotiated within the larger context of cooperative bilateral relations between Lesotho and South Africa.

More specifically and considering South Africa's dependence on and vulnerability to water transfers from Lesotho, the latter despite its upstream position does not use water from the LHWP as a tool of a denial or coercive strategy towards South Africa. This is mainly due to the asymmetric power relationship that favours South Africa, to the interconnectedness of Lesotho to South Africa's economy and infrastructure, and to the greater vulnerability of Lesotho to possible punitive or negative measures against it by South Africa. South Africa remains a hegemonic power with a larger economy, territory and military capability. This hegemonic position of South Africa, despite the fact that it is not used aggressively, does have a restrictive impact on the relations between Lesotho and South Africa.

In summary, asymmetric power relations between Lesotho and South Africa affect their LHWP relations. The LHWP has been both a result and a catalyst of cooperative inter-state relations between the two countries. The transfer of water to South Africa through the LHWP contributes to the economy of Lesotho by means of royalties received and the generation and sale of hydropower. The economic benefits of LHWP serve as an incentive for Lesotho to maintain cooperative relations with South Africa. The LHWP is implemented alongside other cooperative initiatives such as the JBCC and these serve as a further incentive and motivation for cooperation. Lesotho and South Africa have both refrained from using denial and coercive strategies in order to pursue their respective national interests in the context of LHWP. South Africa has especially used the strategy of incentivising within the larger context of bilateral relations with Lesotho. The sustained cooperation between Lesotho and South Africa can be attributed to political will, functional institutions and the effectiveness of the Treaty between the countries based on the mutual recognition of the benefits of the LHWP.

4.3.2 Impact on the national and water security of Lesotho

National security depends on a combination of various external and internal economic, social and political factors (Friedman 2005:161). The water security of individuals, households, communities and a nation is tied to human security and social stability. Water (in)security can negatively or positively affect national security. The LHWP, due to its size, trans-boundary nature and strategic importance, has security implications both for the national security and the water security of Lesotho.

(a) Socio-economic impact: In the development of Phase 1A of the Project, 2 900 households lost 1 504 hectares of arable land and nearly 2 800 hectares of rangeland when they relocated. With the completion of Phase 1B, a total of 3 353 hectares of arable land was lost by 500 households, along with 343 hectares of rangeland (LHDA 1996). This loss of land has resulted in reduced arable and grazing lands, and has contributed to reduced access to food crops and animal stock. The loss of farming and grazing land has put a strain on the food supply of affected and relocated communities. The LHWP has taken over fertile land in Lesotho – for example, the Mohale area, which was the only region in Lesotho that produced an agricultural surplus, has been used for LHWP infrastructure thereby taking away and reducing arable land (Mwangi 2008). Project construction has also contributed significantly to environmental change thereby negatively affecting fuel resources (providing energy and income), wild vegetables (providing additional nutrition) and medicinal plants (Tricarico 2002:7; Mwangi 2007:12–13). As reflected in a study conducted by the Transformation Resource Centre, the resettlement of some communities has posed challenges with regards to self-sustenance (TRC 2004:30). The loss of arable land, grazing land and housing, as well as medicinal plants negatively impacted on the food, economic and health security of the affected communities. The construction of LHWP infrastructure and roads has also aggravated the existing soil erosion problem in Lesotho (Bond 1999:23). The poor drainage system along LHWP roads and the resultant run-off has also negatively affected farming in some areas (Mwangi 2008).

(b) Responses to change: The construction of LHWP infrastructure and related developments has necessitated the relocation and resettlement of the affected communities, an action that has severely impacted on them at social, economic and political levels. The relocation of the affected communities is the responsibility of the Lesotho government and

the implementing authority in Lesotho, namely the LHDA. In Article 15 of the 1986 Treaty the governments of Lesotho and South Africa agreed to “take all reasonable measures to ensure that the implementation operation and maintenance of the Project are compatible with the protection of the existing quality of the environment and, in particular, shall pay due regard to the maintenance of the welfare of persons and communities immediately affected by the project”. In addition, Article 7 (18) delegates the LHDA the responsibility to ensure that members of affected communities “will be enabled to maintain a standard of living not inferior to that obtaining at the time of first disturbance” (KOL and RSA 1986). Although provided for in the Treaty, the task of relocation and compensation of affected communities has not been effectively executed. Criticism related to relocation and compensation includes the lack of consultation, inadequate compensation, as well as delays in the payment of compensation (Molise 2009).

As a result of the discontent over processes of relocation and payments of compensation, dam-affected communities have organised themselves and confronted the Government and the LHDA with their concerns. For example, in 2001 demonstrators gathered at Mohale Dam, Katse Dam and Muela Dam during a nationally coordinated protest over the lack of fair compensation and the unfulfilled promise of development in affected communities (International Rivers 2001). Another protest action followed in 2005 when Survivors of Lesotho Dams (SOLD), a civil organisation formed by dam-affected communities, marched in Maseru against the LHDA. The march was triggered by the LHDA’s delayed payment of compensation to the dam-affected communities. A memorandum of grievances, handed to the LHDA, the Water Commissioner and a representative from the South African High Commission, included the following issues: delayed and inadequate compensation, a lack of training to replace former livelihoods, and a lack of water and sanitation in resettled communities (TRC 2005). On a smaller scale, in April 2013, the Youth League Forum of Lesotho held demonstration near the official residence of the Prime Minister to protest against the construction of a Phase II dam in Polihadi, demanding that it be built in Mashai (Public Eye 2013a).

The LHWP and related infrastructure development affected and will continue to affect communities in Lesotho. The inefficient management of relocations, resettlement and payment of compensation can fuel destabilising tensions. The actual (as indicated above) and perceived (as a possibility) impact of the LHWP on the national security of Lesotho is

dependent on how the Government manages its response to the grievances expressed, and on the delivery of responsibilities to dam-affected communities by the LHDA in particular. It is essential and even critical that the Lesotho government avoid the use of force against communities who decide to express their discontent through public protest and marches.

(c) Physical security of LHWP: Physical security is a crucial aspect of the construction and maintenance of infrastructure and the continuous development of the LHWP. The critical physical infrastructure of LHWP is located within the boundaries of Lesotho. As stated in the 1986 Treaty, the Lesotho government is responsible for the security of the LHWP: “Lesotho shall, in accordance with the provisions of the treaty, have the overall responsibility for that part of the project situated in the Kingdom of Lesotho and the security thereof” (Article 6). In addition, Article 14 makes provision for extreme circumstances by providing procedures in case of *force majeure*. In the context of the Treaty, *force majeure* is defined to include the following: any disturbance and extreme hydrological or other natural event, including extreme drought, and affecting the delivery of water to South Africa; and the use of force by the states, armed insurrection and other forms of civil strife and episodes of sabotage (Article 14.2). The Treaty (Article 14.1) also states that “in case of substantial impairment of the implementation of (the) Treaty caused by *force majeure*, the parties shall take the necessary measures of palliation and restoration on the basis of consultation and in a spirit of co-operation, in so far as the immediate circumstances of the emergency so permit, and shall subsequently agree on joint action”. Essentially, Article 14 provides for unilateral action (albeit not with the exclusion of multilateral action) in case of a crisis situation. Depending on the situation and its context, this in principle provides an opportunity and the justification thereof for South African interference in Lesotho’s internal political issues.

This possibility actualised in 1998, following disputed election results and failed interventions, when an army mutiny broke out at the main Lesotho Defence Force barracks in Maseru in September 1998 (Matlosa 1999:165). The then Prime Minister of Lesotho, Pakalitha Mosisili, wrote to the heads of state of Botswana, Mozambique, South Africa and Zimbabwe, requesting military intervention in Lesotho (Likoti 2007:253) The military intervention was done under the auspices of SADC (RSA 1998b). The mandate for intervention was to deal with the deteriorating security situation in Lesotho (Neethling 1999). The military intervention, codenamed *Operation Boleas*, was undertaken by a combined military task force of the South African National Defence Force (SANDF) and the Botswana

Defence Force (BDF). However, the Botswana troops only arrived on nightfall of 22 September 1998, while SANDF entered Lesotho during the early morning of the same day. On arrival in Lesotho, the SANDF soldiers attempted to secure strategic points such as government buildings, broadcasting stations, embassies and border points (Mandrup 2007:223). The Katse Dam, which is part of the LHWP, was one of the strategic points on which the South African soldiers advanced with the intention to secure it. According to the SANDF, it took over the Katse Dam project site in order to protect civilian workers. Arguably, a consideration for South Africa was the protection of the Project at large, considering the fact that it was of national interest to South Africa (Jacobs 2012:70). This intervention by South Africa and Botswana under the auspices of the SADC, although not explicitly related to the LHWP, is a demonstration of the ability of South Africa to interfere in Lesotho's domestic issues in the case where it perceives a threat to the delivery of water through the LHWP.

Lesotho's domestic stability, peace and security are crucial for creating conditions that are conducive for the functioning of the LHWP. Domestic instability interferes with the functions of government and negatively impacts on the ability of the responsible institutions to deliver on their obligations related to the Project. South Africa's vested national interest in the physical security of the LHWP infrastructure creates the potential for interfering in the domestic affairs and even violating the territorial integrity of Lesotho, and as a consequence undermining the responsibility and ability of the Lesotho Government to guarantee and manage security within its borders.

(d) The LHWP and water security in Lesotho: The Lesotho government is responsible for ensuring that Basotho are water secure. Attaining and improving water security requires that the Government ensures: adequate protection from water-related disasters and diseases; access to a sufficient quantity and quality of water, at affordable cost, to meet the basic food, energy and other requirements essential for leading a healthy and productive life; and sustaining vital ecosystems (Jansky, Pachova and Nakayama 2008). As previously mentioned, the purpose of the LHWP is to divert and control the flow of water in order to deliver specified quantities of water to South Africa and to generate hydroelectric power in Lesotho (KOL and RSA 1989). The LHWP, although not primarily aimed at securing internal water supply in Lesotho, does impact on water security in Lesotho.

Although the LHWP does not capture water for internal use in Lesotho, it is able to provide water to augment domestic supply in case of water crises. For example, in 2003 the Caledon River, which is the main source of water for Maseru, ceased to flow due to the lack of rainfall. The Lesotho government requested the South Africa government to release water from the LHWP into the Caledon River (RSA 2003). South Africa complied with this request, although the LHWC recorded the amount of water released into the Caledon River and the cost was recovered from Lesotho (RSA 2003). This proven flexibility of the agreement and understanding between Lesotho and South Africa, and the cooperative relations between the two countries, make it possible for the Project to cater for or respond to extraordinary circumstances and conditions.

Although South Africa pays royalties to Lesotho for the water delivered through the LHWP, the Project is nevertheless perceived by some communities in Lesotho as ‘stealing’ water that belongs to Basotho. Relocated communities demand that royalties be utilised to improve their livelihoods and to specifically develop infrastructure in dam-affected communities. As articulated by Mothusi Seqee, the Coordinator of the Network for Advocacy of Water Issue in Southern Africa, relocated “communities want to point at something that was brought by this (LHWP) partnership with South Africa” (Matope 2013).

Public expectations of the LHWP to directly contribute to the water supply in Lesotho misrepresent the main purpose of the LHWP. The Lesotho government is frequently criticised for having committed itself to the LHWP, especially by those sections of the population who experience and suffer from water shortages (Irin News 2006). These negative perceptions of the LHWP are further compounded by the challenge of supplying water and providing water services in Lesotho. The ineffective and inefficient management of the available water resources and other related services in Lesotho, to the extent that these problems do occur, has the potential of translating into civil action and political instability that may compromise the national security of the country.

In summary, activities related to LHWP takes place within the larger context of cooperative bilateral relations between Lesotho and South Africa. The asymmetric power relationship between Lesotho and South Africa influences LHWP related decisions in favour of South Africa. South Africa uses strategies of co-optation, reassurance and incentivising to enhance these cooperative relations. The LHWP has, nevertheless, negatively affected economic

security, food security and health security of the dam-affected communities in particular, through the loss of arable and grazing land. The conflict reducing management of the impact of these losses depends on the ability of the LHDA to implement resettlement, payment of compensation, and programs aimed at improving the livelihoods of dam-affected communities. The inability to do this could result in social and political instability, which if sustained and uncontrolled could turn violent and undermine the national security of the Lesotho state and government. The physical security of the LHWP infrastructure and related development projects makes Lesotho vulnerable to interference by South Africa in the internal affairs of Lesotho. Finally, although the LHWP is not specifically aimed at augmenting internal water supply and water services in Lesotho, a cooperative framework exists that ensures a responsiveness to the changing circumstances and needs of the two countries.

4.4 Conclusion

The aim of this chapter was to discuss and analyse the inter-state dimension of water security in the context of the LHWP. The 1986 Treaty established a regulatory and institutional framework within which LHWP related activities take place. The flexibility of the Treaty makes it possible for renegotiation of issues of concern to either Lesotho or South Africa. Furthermore, the Treaty fosters cooperative relations between the two countries.

The LHWP cooperation takes place within the larger context of bilateral relations between Lesotho and South Africa. Changes, especially of a political nature, in both or either of the countries, could affect and compromise this established relationship. Lesotho, although South Africa's water dependency enables this, does not use its upstream position as a coercive or punitive tool in its relations with South Africa. The asymmetric power relationship, although it plays a major role in ensuring the maintenance of cooperative bilateral relations, favours South Africa as the benign hegemon in the power equation and in practice prevents this eventuality.

The construction of LHWP infrastructure has resulted in loss of farming and grazing land, and of the livelihoods of individuals and families in the affected communities. The subsequent human security challenges, including food, economic and health insecurity (see Chapter 5), have resulted in these communities organising themselves into pressure groups to address the problems they face. Activist and protective action by these communities, if nationally orchestrated and coordinated, sustained and manifest in political violence, can obviously pose a national security threat to Lesotho. South Africa is also very sensitive about these insecurities in Lesotho due to the fact that it has a vested interest in the physical

security of LHWP infrastructure. Interference by South Africa in Lesotho, whether unilateral or as part of a multilateral effort as was the case in 1998, especially when it perceives LHWP infrastructure to be directly or indirectly under threat, can also pose a threat to and compromise the national security, sovereignty and territorial integrity of Lesotho.

On the positive side, although this inter-state project is not aimed at improving water security in Lesotho as such, it has the proven ability to do so in the event of a water crisis. What remains and to be dealt with in the next chapter, is the intra-state human security dimension of water security in Lesotho.

Chapter Five

THE INTRA-STATE DIMENSION: WATER SECURITY IN LESOTHO

5.1 Introduction

A central theme of the discussion thus far was that water is an economic and politically strategic resource of Lesotho, apart from being essential for human life, community sustainability, growth and development, and well-being in Lesotho. Since water impacts on all facets of life, it affects and is affected by human development. It is therefore necessary to consider water related matters in Lesotho within the framework of water, human and national security. The aim of this chapter is to analyse the intra-state dimension of water security in Lesotho. This chapter will analyse the effects of water security challenges on human security in Lesotho. This will be done by assessing the impact of water (in)security on food security, economic security, health security and environmental security. This chapter will further discuss the link between water, human security and national security in Lesotho.

5.2 The water security-human security nexus in Lesotho

Water is an essential resource that affects human existence and survival. Water is essential for food production, energy production, health, economic activities and many other facets that are important for human survival and the functioning of the state. The centrality of water to human survival necessitates that water be managed sustainably in order to achieve water security. Water security as previously discussed (see Chapter 2) refers to access to sufficient quantity and quality of water to meet basic needs and other requirements for healthy and productive living; protection from water-related disasters and diseases; and the protection of vital ecosystems (Jansky, Pachova and Nakayama 2008). Water security manifests at individual, community, national and international levels.

Water, because of its centrality to human survival is inextricably linked to and is essential for attaining human security. Human security, amongst others, is linked to and involves economic security, food security, health security, environmental security, community security and personal security. Water is a vital component for all these securities to be met. Within the context of water, this section addresses the water security-human security nexus considering the interrelationship and residual effect of water on food security, health security, environmental security and economic security.

5.2.1 Human security in Lesotho

The UNDP Human Development Index (HDI) summarises the indicators of long term progress in terms of three basic dimensions of human development, namely a long and healthy life, access to knowledge and a decent standard of living. According to these indicators, and in 2013, Lesotho ranked number 158 out of 187 countries (UNDP 2013). This placed Lesotho in the low human development category (UNDP 2013). Indicators of this categorisation are the fact that life expectancy is 48.7 years, expected schooling are 9.6 years, the average number of years of education received is 5.9 years, and the gross national income (GNI) *per capita* is US\$1 879 (UNDP 2013).

Along with most UN member states, Lesotho has committed itself to the MDGs. The MDGs, adopted by the UN General Assembly in 2000, recognised the following developmental challenges: extreme poverty and hunger, universal primary education, gender equality, child mortality, maternal health, HIV/AIDS, malaria and other diseases, environmental sustainability and global partnership for development (UN 2000). Working towards the achievement of these MDG goals is a step towards the implementation of the human security agenda (Koehler, Gasper, Jolly and Simane 2012:85).

In Lesotho 42 per cent of children below five are stunted, and 14 per cent are underweight (UNICEF 2009). The FAO, in 2012, reported that 59 per cent of the Lesotho population lives below the poverty line and 40 per cent lives in extreme poverty (FEWS NET 2013). Lesotho also has a consistently high level of unemployment estimated at 23 per cent. In 2009 the unemployment rate increased to 29.4 per cent (KOL-MLE 2012:12). These human development issues of Lesotho are also human security issues since human development is closely linked to human security; the lack of human development undermines human security whereas the lack of human security undermines human development. The central issue which is common and inextricably linked to all human security challenges in Lesotho is poverty. Poverty is an individual state of deprivation whereby the opportunity and choice of most basic to human development are denied (UNDP 1996:109). Poverty contributes to ill health, food insecurity, the impeded growth of children, a lack of education and skills development, as well as other factors related to human development. Effective water management can reduce poverty by enhancing livelihoods, reducing health risks, reducing vulnerability to water related threats, and introducing pro-poor policies (WHO 2009). Effective water

management contributes to improving human security, while the mismanagement of water resources can result in forced migration, underemployment and social instability, and deteriorating human security conditions (Moench 2002:196). Thus water resource management is crucial for poverty reduction and human security. Water is also essential for food production, energy production, health, economic activities and many other factors that affect human security.

The management of water resources with the cognisance of the centrality of water to human development and human security is important. In response, the *Poverty Reduction Strategy: National Strategic Development Plan* of the Lesotho government identifies the expansion of water and sanitation distribution services to industries, commercial centres, households and other institutions; and the expansion of water harvesting infrastructure expansion of water, as part of a strategy to enhance economic growth and reduce poverty in the country (IMF and KOL 2012: ix).

5.2.2 Water and food security

The notion of food security is not new, as early as 1974 the World Food Summit defined food security as the “availability at all times of adequate world food supplies of basic food stuff to sustain steady expansion of food consumption and to offset fluctuation in production and prices” (UN 1975). A decade later, in 1983, the FAO expanded this definition to include securing access by vulnerable people to available supplies, “ensuring that all people at all times have both physical and economic access to the basic food that they need” (FAO 1983). In 1996 the World Food Summit adopted a more comprehensive and inclusive definition, concluding that “food security, at the individual, household, national, regional and global levels is achieved when all people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary need and food preferences for an active healthy life” (FAO 1996). In 2001, FAO defined food security as a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe, and nutritious food that meets their dietary need and food preferences for an active and healthy life (FAO 2001).

Considering these definitions, it is important to note how the definition has evolved in terms of identifying the object and the purpose of food security. In 1974 food security was defined

as the general availability of food with no specific referent object and no specific value to be protected. The definition has evolved and identifies individuals, households, nations and regions as referent objects of food security; and the values to be protected are dietary need and food preferences for active healthy living. Additionally, the definition acknowledges that barriers to security are both physical and economic.

Accordingly, for purposes of considering the situation in Lesotho, food security is viewed as a situation that exists when all people at individual, households, national, regional and global levels have physical and economic access to sufficient, safe and nutritious food to meet their dietary need and food preferences for an active healthy life.

Water is a critical for food security and crops and livestock need water to grow. Agriculture requires large quantities of water for irrigation and good quality water for various production processes. In Lesotho, agriculture is the livelihood of most rural residents considering that 75 per cent of people living in rural areas participate in agricultural practices (UN OCHA 2013). The agricultural sector, also bearing in mind that agriculture is primarily a rural activity, provides the livelihood of most rural residents and employs 60-70 per cent of the Lesotho's total labour force. However, it only accounts for approximately 10 per cent of the gross domestic product (IFPRI 2012:1).

The annual cereal production in Lesotho has been shrinking since the 1970s. According to World Food Programme, in 1980 the domestic cereal production met about 80 per cent of the national requirement, but this dropped to 50 per cent in 1990s and to 30 per cent by 2004 (UN WFP 2009). In 2012 the annual cereal production was the lowest in ten years at 32 percent of the normal harvest (UN 2012).

Water related weather extremes obviously have a negative effect on food production in Lesotho. For example, in 2007, when Lesotho experienced a drought caused by a combination of high temperatures and low rainfall (FAO 2008:8), there was large scale damage to crops and an accompanied decline in food production. The drought conditions, compounded by other sub-standard social and economic conditions, increased the number of vulnerable people in Lesotho. The maize prices increased by over 35 per cent in 2008 (FAO 2008). The decreased food production and the high food prices left more people in need of food assistance, in the form of grain distribution and cash transfer. The impact of these natural conditions on food

production and on human security in Lesotho was severe considering that in the first quarter of 2008 an estimated 400 000 people faced food shortages (UN WFP 2009).

The other water-related condition, namely extreme heavy rains, also had a destructive effect on agriculture in Lesotho. For example, the heavy rains of December 2010 and January 2011 devastated crops in most of Lesotho (Irin News 2011). According to the *Lesotho Food Security and Vulnerability Monitoring Report*, damage caused by flooding reduced yields of maize, the staple food, by an average of 62 percent compared to the previous year (KOL-DMA 2011). The floods also compounded the existing food insecurity situation in Lesotho. Out of a population of over two million, an estimated 514 000 needed humanitarian assistance in 2011, twice the number that needed assistance in 2010 (Irin News 2011). In August 2012, and as a result of the food insecurity, the Prime Minister of Lesotho, Thomas Thabane, declared a food crisis situation and called on the Development Partners, such as the UK and the United States of America, to assist (KOL 2012b). In 2012/13 the lack of rainfall led to a dramatic 70 per cent drop in cereal production (UN WFP 2013). As a result and according to the Famine Early Warning Systems Network (FEWS NET), the Lesotho Vulnerability Assessment Committee's annual assessment conducted between May and June 2013 estimated approximately 233 000 people to be at risk of acute food insecurity between October 2013 and February 2014 (FEWS NET 2013).

Persistent food insecurity continues to be a chronic problem in Lesotho and a key obstacle to Lesotho's development agenda. The water related weather extremes in Lesotho worsen the food insecurity of already vulnerable groups, especially poor rural populations that depend on agriculture for livelihood. The lack of investment in irrigation causes farmers to depend on uncertain rainfall, and makes agricultural produce to be vulnerable to effects of erratic weather conditions. Investment in water infrastructure can improve the food security situation in Lesotho by increasing food production, and by reducing the financial burden of agricultural imports (FAO 2001). In addition, Lesotho needs to invest in flood management infrastructure to capture, divert and store flood water.

5.2.3 Water and human security

Individual and public health are closely linked to human development, human security and water security. The state of health of individuals can undermine or enhance human

capabilities with regard to food production, economic productivity and other activities important to human development. Health is essential for the achievement of social stability and economic growth (UNDP 2009:162).

The World Health Organisation (WHO) defines health security as “the activities required, both proactive and reactive, to minimise vulnerability to acute public health events that endanger the collective health of populations” (WHO 2007). In terms of this definition the core aspect of health security is of the action that needs to be taken in response to health risks to the collective. Bajpai (2000:15) defines health security as an individual’s freedom from various diseases and debilitating illnesses and his/her access to health care. This definition identifies the individual as the referent object and highlights the importance of access to health care. In assessing the Lesotho situation, a combination of the two definitions is used and health security is defined as activities required to ensure that individuals and communities are free from disease and debilitating illnesses, that a vulnerability to acute public health events that endanger the health of individuals and communities be minimised, and that individuals and communities have access to health care.

The United States government’s Centre for Disease Control and Prevention (CDC) lists the following as major causes of death in Lesotho: HIV, tuberculosis, low respiratory infections and, diarrheal diseases (CDC 2013). Safe water supplies, hygienic sanitation and good water management are fundamental to health, and are important for addressing these health challenges in Lesotho (WHO 2008). The failure to effectively manage water resources and water related risks can severely affect the health of individuals and communities in Lesotho.

Although water-borne diseases such as cholera and typhoid are not endemic to Lesotho, the country has had previous experience of outbreaks of these diseases. In January 2000, 28 people died due to an outbreak of cholera in Lesotho (Irin News 2000). The cause was inadequate sanitation and unprotected water sources which led to the contamination of water sources that households depend on. Lesotho has, however, made progress in improving access to safe water. In 2012 the UNDP reported that Lesotho was on track to attain the goal of reducing the proportion of people without access to safe drinking water by 50 per cent by 2015 (UNDP 2012). In the same report the UNDP indicated that progress in the area of sanitation is slower due to technical and policy reasons. The provision of water and sanitation is closely linked to other health challenges that Lesotho is confronted with.

HIV/ AIDS and tuberculosis (TB) are the foremost health challenges in Lesotho (WHO 2008:4). In 2011, Lesotho's HIV prevalence rate for adults was 23 per cent (NAC 2012:11). According to the UNDP, the HIV epidemic in Lesotho is one of the most severe in the world (UNDP 2012). Adequate supply of safe water is critical in order for HIV infected people to remain healthy as long as possible and to reduce chances of opportunistic infections such as diarrhoea and skin diseases (Kamminga and Wegelin-Schuringa 2005:12). Lesotho is also reported to have the fourth highest estimated tuberculosis incidence in the world (Global Fund 2013). Similarly, the lack of clean water and sanitation contributes to an increased susceptibility to TB. The high prevalence of HIV/AIDS and tuberculosis in Lesotho necessitates a reliable supply of safe water to household and to public health institutions, to support provision of health care and the prevention and management of treatment.

Lesotho is also confronted with high levels of infant mortality, i.e. the number of infants dying before reaching one year of age. In 2012 the infant mortality rate in Lesotho was reported to be 71 out of 1 000 live births, while the child mortality rate was 113 out of 1 000 (UNICEF 2012). Child and infant mortality are also closely linked to the availability of clean water and sanitation, mainly because water access is significantly associated with decreased odds of under-five child mortality due to diarrhoea (Cheng, *et al* 2012:6). Clean water is also crucial for infant feeding. Chances of a child dying from diarrhoea rises when feeding is not prepared with clean water, or when cleaning and water handling practices are not hygienic (Kamminga and Wegelin-Schuringa 2005:12). Increasing access to safe water and adequate sanitation is important for supporting programs aimed at lowering infant and child mortality rates in Lesotho.

According to research done for the Africa Adaptation Programme (AAP) of the UNDP the most serious threats from climate change for Lesotho will be from water-borne diseases such as diarrhoea, typhoid, hepatitis A, with pneumonia as an associated threat (UNDP 2012). Threats to health security require investment for improvement of water supply and sanitation in Lesotho in both the rural and urban areas of Lesotho.

In summary, although water is not a primary cause of diseases and health challenges in Lesotho, it is a critical factor in all health related initiatives in Lesotho. Water is vital for human health at an individual, community and national level. Improved access to water contributes positively to human health, to social welfare and to national stability.

5.2.4 Water and economic security

Economic security is important for achieving, amongst others, food and health security. Economic security refers to an individual's enjoyment of a basic income either through gainful employment or from a social safety service (Bajpai 2000:15) The economy of Lesotho is based on agriculture, livestock, manufacturing, mining and water export (KOL: undated). Production in all these sectors requires a reliable supply of water, hence the storage, treatment and distribution of water are critical for the functioning of the sectors that make up Lesotho economy.

As previously discussed (see Chapter 4), the LHWP contributes positively to the economy of Lesotho in form of royalties received from South Africa, infrastructure development, energy generation as well as the creation of employment opportunities. Other projects that require water-related infrastructure development have the same positive effect. For example, the Metolong Dam and Water Supply Programme, through improved water delivery, is expected to preserve 48 000 jobs and create approximately 6 000 additional jobs (CDM Smith undated). Phase II of the LHWP is expected to create 25 000 jobs over 15 years and employ about 1 500 technicians and engineers on a permanent basis (African Union 2011).

The Tikoe-Thetsane Water Treatment Plant, inaugurated in January 2012, was initiated based on the realisation that water shortage in the textile industry – being a water intensive industry – could have serious repercussion for future investment (KOL-WASCO 2012). On the one hand, the textile industry is the largest contributor to the GDP of and the largest employer in Lesotho. It furthermore accounts for nearly 50 per cent of those employed in the formal sector (KOL-BOS 2011). On the other hand, any interruption or shortage in water supply to the textile industry affects the production and the profitability of the industry in two ways: firstly, through disinvestment due to a decrease in production; and secondly, through increased unemployment due to the disinvestment. Hence it is important that the textile industry be assured of reliable water supply.

The agricultural sector which is the major source of livelihood and subsistence for Basotho is also largely dependent on the availability and access to water. As previously discussed (see section 5.2.2), poor water infrastructure and inadequate water management negatively affects the agricultural sector, causing waning livelihoods and economic conditions of Basotho.

Lesotho's poverty is closely linked to its dependence on rain-fed subsistence farming (World Bank 2010: 274). Furthermore, limited irrigation and underdevelopment of water infrastructure increase the rural economy's vulnerability to water shocks (World Bank 2010:275).

In summary water is an important resource that contributes positively to Lesotho's economic security, and the livelihoods of individuals and communities. Water-related risk, however, has the potential to cause economic loss and growth constraints (Grey and Saddoff 2006). Lack of access to reliable and safe water can result in financial loss to business and loss of employment. Lesotho, due to its vulnerability to water, invariably needs to invest in water storage and irrigation in order to enhance economic security and to protect it from the reversal of economic gains that have been achieved.

5.2.5 Water and environmental security

Environmental security is the relative public safety from environmental dangers caused by natural or human processes due to ignorance, accident, mismanagement or design (Millennium Project 2000). The environment is affected by natural forces as well as human activities. The conservation of natural resources is necessary for the attainment and management of environmental security. Conservation refers to the planned management, use and protection; continued benefit for present and future generations; and prevention of exploitation, destruction and/or neglect of natural or cultural resources (Millennium Project 2000).

Under the *United Nations Framework Convention on Climate Change* (UNFCCC), 1995, Lesotho is categorized as one of the countries highly vulnerable to the impact of climate change and as indicated, experiences frequent droughts and heavy rains that have a damaging impact on its environment (KOL 2007b: ii). The management, use and protection of water resources is an important element of Lesotho's climate change adaptation programme of action (KOL 2007b:v). There are several ways in which water affects environmental security in Lesotho

Firstly, erosion poses a major challenge to environmental security in Lesotho. Water erosion is accountable for most soil erosion in Lesotho. Longer dry seasons followed by heavy rainfall escalate soil erosion in Lesotho (KOL-LESMET 2013). The resultant degraded soil negatively affects agricultural productivity. The development of water related infrastructure is important for preventing soil erosion, as is proper drainage. For example, the installation of

interception structures, the construction of water banks for the safe diversion of rainwater around croplands, and the construction of a weir to divert water around a gully (donga) are some of the methods that can be utilised to reduce erosion (FAO 1990). Additionally, erosion prevention requires adoption of land management and farming methods that are focused on reversing and preventing erosion (IFAD 2013)

Secondly, the degradation of wetlands due to climate change and practices such as the conversion of wetlands into croplands and grazing land is an environmental challenge to Lesotho. Wetlands provide a range of benefits to human populations such as water for drinking, water for food production and water for the energy sector. Wetlands in Lesotho support more than 300 000 households through agriculture, fishery and livestock watering activities (Olaleye and Sekaleli 2010:1). The protection and rehabilitation of wetlands is a critical factor for environmental security in Lesotho. The Lesotho government recognises the importance of restoration and conservation of wetland and has in partnership with a number of international institutions such as the MCA initiated projects that are intended to address the degradation of wetlands. Among these are projects such as the Semongkong Wetlands Restoration Conservation Project (Public Eye 2013b; MCA: Undated)

Thirdly, water treatment and wastewater management (or the lack thereof) similarly impacts on environmental security and human health. The development and improvement of wastewater infrastructure is important to ensure provision of not only clean and safe water, but also to maintain the integrity of the environment. As previously indicated, the Lesotho government has undertaken projects aimed at water treatment and wastewater management such as the Tikoe-Thetsane Water Treatment Plant in urban Maseru and the Leribe Treatment Plant in the rural Pitseng District. Accessibility of rural areas and extreme weather conditions such as flooding pose a challenge for water treatment – for example abstraction points are washed away during seasonal floods (ORASECOM: Undated).

Fourthly, the impact of industrial activities on water resources and the environment is important in the context of Lesotho. The textile industry, which is important for Lesotho's economy, is not only water intensive but is also associated with water and environmental pollution. The textile industry produces wastewater as a result of dyeing and washing processes (Tshabalala: undated). Chemicals found in wastewater discharged from textile industry mills have chemicals that cause both environmental damage and human disease

(Sustainable Communication 2012). Thus strict monitoring of industrial waste discharge is critical for environmental security in Lesotho.

For example, in 2009 the media reported that the textile industries in Maseru were dumping dangerous waste and that untreated wastewater, dyed deep blue and polluted with chemicals, was leaking into and contaminating the water table and the Mohokare River (CBS News 2010). Following these reports, the Lesotho government issued a statement confirming that the mill and denim manufacturing units in Maseru in fact had functioning wastewater treatment plants and that the reported incident was an isolated one which had been corrected. This nevertheless points to the detrimental impact of the textile industry and the fact that although the Government has policies and regulations in place to regulate pollution, the lack of enforcement undermines the curbing of pollution by the textile industry. For example, the area of Ha Thetsane in Maseru, where the textile industry estates are located, continues to be plagued by untreated waste water discharged into the nearby rivers and by solid waste from the factories (Maphathe 2013).

Finally, large scale water infrastructure projects, although necessary for water security, have a negative impact on environmental security. The LHWP contributed significantly to environmental degradation in the form of the destruction of riverine ecosystems, changes in flow patterns, species extinction, and the loss of water by evaporation and contamination (Mwangi 2008). Admittedly, environmental degradation cannot completely be eliminated when building large dams. It is however important that the processes of dam building, from feasibility studies to execution and management of the project, be transparent and that the negative environmental impact these projects be communicated and managed.

In summary, sustainable water resource management is important for the conservation of both water and the environment. Pollution monitoring and control, investment in water drainage and storage infrastructure, and the transparent management of the environmental related issues are critical for environmental and water security in Lesotho. The degradation of the environment adversely affects water and human security in Lesotho because it destroys livelihoods and reduces the ability of people and communities, in the rural areas in particular, to produce food and sustain themselves.

5.2.6 Water security as a component of Lesotho's security

There is a direct relationship between the internal dimensions of water security and human security in Lesotho. As indicated in the aforesaid, water and the availability of water in appropriate quantity and quality are essential for the sustenance of human existence, at an individual and collective level. Since water is critical for and interlinked with most aspects that constitute human security, e.g. it is essential for food production, community health, personal health and hygiene, economic activities, environmental security, and community stability, mitigation strategies are essential to reduce factors that contribute to water insecurity and to deal with threats to human security. In 2011 the UNDP reported that Lesotho was making progress in the attainment of the Millennium Development Goals (MDG) by reducing the proportion of people without access to safe drinking water by 50 per cent in 2015 (UNDP 2011). However, hydrological variability (recurring droughts and heavy rains) and extremes constrain these efforts (Tandon 2007:5).

Hence, as a component of human security and in Lesotho in particular, water security depends on safety from chronic threats to everyday water supply, and to protection against climate related disruptions such as floods and droughts. The availability and access to water, or lack thereof, can drastically improve or degrade human security. Water security is especially important to human security in Lesotho, based on its multi-sectoral impact and multiplying effect as indicated above. Water-related gains or losses in one sector of human security have a spill over effect on other sectors.

5.3 The water security-national security nexus

There is an indirect relationship between the internal dimensions of water security and national security in Lesotho. The reason for this indirect relationship is that although a direct threat to human security, water insecurity or the lack of total water security in Lesotho does not pose a direct national security threat as such. It is only independently in human security terms that Lesotho's human security is equated with its national security, or that it is seen as a component of its national security, or that internal dimensions of Lesotho's water security are linked to the country's national security. Human security is the intervening variable that 'translates' water security threats into threats to national security. To put this differently, water-related threats to economic, societal and environmental sectors as a result of inadequate water supply can have a detrimental impact on national security. Water insecurity affects the

traditional and non-traditional elements of national security. As indicated, the effects of water insecurity mainly manifest in human insecurity. The response of individuals, communities and states to the human insecurity then determines the effects of the water insecurity on national security.

5.3.1 The water security-human security nexus as a component of national security

The water security-human security nexus forms part of national security. When water as a human security issue is ignored or sacrificed, the social and economic consequences can destabilise societies and threaten political stability. On the one hand, the inequitable distribution or access to water, poor water quality, the vulnerability of communities to water related threats, and ineffective disaster management have the potential to precipitate or generate conflict. The conflict may not be violent initially, but the failure to address these concerns has the potential of escalating to violent conflict if the demonstrations and other civil action are sustained over longer period of time. Water in itself is unlikely to result in conflict, but when combined with poverty, social inequality, environmental degradation and ineffective water management institutions, water problems can result in social disruptions and even delivery-related state failure (Walton 2012). On the other hand, the positive benefits of water security such as economic growth, infrastructural development, employment, improved health and food security enhance the national security. Water security is interlinked with human security; as such it is a component of national security. Water security is not about water in itself but about the impact that it has on human security and national security.

To illustrate the above: as previously indicated (see Chapter 3) policymakers in Lesotho have not placed water security on the security agenda. Water in Lesotho is recognised in the NSDP as necessary for poverty reduction and economic development. Measures to ensure water security for human health, economic productivity, food production, and environmental conservation have not been taken out of ‘normal politics’. In Lesotho water is recognised as a social and economic good, but no extraordinary measures have been adopted to ensure water security for human security

5.3.2 Intrastate water conflict

Water-related conflict in Lesotho only manifests on a small scale. The issue around which the protests are organised do not attract the attention of all Basotho across the country. The dam-

affected, rural populations of Lesotho and the urban populations experience water insecurity and resultant human insecurity in different ways. On the one hand, the rural communities are mostly affected by the impact that water threats have on their ability to produce food and sustain themselves through agricultural activities. On the other hand, the urban population is affected by water pollution, wastewater management and the ability to access water for economic and commercial purposes. International civil society's involvement in water issues in Lesotho focuses mainly on advocacy and creating awareness on effects of water issues (especially the LHWP) on human rights.

In summary water insecurity in Lesotho, although experienced in different communities and in different forms has not resulted in civil action and political instability on a large scale. Water-related concerns of communities in Lesotho are diverse. The rural and urban communities have not established common issues around which they organise themselves. Water-related protests and demonstrations in Lesotho lack the critical mass in terms of numbers and therefore do not draw the desired attention from communities in Lesotho and the international community. In addition, water-related conflict in Lesotho is neither violent nor protracted, does not pose a direct threat to state and/or political regime security and therefore does not warrant extraordinary security measures such as the use of force by the government.

5.3.3 Water infrastructure as protected areas

An area where water security indeed has a more direct impact on the national security is that of water-related infrastructure that constitute national key points. Water infrastructure is essential to ensure water supply for individual household needs, agricultural needs and industry needs. Water infrastructure systems include surface and ground water sources of untreated water for municipal industrial, agricultural and household needs; dams, reservoirs, aqueducts and pipes that contain and transport raw water; treatment facilities that remove contaminants from raw water; completed water reservoirs; systems that distribute and/or transfer water to users; and wastewater collection and treatment facilities (Copeland and Cody 2005:2). The security of water infrastructure is essential to ensure that water sources and water distribution systems are protected from accidental or intentional contamination events, theft, vandalism and sabotage; and that reliable alternative or corrective systems are in place should such an event occur (Sandia National Laboratories 2013). Damage to or the destruction

of water supply and water quality infrastructure would obviously not only disrupt the delivery of vital human services in Lesotho, but would also compromise its national interests.

The Ministry of Energy, Meteorology and Water Affairs, which is the umbrella institution under which water sector institutions operate in Lesotho, neither has a water sector infrastructure protection plan, nor guidelines on the security of water sector infrastructure (Nthathakane 2013). There is no coordinated approach to water infrastructure protection and separate institutions, namely the DRWS, WASCO, the LHDA and the Metolong Authority, are responsible for the security of water sector infrastructure under their operations. This makes water infrastructure extremely vulnerable and insecure, with obvious detrimental implications for Lesotho's national security.

The security of the LHWP, due to its regional and national strategic significance in economic and political terms, is a different matter. It includes co-responsibility on the part of South Africa as previously indicated (see Chapter 4), although in Lesotho itself the security role of the LHDA is reinforced by the presence and protective role of the LDF at the two LHWP dams, the Katse Dam and Mohale Dam (Sekoboto 2013). This implicit securitisation is because as 'protected places', the immediate security of these dams is the responsibility of the LDF. The LHDA, however, also relies on the LMPS to maintain public order at the dam sites and their immediate vicinity (Sekoboto 2013). Water infrastructure for internal water supply, such as the Metolong Dam, is however not protected by the LDF and the safety and security thereof depend on and is the responsibility of the LMPS in terms of their general mandate to maintain law and order.

The international nature and strategic value of the LHWP dams and related infrastructure allow them to be exploited by opposition political parties or activist groups to attract attention, transmit political messages and/or exert political pressure, by staging protests at dam sites. This potential threat, whether violent or not, and depending on whether it is linked to broader political instability (such as the events of 1998 described in Section 4.3.2), may elicit a response not only from the Lesotho government but also from South Africa and/or SADC. Such action in response to (perceived or actual) threats to LHWP infrastructure may either improve the security situation in Lesotho or cause increased insecurity.

In summary, as far water-related infrastructure is concerned, Lesotho lacks a framework that integrates and coordinates efforts designed to ensure and enhance the safety and security of water infrastructure. The lack of guidelines for standard water infrastructure protection plans for the different water management institutions is a negative aspect that affects water security in Lesotho.

5.3.4 Water security as a component of national security

Apart from being an important component human security as such (see Section 5.2.6) internal water resources management and water security in Lesotho are dealt with as ‘normal’ political issues and are not securitised by the Lesotho government. However, this centrality of water to human security has broader national security implications. Lesotho recognises the importance of protecting the LHWP water infrastructure and maintaining amicable relations with South Africa in the interest of national security, although not directly in order to protect and ensure water supply for Basotho. Arguably, this approach is not sustainable, based on the assumption that conventional or physical threats to security may develop that may impact negatively on the national security of Lesotho, and/or that the neglect of water security in human security terms may create conditions of insecurity that have a detrimental effect on the national interests and therefore the national security of the country.

5.4 Conclusion

The aim of this chapter was to analyse the intra-state dimension of water security in Lesotho. Water as a natural resource and the security thereof affects both human security and national security in Lesotho. The intra-state effects of water security in Lesotho were considered in terms of both the non-traditional human security and traditional national security approaches.

Water security in the sense of an availability of appropriate quantity and quality of water for utilisation by individuals and communities for self-sustenance and productive activities, and in the sense of the protection of the individuals and communities from water related risks, is an important component of human security. Water security as a component of human security has an impact on food security, health security, economic security and environmental security. Furthermore, water security and human security are interrelated and the improvement or deterioration of one has a direct effect on the other. The human security outcomes of water security are also closely linked to development and poverty reduction in

Lesotho. Water security and its resultant effects on human security thus have a stabilising or destabilising effect on societal and political security, depending on whether or not actual insecurity exists. The societal and political effects of water (in)security affect national security if they generate or precipitate conflict.

Water insecurity in Lesotho is mainly due to weather extremes (drought and heavy rain) and the ineffective water management institutions that are unable to harness the productive potential of water and to reduce the destructive capacity of water. Water insecurity in Lesotho exacerbates the already dire human development and human security challenges and impacts on national security to the extent that it limits and reduces the ability of individuals and communities in Lesotho to produce and access food; to respond to health challenges; to enhance economic productivity; and to maintain an environment conducive for the above. Furthermore, Lesotho also requires extensive investment in water infrastructure to reduce the destructive force of water (flood and drought management) and to increase the productive capacity of water (water storage and irrigation).

The physical security of the LHWP, although a traditional security issue, requires a multi-sectoral integrated water infrastructure protection plan. The current approach of water infrastructure protection is fragmented and uncoordinated. The lack of guidelines and policy framework or water infrastructure protection can result in insecurity.

In conclusion, Lesotho's water insecurity negatively affects human security; it compounds food and health insecurity; and it has a detrimental effect on the economy. The resultant insecurities are not recognised or dealt with as national security issues in Lesotho, not being securitised. However, the neglect of water security has the potential to perpetuate human development and human insecurity in Lesotho, thereby negatively affecting national security. Hence water security needs to be recognised as a component that either indirectly in human security terms or directly in terms of the security of water-related infrastructure, is linked to and affects the national security of Lesotho. However, this does not constitute or imply the securitisation of water as such in terms of the tenets of Securitisation Theory.

Chapter Six

EVALUATION AND RECOMMENDATIONS

6.1 Concluding summary

The aim of this study was to identify and assess the effects of water (in)security on human security and national security with specific reference to the Kingdom of Lesotho. As an assumption, it was argued that due to the centrality of water to human life, and its impact on human security and national security, the Government of Lesotho is responsible for ensuring the attainment of water security in Lesotho. Based on the assumption that its government is responsible for providing water for human security, Lesotho requires efficient water resource management institutions that are able to develop and implement water management plans to address the needs of competing users while protecting the ecosystem.

The study explored water security as a human security and national security issue. In this study water security was defined as access to sufficient quantity and quality of water to meet basic needs and other requirements for healthy and productive living, and the protection from water-related disasters and diseases, while ensuring the protection of vital ecosystems. National security was defined as the action or organization, or both, designed to preserve or to create conditions considered to be the most conducive to optimization of national interest, by taking into consideration threats in the political, military, economic, societal as well as environmental sectors. In respect of the case study of Lesotho, human security was seen as an important component of national security. Human security was defined as safety of individuals from chronic threats and protection from sudden hurtful disruptions in the daily patterns of life.

The study identified three characteristics of water security. Firstly, water security is a multi-sectoral issue; it cuts across issues of food production, energy production, economic production, health, environmental conservation, community security and political stability. Secondly, water security is about the security of individuals and communities. Thirdly, water security is affected by the dynamics of regional interconnectedness and functional cooperation. At the outset, it was assumed that the securitisation of water, if done within and limited to framework of human security and international cooperation, could transform the water sector and reduce water insecurity.

Institutions of water resource management are responsible for executing water-related policies, strategies and legislation, in order to attain and maintain water security. The institutions of water management in Lesotho are concerned both with the management of water issues within the borders of the country, and with bilateral water issues between Lesotho and South Africa in the context of the LHWP. In the case of Lesotho, as is the case in all countries, water is an economic, social and political resource. However, due to its geophysical and geopolitical characteristics, water is of central concern and of more significance in Lesotho than in most other countries.

6.2 Key findings

As an assumption this study argued that water is central to human life and human development. The effects of water on human security affect the sectors of security, namely the political, military, economic, societal as well as environmental sectors. The Lesotho government is responsible for creating the policy, strategic, legislative and institutional framework for the management of water resources. Within this context, water and water security as human and national security issues were firstly contextualised in policy and institutional terms, and thereafter discussed on two levels, i.e. the inter-state level and the intra-state level.

Firstly, as a point of departure, it was pointed out that water resources in Lesotho are managed as a social and economic good. Cooperation over water resources is important to Lesotho especially in the context of the LHWP. Although Lesotho is water rich, climate change and adverse climate conditions negatively affect water resources in Lesotho. Water resource management forms part of Lesotho's climate change mitigation strategies. Although Lesotho is confronted with water-related challenges, water resource management and water resources are not securitised by the Lesotho government. Policy, legislative and institutional frameworks which reflects the official perception of water resource management in Lesotho, address water issues through normal political procedures and are not part of the security agenda of Lesotho.

Although water remains an issue within 'normal politics', water related issues especially connected to the LHWP have a potential to be securitised. With regards to the LHWP, human rights and socio-economic security issues related to dam-affected communities are the focus

of the activism of local and international civil society organisations. The methods pursued by communities in Lesotho with the assistance of these organisations mainly involve peaceful engagement with water resource management institutions and the Government. However, if water resources, are not managed properly for the common good, conflict may arise.

Secondly, at the inter-state level, the LHWP is the largest inter-state water project Lesotho (and South Africa) is engaged in. The LHWP, although primarily related to water issues, is not solely a water sector issue. The bilateral Lesotho-South Africa water relations over the LHWP take place within the larger context of bilateral foreign relations between the two countries. The landlocked geopolitical position of Lesotho and its small state status relative to South Africa affect this relationship and therefore its security, economy, trade, transport, societal dynamics, political decision-making and societal developments. Therefore, the construction and inception of the LHWP was shaped by the political, economic and environmental conditions under which it was negotiated and due to the evolving nature of these conditions, they continue to shape renegotiations and issues related to the LHWP. The 1986 Treaty and the LHWP institutions which facilitate cooperative relations between Lesotho and South Africa, make provision for the individual and joint management of the components of the Project. The flexibility of the Treaty ensures responsiveness to water needs and changes in circumstance of the parties to the agreement.

Political power relations obviously play an important role in trans-boundary water resource management. In the case of LHWP, the upstream position of Lesotho as a source of bargaining power is countered by South Africa's structural power; its larger territory, bigger economy and greater military might. Even prior to its inception, the asymmetric power relations between Lesotho and South Africa have been the dominant feature of their bilateral relations. As a result, South Africa's use of this structural power is influenced by political and economic considerations and has evolved over time. In this respect South Africa, during the pre-democratic dispensation of the apartheid regime, used this structural power in a coercive-strategic manner. However, since 1994, this has change to the use of structural power for incentivising and collaboration. This interconnectedness and interdependence of Lesotho-South Africa relations encourage and sustain cooperation over water resources, specifically over the LHWP. Nevertheless, on the deficit side, the construction of large scale water infrastructure as part of the LHWP did result in the degradation of the environment and the loss of livelihoods of affected communities. The management and redressing of the effects of

the large scale infrastructure on individual lives, communities and the nation as a whole are nevertheless important socio-political concerns that also require efficient and accountable institutions. This impact is, however, more of an intra-state nature and is addressed below.

The management of water infrastructure intended for water transfer within the framework of the bilateral arrangement present challenges for the inter-state relations and national security of both parties. Although the Treaty delegates the responsibility of protecting infrastructure in Lesotho to its government, it also makes provision for exceptional circumstance which allow South Africa to take measures to protect the infrastructure of the LHWP. This provision, if not properly managed, can violate the sovereignty and territorial integrity of Lesotho, as was the case in the 1980s and 1990s. In summary, it is evident that the LHWP has a direct impact on Lesotho's national interests and national security. Although protective responsibilities reside with the LDF and the LMPS, who have to ensure security, safety and law and order as far as the physical infrastructure is concerned, and although there has been the one incident of military intervention that by implication also had a bearing on LHWP infrastructure, the LHDW still remains a form of sectoral functional cooperation in the area of water and is not securitised at a high level that involve extraordinary measures on a continuous basis.

Thirdly, at intra-state level, although Lesotho has abundant water resources, water insecurity is experienced mainly due to weather extremes that include both droughts and heavy rains. Lesotho lacks the critical infrastructure required for flood management, water storage and irrigation. The water resource management responsibilities, although undertaken under the auspices of the Ministry of Energy, Meteorology and Water Affairs, are spread across many institutions. The current arrangement places a strain on the already limited resources – both financial and human.

Lesotho is predominantly rural and rural water supply is critical. The institution responsible for rural water supply, the DRWS, shares the water resource management responsibilities with local rural communities. Responsibility for the operation and maintenance of water service systems and infrastructure in rural areas are handed over to the community after completion of construction projects. This presents a challenge due to the high level of poverty in Lesotho coupled to the expectation that (impoverished) communities have to contribute to the maintenance of water service systems themselves; the lack of training for and skills amongst Village Water and Health Committees who have to render services such as the

maintenance of systems and financial management; the fact that these committees do not have a legal status and it is not always sufficiently clear who they are accountable to (to communities or to the DRWS); and the fact that they are also not able to take action against defaulters who refuse to pay their water levies and contributions to the maintenance of systems. Furthermore, unlike the urban areas, rural water supply is not regulated. The urban-rural differentiation and even discrimination in applying standards for the provision of water as a service undermine the pursuit of human development and human security in rural areas. In addition, in the urban areas, the textile industry in particular, which is a major contributor to the economy of Lesotho, is water intensive and uses chemicals that can pollute and damage the environment. The textile industry requires the management of pollution and the enforcement of laws related to pollution control and penalties, which currently are not effective.

Lesotho does not have consistent standards for the protection of water infrastructure. Institutions of water management are responsible for physical security of the infrastructure within their ambit. The LHWP dam sites are reinforced by the presence of LDF while water infrastructure for internal water supply is not protected in the same manner. Lesotho lacks a framework that integrates the efforts designed to enhance safety of water infrastructure. The lack of guidelines for standard water infrastructure protection plans for the different water management institutions has a potential to affect water security in Lesotho negatively. In summary, it is evident that water and water (in)security are issues that have a direct impact on human security in Lesotho, but only an indirect impact on the national security of the country and to the extent that the latter is apparent, through human security as an intervening variable. As such, at the intra-state level, water in Lesotho is securitised in human security terms but not in national security terms.

6.3 Recommendations

The effective and efficient management of water resources are essential for and can improve the lives of individuals, reduce poverty, and contribute positively to human development and human security. Lesotho has abundant natural resource and needs to harness the productive capacity of water and reduce its destructive capacity. Lesotho needs to give consideration to the centralisation of water resource management instead of spreading the functions across many institutions. This will allow for the currently overstretched human and financial

resources to be pooled and utilised more effectively. It would also address the urban-rural divide and asymmetry that currently exist to the detriment of the latter.

Furthermore, the Lesotho government needs to invest in infrastructure for the development and improvement of drainage systems in Lesotho, especially the rural areas; for the storage of surplus water during excessive rains, especially in rural areas (from where it can also be channelled to urban areas); and for irrigation and agricultural purposes.

Due to the societal security challenges and political discontent Lesotho experiences, particularly amongst dam-affected communities over the effects of LHWP, the Government needs to consider establishing a fund that will create long term benefits for dam-affected communities through livelihood restoration and community development. The fund could also form a direct link between the benefits of the communities and the LHWP. The fund must operate separate from policy of relocation and compensation.

Finally, Lesotho needs to formulate a framework that will provide guidelines for the protection of physical water infrastructure. This will require consultative processes between experts from various sectors, such as science, information technology, biological chemistry, geology and the military. They can contribute to the development of a strategic plan that is comprehensive and integrated and that will ensure the safety of water infrastructure and make provision for appropriate responses in case of a disaster or a more direct physical, military or cyber threat. This, however does not imply high levels of securitisation through securitisation moves, speech acts and extraordinary measures, but a plan that is part of ‘normal politics’ and that, under exceptional and contingency circumstances, makes provision for limited and temporary military or law enforcement securitisation.

6.4 Future Research

Two themes for future research are identified. The first theme is on benefit sharing with the dam-affected local communities. Given the long-term nature of the LHWP and the impact of the construction of dams on the affected communities, non-financial benefit sharing structures which can enable the channelling of returns directly back to communities in order to improve their livelihoods in the long-term and to contribute to social stability and national security needs to be investigated.

The second research theme concerns the development of a water infrastructure protection plan based on a multi-sectoral approach and trans-boundary considerations. The threats to water security are constantly evolving and the non-traditional aspects of infrastructure security, including trans-boundary and local infrastructure, need to be considered.

6.5 Conclusion

The aim of this study was to investigate water as a security issue in Lesotho. As such the focus was on the conceptual aspects related to water and water security; on the policy, legislative and institutional framework for water resource management in Lesotho; and on the inter-state and intra-state dimensions of water security in Lesotho. The underlying research question was: *What are the effects of water (in)security on human security and national security in Lesotho?* This question was linked to sub-questions on the nature and scope of water security, especially in Lesotho; the current status of water security in Lesotho; the impact of the LHWP on water-related inter-state relations between Lesotho and South Africa; and the intra-state impact of water (in)security on human and national security in Lesotho. The underlying assumption or thesis statement in response to the above was that because of the centrality of water to human life and human security and its impact on national security, the government is responsible for ensuring the realization of water security in Lesotho. Therefore, the main objective of the study was to determine the meaning of water security and the effects of water (in)security on national security of Lesotho. In this respect, the objectives of the study were to clarify the concepts water security and the securitisation of water, and to investigate the impact of water (in) security on the country's national security. The study considered the inter-state and intra-state impact of water (in)security by identifying factors that contribute to water (in)security in Lesotho and ways in which water (in)security affects the different sectors of security. The study assessed how water security issues of a local and regional nature (including the LHWP) interact with other source of conflict to exacerbate, prolong or complicate the existing disputes and national security problems in Lesotho.

Having done this, it is concluded firstly, that despite the challenges to and problems of water resource management, water resources are not securitised by the Lesotho government in terms of the official perceptions thereof as articulated and implemented in terms of policy, legislative and institutional frameworks. Within these frameworks, water resources are politicised and managed through normal political and technocratic procedures and are not part of the security agenda of Lesotho; secondly; although the LHWP has a direct impact on

Lesotho's national interests and national security, it still resides in the domain of sectoral functional cooperation in the area of water and is not securitised at a high level that involve extraordinary measures on a continuous basis; and thirdly, that water and water (in)security within Lesotho have a direct impact on human security, but only an indirect impact on the national security of the country. As such, at the intra-state level, water in Lesotho is securitised in human security terms but not in national security terms. Thus, in final conclusion it is evident that water has security implications in and for Lesotho – directly in human security terms and apart from the LHWP, only indirectly in national security terms – but that in terms of the tenets of Securitisation Theory, water is not securitised in Lesotho.

In conclusion, based on the findings on intra-state and inter-state effects of water management, it is clear that water security is important for human development, human security and national security. The government of Lesotho and its institutions of water management eventually remain responsible for managing the intra-state provision of water services, protection of people from water related disasters, and conservation of ecosystems, as well as managing relations between Lesotho and South Africa in order to maintain cooperative relations over LHWP.

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SUMMARY

WATER SECURITY WITH SPECIFIC REFERENCE TO THE KINGDOM OF LESOTHO

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This study explores water security as a human and national security issue with reference to the Kingdom of Lesotho. Water security is defined as access to sufficient quantity and quality of water to meet basic needs for healthy and productive living, including protection against water-related disasters and diseases, while sustaining vital ecosystems. Human security is defined as the safety of individuals from chronic threats to and their protection against unforeseen, hurtful disruptions of daily patterns of life. National security is defined as the action and/or organisation designed to create and/or preserve conditions conducive to the optimisation of national interests, taking into consideration threats in the political, military, economic, societal and environmental sectors.

Within this conceptual framework the main research question of the study is: *What are the effects of water (in)security on human security and national security, with specific reference to the Kingdom of Lesotho?* In response, the assumption is that since water is linked to and affects economic, health, societal, political and military security, it is central to human security but only in a qualified manner linked to the national security of Lesotho. Nonetheless, the Lesotho government is ultimately responsible for ensuring the water security of individuals, communities, districts and the nation-state.

Accordingly, Lesotho's water security was analysed at two levels, namely the inter-state level and the intra-state level. At the inter-state level it was found that the joint Lesotho-South Africa water project in the form of the Lesotho Highlands Water Project (LHWP) is shaped by (but also influences) the bilateral (power) relations between the states, the interdependence of their international relations and the agreements and institutions established to manage the project. At the intra-state level it was evident that Lesotho, although a water rich country, experiences water insecurity in the rural areas in particular, mainly due to periodic droughts and heavy rains but also on account of policy and infrastructure deficiencies.

It is concluded that at an intra-state-level water / water security has a direct bearing on and is critical for human security in Lesotho, but that in this respect it only has an indirect impact on national security. The reason being that as a human security issue, it is politicised but not securitised as a threat to state and regime. However, to the extent that Lesotho's water security also manifests at an inter-state level through the LHWP, it is directly linked to national interests and therefore impacts directly on national security. Although this national security significance is recognised it is, similar to the impact of water on human security, not securitised or militarised. As policy recommendations it is suggested that the Lesotho government consider investment in water infrastructure to strengthen resilience against weather extremes; to restructure the water sector to pool financial and human resources, to coordinate water resource management, to regulate rural water supply and to monitor water pollution; and to draft a national plan for infrastructure protection.

Key Terms: Lesotho, Lesotho Highlands Water Project, human security, national security, security, securitisation, South Africa, water resource management, water scarcity, water security,