

**THE CONSIDERATION AND IMPROVEMENT OF THE SUSTAINABILITY
PERFORMANCE MONITORING FRAMEWORK FOR SOUTH AFRICAN WATER
BOARDS**

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Integrative Summary

The South African Constitution ensures the right to adequate water, health services and a healthy environment (Government Gazette, 1996: 1251, 1255). Associated legislation and national strategies require that water resources and water services are rendered in a sustainable manner to ensure the rights enshrined in the Constitution are realised (Triologue, 2010: 34; Government Gazette, 1998(c):11; Department of Water Affairs (DWA), 2003:9).

South Africa is the 30th driest country in the world (DWA, 2013: iii), has impounded most of its surface water resources and has utilised 40% of the groundwater resource with remaining groundwater water quality uncertain (DWA, 2013:6-7). Despite achieving the basic water and sanitation Millennium Development Goals approximately 2.2 million and 4.5 million households still require access to basic services respectively (DWA, 2013:28-29).

South Africa's ten water boards play a key role in bulk water service provision. They supply 57% of the countries domestic water supply (DWA, 2013:19) and are required to provide sustainable water services (Government Gazette, 1997:35). The Department of Water Affairs (Department of Water and Sanitation (DWS) as of June 2014) is mandated to monitor the performance of water boards and monitors of water boards through a Share Holders Compact (SHC) (Government Gazette, 1997: 50).

The aim of the research is to achieve the following objectives:

1. Describe best practice for sustainability monitoring frameworks for water services
2. Outline South Africa's water services mandatory and voluntary requirements with regards to sustainability monitoring
3. Evaluate South Africa's current water services performance monitoring framework for water boards against findings from goals one and two
4. Develop an improved framework for assessing South African water board's performance in their compliance and sustainability journey

5. Demonstrate the improved framework functionality with a sample of water boards audited performance data from the 2012/13 financial year

A qualitative normative theory evaluation research method was utilised to achieve first three objectives of the research. The objectives to first understand current best practice for sustainability monitoring frameworks and the mandatory requirements for water services sustainability monitoring frameworks in South Africa was achieved via an extensive literature review. The evaluation research method was used where South Africa's current water services monitoring framework for water boards was evaluated for its adequacy to monitor sustainability compared with legislated requirements, national and international best practices (Hall et al, 2004: 55).

Data collection for the evaluation research was sourced via documentation analysis. The 2012/13 water board audited annual reports, relevant national water services legislation, national and global water service sustainability monitoring best practices were critically reviewed. The review yielded a "thick description" of sustainability performance monitoring framework requirements that was used to evaluate the SHC (Holliday, 2002: 79).

Despite the mandatory participation requirement for successful sustainability performance monitoring being met, the SHC was found to have inadequate aspects. It lacks an outcomes based approach, does not include environmental indicators, does not allow water board sustainability performance comparison and cannot indicate where individual water boards are on their sustainability journey.

An improved sustainability performance monitoring framework for South African water boards is therefore proposed. This was developed with the assistance of an expert focus group drawn from multiple disciplines and organizations relevant to water board sustainability (Litosseliti, 2003: 8 and Hall et al, 2004: 51). The functionality of the framework is then demonstrated using 2012/13 audited performance data sourced from the annual reports of Overberg, Amatola, Rand and Umgeni Water boards.

The proposed Water Services Sustainability Monitoring Framework (WSSMF) quantifies performance in terms of 10 water utility outcomes that are measured with 88 performance indicators that encompass the financial, social, environmental and governance dimensions of sustainability. The WSSMF demonstrated that the legislated intentions and best practice recommendations can be incorporated into an improved version of the SHC.

Further refinement of the WSSMF is required. In depth engagement with DWS and all the water boards would promote the refinement of the indicator set, performance thresholds for indicators and indicator weighting. Further testing through a pilot project initiative would allow the WSSMF to be developed into a robust and adequate sustainability performance monitoring framework for South African water boards (Rametsteiner *et al*, 2011: 64; Muga and Mihelcic, 2008: 438; McAlphine and Birnie, 2005: 247 and van Leeuwen *et al*, 2012: 2192).

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List of Acronyms

BBBEE – Broad Based Black Economic Empowerment
BDS – Blue Drop System
CDP – Carbon Disclosure Project
COP – Communication On Progress
CWDF – Corporate Water Disclosure Framework
DWA – Department of Water Affairs
DWS – Department of Water and Sanitation

EMP – Environmental Management Plan
EUM – Effective Utility Management
EUMC – Effective Utility Management Collaboration
EWQMS – Electronic Water Quality Management System
GDS – Green Drop System
GRI – Global Reporting Initiative
IIRC – International Integrated Reporting Council
IIRF – International Integrated Reporting Framework
IR – Integrated Reporting
KPI – Key Performance Indicator
MDG – Millennium Development Goal
NEMA – National Environmental Management Act
NDP – National Development Plan
NPC – National Planning Commission
NWA – National Water Act
NWSBI – National Water Services Benchmarking Initiative
OECD - Organization for Economic Co-operation and Development
PFMA – Public Finance Management Act
RPMS – Regulatory Performance Management System
SAAWU – South African Association of Water Utilities
SALGA – South African Local Government Association
SFWS – Strategic Framework for Water Services
SHC – Share Holders Compact
SIIUWM – Sustainability Index for Integrated Urban Water Management
SWOT – Strengths, Weaknesses, Opportunities and Threats
UNCSD – United Nations Commission on Sustainable Development
UNEP – United Nations Environment Programme
UNESCO – United Nations Educational, Scientific and Cultural Organisation
UNGC – United Nations Global Compact
WEF – World Economic Forum
WISA – Water Institute of Southern Africa
WRC – Water Research Commission
WRF – Water Research Foundation

WSA – Water Services Authority

WSDP – Water Services Development Plan

WSP – Water Services Provider

WSSMF – Water Services Sustainability Monitoring Framework

1 Section 1: Academic Paper

1.1 Abstract

The Constitution and legislative framework of South Africa mandates sustainable development to ensure the current and future generations are able to live healthy social and economic lives in an enduring environment (Government Gazette, 1996:8). Sustainability commonly includes social, environmental and economic dimensions but an emerging trend to include a fourth dimension i.e. institutional / governance or ethical is also gaining acceptance (Valentin and Spangenberg, 2000:382).

Water has a critical role in sustainable development in South Africa as water resources become fully harnessed to meet social and economic development needs. It is identified as a key enabler of social and economic transformation for South Africa in the National Development Plan (National Planning Commission, 2011:177). The Department of Water and Sanitation (DWS) is legislated as the custodian of water resources and the regulator of water services in South Africa (Government Gazette, 1998 (a):8). As such it is required to ensure that this strategic resource is governed in a socially, economically and environmentally acceptable manner (Government Gazette, 1997:35).

The DWS has ten established water boards to assist with bulk water service provision. These water boards collectively supply potable water to 57% of the population on a daily basis (DWA, 2013:19). The sustainability of these institutions is therefore vital and the DWS is mandated to regulate and monitor these entities. This is done through the annual agreement of a Share Holders Compact (SHC) that has 27 key performance indicators with agreed baselines and targets for each water board (Government Gazette, 1997: 50).

A key question to be answered by this research is how effective is the Share Holders Compact to monitor the sustainability performance of South African water boards? This paper presents a detailed view of the legislated sustainability mandate and best practices to evaluate the adequacy of the current SHC. Analysis reveals that the

SHC does not adequately meet the mandatory monitoring requirements nor is it aligned with best practice for sustainability performance monitoring.

A new shareholders compact termed the Water Services Sustainability Monitoring Framework (WSSMF) has been developed in response to these shortfalls. The WSSMF is an outcomes based tool that could significantly improve the monitoring of water board sustainability in South Africa with further consultation and development with critical sector stakeholders.

Keywords: South African water boards, sustainability, triple bottom line, shareholders compact, sustainability performance monitoring, indicators, indices.

1.2 Introduction

“Perhaps the most troubling aspect of this assessment is that the rate of change now seen across the water cycle leaves water experts somewhat perplexed; history is no longer a reliable means of predicting future water demand and availability” (UNESCO, 2012:18).

The 2012 United Nations World Water Report quote highlights the critical need for an improved understanding of how to achieve sustainable water services. The United Nations has had the emerging global water sustainability crisis in focus since 1992 (UNCSD, 2011:1). Global business leaders and decision makers are also concerned and include the water sustainability crisis in the top three risks to be addressed by business strategies and plans (WEF, 2014:9).

Africa’s water sustainability crisis context is aggravated by poverty, rapid population growth and rapid urbanization (UNESCO, 2012:177). These are compounded by over abstraction of resources, human resource skills shortages, low public awareness and market failure to price water adequately (UNEP, 2006:8-10).

South Africa shares the African context but is also the 30th driest country in the world (DWA, 2013: iii), has impounded most of its surface water resources and has utilised 40% of its groundwater resource with remaining groundwater water quality uncertain (DWA, 2013:6-7).

The countries water sector asset base has an estimated total replacement value of R850 billion (DWA, 2013:52) while water services revenue is estimated at R33 billion per annum (DWA, 2013:61). Yet approximately 2.2 million and 4.5 million households still require access to basic water and sanitation services respectively (DWA, 2013:28-29).

The Constitution and legislative framework of South Africa mandates sustainable development to ensure the current and future generations are able to have healthy social and economic lives in an enduring environment (Government Gazette,

1996:8). Sustainability commonly includes social, environmental and economic dimensions often referred to as the triple bottom line. An emerging trend to include a fourth dimension i.e. institutional / governance or ethical is also gaining acceptance (Valentin and Spangenberg, 2000:382; Burford et al, 2013: 3035; Mutiyisa and Yarime, 2014:206).

Water has critical role in sustainable development in South Africa as water resources become fully harnessed to meet social and economic development needs. The Strategic Framework for Water Services (SFWS) was adopted by the South African government in 2003 to ensure access to equitable, affordable, effective, efficient and sustainable water services (DWA, 2003:9).

The theme of sustainable water services continues in national plans of the country. The National Development Plan that defines the countries 2030 vision for eliminating poverty and reducing social inequality identifies sustainable water services as a key enabler of social and economic transformation (National Planning Commission, 2011:177).

The Department of Water and Sanitation (formerly Department of Water Affairs) is legislated as the custodian of water resources and the regulator of water services in South Africa (Government Gazette, 1998 (a):8). It is required to ensure that this strategic resource is governed in a socially, economically and environmentally acceptable manner (Government Gazette, 1997:35).

The DWS has ten established water boards to assist with bulk water services provision (Government Gazette, 1997:31). Water services include water and sanitation services in South Africa (Government Gazette, 1997:10).

South Africa's ten water boards are responsible for 57% of the countries domestic water supply to approximately 28 of the 51.77 million people (DWA, 2013:19). It is crucial that water boards are therefore sustainable. The DWS is mandated to monitor the performance of water boards and utilises a SHC for this purpose (Government Gazette, 1997: 50).

The aim of the research is therefore to achieve the following objectives:

1. Describe best practice for sustainability monitoring frameworks for water services
2. Outline South Africa's water services sector mandatory and voluntary requirements with regards to sustainability monitoring
3. Evaluate South Africa's current water services performance monitoring frameworks for water boards against findings from goals one and two
4. Develop an improved framework for assessing South African water board's performance in their compliance and sustainability journey
5. Demonstrate the improved framework functionality with a sample of water boards audited performance data from the 2012/13 financial year

1.3 Literature Review

A literature review was undertaken to understand the concept of sustainability, the South African water service sector, including its mandatory and voluntary requirements with regards to sustainability monitoring. South Africa's current water services performance monitoring framework for water boards was also reviewed. Best practice for sustainability monitoring frameworks for water services was finally considered.

1.3.1 The Concept of Sustainability

Research literature generally agrees that the concept of sustainability in any context must ensure an appropriate balance between economic achievement, social well-being and environmental preservation to achieve intergenerational equity (Milman and Short, 2008: 758; Mori and Christodoulou, 2012: 96). An emerging trend is that this requires a fourth dimension of sound institutional / governance arrangements for this to be achieved (Dahl, 2012:16; Mutisya and Yarime, 2014:206; Burford et al, 2013: 3036).

Sustainability is an "evolutionary progression" towards more sustainable practices (Campbell, 1996:262). McAlpine and Birnie (2005:244) state that "as people and society change, so sustainability changes with them". It can be stated then that

sustainability is not so much a destination but a journey about “managing and living with change” (van Leeuwen et al, 2012:2193).

Callado and Fensterseifer (2011:44) and Davidson (2011:356) emphasize the need for a common definition of sustainability to be agreed before it can be measured. Most water resource management definitions of sustainability emphasize that “any water related decision maker and /or other stakeholder to consider every impact of their water related programs on both present and future generations” (Julwana et al, 2012:7). This provides guidance for a sustainability definition for water utilities such as water boards.

The Effective Utility Management (EUM) has developed a sustainability definition for water utilities as “The use of natural, community, and utility resources in a manner that satisfies current needs without compromising future needs or options” (EUM, 2008:22).

1.3.2 Pertinent South African Legislation applicable to Water Boards

The Constitution (Government Gazette, 1996:1), the NWA (Government Gazette, 1998(a):1), the Water Services Act (Government Gazette, 1997:1), the NEMA (Government Gazette, 1998(c):1) and the PFMA (Government Gazette, 1999:1) are key legislative documents for water services in South Africa.

1.3.2.1 *The Constitution of South Africa*

The Constitution ensures the right to adequate water, health services and a healthy environment which can be viewed as intended outcomes (Government Gazette, 1996:1251, 1255).

1.3.2.2 *The National Water Act*

The NWA regulates water resources and mandates DWS as the custodian (Government Gazette, 1998 (a):8). The NWA seeks to ensure (i.e. intended outcomes) that water resources are allocated and utilised in a sustainable manner for the benefit of people and the environment (Triologue, 2010: 34).

1.3.2.3 The Water Services Act

The Water Services Act ensures (i.e. intended outcomes) that access to basic water services, services standards and norms, water services planning, water services institution regulation and monitoring are achieved by the State through the Office of the Minister of Water and Sanitation (Government Gazette, 1997:2). In particular water boards are required to “provide efficient, reliable and sustainable water services; optimally use available resources; strive to be financially viable; promote the efficiency of water services authorities; take cognizance of the needs of water services institutions, consumers and users; take into account national and provincial policies, objects and developments; act in an equitable, transparent and fair manner; comply with health and environmental policies; take reasonable measures to promote water conservation and water demand management including promoting public awareness of these matters” (Government Gazette, 1997:35).

1.3.2.4 The National Environmental Management Act

Sustainability is strongly emphasised in the NEMA where people and their needs are to be at the forefront of developmental decision making (i.e. intended outcomes) including the provision of water services while ensuring that development is sustainable (Government Gazette, 1998(c):11).

1.3.2.5 The Public Finance Management Act

The Public Finance Management Act (PFMA) ensures (i.e. intended outcomes) public entity finances are managed in a sound, transparent and accountable manner (Government Gazette, 1999:12). The DWS and water boards are subject to the PFMA. Key implications include effective, efficient, transparent financial and risk management, adequate internal controls (Government Gazette, 1999:36), accurate and timeous annual reports that comply with the applicable accounting standards prescribed by National Treasury (Government Gazette, 1999:51).

Additional responsibility is placed on public entities such as water boards to prepare an annual budget and to produce an annual business plan that details its intended

business activities for a three year period that includes a SHC (Government Gazette, 1999:50).

1.3.3 Mandatory Water Service Sustainability Monitoring in South Africa

1.3.3.1 *The Water Board Share Holders Compact (SHC)*

The National Treasury Regulations, GN 225 IN GG 27388 of 15 March 2005 requires a SHC to be concluded between Water Boards and the DWS that includes key performance measures and indicators to be attained (see Annexure F). The SHC is the only performance monitoring framework used exclusively to measure sustainability performance of water boards in South Africa (DWA, 2007:18). The basis of the SHC is the annual business plan of water boards required in terms of Section 40 of the Water Services Act and section 29 of the Public Finance Management Act (DWA, 2007:4).

The SHC contains 19 mandatory strategic objectives covering social, governance and financial objectives (Amatola Water, 2013(2): 9). The predominance of social objectives is perhaps explained by the strong developmental focus of the SHC (Amatola Water, 2013(2):4). The glaring omission of any mandatory environmental strategic objectives is curious considering the environmental rights entrenched under section 24 of the Constitution (Government Gazette, 1996: 1251), the environmental stewardship of water resources detailed in section 2 of the National Water Act (1998) and section 2 of the Water Services Act (1997).

The SHC's social strategic objectives include water quality compliance, reliability of supply, staff turnover, increasing Broad Based Black Economic Empowerment (BBBEE) expenditure, increased access to services, training and skills development, jobs created and corporate social responsibility initiatives. The governance strategic objectives include financial reporting compliance, board member attendance, effective internal controls and risk management, bulk supply agreements concluded with municipalities and other customers, achieve statutory reporting compliance and good governance. The financial strategic objectives include minimizing non-revenue water, improve financial ratios, manage costs within approved budget, capital

expenditure and engagement in secondary activities (e.g. Amatola Water, 2013(2): 9).

Each strategic objective requires a water board specific baseline measurement and projected targets for a five year period. The mandatory strategic objectives have 27 associated indicators. The social strategic objectives have 9 quantitative indicators, the financial strategic objectives have 12 quantitative indicators and the governance strategic objectives have one qualitative and 5 quantitative indicators (Amatola Water, 2013(2): 9).

The SHC does not allow the DWS to compare sustainability performance between water boards due to the baselines and targets being unique to each water board. It also does not allow the regulator to establish how relevant the water board baselines and targets are with regards to measuring sustainability.

1.3.3.2 The Regulatory Performance Management System (RPMS)

The DWS has many monitoring systems to monitor water services institutions to ensure that national standards, norms and planning compliance are achieved (DWA, 1997:51). The RPMS is a web-, risk-based outcomes monitoring and evaluation system for municipalities. The system focuses on the four strategic objectives of financial viability, customer satisfaction, institutional effectiveness and technical efficiency as depicted (see Annexure D) (DWA, 2012b:11). DWS sets a minimum number of key performance indicators required for each strategic objective aligned with national targets including prescribed minimum risks and associated controls per KPI (DWA, 2012b:11).

Limitations of the RPMS appear to include that it is focused on municipalities only and that having only four outcomes may exclude others that may be relevant water services, e.g. the ten outcomes suggested in the EUM framework (EUMC, 2008:4) .

1.3.3.3 The Blue and Green Drop Systems

The BDS' and GDS' intentions are to incentivize municipal water and waste water quality legal compliance and best practice (DWA, 2009:3). Quality results are

submitted monthly to DWS via their web-based water quality monitoring system (EWQMS) (DWA, 2009:5). The criteria for drinking water and waste water are weighted to incentivize progressive quality improvement (see Annexure E) (DWA, 2009:11). The aspects monitored include product quality, reporting frequency, human resources, health and safety, management processes and asset management (DWA, 2009:4-7). Performance is incentivised through the publication of results and certification in recognition of excellence (DWA, 2009:11).

1.3.4 Voluntary Sustainability Performance Monitoring Systems

1.3.4.1 The Sustainability Index for Integrated Urban Water Management (SIIUWM)

The Sustainability Index for Integrated Urban Water Management was developed through research undertaken by the University of Cape Town and funded by the South African National Research Foundation (NRF). The SIIUWM provides city stakeholders a measure of the sustainability of the urban water management practice with the South African context considering the emerging risks of climate change, industrialisation and population growth which are not addressed by other existing sustainability frameworks in South Africa (Carden and Armitage, 2013: 346)

The SIIUWM consists of 16 indicators with 35 quantitative and qualitative variables selected on the basis of their input data being in existence, easily accessible and regularly updated (see Annexure C). Wide data ranges per variable required a standardisation process to allow comparisons between cities' sustainability scores. Raw input data was converted into categorical data combined with a predetermined weighting. Indicator scores were calculated by determining the geometric means. Sustainability dimension scores are calculated as the mean of the relevant indicator scores. The city sustainability score is then the weighted mean of the dimension scores (Carden and Armitage, 2013: 347).

A limitation of SIIUWM is that its focus is on cities. Municipalities in South Africa all incorporate urban and rural areas including metropolitan areas. Considering that the WSA function is the responsibility of municipalities, SIIUWM can only provide

stakeholders, decision makers and the regulator with part of the sustainability status of municipalities.

1.3.4.2 The National Water Service Benchmarking Initiative (NWSBI)

The SALGA NWSBI has its origin in a Water Research Council pilot project launched in April 2003 (Pybus et al, 2005: 6). The pilot has since been developed to its present version that uses 31 indicators to monitor municipal performance in terms of water conservation and demand management, human resources and skills development, service delivery and backlogs, operations and maintenance, product quality and financial management (SALGA, 2014:21). Participation by municipalities is on a voluntary basis (SALGA, 2005: 5). The NWSBI only allows comparisons between municipalities in the same category i.e. metropolitan, local or district municipalities. This is done by calculating the weighted average indicator scores per municipality. Each municipality's weighted indicator scores are then averaged for a score out of 10, with a higher overall score implying better municipal water services performance (SALGA, 2008:140).

1.3.4.3 The South African Association of Water Utilities (SAAWU) Benchmarking System

SAAWU established a performance benchmarking system in 2000. The benchmarking system allowed water boards to monitor and compare their bulk service delivery performance (Pybus, 2002:5). Pybus (2002:56) acknowledges that the variation in water board size and economic circumstances makes direct comparisons across the full range of water boards challenging, but possible where similar contexts exist. There are 60 key performance indicators in this benchmarking system (Ramjatan et al, 2006: 4). Indicators have been clustered by SAAWU into the performance quadrants of customer service, internal processes and operations, finance, learning and growth that appear to be based on the Balanced Corporate Scorecard concept developed by Norton and Kaplan (Kaplan and Norton, 2001:90). Despite this thematic refinement, the system retains a strong financial bias while the social and environmental aspects of sustainability seem neglected. Sanitation also receives no attention (Ramjatan et al, 2006: 5).

1.3.5 International Water Service Sustainability Monitoring Frameworks

For this research, a non-exhaustive review of prominent international sustainability monitoring frameworks was also undertaken. Prominent frameworks include UNGC, the CDP, the GRI, the IIRF, the CWDF and EUM and are explained in further detail below.

1.3.5.1 *The Corporate Water Disclosure Framework (CWDF)*

The CWDF was developed by the CEO Water Mandate for water management disclosure to allow better comparability by stakeholders between organizations based on the use of common metrics (CEO Water Mandate, 2012:5). The CWDF focuses on the organizations current state, implications of that state and the organizations response. The current state details business related water resource conditions, water resources withdrawals, water use intensity, waste water discharges and compliance matters (CEO Water Mandate, 2012:49-53). The response component provides clarity on an organizations response in terms of policies, plans, strategies, governance, management practices, technologies, innovation or business realignment efficiency and effectiveness (CEO Water Mandate, 2012:71). A limitation of the CWDF appears to be that it informs stakeholders of improving or declining performance with regards to water stewardship, but cannot indicate where an organization is in terms of its water sustainability journey.

1.3.5.2 *The Carbon Disclosure Project - Water (CDP)*

The CDP is unique in that it was the first international initiative by investors to improve how business approaches the environment and governance rather than just financial performance (Hale and Held, 2011:213). Industry sector leading corporations complete an annual water disclosure questionnaire including the 500 largest global, 500 American, 100 largest Australian and 100 largest South African companies with high water usage or supply chains with high water risk. Other companies may participate on a voluntary basis (CDP, 2014a:1). Information is collated concerning the current business state, the approach to risk, risk implications, water usage, leadership, and the level of accountability for water reporting. A newly

developed progressive stepped scoring approach is utilised where scoring is based on disclosure detail, awareness, management and leadership (CDP, 2014c:3). Scoring is dependent on the accuracy and detail of the information provided in the answers (CDP, 2014c:4).

1.3.5.3 The United Nations Global Compact (UNGC)

The UNGC was launched in 2000 with the goal of promoting responsible global corporate business policy and practice through the annual corporate disclosure of progress towards embedding and implementing ten globally accepted principles related to human rights, labour practices, environmental responsibility and anti-corruption (see Annexure G) (UNGC, 2012:2). . The UNGC laid claim to being the largest corporate responsibility initiative in the world (UNGC, 2012:2). Participation is voluntary but binding once a commitment has been made by a corporation (UNGC, 2012:3).

Corporation performance is classified into either the Learner, Active, Advanced or Leadership categories (UNGC, 2012:5). Although not specific to water services sustainability monitoring, the UNGC does incorporate strong social and environmental aspects of sustainability (UNGC, 2013:5) and therefore also provides a means of comparing different organizations performance through setting minimum reporting requirements linked to different classifications.

1.3.5.4 The Global Reporting Initiative (GRI)

The GRI has gained international acceptance as one of the preferred sustainability reporting frameworks (Hale and Held, 2011:281). Its popularity is attributed to the voluntary, incremental and flexible approach it offers organizations for sustainability reporting (Verschoor 2011:12).

GRI provides organizations of all sizes with a means of evaluating performance in a “standardised, comparable and consistent” manner (Hale and Held, 2011:282). A “core” or “comprehensive” approach (see Annexure J) may be taken where the core approach applies to organizations either commencing with the utilization of the framework or those that have limited resources (GRI, 2013a:8). The comprehensive

approach increases the rigour and level of detail for sustainability reporting with a corresponding requirement for an increase in resource allocation for this activity (GRI, 2013a:11).

GRI water indicators include “total water withdrawn by source, water sources significantly affected by withdrawal of water, percentage and total volume of water recycled and reused” (GRI, 2013b: 96). Effluent and waste indicators relevant to sanitation include “total water discharge by quality and destination, total number and volume of significant spills, Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization’s discharges of water and runoff” (GRI, 2013b: 121).

1.3.5.5 The International Integrated Reporting Framework (IIRF)

The International Integrated Reporting Council has developed the IIRF 2013 (ref). The IIRF was developed for the private sector to engage with the providers of financial capital by providing a short, medium and long term view of the organizations value proposition. IIRF requires annual reporting with the specific focus on accountability and stewardship of the various capitals the organization owns or utilizes for its business activities (IIRC, 2013:8).

The fundamental concept underpinning the IIRF is that organizations depend on various combinations of capitals for their success. Capitals are “stores of value” that increase and decrease over time through business activities including financial, manufactured, intellectual, social and relationship, human and natural (IIRC, 2013:9). It is not prescriptive in terms of indices, indicators, baselines, benchmarks or targets but encourages the use of internationally accepted standards, indices and indicators to facilitate comparison of value creation between organizations (IIRC, 2013:23).

IIRF is essentially about developing integrated reporting for corporations and as such is not specifically focused on water services sustainability. However the six capitals do incorporate the traditional social, financial and environmental, as well as the emerging governance dimensions of sustainability. The approach also allows entities

to measure changes in the capitals over time and set upper and lower limits for each capital in terms of sustainability performance.

1.3.5.6 The Effective Utility Management Framework

The EUM framework was American water utility leaders and expert's response to improve the management and sustainability performance of the utilities (EUMC, 2008:1). EUM defines sustainability as "the use of natural, community, and utility resources in a manner that satisfies current needs without compromising future needs or options" (EUMC, 2008:22) and seems adequate in terms of including the core elements of sustainability.

Ten attributes of effectively managed water sector utilities (see Annexure K) were identified including product quality, customer satisfaction, employee and leadership development, operational optimization, financial viability, infrastructure stability, operational resiliency, stake holder understanding and support, community sustainability and water resource adequacy (EUMC, 2008:4).

EUM is not prescriptive in terms of the indicators that utilities should allocate to attributes (EUMC, 2008:16). EUM does provide a total of 34 indicators sourced from the American Water Works Association and the Water Environment Federation Qualserve performance monitoring program that is used by over 200 utilities in North America (WRF,2009: xvi). These indicators are recognised as being widely used by utilities and directly related to the ten attributes (EUMC, 2008:17). EUM is an outcomes based approach to water services sustainability and in this regard is aligned with the RPMS of DWS but with more specific outcomes. It is also specifically designed for water service utilities.

The review of the 2012/13 annual reports of South African water boards has also revealed the use of EUM by Umgeni Water and Amatola Water indicating a growing acceptance of the framework as appropriate for the South African context (Annexure O).

1.4 Research Method

1.4.1 Evaluation Research Component

A qualitative normative theory, evaluation research method (Hall and Hall, 2004:55) was utilised to achieve the first three objectives of the research. The objectives to first understand current best practice for sustainability monitoring frameworks and the mandatory requirements for water services sustainability monitoring frameworks in South Africa was achieved via an extensive literature review. The evaluation research method was used where South Africa's current water services monitoring framework for water boards was evaluated for its adequacy to monitor sustainability compared with legislated requirements, national and international best practices (Hall and Hall, 2004: 55).

Data collection for the evaluation research was sourced via documentation analysis (Babbie, 2011:354). The 2012/13 audited annual reports for the ten water boards was sourced for this purpose. National legislation that has a direct influence on the mandatory aspects of the South African water sector was sourced through their respective published Government Gazettes. National and global monitoring best practice was sourced respectively from nationally and internationally recognised institutions and associations. A critical review of the data collected was undertaken to obtain a "thick description" of sustainability performance monitoring framework requirements (Holliday, 2002: 79). This thick description was used to evaluate the appropriateness and effectiveness of the current shareholders compact to monitor water board sustainability performance.

Based on the outcome of the above evaluation research, an improved sustainability performance monitoring framework for water boards is proposed and has been developed. The proposed sustainability monitoring framework was submitted for critique to a group of experts drawn from multiple disciplines and organizations relevant to water board sustainability from across South Africa (Litosseliti, 2003: 8). The experts were consulted through a series of individual meetings to consider the proposed framework, its functionality and the indicators to be incorporated. The experts provided reliability and validity checks for the proposed sustainability

performance monitoring framework to ensure it is relevant and applicable to South African water boards (Hall and Hall, 2004: 51).

1.5 Results

1.5.1 Evaluating a “Thick Description” of a Sustainability Monitoring Framework to the Share Holders Compact for Water Boards

1.5.1.1 *The Sustainability Imperative*

South Africa is a water scarce country and is the 30th driest country in the world (DWA, 2013: iii). This combined with emerging water service challenges including water service scheme non-functionality, non-revenue water, environmental pollution from poorly managed waste water treatment works and increasing demand for higher levels of service places enormous stress on water services in the country (DWA, 2013:68-69). The NDP also identifies that adequate water resources combined with efficient and effective water services are key enablers to achieving the South Africa’s desired economic growth and social development goals (NPC, 2011: 177-178). Sustainable water services (and by default, associated institutions) is therefore an imperative for South Africa’s present and future wellbeing.

The SHC is the performance contract between the DWS and water boards. The imperative to ensure water service provision is rendered in a sustainable manner implies the SHC is in fact a sustainability performance contract (Government Gazette, 1997:35) and (DWA, 2003:57). This implies that the financial, social, environmental and governance dimensions of sustainability should be adequately quantified in the SHC (Dahl, 2012:16; Mutisya and Yarime, 2014:206; Government Gazette, 1996: 1251; Government Gazette, 1996: 1255; Trialogue, 2010: 34; Government Gazette, 1997:35; Government Gazette, 1998a: 9; Government Gazette, 1998(c):11; DWA, 2003:9; Burford et al, 2013: 3035; Milman and Short, 2008: 758; Mori and Christodoulou, 2012: 96).

Analysis of the SHC reveals an economic bias (Liner and deMonsabert, 2011: 341) and the environmental dimension of sustainability has no performance indicators

(Amatola Water, 2013(2): 9). This is contrary to the vision of sustainability encapsulated in legislation, the NDP and international best practice.

1.5.1.2 An Outcomes Based Approach

The review of the Constitution and legislation applicable to water services reveals the intention for certain outcomes or “consequences” (Soanes, 2006: 616) to be realised including access to water services, a healthy environment, sustainable social and economic development, effective and efficient water resources and services, and accountable government (Government Gazette, 1998(a): 9), (Government Gazette 1998(c): 1) and (Government Gazette, 1997: 12). In particular, water board outcomes include service efficiency, service reliability, service sustainability, financial viability, resource optimisation, customer satisfaction, stakeholder support, environmental and social compliance (Government Gazette, 1997:35). The EUM adopts an outcomes based approach which aligns strongly with the requirements of South African legislation and has been specifically developed for water utilities (EUMC, 2008:4).

The SHC has been established on 19 objectives (Amatola Water, 2013(2): 9) or “aims or goals” (Soanes, 2006: 632) with associated indicators. While some could be classified as outcomes most are indeed objectives. Although valid as water services objectives these miss the intention of legislation to achieve particular governance, social, environmental and financial (sustainability) outcomes.

1.5.1.3 Comparative Performance

Local and international sustainability performance frameworks encourage comparative performance. The DWS RPMS (DWA, 2010:13), BDS (DWA, 2009: 4) and GDS (DWA, 2009:11) allow comparison of performance by reducing an entities performance to a percentage score. SIIUWM is similar but rates performance on a scale of 1 to 5 (Carden and Armitage, 2013: 347). The local benchmarking initiatives of SALGA (SALGA, 2008: 140) and SAAWU (Pybus, 2002: 5) promote comparison within the limitations of comparing entities with similar contexts. The GRI (Hale and Held, 2011: 282), the CDP (CDP, 2014(c): 7), the UNGC (UNGC, 2012: 5) and the CDWF (CEO Water Mandate, 2012: 84) do the same.

The SHC does not allow the comparison of sustainability performance between water boards due to the baselines and targets being unique to each water board.

1.5.1.4 Categorization of Sustainability Performance

The UNGC, CDP and SIIUWM provide insight into the categorization of sustainability performance. The UNGC (UNGC, 2012:5) and the CDP (CDP, 2014c:4) have set predetermined performance tiers while the SIIUWM (Carden and Armitage, 2013: 347) uses a numerical scale to rate performance.

The SHC lacks this sophistication and inhibits the assessment of where water boards are on their sustainability journey. Although the SHC does allow the water boards to set unique indicator baselines and targets it does not allow the regulator to establish how relevant the water board baselines and targets are with regards to measuring sustainability.

1.5.1.5 Mandatory Participation

Participation in most sustainability performance monitoring frameworks reviewed was voluntary. While this is a noble approach reality indicates most entities participating in such frameworks are already orientated towards becoming more sustainable businesses over time (Ried and Toffel, 2009, cited in Hale and Held, 2011:217) while others that should participate do not. This tends to support the argument that sector wide sustainability performance monitoring would be most successful if it was a regulatory requirement (Government Gazette, 1998(a): 62) and (Government Gazette 1999: 50). In this regard the SHC is effective as participation is legislated (Government Gazette, 1997: 50).

It can therefore be concluded that best practice of an outcomes based approach, categorisation of sustainability performance, comparing performance between water boards and meeting full mandatory sustainability performance monitoring requirements are not satisfied by the current SHC between water boards and the DWS. This has resulted in a proposed new sustainability performance monitoring framework for water boards being developed.

1.5.2 Development of the Proposed Framework

The development of the Water Services Sustainability Monitoring Framework (WSSMF) was undertaken in stages. The stages (outlined below per sub-heading) included the adoption of an appropriate sustainability definition, the development of the framework architecture, selection of indicators, indicator allocation per outcome per sustainability category, selection of indicator performance threshold values, selection of indicator weighting and the calculation of outcome index scores.

The development process included a series of interviews with industry experts with multi-disciplinary backgrounds (relating to water management) which were held in place of an intended focus group that failed to convene due to logistical challenges. The five expert interviews were utilised to refine the proposed WSSMF architecture, select indicators, set indicator weighting, agree indicator allocations per outcome and set indicator performance threshold values (Callado and Fensterseifer, 2011:46), (Yigitcanlar and Dur, 2010: 328) and (Juwana et al, 2012: 10).

1.5.2.1 *Framework Architecture*

The WSSMF was developed using Microsoft Excel and was chosen due to its universal acceptance as a business tool. Other software applications could prove more robust should the WSSMF be developed further.

The literature review in section 1.3.1 highlighted the need to be able to quantify sustainability performance levels. Table 1 summarises the sustainability performance levels used in the key applicable frameworks considered in the literature review.

Table 1: Literature Review Framework Performance Rating approaches

| Framework | Performance Rating Used | | | |
|-----------|-------------------------|-----------|---------------|------------|
| SIIUWM | Score 1 -5 | | | |
| RPMS | % score | | | |
| SALGA NBI | % score | | | |
| BDS | % score | | | |
| GDS | % score | | | |
| CDP | Disclosure | Awareness | Management | Leadership |
| UNGC | Learning | Active | Advanced | Leadership |
| GRI | Core | | Comprehensive | |
| CDWF | Basic | | Advanced | |

The SIIUWM, RPMS, SALGA NWSBI, BDS and GDS performance rating approaches are quantitative, while the CDP, UNGC, GRI and CDWF use qualitative descriptions to define sustainability performance. The qualitative approach was preferred for the WSSMF architecture as it conveys the concept of sustainability journey more succinctly than the quantitative approach. It is also selected to motivate water boards towards improved sustainability performance e.g. it could be viewed that there is little difference between a 60% and 70% score whereas there is a clear difference between an “active” or “advanced” rating used by the UNGC.

The UNGC categorical approach was ultimately preferred over the CDP, GRI and CWDF. This was based on the UNGC’s more widely accepted international use for corporate disclosures than the CDP and an established understanding of different performance levels (UNGC, 2012:2). The UNGC was also preferred to the GRI and CDWF rating systems that only provided two performance options respectively which seems too broad to monitor the sustainability journey of water boards. These performance categories are linked to the proposed framework outcomes as presented in table 2.

The literature review indicates that South African water services legislation is intended to be outcomes-based. The EUM is an outcomes based framework for water utilities which lead to its incorporation into the WSSMF (EUMC, 2008:4). EUM is aligned with the sustainability principles defined by Loucks and Gladwell (1999 as cited by Juwana et al, 2012: 9) including “water infrastructure, environmental quality,

economics and finance, institutions and society, human health and welfare as well as planning and technology”. The 10 outcomes of the EUM including product quality, customer satisfaction, employee and leadership development, operational optimization, financial viability, infrastructure stability, operational resiliency, stakeholder understanding and support, community sustainability and water resource adequacy (EUMC, 2008:4) were therefore incorporated into the WSSMF (see Annexure K for outcome definitions). The WSSMF architecture therefore allows each of the 10 water boards sustainability performance per outcome to be presented and compared once performance scores have been calculated (see Table 2).

Table 2: Water Services Sustainability Monitoring Framework Architecture

| | Performance Categories | Amatola Water | Bloem Water | Botshelo Water | Lepelle Northern Water | Magalies Water | Mhlatuze Water | Overberg Water | Sedibeng Water | Rand Water | Umgeni Water |
|--|------------------------|---------------|-------------|----------------|------------------------|----------------|----------------|----------------|----------------|------------|--------------|
| Financial Viability | Leading | | | | | | | | | | |
| | Advanced | | | | | | | | | | |
| | Active | | | | | | | | | | |
| | Learning | | | | | | | | | | |
| Operational Optimization | Leading | | | | | | | | | | |
| | Advanced | | | | | | | | | | |
| | Active | | | | | | | | | | |
| | Learning | | | | | | | | | | |
| Infrastructure Stability | Leading | | | | | | | | | | |
| | Advanced | | | | | | | | | | |
| | Active | | | | | | | | | | |
| | Learning | | | | | | | | | | |
| Water Resource Adequacy | Leading | | | | | | | | | | |
| | Advanced | | | | | | | | | | |
| | Active | | | | | | | | | | |
| | Learning | | | | | | | | | | |
| Operational Resiliency | Leading | | | | | | | | | | |
| | Advanced | | | | | | | | | | |
| | Active | | | | | | | | | | |
| | Learning | | | | | | | | | | |
| Product Quality | Leading | | | | | | | | | | |
| | Advanced | | | | | | | | | | |
| | Active | | | | | | | | | | |
| | Learning | | | | | | | | | | |
| Employee and Leadership Development | Leading | | | | | | | | | | |
| | Advanced | | | | | | | | | | |
| | Active | | | | | | | | | | |
| | Learning | | | | | | | | | | |
| Community & Environmental Sustainability | Leading | | | | | | | | | | |
| | Advanced | | | | | | | | | | |
| | Active | | | | | | | | | | |
| | Learning | | | | | | | | | | |
| Customer Satisfaction | Leading | | | | | | | | | | |
| | Advanced | | | | | | | | | | |
| | Active | | | | | | | | | | |
| | Learning | | | | | | | | | | |
| Stakeholder Understanding and Support | Leading | | | | | | | | | | |
| | Advanced | | | | | | | | | | |
| | Active | | | | | | | | | | |
| | Learning | | | | | | | | | | |

1.5.2.2 Performance Indicators

A detailed review of the 2012/13 Annual Reports of the ten water boards provided clarity on the use of various sustainability reporting frameworks and associated indicators in the South African water board sector. Annexure L indicates that Umgeni Water has the maximum of 123 indicators (Umgeni Water, 2013:175) while Mhlathuze Water has the least at 23 (Mhlathuze Water, 2013:27). The mean is 46.6 indicators. Six of the water boards have indicator sets that exceed the 27 required in the SHC, which supports the research evaluation conclusion that that SHC is inadequate to monitor sustainability performance of South African water boards.

Existing water board performance monitoring indicators were then combined with all the 632 various indicators sourced from the associated sustainability performance monitoring frameworks considered in the literature review. These were used as a basis to engage with industry experts to select relevant outcomes based indicators for the WSSMF. Annexure M shows the list of indicators presented to these experts.

A final set of 88 sustainability indicators (Annexure P) with their associated performance threshold values (Martinet, 2011: 193), indicator weighting and sustainability category allocations, were selected by the industry experts that could be strongly related to the 10 outcomes of EUM. The indicators were selected to generally comply with the principles of being simple to use, have sufficient scope, be readily measureable, produce performance trends and be sensitive to change (Harger and Meyer, 1996: 1753). Consideration was also given to the requirements for cost effective data collection, complimentary to existing regulatory programs and usefulness for decision making (Tanzil and Beloff, 2006: 47). The 88 indicators include 22, 11, 41 and 13 financial, environmental, social and governance indicators respectively.

1.5.2.3 Linking Indicators to Sustainability Performance Categories

A key consideration in the development of the WSSMF was how to relate indicators to the four sustainability performance levels (chosen as *Learning* to *Leading*, as outlined in section 1.5.2.1 above). Two options were considered: The first was that all outcome indicators apply across the entire sustainability performance range. Minimum allowable

threshold values for an indicator would equate to “learning” performance while maximum threshold values would equate to “leading” performance for an indicator (Juwana et al, 2012: 15).

The alternative option was that each indicator is allocated to a specific sustainability performance level within a particular outcome. Minimum to maximum threshold values are still allocated for performance measurement per indicator (Juwana et al, 2012: 15). This option implies that the number of indicators used to measure sustainability performance increases as the journey from “learning” to “leading” is undertaken by a water board.

This latter, alternative option was selected for the WSSMF, based on comparing both options with the same indicators, indicator weighting and indicator threshold values. This revealed that the sustainability performance level transition values for each indicator in the first option could be set at any random point within the performance threshold values. The alternative option sustainability performance level transition values are determined by the number of indicators in each performance level per outcome and their weighting as presented in Table 3.

Data collection does have a cost implication (Tanzil and Beloff, 2006: 47). The selected approach allows water boards to be measured on the indicators they can afford to monitor initially, with the view that over time, more indicators would be selected to improve the organisations understanding of its sustainability status and improve performance. This was believed to be a relevant concern for the South African water board sector that has significant differences in context, financial resources, human resources and approaches to performance monitoring as presented in Annexures N and O.

1.5.2.4 Determining Sustainability Performance Outcome Index Scores

The key aspect of the WSSMF was the development of an index score per outcome. This was achieved through the use of continuous scaling (Juwana et al, 2012: 14) to convert the individual indicator scores to ratios (Böhringer and Jochem, 2007:2), (Yigitcanlar and

Dur, 2010: 328) and (Juwana et al, 2012: 13) and then calculating the arithmetic mean of the weighted indicator ratio products.

The “perfect substitutability and compensability” challenge (Nardo et al, 2005, cited in Julwana et al, 2012: 22) of using the arithmetic mean was addressed when converting indicator scores to ratios. All the indicators selected have linear scales and it was therefore possible to ensure all indicator ratio scores increase with improving and decrease with deteriorating performance, regardless if improving sustainability implies a “smaller/lesser indicator score” as is for instance the case with debtors days, where lesser or smaller numbers (i.e. days) relate to improved sustainability (Yigitcanlar and Dur, 2010: 330; Juwana et al, 2012: 22).

The 2012/13 Amatola Water performance for the *Infrastructure Stability Outcome* of the WSSMF is used as an example of how the outcome index is derived from performance scores and is presented in Tables 3, 4 and 5.

The 2012/13 Amatola Water annual report indicates that operation and maintenance budget expenditure was 97%, capital budget expenditure variance was 92.24% and the implementation of the preventative maintenance program was 97% are presented in Table 3.

These performance scores were converted to ratios using the following formula:

| |
|--|
| $\text{Performance Score Ratio} = \frac{\text{Performance Score} - \text{Minimum threshold value for Indicator}}{\text{Maximum indicator threshold value} - \text{minimum indicator threshold value}}$ |
|--|

The above performance scores corresponding ratios were calculated to be 0.85, 0 and 0.88 respectively. Note that the performance score of 92.24% for capital budget expenditure variance falls below the desired minimum performance threshold variance value of 20% resulting in a default performance score ratio value of zero. Similarly, if the capital budget expenditure variance was 0% that equivalent to the maximum

performance threshold value of the ratio score then the performance ratio score defaults to a value of 1.

The allocation of weights to indicators has been included in the WSSMF but for the purposes of simplicity all indicators per outcome were weighted equally as correlation between the various selected indicators included in the WSSMF has not been addressed in this research (Julwana, 2012: 19). This area will require further refinement through either a further participatory based or statistical based approach in future research (Juwana et al, 2012: 18).

Table 3: 2012/13 WSSMF Infrastructure Stability Outcome with Performance Scores and Ratios for Amatola Water

| No. | Infrastructure Stability | Indicator Classification | | | | Sustainability Category | KPI Weighting | Unit | Threshold Values | | Amatola Water |
|-----|--|--------------------------|---------------|--------|------------|-------------------------|---------------|------|------------------|-----------|---------------|
| | | financial | environmental | social | governance | | | | Least Preferred | Preferred | |
| 1 | O&M budget expenditure % | 1 | 0 | 0 | 0 | | % | 80 | 100 | 97 | |
| | | | | | | Learning | 0.2 | | | 0.8500 | |
| 2 | Capital budget expenditure variance % | 1 | 0 | 0 | 0 | | % | 20 | 0 | 92.24 | |
| | | | | | | Learning | 0.2 | | | 0.0000 | |
| 3 | % attainment of capex project completion dates | 0 | 0 | 1 | 0 | | % | 50 | 100 | 0 | |
| | | | | | | Active | 0.2 | | | 0.0000 | |
| 4 | % implementation of preventative maintenance plans | 1 | 0 | 0 | 0 | | % | 75 | 100 | 97 | |
| | | | | | | Advanced | 0.2 | | | 0.8800 | |
| 5 | Treatment works uptime % | 0 | 0 | 1 | 0 | | % | 90 | 100 | na | |
| | | | | | | Leading | 0.2 | | | 0.0000 | |
| | No. Indicators per Sustainability Dimension | 3 | 0 | 2 | 0 | Total Weight Check | 1 | | | | |

The performance category scores are then calculated using the following formula:

$$\text{Performance category score} = \sum_{j=0}^n (R_j \times W_j)$$

where R = ratio score for the performance indicator score
 W = weighting assigned to the performance indicator
 n = number of performance indicators per performance category

To illustrate, the performance category scores for the 2012/13 *Infrastructure Stability Outcome* for Amatola Water is presented in Table 4.

Table 4: 2012/13 WSSMF Performance Category scores for the Infrastructure Stability Outcome for Amatola Water

| | Performance Categories | Amatola Water |
|--------------------------|------------------------|---------------|
| Infrastructure Stability | Leading | 0.00 |
| | Advanced | 0.18 |
| | Active | 0.00 |
| | Learning | 0.17 |

The 2012/13 *Infrastructure Stability Outcome* index score for Amatola Water is then calculated as the sum of the performance category scores which in this case is 0.35 (calculated as 0.18 + 0.17 from the data above in Table 4), as presented in Table 5.

Table 5 indicates that the sustainability performance category transition values for the *Infrastructure Stability Outcome* index are 0.4, 0.6 and 0.8. These values are calculated using the following formula:

| | |
|----------------------------|--|
| <i>Transition values =</i> | <i>Indicator weights in performance category + Σ indicator weights in lower performance categories</i> |
|----------------------------|--|

Table 5: 2012/13 WSSMF Infrastructure Stability Outcome Index score for Amatola Water

| Performance Categories and Organisations | Infrastructure Stability |
|--|--------------------------|
| Leading Level Transition Value | 1.00 |
| Advanced Level Transition Value | 0.80 |
| Active Level Transition Value | 0.60 |
| Learning Level Transition Value | 0.40 |
| Amatola Performance | 0.35 |

The WSSMF was then tested using audited performance data from the 2012/13 Annual Reports for the following four water boards: Overberg, Amatola, Umgeni and Rand Water. For the purpose of demonstrating the WSSMF, it was assumed that definition and the calculation of common indicators in the annual reports was standard.

1.5.3 Testing the Water Services Sustainability Monitoring Framework

The WSSMF has 88 key performance indicators of which 40, 46, 61 and 48 respectively from the 2012/13 annual reports of Overberg Water, Amatola Water, Umgeni Water and Rand Water were available for testing the functionality of the WSSMF. The indicators used and their respective ratio scores per outcome are presented in Annexure P.

Overberg was selected as the smallest water board in terms of annual revenue at approximately R31 million (Overberg, 2012: 38) and for its mix of domestic and agricultural water supply services. Amatola Water was selected for its mix of urban and rural supply services (Amatola, 2012: 7) while being representative of a grouping of 6 water boards with annual revenue between R290 to R640 million. Umgeni Water was selected as the second largest water board in terms of revenue R2, 081 billion (Umgeni, 2012: 124), its service mix of urban and rural water supply including urban waste water services. Rand Water was selected as the sector leader in terms of annual revenue at

R7, 751 billion (Rand, 2012: 177), the provision of water and waste water services to the economic hub of South Africa. The performance category scores per water board are presented in Table 6.

Table 6: Sustainability Performance Category scores for Overberg, Amatola, Rand and Umgeni Water

| | Performance Categories | Amatola Water | Overberg Water | Rand Water | Umgeni Water |
|--|------------------------|---------------|----------------|------------|--------------|
| Financial Viability | Leading | 0.01 | 0.00 | 0.06 | 0.11 |
| | Advanced | 0.04 | 0.01 | 0.07 | 0.15 |
| | Active | 0.00 | 0.10 | 0.12 | 0.14 |
| | Learning | 0.03 | 0.27 | 0.23 | 0.29 |
| Operational Optimization | Leading | 0.03 | 0.00 | 0.16 | 0.11 |
| | Advanced | 0.05 | 0.07 | 0.08 | 0.00 |
| | Active | 0.06 | 0.03 | 0.16 | 0.36 |
| | Learning | 0.06 | 0.14 | 0.15 | 0.15 |
| Infrastructure Stability | Leading | 0.00 | 0.00 | 0.00 | 0.00 |
| | Advanced | 0.18 | 0.04 | 0.00 | 0.00 |
| | Active | 0.00 | 0.02 | 0.00 | 0.06 |
| | Learning | 0.17 | 0.00 | 0.19 | 0.00 |
| Water Resource Adequacy | Leading | 0.00 | 0.00 | 0.00 | 0.00 |
| | Advanced | 0.00 | 0.00 | 0.16 | 0.17 |
| | Active | 0.00 | 0.00 | 0.00 | 0.00 |
| | Learning | 0.17 | 0.00 | 0.00 | 0.17 |
| Operational Resiliency | Leading | 0.16 | 0.17 | 0.17 | 0.32 |
| | Advanced | 0.17 | 0.00 | 0.12 | 0.00 |
| | Active | 0.12 | 0.17 | 0.13 | 0.15 |
| | Learning | 0.00 | 0.00 | 0.00 | 0.00 |
| Product Quality | Leading | 0.01 | 0.00 | 0.11 | 0.00 |
| | Advanced | 0.03 | 0.00 | 0.19 | 0.17 |
| | Active | 0.19 | 0.00 | 0.00 | 0.00 |
| | Learning | 0.22 | 0.13 | 0.25 | 0.25 |
| Employee and Leadership Development | Leading | 0.00 | 0.00 | 0.00 | 0.24 |
| | Advanced | 0.16 | 0.07 | 0.10 | 0.08 |
| | Active | 0.00 | 0.02 | 0.12 | 0.07 |
| | Learning | 0.07 | 0.00 | 0.15 | 0.10 |
| Community & Environmental Sustainability | Leading | 0.00 | 0.00 | 0.00 | 0.03 |
| | Advanced | 0.01 | 0.01 | 0.05 | 0.09 |
| | Active | 0.00 | 0.00 | 0.07 | 0.07 |
| | Learning | 0.00 | 0.02 | 0.10 | 0.11 |
| Customer Satisfaction | Leading | 0.20 | 0.00 | 0.00 | 0.00 |
| | Advanced | 0.00 | 0.00 | 0.00 | 0.00 |
| | Active | 0.30 | 0.00 | 0.20 | 0.20 |
| | Learning | 0.00 | 0.00 | 0.20 | 0.00 |
| Stakeholder Understanding and Support | Leading | 0.13 | 0.13 | 0.13 | 0.13 |
| | Advanced | 0.00 | 0.25 | 0.00 | 0.21 |
| | Active | 0.00 | 0.00 | 0.03 | 0.00 |
| | Learning | 0.14 | 0.27 | 0.25 | 0.29 |

The respective outcome index scores per water board and transition values between performance categories per WSSMF outcome are presented in Table 7. The data in Table 7 is presented in a radar chart in Figure 1:

Table 7: Outcome Index Scores for Overberg, Amatola, Rand and Umgeni Water

| Performance Categories and Organisations | Financial Viability | Operational Optimization | Infrastructure Stability | Water Resource Adequacy | Operational Resiliency | Product Quality | Employee and Leadership Development | Community & Environmental Sustainability | Customer Satisfaction | Stakeholder Understanding and Support |
|--|---------------------|--------------------------|--------------------------|-------------------------|------------------------|-----------------|-------------------------------------|--|-----------------------|---------------------------------------|
| Leading Level Transition Value | 0.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Advanced Level Transition Value | 0.00 | 0.00 | 0.80 | 0.83 | 0.50 | 0.75 | 0.74 | 0.90 | 0.80 | 0.75 |
| Active Level Transition Value | 0.00 | 0.00 | 0.60 | 0.50 | 0.33 | 0.50 | 0.37 | 0.54 | 0.60 | 0.50 |
| Learning Level Transition Value | 0.00 | 0.00 | 0.40 | 0.17 | 0.17 | 0.25 | 0.21 | 0.36 | 0.20 | 0.38 |
| Amatola Performance | 0.08 | 0.20 | 0.35 | 0.17 | 0.44 | 0.46 | 0.23 | 0.01 | 0.50 | 0.27 |
| Overberg Performance | 0.38 | 0.23 | 0.06 | 0.00 | 0.33 | 0.13 | 0.08 | 0.03 | 0.00 | 0.64 |
| Rand Performance | 0.48 | 0.54 | 0.19 | 0.16 | 0.42 | 0.55 | 0.37 | 0.21 | 0.40 | 0.40 |
| Umgeni Performance | 0.68 | 0.61 | 0.06 | 0.33 | 0.47 | 0.41 | 0.50 | 0.30 | 0.20 | 0.63 |

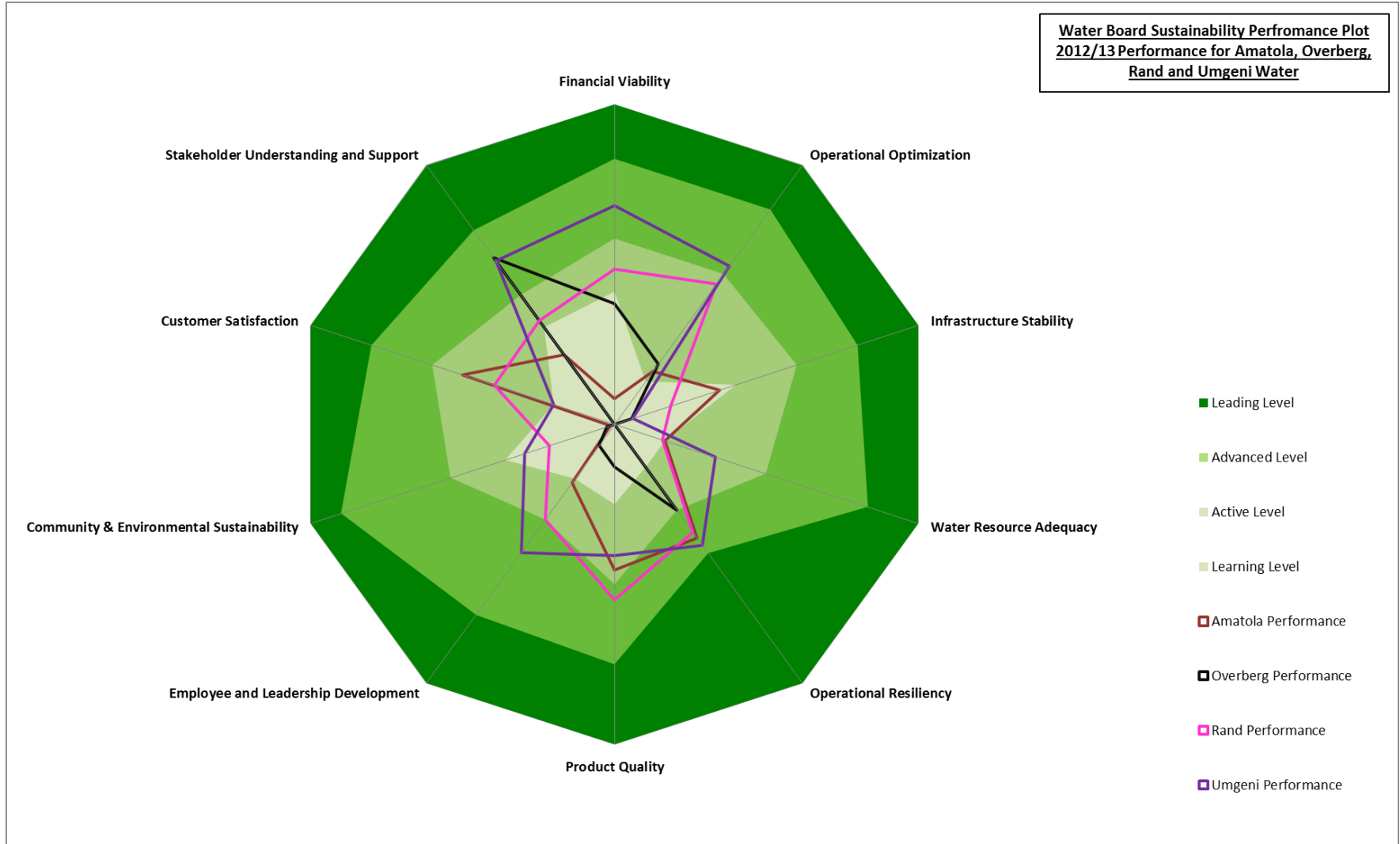


Figure 1: Outcome Indices Radar Chart for Overberg, Amatola, Rand and Umgeni Water

1.6 Discussion

The results presented in Tables 6, 7 and Figure 1 demonstrate that the WSSMF has the ability to give a numerical and graphical meaning to the input data in terms of classifying each water board's sustainability performance per outcome. Annexure N demonstrates that the four dimensions of sustainability are represented by 22 financial, 11 environmental, 42 social and 13 governance indicators (Dahl, 2012:16; Mutisya and Yarime, 2014:206 and Burford et al, 2013: 3036).

The outcomes-based approach of the WSSMF is aligned with the intention of South African water-related legislation (Government Gazette, 1997: 35) and has merit. An example is the financial viability outcome index scores for the four water boards. The high level summary of the 2012/13 annual reports presented in Annexure N could result in the conclusion that Rand Water having the largest revenue, profit and asset base of all the water boards must therefore be the most financially viable. The WSSMF clearly demonstrates that Umgeni Water has a better Financial Viability score than Rand Water. A similar argument applies when comparing Overberg Water and Amatola Water where Overberg is orders of magnitude smaller than Amatola Water and yet has a stronger Financial Viability score. The WSSMF clearly allows for comparison between water boards for sustainability performance despite their differing sizes and contexts.

The WSSMF approach to the categorization of sustainability performance (UNGC, 2012: 12) per outcome allows an immediate understanding of where a water board is in its sustainability journey (van Leeuwen et al, 2012:2193). As an example Figure 1 indicates that Overberg Water sustainability performance is strongest in the Stakeholder Understanding and Support outcome which is at an "advanced" level. Its sustainability performance is weakest in the water resource adequacy and customer outcomes where it is at the "learning" level. This information can assist the water board with strategic planning in terms of where effort and resources should be directed to strengthen overall sustainability performance in the future. It also allows the DWS to identify areas of risk in each water board and focus its regulatory oversight function more effectively. This could assist to improve regulatory compliance and performance of water boards.

The concept of sustainability and that it changes over time (McAlpine and Birnie, 2005: 244) can be accommodated in the WSSMF. Figure 1 provides a graphical quantification of the different levels of sustainability for each of the 10 outcomes for water boards. The effect of the number and weighting of each sustainability indicator per outcome is evident. For example the effect of selecting 3 out of 6 indicators to describe the “leading” sustainability performance category of the operational resilience outcome compared to 1 out of 11 for the community and environmental sustainability outcome is clear. This allows the DWS together with the water boards to agree through the selection and weighting of indicators what sustainability means in terms of each of the 10 outcome areas for water boards. This can then be adjusted over time to more accurately define sustainability as knowledge improves the sector changes or to better accommodate the effects of externalities such as climate change.

1.7 Conclusions

Evaluation research was conducted to establish key principles required of the SHC for water boards in South Africa. These include that the SHC is required to be a mandatory outcomes performance monitoring contract adequately covering the financial, social, environmental and governance aspects of sustainability. Best practice dictates that it should be able to quantify performance in terms of predetermined sustainability categories and allow for the comparison of performance between different water boards. The current SHC falls short of these requirements (see section 1.5.1). There is therefore merit in the development of an improved framework based on best practices and legislated requirements.

In this research, a new proposed WSSMF has been developed for the water board sector. It is a framework that quantifies sustainability performance in terms of 10 water utility performance outcomes that are aligned with the financial, social, environmental and governance dimensions of sustainability. The WSSMF allows comparison between South African water boards, based on converting indicator scores to ratios and then calculating index scores per outcome. The WSSMF has demonstrated that the legislated intentions and best practice recommendations

can be incorporated into a sustainability performance monitoring framework for water boards which could be used as a basis for a new improved version of the current SHC.

Agreement would be required between DWS and the water boards concerning operational rules of the WSSMF. It is assumed that minimum mandatory KPI's will be selected by DWS to ensure that baseline indicators for comparing water board performance are the same. Other rules may include that selection of KPI's in higher sustainability category levels per outcome must be preceded by selection of all KPI's in lower sustainability categories for same outcome, progress through sustainability levels per outcome should be guided by organisational annual risk assessment and that quarterly progress reporting may be required.

Further refinement of the WSSMF is required. It is acknowledged that assuming the WSSMF outcomes based approach with categorised sustainability levels is accepted, in depth engagement with DWS and all the water boards would be required to refine the indicator set, agree performance thresholds for each indicator and agree indicator weighting before it can be vigorously tested (Rametsteiner et al, 2011: 64; Muga and Mihelcic, 2008: 438; McAlphine and Birnie, 2005: 247 and van Leeuwen et al, 2012: 2192).

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2 Section 2: Literature Review

This literature review will provide a brief overview of the concept of sustainability followed by the South African water service sector, describing best practice for sustainability monitoring frameworks for water services, outlining South Africa's water services sector mandatory and voluntary requirements with regards to sustainability monitoring. Finally South Africa's current water services performance monitoring framework for water boards will be reviewed and conclusions presented.

2.1 The Concept of Sustainability

"Sustinere" is the Latin word from which the word sustainability derives its meaning and it implies an ability to "keep up, to carry or withstand a weight or pressure" (Cassardo and Jones, 2011:620). Research literature generally agrees that the concept of sustainability in any context must ensure an appropriate balance between economic achievement, social well-being and environmental preservation to achieve intergenerational equity (Milman and Short, 2008: 758 and Mori and Christodoulou, 2012: 96). An emerging trend is that this requires a fourth dimension of sound institutional / governance arrangements for this to be achieved (Dahl, 2012:16; Mutisya and Yarime, 2014:206 and Burford et al, 2013: 3036). South African legislation also supports the four pillar approach to sustainability and intergenerational equity (Government Gazette, 1996: 1251; Government Gazette, 1996: 1255; Trialogue, 2010: 34; Government Gazette, 1998a: 9; Government Gazette, 1998(c):11; Government Gazette, 1997:35 and DWA, 2003:9).

Sustainability is an "evolutionary progression" towards more sustainable practices (Campbell, 1996:262). McAlpine and Birnie (2005:244) state that "as people and society change, so sustainability changes with them". It can be stated then that sustainability is not so much a destination but a journey about "managing and living with change" (van Leeuwen et al, 2012:2193). From a sustainable water management perspective Ioris et al (2008:1190) further emphasize that sustainability is a journey to ensure "indefinite continuation of physically and biologically stable systems,..economic efficiency of water use, equitable distribution of costs

and benefits of water resource developments, participatory approaches to policy making and decision taking”.

Faber et al (2005:3) state that “If companies want to do something about or with sustainability, they have to know what sustainability means”. Milman and Short (2008: 758) state “though there is no consensus on the precise definition of sustainability, it is widely agreed that any conception of sustainability must account for the interconnections of environmental, economic, and social factors; consider both the local and global resource base; and be attentive to the long-term needs of future generations”. The literature review undertaken by Mori and Christodoulou (2012: 96) also supports the view that definitions of sustainability generally comprise of the two key aspects of the triple bottom line and intergenerational equity.

Callado and Fensterseifer (2011:44) and Davidson (2011:356) emphasize the need for a common definition of sustainability to be agreed before it can be measured. There are many water resource management definitions of sustainability and most emphasize that “any water related decision maker and /or other stakeholder to consider every impact of their water related programs on both present and future generations” (Julwana et al, 2012:7). This provides guidance for a sustainability definition for water utilities such as water boards.

The EUM has developed a sustainability definition for water utilities as “The use of natural, community, and utility resources in a manner that satisfies current needs without compromising future needs or options” (EUM, 2008:22). This seems comparable with other definitions in terms of including the core environmental, social, financial and governance dimensions of sustainability while including intergenerational considerations (Juwana et al, 2012: 4).

2.2 Overview of the South African Water Services Sector

South Africa’s water sector is set within the framework provided by its Constitution (Act No. 108 of 1996) and associated legislation. The Constitution enshrines the right to adequate water and to a healthy environment (Government Gazette, 1996: 1251, 1255).

The DWS is mandated as the custodian of water resources (Government Gazette, 1998 (a):8) and the regulator of water services (Government Gazette, 1997: 50). Municipalities are designated as WSA's and are responsible to ensure water services are provided in an efficient, sustainable and cost effective manner (Government Gazette 1997:19). The two major role players in water service provision include municipalities (Government Gazette 1997:24) and water boards providing bulk water services (Government Gazette 1997:29).

The country's water sector asset base has an estimated replacement value of R850 billion including water resource and water services infrastructure (DWA, 2013:52). Water service revenue is estimated at R33 billion per annum (DWA, 2013:61).

Water is a scarce resource in South Africa which is classified as the 30th driest country in the world (DWA, 2013: iii). The country has an estimated mean annual run-off of approximately 49 billion m³ per annum of which only 20.89% is at a high level of assurance. The annual environmental allocation of 9.5 billion m³ combined with 31 billion m³ current dam storage capacity leaves little water for future development. Two of the five billion m³ per annum groundwater resources is already utilised but with remaining groundwater water quality uncertain (DWA, 2013:6-7).

South Africa achieved the MDG's to halve the number of people without access to basic water and sanitation by 2015. Despite achieving these targets approximately 2.2 million and 4.5 million households respectively still require access to basic water and sanitation services (DWA, 2013:28-29).

South Africa's ten water boards play a key role in bulk water service provision and are responsible for the supply of 2.46 billion m³ per annum or 57% of the country's domestic water supply. This translates into supplying approximately 28 of the 51.77 million people living in South Africa with potable water on a daily basis. This service is rendered through a combined asset base of R 19.6 billion and a combined operating budget of R 5.6 billion (DWA, 2013:19).

Critical emerging water service challenges include increasing water supply schemes becoming non-functional, increasing non-revenue water, and increasing risk of environmental pollution due to under capacitated and/or poorly maintained waste water treatment works. These are largely due to inadequate water service management and combined with an increasing demand for higher levels of service places enormous stress on water services in the country (DWA, 2013:68-69).

Set against these challenges is the NDP that presents South Africa's vision for the country in 2030. The plan recognises that adequate water resources combined with efficient and effective water services are key enablers to achieving the desired economic growth and social development goals. Without these the envisaged strong economy operating in a healthy environment where domestic, industrial and agricultural water service needs are adequately served will not be achieved (NPC, 2011: 177-178).

2.3 The Legislative and Policy Framework for Water Services

A non-exhaustive list of legislation impacting on water services is detailed in Annexure A. Only legislation with direct reference to water services will be discussed in detail while the remaining legislation while requiring adherence does not provide unique insight into the mandatory setting for water services. The Constitution, the NWA (1998), the Water Services Act (1997), the NEMA (1998) and the PFMA (1999), will be discussed further.

2.3.1 Constitution of the Republic of South Africa

The principles applicable to water and the environment are found in Chapter 2 covering the bill of rights. Section 24 clarifies the right for the present generation to an environment that is not harmful to the health and wellbeing while ensuring the environment is also protected for future generations. Particular emphasis is placed on preventing pollution, ecosystem degradation, promoting conservation, sustainable economic development and use of natural resources to achieve this outcome (Government Gazette, 1996: 1251).

Section 27 provides citizens with the right to sufficient water and health care services. Adequate sanitation is considered part of health care services (Government Gazette, 1996: 1255). The detail on water and sanitation (water services as defined in the Water Services Act) is expanded in Schedule 4b where the responsibility for these outcomes through the allocation of the functions of potable water supply and domestic waste water including sewage disposal systems are allocated to the sphere of local government (Government Gazette, 1996: 1331).

2.3.2 The National Water Act

The NWA seeks to ensure that water resources are allocated and utilised in a sustainable manner for the benefit of people and the environment (Dialogue, 2010: 34). Section 2 of the NWA clarifies the intended outcomes of the Act are to ensure water resources safely meet human needs of present and future generations, promote equitable water access, redress past discrimination; promote efficiency and sustainability, facilitate social and economic development, protect ecosystems and biological diversity, prevent pollution and degradation of water resources and meet international (Government Gazette, 1998a: 9).

The DWS is the custodian of the country's water resources and is responsible for strategy, planning, development, regulation and monitoring the matters related to the above stated purpose of the NWA (Government Gazette, 1998a: 10, 62).

2.3.3 The National Environmental Management Act

NEMA provides a framework for co-operative governance and decision making principles with regards to the environment (Dialogue, 2010: p34). Key principles include the precautionary principle, the polluter pays principle and the life cycle principle (Government Gazette, 1998 (c):12). These are globally recognised as best practice for environmental stewardship and among others highlighted in the Act provide stakeholders with a well-defined framework for environmental decision making.

NEMA places people and their needs at the forefront of decision making while ensuring that development is sustainable. NEMA is specific that the outcome from the use of renewable

resources such as water must not compromise the integrity of the environment and its associated ecosystems (Government Gazette, 1998(c):11).

Environmental management plans (EMP) are required to guide the water service institutions to develop, operate and maintain water service systems over their life cycles for the social and economic good of society but not at the expense of the environment. A critical aspect of EMP's is the collection, maintenance and communication of relevant data as the mandate is on the State to be able to provide access to environmental information when required (Government Gazette, 1998(c):49).

2.3.4 The Water Services Act

The Water Services Act was promulgated in 1997 with the primary outcome of ensuring that everyone has access to basic water supply and sanitation. The Act defines three key mandates of water service regulation, water service authority and water service provision which will be discussed further (Government Gazette, 1997:12).

The DWS has responsibility to regulate the sector (DWA, 2003: 12) prescribing standards, monitoring water service institutions, intervening in water sector crises, administering grants, establishing information management systems for water services and developing regulations.

The WSA mandate is allocated to municipalities provided with such authority via the Municipal Structures Act (DWA, 2003:15). The WSA mandate is to progressively ensure access to affordable, economical, efficient and sustainable water services to current and potential consumers (Government Gazette, 1997:19). There were 152 WSA's in 2013 of which 8 were metropolitan municipalities, 21 were district municipalities and 123 were local municipalities (DWA, 2013:17).

WSA's must ensure appropriate water service provision arrangements are established. Water services may only be accessed through a water service provider (WSP) nominated or approved by the WSA. WSP options available to WSA's include providing the service

themselves, contracting with water boards, contracting with the private sector or contracting with other municipalities (Government Gazette, 1997:24).

Water boards are established by the Minister with the specific primary mandate (section 29) of providing water services to other institutions. Water board's primary function has been defined as being bulk water services provision (DWA, 2003:65).

The results or consequences (i.e. outcomes) of water boards implementing their mandates include "strive to provide efficient, reliable and sustainable water services; optimally use available resources; strive to be financially viable; promote the efficiency of water services authorities; take cognizance of the needs of water services institutions, consumers and users; take into account national and provincial policies, objects and developments; act in an equitable, transparent and fair manner; comply with health and environmental policies; take reasonable measures to promote water conservation and water demand management including promoting public awareness of these matters" (Government Gazette, 1997:35).

They must be commercially viable implying they can repay and service debt, recover capital costs, cover operational and maintenance costs, provide for depreciation of assets, and make reasonable provision for future capital requirements and expansion (Government Gazette, 1997:35).

Water board mandates are regulated through the requirement to produce business plans which is the basis of a shareholders compact for approval by the Minister at the commencement of each financial year (Government Gazette, 1997:38). Similar to the requirements of section 55 of the PFMA water boards are required to produce audited financial statements at the end of each financial year (Government Gazette, 1997:41).

2.3.5 The Public Finance Management Act

The PFMA prescribes the financial management approach of national and provincial government and their associated public entities. The intended outcomes of the Act are to

ensure finances are managed in a sound, transparent and accountable manner (Government Gazette, 1999:12). The DWS and water boards are subject to the PFMA.

Key implications from a water services perspective include the requirement for effective, efficient, transparent financial and risk management and adequate internal controls (Government Gazette, 1999:36).

Accurate and timeous annual reporting is required for both government departments and their public entities. Annual reports must comply with the applicable accounting standards prescribed by National Treasury (Government Gazette, 1999:51).

Additional responsibility is placed on public entities such as water boards to prepare an annual budget in a prescribed format and to produce an annual business plan that details its intended business activities for a three year period (Government Gazette, 1999:50).

2.3.6 Strategic Framework for Water Services

The SFWS was developed by DWA in 2003 through a consultative process with government, civil society organisations, water boards, various associations and the public (DWA, 2003:1). The SFWS provides a ten year view of the water services sector in South Africa (DWA, 2003:8).

The water sector vision is defined as “All people living in South Africa have access to adequate, safe, appropriate and affordable water and sanitation services, use water wisely and practise safe sanitation. Water supply and sanitation services are provided by effective, efficient and sustainable institutions that are accountable and responsive to those whom they serve. Water services institutions reflect the cultural, gender and racial diversity in South Africa. Water is used effectively, efficiently and sustainably in order to reduce poverty, improve human health and promote economic development. Water and wastewater are managed in an environmentally responsible and sustainable manner” (DWA, 2003:9).

The framework has a strong technical, social, financial and institutional focus. The technical focus seeks to ensure that effective and efficient water services are provided (DWA, 2003:41).

Social transformation through the development of water services that cause “the creation of jobs, use of local resources, improvement of nutrition and health, development of skills and the provision of long-term livelihood for many households” is strongly advocated (DWA, 2003:1).

The SFWS financial perspective is held in tension between the principles of affordability and responsibility to pay. The principle of the responsibility to pay applies to consumers who use services above the basic levels as defined in the SFWS. Guidance is provided in terms of principles to be utilised to set tariffs, credit control, and utilization of subsidies and financial aspects of water service provision contracts (DWA, 2003:38).

The SFWS identifies critical institutional interventions to create “efficient and sustainable water service providers” (DWA, 2003:1), the promotion of “regional integration of water services where appropriate” (DWA, 2003:2).

The SFWS has set 19 specific targets aligned but exceeding the MDG’s (DWA, 2003:10). The goals seek to ensure access to water services for households, schools and clinics, improved water related awareness and hygiene practices, access to free basic services for the poor, water sector institutional reform and improved performance monitoring. The goals require DWS to report on sector development and progress on an annual basis (DWA, 2003:56) while WSA’s are to report annually on a set of key performance indicators (DWA, 2003:11).

The 9 WSA key performance indicators cover access to services, quality of services provided, access to free basic services, financial performance, resource use and environmental impacts (DWA, 2003:61). Benchmarks were set for each indicator together with the means of verifying performance. The framework does not however explain how each indicator is to be calculated. The water service authority key performance indicators are presented in Annexure B.

2.4 Current Water Services Sustainability Monitoring in South Africa

2.4.1 Sustainability Index for Integrated Urban Water Management

The Sustainability Index for Integrated Urban Water Management was developed through research undertaken by the University of Cape Town and funded by the South African National Research Foundation (NRF). The SIIUWM provides city stakeholders a measure of the sustainability of the urban water management practice with the South African context considering the emerging risks of climate change, industrialisation and population growth which are not addressed by other existing sustainability frameworks in South Africa (Carden and Armitage, 2013: 346)

The SIIUWM consists of 16 indicators with 35 quantitative and qualitative variables selected on the basis of their input data being in existence, easily accessible and regularly updated (see Annexure C). Wide data ranges per variable required a standardisation process to allow comparisons between city sustainability scores. Raw input data was converted into categorical data combined with a predetermined weighting. Indicator scores were calculated by determining the geometric means. Sustainability dimension scores are calculated as the mean of the relevant indicator scores. The city sustainability score is then the weighted mean of the dimension scores (Carden and Armitage, 2013: 347).

A limitation of SIIUWM is that its focus is on cities. Municipalities in South Africa all incorporate urban and rural areas including metropolitan areas. Considering that the WSA function is the responsibility of municipalities SIIUWM can only provide stakeholders, decision makers and the regulator with part of the sustainability status of municipalities.

2.4.2 National Benchmarking Initiative

The SALGA NWSBI has its origin in a Water Research Council pilot project launched in April 2003 (Pybus et al, 2005: 6). The pilot has since been developed to its present version that uses 31 indicators to monitor municipal performance in terms of water conservation and demand management, human resources and skills development, service delivery and

backlogs, operations and maintenance, product quality and financial management (SALGA, 2014:21). Participation by municipalities is on a voluntary basis (SALGA, 2005: 5).

The NWSBI only allows comparisons between municipalities in the same category i.e. A, B or C rated municipalities. This is done by calculating the weighted average indicator scores per municipality. Each municipality's weighted indicator scores are then averaged for a score out of 10 with a higher overall score implying better municipal water services performance (SALGA, 2008:140).

The NWSBI is focused at municipalities only. Participation by other water sector role players such as water boards is not directly possible meaning the initiative only provides part of the sustainability performance of the South African water services sector.

2.4.3 SAAWU Benchmarking System

The SAAWU represents water boards and other water service utilities in South Africa. (SAAWU, 2001:1). The SAAWU benchmarking system was established in 2000 and allowed water boards to monitor and compare their bulk service delivery performance (Pybus, 2002:5).

The benchmarking system was aligned to international systems, commonly accepted performance indicators and indicator categories at the time. The categories included were:

- Service Delivery
- Financial Credibility
- Technical Effectiveness
- Plant Capacity and Utilisation
- Human Resources
- Background Information

The benchmarking system indicators were selected to be calculated from commonly available operational information to avoid excessive data collection activities (Pybus, 2002:11).

Pybus (2002:56) acknowledges that the variation in water board size and economic circumstances makes direct comparisons across the full range of water boards challenging but possible where similar contexts exist.

The benchmarking system was further refined in 2002 to improve participation through the reduction from 90 to 49 mandatory and 15 voluntary key performance indicators. Indicators were clustered into the performance quadrants of customer service, internal processes and operations, finance, learning and growth based on the Balanced Corporate Scorecard concept (Kaplan and Norton, 2001:90).

A critical improvement included the incorporation of statutory reporting indicators into the system. This facilitated efficient data collection and reporting to stakeholders. The DWS also ensured that the annual water board business plan content reflected the same set of key performance indicators (WRC, 2004:4-5). These indicators are currently contained in the Shareholders Compact between water boards and the Minister at present.

Despite the refinement the system retains a strong financial bias while the social and environmental of sustainability seem neglected. Sanitation also receives no attention (Ramjatan *et al*, 2006: 5). The SAAWU benchmarking system is however not currently operational due to management and funding constraints. This exposes the risk of voluntary based sustainability monitoring systems in general and creates an argument that participation water sector sustainability performance monitoring systems should be mandatory in South Africa.

2.4.4 DWA Regulatory Performance Management System

A national water services monitoring system is required to capture relevant water services data for public consumption, monitoring of compliance and research purposes (DWA, 1997:56). The DWS RPMS was created in 2008 to monitor WSA performance.

The RPMS is a web risk based outcomes monitoring and evaluation system for municipalities. The system focuses on the four strategic objectives of financial viability, customer satisfaction,

institutional effectiveness and technical efficiency as depicted (see Figure 2 and Annexure D) (DWA, 2012b:11). This appears to be a modification of the balanced corporate scorecard approach (Kaplan and Norton, 2001:90) where the effective institution objective has replaced the traditional learning and growth objective. Similarly technical efficiency has replaced the internal processes objective.



Figure 2: DWA Risk Based Regulatory Approach (DWA, 2012b:10).

DWS sets a minimum number of key performance indicators required for each strategic objective with national targets. WSA's may set additional KPI's depending on the outcome of their context specific risk assessments. Similarly DWS prescribes minimum risks and associated controls per KPI (DWA, 2012b:11). The prescribed minimum risks and controls per strategic objective are presented in Annexure D.

Key RPMS limitations include its WSA focus excluding other water services sector role players. Perhaps a more salient limitation is the four objectives that could be viewed as

desired outcomes from the regulator yet there may be other relevant water services outcomes appropriate for the sector as suggested in the EUM framework reviewed in section 2.5.6.

2.4.5 Blue and Green Drop System

DWS launched the Blue and Green Drop system in 2009 to incentivize water and waste water quality legal compliance and best practice (DWA, 2009:3). The BDS and GDS intention is to incentivize municipal water and waste water quality legal compliance and best practice (DWA, 2009:3). Water and waste water quality results are submitted monthly to DWS via their web based water quality monitoring system (EWQMS) (DWA, 2009:5). The criteria for drinking water and waste water are weighted to incentivize progressive quality improvement (see Annexure E)(DWA, 2009:11). The aspects monitored include product quality, reporting frequency, human resources, health and safety, management processes and asset management (DWA, 2009:4-7).

WSA participation is compulsory (DWA, 2009:10). Scores per system are aggregated for each town or city for water and waste water respectively. A water system score of 95% results in Blue Drop Certification. Similarly, a waste water system score of 90% results in Green Drop Certification (DWA, 2009:4). Performance is incentivised through the publication of results and certification in recognition of excellence (DWA, 2009:11).

2.4.6 Water Board Shareholders Compact

The National Treasury Regulations, GN 225 IN GG 27388 of 15 March 2005 requires a SHC to be concluded between water boards and the DWS that includes key performance measures and indicators to be attained (DWA, 2007:18). The 2013/14 SHC between DWS and Amatola Water is presented in Annexure F as a typical example.

The SHC is defined as the exclusive performance contract between a water board and DWA (Amatola Water, 2013 (2):2). The basis of the SHC is the annual business plan of water boards required in terms of Section 40 of the Water Services Act and section 29 of the Public Finance Management Act (DWA, 2007:4). The SHC is concluded annually but has a five year

planning horizon (Amatola Water, 2013(2):3). Quarterly progress reports are submitted to DWS for monitoring water board performance.

The SHC contains 19 mandatory strategic objectives. Water Boards are compelled to report on these as well as other voluntary objectives that they deem applicable from their business plans. Analysis indicates that there are eight social, six governance, five financial and zero environmental strategic objectives. The predominance of social objectives is perhaps explained by the strong developmental focus of the SHC (Amatola Water, 2013(2):4). The glaring omission of any mandatory environmental strategic objectives is curious considering the environmental rights entrenched under section 24 of the Constitution, the environmental stewardship of water resources detailed in section 2 of the NWA (1998) and section 2 of the Water Services Act.

The social strategic objectives include water quality compliance, reliability of supply, staff turnover, increase BBBEE spend, increased access to services, training and skills development, jobs created and corporate social responsibility initiatives. The governance strategic objectives include financial reporting compliance, board member attendance, effective internal controls and risk management, bulk supply agreements concluded with municipalities and other customers, achieve statutory reporting compliance and good governance. The financial strategic objectives include non-revenue water, improve financial ratios, manage costs within approved budget, capital expenditure and engagement in secondary activities (Amatola Water, 2013(2): 9).

Each strategic objective requires water board specific baseline measurements and projected targets for a five year period. The mandatory strategic objectives have 27 associated indicators. The social strategic objectives have 9 quantitative indicators, the financial strategic objectives have 12 quantitative indicators and the governance strategic objectives have one qualitative and 5 quantitative indicators (Amatola Water, 2013(2): 9).

The SHC does not allow the regulator to compare sustainability performance between water boards due to the baselines and targets being unique to each water board. It also does not

allow the regulator to establish how relevant the water board baselines and targets are with regards to measuring sustainability.

2.5 Global Best Practice for Monitoring Water Services Sustainability

2.5.1 CEO Water Mandate

The CEO Water Mandate was launched in 2007 in response to and support of the UNGC. It is a voluntary organization with the goal of improving the stewardship of water management across the globe and is open to all participants of the UNGC (CEO Water Mandate, 2011:3).

The CWDF was developed by the CEO Water Mandate for water management disclosure to allow better comparability by stakeholders between organizations based on the use of common metrics (CEO Water Mandate, 2012:5). The CWDF presented in Figure 3 is based on the three pillars of the organizations describing the company water profile, defining the report contents and the corresponding detailed disclosure.

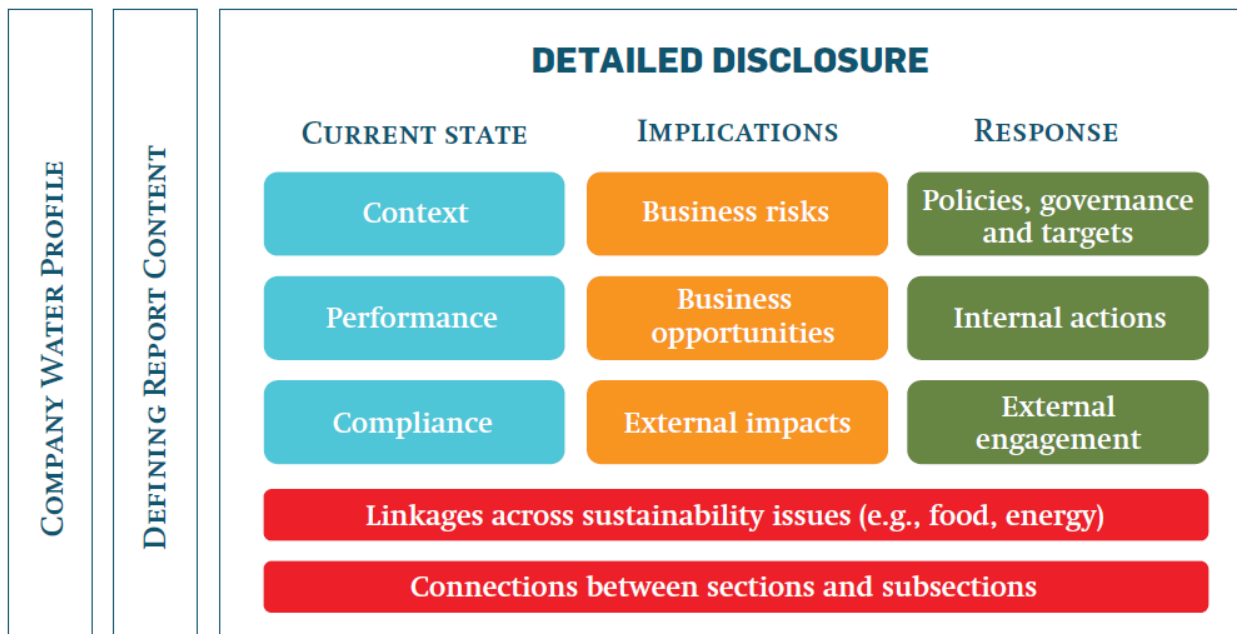


Figure 3: Corporate Water Disclosure Framework (CEO Water Mandate, 2012:10)

The company water profile provides an overview of its interactions with water with particular focus on opportunities, risks, impacts, commitments and response strategies. High level metrics are also required of organizational water withdrawals, water use intensity and significant non compliances to regulations (CEO Water Mandate, 2012:10).

The CWDF focuses on the organizations current state, implications of that state and the organizations response. The current state details business related water resource conditions, water resources withdrawals, water use intensity, waste water discharges and compliance matters (CEO Water Mandate, 2012:49-53). The response component provides clarity on an organizations response in terms of policies, plans, strategies, governance, management practices, technologies, innovation or business realignment efficiency and effectiveness (CEO Water Mandate, 2012:71). Typical corporate water disclosure contents for basic and advanced reporting are shown in Figure 4.

| | Content | Scope | Format | |
|--|---|--|--|--|
| Current State | CONTEXT | | | |
| | Basic | <ul style="list-style-type: none"> High-level assessment of water stress Profile information: List of “hot spot” basins | <ul style="list-style-type: none"> Companywide | <ul style="list-style-type: none"> Tabular; quantitative |
| | Advanced | <ul style="list-style-type: none"> Detailed assessment of water stress and other context factors in “hot spot” basins | <ul style="list-style-type: none"> Basin level | <ul style="list-style-type: none"> Tabular; qualitative |
| | PERFORMANCE | | | |
| | Basic | <ul style="list-style-type: none"> Profile metric: Percentage of water withdrawals in water-stressed areas Profile metric: Average water intensity in water-stressed areas | <ul style="list-style-type: none"> Companywide | <ul style="list-style-type: none"> Tabular; quantitative |
| | Advanced ¹ | <ul style="list-style-type: none"> Water withdrawals by source type Water intensity Water consumption Water discharge by destination | <ul style="list-style-type: none"> Basin level | |
| | | <ul style="list-style-type: none"> Water withdrawals in the value chain | <ul style="list-style-type: none"> Value chain | |
| | COMPLIANCE | | | |
| | Basic | <ul style="list-style-type: none"> Profile metric: Significant water-related regulatory compliance violations | <ul style="list-style-type: none"> Companywide | <ul style="list-style-type: none"> Tabular; quantitative |
| | Advanced ¹⁷ | <ul style="list-style-type: none"> Adoption of voluntary and/or internal standards | | <ul style="list-style-type: none"> Tabular; qualitative |
| Implications | BUSINESS RISKS | | | |
| | Basic | <ul style="list-style-type: none"> Risks related to water stress | <ul style="list-style-type: none"> Companywide | <ul style="list-style-type: none"> Narrative; qualitative |
| | Advanced | <ul style="list-style-type: none"> Risks related to other context factors | <ul style="list-style-type: none"> Basin level | |
| | | <ul style="list-style-type: none"> Value chain risks | <ul style="list-style-type: none"> Value chain | |
| | BUSINESS OPPORTUNITIES | | | |
| | Basic | <ul style="list-style-type: none"> High-level assessment of: <ul style="list-style-type: none"> Cost-saving opportunities Revenue-generating opportunities | <ul style="list-style-type: none"> Companywide | <ul style="list-style-type: none"> Narrative; qualitative |
| | Advanced | <ul style="list-style-type: none"> Detailed assessment of opportunities | <ul style="list-style-type: none"> Basin level | |
| | IMPACTS | | | |
| | Basic | <ul style="list-style-type: none"> N/A | <ul style="list-style-type: none"> N/A | <ul style="list-style-type: none"> N/A |
| | Advanced | <ul style="list-style-type: none"> Impacts from water discharge Impacts from consumption and withdrawals Human-rights-related impacts Value chain impacts | | <ul style="list-style-type: none"> Narrative; qualitative |
| Response | POLICIES, GOVERNANCE and TARGETS | | | |
| | Basic | <ul style="list-style-type: none"> Commitments | <ul style="list-style-type: none"> Companywide | <ul style="list-style-type: none"> Narrative; qualitative |
| | | <ul style="list-style-type: none"> Goals/Targets | | <ul style="list-style-type: none"> Tabular; quantitative |
| | Advanced | <ul style="list-style-type: none"> Policies, strategies, and governance | | <ul style="list-style-type: none"> Narrative; qualitative |
| | INTERNAL ACTIONS | | | |
| | Basic | <ul style="list-style-type: none"> Improvements in direct operations | <ul style="list-style-type: none"> Companywide Basin level | <ul style="list-style-type: none"> Narrative; qualitative |
| | Advanced | <ul style="list-style-type: none"> Product innovation Supply chain engagement | | |
| | EXTERNAL ENGAGEMENT | | | |
| | Basic | <ul style="list-style-type: none"> N/A | <ul style="list-style-type: none"> N/A | <ul style="list-style-type: none"> N/A |
| | Advanced | <ul style="list-style-type: none"> Consumer/public engagement & awareness building | <ul style="list-style-type: none"> Companywide | <ul style="list-style-type: none"> Narrative; qualitative |
| <ul style="list-style-type: none"> Policy advocacy | | | | |
| <ul style="list-style-type: none"> Participation in global initiatives and partnerships | | | | |
| <ul style="list-style-type: none"> Place-based collective action | | <ul style="list-style-type: none"> Basin level | | |

Figure 4: Summary of Basic and Advanced Corporate Water Disclosure Practices (CEO Water Mandate, 2012:84)

The CWDF appears to be a modified strengths, weaknesses, opportunities and threats (SWOT) approach to water stewardship. The current state component is essentially accounting for current strengths and weaknesses while the implications component details opportunities and threats. The response component is an action plan that would typically respond to a SWOT analysis.

A limitation of the CWDF appear to be that it informs stakeholders of improving or declining performance with regards to water stewardship, but cannot indicate where an organization is in terms of its water sustainability journey.

2.5.2 Carbon Disclosure Project

The CDP is unique in that it was the first international initiative by investors to improve how business approaches the environment and governance rather than just financial performance (Hale and Held, 2011:213).

The CDP proposition is that good corporate water stewardship will benefit business through attracting investments that will increase revenue and build resilience for water challenges. This would appear to be a valid point considering that signatories of the CDP include 530 investors worth in excess of US\$ 57 trillion in 2012. (CDP, 2014a:1).

Industry sector leading corporations complete an annual water disclosure questionnaire including the 500 largest global, 500 American, 100 largest Australian and 100 largest South African companies with high water usage or supply chains with high water risk. Other companies may participate on a voluntary basis (CDP, 2014a:1).

Information is collated concerning the current business state, the approach to risk, risk implications, water usage, leadership, and the level of accountability for water reporting. A newly developed progressive stepped scoring approach is utilised where scoring is based on disclosure detail, awareness, management and leadership (see Figure 5) (CDP, 2014c:3).

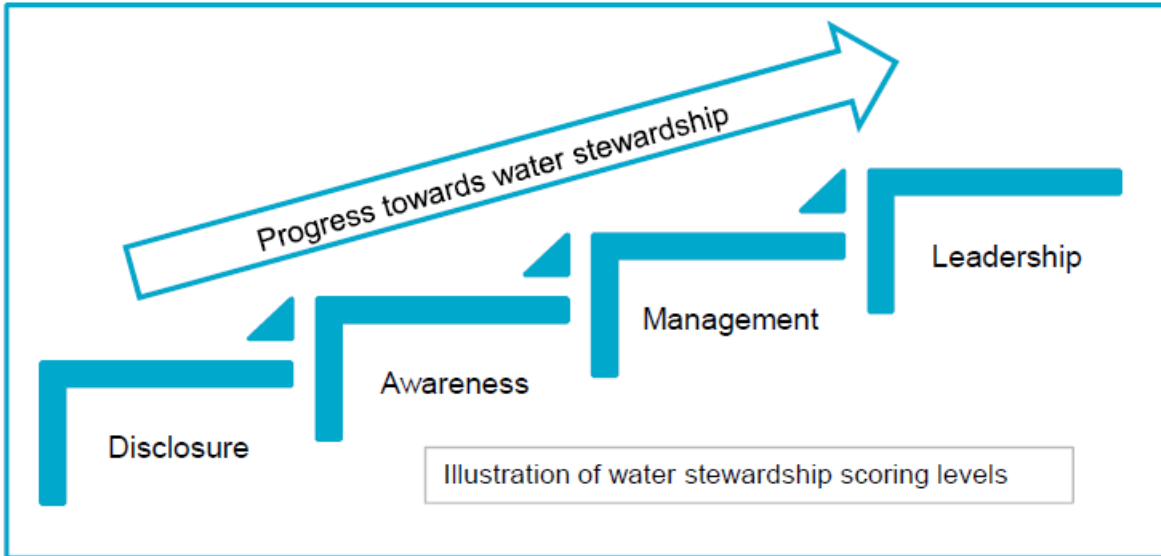


Figure 5: CDP Water Stewardship Scoring Levels

The approach will be tested with the Global 500 companies participating in the 2014 survey. The outcome of the CDP research is expected to be a refined scoring approach that will be applicable to all participants in the 2015 survey (CDP, 2014c:9).

Hale and Held (2011:218) do highlight that there is no definitive research that provides evidence of a correlation between participating in the CDP and an improved approach to management behaviour or performance. It could therefore be argued that the CDP is an effective reporting method for companies that are inherently socially and environmentally responsible while being less effective as a tool to change business practice. Ried and Toffel (2009, cited in Hale and Held, 2011:217) do support this argument in that they confirmed that participation in the CDP correlates to the level of associated regulation or shareholder resolutions.

2.5.3 United Nations Global Compact

The UNGC was launched in 2000 with the goal of promoting responsible global corporate business policy and practice through the annual corporate disclosure of progress towards embedding and implementing ten globally accepted principles related to human rights, labour

practices, environmental responsibility and anti-corruption (see Annexure G) (UNGC, 2012:2). The UNGC laid claim to being the largest corporate responsibility initiative in the world (UNGC, 2012:2). Participation is voluntary but binding once a commitment has been made by a corporation (UNGC, 2012:3).

Corporation performance is classified into either the Learner, Active, Advanced or Leadership categories (see Figure 6) (UNGC, 2012:5). Companies that meet the minimum reporting requirement on the specified three content sections are classified as GC Active. The Learner Platform classification is allocated to companies that disclose but do not cover all the minimum requirements. The GC Advanced classification is achieved when a corporation exceeds the minimum reporting requirements and includes additional advanced disclosures (UNGC, 2012:5).

Implementation of UNGC principles

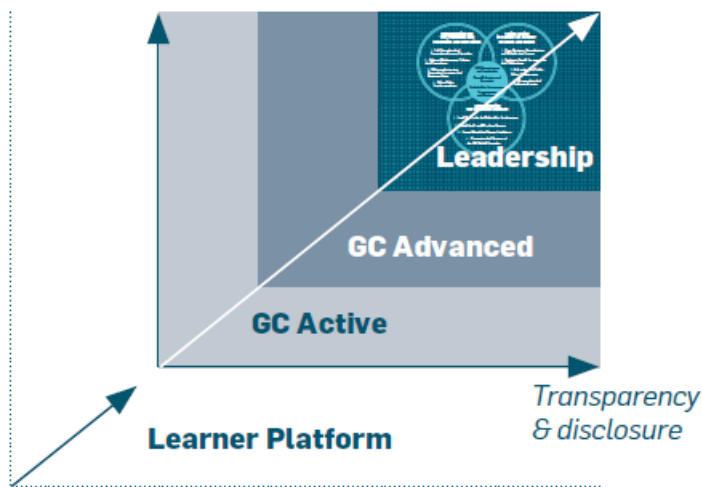


Figure 6: UNGC Reporting Levels (UNGC, 2012:5).

Hale and Held (2011:354) argue that the principles based approach rather than a regulatory based approach makes the quantification and correlation of change due to participation in the

UNGC difficult to measure. They do however propose that a means of measurement would be the rate of increase in participation in the UNGC by business over time.

Although not specific to water services sustainability monitoring the UNGC does incorporate strong social and environmental aspects of sustainability. The UNGC also provides a means of comparing different organizations performance through setting minimum reporting requirements linked to different classifications.

2.5.4 Global Reporting Initiative

The GRI was launched in 1999 and has gained international acceptance as one of the preferred sustainability reporting frameworks (Hale and Held, 2011:281). Its popularity is attributed to the voluntary, incremental and flexible approach it offers organizations for sustainability reporting (Verschoor 2011:12).

GRI provides organizations of all sizes with a means of evaluating performance in a “standardised, comparable and consistent” manner (Hale and Held, 2011:282). The latest framework version, G4 was released in 2013 has a strong focus on materiality. Material aspects to be included in sustainability reporting are those that result in a significant financial, social or environmental impact that may have substantive influence over shareholders assessments and decisions with regards to the organization (GRI, 2013a:11).

G4 is applicable to organizations of all sizes and offers two options to report on sustainability including a “core” or “comprehensive” approach (see Annexure J). The core approach applies to organizations either commencing with the utilization of the framework or those that have limited resources. The comprehensive approach increases the rigour and level of detail for sustainability reporting with a corresponding requirement for an increase in resource allocation for this activity (GRI, 2013a:11).

The GRI (2013a:8) typical steps required to produce a sustainability report in accordance with the guidelines are presented in Annexure H. The framework provides a principle based

approach to developing the content (GRI, 2013b:11-13) and quality (GRI, 2013b:13-16) of a sustainability report. The principles are presented in Annexure I.

Data requirements are defined for both the general and specific disclosures. Disclosures are aligned where possible with the reporting requirements of the UNGP ten principles and the Guidelines for Multinational Enterprises developed by the OECD (GRI, 2013b: 19-21).

GRI water indicators include “total water withdrawn by source, water sources significantly affected by withdrawal of water, percentage and total volume of water recycled and reused” (GRI, 2013b: 96). Effluent and waste indicators relevant to sanitation include “total water discharge by quality and destination, total number and volume of significant spills, Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization’s discharges of water and runoff” (GRI, 2013b: 121).

External independent assurance is not mandatory. Verschoor (2011: 15) however takes a much stronger view external assurance is becoming a critical requirement for all sustainability reporting to ensure organizations performance claims are valid.

The view of the increasing importance of external independent assurance supported in the 2013 “Carrots and Sticks” report on sustainability reporting policy practices and trends. This report notes the increasing trend and use of internationally accepted assurance standards including the International Standard on Assurance Engagements (ISAE 3000) and the AA1000 Assurance Standard (GRIc, 2013:80).

2.5.5 International Integrated Reporting Framework

The IIRC has developed the IIRF 2013. The IIRF was developed for the private sector to engage with the providers of financial capital by providing a short, medium and long term view of the organizations value proposition. IIRF requires annual reporting with the specific focus on accountability and stewardship of the various capitals the organization owns or utilizes for its business activities (IIRC, 2013:8).

The fundamental concept underpinning the IIRF is that organizations depend on various combinations of capitals for their success. Capitals are “stores of value” that increase and decrease over time through business activities including financial, manufactured, intellectual, social and relationship, human and natural (IIRC, 2013:9). Figure 7 illustrates how the various capitals interact with a business model.

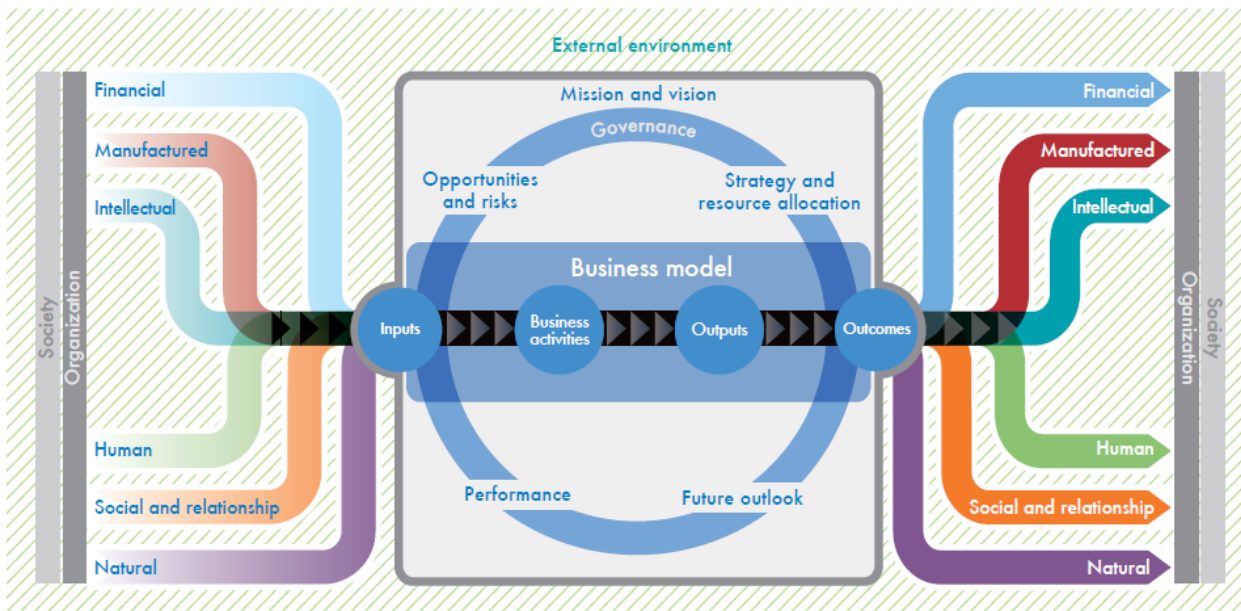


Figure 7: Organizational Value Creation Process (IIRC, 2013:11)

It is not prescriptive in terms of indices, indicators, baselines, benchmarks or targets but encourages the use of internationally accepted standards, indices and indicators to facilitate comparison of value creation between organizations (IIRC, 2013:23).

IIRF is essentially about developing integrated reporting for corporations and as such is not specifically focused on water services sustainability. However the six capitals do incorporate the traditional social, financial and environmental, as well as the emerging governance dimensions of sustainability. The approach also allows entities to measure changes in the capitals over time and set upper and lower limits for each capital in terms of sustainability performance.

2.5.6 Effective Utility Management

The EUM framework was developed against the back ground of increasing costs, more stringent legislation, changes in demographics of the population being served and aging infrastructure in the American water services sector. The EUM was utility leaders and expert's response to improve the management and sustainability performance of the utilities (EUMC, 2008:1).

The EUM defines sustainability as “The use of natural, community, and utility resources in a manner that satisfies current needs without compromising future needs or options” (EUMC, 2008:22) and seems adequate in terms of including the core elements of sustainability (Milman and Short, 2008: 758 and Mori and Christodoulou, 2012: 96).

From this definition ten attributes of effectively managed water sector utilities were identified (EUMC, 2008:4). The ten attributes describe the desired outcomes for an effective utility and include:

- product quality
- customer satisfaction
- employee and leadership development
- operational optimization
- financial viability
- infrastructure stability
- operational resiliency
- stake holder understanding and support
- community sustainability
- water resource adequacy

Each attribute is defined (Annexure K) and performance is monitored by KPI's. EUM is not prescriptive in terms of the indicators that utilities should allocate to attributes but provide

guidelines to ensure indicator selection relates directly to a particular utilities strategic objectives and the ten attributes (EUMC, 2008:16).

EUM does provide a total of 34 indicators sourced from the American Water Works Association and the Water Environment Federation Qualserve performance monitoring program that is used by over 200 utilities in North America (WRF,2009: xvi). These indicators are recognised as being widely used by utilities and directly related to the ten attributes (EUMC, 2008:17).

EUM is an outcomes based approach to water services sustainability and it this regard is aligned with the RPMS of DWS but with more specific outcomes. It is also specifically designed for water service utilities.

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3 Section 3: Description of Research Methodology

3.1 Methodology

The goal of this research was to consider and improve the approach of DWS to monitoring the sustainability performance of South African Water Boards compared with legislated requirements, national and international best practice. The intended outcomes were to develop an understanding of how water board sustainability performance is monitored and to develop an improved sustainability monitoring framework.

The research paradigm adopted was that of post positivism. The researcher acknowledges the inability to perfectly conduct the research proposed due to limited intellectual capacity and therefore has an ontological view of critical realism. The corresponding epistemology of an objectivist approach was adopted as research findings were evaluated against “pre-existing” knowledge and debated with a relevant “critical community” i.e. a selected group of water industry experts (Guba and Lincoln, 1994:110).

A qualitative normative theory evaluation research method was utilised to achieve first three objectives of the research. The aim to first understand current best practice for sustainability monitoring frameworks and the mandatory requirements for water services sustainability monitoring frameworks in South Africa was achieved through an extensive literature review. The evaluation research method was then used to consider South Africa’s current water services monitoring frameworks for water boards for their adequacy to monitor sustainability compared with legislated requirements, national and international best practices (Hall and Hall, 2004: 55).

Data collection for the evaluation research was sourced via documentation analysis. The 2012/13 audited annual reports for all ten water boards were sourced for this purpose. National legislation that has a direct influence on the mandatory aspects of the South African water sector was sourced through their respective published Government Gazettes. National and global monitoring best practice was sourced respectively from nationally and internationally recognised institutions and associations. A critical review of the data collected was undertaken to obtain a “thick description” of sustainability performance monitoring

framework requirements (Holliday, 2002: 79). This thick description was used to evaluate the appropriateness and effectiveness of the current shareholders compact to monitor water board sustainability performance.

An improved sustainability performance monitoring framework for water boards in South Africa has been developed and proposed. In the development of the improved framework, monitoring indicators have been selected that best address the mandatory and best practice requirements for the sustainability monitoring of South African Water Boards. Apart from proposing what should be monitored, consideration was also given to defining performance thresholds within the proposed set of monitoring criteria. The draft sustainability monitoring framework was submitted for critique to a group of experts drawn from multiple disciplines and organizations relevant to water board sustainability from across South Africa (Litosseliti, 2003: 8). The expert group provided a reliability and validity check for the proposed sustainability performance monitoring framework. This ensured that the framework is relevant and applicable to South African water boards (Hall and Hall, 2004: 51).

The functionality of the framework was then be demonstrated using audited performance data sourced from the annual reports of Overberg, Amatola, Rand and Umgeni Water boards.

3.2 Ethical Considerations

Babbie (2011:387) highlights the “internal or external pressure to produce a particular finding” when undertaking evaluation research and hence the need for ethical research. This research was done within the ethical guidelines of Rhodes University.

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4 Appendices

Annexure A: Legislation Impacting Water Services

| Water Services Sector Legislative Framework | | | |
|---|---|---|--|
| Constitution of the Republic of South Africa (Act 108 of 1996) | | | |
| <i>Environmental Legislation</i> | <i>Financial Legislation</i> | <i>Social Legislation</i> | <i>Governance Legislation</i> |
| The National Water Act (Act 36 of 1998) | The Income Tax Act (Act 28 of 1997) | The Occupational Health and Safety Act (Act 85 of 1993) | The Access to Information Act (Act 2 of 2000) |
| The Environmental Conservation Act (Act 73 of 1989) | The Public Finance Management Act (Act 1 of 1999) | The Compensation for Occupational Injuries and Diseases Act (Act 130 of 1993) | The Municipal Systems Act (Act 32 of 2000) |
| The National Environmental Management Act (Act 107 of 1998) | The Municipal Finance Management Act (Act 56 of 2003) | The Labour Relations Act (Act 66 of 1995) | The Construction Industry Development Board Act (Act 38 of 2000) |
| The Water Services Act (Act 108 of 1997) | The Pension Fund Act (Act 11 of 2007) | The Basic Conditions of Employment Act (Act 75 of 1997) | The Municipal Structures Act (Act 117 of 1998) |
| | The Skills Development Levies Act (Act 9 of 1999) | The Skills Development Act (Act 97 of 1998) | Government Immovable Asset Management Act (Act 19 of 2007) |
| | | The Employment Equity Act (Act 55 of 1998) | |
| | | The Unemployment Insurance Act (Act 63 of 2001) | |

| | | | |
|--|--|---|--|
| | | The Unemployment Insurance Contributions Act (Act 4 of 2000) | |
| | | The Preferential Procurement Framework Act (Act 5 of 2000) | |
| | | The Broad Based Black Economic Empowerment Act (Act 53 of 2003) | |
| | | The Hazardous Substance Act (Act 15 of 1973) | |

Annexure B: Water Service Authority Key Performance Indicators

| INDICATOR | BENCHMARK | MEANS OF VERIFICATION | |
|--|---|--|---|
| Access to services | | | |
| 1 | Access to water. Rate of reduction in the number of households in the WSA area without a basic water supply service. | Number of households without a basic water supply service reduced by 20% each year to achieve full coverage in five years. | Reported to DWAF by the WSA. Checked by DWAF on a random basis. |
| 2 | Access to sanitation. Rate of reduction in the number of households in the WSA area without a basic sanitation service. | Number of households without a basic sanitation service reduced by 14% each year to achieve full coverage in seven years. | Reported to DWAF by the WSA. Checked by DWAF on a random basis. |
| <p>Note: Where the rate of reduction in the number of households without access to basic water supply and sanitation services is below the benchmarks set out above, the WSA must show why the rate of reduction has been slower and what actions it is taking to remedy the situation.</p> | | | |
| Quality of services provided | | | |
| 3 | Water quality. Number of households (and proportion of total households supplied by formal piped systems) who do <u>not</u> receive water of an adequate drinking quality. | All households supplied with water from formal piped water supply systems receive water which consistently meets the defined minimum standards for potable water as defined in SABS 241. | Sampling system in place for all formal piped water supply systems and water quality results regularly reported. Testing systems and results checked by DWAF on a random basis. |
| 4 | Continuity of water supply. Number of households (and proportion of total households supplied by formal piped systems) which experience inadequate continuity of the water supply service. | All consumers served by formal piped systems (and with at least a basic level of water supply service) experience interruptions of less than 48 hours (at any one time) and a cumulative interruption time during the year of less than 15 days. | WSA complaint and maintenance logs. Random customer surveys undertaken by DWAF to verify reporting. |
| <p>Note: Where quality standards are not met, the WSA must demonstrate what actions it is taking to improve the quality of services provided and must show reasonable annual improvements in the quality of service provided so as to meet the quality standards within a period of five years.</p> | | | |

| INDICATOR | BENCHMARK | MEANS OF VERIFICATION |
|--|---|-----------------------|
| Free basic services provided | | |
| 5 | Free basic water. Number of domestic consumers (and proportion of total) who must pay for services even though they have access to just a basic water supply service and they use only a basic amount. | Zero (0%). |
| Reported by WSAs to DWAF. Random checks by DWAF to verify. | | |
| 6 | Free basic sanitation. Number of domestic consumers (and proportion of total) who must pay for services even though they have access to just a basic sanitation service and they use only the basic service. | Zero (0%). |
| Reported by WSAs to DWAF. Random checks by DWAF to verify. | | |
| Note: Where free basic water supply and sanitation services are not provided in terms of the policies in this Strategic Framework, the WSA must demonstrate what actions is it taking to extend free basic water supply and sanitation services and must show reasonable annual expansion in the provision of free basic services so as to meet the benchmark as soon as is practically feasible. | | |
| Financial performance | | |
| 7 | Affordability. Outstanding debt for water and sanitation services for all consumers expressed as debtor days. <i>(Note: This is also a measure of the efficacy of revenue collection.)</i> | Less than 90 days. |
| Reported by WSA to National Treasury as weighted average for the WSA area. Annual financial audits of financial reporting by the auditor general. | | |
| Use of resources | | |
| 8 | Metering efficiency. The proportion of the total water abstracted and/or purchased which is supplied & metered. | At least 80%. |
| Reported by WSA to DWAF. Random checks by DWAF to verify. | | |
| Environment | | |
| 9 | Quality of water discharged. Volume of water discharged to the environment (and % of total discharge) which does not meet discharge standards. | Zero (0%). |
| Reported by WSA to DWAF. Random checks by DWAF to verify. | | |
| Note: Where financial performance, use of resources and environmental benchmarks are not met, the WSA must demonstrate what actions is it taking to meet these benchmarks and must show reasonable annual improvements so as to meet these benchmarks within a period of five years. | | |

Annexure C: Sustainability Index for Integrated Urban Water Management

| TABLE 1 Data sources for SIUWM variables | | | |
|---|---|---|---------------------------------------|
| Component | Indicator | Variable | Data source – published / unpublished |
| Social | Level of service | LOS Water supply | Census surveys |
| | | LOS Sanitation | Census surveys |
| | | LOS Solid waste collection | Census surveys |
| | | LOS Drainage | Interviews |
| | Health | Under 5 mortality rate | Gaffneys / State of the cities |
| | | HIV/AIDS prevalence | Gaffneys / State of the cities |
| | Vulnerability to disasters | % population in informal dwellings | Census / State of the cities |
| | | Risk management / disaster mitigation | DMP / interviews |
| | Education and awareness | Customer service standards | RPMS – KPI 7 |
| | | Secondary education levels | Gaffneys / State of the Cities |
| Economic | Capacity to pay or access services | Unemployment rate | Gaffneys / Census surveys |
| | | Levels of inequality (Gini coefficient) | State of the world's cities |
| | Cost recovery | WSA financial performance | RPMS – KPI 9 |
| | | Water use efficiency / NRW | RPMS – KPI 11 |
| | Asset management | Strategic asset management | RPMS – KPI 10 |
| Environment | Resource sustainability/ feasibility (quantity) | Per capita water availability | WSDP / SoE / interviews |
| | | Sustainability of source | WSDP / interviews |
| | | Demand for water resources (average population growth rate) | IDP / State of the Cities / Census |
| | Sustainability of water resources (quality) | Potable water quality (Blue Drop) | RPMS – KPI 5 / Blue Drop |
| | | Water resource quality (River health) | SoE / River Health Programme |
| | | Groundwater quality | SoE / interviews |
| | Climate change response | Energy consumption by water sector | Interviews |
| | | Climate change strategic planning | Interviews |
| | Use (resource distribution per sector) | Domestic water demand | WSDP / interviews |
| | | Industrial water demand | WSDP / interviews |
| | | Ecosystems water demand | WSDP / interviews |
| | Wastewater management | Wastewater quality (Green Drop) | RPMS – KPI 6 / Green Drop |
| Stormwater management | WSUD / SuDS policy, implementation | Interviews | |
| Institutional | Governance model | Defined roles and responsibilities | Interviews |
| | | Departmental integration | Interviews |
| | Progress with meeting targets (MDGs etc) | Access to water supply | RPMS – KPI 1 |
| | | Access to sanitation | RPMS – KPI 2 |
| | | Access to Free Basic Water (FBW) | RPMS – KPI 3 |
| | Institutional capacity/ policies | WDM policy / IUWM approach | WSDP / interviews |
| Institutional effectiveness | | RPMS – KPI 8 | |

RPMS – Regulatory Performance Measurement System; WSDP – Water Services Development Plan; DMP – Disaster Management Plan; IDP – Integrated Development Plan; SoE – State of Environment report

Annexure D: RPMS Risks and Controls

RPMS Strategic Objective: Effective Institutions

| Risks | Minimum Control measures |
|---------------------------------------|--|
| Poor contract management | <p>Appropriate contracts in place:</p> <ul style="list-style-type: none"> Bulk contract Retail contract Operation and Maintenance / Management Contract Support Services Agent Contract Concession Contract Internal WSA - WSP Service Level Agreement <p>PENALTY: Unsigned/expired/non-existent contract</p> |
| Poor Legal Framework | <p>Gazetted bylaws</p> <ul style="list-style-type: none"> Aligned with legislation Revised following changes in legislation or significant changes to service provision mechanism <p>Water services set of policies (see Financial objective)</p> |
| Fragmented approach to water services | <p>Water services business plan</p> <ul style="list-style-type: none"> Roles, responsibilities, KPIs, goals for: WSP, WSA, Finance, HR, Corporate Services, Community Services, Office of the MM |

| Risks | Minimum Control measures |
|---|--|
| Insufficient Stilled staff | Defined competencies for key water services management staff |
| Inadequate Knowledge and information management | <p>Standard Operating Procedures</p> <ul style="list-style-type: none"> Correspondence Filing Reporting Project handover Succession |
| | <p>Information Management Systems</p> <ul style="list-style-type: none"> Electronic and hard copy system for record keeping and information sharing <p>BONUS: ISO 9001 quality management system</p> |

Strategic Objective: Financially Sustainable Business

| Risk | Required Control Measures |
|--|---|
| <p>Poor short term sustainability: Liquidity Financial Performance</p> | <p>Revenue Management systems compliant with Section 64 of MFMA (2003) and other applicable regulations Automated billing system; automated credit follow up Effective meter reading and data capture process Automatic anomaly alert Credit control processes</p> <p>Short term Investment management and policies assess debtor situation and plan careful investments over the short term. Policy required to standardise approach under different situations.</p> <p>Cash flow management and policies Monthly cash flow projections and monitoring over the full financial year, to allow for payment planning, expenses, salaries etc</p> |
| <p>Poor Long term sustainability: Leverage Ability to provide services Debtor Collection</p> | <p>Credit rating Debt policy and benchamarking Medium to long term budget Medium to long term cashflow plan integrated with budget Projected statement of financial position</p> |
| Risk | Required Control Measures |
| | <p>Credit Control and Debt Collection Policy Compliance with MFMA requirements</p> <p>Revenue collection system (see above)</p> |
| <p>Poor Self sustainability: Dependance on external grants Cost reflective tariffs</p> | <p>Tariff-cost Model - clear methodology for calculating tariffs (see Appendix for detailed requirements) Tariffs compliant with Section 10 regs BONUS: clear method for tariff calculations that accounts for full cost of service</p> <p>Rising block tariffs - requirements as per Section 10 regulations Differentiation between customer categories: domestic; institutional; commercial and industrial PENALTY: No rising block tariffs</p> <p>Consumer DemandConsumption per zone (zonal bulk meter readings)Total consumption per customer categoryTotal annual demand for current and future yearsBONUS: Comprehensive, categorised billing records</p> <p>Policies Tariff policy- as per section 74 of the Municipal systems Act (2000) free basic Water and sanitation policy Indigent policy</p> |

RPMS Strategic Objective: Customer Satisfaction

| RISKS | Required Control measures |
|-------------------------------|---|
| <p>Low willingness to pay</p> | <p>Accurate, timeous invoices</p> <p>clear, readable bills Reflection of rising block structure Billing period (dates) actual consumption and unit cost contact information for queries</p> <p>BONUS: historical consumption trend on bill</p> |
| RISKS | Required Control measures |
| | <p>CRM system and processes that include:</p> <p>Recordal, escalation and resolution of queries Performance reporting (stats from loggs) query/complaint risk prioritisation SOPs for staff training module for staff (must prove training) hotline / other dedicated 24hr line service centres accessible, welcoming</p> <p>BONUS: Fully implemented electronic system</p> <p>Customer communication:</p> <p>annual performance publication notification methods - website; bill; email; sms; radio; telephone annual satisfaction survey education and awareness (different customer types)</p> |
| <p>Change in expectations</p> | <p>Customer charter – reviewed annually</p> <p>Customer education and awareness</p> <p>Customer surveys</p> |

Annexure E: DWA Blue and Green Drop Criteria

Water Quality Criteria (Blue Drop)

| | Criterion | Allocated Weight (%)* | | |
|---|---|-----------------------|--------|---------|
| | | YEAR 1 | YEAR 2 | YEAR 3+ |
| 1 | Water Safety and Security Plan | 0 | 5 | 10 |
| 2 | Operational staff | 10 | 10 | 10 |
| 3 | Drinking Water Quality Monitoring Programme | 20 | 15 | 10 |
| 4 | Drinking Water Quality Sample Analysis | 5 | 5 | 5 |
| 5 | Submission of Drinking Water Quality Results | 10 | 5 | 5 |
| 6 | Drinking Water Quality Compliance | 35 | 30 | 30 |
| 7 | Management of Drinking Water Quality Failures | 20 | 15 | 15 |
| 8 | Publication of Drinking Water Quality Performance | 0 | 5 | 5 |
| 9 | Drinking Water Asset Management | 0 | 10 | 10 |
| | | 100 | 100 | 100 |

* Weights per criterion are subject to change

Source: DWA, 2009: 5

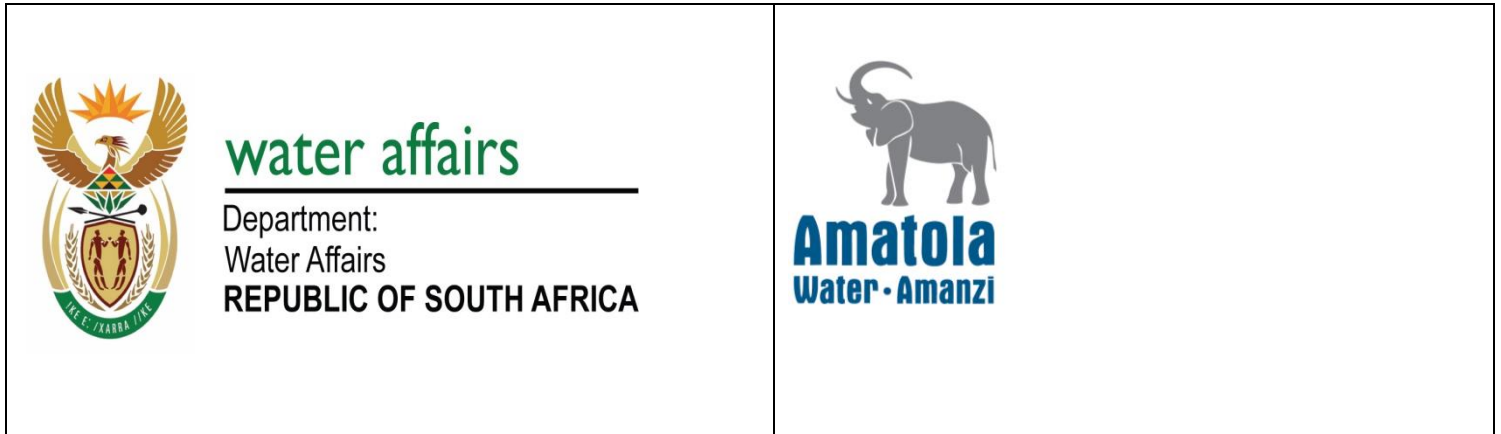
Waste Water Quality Criteria (Green Drop)

| | Criterion | Allocated Weight (%)* | | |
|----|--|-----------------------|--------|---------|
| | | YEAR 1 | YEAR 2 | YEAR 3+ |
| 1 | Operational Staff | 10 | 10 | 10 |
| 2 | Waste Water Quality Monitoring Programme | 10 | 10 | 10 |
| 3 | Waste Water Quality Sample Analysis | 5 | 5 | 5 |
| 4 | Submission of Waste Water Quality Results | 10 | 10 | 10 |
| 5 | Waste Water Quality Compliance | 35 | 25 | 20 |
| 6 | Management of Waste Water Quality Failures | 20 | 10 | 10 |
| 7 | Stormwater Management | 0 | 0 | 5 |
| 8 | Bylaws | 0 | 5 | 5 |
| 9 | Waste Water Treatment Works Capacity | 10 | 10 | 10 |
| 10 | Publication of Waste Water Quality Performance | 0 | 5 | 5 |
| 11 | Waste Water Asset Management | 0 | 10 | 10 |
| | | 100 | 100 | 100 |

* Weights per criterion are subject to change

Source: DWA, 2009: 9

Annexure F: Water Board Shareholders Compact



SHAREHOLDER COMPACT

Entered into by and between

**AMATOLA WATER, HEREIN REPRESENTED BY THE CHAIRPERSON OF
THE BOARD**

And

**THE GOVERNMENT OF THE REPUBLIC OF SOUTH AFRICA, HEREIN
REPRESENTED BY THE MINISTER OF WATER AFFAIRS**

SHAREHOLDER COMPACT

AGREED PRINCIPLES

1. INTRODUCTION

1.1 In terms of regulation 29 of the Treasury Regulations issued in terms of the Public Finance Management Act, 1999 Act No. 1 of 1999)(as amended) (“the PFMA”), the accounting authority for a public entity listed in Schedule 3b, must, in consultation with its executive authority, annually conclude a Shareholder Compact.

1.2 The Shareholder Compact must document the mandated key performance measures and indicators to be attained by the public entity as agreed between the accounting authority and the executive authority.

1.3 The required Shareholder Compact in the context of Amatola Water and the executive authority comprises:

1.3.1 the agreed principles, and;

1.3.2 the key performance objectives, measures and indicators.

2. INTERPRETATION

In this Shareholder Compact, unless otherwise indicated or contrary to the context, the words and phrases set out below shall have the meanings ascribed to them as follows:

“Board of Directors” means the Board of Amatola Water as appointed by the Minister;

“Executive Authority” or “Minister” means the Honorable Minister of Water Affairs in his or her capacity as such, or any other Minister of State made responsible for Amatola Water;

“Amatola Water” means the water board deemed to continue in accordance with the Water Services Act, having its principal place of business at 6 Lancaster Road, Vincent, East London;

“party” means either the shareholder or Amatola Water and “parties” mean both the shareholder and Amatola Water;

“Shareholder” means the Government of the Republic of South Africa, represented by the Minister.

“Shareholder Compact” means this performance agreement between Amatola Water and Shareholder together with all appendices attached hereto, as defined in the PFMA.

“Water Services Act” means the Water Services Act, 1997 (Act No 108 of 1997);

“PFMA” means the Public Finance Management Act, 1999 Act No. 1 of 1999)(as amended) and regulations issued in terms of this Act.

3. AGREED PRINCIPLES

3.1 The Shareholder Compact is designed solely to regulate the relationship between the Shareholder, on the one hand, and the Board and management on the other.

3.2 The Shareholder Compact is not intended to :

3.2.1 Interfere in any way with the normal company law principles and the normal relationship between the Shareholder, on the one hand, and the Board on the other. In giving effect to these principles, the Shareholder would have communicated its expectations to the Board and management.

3.2.2 Create rights and expectations that third parties may rely upon, it being specifically recorded that this Shareholder Compact does not create, confer or afford any third party any rights or expectations in terms hereof.

4. PERIOD

4.1 As contemplated in terms of the PFMA, the Shareholder Compact will be concluded on an annual basis.

4.2 This Shareholder Compact is effective for the period 1 July 2013 to 30 June 2014.

4.3 It is hereby recorded that the agreed objectives, although subject to review annually, set out matters that are applicable beyond a period of a year. In the event that they are amended, the parties shall take into account initiatives already commenced on the basis of such objectives.

5. MANDATE, VISION AND MISSION OF AMATOLA WATER

The mandate of Amatola Water is set out in Sections 29 and 30 of the Water Services Act.

In addition to its mandate, the Shareholder acknowledges that Amatola Water has a strategic developmental role that may require decisions that are not always optimal from a commercial perspective, but contribute to National Government's broader objectives and the growth and development in South Africa and Africa.

The Strategic Intent/Vision of Amatola Water is:

“To be the dominant Bulk Water Service Provider in the Eastern Cape Province”

The Mission of Amatola Water is:

“Amatola Water provides sustainable bulk, quality, clean water to WSAs enhancing equitable access of water services to all households”

6. STRATEGIC OBJECTIVES

6.1 In order to attain its strategic intent, Amatola Water has set the following strategic objective, which will focus and direct the business activities of the organization over the planning period:

“To Grow Bulk Water Service Provision”

The Amatola Water strategic objective, as set out in 6.1 above, is underpinned by specific goals, defined key activities and targets. These are broadly categorized as follows:

Financial

Increase the financial turnover and improve the sustainability of the organization. This will be achieved through growth in the primary business while maintaining secondary business services at their current levels

Customer

Increase the client base of the organization and penetration of services with clients. This will be achieved through the provision of legally compliant, efficient and effective service delivery.

Internal

Focus will be placed on ensuring water resource adequacy, improving infrastructure stability, reinforcing operational resiliency and enhancing operational optimization.

Learning and Growth

The organization will focus on developing the capacity and skills of its staff through targeted training programmes and partnerships. A strong emphasis will also be placed on developing leadership capacity within the organization.

AMATOLA WATER'S DEVELOPMENTAL ROLE

7.1 Initiatives in support of Amatola Water's developmental role can be classified into the following categories:

7.1.1 Social Development Initiatives such as shareholder projects, BBBEE promotion, water conservation/awareness programmes, donations and social investment.

7.1.2 Developmental Projects that have a significant developmental impact with a particular focus on improving rural livelihoods will be implemented by Amatola Water.

7.1.3 Training and Capacity Building initiatives such as developing a learning academy, a graduate placement programme, a bursary scheme and continuing professional development programmes.

7.2 The shareholder hereby confirms that the Board is empowered to develop such high impact projects. As regards any major developmental projects, it is necessary that Amatola Water's developmental role be fulfilled in a manner that is effective and sustainable.

7.3 In the event that the Executive Authority issuing a directive that Amatola Water undertakes shareholder projects, such directive will be issued in accordance with the provisions of relevant sections of the WSA and the PFMA.

8. BUSINESS PLAN AND STRATEGIC INTENT

Amatola Water's Business Plan, incorporating its Policy Statement and related financial plans shall be submitted to the Executive Authority in terms of Section 40 of the WSA and Section 52 of the PFMA.

Amatola Water shall ensure that its Business Plan and its objectives, goals and targets are aligned with the strategic intent, which will inform the business focus and direction for Amatola Water into the future.

The strategic business targets, as set out below will be the measure for control and monitoring of the performance of Amatola Water by the shareholder.

ROLES AND RESPONSIBILITIES

9.1 The Shareholder:

9.1.1 Is hereby empowered and hereby reserves the right to determine initiatives, projects or activities that Amatola Water shall undertake or become involved in, in the national interest.

9.1.2 The key performance measures for Amatola Water shall be adjusted by the Shareholder to take into account Amatola Water's developmental role.

9.1.3 The Board and the Shareholder shall agree on an amount to be set aside for developmental projects annually referred to in clause 7.

9.2 The Board:

is hereby mandated to oversee and to contribute to development of the strategic intent and furthermore to oversee the management of the business in accordance with such strategic intent, business plan and any applicable legislation;

and its members shall exercise their skill and fiduciary duties to ensure that management pursue the objectives and targets as set out in the business plan;

commits itself to the achievement of the Strategic Intent, strategic objectives and goals of Amatola Water, and always to act within its powers and the best interests of Amatola Water, the shareholder and customers;

accepts responsibility to direct and guide the business in a proper manner in keeping with good governance practices, the Water Services Act, the PFMA, this Shareholder Compact, including the Business Plan and Policy Statement; and

recognizes the importance of speedy decision-making, and will use its best endeavors to prevent undue delays with regard to critical decisions.

will ensure that Amatola Water and all its subsidiaries shall, subject to relevant legislation, comply with the policies of the Shareholder, and that they adhere to acceptable governance practices in terms of reporting and accountability.

UNDERTAKINGS BY THE SHAREHOLDER

The Shareholder undertakes for the duration of the agreement:

10.1 not to introduce new or additional requirements during the validity of this compact other than through a process of consultation with the Board;

10.2 to provide reasonable notice before the introduction of any new or additional requirements;

10.3 that, if new or additional requirements are introduced, the parties shall amend the key performance indicators and targets;

10.4 on the specific request of the request of the Board , to provide appropriate strategic leadership, support and direction to Amatola Water, where necessary, to enable the Board to fulfill its fiduciary responsibilities.

11. KEY PERFORMANCE MEASURES AND INDICATORS

The corporate strategic Key Performance Indicators for Amatola Water, as contemplated in the PFMA, are attached hereto, it is hereby recorded that they have been accepted by the Shareholder at the Board Meeting held on 30 April 2012.

Dated at.....on this the.....day of.....2013.

.....

(Chairperson of the Board of Amatola Water)

AS WITNESSES:

1.....

2.....

Dated at.....on this the.....day

of.....2013.

.....

(Minister of Water Affairs)
Shareholder Representative for and on
behalf of the Republic of South Africa).

AS WITNESSES:

1.....

2.....



water affairs

Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

Appendix 1 to Annual Shareholder Compact

Amatola Water: period 2013 to 2017

Introduction

The performance indicators and targets in Appendix 1 to the shareholder compact are aligned with the Strategic Plan of the Department of Water Affairs, as set out below.

| No | Strategic outcome oriented goals | Government outcomes and other initiatives | Strategic objectives |
|----|--|---|--|
| 1. | An efficient, effective and development oriented sector leader | 12 (Public service) New Growth Path 2 (job creation) | 1.1. Improve and increase the skills pool and build competencies in the Department and within the sector |
| | | | 1.2. Effective and efficient internal control environment |
| | | | 1.3. Implement programmes that create job opportunities |
| | | | 1.4. Improve water resources and water services information |
| | | | 1.5. Coordinate regional and global water cooperation |
| | | | 1.6. Ensure effective performance of water management and services institutions |
| 2. | Equitable and sustainable provisioning of raw water | 6 (Infrastructure) New Growth Path 2 | 2.1. Ensure the availability of / access to water supply for environmental and socio-economic use |
| | | | 2.2. Improve equity and efficiency in water allocation |
| | | | 2.3. Strengthen and implement strategies for water management in the country |
| | | | 2.4. Improve water use efficiency |
| 3. | Provision of equitable and sustainable water services of acceptable quantity and quality | 9 (Local government) | 3.1. Ensure compliance to water legislation |
| | | | 3.2. Support the water sector |
| 4. | Protection of freshwater ecosystems | 10 (Environment) | 4.1. Ensure compliance to water legislation |
| | | | 4.2. Improve the protection of water resources and ensure their sustainability |

2. KEY PERFORMANCE INDICATORS AND TARGETS: AMATOLA WATER BOARD.

| Sustainability Dimension | Performance Objective | Alignment | | Outcomes /Impact | Indicators | Measure | Actual 2012/13 | Target 2013/14 | Target 2014/15 | Target 2015/16 | Target 2016/17 | Target 2017/18 |
|--------------------------|-----------------------------------|--|--------------------------|---|--|------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | Government Outcomes | DWA Strategic Plan | | | | | | | | | |
| Social | 1. Water Quality Compliance | 9 – Local Government | SO 3 – 3.1 | Water quality standards met | Test results, SANS 241 | % compliance | 99 | 99 | 98 | 98 | 98 | 98 |
| Financial | 2. Non Revenue Water | 6 – Infrastructure 10 - Environment | SO 2 – 2.3 SO 4 – 4.2 | Reduced levels of unaccounted for water (UAW) | Water lost as a % of total water produced | % | 15.67 | 17 | 12 | 12 | 9 | 8 |
| Social | 3. Reliability of supply | 6 - Infrastructure | SO 2 – 2.1 | No unplanned interruptions to supply exceeding 24 hours | % number of days' supply disrupted divided by total number of possible supply days | % | 2 | 2.2 | 2 | 2 | 2 | 2 |
| Governance | 4. Financial Reporting Compliance | 9 – Local Government | SO 3 – 3.1 | unqualified audit report | Annual external audit | Qualified/ Unqualified | Qualified | Unqualified | Unqualified | Unqualified | Unqualified | Unqualified |
| Social | 5. Staff Turnover | 12- Public Service | SO 1 – 1.1 | Optimal staff retention | % staff leaving | % | 9 | 7 | 6 | 6 | 6 | 6 |

| Sustainability | Performance | Alignment | | Outcomes | Indicators | Measure | Actua | Target | Target | Target | Target | Target |
|----------------|--|--------------------|------------|---|--|--|----------|----------|----------|----------|----------|----------|
| Governance | 6. Board Member Attendance | 12- Public Service | SO 1 – 1.2 | Improved performance of fiduciary duties/governance | Annual performance assessment | % | 86 | 80 | 80 | 80 | 80 | 80 |
| Governance | 7.Effective Internal Controls And Risk Management | 12- Public Service | SO 1 – 1.2 | Internal audit findings dealt with | Internal audit reports | No repeat and unresolved findings | 0 | 0 | 0 | 0 | 0 | 0 |
| Governance | 8. Bulk Supply Agreements Concluded With Municipalities/ Other Customers | 12- Public Service | SO 1 – 1.6 | Statutory and service level agreements in place | Municipalities/other customers with bulk supply agreements | % | 100 | 100 | 100 | 100 | 100 | 100 |
| Financial | 9. Improve Financial Ratios | 12- Public Service | SO 1 – 1.6 | Improved viability and sustainability | Financial ratios | Liquidity | 0.87 | 0.87 | 1.25 | 2 | 2.5 | 2.5 |
| | | | | | | Gross profit margin % | 22.5 | 20.9 | 21.8 | 26.1 | 30 | 33.2 |
| | | | | | | Net profit margin % (primary activity) | -1% | 5% | 5% | 5% | 5% | 5% |
| | | | | | | Net profit margin % (secondary activity) | -2.5% | 5% | 5% | 5% | 5% | 5% |
| | | | | | | Debt Equity% | 0% | 1% | 1% | 1% | 1% | 1% |
| | | | | | | Return on assets % | -2.94% | -7.2% | 0.10% | 2% | 2.5% | 3% |
| | | | | | | Debtors days | 113 days | 110 days | 120 days | 127 days | 124 days | 115 days |

| Sustainability | Performance | Alignment | | Outcomes | Indicators | Measure | Actua | Target | Target | Target | Target | Target |
|----------------|--|----------------------|-----------------|---|---|-----------------------------|--------|---------|----------|---------|--------|---------|
| Social | Increase BBBEE Spend | 12- Public Service | SO 1 – 1.3 | % of spend increased and increased new entrants | Quarterly reports | % increase | 75 | 75 | 80 | 85 | 90 | 95 |
| Financial | Manage Costs Within The Approved Budget | 12- Public Service | SO 1 – 1.2 | No over expenditure/losses | Financial reports | % variance | 10 | 5 | 5 | 5 | 5 | 5 |
| Financial | Capital Expenditure | 6 - Infrastructure | SO 2 – 2.1 | Infrastructure available to meet demands | Overall project expenditure within R target | % variance | 94 | 10 | 10 | 10 | 10 | 10 |
| | | | | | Overall project completion dates within targets | % variance | 100 | 10 | 10 | 10 | 10 | 10 |
| Social | 13. Increased Access to Services | 6 - Infrastructure | SO 2 – 2,1, 2.3 | Contribution to national objectives | CAPEX spend /projects | CAPEX spend ('000) | R0,316 | R26,519 | R186,034 | R40,000 | R3,000 | R32,000 |
| Financial | 14.Engagement in Secondary Activities | 9 – Local Government | SO 3 – 3.2 | Extent of involvement | | % of total turnover | 47 | 49 | 45 | 40 | 37 | 33 |
| Governance | 15. Achieve Statutory Reporting Compliance | 12- Public Service | SO 1 – 1.2 | Reporting compliance achieved | Statutory submissions made on time | Submission dates met/missed | 6/6 | 6/6 | 6/6 | 6/6 | 6/6 | 6/6 |
| Social | 16. Jobs Created | 12- Public Service | SO 1 – 1.3 | Permanent and contract (direct) | Total Number | Number | 410 | 379 | 345 | 355 | 365 | 375 |
| | | 12- Public | SO 1 – | Temporary | Total Number | Number | 69 | 22 | 22 | 22 | 22 | 22 |

| Sustainability | Performance | Alignment | | Outcomes | Indicators | Measure | Actua | Target | Target | Target | Target | Target |
|----------------|---|--------------------|------------|---------------------------------------|--|--------------------|-------|--------|--------|--------|--------|--------|
| | | Service | 1.3 | | | | | | | | | |
| | | Service | 1.3 | (indirect) | | | | | | | | |
| Social | 17. Corporate Social Responsibility Initiatives | 12- Public Service | SO 1 – 1.6 | Good corporate citizenship | Number of initiatives | Number and R value | 0 | 2 | 2 | 3 | 3 | 4 |
| Social | 18. Training And Skills Development | 12- Public Service | SO 1 – 1.3 | Skills and capacity building | Training courses, learner-ships, bursaries | Total Number | 38 | 60 | 65 | 70 | 75 | 80 |
| Governance | 19. Good Governance | 12- Public Service | SO 1 - 6 | Improved controls and risk mitigation | Breaches of materiality and significance framework | Number | 1 | 0 | 0 | 0 | 0 | 0 |
| | 20. Other (water board specific objectives) | | | | | | | | | | | |
| | | | | | | | | | | | | |

Annexure G: UNGC Principles

The Ten Principles of the United Nations Global Compact

HUMAN RIGHTS

- Principle 1 Businesses should support and respect the protection of internationally proclaimed human rights; and
- Principle 2 make sure that they are not complicit in human rights abuses.

LABOUR

- Principle 3 Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- Principle 4 the elimination of all forms of forced and compulsory labour;
- Principle 5 the effective abolition of child labour; and
- Principle 6 the elimination of discrimination in respect of employment and occupation.

ENVIRONMENT

- Principle 7 Businesses should support a precautionary approach to environmental challenges;
- Principle 8 undertake initiatives to promote greater environmental responsibility; and
- Principle 9 encourage the development and diffusion of environmentally friendly technologies.

ANTI-CORRUPTION

- Principle 10 Businesses should work against corruption in all its forms, including extortion and bribery.

Source (UNGC, 2012:16)

Annexure H: GRI Steps for Sustainability Reports

| Sustainability Reporting Stage | “In accordance” Option | Reporting Stage Content |
|---------------------------------------|-------------------------------|---|
| Content Choice: | Core | Governance approach, significant environment, social and financial impacts |
| | Comprehensive | core content plus strategy & analysis, ethics and integrity |
| General Standard Disclosures | Core and Comprehensive | Disclosures on strategy and analysis, organizational profile, identified material aspects & boundaries, stakeholder engagement, report profile, governance, ethics & integrity, general standard disclosures for sector |
| Specific Standard Disclosures | Core and Comprehensive | Disclosures on management approach, indicators, specific standard disclosures for sector |
| Prepare Sustainability Report | Core and Comprehensive | Web or paper based report with complete set of information for the reporting period |

Annexure I: GRI Content and Quality Principles

| Content Principle | Principle Description |
|---------------------------|---|
| Stakeholder Inclusiveness | Stakeholders are identified and response to their expectations / interests are provided |
| Sustainability Context | Report on the organizations performance in the wider sustainability context |
| Materiality | Report on significant impacts, governance approach and matters that substantively influence the decisions of stakeholders |
| Completeness | Cover all material aspects and their boundaries |

| Quality Principle | Principle Description |
|--------------------------|--|
| Balance | Report reflects positive and negative aspects of performance |
| Comparability | Information is selected, compiled and reported to allow comparison with past performances |
| Accuracy | Information is reported accurately to allow informed decisions by stakeholders |
| Timeliness | Reporting is regular and in time to allow informed decisions by stakeholders |
| Clarity | Reports are understandable and accessible |
| Reliability | Information and processes used to compile the report are examinable for quality assurance purposes |

Annexure J: G4 General and Specific Standard Disclosures

G4 GENERAL STANDARD DISCLOSURES OVERVIEW

| STRATEGY AND ANALYSIS | | | | | | | | | | |
|--|-------|-------|-------|-------|-------|-------|-------|-----------|-------|-------|
| G4-1 | G4-2 | | | | | | | | | |
| ORGANIZATIONAL PROFILE | | | | | | | | | | |
| G4-3 | G4-4 | G4-5 | G4-6 | G4-7 | G4-8 | G4-9 | G4-10 | G4-11 | G4-12 | G4-13 |
| | | | | | | | UNGC | OECD/UNGC | | |
| G4-14 | G4-15 | G4-16 | | | | | | | | |
| IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES | | | | | | | | | | |
| G4-17 | G4-18 | G4-19 | G4-20 | G4-21 | G4-22 | G4-23 | | | | |
| STAKEHOLDER ENGAGEMENT | | | | | | | | | | |
| G4-24 | G4-25 | G4-26 | G4-27 | | | | | | | |
| REPORT PROFILE | | | | | | | | | | |
| G4-28 | G4-29 | G4-30 | G4-31 | G4-32 | G4-33 | | | | | |
| GOVERNANCE | | | | | | | | | | |
| G4-34 | G4-35 | G4-36 | G4-37 | G4-38 | G4-39 | G4-40 | G4-41 | G4-42 | G4-43 | G4-44 |
| G4-45 | G4-46 | G4-47 | G4-48 | G4-49 | G4-50 | G4-51 | G4-52 | G4-53 | G4-54 | G4-55 |
| ETHICS AND INTEGRITY | | | | | | | | | | |
| G4-56 | G4-57 | G4-58 | | | | | | | | |

LEGEND



General Standard Disclosures



Required General Standard Disclosures for both 'in accordance' criteria options

OECD

Linkage to OECD Guidelines for Multi-national Enterprises

UNGC

Linkage to UN Global Compact 'Ten Principles'

G4 SPECIFIC STANDARD DISCLOSURES OVERVIEW

| DISCLOSURES ON MANAGEMENT APPROACH | | | | |
|------------------------------------|---------|---------|---------|-----------|
| G4-DMA | | | | |
| Indicators by Aspects | | | | |
| CATEGORY: ECONOMIC | | | | |
| Economic Performance | | | | OECD |
| G4-EC1 | G4-EC2 | G4-EC3 | G4-EC4 | |
| Market Presence | | | | |
| G4-EC5 | G4-EC6 | | | |
| Indirect Economic Impacts | | | | |
| G4-EC7 | G4-EC8 | | | |
| Procurement Practices | | | | |
| G4-EC9 | | | | |
| CATEGORY: ENVIRONMENTAL | | | | OECD/UNGC |
| Materials | | | | |
| G4-EN1 | G4-EN2 | | | |
| Energy | | | | |
| G4-EN3 | G4-EN4 | G4-EN5 | G4-EN6 | G4-EN7 |
| Water | | | | |
| G4-EN8 | G4-EN9 | G4-EN10 | | |
| Biodiversity | | | | |
| G4-EN11 | G4-EN12 | G4-EN13 | G4-EN14 | |
| Emissions | | | | |
| G4-EN15 | G4-EN16 | G4-EN17 | G4-EN18 | G4-EN19 |
| G4-EN20 | G4-EN21 | | | |
| Effluents and Waste | | | | |
| G4-EN22 | G4-EN23 | G4-EN24 | G4-EN25 | G4-EN26 |

| Indicators by Aspects | | | | |
|--|---------|---------|--------|-----------|
| CATEGORY: ENVIRONMENTAL | | | | OECD/UNGC |
| Products and Services | | | | |
| G4-EN27 | G4-EN28 | | | |
| Compliance | | | | |
| G4-EN29 | | | | |
| Transport | | | | |
| G4-EN30 | | | | |
| Overall | | | | |
| G4-EN31 | | | | |
| Supplier Environmental Assessment | | | | |
| G4-EN32 | G4-EN33 | | | |
| Environmental Grievance Mechanisms | | | | |
| G4-EN34 | | | | |
| CATEGORY: SOCIAL | | | | |
| LABOR PRACTICES AND DECENT WORK | | | | OECD/UNGC |
| Employment | | | | |
| G4-LA1 | G4-LA2 | G4-LA3 | | |
| Labor/Management Relations | | | | UNGC |
| G4-LA4 | | | | |
| Occupational Health and Safety | | | | OECD |
| G4-LA5 | G4-LA6 | G4-LA7 | G4-LA8 | |
| Training and Education | | | | OECD |
| G4-LA9 | G4-LA10 | G4-LA11 | | |
| Diversity and Equal Opportunity | | | | |
| G4-LA12 | | | | |
| Equal Remuneration for Women and Men | | | | |
| G4-LA13 | | | | |

G4 SPECIFIC STANDARD DISCLOSURES OVERVIEW (continued)

| Indicators by Aspects | | | | |
|---|---------|--------|--|--|
| LABOR PRACTICES AND DECENT WORK OECD/UNGC | | | | |
| Supplier Assessment for Labor Practices | | | | |
| G4-LA14 | G4-LA15 | | | |
| Labor Practices Grievance Mechanisms OECD | | | | |
| G4-LA16 | | | | |
| HUMAN RIGHTS OECD/UNGC | | | | |
| Investment | | | | |
| G4-HR1 | G4-HR2 | | | |
| Non-discrimination OECD/UNGC | | | | |
| G4-HR3 | | | | |
| Freedom of Association and Collective Bargaining OECD/UNGC | | | | |
| G4-HR4 | | | | |
| Child Labor OECD/UNGC | | | | |
| G4-HR5 | | | | |
| Forced or Compulsory Labor OECD/UNGC | | | | |
| G4-HR6 | | | | |
| Security Practices | | | | |
| G4-HR7 | | | | |
| Indigenous Rights | | | | |
| G4-HR8 | | | | |
| Assessment | | | | |
| G4-HR9 | | | | |
| Supplier Human Rights Assessment | | | | |
| G4-HR10 | G4-HR11 | | | |
| Human Rights Grievance Mechanisms | | | | |
| G4-HR12 | | | | |
| Indicators by Aspects | | | | |
| SOCIETY | | | | |
| Local Communities OECD/UNGC | | | | |
| G4-SO1 | G4-SO2 | | | |
| Anti-corruption OECD/UNGC | | | | |
| G4-SO3 | G4-SO4 | G4-SO5 | | |
| Public Policy OECD/UNGC | | | | |
| G4-SO6 | | | | |
| Anti-competitive Behavior OECD | | | | |
| G4-SO7 | | | | |
| Compliance OECD | | | | |
| G4-SO8 | | | | |
| Supplier Assessment for Impacts on Society OECD | | | | |
| G4-SO9 | G4-SO10 | | | |
| Grievance Mechanisms for Impacts on Society OECD | | | | |
| G4-SO11 | | | | |
| PRODUCT RESPONSIBILITY OECD | | | | |
| Customer Health and Safety OECD | | | | |
| G4-PR1 | G4-PR2 | | | |
| Product and Service Labeling | | | | |
| G4-PR3 | G4-PR4 | G4-PR5 | | |
| Marketing Communications | | | | |
| G4-PR6 | G4-PR7 | | | |
| Customer Privacy | | | | |
| G4-PR8 | | | | |
| Compliance | | | | |
| G4-PR9 | | | | |

Source: (GRI, 2013b: 19-21)

Annexure K: Ten Outcomes of Effective Utility Management

PRODUCT QUALITY:

The system is in compliance with permit requirements and other regulatory or reliability requirements. It meets its community's expectations for the potable water or treated effluent and process residuals that it produces. The system reliably meets customer, public health, and ecological needs.

CUSTOMER SATISFACTION:

The system is informed about what its customers expect in terms of service, water quality, and rates. It provides reliable, responsive, and affordable services, and requests and receives timely customer feedback to maintain responsiveness to customer needs and emergencies. Customers are satisfied with the services that the system provides.

EMPLOYEE & LEADERSHIP DEVELOPMENT:

The system recruits and retains a workforce that is competent, motivated, and safe-working. Opportunities exist for employee skill development and career enhancement, and training programs are in place, or are available, to retain and improve their technical and other knowledge. Job descriptions and performance expectations are clearly established (in writing), and a code of conduct is in place and accepted by all employees.

OPERATIONAL OPTIMIZATION:

The system ensures ongoing, timely, cost-effective, reliable, and sustainable performance in all aspects of its operations. The key operational aspects of the system (e.g., pressure, flow, quality) are documented and monitored. It minimizes resource use, loss, and impacts from day-to-day operations. It has assessed its current energy use and water loss and performed related audits.

FINANCIAL VIABILITY:

The system establishes and maintains an effective balance between long-term debt, asset values, operations and maintenance expenditures, and operating revenues. The rates that it charges are adequate to pay its bills, put some funds away for both future capital expenditures and unanticipated issues, and maintain,

repair, and replace its equipment and infrastructure as needed. The system discusses rate requirements with its customers, decision making authorities, and other key stakeholders.

INFRASTRUCTURE STABILITY:

The system understands the condition and costs associated with its critical infrastructure assets. It has inventoried its system components, conditions, and costs, and has a plan in place to repair and replace these components. It maintains and enhances the condition of all assets over the long-term at the lowest possible life-cycle cost and acceptable level of risk.

OPERATIONAL RESILIENCY:

The system ensures that its leadership and staff members work together to anticipate and avoid problems. It proactively identifies legal, financial, non-compliance, environmental, safety, security, and natural threats to the system. It has conducted a vulnerability assessment for safety, natural disasters, and other environmental threats, and has prepared an emergency response plan for these hazards.

COMMUNITY SUSTAINABILITY & ECONOMIC DEVELOPMENT:

The system is active in its community and is aware of the impacts that its decisions have on current and long-term future community health and welfare. It seeks to support overall watershed, source water protection, and community economic goals, where feasible. It is aware of, and participates in, local community and economic development plans.

WATER RESOURCE ADEQUACY:

The systems ensure that water availability is consistent with current and future customer needs. It understands its role in water availability, and manages its operations to provide for long-term aquifer and surface water sustainability and replenishment. It has performed a long-term water supply and demand analysis, and is able to meet the water and sanitation needs of its customers now and for the reasonable future.

STAKEHOLDER UNDERSTANDING & SUPPORT:

The system actively seeks understanding and support from decision making bodies, community members, and regulatory bodies related to service levels, operating budgets, capital improvement programs, and risk management decisions. It takes appropriate steps with these stakeholders to build support for its performance goals, resources, and the value of the services that it provides, performing active outreach and education to understand concerns and promote the value of clean, safe water and the services the utility provides, consistent with available resources.

Source: EPA, 2013: 4-5

Annexure L: 2012/13 Performance Indicator Summary for South African Water Boards

| Water Board | Economic Indicators | Social Indicators | Environmental Indicators | Governance Indicators | Total Indicators | 2012/13 Annual Report Reference |
|--------------------|----------------------------|--------------------------|---------------------------------|------------------------------|-------------------------|--|
| Rand | 4 | 8 | 9 | 37 | 58 | p140 |
| Umgeni | 9 | 29 | 25 | 60 | 123 | p175 |
| Overberg | 16 | 35 | 0 | 15 | 66 | p23 |
| Amatola | 11 | 30 | 1 | 1 | 43 | p9 |
| Botshelo | 11 | 24 | 0 | 5 | 40 | p21 |
| Lepelle Northern | 14 | 16 | 2 | 0 | 32 | p89 |
| Bloem | 12 | 9 | 0 | 6 | 27 | p140 |
| Magalies | 4 | 18 | 2 | 3 | 27 | p23 |
| Sedibeng | 12 | 9 | 0 | 6 | 27 | p91 |
| Mhlatuze | 12 | 8 | 0 | 3 | 23 | p27 |
| Max | 16 | 35 | 25 | 60 | 123 | |
| Min | 4 | 8 | 0 | 0 | 23 | |
| Mean | 10.5 | 18.6 | 3.9 | 13.6 | 46.6 | |

(Source: Respective 2012/13 Water Board Annual Reports)

Annexure M: Indicator Set used to select WSSMF Indicators

| No. | Outcomes | KPI No. | KPI's |
|-----|---------------------|---------|---|
| 1 | Financial Viability | 1 | Water services income (revenue) |
| | | 2 | % water abstracted or purchased which is supplied and metered |
| | | 3 | Unemployment rate |
| | | 4 | Levels of inequality (Gini Co-efficient) |
| | | 5 | Financial management health check |
| | | 6 | Revenue collection health check |
| | | 7 | WSA financial performance |
| | | 8 | Water use efficiency / Non Revenue Water |
| | | 9 | Strategic asset management |
| | | 10 | Revenue management system |
| | | 11 | Short term investment management and policies |

| | | | |
|--|--|----|--|
| | | 12 | Cashflow management and policies |
| | | 13 | Debt policy and benchmarking |
| | | 14 | Medium to long term budget |
| | | 15 | Medium to long term cashflow plan integrated with budget |
| | | 16 | Projected Statement of Financial Position |
| | | 17 | Credit control and debt collection policies |
| | | 18 | MFMA compliance |
| | | 19 | Revenue collection system |
| | | 20 | Tariff cost model |
| | | 21 | Rising block tariffs |
| | | 22 | Accurate and timeous invoices |
| | | 23 | Revenue to expenditure ratio |
| | | 24 | Life cycle cost accounting |
| | | 25 | Financial accounting policies and procedures in place |

| | | | |
|--|--|----|--|
| | | 26 | Annual audit of financial results and controls |
| | | 27 | G4.EC1 Report the direct economic value generated and distributed (EVG&D) on an accruals basis |
| | | 28 | External Annual Audit outcome |
| | | 29 | Current ratio |
| | | 30 | Debtors days (water) |
| | | 31 | Debtors days (sanitation) |
| | | 32 | Return on Assets |
| | | 33 | Gross profit margin |
| | | 34 | Nett profit margin |
| | | 35 | % secondary to primary turnover |
| | | 36 | Total volume of potable water sold |
| | | 37 | Total volume of raw water sold |
| | | 38 | Total Volume of waste water disposed of |
| | | 39 | Total volume of waste water treated |

| | | | |
|--|--|----|---|
| | | 40 | Debt service/interest cover ratio |
| | | 41 | Working ratio |
| | | 42 | Controllable working ratio |
| | | 43 | % labour costs of total costs |
| | | 44 | Credit rating |
| | | 45 | Accounts receivable turnover |
| | | 46 | O&M expenditure % |
| | | 47 | Capital expenditure % |
| | | 48 | G4.EC3 Report on the coverage of the organizations defined benefit plan obligations |
| | | 49 | G4.EC4 Report on financial assistance received from government (Amount) |
| | | 50 | % reduction in audit findings |
| | | 51 | Tariff rate increase / CPI ratio |
| | | 52 | 60-90 day operating reserve |
| | | 53 | G4.EC2 Report risks and opportunities posed by climate change that have the potential to generate substantive changes in operations, revenue or expenditure |

| | | | |
|--|--|----|---|
| | | 54 | G4.EC5 Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation |
| | | 55 | G4.EC9 Proportion of spending on local suppliers at significant locations of operation |
| | | 56 | Bond rating |
| | | 57 | Rate stabilization reserve |
| | | 58 | G4.EC6 Proportion of senior management hired at locations of significant operation |
| | | 59 | G4.EC7 Report on the development and impact of infrastructure investments and services supported |
| | | 60 | G4.EC8 Report significant identified positive and negative indirect economic impacts the organization has |
| | | 61 | DuPont Ratio |
| | | 62 | Employee to revenue ratio |
| | | 63 | % revenue growth (primary business) |
| | | 64 | % revenue growth (secondary business) |
| | | 65 | % Growth in Kilolitre water sold |
| | | 66 | % contribution (revenue less costs) |
| | | 67 | % infrastructure CAPEX vs budget |

| | | | |
|--|--|----|--|
| | | 68 | % variance on approved budget |
| | | 69 | % variance on expenditure of capital budget |
| | | 70 | % variance on capex project completion dates |
| | | 71 | No. breaches of materiality and significance framework |
| | | 72 | Debt / equity ratio |
| | | 73 | Total turnover / operate & maintain revenue |
| | | 74 | No. section 30 projects implemented |
| | | 75 | New section 30 opportunities acquired or extended |
| | | 76 | No. of section 30 contracts retained |
| | | 77 | Total expenditure |
| | | 78 | Gross profit margin (secondary activities) |
| | | 79 | Nett profit margin (secondary activities) |
| | | 80 | Gross profit margin (primary activities) |
| | | 81 | Nett profit margin (primary activities) |

| | | | |
|--|--|----|--|
| | | 82 | Total gross revenue |
| | | 83 | Average water tariff |
| | | 84 | Cost of raw water |
| | | 85 | Total cost / volume |
| | | 86 | Finance costs / kl |
| | | 87 | Asset turnover |
| | | 88 | Debt ratio (debt to total capital employed) |
| | | 89 | Return on Equity |
| | | 90 | Operating surplus to sales |
| | | 91 | Cost / revenue % |
| | | 92 | Return on section 30 activities |
| | | 93 | Surplus targets met |
| | | 94 | Annual review of tariff structure |
| | | 95 | Annual tariff increase done according to Treasury regulations and guidelines |

| | | | |
|------------|--------------------------|-----|--|
| | | 96 | Annual tariff increase implemented |
| | | 97 | Interest on overdraft account |
| | | 98 | Per cent bulk wastewater volume growth. |
| | | 99 | Funds mobilised for long-term financial sustainability of projects |
| | | 100 | Interest cover. |
| | | 101 | G3 EC 1 Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments |
| | | 102 | G3 EC 3 Coverage of the organisation's defined benefit plan obligations. |
| | | 103 | G3 EC 8 Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement. |
| | | 104 | G3 EC 9 Understanding and describing significant indirect economic impacts, including the extent of impacts. |
| No. | Outcomes | | KPI's |
| 2 | Operational Optimization | 105 | System input volume (population) |
| | | 106 | System input value (households) |
| | | 107 | Energy consumption by water sector |

| | | | |
|--|--|-----|--|
| | | 108 | Institutional effectiveness |
| | | 109 | Number of connections metered |
| | | 110 | Meter management |
| | | 111 | Meter replacement programme |
| | | 112 | WCWDM regulations |
| | | 113 | Organizational performance monitoring health check |
| | | 114 | Water lost as % of total water produced |
| | | 115 | % number of days' supply disrupted divided by total number of possible supply days |
| | | 116 | Water balance per system |
| | | 117 | Operational staff (numbers, qualifications and experience) |
| | | 118 | Unaccounted for water in bulk water distributions system |
| | | 119 | Unaccounted for water in treatment system |
| | | 120 | Total water loss |
| | | 121 | Non-revenue water by value |

| | | | |
|--|--|-----|--|
| | | 122 | electricity usage (r/kl & kWh/kl) |
| | | 123 | chemical usage (R/kl & g/kl) |
| | | 124 | Zonal metering |
| | | 125 | Meter function % |
| | | 126 | O&M cost per volume delivered |
| | | 127 | Standard operating procedures |
| | | 128 | Information management system |
| | | 129 | Awareness programme |
| | | 130 | Active and passive leak detection |
| | | 131 | WCWDM plan |
| | | 132 | Pressure management |
| | | 133 | Production efficiency |
| | | 134 | % Billed time Grade K employees and above vs. available time |
| | | 135 | Improve /optimise Operation & Maintenance value chain (Secondary business repairs to payment duration) |

| | | | |
|--|--|-----|--|
| | | 136 | Optimise primary bulk water supply (improve unbilled water – meter accuracy, water losses) |
| | | 137 | % of compliance to the KPI's (of contracts) |
| | | 138 | Number of identified processes successfully implemented and improved |
| | | 139 | Number of active research projects |
| | | 140 | Organisational Performance score |
| | | 141 | % bulk water sold / bulk water purchased |
| | | 142 | No. of awareness programmes conducted |
| | | 143 | Water balance in bulk distribution (kl/km/month) |
| | | 144 | Water balance in treatment system (plant) |
| | | 145 | Bulk meter coverage % |
| | | 146 | % WTW plant utilisation |
| | | 147 | % fixed assists utilisation |
| | | 148 | % development and compliance to process, procedures and policies |
| | | 149 | Stock levels according to approved levels |

| | | | |
|------------|------------------------|-----|--|
| | | 150 | Senior management meetings held quarterly |
| | | 151 | Per cent key business processes, policies and systems improved and are enabling for strategy implementation |
| No. | Outcomes | | KPI's |
| 3 | Operational Resiliency | 152 | Disabling incident severity rate |
| | | 153 | G4.EN21 Report the amount of significant air emissions, in kilograms or multiples for NOX, SOX, Persistent organic pollutants (POP), Volatile organic compounds (VOC), Hazardous air pollutants (HAP), Particulate matter (PM) and other standard categories of air emissions identified in relevant regulations |
| | | 154 | G4.EN25 Report the total weight for hazardous waste transported, hazardous waste imported, hazardous waste exported and hazardous waste treated |
| | | 155 | Disabling Injury Frequency Rate |
| | | 156 | Number of supply failures leading to disruptions of service of longer than 24 hours during the monthly reporting period. |
| | | 157 | G4.EN8 Report the total volume of water withdrawn from different sources |
| | | 158 | G4.EN9 Report the total number of water sources significantly affected by withdrawal |
| | | 159 | G4.EN29 Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations |
| | | 160 | Drought management plan |
| | | 161 | G4.EN3 Report on energy consumption within organization (renewable and non-renewable) |

| | | | |
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| | | 162 | G4.EN11 Report on each operational site owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas |
| | | 163 | G4.EN26 Report water bodies and related habitats that are significantly affected by water discharges based on size of water body and related habitat, whether the water body and related habitat is designated as a protected area and biodiversity value |
| | | 164 | G4.EN34 Report the total number of grievances about environmental impacts filed through formal grievance mechanisms during the reporting period |
| | | 165 | Emergency response plan in place |
| | | 166 | Number and frequency of ERP trainings per year |
| | | 167 | Number and frequency of ERP exercises per year |
| | | 168 | ERP review frequency |
| | | 169 | Power resiliency |
| | | 170 | Treatment chemical resiliency |
| | | 171 | Critical parts and equipment resiliency |
| | | 172 | Critical staff resiliency |
| | | 173 | Treatment operations resiliency |
| | | 174 | Source water resiliency |

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|--|--|-----|---|
| | | 175 | G4.EN1 Report the total weight or volume of materials that are used to produce and package the organization's primary products and services during the reporting period (renewable and non-renewable) |
| | | 176 | G4.EN2 Report the percentage of recycled input materials used to manufacture the organization's primary products and services. |
| | | 177 | G4.EN6 Report the amount of reductions in energy consumption achieved as a direct result of conservation and efficiency initiatives |
| | | 178 | G4.EN7 Report the reductions in the energy requirements of sold products and services achieved during the reporting period |
| | | 179 | G4.EN10 Report the total volume of water recycled and reused by the organization |
| | | 180 | G4.EN22 Report the total volume of planned and unplanned water discharges by destination and quality of the water |
| | | 181 | G4.EN24 Report the total number and total volume of recorded significant spills. |
| | | 182 | G4.EN27 Report quantitatively the extent to which environmental impacts of products and services have been mitigated during the reporting period. |
| | | 183 | G4.EN31 Total environmental protection expenditures and investments by type |
| | | 184 | Climate change strategic planning |
| | | 185 | Number of general liability and auto insurance claims |
| | | 186 | Severity of general liability and auto insurance claims |
| | | 187 | Critical component uptime % |

| | | | |
|--|--|-----|--|
| | | 188 | G4.EN4 Report energy consumed outside of the organization |
| | | 189 | G4.EN5 Report the energy intensity ratio. |
| | | 190 | G4.EN12 Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas |
| | | 191 | G4.EN13 Report the size and location of all habitat protected areas or restored areas, and whether the success of the restoration measure was or is approved by independent external professionals. |
| | | 192 | G4.EN14 Report the total number of IUCN Red List species and national conservation list species with habitats in areas affected by the operations of the organization, by level of extinction risk |
| | | 193 | G4.EN15 Report gross direct (Scope 1) GHG emissions in metric tons of CO2 equivalent, independent of any GHG trades, such as purchases, sales, or transfers of offsets or allowances. |
| | | 194 | G4.EN16 Report gross energy indirect (Scope 2) GHG emissions in metric tons of CO2 equivalent, independent of any GHG trades, such as purchases, sales, or transfers of offsets or allowances. |
| | | 195 | G4.EN17 Report gross other indirect (Scope 3) GHG emissions in metric tons of CO2 equivalent, excluding indirect emissions from the generation of purchased or acquired electricity, heating, cooling, and steam consumed by the organization (these indirect emissions are reported in Indicator G4-EN16) |
| | | 196 | G4.EN18 Report the GHG emissions intensity ratio |
| | | 197 | G4.EN19 Report the amount of GHG emissions reductions achieved as a direct result of initiatives to reduce emissions, in metric tons of CO2 equivalent |
| | | 198 | G4.EN20 Report production, imports, and exports of ODS in metric tons of CFC-11 equivalent |
| | | 199 | G4.EN23 Report the total weight of hazardous and non-hazardous waste |
| | | 200 | G4.EN28 Report the percentage of reclaimed products and their packaging materials for each product category |

| | | | |
|--|--|-----|--|
| | | 201 | G4.EN30 Report the significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce |
| | | 202 | G4.EN32 Report the percentage of new suppliers that were screened using environmental criteria |
| | | 203 | G4.EN33 Significant actual and potential negative environmental impacts in the supply chain and actions taken |
| | | 204 | Implementation of renewable energy projects linked to water service provision |
| | | 205 | Green economy programmes |
| | | 206 | Environmental health |
| | | 207 | Alternative energy sources |
| | | 208 | WTW Plant availability |
| | | 209 | Infrastructure failure correction plan in place |
| | | 210 | Infrastructure failure correction plan reviewed annually |
| | | 211 | Average response time to reported water supply failures |
| | | 212 | G3 EN 11 Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas. |
| | | 213 | G3 EN 12 Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas |
| | | 214 | G3 EN 13 Habitats protected or restored. |

| | | | |
|------------|--------------------------|-----|---|
| | | 215 | G3 EN 14 Strategies, current actions, and future plans for managing impacts on biodiversity. |
| | | 216 | G3 EN 21 Total water discharge by quality and destination. |
| | | 217 | G3 EN 25 Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organisation's discharges of water and runoff. |
| | | 218 | G3 EN 26 Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation. |
| No. | Outcomes | | KPI's |
| 4 | Infrastructure Stability | 219 | Water services planning health check |
| | | 220 | Infrastructure asset management health check |
| | | 221 | Annual O&M Audit |
| | | 222 | Operations and maintenance of assets health check |
| | | 223 | Job cards |
| | | 224 | Maintenance expenditure |
| | | 225 | % expenditure of capital infrastructure budget |
| | | 226 | Water services capital investment |
| | | 227 | 5 year water services plan |

| | | | |
|--|--|-----|--|
| | | 228 | Asset management plan |
| | | 229 | Stock control system |
| | | 230 | Water safety and security plan |
| | | 231 | Waste water treatment works capacity |
| | | 232 | Inventory coverage % |
| | | 233 | Asset condition assessment coverage % |
| | | 234 | Asset renewal / replacement rate % |
| | | 235 | Leakage and breakage frequency rate |
| | | 236 | Collection system failure rate |
| | | 237 | Planned maintenance ratio (hours) |
| | | 238 | Planned maintenance ratio (cost) |
| | | 239 | % implementation of preventative maintenance plans |
| | | 240 | % completeness of asset management register |
| | | 241 | Raw water abstraction infrastructure installed % |

| | | | |
|------------|-----------------|-----|---|
| | | 242 | Treatment systems: infrastructure installed % |
| | | 243 | Pumping systems: infrastructure installed % |
| | | 244 | Bulk distribution: infrastructure installed % |
| | | 245 | % assets maintained |
| | | 246 | No. capex projects implemented |
| | | 247 | Develop ICT Master Systems Plan supporting operations |
| | | 248 | Routine maintenance plan reviewed annually |
| | | 249 | Asset management plan reviewed annually |
| | | 250 | Infrastructure maintenance (Opex) within target cash flows. |
| | | 251 | Turnaround time (working days), from date of requisition, for awarding of open tenders. |
| No. | Outcomes | | KPI's |
| 5 | Product Quality | 252 | Drinking water compliance rate |
| | | 253 | Drinking water quality health check |
| | | 254 | Wastewater and environmental safety health check |

| | | | |
|--|--|-----|--|
| | | 255 | Water service quality health check |
| | | 256 | Waste water treatment effectiveness rate |
| | | 257 | no. households with piped water supply not receiving adequate water quality |
| | | 258 | no. households with piped water supply not receiving adequate continuity of water supply |
| | | 259 | Volume of water discharged to environment which does not meet discharge standards |
| | | 260 | % of water discharged to environment which does not meet discharge standards |
| | | 261 | Drinking water sample analysis |
| | | 262 | Submission of drinking water quality results |
| | | 263 | Waste water sample analysis |
| | | 264 | Submission of waste water quality results |
| | | 265 | Management of waste water quality failures |
| | | 266 | Percentage of potable water analysis failing to meet SABS 241 class 1 standard |
| | | 267 | Waste Water Quality |
| | | 268 | G4.PR3 Type of product and service information required by the organization's procedures for product and service information and labelling, and percentage of significant product and service categories |

| | | | |
|--|--|-----|---|
| | | | subject to such information requirements |
| | | 269 | G4.PR4 Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labelling, by type of outcomes |
| | | 270 | G4.PR6 Sale of banned or disputed products |
| | | 271 | G4.PR7 Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes |
| | | 272 | G4.PR8 Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data |
| | | 273 | % compliance to SANS 241 |
| | | 274 | % compliance to effluent discharge license |
| | | 275 | Drinking water quality monitoring programme |
| | | 276 | Publication of drinking water quality performance |
| | | 277 | Waste water quality monitoring programme |
| | | 278 | Publication of waste water quality performance |
| | | 279 | Blue Drop score |
| | | 280 | Green Drop score |
| | | 281 | Service interruptions |

| | | | |
|--|--|-----|--|
| | | 282 | Sewer overflows |
| | | 283 | Storm water management |
| | | 284 | Drinking water flow and pressure |
| | | 285 | Water reuse |
| | | 286 | G4.PR1 Report the percentage of significant product and service categories for which health and safety impacts are assessed for improvement. |
| | | 287 | G4.PR5 Report the results or key conclusions of customer satisfaction surveys |
| | | 288 | G4.PR9 Report the total monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services. |
| | | 289 | Bio solids put to useful use |
| | | 290 | G4.PR2 Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes |
| | | 291 | % compliance to SANS 241 (Primary business) |
| | | 292 | % compliance to SANS 241 (Secondary business) |
| | | 293 | % compliance to effluent discharge license (Secondary business) |
| | | 294 | % of Blue Drop compliance (Primary Business) |
| | | 295 | % of Blue and Green Drop compliance (Secondary business) |

| | | | |
|------------|-----------------------|-----|---|
| | | 296 | No. samples failing water quality standard |
| | | 297 | % water quality compliance - chemical |
| | | 298 | % water quality compliance - biological |
| No. | Outcomes | | KPI's |
| 6 | Customer Satisfaction | 299 | Customer service standards |
| | | 300 | Appropriate contracts in place |
| | | 301 | Gazetted bylaws in place |
| | | 302 | Customer charter |
| | | 303 | Call responsiveness |
| | | 304 | Overall customer satisfaction |
| | | 305 | Customer care health check |
| | | 306 | % bulk supply agreements |
| | | 307 | Percentage of customers with service agreements |
| | | 308 | Customer Relationship Management system |

| | | | |
|--|--|-----|--|
| | | 309 | Customer education and awareness |
| | | 310 | Customer survey |
| | | 311 | Average time of response to complaints |
| | | 312 | Customer service complaint rate |
| | | 313 | Technical quality complaint rate |
| | | 314 | Error driven billing adjustment rate |
| | | 315 | First Call resolution % |
| | | 316 | Identify opportunities and obtain concession contracts |
| | | 317 | Identify opportunities for BOTT contracts |
| | | 318 | Average turnaround times on business proposals |
| | | 319 | % Rand value growth with existing customers |
| | | 320 | % Retention of existing Primary and Secondary customers |
| | | 321 | No. of internal customer relationship management initiatives conducted |
| | | 322 | No. of contractual agreements |

| | | | |
|------------|-------------------------------------|-----|--|
| | | 323 | Compliance to socio-economic objectives of CAPEX programme |
| | | 324 | % compliance to bulk supply agreement balanced scorecard |
| | | 325 | No. new contractual agreements |
| | | 326 | Website up and running and updated as needed |
| | | 327 | The extent to which UW has grown its services and customers. |
| | | 328 | G3 PR5 Practices related to customer satisfaction, including results of surveys measuring customer satisfaction. |
| No. | Outcomes | | KPI's |
| 7 | Employee and Leadership Development | 329 | Technical management skill level health check |
| | | 330 | Technical staff skill level health check |
| | | 331 | Technical staff numbers health check |
| | | 332 | No. training courses (PIVOTAL) |
| | | 333 | No. bursaries |
| | | 334 | No. learnerships |

| | | | |
|--|--|-----|---|
| | | 335 | No. staff |
| | | 336 | Number of water services registered professional engineers |
| | | 337 | Number of water services technicians |
| | | 338 | G4.LA1a Report the total number and rate of new employee hires during the reporting period, by age group, gender and region. |
| | | 339 | G4.LA1b Report the total number and rate of employee turnover during the reporting period, by age group, gender and region. |
| | | 340 | Defined competencies for key water services staff |
| | | 341 | Employment Equity Planning |
| | | 342 | Cost of training |
| | | 343 | Employee turnover rate |
| | | 344 | Employee evaluation results |
| | | 345 | Employee focused objectives and targets |
| | | 346 | Key position vacancies |
| | | 347 | G4.LA2 Report the benefits which are standard for full-time employees of the organization but are not provided to temporary or part-time employees, by significant locations of operation |
| | | 348 | G4.LA3 Return to work and retention rates after parental leave, by gender |

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|--|--|-----|---|
| | | 349 | G4.LA4 Minimum notice periods regarding operational changes, including whether these are specified in collective agreements |
| | | 350 | G4.LA5 Percentage of total workforce represented in formal joint management–worker health and safety committees that help monitor and advise on occupational health and safety programs |
| | | 351 | G4.LA6 Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender |
| | | 352 | G4.LA13 Report the ratio of the basic salary and remuneration of women to men for each employee category, by significant locations of operation. |
| | | 353 | G4.LA16 Number of grievances about labour practices filed, addressed, and resolved through formal grievance mechanisms |
| | | 354 | Employee job satisfaction % |
| | | 355 | Presence of job descriptions and performance expectations |
| | | 356 | Training hours per employee |
| | | 357 | Certification coverage |
| | | 358 | Key position internal / external recruitment % |
| | | 359 | Long term succession plan coverage |
| | | 360 | G4.LA7 Report whether there are workers who are involved in occupational activities who have a high incidence or high risk of specific diseases. |
| | | 361 | G4.LA8 Report whether formal agreements with trade unions cover health and safety. |
| | | 362 | G4.LA9 Average hours of training per year per employee by gender, and by employee category |

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| | | 363 | G4.LA11 Report the percentage of total employees by gender and by employee category who received a regular performance and career development review during the reporting period. |
| | | 364 | G4.LA12 Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity |
| | | 365 | G4.LA10 Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings |
| | | 366 | G4.LA14 Report the percentage of new suppliers that were screened using labour practices criteria |
| | | 367 | G4.LA15 Significant actual and potential negative impacts for labour practices in the supply chain and actions taken |
| | | 368 | Best Company to Work For Survey Implementation Plan |
| | | 369 | % Compliance with recruitment plan |
| | | 370 | % of internal promotions |
| | | 371 | % of staff PDP training completed |
| | | 372 | Implement Learning Academy |
| | | 373 | Cultural analysis score |
| | | 374 | % staff leaving |
| | | 375 | % resignations / total staff compliment |
| | | 376 | Approved funded positions filled |

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|--|--|-----|--|
| | | 377 | Implement a performance management system |
| | | 378 | Establish a functional ICT Unit |
| | | 379 | Employment Equity Planning: No. males employed |
| | | 380 | Employment Equity Planning: No. males employed |
| | | 381 | Skills development |
| | | 382 | Staff absenteeism percentage |
| | | 383 | No. industrial relations actions |
| | | 384 | % of people that match growth opportunities |
| | | 385 | No. transformational programmes implemented |
| | | 386 | Annual skills audit |
| | | 387 | Training committee meets quarterly |
| | | 388 | Employment equity plan reviewed and updated annually |
| | | 389 | Employment equity committee meets quarterly |
| | | 390 | Employee communication - Annual workshop held with employees |

| | | | |
|------------|--------------------------|-----|---|
| | | 391 | Employee communication - departmental meetings held quarterly |
| | | 392 | Local labour Forum held quarterly |
| | | 393 | Performance management plan in place |
| | | 394 | Performance management plan reviewed annually |
| | | 395 | Quarterly performance management reports |
| | | 396 | Turnaround time (working days) for filling vacant posts. |
| | | 397 | G3 LA 1 Total workforce by employment type, employment contract, and region. |
| | | 398 | G3 LA 4 Percentage of employees covered by collective bargaining agreements. |
| | | 399 | G3 LA 7 Rates of injury, occupational diseases, lost days, and absenteeism, and number of work related fatalities by region. |
| | | 400 | G3 LA 8 Education, training, counselling, prevention, and risk-control programs in place to assist |
| | | 401 | Workforce members, their families, or community members regarding serious diseases. |
| | | 402 | G3 LA 11 Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings. |
| No. | Outcomes | | KPI's |
| 8 | Community Sustainability | 403 | % reduction of households without basic water access |

| | | | |
|--|--|-----|---|
| | | 404 | % reduction of households without basic sanitation access |
| | | 405 | no. domestic consumers paying for but only receiving a basic level of water service |
| | | 406 | Proportion of domestic consumers paying for but only receiving a basic level of water service |
| | | 407 | no. domestic consumers paying for but only receiving a basic level of sanitation service |
| | | 408 | Proportion domestic consumers paying for but only receiving a basic level of sanitation service |
| | | 409 | Level of Supply - Solid Waste Collection |
| | | 410 | Level of Supply - Drainage |
| | | 411 | Under age 5 mortality rate |
| | | 412 | % population in informal dwellings |
| | | 413 | Secondary education levels |
| | | 414 | Access to free basic water |
| | | 415 | Water services vulnerability index |
| | | 416 | Free basic water policy |
| | | 417 | Indigent policy |

| | | | |
|--|--|-----|---|
| | | 418 | Backlog eradication plan |
| | | 419 | Percentage of discretionary orders paid to BEE organizations |
| | | 420 | Bill affordability |
| | | 421 | Low income billing assistance program coverage |
| | | 422 | G4.S06 Report the total monetary value of financial and in-kind political contributions made directly and indirectly by the organization by country and recipient/beneficiary |
| | | 423 | G4.S07 Total number of legal actions for anti-competitive behaviour, anti-trust, and monopoly practices and their outcomes |
| | | 424 | % BBBEE expenditure |
| | | 425 | Rand value of capital expenditure program (backlog eradication) |
| | | 426 | No. permanent jobs created |
| | | 427 | No. temporary jobs created |
| | | 428 | No. corporate social responsibility initiatives |
| | | 429 | Level of Supply - Water |
| | | 430 | Level of Supply - Sanitation |
| | | 431 | HIV / AID's prevalence |

| | | | |
|--|--|-----|--|
| | | 432 | Risk management / disaster mitigation |
| | | 433 | Access to water supply |
| | | 434 | Access to sanitation |
| | | 435 | Disaster management plan |
| | | 436 | Incident management protocol |
| | | 437 | G4.HR3 Total number of incidents of discrimination and corrective actions taken |
| | | 438 | G4.SO4 Communication and training on anti-corruption policies and procedures |
| | | 439 | G4.SO5 Confirmed incidents of corruption and actions taken |
| | | 440 | Does the utility employ integrated watershed management approaches |
| | | 441 | Does the utility utilize green infrastructure approaches in their watersheds |
| | | 442 | G4.HR2 Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained |
| | | 443 | G4.HR7 Report the percentage of security personnel who have received formal training in the organization's human rights policies or specific procedures and their application to security |
| | | 444 | G4.HR8 Total number of incidents of violations involving rights of indigenous peoples and actions taken |
| | | 445 | G4.SO1 Report the percentage of operations with implemented local community engagement, impact assessments, and development programs |

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| | | 446 | G4.SO2 Report operations with significant actual and potential negative impacts on local communities |
| | | 447 | G4.SO3 Total number and percentage of operations assessed for risks related to corruption and the significant risks identified |
| | | 448 | G4.SO8 Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations |
| | | 449 | Net greenhouse gas emissions |
| | | 450 | G4.HR1 Report the total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening |
| | | 451 | G4.HR4 Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights |
| | | 452 | G4.HR5 Operations and suppliers identified as having significant risk for incidents of child labour, and measures taken to contribute to the effective abolition of child labour |
| | | 453 | G4.HR6 Operations and suppliers identified as having significant risk for incidents of forced or compulsory labour, and measures to contribute to the elimination of all forms of forced or compulsory labour |
| | | 454 | G4.HR9 Report the total number and percentage of operations that have been subject to human rights reviews or human rights impact assessments, by country |
| | | 455 | G4.HR10 Report the percentage of new suppliers that were screened using human rights criteria |
| | | 456 | G4.HR11 Significant actual and potential negative human rights impacts in the supply chain and actions taken |
| | | 457 | G4.HR12 Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms |
| | | 458 | G4.SO9 Report the percentage of new suppliers that were screened using criteria for impacts on society |

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| | | 459 | G4.S010 Significant actual and potential negative impacts on society in the supply chain and actions taken |
| | | 460 | G4.S011 Report the total number of grievances about impacts on society filed through formal grievance mechanisms during the reporting period |
| | | 461 | Value of corporate social responsibility initiatives |
| | | 462 | No. of new BBBEE entrants |
| | | 463 | Implementation of community developmental initiatives |
| | | 464 | Number of innovations / environmental sustainability initiatives. |
| | | 465 | G3 SO5 Public policy positions and participation in public policy development and lobbying. |
| | | | KPI's |
| No. | Outcomes | | |
| 9 | Water Resource Adequacy | 466 | Customer demand strategy |
| | | 467 | Water resource management health check |
| | | 468 | Water conservation demand management health check |
| | | 469 | Water demand management plan in place |
| | | 470 | Domestic water demand |

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| | | 471 | Industrial water demand |
| | | 472 | Short term water supply adequacy |
| | | 473 | Demand for resource (average population growth rate) |
| | | 474 | WDM Policy |
| | | 475 | Peak demand modelling |
| | | 476 | 20 year demand projections |
| | | 477 | Water resource demand management plan |
| | | 478 | Long term water supply adequacy |
| | | 479 | Per capita water availability |
| | | 480 | Sustainability of source |
| | | 481 | Water resource quality (river health) |
| | | 482 | Groundwater quality |
| | | 483 | Ecosystem water demand |
| | | 484 | Water resource protection plan in place |

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| | | 485 | Water conservation |
| | | 486 | Per cent sustainable water resource options identified for all systems. |
| | | 487 | G3 EN 8 Total water withdrawal by source. |
| No. | Outcomes | | KPI's |
| 10 | Stakeholder Understanding and Support | 488 | Governance model - departmental integration |
| | | 489 | G4.1 Chairperson / CEO Sustainability Statement |
| | | 490 | G4.2 Key impacts, risks and opportunities |
| | | 491 | G4.3 Name of organization |
| | | 492 | G4.4 Primary products and services |
| | | 493 | G4.5 Location of Head Office |
| | | 494 | G4.6 Number of countries and their names where organization operates |
| | | 495 | G4.7 Ownership and legal form of organization |
| | | 496 | G4.8 Markets served by organization |

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| | | 497 | G4.9c Net revenue |
| | | 498 | G4.9d Total capitalization (debt and equity) |
| | | 499 | G4.9e Quantity of product or services produced |
| | | 500 | G4.10f Seasonal variation in employment numbers |
| | | 501 | G4.12 Describe the organizations supply chain |
| | | 502 | G4.13a Changes in locations, operations or facilities during year |
| | | 503 | G4.13b Changes in the share capital structure and other capital formation, maintenance, and alteration \operations |
| | | 504 | G4.13c Changes in the location of suppliers, the structure of the supply chain, or in relationships with suppliers, including selection and termination |
| | | 505 | G4.14 Report whether and how the precautionary approach or principle is addressed by the organization. |
| | | 506 | G4.15 List externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses |
| | | 507 | G4.16 List memberships of associations (such as industry associations) and national or international advocacy organizations |
| | | 508 | G4.18a Explain the process for defining the report content and the Aspect Boundaries |
| | | 509 | G4.18b Explain how the organization has implemented the Reporting Principles for Defining Report Content |
| | | 510 | G4.19 List all the material Aspects identified in the process for defining report content. |

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| | | 511 | G4.20 |
| | | 512 | G4.21 |
| | | 513 | G4.22 Report the effect of any restatements of information provided in previous reports and the reasons for such restatements. |
| | | 514 | G4.23 Report significant changes from previous reporting periods in the Scope and Aspect Boundaries |
| | | 515 | G4.24 Provide a list of stakeholder groups engaged by the organization |
| | | 516 | G4.25 Report the basis for identification and selection of stakeholders with whom to engage |
| | | 517 | G4.26 Report the organization's approach to stakeholder engagement (frequency of engagement by type and stakeholder group) and whether any of the engagement was undertaken specifically as part of the report preparation process. |
| | | 518 | G4.27 Report key topics and concerns raised through stakeholder engagement, and the organizations response |
| | | 519 | G4.28 Reporting period (such as fiscal or calendar year) for information provided. |
| | | 520 | G4.29 Date of most recent previous report (if any). |
| | | 521 | G4.30 Reporting cycle (such as annual, biennial). |
| | | 522 | G4.31 Provide the contact point for questions regarding the report or its contents |
| | | 523 | G4.32a Report the 'in accordance' option the organization has chosen. |

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| | | 524 | G4.32b Report the GRI Content Index for the chosen option |
| | | 525 | G4.32c Report the reference to the External Assurance Report, if the report has been externally assured |
| | | 526 | G4.33a Report the organization's policy and current practice with regard to seeking external assurance for the report |
| | | 527 | G4.33b Report the scope and basis of any external assurance provided. |
| | | 528 | G4.33c Report the relationship between the organization and the assurance providers |
| | | 529 | G4.33d Report whether the highest governance body or senior executives are involved in seeking assurance for the organization's sustainability report. |
| | | 530 | G4.34 Report the governance structure of the organization, including committees of the highest governance body |
| | | 531 | G4.35 Report the process for delegating authority for economic, environmental and social topics from the highest governance body to senior executives and other employees. |
| | | 532 | G4.36 Report whether the organization has appointed an executive-level position or positions with responsibility for economic, environmental and social topics, and whether post holders report directly to the highest governance body. |
| | | 533 | G4.37 Report processes for consultation between stakeholders and the highest governance body on economic, environmental and social topics. |
| | | 534 | G4.38 Report the composition of the highest governance body and its committees (Executive or non-executive, Independence, Tenure, Number of each individual's other significant positions and commitments, and the nature of the commitments, Gender, Membership of under-represented social groups, Competences relating to economic, environmental and social impacts, Stakeholder representation) |
| | | 535 | G4.39 Report whether the Chair of the highest governance body is also an executive officer |

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| | | 536 | G4.40 Report the nomination and selection processes for the highest governance body and its committees, and the criteria used for nominating and selecting highest governance body members |
| | | 537 | G4.41 Report processes for the highest governance body to ensure conflicts of interest are avoided and managed. Report whether conflicts of interest are disclosed to stakeholders. |
| | | 538 | G4.42 Report the highest governance body's and senior executives' roles in the development, approval, and updating of the organization's purpose, value or mission statements, strategies, policies, and goals related to economic, environmental and social impacts |
| | | 539 | G4.43 Report the measures taken to develop and enhance the highest governance body's collective knowledge of economic, environmental and social topics. |
| | | 540 | G4.44a Report the processes for evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics (evaluation independence, its frequency and if a self-assessment) |
| | | 541 | G4.44b Report actions taken in response to evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics |
| | | 542 | G4.45a Report the highest governance body's role in the identification and management of economic, environmental and social impacts, risks, and opportunities. Include the highest governance body's role in the implementation of due diligence processes. |
| | | 543 | G4.45b Report whether stakeholder consultation is used to support the highest governance body's identification and management of economic, environmental and social impacts, risks, and opportunities. |
| | | 544 | G4.46 Report the highest governance body's role in reviewing the effectiveness of the organization's risk management processes for economic, environmental and social topics. |
| | | 545 | G4.49 Report the process for communicating critical concerns to the highest governance body. |
| | | 546 | G4.51a Report the remuneration policies for the highest governance body and senior executives |
| | | 547 | G4.51b Report how performance criteria in the remuneration policy relate to the highest governance body's and \senior executives' economic, environmental and social objectives. |

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| | | 548 | G4.52 Report the process for determining remuneration. Report whether remuneration consultants are involved in determining remuneration and whether they are independent of management. Report any other relationships which the remuneration consultants have with the organization |
| | | 549 | G4.53 Report how stakeholders' views are sought and taken into account regarding remuneration, including the results of votes on remuneration policies and proposals, if applicable. |
| | | 550 | G4.54 Report the ratio of the annual total compensation for the organization's highest-paid individual in each country of significant operations to the median annual total compensation for all employees (excluding the highest-paid individual) in the same country. |
| | | 551 | G4.55 Report the ratio of percentage increase in annual total compensation for the organization's highest-paid individual in each country of significant operations to the median percentage increase in annual total compensation for all employees (excluding the highest-paid individual) in the same country |
| | | 552 | G4.56 Describe the organization's values, principles, standards and norms of behaviour such as codes of conduct and codes of ethics |
| | | 553 | G4.57 Report the internal and external mechanisms for seeking advice on ethical and lawful behaviour, and matters related to organizational integrity, such as helplines or advice lines |
| | | 554 | G4.58 Report the internal and external mechanisms for reporting concerns about unethical or unlawful behaviour, and matters related to organizational integrity, such as escalation through line management, whistleblowing mechanisms or hotlines. |
| | | 555 | G4.DMAa Report why the Aspect is material. Report the impacts that make this Aspect material |
| | | 556 | G4.DMAb Report how the organization manages the material Aspect or its impacts. |
| | | 557 | G4.DMAc Report the evaluation of the management approach, including the mechanisms for evaluating the effectiveness of the management approach, the results of the evaluation of the management approach and any related adjustments to the management approach |
| | | 558 | % attendance of Board members at scheduled meetings |
| | | 559 | % repeat internal audit findings |

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| | | 560 | % unresolved internal audit findings |
| | | 561 | % compliance target dates met |
| | | 562 | Governance model - defined roles and responsibilities |
| | | 563 | Water services business plan in place |
| | | 564 | Number of contacts with key stakeholders |
| | | 565 | G4.9a Total number of employees |
| | | 566 | G4.9b Total number of operations |
| | | 567 | G4.10a Total number of employees by contract type and gender |
| | | 568 | G4.10b Total number of permanent employees by employment type and gender |
| | | 569 | G4.10c Total workforce by employees and supervised workers and by gender. |
| | | 570 | G4.10d Total workforce by region and gender |
| | | 571 | Overall stakeholder satisfaction % |
| | | 572 | Overall stakeholder responsiveness % |
| | | 573 | Amount of media coverage |

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|--|--|-----|---|
| | | 574 | % positive media coverage |
| | | 575 | Media coverage accuracy % |
| | | 576 | G4.10e Portion of the organization's work is performed by self-employed workers or by individuals other than employees or supervised workers, including employees and supervised employees of contractors |
| | | 577 | G4.11 % of total employees covered by collective bargaining agreements |
| | | 578 | G4.47 Report the frequency of the highest governance body's review of economic, environmental and social impacts, risks, and opportunities |
| | | 579 | G4.48 Report the highest committee or position that formally reviews and approves the organization's sustainability report and ensures that all material Aspects are covered |
| | | 580 | G4.50 Report the nature and total number of critical concerns that were communicated to the highest governance body and the mechanism(s) used to address and resolve them. |
| | | 581 | Overall stakeholder value add % |
| | | 582 | G4.17a List all entities included in the organization's consolidated financial statements or equivalent documents |
| | | 583 | G4.17b Report whether any entity included in the organization's consolidated financial statements or equivalent \documents is not covered by the report. |
| | | 584 | No. of IRR sessions conducted with Department of Water Affairs and/or Water Services Authorities |
| | | 585 | % audit findings dealt with |
| | | 586 | % compliance with stakeholder engagement plan |

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| | | 587 | Implement approved risk management processes |
| | | 588 | Risk and Fraud management plan in place |
| | | 589 | Risk and Fraud management plan and polices reviewed annually |
| | | 590 | Risk and Fraud management plan implemented |
| | | 591 | Internal audit plan in place |
| | | 592 | Internal audit plan and policies reviewed annually |
| | | 593 | Internal audit plan implemented |
| | | 594 | Quarterly board meetings |
| | | 595 | The extent to which there is engagement of statutory, contracted and non-contracted stakeholders, inputs into policy frameworks and response to queries. |
| | | 596 | G3 1.1 Statement from the most senior decision-maker of the organisation about the relevance of sustainability to the organisation and its strategy. |
| | | 597 | G3 1.2 Description of key impacts, risks, and opportunities. |
| | | 598 | G3 2.1 Name of the organisation |
| | | 599 | G3 2.2 Primary brands, products, and/or services. |
| | | 600 | G3 2.3 Operational structure of the organisation, including main divisions, operating companies, subsidiaries, and joint ventures. |

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| | | 601 | G3 2.4 Location of organisation's headquarters |
| | | 602 | G3 2.5 Number of countries where the organisation operates, and names of countries with either major operations or that is specifically relevant to the sustainability issues covered in the report. |
| | | 603 | G3 2.6 Nature of ownership and legal form. |
| | | 604 | G3 2.7 Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries). |
| | | 605 | G3 2.8 Scale of the reporting organisation. |
| | | 606 | G3 2.10 Awards received in the reporting period. |
| | | 607 | G3 3.1 Reporting period (e.g., fiscal/calendar year) for information provided. |
| | | 608 | G3 3.2 Date of most recent previous report (if any). |
| | | 609 | G3 3.3 Reporting cycle (annual, biennial, etc.) |
| | | 610 | G3 3.4 Contact point for questions regarding the report or its contents. |
| | | 611 | G3 3.5 Process for defining report content |
| | | 612 | G3 3.6 Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers). |
| | | 613 | G3 3.9 Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report. Explain any decisions not to apply, or to substantially diverge from, the GRI Indicator Protocols |

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| | | 614 | G3 3.12 Table identifying the location of the Standard Disclosures in the Report. |
| | | 615 | G3 3.13 Policy and current practice with regard to seeking external assurance for the Report |
| | | 616 | G3 4.1 Governance structure of the organisation, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organisational oversight. |
| | | 617 | G3 4.2 Indicate whether the Chair of the highest governance body is also an executive officer. |
| | | 618 | G3 4.3 For organisations that have a unitary board structure, state the number and gender of members of the highest governance body that are independent and/or non-executive members |
| | | 619 | G3 4.4 Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body. |
| | | 620 | G3 4.5 Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organisation's performance (including social and environmental performance). |
| | | 621 | G3 4.6 Processes in place for the highest governance body to ensure conflicts of interest are avoided |
| | | 622 | G3 4.7 Process for determining the composition, qualifications and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity |
| | | 623 | G3 4.8 Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation |
| | | 624 | G3 4.9 Procedures of the highest governance body for overseeing the organisation's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles |
| | | 625 | G3 4.10 Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance. |

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| | | 626 | G3 4.11 Explanation of whether and how the precautionary approach or principle is addressed by the organisation |
| | | 627 | G3 4.12 Externally developed economic, environmental, and social charters, principles, or other |
| | | 628 | G3 4.13 Memberships in associations (such as industry associations) and/or national/international advocacy organisations in which the organisation has positions in governance bodies; participates in projects or committees; provides substantive funding beyond routine membership dues; or views membership as strategic. |
| | | 629 | G3 4.14 List of stakeholder groups engaged by the organisation |
| | | 630 | G3 4.15 Basis for identification and selection of stakeholders with whom to engage. |
| | | 631 | G3 4.16 Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group. |
| | | 632 | G3 4.17 Key topics and concerns that have been raised through stakeholder engagement, and how the organisation has responded to those key topics and concerns, including through its |

Annexure N: 2012/13 Audited Financial Statement Summary for South African Water Boards

| Water Board | Province | Revenue ('000) | Profit ('000) | Property, Plant & Equipment ('000) | Significant Municipal Bulk Supply Customers | Volume of Water Sold (MI) | Staff Complement | Audit Opinion |
|--------------------|---------------------|-----------------------|----------------------|---|--|----------------------------------|-------------------------|----------------------|
| Amatola | Eastern Cape | R 352,521 | R 25,083 | R 292,525 | Buffalo City Metropolitan Municipality, Ndlambe Local Municipality, Joe Gqabi and Amathole District Municipalities | 39,565 | 424 | Unqualified |
| Bloem | Free State | R 376,954 | R 63,123 | R 720,529 | Mantsopa and Naledi Local Municipalities and Mangaung Metropolitan Municipality | 82,763 | 277 | Unqualified |
| Botshelo | North West | R 64,200 | R 32,995 | R 25,952 | Ngaka Modiri Molema and Dr Ruth Segomotsi District Municipalities | 25,002 | 236 | Qualified |
| Lepelle Northern | Limpopo | R 353,303 | R 69,308 | R 447,421 | Capricorn, Mopani and Sekhukune District Municipalities | 106,255 | 358 | Unqualified |
| Magalies | North West, Limpopo | R 294,523 | R 29,111 | R 718,395 | Moses Kotane, Thabazini, Bela Bela, Modimelle and | 79,979 | 415* | Unqualified |

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| | and Gauteng | | | | Rustenberg Local Municipalities; Twshane Metropolitan Municipality | | | |
| Mhlatuze | KwaZulu Natal | R 494,007 | R 68,070 | R 314,971 | Mhlatuze Local Municipality and Umkhanyakude District Municipality | 108,927 | 160 | Unqualified |
| Overberg | Western Cape | R 30,958 | R 1,285 | R 56,103 | Tweewaterskloof, Cape Agulhas, Swellendam and Hassequa Local Municipalities | 4,092 | **Not disclosed | Unqualified |
| Rand | Gauteng, North West, Free State and Mpumalanga | R 7,751,214 | R 977,291 | R 9,947,476 | Johannesburg, Twshane and Ekurhuleni Metropolitan Municipalities | 1,534,825 | 3214*** | Unqualified |
| Sedibeng | North West, Free State and Northern Cape | R 644,619 | R 28,721 | R 1,944,306 | Namakwa, Siyanda, John Taolo Gaetsewe, Dr Ruth Mompati, Francis Baard, Dr Kenneth Kaunda and Lejweleputswa District Municipalities | 100,356 | 465 | Unqualified |

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|---------------|------------------|---------------------|--------------------|---------------------|--|------------------|--------------|-------------|
| Umgeni | KwaZulu Natal | R 2,068,668 | R 581,105 | R 3,441,872 | eThekweni Metropolitan Municipality; Lembe, Ugu, Sisonke, uMgungundlovu and Msinduzi District Municipalities | 440,445 | 812 | Unqualified |
| Totals | na | R 12,443,914 | R 1,876,092 | R 17,871,017 | na | 2,522,209 | 6,525 | na |

(Source: Respective 2012/13 Water Board Annual Reports)

Note:

* Magalies Water 2010/11 Annual Report as neither the 2011/12 or 2012/13 Annual Reports indicate the number of staff employed at the organization

** Overberg Water does not disclose its number of staff in either the 2011/12 or 2012/13 annual reports available on its website

***Only the number of staff employed by the Rand Water Group of companies as at 30 June 2013 is presented in the 2012/13 annual report

Annexure O: 2012/13 Performance Indicator Summary for South African
Water Boards

| Water Board | Shareholders Compact | GRI | EUM | King III |
|--------------------|-----------------------------|------------|------------|-----------------|
| Amatola | Yes (p40) | Yes (p58) | Yes (p3) | Yes (p58) |
| Bloem | Yes (p140) | - | - | - |
| Botshelo | Yes (p21) | - | - | Yes (p18) |
| Lepelle Northern | Yes (p86) | - | - | Yes (p13) |
| Magalies | Yes (p18) | - | - | - |
| Mhlatuze | Yes (p27) | - | - | Yes (p10) |
| Overberg | Yes (p23) | - | - | - |
| Rand | Yes (p41) | Yes (p141) | - | Yes (p37) |
| Sedibeng | Yes (p13) | - | - | Yes (p13) |
| Umgeni | Yes (p47) | Yes (p175) | Yes (p10) | Yes (p4) |
| Totals | 10 | 3 | 2 | 7 |

(Source: Respective 2012/13 Water Board Annual Reports)

Annexure P: Proposed Water Board Sustainability Outcomes and Associated Key Performance Indicators

| Sustainability Performance Outcome | No. Indicators per Sustainability Dimension Classification | | | |
|--|--|---------------|-----------|------------|
| | financial | environmental | social | governance |
| Financial Viability | 12 | 0 | 0 | 0 |
| Operational Optimization | 6 | 4 | 2 | 0 |
| Infrastructure Stability | 3 | 0 | 2 | 0 |
| Water Resource Adequacy | 0 | 4 | 2 | 0 |
| Operational Resiliency | 1 | 0 | 4 | 1 |
| Product Quality | 0 | 1 | 1 | 2 |
| Employee and Leadership Development | 0 | 0 | 19 | 0 |
| Community & Environmental Sustainability | 0 | 2 | 9 | 0 |
| Customer Satisfaction | 0 | 0 | 2 | 3 |
| Stakeholder Understanding and Support | 0 | 0 | 1 | 7 |
| Totals | 22 | 11 | 42 | 13 |
| Combined Total | 88 | | | |

Financial Viability Outcome Indicators Sheet

| No. | Financial Viability Indicators | Sustainability Dimension Classification | | | | Sustainability Performance Category | KPI Weighting | Unit | Threshold Values | | Water Board Performance 2012/13 | | | |
|---|--|---|---------------|--------|------------|-------------------------------------|---------------|------|------------------|-----------|---------------------------------|----------------|------------|--------------|
| | | financial | environmental | social | governance | | | | Least Preferred | Preferred | Amatola Water | Overberg Water | Rand Water | Umgeni Water |
| 1 | Current ratio | 1 | 0 | 0 | 0 | Learning | na | 1 | 8 | 1.03 | 7.68 | 1.09 | 3.21 | |
| | | | | | | 0.083 | | | | 0.0043 | 0.9543 | 0.0129 | 0.3157 | |
| 2 | Debtors days | 1 | 0 | 0 | 0 | Learning | days | 120 | 30 | 295 | 56 | 34 | 37 | |
| | | | | | | 0.083 | | | | 0.0000 | 0.7111 | 0.9556 | 0.9222 | |
| 3 | % variance of expenditure of approved budget | 1 | 0 | 0 | 0 | Learning | % | 15 | 0 | na | 2.63 | 2 | 2 | |
| | | | | | | 0.083 | | | | 0.0000 | 0.8247 | 0.8667 | 0.8667 | |
| 4 | Gross profit margin | 1 | 0 | 0 | 0 | Learning | % | 0 | 100 | 19.77 | 63.75 | 57.7 | 54.3 | |
| | | | | | | 0.083 | | | | 0.1977 | 0.6375 | 0.5770 | 0.5430 | |
| 5 | Nett profit margin | 1 | 0 | 0 | 0 | Learning | % | 0 | 35 | 4.1 | 4.65 | 12.86 | 30.6 | |
| | | | | | | 0.083 | | | | 0.1171 | 0.1329 | 0.3674 | 0.8743 | |
| 6 | Return on Assets | 1 | 0 | 0 | 0 | Active | % | 0 | 20 | 0.04 | 3.38 | 9.3 | 13.3 | |
| | | | | | | 0.083 | | | | 0.0020 | 0.1690 | 0.4650 | 0.6650 | |
| 7 | No. breaches of materiality and significance framework | 1 | 0 | 0 | 0 | Active | No. | 10 | 0 | na | 0 | 0 | 0 | |
| | | | | | | 0.083 | | | | 0.0000 | 1.0000 | 1.0000 | 1.0000 | |
| 8 | % Growth in Kilolitre water sold | 1 | 0 | 0 | 0 | Advanced | % | 0 | 10 | 1.44 | -11.8 | 3 | 1.39 | |
| | | | | | | 0.083 | | | | 0.1440 | 0.0000 | 0.3000 | 0.1390 | |
| 9 | Debt service/interest cover ratio | 1 | 0 | 0 | 0 | Advanced | na | 1 | 10 | na | na | na | 7.71 | |
| | | | | | | 0.083 | | | | 0.0000 | 0.0000 | 0.0000 | 0.7456 | |
| 10 | Debt / equity ratio | 1 | 0 | 0 | 0 | Advanced | na | 0 | 0.35 | 0.133 | 0.04 | 0.21 | 0.31 | |
| | | | | | | 0.083 | | | | 0.3800 | 0.1143 | 0.6000 | 0.8857 | |
| 11 | Working ratio | 1 | 0 | 0 | 0 | Leading | na | 1 | 0.5 | 0.94 | na | na | 0.71 | |
| | | | | | | 0.083 | | | | 0.1200 | 0.0000 | 0.0000 | 0.5800 | |
| 12 | Credit rating* | 1 | 0 | 0 | 0 | Leading | | 1 | 4 | na | na | 3 | 3 | |
| | | | | | | 0.087 | | | | 0.0000 | 0.0000 | 0.6667 | 0.6667 | |
| No. Indicators per Sustainability Dimension | | 12 | 0 | 0 | 0 | Total Weight Check | 1 | | | | | | | |

| Fitch Credit Rating scores are as follows: | Score |
|--|-------|
| aaa | 4 |
| aa+ to aa- | 3 |
| a+ to a- | 2 |
| bbb+ to bbb- | 1 |

Operational Optimization Outcome Sheet

| No. | Operational Optimization | Indicator Classification | | | | Sustainability Performance Category | KPI Weighting | Unit | Threshold Values | | Water Board Performance 2012/13 | | | |
|---|---|--------------------------|---------------|--------|------------|-------------------------------------|---------------|-------------|------------------|-----------|---------------------------------|----------------|------------|--------------|
| | | financial | environmental | social | governance | | | | Least Preferred | Preferred | Amatola Water | Overberg Water | Rand Water | Umgeni Water |
| 1 | Water lost as % of total water produced | 0 | 1 | 0 | 0 | Learning | | % | 20 | 0 | 14.4 | 6.5 | 3.82 | 2.45 |
| | | | | | | | 0.083 | | | | 0.2800 | 0.6750 | 0.8090 | 0.8775 |
| 2 | % number of days supply disrupted divided by total number of possible supply days | 0 | 0 | 1 | 0 | Learning | | % | 2 | 0 | 1 | 0 | 0 | 0.25 |
| | | | | | | | 0.083 | | | | 0.5000 | 1.0000 | 1.0000 | 0.8750 |
| 3 | electricity efficiency | 0 | 1 | 0 | 0 | Active | | kWh/kI | 1 | 0.15 | 0.82 | na | 0.84 | 0.23 |
| | | | | | | | 0.083 | | | | 0.2118 | 0.0000 | 0.1882 | 0.9059 |
| 4 | chemical efficiency | 1 | 0 | 0 | 0 | Active | | g/kI | 0.5 | 0.05 | 0.33 | na | 0.11 | 0.1 |
| | | | | | | | 0.083 | | | | 0.3778 | 0.0000 | 0.8657 | 0.8889 |
| 5 | staff unit cost | 1 | 0 | 0 | 0 | Active | | R/kI | 1.5 | 0.2 | 1.54 | 1.36 | 0.34 | 0.24 |
| | | | | | | | 0.083 | | | | 0.0000 | 0.1077 | 0.8923 | 0.9632 |
| 6 | maintenance unit cost | 1 | 0 | 0 | 0 | Active | | R/kI | 0 | 0.5 | na | 0.1 | na | 0.3 |
| | | | | | | | 0.083 | | | | 0.0000 | 0.2000 | 0.0000 | 0.6000 |
| 7 | raw water unit cost | 1 | 0 | 0 | 0 | Active | | R/kI | 2 | 0.7 | 1.78 | na | 2.11 | 0.79 |
| | | | | | | | 0.083 | | | | 0.1692 | 0.0000 | 0.0000 | 0.9308 |
| 8 | Meter functionality % | 0 | 1 | 0 | 0 | Advanced | | % | 85 | 100 | na | na | na | na |
| | | | | | | | 0.083 | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 9 | No. of awareness programmes conducted | 0 | 0 | 1 | 0 | Advanced | | No. | 0 | 96 | na | na | 87 | na |
| | | | | | | | 0.083 | | | | 0.0000 | 0.0000 | 0.9063 | 0.0000 |
| 10 | Average response time to reported water supply failures | 0 | 1 | 0 | 0 | Advanced | | hrs | 12 | 0.5 | 5.3 | 2.5 | na | na |
| | | | | | | | 0.083 | | | | 0.5826 | 0.8261 | 0.0000 | 0.0000 |
| 11 | Revenue per employee | 1 | 0 | 0 | 0 | Leading | | R (million) | 0.1 | 3.5 | 0.813 | na | 3.101 | 2.563 |
| | | | | | | | 0.083 | | | | 0.2097 | 0.0000 | 0.8826 | 0.7244 |
| 12 | % staff cost to total cost | 1 | 0 | 0 | 0 | Leading | | % | 40 | 15 | 36.8 | 58 | 16.5 | 25.8 |
| | | | | | | | 0.087 | | | | 0.1280 | 0.0000 | 0.9400 | 0.5680 |
| No. Indicators per Sustainability Dimension | | 6 | 4 | 2 | 0 | Total Weight Check | 1 | | | | | | | |

Infrastructure Stability Outcome Sheet

| No. | Infrastructure Stability | Indicator Classification | | | | Sustainability Category | KPI Weighting | Unit | Threshold Values | | Water Board Performance 2012/13 | | | |
|-----|--|--------------------------|---------------|--------|------------|-------------------------|---------------|------|------------------|-----------|---------------------------------|----------------|------------|--------------|
| | | financial | environmental | social | governance | | | | Least Preferre | Preferred | Amatola Water | Overberg Water | Rand Water | Umgeni Water |
| 1 | O&M budget expenditure % | 1 | 0 | 0 | 0 | | % | 80 | 100 | 97 | na | na | na | |
| | | | | | | Learning | 0.2 | | | 0.8500 | 0.0000 | 0.0000 | 0.0000 | |
| 2 | Capital budget expenditure variance % | 1 | 0 | 0 | 0 | | % | 20 | 0 | 92.24 | 54 | 1.5 | 26 | |
| | | | | | | Learning | 0.2 | | | 0.0000 | 0.0000 | 0.9250 | 0.0000 | |
| 3 | % attainment of capex project completion dates | 0 | 0 | 1 | 0 | | % | 50 | 100 | 0 | 54 | 0 | 65 | |
| | | | | | | Active | 0.2 | | | 0.0000 | 0.0800 | 0.0000 | 0.3000 | |
| 4 | % implementation of preventative maintenance plans | 1 | 0 | 0 | 0 | | % | 75 | 100 | 97 | 80 | na | na | |
| | | | | | | Advanced | 0.2 | | | 0.8800 | 0.2000 | 0.0000 | 0.0000 | |
| 5 | Treatment works uptime % | 0 | 0 | 1 | 0 | | % | 90 | 100 | na | na | na | na | |
| | | | | | | Leading | 0.2 | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| | No. Indicators per Sustainability Dimension | 3 | 0 | 2 | 0 | Total Weight Check | 1 | | | | | | | |

Water Resource Adequacy Outcome Sheet

| No. | Water Resource Adequacy | Indicator Classification | | | | Sustainability Category | KPI Weighting | Unit | Threshold Values | | Water Board Performance 2012/13 | | | |
|-----|---|--------------------------|---------------|--------|------------|-------------------------|------------------|------|------------------|-----------|---------------------------------|----------------|------------|--------------|
| | | financial | environmental | social | governance | | | | Least Preferred | Preferred | Amatola Water | Overberg Water | Rand Water | Umgeni Water |
| 1 | % schemes with at least 98% assurance of supply | 0 | 0 | 1 | 0 | | % | 80 | 100 | 100 | na | na | 100 | |
| | | | | | | Learning | 0.166 | | | 1.0000 | 0.0000 | 0.0000 | 1.0000 | |
| 2 | % raw water abstractions exceeding water use license | 0 | 1 | 0 | 0 | | % | 60 | 0 | na | na | na | na | |
| | | | | | | Active | 0.166 | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| 3 | over abstracted raw water volume / relevent water use license volumes | 0 | 1 | 0 | 0 | | na | 1.75 | 1 | na | na | na | na | |
| | | | | | | Active | 0.166 | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| 4 | % raw water sources with quality monitoring programme | 0 | 1 | 0 | 0 | | % | 0 | 100 | na | na | 95 | 100 | |
| | | | | | | Advanced | 0.166 | | | 0.0000 | 0.0000 | 0.9500 | 1.0000 | |
| 5 | Per capita water resource availability | 0 | 0 | 1 | 0 | | kl/capita /annum | 21 | 69 | na | na | na | na | |
| | | | | | | Leading | 0.166 | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| 6 | % total raw water volume with at least mesotrophic water quality | 0 | 1 | 0 | 0 | | % | 30 | 0 | na | na | na | na | |
| | | | | | | Advanced | 0.17 | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| | No. Indicators per Sustainability Dimension | 0 | 4 | 2 | 0 | Total Weight Check | 1 | | | | | | | |

Operational Resiliency Outcome Sheet

| No. | Operational Resiliency | Indicator Classification | | | | Sustainability Category | KPI Weighting | Unit | Threshold Values | | Water Board Performance 2012/13 | | | |
|-----|---|--------------------------|---------------|--------|------------|-------------------------|---------------|------|------------------|-----------|---------------------------------|----------------|------------|--------------|
| | | financial | environmental | social | governance | | | | Least Preferred | Preferred | Amatola Water | Overberg Water | Rand Water | Umgeni Water |
| 1 | Financial operating reserve | 1 | 0 | 0 | 0 | | days | 30 | 120 | na | na | na | na | |
| | | | | | | Learning | 0.166 | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| 2 | Disabling Injury Frequency Rate | 0 | 0 | 1 | 0 | | na | 1.5 | 0 | 0.44 | 0 | 0.33 | 0.16 | |
| | | | | | | Active | 0.166 | | | 0.7067 | 1.0000 | 0.7800 | 0.8933 | |
| 3 | Infrastructure planning horizon | 0 | 0 | 1 | 0 | | years | 5 | 20 | 20 | na | 16 | na | |
| | | | | | | Advanced | 0.166 | | | 1.0000 | 0.0000 | 0.7333 | 0.0000 | |
| 4 | No of ISO accredited systems | 0 | 0 | 0 | 1 | | No. | 0 | 4 | 1 | 0 | 4 | 1 | |
| | | | | | | Leading | 0.166 | | | 0.2500 | 0.0000 | 1.0000 | 0.2500 | |
| 5 | % WTW plant utilisation | 0 | 0 | 1 | 0 | | % | 120 | 80 | 92.37 | 58 | na | 93 | |
| | | | | | | Leading | 0.166 | | | 0.6908 | 1.0000 | 0.0000 | 0.6750 | |
| 6 | % WWTW plant utilisation | 0 | 0 | 1 | 0 | | % | 120 | 80 | na | na | na | 81 | |
| | | | | | | Leading | 0.17 | | | 0.0000 | 0.0000 | 0.0000 | 0.9750 | |
| | No. Indicators per Sustainability Dimension | 1 | 0 | 4 | 1 | Total Weight Check | | 1 | | | | | | |

Product Quality Outcome Sheet

| No. | Product Quality | Indicator Classification | | | | Sustainability Category | KPI Weighting | Unit | Threshold Values | | Water Board Performance 2012/13 | | | |
|---|--|--------------------------|---------------|--------|------------|-------------------------|---------------|------|------------------|-----------|---------------------------------|----------------|------------|--------------|
| | | financial | environmental | social | governance | | | | Least Preferred | Preferred | Amatola Water | Overberg Water | Rand Water | Umgeni Water |
| 1 | % compliance to SANS 241 | 0 | 0 | 1 | 0 | | % | 90 | 100 | 98.9 | 95.32 | 99.8 | 99.81 | |
| | | | | | | Learning | 0.25 | | | 0.8900 | 0.5320 | 0.9800 | 0.9810 | |
| 2 | Blue Drop score | 0 | 0 | 0 | 1 | | % | 50 | 100 | 87.7 | na | na | na | |
| | | | | | | Active | 0.25 | | | 0.7540 | 0.0000 | 0.0000 | 0.0000 | |
| 3 | % compliance to effluent discharge license | 0 | 1 | 0 | 0 | | % | 60 | 100 | 65.1 | na | 91 | 86.4 | |
| | | | | | | Advanced | 0.25 | | | 0.1275 | 0.0000 | 0.7750 | 0.6600 | |
| 4 | Green Drop score | 0 | 0 | 0 | 1 | | % | 50 | 100 | 52.5 | na | 72 | na | |
| | | | | | | Leading | 0.25 | | | 0.0500 | 0.0000 | 0.4400 | 0.0000 | |
| No. Indicators per Sustainability Dimension | | 0 | 1 | 1 | 2 | Total Weight Check | 1 | | | | | | | |

Employee and Leadership Development Outcome Sheet

| No. | Employee and Leadership Development | Indicator Classification | | | | Sustainability Category | KPI Weighting | Unit | Threshold Values | | Water Board Performance 2012/13 | | | |
|-----|--|--------------------------|---------------|--------|------------|-------------------------|---------------|------|------------------|-----------|---------------------------------|----------------|------------|--------------|
| | | financial | environmental | social | governance | | | | Least Preferred | Preferred | Amatola Water | Overberg Water | Rand Water | Umgeni Water |
| 1 | No. staff | 0 | 0 | 1 | 0 | | No. | 100 | 1000 | 377 | na | 3214 | 812 | |
| | | | | | | Learning | 0.0526 | | | 0.3078 | 0.0000 | 1.0000 | 0.7911 | |
| 2 | % female employees | 0 | 0 | 1 | 0 | | % | 25 | 70 | 25.7 | na | 31.05 | 30 | |
| | | | | | | Learning | 0.0526 | | | 0.056 | 0.0000 | 0.1344 | 0.1111 | |
| 3 | % African, Coloured & Indian employees | 0 | 0 | 1 | 0 | | % | 50 | 90 | 91 | na | 87.77 | 93 | |
| | | | | | | Learning | 0.0526 | | | 1.0000 | 0.0000 | 0.9443 | 1.0000 | |
| 4 | % people with disability employees | 0 | 0 | 1 | 0 | | % | 0 | 5 | 0.008 | na | 4.3 | na | |
| | | | | | | Learning | 0.0526 | | | 0.0016 | 0.0000 | 0.8600 | 0.0000 | |
| 5 | No. training courses | 0 | 0 | 1 | 0 | | No. | 0 | 800 | na | 12 | 192 | 644 | |
| | | | | | | Active | 0.0526 | | | 0.0000 | 0.0150 | 0.2400 | 0.8050 | |
| 6 | No. learnerships | 0 | 0 | 1 | 0 | | No. | 0 | 100 | na | 28 | 166 | 47 | |
| | | | | | | Active | 0.0526 | | | 0.0000 | 0.2800 | 1.0000 | 0.4700 | |
| 7 | No. bursaries | 0 | 0 | 1 | 0 | | No. | 0 | 100 | na | 0 | 227 | 13 | |
| | | | | | | Active | 0.0526 | | | 0.0000 | 0.0000 | 1.0000 | 0.1300 | |

| | | | | | | | | | | | | | | |
|--|---|----------|----------|-----------|----------|---------------------------|------|-----|-----|----------|--------|--------|--------|--------|
| 8 | Staff absenteeism percentage | 0 | 0 | 1 | 0 | | % | 5 | 0 | 0.28 | na | na | na | na |
| | | | | | | Advanced | | | | 0.0526 | 0.9440 | 0.0000 | 0.0000 | 0.0000 |
| 9 | Employee turnover rate | 0 | 0 | 1 | 0 | | % | 15 | 0 | 12.8 | 11.11 | 2.62 | 5.04 | |
| | | | | | | Advanced | | | | 0.0526 | 0.1467 | 0.2593 | 0.8253 | 0.6640 |
| 10 | Employee job satisfaction % | 0 | 0 | 1 | 0 | | % | 60 | 100 | na | na | na | na | |
| | | | | | | Advanced | | | | 0.0526 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 11 | Key position internal / external recruitment % | 0 | 0 | 1 | 0 | | % | 0 | 40 | 45 | na | na | na | |
| | | | | | | Advanced | | | | 0.0526 | 1.0000 | 0.0000 | 0.0000 | 0.0000 |
| 12 | Turn around time to fill vacancies | 0 | 0 | 1 | 0 | | | 120 | 60 | na | na | na | 93 | |
| | | | | | | Advanced | days | | | 0.0526 | 0.0000 | 0.0000 | 0.0000 | 0.4500 |
| 13 | No. industrial relations actions | 0 | 0 | 1 | 0 | | No. | 4 | 0 | na | 0 | na | na | |
| | | | | | | Advanced | | | | 0.0526 | 0.0000 | 1.0000 | 0.0000 | 0.0000 |
| 14 | % of total employees covered by collective bargaining agreements | 0 | 0 | 1 | 0 | | % | 40 | 80 | 75 | na | 83.33 | 56 | |
| | | | | | | Advanced | | | | 0.0526 | 0.8750 | 0.0000 | 1.0000 | 0.4000 |
| 15 | Ratio of remuneration of women to men - top management | 0 | 0 | 1 | 0 | | na | 0.5 | 1 | na | na | na | 1.1 | |
| | | | | | | Leading | | | | 0.0526 | 0.0000 | 0.0000 | 0.0000 | 1.0000 |
| 16 | Ratio of remuneration of women to men - senior management | 0 | 0 | 1 | 0 | | na | 0.5 | 1 | na | na | na | 1 | |
| | | | | | | Leading | | | | 0.0526 | 0.0000 | 0.0000 | 0.0000 | 1.0000 |
| 17 | Ratio of remuneration of women to men - professionals, specialists & mid management | 0 | 0 | 1 | 0 | | na | 0.5 | 1 | na | na | na | 14 | |
| | | | | | | Leading | | | | 0.0526 | 0.0000 | 0.0000 | 0.0000 | 1.0000 |
| 18 | Ratio of remuneration of women to men - skilled labour | 0 | 0 | 1 | 0 | | na | 0.5 | 1 | na | na | na | 12 | |
| | | | | | | Leading | | | | 0.0526 | 0.0000 | 0.0000 | 0.0000 | 1.0000 |
| 19 | Ratio of remuneration of women to men - semi skilled labour | 0 | 0 | 1 | 0 | | na | 0.5 | 1 | na | na | na | 0.8 | |
| | | | | | | Leading | | | | 0.0532 | 0.0000 | 0.0000 | 0.0000 | 0.6000 |
| No. Indicators per Sustainability Dimension | | 0 | 0 | 19 | 0 | Total Weight Check | | | | 1 | | | | |

Community and Environmental Sustainability Outcome Sheet

| No. | Community & Environmental Sustainability | Indicator Classification | | | | Sustainability Category | KPI Weighting | Unit | Threshold Values | | Water Board Performance 2012/13 | | | |
|-----|---|--------------------------|---------------|--------|------------|-------------------------|---------------|------|------------------|-----------|---------------------------------|----------------|------------|--------------|
| | | financial | environmental | social | governance | | | | Least Preferred | Preferred | Amatola Water | Overberg Water | Rand Water | Umgeni Water |
| 1 | % increase in BBBEE expenditure | 0 | 0 | 1 | 0 | | % | 0 | 20 | na | 3.68 | na | -17 | |
| | | | | | | Learning | 0.09 | | | 0.0000 | 0.1840 | 0.0000 | 0.0000 | |
| 2 | No. of new BBBEE entrants | 0 | 0 | 1 | 0 | | No. | 0 | 100 | na | 0 | 10 | 5 | |
| | | | | | | Learning | 0.09 | | | 0.0000 | 0.0000 | 0.1000 | 0.0500 | |
| 3 | No. permanent jobs created | 0 | 0 | 1 | 0 | | No. | 5 | 50 | na | 0 | na | 38 | |
| | | | | | | Learning | 0.09 | | | 0.0000 | 0.0000 | 0.0000 | 0.7333 | |
| 4 | No. temporary jobs created | 0 | 0 | 1 | 0 | | No. | 0 | 5000 | na | 1 | 4914 | 2328 | |
| | | | | | | Learning | 0.09 | | | 0.0000 | 0.0002 | 0.9828 | 0.4656 | |
| 5 | % of Rand value of capital expenditure program for increased access to services | 0 | 0 | 1 | 0 | | R | 50 | 100 | na | 0 | na | 87 | |
| | | | | | | Active | 0.09 | | | 0.0000 | 0.0000 | 0.0000 | 0.7400 | |
| 6 | % compliance with environmental management plans | 0 | 1 | 0 | 0 | | | 50 | 100 | na | na | 90 | na | |
| | | | | | | Active | 0.09 | % | | 0.0000 | 0.0000 | 0.8000 | 0.0000 | |
| 7 | No. corporate social responsibility initiatives | 0 | 0 | 1 | 0 | | No. | 0 | 20 | 3 | 2 | 10 | 3 | |
| | | | | | | Advanced | 0.09 | | | 0.1500 | 0.1000 | 0.5000 | 0.1500 | |
| 8 | Value of corporate social responsibility initiatives | 0 | 0 | 1 | 0 | | (million) | 1 | 10 | na | na | na | na | |
| | | | | | | Advanced | 0.09 | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| 9 | Level of Supply - % households with water connections | 0 | 0 | 1 | 0 | | % | 0 | 100 | na | na | na | 84 | |
| | | | | | | Advanced | 0.09 | | | 0.0000 | 0.0000 | 0.0000 | 0.8400 | |
| 10 | Level of Supply - % households with sanitation connections | 0 | 0 | 1 | 0 | | % | 0 | 100 | na | na | na | na | |
| | | | | | | Advanced | 0.09 | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| 11 | Carbon footprint | 0 | 1 | 0 | 0 | | Equip kg / Ml | 500 | 0 | na | na | na | 363 | |
| | | | | | | Leading | 0.1 | | | 0.0000 | 0.0000 | 0.0000 | 0.2740 | |
| | No. Indicators per Sustainability Dimension | 0 | 2 | 9 | 0 | Total Weight Check | 1 | | | | | | | |

Customer Satisfaction Outcome Sheet

| No. | Customer Satisfaction | Indicator Classification | | | | Sustainability Category | KPI Weighting | Unit | Threshold Values | | Water Board Performance 2012/13 | | | |
|-----|---|--------------------------|---------------|--------|------------|-------------------------|---------------|------|------------------|-----------|---------------------------------|----------------|------------|--------------|
| | | financial | environmental | social | governance | | | | Least Preferred | Preferred | Amatola Water | Overberg Water | Rand Water | Umgeni Water |
| 1 | Overall customer satisfaction | 0 | 0 | 1 | 0 | | % | 0 | 100 | na | na | 97.7 | na | |
| | | | | | | Learning | 0.2 | | | 0.0000 | 0.0000 | 0.9770 | 0.0000 | |
| 2 | No. new contractual agreements | 0 | 0 | 0 | 1 | | No. | 0 | 4 | 2 | na | na | na | |
| | | | | | | Active | 0.2 | | | 0.5000 | 0.0000 | 0.0000 | 0.0000 | |
| 3 | % bulk supply agreements | 0 | 0 | 0 | 1 | | % | 50 | 100 | 100 | 33 | 100 | 100 | |
| | | | | | | Active | 0.2 | | | 1.0000 | 0.0000 | 1.0000 | 1.0000 | |
| 4 | % of compliance to the KPI's of contracts | 0 | 0 | 0 | 1 | | % | 75 | 100 | 65 | na | na | na | |
| | | | | | | Advanced | 0.2 | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| 5 | % Retention of existing Primary and Secondary customers | 0 | 0 | 1 | 0 | | | 75 | 100 | 100 | na | na | na | |
| | | | | | | Leading | 0.2 | | | 1.0000 | 0.0000 | 0.0000 | 0.0000 | |
| | No. Indicators per Sustainability Dimension | 0 | 0 | 2 | 3 | Total Weight Check | | 1 | | | | | | |

Stakeholder Understanding and Support Outcome Sheet

| No. | Stakeholder Understanding and Support | Indicator Classification | | | | Sustainability Category | KPI Weighting | Unit | Threshold Values | | Water Board Performance 2012/13 | | | |
|-----|--|--------------------------|---------------|--------|------------|-------------------------|---------------|------|------------------|-----------|---------------------------------|----------------|------------|--------------|
| | | financial | environmental | social | governance | | | | Least Preferred | Preferred | Amatola Water | Overberg Water | Rand Water | Umgeni Water |
| 1 | % attendance of Board members at scheduled meetings | 0 | 0 | 0 | 1 | | % | 80 | 100 | 83 | 83 | 79.31 | 87 | |
| | | | | | | Learning | 0.125 | | | 0.1500 | 0.1500 | 0.0000 | 0.3500 | |
| 2 | % compliance target dates met | 0 | 0 | 0 | 1 | | % | 90 | 100 | na | 100 | 100 | 100 | |
| | | | | | | Learning | 0.125 | | | 0.0000 | 1.0000 | 1.0000 | 1.0000 | |
| 3 | Audit opinion outcome* | 0 | 0 | 0 | 1 | | na | 1 | 4 | 4 | 4 | 4 | 4 | |
| | | | | | | Learning | 0.125 | | | 1.0000 | 1.0000 | 1.0000 | 1.0000 | |
| 4 | % positive to media coverage | 0 | 0 | 1 | 0 | | % | 0 | 100 | na | na | 20.36 | na | |
| | | | | | | Active | 0.125 | | | 0.0000 | 0.0000 | 0.2036 | 0.0000 | |
| 5 | % repeat internal audit findings | 0 | 0 | 0 | 1 | | % | 20 | 0 | na | 0 | na | 0 | |
| | | | | | | Advanced | 0.125 | | | 0.0000 | 1.0000 | 0.0000 | 1.0000 | |
| 6 | % unresolved internal audit findings | 0 | 0 | 0 | 1 | | % | 10 | 0 | na | 0 | na | 3 | |
| | | | | | | Advanced | 0.125 | | | 0.0000 | 1.0000 | 0.0000 | 0.7000 | |
| 7 | Frequency of the highest governance body's review of economic, environmental and social impacts, risks, and opportunities (Board Meetings) | 0 | 0 | 0 | 1 | | No. | 1 | 4 | 5 | 5 | 9 | 8 | |
| | | | | | | Leading | 0.125 | | | 1.0000 | 1.0000 | 1.0000 | 1.0000 | |
| 8 | % compliance with stakeholder engagement plan | 0 | 0 | 0 | 1 | | % | 40 | 100 | na | na | na | na | |
| | | | | | | Leading | 0.125 | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| | No. Indicators per Sustainability Dimension | 0 | 0 | 1 | 7 | Total Weight Check | 1 | | | | | | | |

| * Audit outcomes have been rated as follows: | Score |
|--|-------|
| Unqualified | 4 |
| Qualified | 3 |
| Adverse | 2 |
| Disclaimer | 1 |