CORPORATE WATER RISK IN SOUTH AFRICA

Implications for Growth and Development

Report to the
Water Research Commission

by

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The publication of this report emanates from a project entitled *The understanding of corporate risk, opportunities and response to water security in the context of growth and development in South Africa* (WRC Project No. K8/927).

EXECUTIVE SUMMARY

The objective of the project is to *scope and investigate aspects of shared risk between private and public sector in South Africa and to frame the synergies and opportunities for cooperative engagement or partnership in mitigating these risks in the context of water for growth and development.*

There is an increasing consensus in the international water scientific and development communities that water scarcity will increase dramatically in many parts of the world in the next 20 to 30 years, which will have significant social, political, and economic consequences. In South Africa, these factors increase the challenge of managing South Africa's limited water resources requiring consideration of the nature of water as a development catalyst or possible constraint on sustainable economic growth which is the premise of the Water for Growth and Development (WfGD) strategy and the foundation for other government initiatives such as the Green Economy strategy. This concept explores the way in which the water sector contributes to economic, social, and environmental imperatives often focusing on the relationship between government and the private sector.

As a result of this increasing global risk around water, the private sector has begun to actively engage with water risk and management through local interventions in operations and participation in the international debates in this space. Large global corporates have encountered significant and variable water related risk, which has prompted this engagement motivated by operational crises, supply chain failures, brand management, and broader corporate social responsibility. From these engagements the concept of shared risk has emerged arguing that there are a number of commonalities in government and private sector exposure to water-related risks.

Corporate engagement of water risk has specific characteristics in the South African context due to the nature of institutional framework and infrastructure base for water management as well as challenges associated with redressing historical inequalities. Large corporates, including SASOL, Anglo-American, SAB-Miller, ESKOM, Standard Bank, and Woolworths whose experiences are reflected herein, have each begun to engage water risk beyond their operations in different ways to varying degrees based on the extent of risk, the reputation of the company, the impact on operations, and the corporate resources available.

From these experiences a framework for engagement emerges which is instructive in understanding the ways in which corporates engage the public sector and stakeholders to mitigate their water related risk.

- *Operations and Supply Chain* management is the initial focal point as companies attempt to keep their own "house in order"
- *Local level* engagement focuses on interaction with local government or communities to ensure the security of adequate water supply
- *Basin level* engagement becomes necessary when local engagement is insufficient to address the increasing primary or secondary water scarcity focusing on

sustainable availability of supplies and control of waste discharge at a catchment scale

- *Country level* engagement occurs if the enabling framework constrains or inappropriately incentivises basin or local water management.

This increased engagement in the water sector presents many challenges and opportunities for government. Extensive engagement by corporates in the water sector may result in corporate capture, whereby planning and development processes are co-opted by a more resourced and capacitated private sector, and neglect for the needs of the poor, as the primary goal of the private sector is to ensure its operations are profitable and sustainable. Notwithstanding these challenges, there are the following opportunities for corporate engagement with government in a WfGD framework:

- Economic and social development focus of water planning in conjunction with the private sector
- Create stakeholder platforms to understand the potential synergies and challenges that engagement with the private sector presents
- Capitalize on shared risk opportunities through strategic partnerships with the private sector
- Develop a framework to manage corporate engagement within the water sector.

The publication of this report emanates from a consultancy project entitled: "the understanding of corporate risk, opportunities and response to water security in the context of growth and development in South Africa."

(WRC Project No. K8/927)

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1 INTRODUCTION

In the past two years, the concept of Water for Growth and Development (WfGD) has been explored as an important way of engaging the linkages, opportunities and constraints between the water sector and other economic, social and environmental imperatives in South Africa. An important dimension of the WfGD paradigm is the relationship between water management by government and water use, engagement and risk by the private sector as the engine of the economy.

An underlying dimension of WfGD is the recognition that as the demands on water systems increase and these hydrological systems become more stressed (together with the social and economic systems they support), the behaviour and responses of the system become more uncertain and unpredictable. They may also become less resilient to change, and more vulnerable to negative feedback as political, social and economic decisions contribute to unexpected consequences and negative feedback.

The following report explores the ways in which different corporations engage water risk. This engagement primarily stems from the amount of water used, the intensity of water usage for operations, and the access to policy makers that control water supply. Several companies important in the various sectors of the South African economy including Woolworths, TSB, Anglo-American, Sasol, Eskom, Standard Bank, were interviewed focusing on their approaches to water risk management. These rich descriptions have demonstrated many ways in which corporations engage this sector.

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2 THE GLOBAL CONTEXT FOR WATER RISK

2.1 GLOBAL DEVELOPMENTS

There is an increasing consensus among the international water scientific and development communities that water scarcity will increase dramatically in many parts of the world in the next 20 to 30 years. This will have significant social, political, and economic consequences. The increasing public and corporate awareness of climate change over the past decade has focused broad attention on water as a key resource under threat. A 2008 Goldman Sachs "Top 5 Risks" conference identified water as "the new petroleum" and a catastrophic global water shortage as a greater global risk than soaring food prices and exhaustion of energy reserves. The rapid increase in water-related articles in both popular and business media attests to this recognition (Morrison, 2009).

Agriculture

The world population is expected to peak at about nine billion by 2050. The additional food and water requirements are very dramatic given that most of the additional three billion people will be in water stressed areas. According to the OECD, 44% (2.8 billion) of the world population lives in areas of high water stress. If current trends continue, this figure could increase to 3.8 billion in 2030. Agriculture is the greatest user of water globally (70% of freshwater usage) making the activity highly vulnerable to water stress and scarcity. As a result of increased water stress as many as 55% of the world's population will be dependant on import food by 2030 if water usage practices continues unabated. At the same time, demand for agricultural products is expected to increase by 70% to 90% by 2050 putting further pressure on agriculture and water (WEF, 2009).

Energy

Increasing population and higher standards of living for many people in middle-income countries will result in a concomitant increase in the requirement for energy. This requirement will be further heightened by urbanization trends. Demands on freshwater will increase as a result of the interdependent nature of water and energy given that substantial amounts of water are needed to produce energy (hydropower, thermal and nuclear cooling, bio-fuels cultivation and solar production) and substantial energy is required to deliver water (pump, groundwater, treat wastewater, and water distribution systems). In many countries, electricity accounts for more than 60% of water processing and distribution operating costs. This is particularly the case in South Africa where there are extensive transfer schemes and water treatment facilities (Orr et al., 2009).)

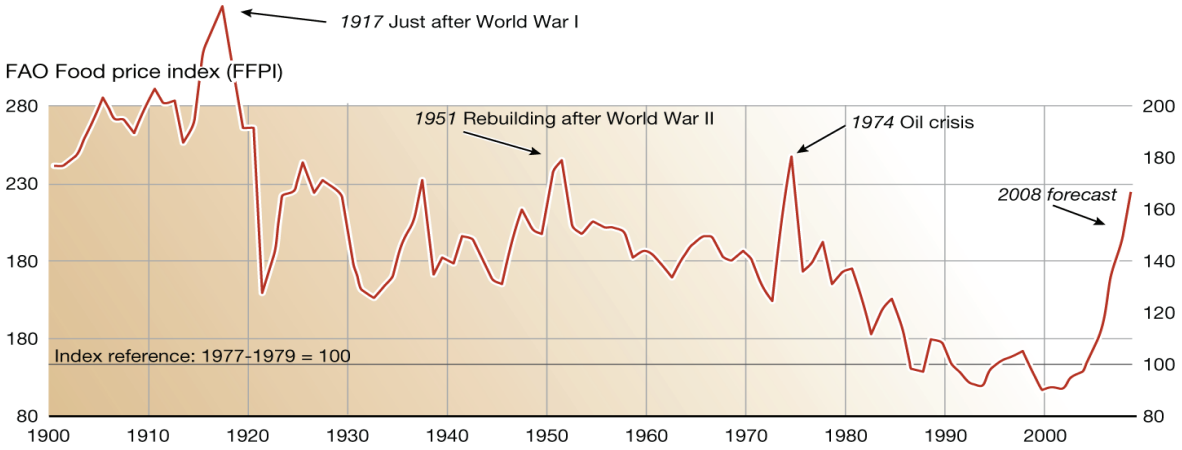
Environment

Increased water scarcity also has a profound effect on the environment. Over-abstraction globally has caused water-based ecosystems to become the world's most degraded natural resources. According to the 2005 Millennium Ecosystem Assessment seventy major rivers around the world are near maximum extraction levels to supply water for domestic and industrial use, irrigation systems, and energy production. These include the Colorado, Ganges, Jordan, Nile, Yellow, Orange, and Tigris-Euphrates rivers, in which large portions of the world's population reside and upon which much of the world's agricultural and manufacturing production depend. Over-abstracted systems

can cause significant environmental damage including salinity, nutrient pollution and loss of floodplains and wetlands, which provide important ecological services to the respective areas and the economy. This degradation is particularly devastating for the world's poor many of whom live in these areas and depend on the environment for sustainable livelihoods (WEF, 2009)

Trade

Engaging in global trade can assist in managing and alleviating water security issues, but the global trade system for agriculture is often perverse and outdated. As food products are easier to ship than the water necessary to grow them (1000 litres of water is required for 1 kg of wheat), countries decrease their water usage by importing cereals, meats, and other products with the "embedded" water captured in these products. Interestingly, international trade of agriculture has decreased in share of international trade from 46% in 1950 to 9% in 2001, due to increasing manufacture and decreasing real prices (Orr et al., 2009). This trend is likely to reverse as land and water become limiting and the demand continues to increase, with associated implications for food security and possible protectionism – consider the global response to the food price spikes in 2008.



Source: FAO Food Outlook (2008)

Sovereign and corporate land lease

Presently a number of water scarce countries in Asia and the Middle East are actively looking to secure agricultural land in water rich regions in particular Africa often causing social and political conflict as demonstrated in Madagascar in 2008. Great geo-political upheaval could foment if cash rich and water scarce countries continue to secure land in water rich and often cash poor countries through bi-lateral negotiations. South Africa faces this challenge as agricultural production inevitably will decrease as a result of further demands on water use from the domestic, industrial, and energy sectors.

Climate Change

The onset of climate change has further exacerbated water stress and scarcity. Predictions indicate greater variability in rainfall, melting of ice packs, and reduced water available in many of the current food and fibre producing regions of the world. These changes will alter the dynamic of domestic, industrial, and energy water usage creating increased competition amongst these sectors for dwindling resources. Continued over-abstraction coupled with climate change will degrade environmental resources at an accelerated pace further threatening eco-systems and vulnerable communities reliant upon them. A secondary consequence of climate stems from the

focus of the international policy community to create an increasingly carbon contained world. Many technologies available to address water scarcity are carbon-intensive such as desalinisation, water treatment and inter-basin transfer pumping (Stern, 2007).

2.2 GLOBAL INITIATIVES

The drivers of water scarcity outlined above coupled with startling examples of the impact of water stress have influenced the international discourse and initiatives around water management. These international processes have focused on increasing water efficiency, improving management of water resources, financing of water infrastructure, building government capacity, addressing inadequate, debilitated, or absent water supply and sanitation services, amongst other water programs.

The development community, governments and non-governmental organisations have been debating these issues for decades, while the private sector water and hydropower utilities have become heavily involved since the 1990s (Pegram, 2010) However, it is only really in the past five years that the water using manufacturing, retail and finance industries have engaged with global water debates, largely through corporate sponsored initiatives that exist in parallel to the global water development fora. A distinction is made here between these initiatives and traditional "adversarial" corporate lobbying and negotiation around regulatory policy and implementation.

This "new" engagement has been prompted by the large corporate recognition of increasing risks to their operations and supply chains in multiple locations globally, negative experience that individual companies have had around water, and the acknowledgement that the private sector alone does not have the mandate or ability to mitigate all risks or manage water. This last point follows the mixed and often negative experience of private sector water services management contracts and concessions over the past two decades (Pegram, 2009).

The global corporate initiatives may be grouped into three broad categories related to (i) measuring risk and exposure, (ii) disclosing risk and response, and (iii) engaging water management at local, basin and national levels.

i) Measurement and Risk Assessment

The first category focuses on using or developing metrics for the assessment of corporate water use, efficiency, impacts and/or risks. These initiatives aim to develop specific methods and standards that corporate entities might employ to assess and understand their water use and the associated risks. These water risk assessments generally enable a better understanding of water use on-site or in the supply chain the efficiency of water use, and its vulnerability to quantity or quality stress in associated water resources or service delivery systems. The first response to this improved understanding is often to improve water use efficiency and to decrease effluent discharge. The key initiatives within water efficiency metrics are as follows:

- Company water metrics – These metrics provide an indication of total water use (direct and indirect), the efficiency of this water use and or the impact or water use by a company or operation. These metrics can be overlain on the water resources and/or supply system to determine water related risk. Three general approaches are typically used, namely water footprint, life cycle assessment and risk assessment, each of which has particular relevance for different corporate sectors asking specific questions about risk.

- Basin metrics – These methodologies focuses on risk and water balance at the basin or country scale rather than focusing on an individual company. The purpose may be to address the water demand-availability gap, to understand the movement of embedded water, or to identify areas of risk to inform investment decision making, at a basin or country scale.

ii) Disclosure and Accreditation

Initiatives focused on water use disclosure aim to provide transparent information about water related risks and activities of a particular company, or indicate that the company is achieving agreed standards of corporate behaviour or stewardship. These initiatives are typically focused on market perceptions of investors or customers.

- Investor Disclosure – These initiatives aim to provide water related data to investors on a company's risk related to water from an operational and financial perspective, and thus the risk to investments. This draws from the carbon disclosure experience, and will likely be based on the above metrics.
- Accreditation and standards – These are based on compliance of companies or products with agreed standards (checklist) of good stewardship, possibly with some type of labeling for customer choice. The nature of these standards is currently being developed through global roundtable processes.

iii) Engagement

Beyond measurement and disclosure, a number of international processes have emerged which attempt to provide a platform for engagement between the corporates, governmental multi-lateral bodies and international non-governmental organisations around water risk. The focus of these is to provide a platform for dialogue on corporate experience with risk and acceptable ways to manage this risk in the public sphere.

- World Economic Forum (WEF) – The water initiative under this global platform began in 2006 to discuss the geopolitical and economic issues pertaining to water security and risk. WEF has forwarded this agenda by assisting in the creation of partnerships in India (companies and donors), Jordan (government and the Chamber of Commerce), and Southern Africa (NEPAD and public private partnerships) and is currently attempting to create a facility that will support corporate-government engagement around water issues at a national scale.
- CEO Water Mandate – Created under the auspices of the UN Global Compact in 2007, this initiative is a public-private partnership intended to promote and support the development, implementation and disclosure of water sustainability policies and practices by private companies. Companies that have endorsed the mandate must annually report on a number of water related guidelines.
- World Business Council on Sustainable Development (WBCSD) – over the last few years the water task team? provides a forum for companies to engage around water issues and has assisted in the development of tools to support corporate assessment of risk.

From this, it is apparent that the space has rapidly filled to respond to the need being articulated by corporates. However, this space is extremely dynamic at the current time and there is little clarity on what the eventual outcomes of these processes will be – which initiatives will prove valuable and gain traction and which will disappear.

3 UNDERSTANDING CORPORATE RISK AND SHARED RISK

The engagement of the private sector in the international debate around water risk and management is borne out of increasing awareness of water stress and its implications in operations and supply chains around the globe. From the outset it is important to recognize that the private sector has always engaged government around water, often in an attempt to restrict regulation. More recently this has been to promote that the regulatory regime implemented by government is "business-friendly" coherent, stable, predictable, equitably applied to all users and enables competition. Historically this engagement has set the private sector, a primary user of water, at odds with government, the custodian of natural resources, with one lobbying for less regulation and the other ensuring that regulations protect social and environmental interests respectively.

However, as freshwater resources come under greater use, development and strain as a result of increasing population growth, economic development and climate change, corporations have begun to more actively address real and future water scarcity at a local, national, and international level beginning to accept the need for sustainable, equitable and efficient regulation (WEF, 2009)

3.1 ELEMENTS OF CORPORATE RISK

Corporate risk related to water may be manifested in different ways for different companies. These manifestations help shape the totality of the risk that a company may face, although it is unlikely that they will all be of equal severity in a given situation:

(1) **Physical Risk** – Business may be impeded by a physical limitation of water in a given area due to over abstraction, pollution, collapse of critical portions of the eco-system, or climate change. This may be manifested as a primary water resources problem or secondary water supply (infrastructure) problem and is the underlying risk to all the other risks, particularly for water-intensive industries in their operations of upstream supply chains.

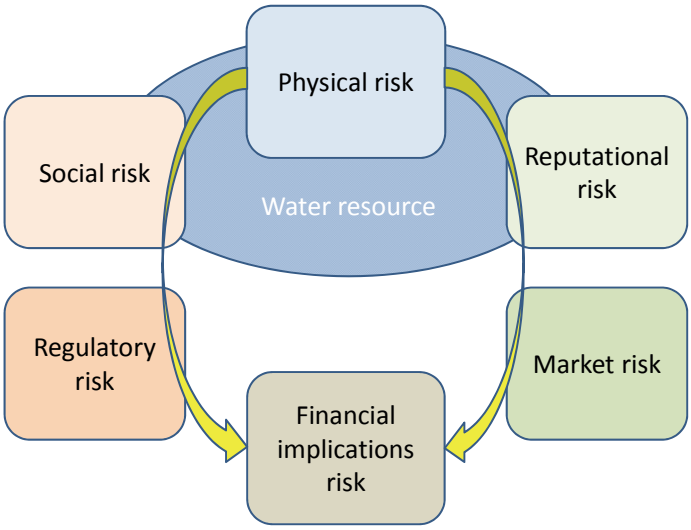
(2) **Reputation Risk** – Perceptions surrounding water usage, management, and general stewardship in an area can impact the ability of well-known industries and players to continue their operations. As publicity about community impacts or environmental degradation in a particular space grows, primary or secondary consumer demand may decrease, lawsuits may arise from the surrounding community or populist government intervention might occur all of which challenge the profitability and sustainability of existing operations.

(3) **Social Risk –** As physical security decreases, social pressure to end operations increases. The surrounding civil community might pressure local, regional or national government to take action against the corporation or in more extreme cases resort to violence or sabotage. This social risk might lower worker productivity and thereby increasing labor costs and increase security and lobbying costs.

(4) **Regulatory Risk –** Regulatory risk relates to the way in which the local, regional, or national government develops and implements policy, as well as responds to stressed water resources. Depending on its view, government may take a pro-business or populist view. No matter the direction, the private sector is forced to engage in water policy debates and influence final decisions in order to mitigate any negative impact from regulatory changes, which may also include changes to pricing regimes.

(5) **Market Risk –** This risk factor revolves around the emerging water-related disclosure requirements of investors and retailers as understanding of water risk

spreads. While small now, this risk will most likely increase as customers become more aware of the environmental impact of water usage through the establishment of accreditation processes, stewardship standards and disclosure metrics.



These risks manifest as increased financial risk for the companies operating in water stressed areas, which can challenge the viability of investment, operations, profit, and the future expansion (Pegram, 2010).

In consideration of the risks outlined above, the private sector faces multiple risk factors when their operations become impeded by water stress and scarcity. The ability, or license, to operate effectively can then be seen in two senses, legal and social.

- A legal license to operate is granted by the government to extract and discharge a certain amount of water under well-demarcated conditions. In a water stressed environment, this legal license may be curtailed or revoked altogether as a result of paucity of resources and allocation constraints.

- A social license to operate is granted implicitly by local communities, society and customers where company behaviour is within acceptable norms. The social and reputational risk determines the ease of operations and the prospects for business growth.

These two licenses to operate are the primary internal foci of the private sector. When facing externally?, customers and investors potentially hold the private sector accountable for its actions around water. Increasing investor scrutiny of water related risks to investment through disclosure and accreditation processes would drive private sector investment decisions and water management behavior. Corporate entities will either adopt water management practices that ensure the sustainability of their operations in a particular area or choose to locate in another, which is under less water stress. From a market perspective, customer facing accreditation processes will determine to a certain extent the viability of a brand or product based on the certification it receives. Receiving a relatively low score or negative media attention may direct consumers to other more "water-friendly" products further enforcing positive water behavior. While this is all in its infancy, the signs are that these initiatives will increase and formalise over the next five to ten years (Pegram and Eaglin, 2010).

The internal social and legal licenses, as well as the investor and customer acceptability, influence the actions of companies around water management, potentially to improve behaviour. However it is possible that these licenses to operate cause companies to establish and maintain businesses in water abundant and poorly governed areas to avoid these risks which can have negative socio-economic impacts.

An important consideration is that the current path-breaking companies have significant risk and exposure and that the current engagement processes are generally in good faith (albeit driven by an obvious self interest). The greatest risk comes if these initiatives are not well guided and are then adopted by less well-intentioned or scrutinised companies, with the resulting problematic consequences for governments, people and ecosystems.

3.2 Illustrations of Shared Risk in Practice

Following this realization, the multi-national corporate sector has already begun engaging in water management practices to address these concerns. Businesses have recognised these significant risks and the need to do more than improve operations or sourcing strategies. The illustrations below present international experience in this domain and highlight the convergence of shared risk and concerns that arise where there is inadequate alignment between government and corporates.

Coca-Cola and License to Operate

Coca-Cola is deeply exposed to water stress, as water is the primary input in their product and is embedded in their secondary input sugar. Its experience in the Plachimada district of the Kerala Province of India is an interesting example of how water stress can affect social and legal license to operate. This area of India is mostly dependant on groundwater resources for irrigated agriculture and domestic use. As the population of the area has grown groundwater boreholes have increased and deepened to serve the needs of the local population. In 1999, the local government granted the Hindustan Coca-Cola Bottling Ltd (HCBL) a license for water abstraction between 0.3 and 0.6 million litres per day for its operations. Over the next four years, rainfall in the area decreased considerably placing further stress on the already over-allocated groundwater resources. In 2002, the local community, supported by domestic and international NGOs, began to protest against the HCBL plant, blaming it for the deterioration of groundwater resources in the area. This sustained action forced the government to re-evaluate the Coca-Cola license and its impact on the area, which eventually lead to its legal license being revoked, with the resulting loss in jobs and economic contribution of the company to the region. Recently a government appointed panel has required Coca-Cola to pay damages to the community for non-compliance with water and environmental legislation.

This event prompted Coca-Cola to re-focus its corporate goals to contemplate water quality, efficiency, management, and community impact, which have lead to a number of operational initiatives aimed to achieve water security and mitigate social related risk as in the case of Kerala. Beyond its operations, Coca-Cola has partnered with a number of international NGOs and organizations to create water stewardship and management programs including organizations such as WWF, USAID, and UNDP.

An example of this sort of focus is a project in the Manchawala watershed in Honduras sponsored by WWF, USAID, and the Coca-Coal Foundation. Water quality and availability have been negatively impacted by overuse by industries in San Pedro Sula and poor forestry management and agricultural practices by communities in the upper areas of the watershed. The challenges have worsened over time as more industries

require water and the rural population has grown, resulting in additional sedimentation in the system. In 2008, WWF-Central America and Cervezeria Hondurenea, a subsidiary of SAB-Miller and bottler of Coca-Cola products, lead a two-stage approach to the problem. First, WWF and the bottler focused on implementing more efficient water usage practices in its operations. Second, WWF engaged with the local communities and encouraged better forest management by teaching better subsistence agricultural practices, which do not harm the forest cover. WWF, with funding from USAID and the Coca-Cola foundation, facilitated the payment of communities to plant and maintain trees with the assistance of grants. These practices have led to reduced sedimentation and increased availability of water in the pilot phases of the project.

Coca-Cola is not alone in its pursuit of management of total water risk. Corporate entities such as Dow Chemical, Pepsi, SAB-Miller and Nestlé have also adopted comprehensive approaches to water management, which involves local, national, and international engagement. Many consider these corporations as leaders in the international water management space, linked to their work with World Economic Forum Water Initiative and the UN Compact CEO Water Mandate.

Lake Naivasha and Shared Risk

Lake Naivasha in Kenya is an interesting example of how multiple water use pressures create shared water risk demonstrating the need for a collective water stewardship approach to the management of the area. The lake is the center of the horticulture industry in Kenya and represents about 10% of the country's foreign exchange. The lake is the second largest in Kenya and has traditionally been a valuable resource for irrigation, fishing, farming, livestock grazing, and geothermal. However as a result of over-abstraction, pollution, and declining biodiversity, the catchment area and lake have come under significant stress, posing various challenges to industry and livelihoods during drought periods. There are large irrigators who conduct commercial horticulture, smallholder farmers providing producing vegetables for the domestic market, pastoralists who live a nomadic existence in the region, a vibrant tourism industry, water service providers who supply potable water to local residents, and commercial users such as the state utility KENGEN which uses water for geothermal electricity. Given these different players with differing interests, only a collective approach can be taken to begin to address the water stress in the region.

As a result of this mix of interests, any individual action by a single stakeholder would be insufficient to secure sustainable water supply and quality for the industry, residents and ecosystem. The reputation to this industry lies in the export market to Europe and the perceptions of consumers that the cut flowers and vegetables are contributing to degradation of this iconic lake ecosystem. A possible response is for international flower growers to relocate to Ethiopia and Sudan, which would have huge impacts on the 300 000 people that have been drawn by the economic growth of flower industry in the catchment, as well as Kenya's foreign exchange earnings. There is a clear shared risk between government and this industry, which should prompt a coordinated and coherent response.

The horticulture industry around Lake Naivasha has taken the initiative to address water use and environmental management by helping to implement Kenya's national water policy, which promotes decentralised governance by user groups. The Lake Naivasha Grower's Group (LNGG), which includes companies such as Homegrown, funded the Water Allocation Plan to guide the establishment of multiple local Water Resource Users' Association (WRUAs). The LNGG has supported the WRUAs in the area, particularly those in the upper catchment, which has a significant impact on water

availability and quality, in adopting water conservation measures and environmentally friendly livelihood strategies. The LNGG and the umbrella WRUA for Lake Naivasha are currently seeking funding with the assistance of CARE and WWF to broaden the activities of the WRUAs to improve positive water management in the region (Pegram, 2010).

Almeria and Regulatory Failure

The Almeria catchment area in southern Spain is one of the most arid regions of the EU but also has some of the highest agricultural output, due to favorable growing conditions. Agricultural production is the backbone of the local economy making water allocation and quality a very sensitive political issue. Government has developed a number of transfer schemes and desalination facilities to support agricultural production there. Despite these efforts, groundwater resources have seriously deteriorated putting future activity at risk. This deterioration has been caused by several factors. The local government has failed to price water consumption appropriately with different regimes for desalinated water, transfer schemes, and groundwater of which the last is the least expensive. Growers have therefore continued to rely heavily on depleted groundwater using other types of water as "top ups". Moreover, the local government has issued further licenses for agricultural expansion as a result of the increase in total water supply.

As a result of this increasing water stress, the Food Ethics Council held several stakeholder meetings in response to this growing crisis, anchored by an engagement with Prima-Flor, a company producing leafy vegetables. The Food Ethics Council found that farmers in the region had little prior information about consumption approaches to water scarcity and water stewardship. The primary incentive for these farmers had to participate was to be 'ahead of the game' in shifts in quality standards demanded by supermarkets so as to be more competitive. These stakeholder forums have proven useful in discussing best practice in water management and to encourage the government to improve allocation processes. Stakeholders agreed on the need to include water indicators in the criteria retailers use to assess their suppliers including elements of water legality, aquifer status and total water availability, and the use of efficient irrigation systems. The stakeholder group agreed that these indicators should be designed with the equal participation of suppliers, other farmers, supermarket buyers, policymakers and competing water users, to explore how water risk can be minimized (Pegram and Eaglin, 2010).

3.3 Shared Risk between Government and the Private Sector

The illustrations of shared risk and corporate engagement in water demonstrate both the ways in which the private sector, often with the assistance of international NGOs and local communities groups, have begun to engage water management and the potential negative consequences of neglecting the implications of water stress. They demonstrate the potential convergence of corporate risk with government risk around water, both of which have important economic, social and ecological aspects. This convergence opens the possibility for common / mutual interest between the private and public sectors, which introduces the opportunity for joint action in engaging this *shared risk*.

The concept of shared risk has emerged in international debates arguing that there are a number of commonalities in government and private sector exposure to water-related risks. These commonalities include:

(1) For both parties, all water related risk stems from physical risk related to stress in water resources (quantity and quality) or failure of supply systems. Water scarcity poses challenges to government by hindering economic growth, public health, social welfare, and ecological sustainability and to the private sector for operations and supply chains. Neither has an interest in heightened uncertainty nor the potential instability that could ensue as a result of stressed resources as the Kerala case in India demonstrates.

(2) Inadequate availability or access to water for social and ecological purposes can result in political opposition to government as the Spanish case demonstrates which parallels reputation risk for the private sector

(3) Water stress and supply failures often are linked to inadequate public sector institutional capacity, which contributes to incoherent, unpredictable and inconsistent water policy formulation and implementation. Such incoherence and inconsistent implementation severely hinders the ability of government to achieve its socio-economic and political goals. Likewise the private sector faces large uncertainty as to the stability and sustainability of water supply as the Naivasha case illustrates. This concern is at the heart of regulatory risk.

(4) Inadequate public sector water management will most likely constrain growth by limiting the ability of the private sector and communities to contribute productively to the economy, which is the primary imperative of most governments.

The commonalities listed above are not meant to imply that public and private sector risks are the same, but there are areas of shared risk that provide opportunities for cooperation and even partnership in the effective and sustainable management of water resources at a local and catchment scale. This is particularly relevant when both government and business managers take a longer-term perspective of their respective imperatives. This is unfortunately disincentivises by the relatively short terms of office and need to demonstrate immediate results.

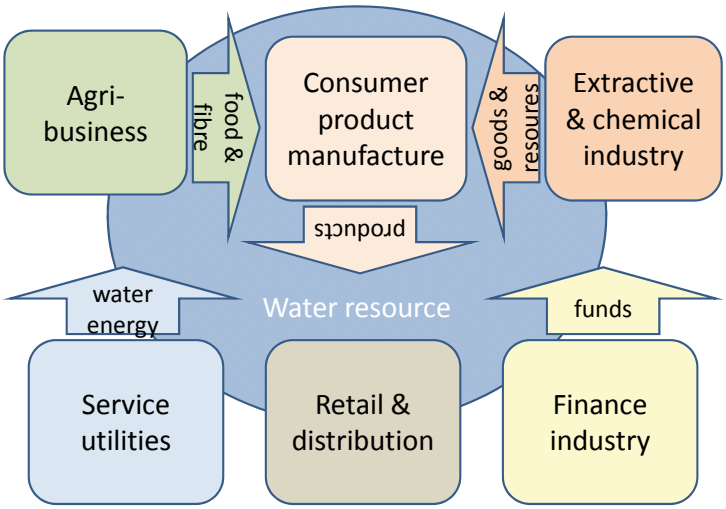
Importantly, the risks faced by business in the long-term have some resonance with the social, economic and political risks facing governments around water. There are opportunities for perceiving shared risk around operational issues (as during flooding events), strategic issues (as with effective basin management) and stewardship issues (where businesses view themselves as social players).

However, government and the private sector have rarely viewed risk as shared and seldom present a common front to water risk, primarily because of a fundamental mistrust on both sides. Government often mistrusts business motivations, assuming that business is servicing its own interests at the expense of society's interests. Business often mistrusts government's capacity to deliver effective risk management and doubts government's policy and strategy position on a particular risk, assuming that in the medium to long-run the rules of the game will change. While these perspectives are appropriate for risk that is divergent, they are not accurate for risk that is shared.

Accordingly, it is abundantly clear that identification and articulation of the concept of shared risk is the primary vehicle through which government and corporate engagement on water risks can be achieved, to the benefit of both mandates. What needs to be explored is the possibility for partnerships between government and business around water to meet the increasingly intractable problems being faced.

3.4 Corporate Motivation for Engagement

To map areas of synergy for government and the private sector, an understanding of the motivation for responses must be developed. The degree and severity of the risks above that underlie the need for action vary depending on the sector that a corporate entity occupies. There is a widely held view in civil society that all corporations are the same in seeking profit and responding similarly to risk. A more nuanced view of the private sector and the risks they face around water indicates that profit maximization at the cost of social goals can be limited and the response to water risk will vary based on these circumstances.



No two corporations respond in exactly the same way to increasing water risk as the international examples illustrate. Following the breakdown of employment, GDP, and water usage by sector the most important industries that use water in South Africa are as follows:

- *Agri-business* requires significant amounts of irrigation water to grow and process food and fibre products, and is constrained by land and water availability. Further irrigation expansion is limited in many basins, and in many areas is under threat from higher-value urban users, as is the case in the dynamic between Gauteng and Limpopo provinces. In addition, increasing climate variability may create unstable commodity markets, which will only benefit those companies with sound market engagement (hedging or speculation).
- *Consumer product manufacturing* also requires water for its operations and in many cases is dependent upon water-intensive agricultural products. While urban and industrial water supplies are typically a government priority, the political and institutional challenges of ensuring reliable water of adequate quality at the factory gate is likely to remain in many developing countries. For some companies, this may be compounded by the instability of agricultural input commodity prices driven by demand and climate variability.
- *Extractive and chemical industry* has some water requirements, but typically their waste discharge has the greatest impact on water quality, with consequences for downstream users and aquatic ecosystems. Although they may be nationally extremely important industries, their negative impacts on local water resources can have considerable political or economic consequences. The availability of raw materials typically dictates location of operations, which precludes relocation to manage water risk.

- *Finance industry* does not directly need much water, but does need to consider the risk to investments made in any other sector that is dependent upon water, particularly where this is linked to a particular river basin. On the other hand, commodity traders and even the insurance industry may thrive on water-related uncertainty, as producers attempt to avoid this risk.
- *Retail and distribution* similarly does not use much water, but by being at the end of the value chain, retail can be significantly exposed to customer perceptions. This exposure is particularly acute for those retailers with brands that customers trust to "do the right thing" and implies that water problems be experienced by their suppliers may transfer to them.
- *Public Service Utilities* (most notably electricity generation) require water for production processes. Often the water supply needed to produce the service is less than many industrial and agricultural users but the assurance of supply is high given the criticality of water for their operations. This sector is most exposed to regulatory risk around government prioritization processes.

As one can see, there are distinct corporate interests that affect water. Even within any one of these groups, concerns over competition, different recognition of interests-risks and inter-corporate distrust restrict the possibilities for cooperation. Experience indicates that there is greater likelihood of cooperation between a single company and local communities and interest groups, than with another company.

Despite these differences, it is likely that at some stage most companies will face some of the water-related risks outlined above at some place in their operations or associated with their supply chains. This occurrence is most likely for those in the primary economic sectors of agriculture or extractive industries, followed by the water-intensive secondary sectors of manufacturing, construction and infrastructure (utilities). The tertiary service sectors of finance and retail largely face risks in association with the water-dependent sectors.

The motivation for a company to engage water issues lies anywhere on the following continuum from operational to ethical, and depends on its exposure to water-related risk:

- **Operations** – response to an existing or perceived operational crisis around availability of water or water-dependent inputs in a specific area or basin.
- **Supply Chain** – pro-active perceived strategic risk to supply chains, due to an expected future change in water availability or requirements in an area or basin.
- **Comparative Marketing Advantage** – comparative advantage positioning of the company relative to competitors in response to client or market perceptions around the importance of water stewardship or risk mitigation.
- **Corporate Social Responsibility** – indirect positioning through corporate social responsibility initiatives following ethical / stewardship imperatives and an interest in being perceived by the public, clients and employees as sector leaders.

The business case for engaging water risk will clearly differ between companies. The international experiences are instructive here.

- Coca-Cola has responded to water risk in all areas above, given the centrality of water to its operations and supply chain, the importance of its brand management, and the global scale and scope of its business.
- The horticulture industry in Lake Naivasha is primarily interested in protecting their operations and creating a comparative marketing advantage.

- Agricultural producers in Almeria are focused on their operations and comparative marketing advantage.
- SAB-Miller is conducting water footprint and basin risk assessment across its global operations.
- Unilever is addressing the "downstream" water use of consumers that use their personal products.
- Pepsi has endorsed the UN human right to water and promotes this in countries in which it operates.
- Swiss-Re and DEG bank are evaluating the water risk of their insurance and investment clients on their business decision-making.
- Marks & Spencer have developed agricultural water efficiency and stewardship guides to promote improved behaviour of their suppliers (Pegram, 2010).

However, regardless of the specifics, the proposition stems from a recognition that the world is changing in its challenges, perceptions and management of water. Purely addressing efficiency, reuse and sourcing will not immunise a company from water risk. Proactive engagement in water governance and management at a local, basin or national scale is ultimately necessary to manage risk. Specific perspectives and experience in South African companies is outlined in the next section.

3.5 Government, Private Sector and Civil Society Interaction

The preceding discussion has intentionally taken the business risk perspective, which is largely related to companies as water users. While the focus has been on water use in production and its supply, similar challenges and risk relate to the discharge of waste water and its treatment. The recent regulatory focus on acid mine drainage, potential local community challenges around effluent discharge and the failure of municipal waste water treatment works all pose significant risks to the associated companies and to government's objectives of water that is fit-for-use.

This implies a shared risk paradigm is relevant here as well, but also highlights the importance of impacts that business water use has on local communities and the aquatic environment. The third dimension of shared risk is with civil society and the social and ecological risks that are dramatically experienced by these interests. This has lead to the engagement of water stewardship initiatives by business and civil society in various situations, a topic that is revisited later in this paper.

There is also a question about whether these concepts are applicable to other resources such as land, mining and air, but this issue has not been explored in this paper. However, it does highlight critical aspects of water risk. Water is fundamentally a social and political good, even though business generally views it as an input to production and economic good. Furthermore, hydrological variability and the social, political and institutional tensions that arise from scarcity create significant risk to business in a way that is not common to other resources.

However, before exploring these issues and responses further, it is necessary to outline the broader South African context within which this shared risk occurs.

4 THE SOUTH AFRICAN CONTEXT FOR WATER RISK

4.1 SOUTH AFRICAN ECONOMIC DEVELOPMENT CONTEXT

Like most countries, South Africa suffers the global water stress factors in a number of ways as it pursues energy expansion, food security and industrial growth.

In response to the inherently uncertain and variable rainfall and water availability, South Africa has built about 32 km^3 of storage capacity to provide a reliable yield for the 13 km^3 of water use. This water supply supports the over R2 trillion economy and population of about 45 million people, neither of which are typically located near major water resources (Figure 3.1). While the storage-population ratio is not high in comparison to many industrialised countries, without it the South African economy would not have been able to sustain the economic growth rates and pattern of the past 50 years.

However, consistent economic growth and development over the past half century has contributed to increasing water stress including deteriorating water quality, increasing management complexity, and over-abstracted resources. This increased water stress has been exacerbated by the difficulties in retaining management capacity and institutional knowledge in the water sector at local, catchment and national levels. The policy and legislative reform of the water sector in the 1990s and the implementation of water resources governance instruments over the past 20 years reflect this changing situation.

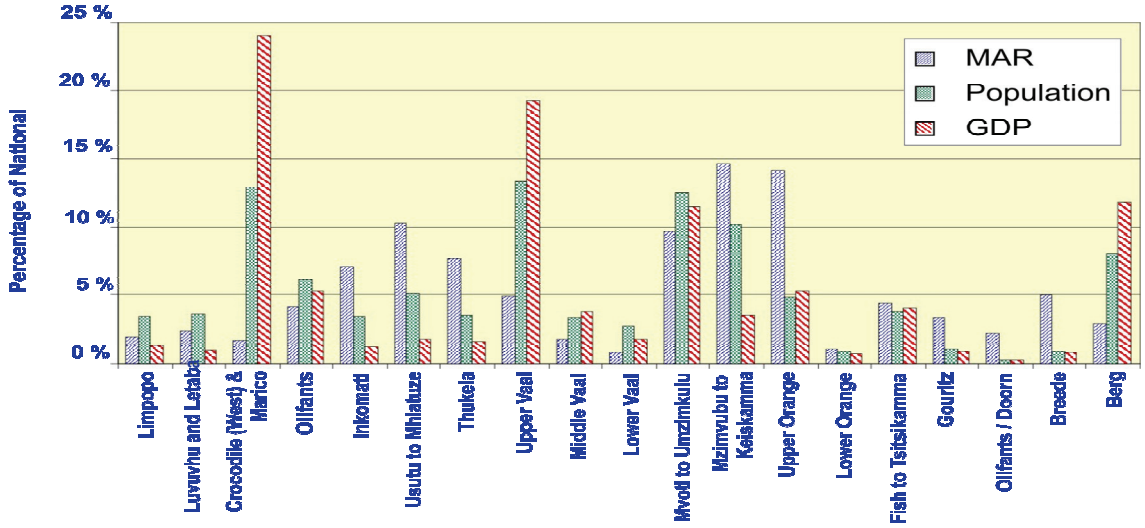


Figure 3.1: Mean Annual Rainfall (MAR), population and GDP per water management area (National Water Resources Strategy, 2005)

This increasing water stress has significant implications for continued growth and development in South Africa, while posing increasing risks to business, people and ecosystems. The nature of this risk has shifted over the past 50 years as the character of the South African economy has matured. It was dominated by primary agriculture and mining sectors in the 1950s, but shifted towards secondary infrastructure and manufacturing sectors until the 1980s (Figure 3.2). The past 20 years has seen a massive shift to the tertiary trade, finance and service sectors. From a water perspective, this reflects two important trends, namely:

- A shift from water dependant production to an economy that is more indirectly dependent upon water; and

- A shift from the rural productive to urban service economy, but with requirements for higher reliability and quality of supply (Sadoff and Grey, 2002).

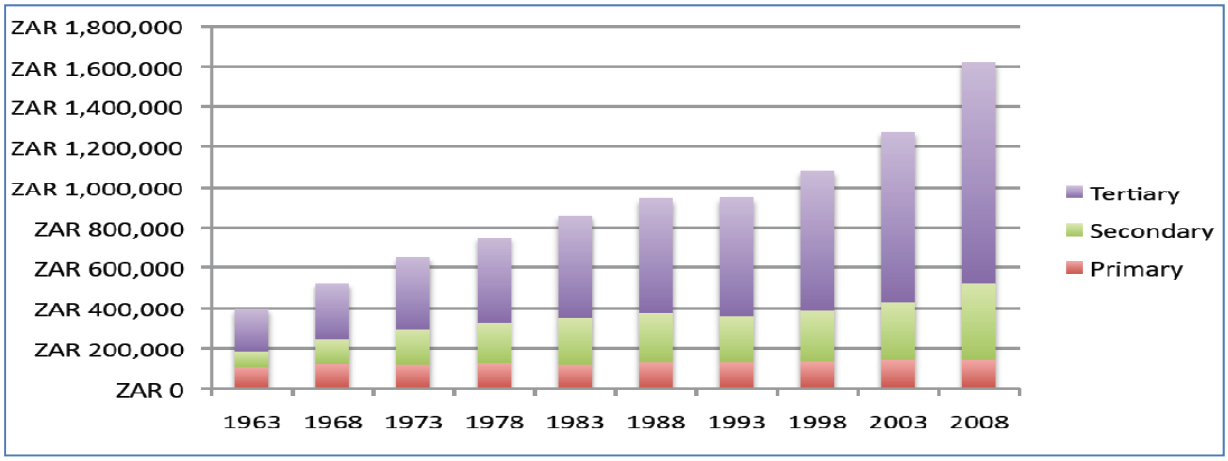


Figure 3.2: Growth in real GDP at 2005 prices (South African Reserve Bank)

The current South African economy is highly diversified with agriculture only making up 2% of the economy compared to financial and business services representing 20% of GDP (Figure 2.3). The agricultural, mining, utilities and manufacturing sectors that are directly dependent upon water for production contribute only a quarter of the economy. Similarly, these water-dependant sectors represent about a quarter to overall employment. . The development and structure of the South Africa economy here is similar to other middle income countries and charts the trajectory to "harnessing hydrology" that almost all developed nations have followed (Sadoff and Grey, 2002).

It should be noted that these estimates include both formal and informal contributions to employment However, they do not represent the underlying importance of these sectors as supply inputs to the entire economy and to national food security considerations, nor do they reflect the distinction between more rural water-dependent production requiring less-skilled labour and the urban services economy requiring higher skilled labour (Pegram, 2009).

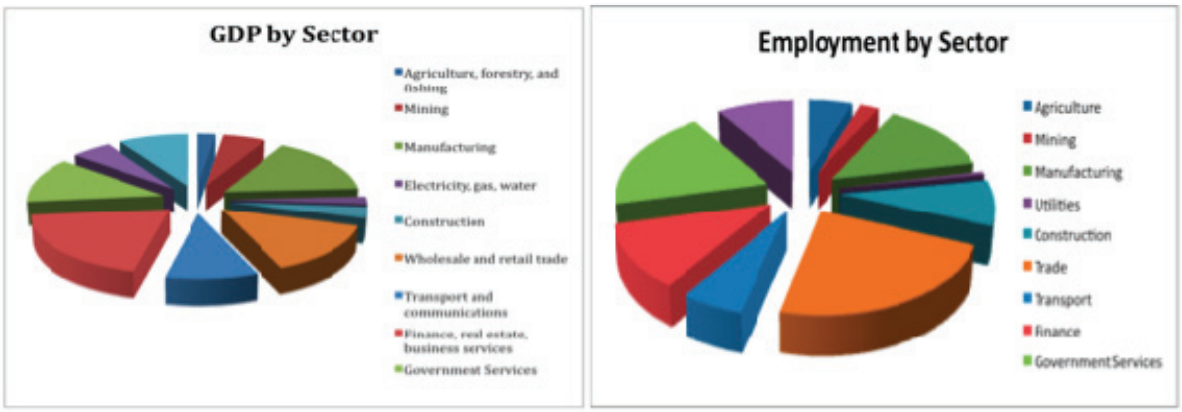


Figure 3.3: (a) GDP by sector (Reserve Bank) and (b) Employment by Sector (Reserve Bank)

As the argument above indicates, the South African economy has become relatively immunised from hydrology by the lower portion of the economy that is directly dependant on water, together with the extensive water resources infrastructure base. This is different to the more agriculturally dependent economies in other parts of Africa, such as Ethiopia where drought can cause a 10% drop in GDP. However, there are rural

parts of northern and southwestern South Africa for which hydrological variability play a significant economic role, as indicated in Figure 3.4.

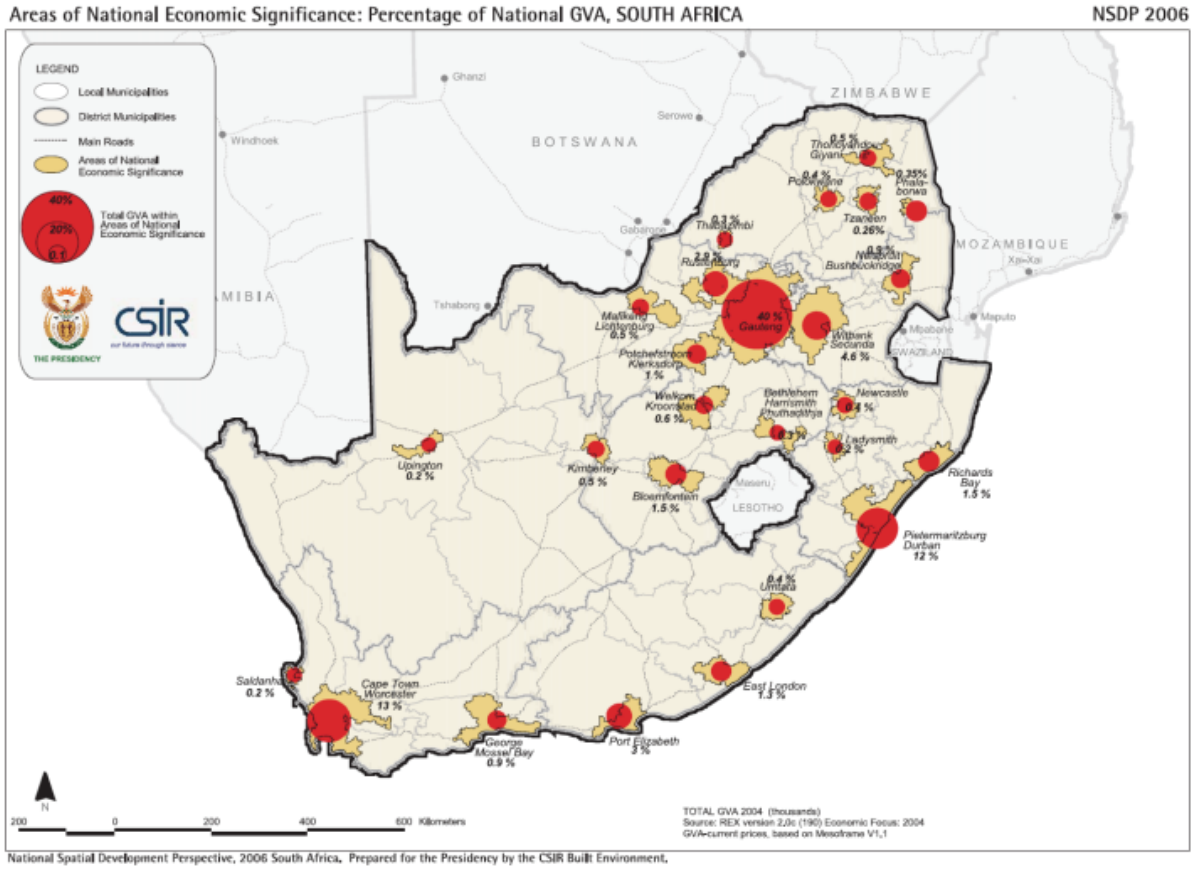


Figure 3.4: Distribution of GDP in South Africa (NSDF, 2007).

Despite being a relatively small economic sector, agriculture still uses more than half of the water in South Africa with urban domestic, commercial and industrial consumers using about one quarter (Figure 3.5). It is important to note that most industry obtains water and discharges waste through municipal systems. This introduces another risk area, namely the reliability of municipal supplies which will deliver the required quantity and quality of water even where adequate water supply is available.

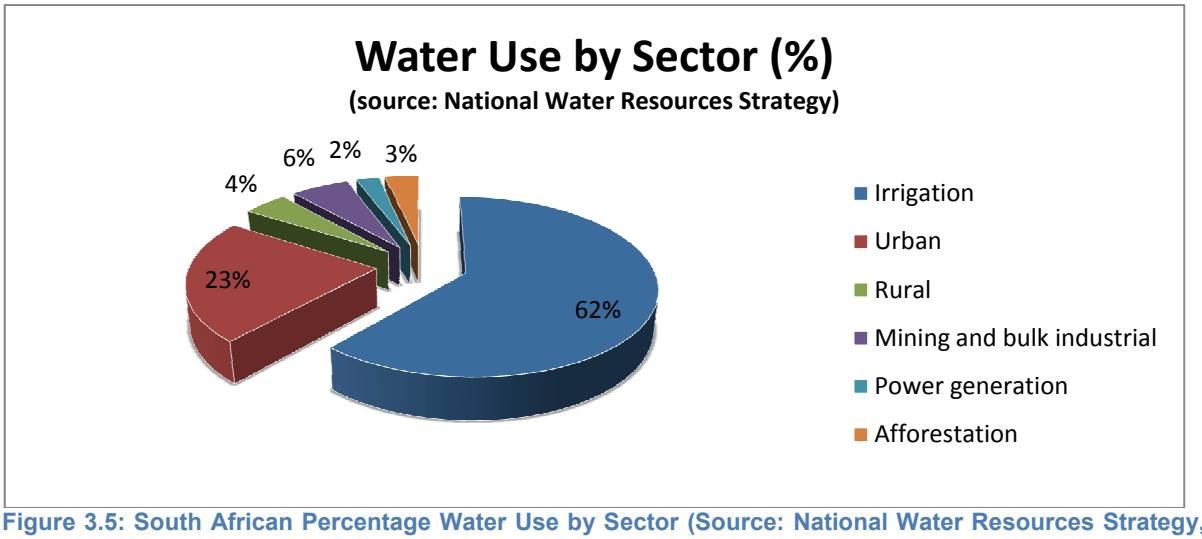


Figure 3.5: South African Percentage Water Use by Sector (Source: National Water Resources Strategy, 2009)

Since 1994, South Africa has been addressing the water services backlog and unequal access to productive water by the black majority. Limited financial, infrastructural, human and water resources have hampered these critical equity and redress imperatives. Without success in these areas, the stability and continued growth of the various sectors of the economy will be jeopardised. There is a clear political, social and economic risk to South African government and business associated with inadequate progress on water allocation and delivery for community water use, livelihoods and economic empowerment. There have been significant efforts on the part of government to address the water challenges facing South Africa including infrastructure asset management, extensive stakeholder engagement, water pricing, and water protection amongst many others.

Even though the economy may be relatively immunised from hydrological variability, it is constrained by the total availability, because even the service industry (and the people who are employed within it) are dependent upon reliable quantity, quality and timing of water. Given increasing social and economic development expectations and the onset of climate change, the challenge of managing South Africa's limited water resources will increase and economic planning will need to consider the nature of water as a development catalyst or possible constraint on development. This is the underlying premise of the Water for Growth and Development strategy.

As in many global settings South Africa faces a trade-off between the agricultural, industrial and energy sectors. The current energy expansion programme anticipates the construction of up to 20GW of new coal fired power plants which will require significant water resources at a high assurance level most of which are planned in water stressed areas of the Limpopo, Mpumalanga, and KwaZulu-Natal provinces. Concurrently, a number of platinum, coal, and other mineral extraction and processing developments are planned in areas that will further stress already over allocated water resources. The agricultural sector is increasingly in competition with these developments as it currently uses much of the water allocation in these areas, but this will have increasing pressure on food security and supply chains for certain manufacturers, with possible trade and balance of payments implications. The need to allocate water to emerging farmers further compounds these challenges and highlights the highly inter-related nature of water, energy, food and trade.

The private sector is increasingly aware of these challenges, in terms of the level of stress in the country's water resources and the water service delivery problems at a municipal level. Business must ensure security of operational water supply and supply chain inputs to maintain and grow their shareholders' economic value. In response, some South African companies have been engaging local, provincial, and national water governance structures or stakeholder platforms to address their water needs and the risks they face. While much of this has been in traditional terms, there are increasingly corporate initiatives that are built around an understanding of the wider risks that companies share with government and communities if water resources become too stressed or water service delivery fails.

While the private sector is often seen as an antagonist to government, the recognition of risk around water management provides the opportunity for government and the private sector to build synergies in this domain. As highlighted above, there is an emerging international debate around the ways in which private sector can mitigate its water risk, no longer viewed in isolation but increasingly seen as *shared water risk,* in cooperation with governments, civil society and communities. It is critical that the private sector actively reach out to other stakeholders to address these issues.

4.2 South African Water for Growth and Development Framework

The Department of Water Affairs has, over the past two years, been developing a Water for Growth and Development Framework, which was approved by Cabinet in early 2010 as the overarching approach for all water management in the country. This document now sets the scene for the revision of the National Water Resources Strategy during 2010, the development of catchment management strategies, and the development and implementation of any water programmes and strategies.

The framework has eight key focus areas:

- Strengthening institutional capacity of the Department to manage water resources effectively;
- Mainstreaming water into all planning decisions in the country, including sectoral planning. The Department also intends, as part of this, to strengthen its regulatory role, and to provide improved guidance and direction to the water sector;
- Diversifying the water mix through desalination and reuse in order to increase the amount of water available for productive purposes;
- Promoting Water Conservation and Water Demand Management as a critical and cost-effective method of ensuring sufficient water to meet growth and development objectives;
- Promoting and maintaining water quality through tighter enforcement and control, through the provision of financial support for the rehabilitation and construction of waste water treatment works at municipal level and through concerted action to address acid mine drainage;
- Water for Development: Addressing service backlogs: The Department intends to ensure full access to water and sanitation services for all by 2014;
- Water for Growth: Changing water use behaviour for the future: A mixture of instruments, including market mechanisms, regulatory instruments, self-regulation and awareness and education are being investigated with the intention of changing current, inappropriate water use behaviour. The irrigation sector, as the biggest water user in the country, is a particular focus here, with pricing, water allocation reform and water trading being seen as tools to improve good water use practices in the sector and to improve water use efficiency.
- Nurturing attitudinal and behavioural changes towards the value of water: The Department intends to launch a massive national awareness campaign to change attitudes to water in South Africa, particularly aimed at achieving improved water use efficiency.

The WfGD Framework will also provide the underpinnings for the review of the raw water pricing strategy currently underway. The Framework stresses DWA's support for full cost pricing and the polluter pays principle, and the need to use water pricing to drive more efficient water use.

Perhaps most importantly for the purposes of this document, the Framework recognises the importance of self-regulation as "a highly effective form of behaviour change". It refers, however, very specifically to ISO 14000 compliance in this regard, and does not sufficiently recognise the suite of water specific initiatives being undertaken by the private sector. Therefore, there is an opportunity to open the debate further with the department on the opportunities around self-regulation, co-regulation and voluntary agreements.

5 CORPORATE RESPONSE TO WATER RISK IN SOUTH AFRICA

In the South African context, corporate engagement of water risk has specific characteristics, due to the nature of water management in the country related to the policy imperatives, legislative requirements, state of infrastructure, institutional arrangements, resources and capacity. These responses are situated within the context of widespread water stress, which is likely to be exacerbated by the combined pressures of climate change, development, urbanisation and improving standards of living. At the same time, there are additional challenges associated with the need for redress and the implications of water allocation reform, land reform and broad based black economic empowerment all of which have implicit or explicit water usage implications.

All of these elements are being woven into the water for growth and development strategy, which correctly has a strong government focus. However, business is the engine of growth and development in South Africa. As such there is a need and opportunity to explore the ways in which business should engage these processes. Following this view, the analysis below looks at the corporate engagement of the water sector in South Africa, rather than water resources or water services, because from a corporate perspective this is an artificial distinction – the issue is whether there is adequate water, reliably available of sufficient quality, without too great a risk of flooding.

Many interviews were conducted across the various sectors in South Africa to determine the extent of awareness and engagement with water risk. Interviews included companies from the major sectors of the economy including mining (Anglo-American), chemical manufacturing (SASOL), agriculture (TSB Sugar), consumer product manufacturing (SAB Miller), energy utility (Eskom), financial services (Standard Bank) and retail services (Woolworths). These interviews produced an interesting cross section of responses to water risk, ranging from very little beyond legal requirements to complete engagement with local, regional, and national water policies and debates.

5.1 AGRI-BUSINESS – TSB SUGAR

TSB Sugar is one of the leading sugar companies in South Africa with activities focusing on the production, distribution and marketing of sugar and downstream products. The investment required for the agricultural production process fixes the majority of operations in a particular location leaving TSB to receive water from a single catchment or scheme. TSB Sugar has focused its engagement primarily in the Inkomati catchment area in which it has significant agricultural and processing assets.

This area is environmentally sensitive and water stressed for a variety of different reasons. The catchment area is the location of a number of land reform initiatives conducted as part of the post-Apartheid economic re-adjustment programmes, which focus on small scale irrigated agriculture. The basin is also home to the Kruger National Park which requires sufficient water in the rivers that run through it to protect ecosystems and the resident animal population, and to provide for its tourism needs. Furthermore, the basin is one of the main centres of sugarcane production in the country.

In order to manage its water risk with primary agricultural suppliers and other competing land users, TSB Sugar has engaged local and regional allocation bodies, and

participated in capacity training and small infrastructure finance. This engagement has manifested itself in many ways:

- Local level – TSB is heavily involved in irrigation and water boards, which oversee their key areas of production participating on the boards in almost all cases. TSB lends significant technical and strategic support to these entities often dedicating full technical personnel to the board. TSB has on occasion provided limited funding to assist in the construction and maintenance of schemes at this level.
- Catchment level – TSB was intensively involved in setting up the local Inkomati CMA participating in strategic sessions and technical support. They have neither provided funding or continued support after its establishment.
- National level – TSB communicates with national government mostly through AgriSA, the agricultural association, and provides inputs when requested but has no direct influence on national policy processes.

TSB has engaged water bodies of this nature over the past 15 years. This engagement is driven by the economic necessity to maintain water supply and quality in the face of limited government capacity. The cost of TSB's engagement with local water institutions has been factored into their general operational budget. While its policies have the added benefit of improving water allocation in the region, its primary focus is on securing water supply to its suppliers, without significant regard to the broader implications of its actions.

From TSB's operations and responses, it is clear that the company faces *political risk, social risk, regulatory risk, physical risk, and financial risk*. The responses of TSB are focused on local policy processes and institutions to ensure its continued water rights and supply. The local focus stems from both the nature of the water risk and the size of the company. TSB expressed a desire to be a part of national policy processes but found it did not have sufficient access to government.

5.2 Extractive Industries – Anglo American

Anglo-American, one of the largest multi-national mining conglomerates in the world, has taken a direct approach to addressing regulatory uncertainty, which has impacted on its operations. Anglo undertakes significant operations in one location where a resource is found including extraction, treatment, and often processing. As such Anglo only receives water from a single catchment or transfer scheme creating significant physical, regulatory and social risk. Recognizing these risks Anglo, at a corporate level, is setting out a corporate policy to become a leading custodian of water in catchments in which it operates recognized as unlocking water potential, leaving the catchment improved, and a welcome socially responsible actor.

Although a corporate policy is only now emerging, Anglo has been addressing water risk in conjunction with the public sector and other stakeholders at an operational level for many years. Anglo, in its platinum mining operations in Rustenburg is facing increasing risk from secondary water scarcity. There was adequate water available but insufficient management infrastructure and capacity to ensure supply to Anglo's operations. As a result, over the past 10 years, Anglo has conducted an extensive engagement process with the local municipal water authorities and the local community to address supply and quality concerns. Through this engagement process, Anglo invested in building capacity and infrastructure to ensure security of supply for its operations. These investments have resulted in lower water tariffs for the local community and improved security of supply for Anglo's operations. Anglo has undertaken similar engagements in other parts of South Africa primarily focused on filling funding gaps and ensuring

adequate capacity building to mitigate any risk from regulatory uncertainty and lack of capacity.

Beyond South Africa, Anglo has encountered significant capacity and institutional weaknesses in water management in developing nations in Africa, Latin America, and Asia. In areas where there is no credible government partner, Anglo has begun adopting what it considers a holistic approach to water supply and management by taking on a quasi governmental role, deploying senior leaders to influence policy processes and contribute physical, financial, and human capital to water schemes. In Brazil Anglo is engaging national water policy to ensure that the plans for a particular catchment where it hopes to operate will have sufficient water over the course of the project life which in turn improves water supply for other economic and social uses.

Globally, Anglo begun to become involved in international initiatives focused on water risk and environmental sustainability as well as incorporating environmental management as part of their training for field managers and technicians. Anglo's engagement in this space has focused on the WEF, CEO Water Mandate and the Carbon Disclosure Project processes. Anglo has not officially joined one of these processes as of yet but is closely scrutinizing them. In addition it is contemplating a global partnership with an NGO to improve its water management and raise its positive stewardship profile.

In South Africa, this position is particularly important given the political and economic legacy of mining houses and their perception as the private arms of the Apartheid regime. In consideration of the multiple risk factors for corporations in relation to water, it is clear that Anglo is responding to *physical risk, reputation risk, social risk, regulatory risk, and financial risk*. The totality of risk faced forces the extensive engagement and is compounded by the inability to relocate away from mineral resources, even where these are in stressed basins.

5.3 Chemical Industries – SASOL

Like TSB Sugar and Anglo-American, SASOL's engagement with water risk and management stems from a deep concern about the institutional capacity of local government and basin water managers (DWA) to regulate water use and to ensure reliable water supplies in the face of increasing water stress. SASOL, originally a state owned enterprise, was privatized prior to the end in late 1980s. Due to their previous status and the strategic nature of supply of liquid fuels in South Africa, SASOL has privileged access to the Department of Water Affairs versus other industries. SASOL has engaged national processes through trade associations to raise awareness with government, indicate private concern with increasing water scarcity, and assist in articulating national policy responses.

At a local level, SASOL has driven initiatives with local government around demand management in the Vaal River system, focusing on improved compliance enforcement to ensure illegal use is reduced, and funding water demand management initiatives to ensure that adequate supply reaches its operations. However in regard to social well-being and protection of vulnerable peoples, SASOL's initiatives, like those of Anglo, have focused on creating space for operational improvements with any additional social consideration as an extra benefit.

SASOL faces the entire suite of risks, but unlike some other chemical companies is also bound by the location of coal reserves. SASOL engages policy processes at a national, basin and local scale to ensure security of supply and to build the image of positive

water steward. SASOL is an active participant in the CEO Mandate and WEF processes, and is closely observing the various disclosure and measurement initiatives.

Companies like SASOL and Anglo benefit from international prestige and access allowing them to engage and manage corporate risk surrounding water security on multiple levels. In addition, their extensive balance sheets create the opportunity to finance capacity building and water focused investment to secure the necessary water rights and supply for their operations. Other companies without these political and economic resources but similar levels of water risk still engage policy processes but approach engagement through different avenues as the TSB case demonstrates.

5.4 Consumer Product Manufacturing – SAB Limited

The experience of SAB Limited is an interesting addition to the story of corporate risk and water. SAB Limited is the South African element of the global SAB Miller brewing company, with a considerable upstream supply chain of grain. Unlike Coca-Cola which purchases its agricultural inputs, primarily sugar, on the international market, SAB-Miller faces risk from the water used directly in its products and in its agricultural supply chain, which is in the proximity of its processing plants. SAB Miller has faced physical risk, through primary or secondary scarcity of water, in many of its operations.

SAB Miller faced this risk complexity around water supply issues in its operations in Polokwane. The brewery in Polokwane faced deteriorating reliability and quality of water supply from the municipality despite there being adequate water resources available for its operations from regional sources. The company directly engaged the local municipality to address its supply concerns rather than focusing only on internal operational solutions. After consultation with the municipality, SAB Miller contributed significant funds to rehabilitate the water treatment facility and build the capacity of municipal water managers. SAB Miller's approach primarily ensured that its own operations continued to function efficiently and at capacity, but also improved the overall supply of water to other municipal water users.

SAB has conducted a detailed water footprint assessment for its operations and supply chains in South Africa and it has overlain this on water resources stress to determine risk areas across the country. At the other scale, SAB has entered a partnership with WWF South Africa to support the water neutral initiative, which provides funds for alien clearing. All of this occurs within the context of the global target to reduce operational water consumption by 25% over the next 5 years.

The SAB Miller case demonstrates how large private sector entities can interact with local governments to address primary or secondary physical water scarcity. These engagements helped motivate the involvement of SAB Miller in international water risk, management, and stewardship processes. The company, funded from the corporate treasury, currently participates or has participated in the CEO Water Mandate, the work undertaken by the WBCSD, the early work of the Water Footprint Network, and the engagement processes under the World Economic Forum to name a few.

5.5 Public Utility – ESKOM

ESKOM is an autonomous state owned enterprise (energy utility) in South Africa with National Government as sole shareholder. ESKOM supplies South Africa's energy requirements with approximately 40GW of capacity under a virtual monopoly, although there are ongoing policy processes to bring in competition. Coal powered thermal power stations dominate the energy portfolio, supported by hydropower from northern countries. Within South Africa, water allocation to ESKOM power stations is a strategic

use specified under the National Water Act through negotiation between ESKOM and Department of Water Affairs.

Due to Eskom's state ownership and its strategic importance, it is acutely aware of water risk and intimately involved in national decision making processes around water. It has addressed water risk in a number of ways.

With the crisis around energy, greater alignment has been developed between energy efficiency and water efficiency, with ESKOM and DWA developing an MOU for cooperation. One area of cooperation is around advocacy by linking energy efficiency technologies with water demand management and conservation technologies initiatives. A second area is the linkage of urban water supply through desalinisation on the back of possible coastal nuclear power stations.

Deteriorating water quality in systems linked to power stations has increased costs of treatment both due to coal and to urban waste treatment failure. In response to this, ESKOM is convening processes to develop regional water treatment schemes on mine drainage to secure good water supply for the power stations and sell the remainder to local municipalities. This is currently being proposed a private sector initiative between ESKOM and mines with National DWA and local government blessing, but has quite difficult institutional and financial arrangements around capital and long-term guarantees.

Shared national objectives between energy and water sector as well as the social license to operate issues around secondary scarcity of local communities next to large dam and pipeline infrastructure, has contributed to direct linkage being made between large infrastructure schemes and local supply to community (domestic water use). This links to the motivation for the nuclear power plants provision of desalinated water in coastal towns.

Despite having strategic water allocation at a national level, there is lack of energy policy clarity on the role of independent power producers for next generating capacity. The next power stations (linked to coal fields) are in a water scarce area (Waterberg), and will require huge capital investment to ensure water supply from Lesotho. Historically, ESKOM has guaranteed the full off-take, but with the credit constraints the ESKOM does not want to guarantee the full off-take, because this may be shared with a private operator. This commercial resistance places the responsibility and risk on the water managers, which affects the off budget nature of the proposed water funding model. The implication is that these policy engagements of public enterprises cross sectors and are embedded in the financial implications, particularly where regulated prices are faced.

In these ways, ESKOM faces significant water related risk including *physical risk, regulatory risk, financial risk, and social risk.* However social risk less affects ESKOM directly rather than through general government services related risk.

5.6 Retail and Distribution – Woolworths

Woolworths is an up-market food and clothing chain store and is the primary dominant player in the South African fresh foods market with a 35% share of formal produce. Supporting its stores, Woolworths has an extensive supply chain of growers and manufacturers with whom the company actively fosters close relationships. Their water risk is mostly secondary, through their supply chain as most growers are fixed in a location and subject to the water available in a particular catchment or scheme. Woolworths therefore has focused on reduced water usage through assisting suppliers

identify savings and initiating a "good business journey" label, which certifies a product achieving a high level of environmental sustainability.

Woolworths has faced reputational risk through poor behavior from their suppliers. As Woolworths is the most financially strong member of the supply chain, communities and organizations have targeted the company although they might not have been directly involved in the operation in question.

Woolworths has not begun to actively engage water policy and supply processes external to their operations and supply chain. Their consideration of water risk has focused on improved supply chain management and increased brand recognition as an "environmentally friendly" supplier. The direct water risks that Woolworths faces at present are reputational risk and financial risk whereas their supply chain faces increasing physical risk and social risk. Given the disjointed nature of these risks between direct operations and supply chain and the perceived lack of current severity has produced a milder response than those of large mineral or agricultural firms. However Woolworths and companies in similar positions are beginning to consider further ways to engage the water policy space as these risk factors worsen and converge.

5.7 Finance Industry – Standard Bank

Standard Bank is one of the largest banks in South Africa and has an extensive presence throughout the continent. As a retail and investment bank, Standard Bank supports small, medium, and large businesses in every sector of the economy. Given its exposure to businesses that have a direct effect on water and the environment Standard Bank is subject to local, national, and international regulations, which dictate environmental practice. Save some real estate ownership, the bank faces indirect risk though its clients and investments.

Standard Bank at a macro and meso level is dictated by national or international precedent in its lending practices concerning water risk and has not expanded beyond that realm on its own. At a micro level the bank is developing financial instruments to encourage smaller clients to become more water efficient and climate resilient. Beyond these initiatives the bank is considering partnerships with international NGOs and national government on water availability and water quality.

Given the size of Standard Bank and its importance in the South African economy, the bank has focused most of its emerging efforts on national policy processes around water risk but has found no value thus far in engagement with local and catchment level organizations. For companies like Standard Bank, water risk stems from *market and reputation risk,* and to a lesser extent *secondary physical risk* in its operations.

Standard Bank, as a major institution in South Africa, is required from a reputational standpoint to be proactive on water policy to maintain its status as an innovative financial institution.

6 FRAMEWORK FOR CORPORATE ENGAGEMENT

The case studies above provide a rich description of the way in which the South African companies have engaged water risk and management. An understanding of the corporate motivations to respond to water risk and the nature of those responses is further enhanced from the international precedents described earlier.

6.1 UNDERSTANDING MOTIVATION FOR CORPORATE ENGAGEMENT

It is valuable to understand the key areas of agreement and disagreement amongst leading companies on the topic of water management. A limited survey of some of the global path-breaking companies in this domain (done under the auspices of another project for DFID) has indicated the following areas of agreement and issues of contention. Reviewing the case studies both nationally and internationally it seems that these companies agree upon the following:

- **Increasing water scarcity a reality** – Every company interviewed recognized that South Africa and many parts of the world face significant challenges around fresh water resources. This increasing water scarcity will affect operations and supply chains from a number of risk factors many of which may not be linked to behavior of the company. However all companies agreed that efficient management of resources is a critical internal first step to manage risk.
- **Greater role in the management of watersheds** – Coupled with the acknowledgement of increasing water scarcity over the coming years, the corporations interviewed recognized that optimal risk mitigation strategies for water risk lie outside the walls of their operations and supply chains. To effectively manage water related risk, corporations must engage the management of watersheds and the multiple stakeholders in the area.
- **Climate Change plays large role in water focus** – Corporations agreed that climate change would increase primary water scarcity in a number of river basins. Changes in the amount, timing and reliability of rainfall coupled with increasing temperatures will place further stress on many operations and supply chains, sharpening the concern of many corporations around water.
- **Water initiatives funded as part of core business** – Corporations agreed that water initiatives at an international, regional, and local level were increasingly considered part of their core operational business (responsibility and budgets). These initiatives are long-term investments, which will yield increasing benefits in the future. Most interviewed indicated a dual structure in which global initiatives were funded by the corporate treasury and local interventions were funded by individual business units.
- **Resistant to financial crisis** – Companies concurred that the initiative ongoing in their company surrounding water risk and management were not heavily impacted by the financial crisis. These initiatives are critical to their business and can only be curtailed if an entire business receives budget cuts. In fact, some corporations increased investment in water related initiatives demonstrating their commitment to mitigating water risk as a core business principle.

- **Benign or positive impact on poor and vulnerable communities** – Each corporation interviewed naively responded to the question of benefits to poor communities either benignly, unsure of impact, or wholly positive, such as job creation or improved water supply. No corporation conceptualized any social or political risk from actively engaging in watershed management issues.

These areas of agreement are interesting in that they imply that the private sector recognizes that water is an increasing risk to their operations and realize that they must engage the public sector and local communities to mitigate water risk. Moreover, these initiatives are treated as central focus of business in those industries in which water is most important for operations. Interestingly, the headlines of divergence relate to the approaches to understanding these risks and the most appropriate types of response:

- **Assessment of water risk** – methods to measure water use, impacts and risks and through which to identify appropriate response
- **Optimal way to engage stakeholders and governments** – approaches to engaging externally reflect the nature of risk and corporate resources available
- **Usefulness and longevity of the various global corporate initiatives** – need for and direction that these initiatives will take into the future
- **Valuation and pricing of water** – pricing of water through market and full-cost mechanisms compared with the social and ecological value of water.

Each company had a different approach to local government and stakeholders. There are a number of factors, which have motivated and shaped engagement in the water space by different companies:

- **Extent and severity of risk** – The cases above demonstrated that often the extent and severity of the water risk that a corporation faces determines the extent of the response both internally and externally which is directly linked to the size of its water footprint. Anglo and TSB represent clear cases of complete corporate focus on the importance of water as their direct operations face the entirety of risk factors. In addition their social license to operate in large part depends on their perception as a positive water steward. In the cases of Woolworths and Standard Bank these risks were less severe and of a secondary or tertiary nature. Therefore the responses were not as comprehensive.

- **Resources** – The financial and political resources available to the firm plays a large role in the manner in which engagement occurs. The contrasting cases of TSB an Anglo demonstrate two different corporations who face similar levels of water risk respond differently based on resources available. TSB would engage more intensively at a catchment and national level if they could instead focus on local engagement to mitigate water risk. Smaller farmers would be less empowered to influence water policy and therefore may focus their attention on an association at a local or catchment level to ensure their issues are heard.

- **Reputation of Company** – The brand reputation of the firm plays a large role in the level of engagement in water policy and managing water risk. Woolworths has built a reputation as an upscale eco-friendly retailer so its actions around water risk have focused primarily on customer interface such as the 'good business journey' and limiting water usage from suppliers. Anglo on the other hand faces complex reputational risks based on its history in South Africa so continually engages in policy debates to manage its political and financial risk surrounding water cognizant of both its social and physical license to operate.

- **Impact on Direct Operations** – The degree of direct engagement of the firms surveyed here is correlated to the impact of water risk on its direction operations. Neither Woolworths nor Standard Bank face significant water risk in their direction operations but instead with their supply chain and clients respectively. Both TSB and Anglo face immediate risk from changing water supply and regulation and therefore as a matter of operational security must engage with security of supply policies.

These four considerations need to be viewed in the light of the four primary motivations for companies to engage water issues, namely operational, supply chain, comparative market advantage and/or corporate leadership / stewardship.

6.2 Approaches and Threats around Corporate Engagement

One of the key areas of disagreement in the international and domestic examples amongst the private sector are the ways in which these entities can interact with the public sector and the other water related stakeholders. There is disagreement in part because there are a variety of engagement strategies available. As outlined above, the selection and intensity of these engagements are dependent on the extent of risk, the reputation of the company, the impact on direct operations, and available corporate resources.

Corporate Approaches

The following highlights a number of these engagement options:

- **Advocacy / lobbying / influencing** – These strategies are those traditionally employed by the private sector and are often the first options corporates select in engaging the external environment. Corporates often employ them in fluid policy or strategy environments in which high level decisions are being made or through one-on-one interaction with decision makers.
- **Self-regulation** – Corporates, often time in conjunction with other major user groups in the area, may initiate a variety of initiatives to ensure engagement and compliance of all users to achieve higher quality and greater consistency of supply in spaces where regulatory capacity is weak and unlikely to achieve the required outcomes. The intervention in Naivasha is an example of users initiating a process, or "self-regulating", filling a space government had not addressed.
- **Partnership** – When sustained and intensive interaction over an extended period of time is necessary in particular areas, corporates often seek partnership structures with other corporates in the areas as well as the public sector to address ongoing water risk issues. These partnerships build credibility around corporate action in the water space. Coca-Cola's partnership with WWF represents this sort of partnership.
- **Financial support / facilitation** – Corporates may elect to provide significant financial resources to communities or the public sector in order to ensure that adequate water is secured for operations. This approach is particularly relevant for capital intensive interventions. SASOL's intervention in the Vaal river system and SAB-Miller's funding strategy in Polokwane illustrate different ways in which such support may take place.
- **Institutional strengthening** – In this space corporates often engage to increase the technical and operational capacity of local government and user associations to ensure that water management may be carried out effectively in the future. These types of interventions are often employed in spaces where government

capacity is weak and existing institutions require technical-managerial capacity or new institutions are required, at a local or basin level. TSB-Sugar's extensive engagement in the Inkomati system demonstrates the way in which institutional strengthening may occur.

- **Implementation** – In cases in which the corporate need for water infrastructure is great and targeted interventions are available to resolve water available or quality issues, large corporates might undertake to develop and construct specific water resources schemes. Anglo's intervention in Rustenburg represents such an engagement.

The options above as intimated are not mutually exclusive. In fact many corporations have adopted a multi-engagement strategy to address their water related risks.

Risks to Corporates through Engagement

The engagement of corporate entities in the water management space however provides a series of risks and challenges for corporates themselves and for government. Corporate engagement in water management often heightens certain risks and uncertainty as these sorts of interventions are within the mandate of the public sector for the most part. The major engagement risks, which may have serious financial and operational consequences if not handled appropriately, are as follows:

- *Project completion* – There is a risk that some parts of projects may be left uncompleted, which would cause negative perceptions amongst stakeholders. These perceptions could be more damaging than non-action possibly leading to the challenge of the physical or social license to operate.

- *Misalignment with larger processes* – Given that corporates often sit outside of larger policy processes and struggle to comprehend the multiplicity of goals of other stakeholders, there is a risk that an intervention may be inappropriate or inadequate for the wider water management process. Such an intervention could be ignored or even opposed by stakeholders with potentially greater negative consequences for the corporate sponsor than continued non-action.

- *Lack of political and community commitment* – Early consultation, ongoing co-operation and partnership are critical to the success of any intervention. The absence of sufficient political or community commitment to a project will create significant exposure for the corporate sponsor with little potential benefit.

- *Lack of institutional capacity* – To ensure the success of public-private action both corporates and government must have sufficient skills and expertise to represent the interests of their entities. An asymmetry, most often lack of capacity in the public space, can jeopardize the ability to implement effective interventions, as the private sector is ultimately not responsible for water.

- *Government abdication* – There is a risk that when a corporate entity intervenes, the public sector with stretched resources may often reprioritise effort away from areas that are being managed, which leaves the corporate with the entire responsibility for a non-core function. This occurrence is both problematic for both parties as the government is ultimately responsible for water management systems and corporates are often misaligned with the goals of government.

- *Excessive resource requirements* – Often interventions in the water space require significant human, infrastructure and financial resources. In addition, effective

interventions in the public sphere may require long time horizons which stretch business planning processes. A lack of necessary resources or ability to invest over time may jeopardize the effectiveness or completion of an intervention.

- *Exit challenges* – As intimated above, corporate entities have a limited time horizon for interventions in an area as such interventions are linked to the profitability and longevity of a particular business. The private sector will exit at some stage and therefore may face a number of risks in the process as it transfers responsibility of a project to government or ends capacity support.

- *Perceptions around policy capture* – Significant intervention in water management and services by the private sector may be seen as an attempt to use the levers of government to secure private operations rather than ensure public goods. Government and civil society representatives have a jaundiced view of corporate motivation for engagement, so this perception must be tackled with transparency and ongoing public outreach.

Unfortunately, it is difficult for corporates to assess these risks before embarking on a process of dialogue with government or communities (civil society). Many corporates interviewed expressed trepidation at the prospect at undertaking significant water interventions however continued given the criticality of reliable water supplies for their operations.

Risks to Government from Corporate Engagement

There are a number of risks to government from corporate engagement in the water management space. Water affairs is the province of the public sector as the development, allocation, distribution, and delivery of water resources and services balances the interests of all stakeholders not just those of the private sector. The private sector has become involved in large part because it believes that there is or will be an institutional failure in supplying water for its operational requirements. While there may be added social or communal benefits, corporate engagements are focused on ensuring the sustainability and profitability of operations. Therefore, significant corporate participation in these processes can obfuscate the public sector goals of the water sector. The primary threats to government are summarized below.

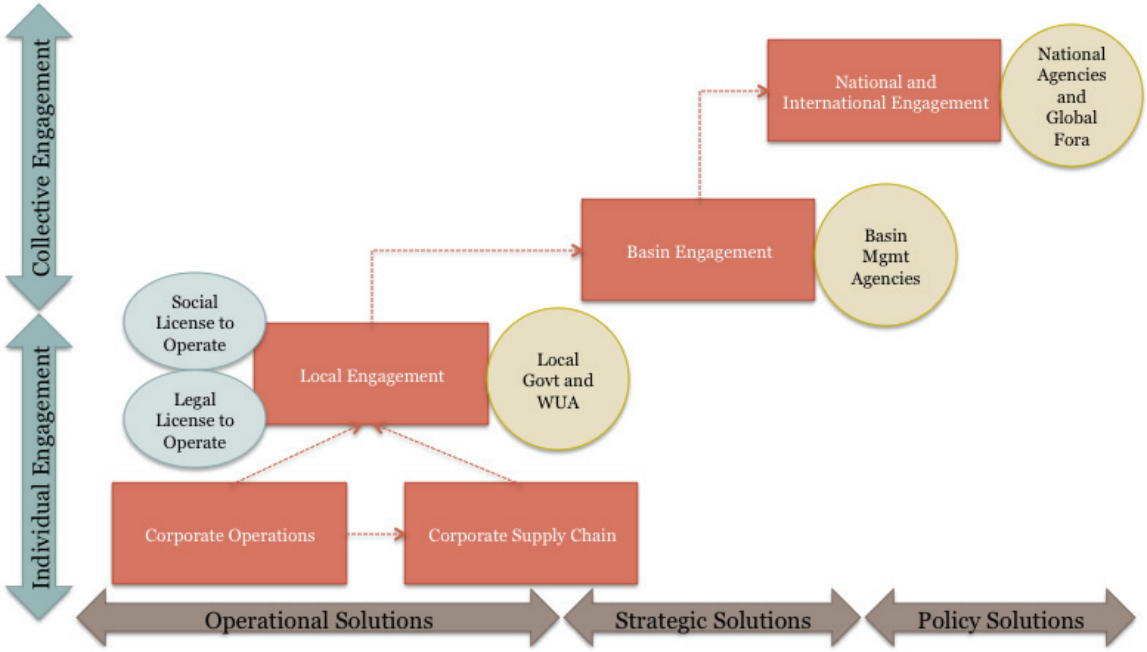
(1) **Corporate Capture** – When corporate entities intervene in water processes, there is a threat to government as it may lose control over basin water processes which are co-opted by corporate who have more resources and capacity to see that an intervention succeeds. Such a co-optation can undermine the objectives and role of government. Coupled with this threat, when the private sector ends its engagement either to end operations or from a strategic re-alignment, a governance and funding vacuum may be created.
(2) **Skills Shortage** – As large corporate entities move into the water security and resources field, the limited pool of skilled human resources may move towards well paid jobs or consultancies in the private sector leaving the public sector less well capacitated. This lack of capacity could negatively affect the ability of government to effectively manage corporate engagement.
(3) **Protection of the Poor** – The diminished influence of government on basin or local water processes arising from poor government capacity and increased corporate engagement reduces the potential for government to exercise its critical function in protecting the interests of the poor and vulnerable. There is very little beyond the social license to operate which will push corporates to address social concerns in their operations without strong government

regulation. In the water sector, government must ensure that water use (abstraction or pollution) does not impact negatively on the access to water by users or the health and well-being of communities in the area.

In this space environmental NGOs have played a critical role in the development of corporate approaches to water both in local spaces and internationally. This engagement has been important in protecting environmental resources in spaces in which the public sector has not yet engaged corporates or capacity is lacking. However the same pressure and engagement has not occurred from development NGOs around socio-economic issues relating to water. Government must be aware of this gap and the risks that it presents.

6.3 Emerging Framework for Corporate Engagement

The theoretical considerations of corporate risk around water and the case studies highlight the complexity of engagement by the private sector in water management. Developing a framework for understanding the path that corporate entities follow to manage water related risk therefore is instructive.



The private sector engages water risk and management in the following ways at these different scales:

- *Operations and Supply Chain* management is the initial focal point for every corporation to manage water risk. The private sector exercises the greatest amount of control in these areas and therefore focuses the majority of its efforts initially on maximizing the efficiency of its internal operations and supply chain. Only once it becomes clear that keeping one's own "house is in order" is insufficient to manage water risk does the private sector begin engaging local communities and public institutions. The experience of Woolworth's is indicative of this focus as it still is grappling with managing risks within its supply chain and has not found the need as of yet to engage external processes.

- *Local level* engagement focuses on interaction with local government or communities, typically individually as a company, largely around access to adequate clean water by operations and/or communities. These engagements focus on the securing adequate water supply by ensuring the functioning of local

infrastructure and institutions such as municipal water agencies and water user associations. The policies of SAB Miller in Polokwane and TSB Sugar in the Inkomati basin represent this focus. Both companies have engaged local institutions to ensure that their operations and supply chains receive sufficient water to continue production. These actions are most closely associated with maintaining the legal and social license to operate assets.

- *Basin level* engagement becomes necessary when individual action or local engagement is not sufficient to address the increasing primary or secondary water scarcity. Companies engage with water managers and civil society, typically through multi-stakeholder platforms or individually for large corporations, focusing on sustainable availability of supplies and control of waste discharge at a catchment scale. The actions of SASOL and Anglo locally and Coca-Cola internationally fall into this category attempting to improve governance and allocation of water to ensure both their and other users sustainable access to water and addressing environmental concerns.

- *Country level* engagement proceeds if local and basin level engagement does not adequately address the degree of water related risk that a company faces, because the enabling framework constrains or inappropriately incentivises basin or local water management. Engagement at this level consists of international with national public institutions and large NGOs (typically through business associations), largely around water policy and strategy development, and its linkages to food and energy. This tends to be the least well developed aspect of engagement, except in a traditional negotiation or lobbying sense through business associations, but would be required for effective engagement around water for growth and development.

- *Global level* engagement through international bodies (typically through representative bodies), largely around the paradigm of water management and possibilities to influence national governments. These actions fall under the auspices of corporate social responsibility and often times provides intangible benefits to the private sector including improved employee satisfaction, strong brand loyalty, and learning international best practices for water risk management and public engagement. However these processes are important in framing the evolving metrics, disclosure requirements and rules of engagement for companies at the national, basin and local levels. SASOL, Anglo, and SAB-Miller are all involved in the international arena.

Underlying the different levels of engagement are different types of decisions which corporations make at an operational, strategic, and policy. The key focus for water risk management is directed towards internal processes and local stakeholders and institutions. Concentrating on these sorts of initiatives provides the greatest opportunity to address crises that occur from operations. The second type of engagement focuses on the resources that are available for a corporate entity to use. This strategic focus seeks to influence the water allocation process such that the rules that are in place are fairly and efficiently implemented. Only when corporations find that the governance structure for water, the rules, is flawed or inadequate do they actively engage national or international spaces. This tri-partite focus directly reflects business management theory, which postulates that companies typically require about 80% of their effort on solving operational difficulties, 15% of their effort addressing strategic concerns, and 5% of their effort on considering overall corporate policy inadequacies.

Another insight from analysis above is that the stages of engagement for the private sector follow the model for the progression of water stewardship, which focuses on ways in which corporations can minimize their impact on the water environment, engage and collaborate with other users to reduce impact, and help strengthen the way in which river basin resources are managed. The water stewardship journey begins with "getting your house in order", continues with engagement of local stakeholders, and ends with engagement of catchment and national agencies.

6.4 Linkages with Water for Growth and Development

The private sector is particularly concerned with ensuring their own water security over the timeframe of their operations. This increase in interest in water opens a number of opportunities for progressive engagement by government and civil society with these processes to further the objectives of government and civil society, both in terms of national development objectives, but also in terms of the key elements of the Water for Growth and Development Framework. The flip side of the coin is that there are opportunities for corporate to engage with and support government-led processes that will contribute to improved water security for the corporates. Some of these areas of potential engagement are outlined below.

Firstly, the National Water Resources Strategy (NWRS) provides a critical point of entry for corporates. The NWRS not only provides the strategic direction for water resources management across the country, but should also identify key risks facing the water sector and high level approaches to dealing with them. Corporate engagement will enable the water risks facing the private sector to be acknowledged and addressed at this level, setting the scene for all processes under the auspices of the NWA and the NWRS. Currently, few of the corporate processes are proactively addressing the national, strategic level, being focused rather on the operational level, although previous experience indicates that there will be extensive corporate engagement with the revision of the NWRS when it is made available for comment. This is an area of engagement that could provide a win-win for all sides.

At the basin level, the same pertains in relation to the development of catchment management strategies (CMS). The first catchment management strategies are being developed in the Inkomati and the Breede water management areas. The Breede CMS, in particular, is being developed around the WfGD framework, and aims to address how water management can best support sustainable growth and development in the water management area. Corporate engagement with this process will enable the development of a CMS that addresses key issues of corporate water risk, but incorporates them into a broader framework that also addresses issue of social development and environmental protection.

The WfGD framework identifies water conservation and demand management as one of the key issues facing South Africa in relation to water management. Many of the corporate water initiatives are focused on improving water use efficiency at the operational level. There is, thus, a synergy between the interests of corporate entities

and government in this regard. A process has already been initiated between NEDLAC and the Department of Water Affairs to develop a voluntary water conservation and demand management water accord, which aims to improve water use efficiency in the private sector. This is an excellent example of the alignment of the interests of government and the private sector. This approach is, however, very much focused on the operational level, and does not address the more strategic basin level issues which are best addressed through engagement at the CMS level.

The water allocation reform process to some extent poses a potential threat to water security for established enterprises, since existing water allocations may be curtailed to reallocate water. This is, therefore, a process that must be factored into risk assessment by the private sector. On the other hand, it provides an opportunity for corporate entities to engage with the process of allocation in the basin and to ensure that issues of social license to operate are, at least to some extent, addressed through the more equitable allocation of water. There are a number of levels at which this engagement should take place – at the operational level in the actual process of compulsory licensing; at the basin and national level in terms of policy and strategy development; and in the stakeholder engagement process run by government. From the government perspective, the increased understanding by some corporates of issues such as social license to operate, and the need for environmental sustainability, provides a platform for broadening this process to a wider range of private sector stakeholders.

South Africa's water resources are extremely vulnerable to resource degradation, whether from mining, industrial or municipal effluent discharge, or physical damage resulting from mining, agriculture, roads construction etc. The Department of Water Affairs has a constitutional obligation to protect the water resources of the country in terms of the requirements for environmental protection and human well-being. This is currently an area where many of the corporate processes around water are weak, and it is an area where engagement by government and civil society around corporate water initiatives could result in significant improvements, including improved voluntary compliance and self- or co-regulation.

The Department of Water Affairs has struggled for some time with the challenges of compliance monitoring and enforcement. Despite good legislation and adequate regulations, weak enforcement has led to compliance failures such as high levels of water theft in some areas, major pollution from municipal waste water treatment failures, and construction of illegal farm dams. The Department is now focusing on developing a regulatory strategy for water resources, which includes consideration of the issue of compliance enforcement. The Department is also building its capacity for compliance monitoring and enforcement, with the development and staffing of a specific unit focused on this task. However, in a context of limited human and financial resources, and the high opportunity costs of reallocating resources to these functions, self- and co-regulation become important additions to government regulation. In this regard, the further development and wider use of some of the key corporate water initiatives can facilitate the better regulation of water use, contributing, in turn, to improved water use efficiency and improved resource protection. The role of civil society in compliance monitoring and enforcement should not, however, be ignored, and the further development of the corporate approaches should be encouraged to enable the engagement of stakeholders in the monitoring of water issues outside the corporate walls.

The deterioration of water services poses a significant threat to those private sector enterprises that draw their water from municipal sources. Decreasing water quality, interrupted supply, and water restrictions arising from poor management of bulk

infrastructure have the potential to disrupt private sector enterprise. A reliable supply of water is in their interests in terms of risk reduction. There are two approaches to resolving this dilemma. The one is for enterprises to develop their own water supply options, such as through groundwater abstraction. While this is not always possible, the impacts of it are that an important source of revenue is removed from the municipal budget, leading to further deterioration of municipal water supply. An alternative approach is for the private sector to engage with municipalities in order to improve municipal water services delivery. This has the dual benefit of reducing business risk and enhancing the social license to operate. Some corporate have already entered into this area.

The Raw Water Pricing Strategy is currently under review, with an expected timeframe of three years before the revised strategy is published. Water pricing is an important tool for achieving many of the stated objectives of the WfGD framework, including improved water conservation and demand management, changing user behavior, enabling effective financing of asset management, and providing funds for compliance monitoring and enforcement and basin management. This is a critical area for engagement between the corporate sector and government, since the development of an appropriate pricing strategy can both enhance government management capacity and reduce private sector risk to water scarcity and deteriorating water quality.

One of the biggest challenges is how to ensure that the corporate water initiatives spread beyond the few sector leaders at the moment, to become common practice amongst all private sector water users, and that, in the process, they are modified to take account of and respond to the particular socio-economic and transformational demands of the South African context.

7 OPPORTUNITIES FOR PRIVATE AND PUBLIC COOPERATION

The above findings represent an opportunity for government to engage the private sector on the shared water risk and craft more comprehensive policies. All of the corporations surveyed herein view the public sector as a partner in managing water risk and would like to be more actively involved in the policy discussions concerning optimal allocation, efficient use, and appropriate pricing. As mentioned above, the corporate sector is generally undecided globally about how to engage the public sector in a meaningful and consistent way to ensure the necessary management of water risk.

In South Africa, many companies are now awakening to the importance of managing water risk and are therefore at the beginning of the engagement process. As a result, the South African government has the opportunity to collaborate and craft joint responses to water risks with proactive companies, despite seemingly conflicting imperatives around profit and public well-being. However, the important message is that companies will increasingly move into the public domain in order to manage their risk and it is up to water managers to channel this energy at the different scales of engagement, or to ignore it and let it to go its own way, with the possible undesirable consequences.

7.1 ELEMENTS OF GOOD WATER GOVERNANCE

Good water governance occurs when there is clear policy that address economic, social, and environmental imperatives, an effective civil service that implements these policies, and engaged stakeholders who hold policy makers and civil servants accountable for the policies they have created and the ways in which these policies have been implemented.

This circle of policy formation, implementation and review creates robust water infrastructure and governance. Often times, the private sector has antagonized this process lobbying government to prioritize its operational requirements and expansion programmes at the expense of social welfare and environmental sustainability. As the

analysis above suggests, the private sector is moving out of its traditional role into one of positive water stewardship on account of mounting water related stresses and risks.

This shift in focus challenges the long held viewpoint of government and its stance with the private sector. One of the most pressing questions now for government is what the public sector response should be to the emerging possibility of corporate engagement of water risk and management in South Africa, particularly given the challenges and opportunities implicit in water for growth and development. In this vein, robust stakeholder engagement processes must take place around water for growth and development, which actively includes the private sector and its increasing engagement.

7.2 Implications for Water for Growth and Development

To take advantage of the opportunity presented by corporate engagement, the South African government should to explore and deepen its understanding of corporate engagement, and capitalize on the opportunities for shared risk, while being clear about the country's political, social, economic and environmental imperatives.

- **Economic and social development focus** – As a core part of WfGD, government has an opportunity to re-align its strategic planning process away from simply meeting water requirements for forecasted demand. The case of ESKOM clearly demonstrates that South Africa faces a trade-off between different sectors of its economy, which require water – in this case food and energy security. Therefore planning in the water sector should be centered on supporting overall economic, social, and ecological development objectives of government through an integrated planning process rather than reactively responding to demand projections. Understanding the inter-linkages between the goals of the different sectors of the economy and their requirements for water will significantly strengthen the position of government in interacting with the private sector around water risk and management.

- **Diversity of understanding** – Following the change in focus outlined above government may attempt to understand the different perspectives, operational requirements, and development plans of the private sector as a baseline before synergies can be mapped and projects implemented. The most appropriate way to gain this understanding is to hold multi-stakeholder platforms with the private sector and relevant civil society organizations. Interestingly, this was a proposed outcome of the WEF Davos 2009 water initiative meeting at which the Minister of water Affairs represented South Africa. Developing these types of platforms would place the country as a global leader in taking this process forward.

- **Capitalize on shared risk opportunities** – The foregoing description and analysis of corporate responses to mounting water risk and its management presents an opportunity to forge partnerships in areas and catchments of shared risk. The private sector has financial and managerial resources available, which it may be willing to dedicate to water resources and services if there are clear benefits to its operations. These partnerships should focus on strategic resource constrained areas at a catchment or local scale, where additional funding would be particularly useful in building governance capacity and managing water infrastructure. This does not imply private sector involvement in the development or operation of these assets.

- **Manage corporate engagement** – While government should capitalize on shared risk opportunities it should be wary of the dangers of excessive corporate influence in policy processes and program implementation. Often times corporations through disproportionate influence and resources can capture policy processes to achieve their own operational or development ends. Government should seek to engage and manage corporate engagement such that other economic, social, and environmental objectives may be achieved. Developing clear "guidelines for engagement" would assist all parties understand their responsibilities and roles in these processes.

7.3 Emerging Issues and Research Opportunities

There are a number of opportunities available to government to engage corporate water risk. The World Economic Forum over the past four years has begun to focus on water as a key global risk area. WEF has held high level discussions between governments and the private sector, which focus on geo-political and economic issues pertaining to water. The forum is looking to develop a new kind of entity to provide sound analysis of water issues, to create platforms for discussion, and to provide technical, financial, and other assistance to ongoing water related processes.

As part of its ongoing processes, WEF has engaged in multi-stakeholder networks to work in practice to develop initiatives that enhance industrial growth and in tandem improve social access to water. South Africa is a regional focus of this effort. The rationale underpinning this work is as follows:

(1) Water projects, which are designed to manage both economic and community needs, are better placed to avoid conflicts particularly in poorer areas.
(2) There are few fora that convene governments, industry, civil society, NGOs, and the development community to discuss and develop water projects which results in few executable projects that achieves multi-use goals.
(3) Projects are not executed, or not "bankable", due to the often disjointed way in which planning happens in the public and private sector around the water sector.
(4) Formation of multi-stakeholder networks can facilitate more effective collaboration from all stakeholders to develop these bankable projects.

South Africa, along with several other countries, was part of the discussion on the intersection of the risk for the private and public sector at the WEF in Davos this year. NEPAD in conjunction with the WEF Water Initiative is helping to facilitate multi-stakeholder water network which includes government, civil society, key industries, and multi-lateral agencies to discuss an approach to water which focuses on WfGD.

This process is an excellent opportunity for government to engage with the private sector around its already ongoing interventions in the water space. The process has already identified the Hartbeespoort Dam and the Burgersfort Dam as projects that could serve a variety of needs. Government must therefore begin to develop guidelines for corporate engagement in this space.

Notwithstanding the above, while it is clear that there are major opportunities for synergy between the corporate engagements around water, and government objectives in water resources management, it is equally clear that the drivers behind the two processes are profoundly different. Examination of the suite of water tools being used by the corporate sector shows them to be generally weak on the social issues, which is a key area of interest for government. It also shows the potential for regressive impacts if care is not taken on the development, implementation and interpretation of these

processes, particularly by investors and customers. For this reason, the development of guidelines for corporate engagement would set a level playing field and a transparent approach for government, the private sector and civil society to buy in to.

The development of the draft Water Conservation and Water Demand Management Water Accord through NEDLAC suggests that there may be a useful role for NEDLAC to play in developing mutually acceptable guidelines for corporate engagement in the water sector, guidelines that take on board the economic, social and environmental aspects of such engagement processes.

7.4 CONCLUSIONS

The above analysis has presented the global debates on corporate water risk, scoped the experience of the South African private sector, presented a framework for understanding corporate engagement in water management processes and recommended ways in which government might begin to capitalize on opportunities of shared risk with the private sector. It is clear from the interviews conducted that South Africa is not currently far advanced in the corporate water risk debate, due in part to government assumptions on the role of the private sector and a distrust borne out of mixed experiences with the private sector in the past. Government should build on the experience and platforms described herein to forward an integrated approach to water and development viewing corporate engagement as a tool to achieve that end.

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