

IMPLICATIONS OF SOUTH AFRICA'S TRADE POLICIES FOR WATER POLICY AND WATER RESOURCES MANAGEMENT

Report to the
Water Research Commission

by

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Executive Summary

This report introduces the background and rationale for the project, followed by a discussion of the core outputs and findings, which in essence are the following:

Following South Africa's transformation to democracy, the country has seen major shifts in virtually all policy fields, including water management and international trade, which are of relevance to this project. Much of South Africa is considered "water stressed" (DWAF, 2004) and competition over water resources between water use sectors is likely to increase. This competition has to be managed within the new policy framework for water management in South Africa, which places emphasis on redressing the current imbalances in access to water resources and services. At the same time South Africa has been re-integrated into the international trade system, in which it fully participates as a member of the World Trade Organisation (WTO). South Africa has to align its policy objectives with respect to water resources management and water services with its obligations from international trade law in a way that is most beneficial to the country and its people.

South Africa is at a disadvantage in terms of capacity of trade negotiators for two reasons. One is that prior to 1994 the country was largely isolated from international trade agreement processes – so it did not get the opportunity to develop expertise in this area. The other is that as South Africa entered the global economy again after 1994, there were large and rapid shifts in trade rules – partly driven by the end of the cold-war era and a general opening up of local markets to international companies. These two factors have resulted in South Africa's capacity in trade negotiators being low – with only a small team of permanent professionals available in the Department of Trade and Industry (DTI). It has also meant that knowledge of trade issues is very limited in other national departments such as the Department of Water Affairs and Forestry (DWAF). This lack of capacity severely hampers efforts to become more proactive in developing positions on trade issues for specific sectors.

Against this background the project has explored linkages between water resources management and water services provision and international trade with a view to:

- Highlight possible inconsistencies between the two fields within the South African policy framework
- Identify options to harmonise policies and laws in the two fields and to ensure the protection of domestic policy objectives in the light of obligations resulting from international trade agreements
- Recommend channels for improved communications between government departments to ensure optimal policy harmonisation

As one of the outputs, the Strategic Review of the Implications of South Africa's Trade Policies for Water Policy and Water Resources Management (see report and Appendix 1) provides an overview of the various linkages between water and trade issues. This represents a first step towards developing an understanding of the inter-connections between trade and both water resources management and water services provision. The strategic review also highlights that there is a need for greater cooperation between government departments on water/ trade issues and particularly when it comes to trade negotiation, strategy development.

The latter issue was addressed by the project team in a report highlighting possible channels for improved cooperation between government departments on water/ trade issues (see report and Appendix 2). During this project it was proposed by the DTI that cooperation structures be established with DWAF in order to discuss water-related issues and take them into account in the Regional Industrial Development Strategy (RIDS) planning process currently underway. This suggestion was also supported by some of the DWAF representatives consulted. These cooperative structures could take the form of a permanent institution – or may be an *ad-hoc* committee formed between the two departments specifically to provide input and exchange information on the RIDS.

The key structure for interdepartmental cooperation and policy coordination on international trade issues is the Permanent Trade Forum (PTF), convened monthly by

the DTI. It is felt that DWAF is underrepresented at this forum with the result that water issues are not considered to the necessary extent. Continuous and high level DWAF representation is recommended, in order to create awareness within DWAF of international trade issues impacting on water, and to create awareness of water issues within the other departments.

It is also suggested that the PTF not only be strengthened by increased representation of DWAF, but also through the creation of a specific Trade and Natural Resources Working Group. The proposed working group would discuss international trade issues impacting on water and other natural resources in more depth in order to inform the high level discussions at the PTF. In addition to representatives from affected departments, i.e. DTI, DWAF, Department of Agriculture (DoA), Department of Environmental Affairs and Tourism (DEAT) and Department of Minerals and Energy (DME) the working group could also include Research Institutes e.g. the Water Research Commission (WRC), National Research Foundation (NRF), CSIR and others in order to ensure a broad scientific base.

Based on the linkages identified in the strategic review, the project team has produced a discussion paper that explores some of the most pertinent issues with the specific objective of highlighting possible misalignments between current South African (water) policy and obligations resulting from international trade agreements (see Appendix 3). The report points out where South African policy is, or could be in the future, at odds with international trade law provision and proposes possible mitigation strategies.

Last, in Appendix 4, the project team has made recommendations for future research on specific aspects that are likely to become of increasing relevance for policy makers in South Africa in the realm of water and trade policy making. Further research into these issues should be aimed to increase the knowledge base on water/ trade linkages within government and civil society in South Africa and contribute to improved understanding of policy options for the future.

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1 Introduction

This research is about policy harmonization in the context of a state that has recently found its national identity. In this regard the notion of a frontier is a powerful analytical tool. As defined by Thompson & Lamar (1981), a frontier is not a boundary line, but rather a zone of interpretation between two previously distinct societies. The frontier can be thought of as “opening” in a given zone or area when the first representatives of an intrusive society arrive. It can be thought of as “closing” when a single political authority has established hegemony over the zone in question. We can therefore trace the history of South Africa back in phases (Turton *et al.*, 2004), to when the frontier “opened” with the arrival of the first European settlers, to when it “closed” with the first democratic elections in 1994. This research is about implications arising in the policy field from that closure, because it heralded South Africa’s reintegration into a globalised economy as a sovereign state, recognized as being legitimate by the family of sovereign nations. In essence, those implications are centred on one key technical fact – internal sovereignty has resulted in major policy and legal reform – which might be slightly at odds with external sovereignty as expressed in international trade agreements to which South Africa is a signatory. In the context of a country that has future economic growth fundamentally constrained by hydrological factors (Turton *et al.*, 2006; Ashton & Turton, 2007), it is important to harmonize trade negotiations with internal hydrological realities so as not to create a future revolution of expectations that cannot be realized.

1.1 Background

The climatic realities of South Africa have led the country to experience spatial and temporal fluctuations in water resource availability. Much of the country is considered “water stressed” to some degree (DWAF, 2004). Coupled with this relative scarcity of water as a resource, is the history of inequitable access to water resources and water services. The result is that since the election of the first democratic South African government in 1994 active measures have been taken to redress this imbalance in access to water resources and services, while recognising water as a scarce resource

with an economic value. In recognition of this situation and the fact that water plays a crucial role in social development the South African government treats water as “a social, environmental and economic good” (DWAF, 2004).

In effect, under the National Water Act (Act 36, 1998) water is a good common to all and placed under the trusteeship of the national government, acting through the Minister of Water and Forestry who “must ensure that water is protected, used, developed, conserved, managed and controlled in a sustainable and equitable manner, for the benefit of all persons and in accordance with its (the government) constitutional mandate” (RSA, 1998). Water in this context is seen as playing a role in livelihood security and poverty eradication with due recognition of the inequitable access to the resource and water services in the country in the past (Earle *et al.*, 2005).

The increasingly interventionist role the South African government has played in water management is in parallel with the country’s integration into the international economic system. The global nature of today’s markets has led to stronger links between national and international economies. International trade is nothing new – the ancient Silk Roads from China, the empires of the Greeks and Romans, the cross-Mediterranean reach of the Moorish empire, the colonialist empires of the European powers, and the restructuring of nation states with the Treaty of Westphalia all had major trade and economic aspects (Mann, 2006).

The increase in the degree of international trade as well as the integration of the national with the international economy has been underpinned by two main trends:

- Modern business approaches where all the elements needed to produce a final good or service - production of inputs, design, assembly, management, marketing, savings for investment - may be sourced from around the globe in a system held together by powerful communications and information technologies and transportation networks (UNEP, 2005).
- The steady and progressive removal of barriers to international trade. Aside from the physical barriers being reduced, through improved communication

and transport, there has been a commensurate removal of political, economic and legislative barriers to international trade, through various trade agreements.

The trade agreements are collectively referred to as “free trade” measures. Whereas achieving “free trade” is the long-term objective, the WTO system does not ensure this state immediately. Instead, it is currently a system of “managed trade” with the objective of promoting the easier flow of goods and services between countries. The agreements governing international trade (under the WTO umbrella) establish a complex regime of rules and laws, governing what nation states may and may not do when it comes to trade. South Africa is a member of the World Trade Organisation (WTO) and consequently a party to the General Agreement on Tariffs and Trade (GATT), regulating the global trade in goods, as well as the General Agreement on Trade in Services (GATS), regulating the global trade in services. In addition to these and other WTO agreements, which together form the so-called “single undertaking”, South Africa is also party to a range of other multi- and bi-lateral trade agreements.

These various trade agreements cover a wide range of products, inputs and services – all with the aim of promoting free trade through reducing government intervention in the market (Mann, 2006). Governments, under the various trade agreements, have committed themselves to reducing the regulation of various goods and markets – allowing private companies access to domestic markets with the same rights and privileges enjoyed by local firms. The South African government is no exception – trade barriers have been reduced and various other trade facilitation measures implemented over the past decade.

At the same time where international trade is being managed on a global level through the WTO system, there is also a relatively high degree of government intervention in the management of South Africa’s water resources. Indeed, the level of government intervention in the management of South Africa’s water resources and water services sector has actually increased – with a view to actively managing the trade-offs between economic efficiency, environmental sustainability and social redress (Turton *et al.*, 2006). The challenge is to harmonise water resource management interventions with South Africa’s (existing and potential) obligations resulting from international

trade agreements to which South Africa is party. In addition, the composition of South Africa's traded product mix may change under agreements reached with other countries providing improved market access for specific industries. For instance any large change in the production of basic agricultural products would have ramifications for water resources management due to the water-intensive nature of crop production.

1.2 Research Objectives

The overall goal of this research project is to ensure that the South African water management sector (public and private) is adequately informed and can respond, with understanding, to developments in the various trade negotiation forums. Additionally, other groups, such as the trade negotiators, should get a broader understanding of some of the water issues in the country. In pursuit of this goal the current project was solicited by the WRC. The Terms of Reference (TOR) of the call for solicited research listed five objectives which the project would need to address:

- Provide a strategic analysis of South Africa's trade policies related to the ongoing negotiations at multilateral, regional and bilateral level with emphasis on the implications of these trade policies for water resources management and water service provision, and *vice versa*.
- Develop a template for the DWAF, which can serve to guide an evaluation of the implications for water resources and water services of a specific set of trade negotiations and enables the DWAF to draft position papers for making recommendations to South Africa's trade negotiators on these issues.
- Make recommendations for a process of information exchange between the DWAF, DTI, DEAT, other government departments and other stakeholders, which can support ongoing updating and dissemination of relevant information and knowledge.
- Using the template developed, produce a model "position paper" for a specific current set of trade negotiations in which South Africa is involved.

- Through consultation with trade negotiators and water managers as well as other relevant stakeholders and role players, to identify and make recommendations for future research priorities in the field of linked trade - water policies.

1.3 Report Outline

As this project was dealing with a topic around which very little specific research has been conducted – both locally as well as internationally, the project team had to make adaptations to the original approach and objectives developed in the project proposal. Thus Section Two of the report covers items related to the methodology adopted by the team, providing an overview of some of the challenges faced and the alternatives investigated. Section Three of the report covers some of the issues raised in Section Two in more depth – discussing some of the findings and outputs of the project. Recommendations are also made for future research on the topic and the section ends with a set of conclusions.

This report concludes with a list of appendices that provide the specific outputs which form components of this study. These appendices are:

- Strategic Review of the Implications of South Africa's Trade Policies for Water Policy and Water Resource Management.
- Recommendations for strengthening interdepartmental cooperation on matters relating to international trade and water and other natural resources.
- Discussion Paper on linkages between selected water policy goals and trade agreements.
- Recommendations for Future Research

2 Methodology

As this field of study is so new and of such an interdisciplinary nature a lot of time was spent at the beginning of the project to get the views and inputs of individuals involved in the interfaces between water and trade issues. This included representatives from the national departments of Trade and Industry (DTI), Environment and Tourism (DEAT), Water Affairs and Forestry (DWAF) and from Department of Agriculture (DoA) as well as NGOs. A project inception meeting was held during which the project team members had the opportunity to discuss issues around trade and water with the above people. The purpose of the inception meeting was to assist the project team in defining the scope of the project, in particular:

- To identify and prioritise current negotiations and existing agreements.
- To identify and prioritise trade-water linkages.

At this first meeting it emerged that the DTI did in fact not plan on making any offers in the water services sector. As such they had no need for the DWAF to develop a position on any set of trade negotiations – although they lauded the fact that DWAF was being pro-active in a way which many other departments were not. However, under some of the discussions, such as GATS, broadly defined Environmental Services are included, which although not being specifically focussed on water services or resources, could have a major impact on them. These include energy services, waste-water treatment, sewage and sanitation services and biodiversity and landscape management services. The exact definition of what falls under these services categories is still unclear and subject to the ongoing negotiations. It was pointed out by the project team that it is possible that landscape management services or other environmental management services could potentially have a direct impact on the operation of CMAs in the country. If this sector was opened up to private or foreign companies there is a chance that they would be entitled to operate CMAs.

It was pointed out that there are various protective measures a country may invoke for specific sectors and that these should be identified by the project team. Some of these protective measures, such as singling out a specific service activity for exclusion from

making commitments under GATS or attaching certain conditions to commitments, need to be made explicit at the time of making commitments. Others are inherent in national legislation, governing the rights and responsibilities of companies, foreign as well as domestic, in the provision of environmental services.

It is important for the project team to identify possible “loopholes” through which commitments affecting South Africa’s water services provision and water management policies could be affected, even though no direct commitments for water services provision have been made. This requires an analysis of the cross-cutting linkages between water services and the broader field of environmental and management services.

The management of water resources is also potentially affected by trade agreements and it became evident at the meeting that the direct linkage between water and goods trade is of interest to the DWAF. A change in market access for a particular good could have potential implications for water resources management in South Africa. The development of water intensive industries or agriculture in dry parts of the country makes it difficult for DWAF to provide water. The project team would discuss this with the Economic and Industrial Division (EID) of the DTI as well as the DoA and propose possible linkages with the DWAF.

At the meeting the DTI representative and other participants assisted the project team in developing a conceptualisation of all the trade negotiation processes and agreements in which South Africa was involved. It was decided that the deliverable - the “*Strategic Review of the Linkages between South Africa’s trade policies and water policy*”, would form a key output of the project, as it would provide an overview of the interaction between South Africa’s water management policies and laws; and trade issues (see Appendix 1). This was aimed broadly at water managers, to provide them with an overview of international trade issues as they relate to water, as well as trade negotiation representatives – sensitising them to water management issues in South Africa. The Review focussed on five key topics:

1. An Overview of Water Policy and Strategy in South Africa: Resource Management and Service Provision.

2. An Overview of South African Trade Policy.
3. An Assessment of Trade in Non-Agricultural Goods.
4. An Assessment of Trade in Agricultural Goods.
5. An Assessment of Trade in Services.

Each topic area was analysed in terms of what the current situation is, pointing out water/trade linkages, government policy direction on that issue as well as the policies, goals and concerns of non-government groups including the private sector, NGOs, trades unions and other civil society groups. The review was circulated to the various representatives listed above for further comment and input.

The next deliverable was a report containing “*Recommendations for strengthening interdepartmental cooperation on matters relating to international trade and water and other natural resources*”. The rationale for this report was that the linkages between international trade negotiations, water services provision and water resources management are complex and cross-cutting. Consequently, cooperation and policy coordination between the various national departments involved (including the DTI, DWAF, DEAT and DoA) is essential in order to develop a consolidated national position that ensures optimal utilisation of trade opportunities and at the same time ensures that South Africa’s social and constitutional commitments are being met.

In order to assess the level of interdepartmental interaction on trade issues and to develop possible suggestions to strengthen cooperation, interviews were held with representatives from the DWAF, the DTI, the DoA and the DEAT. The interviews resulted in a number of suggestions being made on how the current interdepartmental cooperation could be strengthened. The report is an overview of the key outputs from the interviews, along with some recommendations by the project team on how inter-departmental cooperation on water and trade issues can be strengthened (see Appendix 2 for the full report).

The next two deliverables – “Template for developing “position papers” on water resources or water services with respect to specific trade negotiations” and an “Example Position Paper for a current set of trade negotiations” were going to be developed in parallel. In that way there would be the opportunity for lessons learned

in the development of one to feed into the other. When drafting the project proposal the intent for these deliverables was to develop with, and for DWAF, a template to form a position on the implications of a specific set of current trade negotiations on water resources management and water services provision as well as a specific real-world example. The developments which surrounded current trade negotiations made it difficult to achieve this objective. The US-SACU trade negotiations are currently stalled and their progress uncertain. Other bilateral trade talks have not yet reached the stage of actual negotiations based on concrete offers and requests. The WTO Doha Round of negotiations was called off, leaving no active set of negotiations for which a model paper could be developed. In addition, as emerged from the project inception meeting, the DTI was not calling on the DWAF to develop a position around any set of negotiations at that time.

This situation was explained to the Reference Group at their meeting of 11 May 2006. With input from the Reference Group it was decided to rather develop one deliverable – a “Discussion Paper on linkages between selected water policy goals and trade agreements”. The paper was based on some of the key water policy objectives of the DWAF, taken from existing DWAF policies, laws and strategies such as the National Water Resources Strategy (NWRS). The aim of the paper was to highlight some of the hypothetical risks which exist in relation to water policy objectives in an effort to provide DWAF officials with a broader understanding of the issues. This would form a first step in developing capacity within DWAF to engage on water-trade related issues.

The paper first discussed the possible risks, posed by various international trade agreement processes, to a selection of the policies. Then it proposed the possible mitigatory strategies to safeguard the water policy objectives under the various scenarios. The paper was not based on any specific set of negotiations. Rather, it sought to develop hypothetical scenarios based on some of the issues which have been brought up through existing trade regimes as well as through trade agreements in other parts of the world (e.g. NAFTA), where appropriate. As such the paper was speculative and exploratory in nature. Three areas of water policy objectives were considered:

- *Water services* – including issues such as the Free Basic Water (FBW) strategy, rising block and lifeline tariffs and the appointment of private sector water service providers.
- *Water resource management by Catchment Management Agencies (CMA) in the light of GATS*: covering issues such as separation of regulatory and operational functions of CMAs and access to government subsidies.
- *Inter-basin transfers and water exports*: looking at the issue of countries being tied into allowing water exports if permission is granted to one operator under GATS.

This paper consequently plots hypothetical aspects that could arise in order to sensitize the negotiators of future trade agreements on the one hand, and water resource and service managers on the other. The National Water Act, supported by the South African Constitution, makes DWAF the custodian of water at the national level, but future trade commitments could impact on this national responsibility if left unchecked. The report discusses some of these potential issues (see Appendix 3 for the full discussion paper).

The discussion paper was followed by Recommendations for Future Research in the field, as requested in the original TOR for the project. During the project lifespan some of the issues which emerged required a greater degree and depth of analysis than what was possible in the project. These were incorporated into a research agenda of issues of importance to the DWAF and South Africa as a whole (see Appendix 4 for the full set of recommendations or Section 3.2 on page 17 for a summary).

3 Discussion, Recommendations and Conclusions

3.1 Discussion

As this project sought to develop inter-disciplinary knowledge and capacity around a comparatively new field, it was expected that a certain degree of reflexivity on the part of the research team, as well as the WRC, would be required. The actual needs and objectives of the various project stakeholders only became evident through their engagement in the project. Macro-level events beyond the control of the project team, such as the suspension of the WTO Doha Round, had a direct impact on the project activities, calling for the changes to some of the deliverables as described above. Throughout this process the input, guidance and facilitation received from the project Reference Group proved invaluable to the project team, allowing them to adapt to the various changes and challenges encountered.

The project outputs (deliverables) reflect this adaptive management approach – being tailored towards the needs of the water management community in South Africa, as well as incorporating the inputs from other stakeholders, such as the DTI and DoA. Assumptions which the team had operated on while developing the project, such as the need for DWAF to develop a position on water issues for the DTI trade negotiators and the belief that the DoA takes water issues into account when developing their trade strategy proved unfounded. The DTI negotiation section representative made it clear to the team that they are not planning on making any offers directly involving water – resources or services. He went further to state that should the time come when the DTI planned to make commitments on water they would approach the DWAF to work with them on developing a position. Based on this, and the fact that very little capacity exists presently at the DWAF on trade issues, it became evident that the project would play a role in developing knowledge-products aimed at DWAF officials, who may in the future be called on to participate in trade negotiations.

Thus the Strategic Review (see Appendix 1) provides an overview of the various linkages between water and trade issues – presented in a format readily

understandable by professionals who are not experts on trade issues. In addition – it provides trade negotiators with an overview of the prime water-related challenges, policies and uses in the country. This represents a first step towards developing an understanding of the inter-connections between trade and both water resources management as well as water services provision.

On the resource management side some of the key points noted are:

- Water scarcity, if incorrectly managed, can become an impediment to economic growth and development (Allan, 2000; Ashton & Turton, 2007). South Africa is relatively water-scarce, meaning that impeded economic growth due to water scarcity can become a reality, with significant consequences for a young democracy dealing with post-conflict reconstruction. The policy process and the evolving institutions and policy instruments that are under way in South Africa are addressing this problem of scarcity.
- Under existing rules, some of which are not yet fully clear, foreign private entities could have equal opportunity to bid for the contract to perform the **operational tasks** of Catchment Management Agencies (CMA).
- A foreign private entity could receive a subsidy for performing the operational tasks of a CMA.
- A key consideration in trade policy negotiations should be the promotion of growth in the production of local products with a high value-added content that are at the same time relatively efficient users of water, both upstream and downstream of the production process. The concept of more value-added per unit of water is a sound one that should be mainstreamed in trade negotiations.
- Given the endemic water scarcity in South Africa, intra-SADC trade in water-intensive crops will be influenced by water value being reflected by its social, environmental and scarcity value. This has implications for emerging farmers,

domestic land reform and regional development in the context of SADC, making it a strategic issue of note that is currently under-researched.

- Some interpretations on the General Agreement on Trade in Services (GATS) suggest that quantitative restrictions on water use could have unintended legal implications. This is significant and not yet fully understood, but it has potential implications for compulsory licensing and therefore needs to be better understood.

Some of the key points raised in the review around water services provision include:

- Technical aspects of the Water Services Act (WSA) indicate that partnerships with the private sector should be open to competition and can be bid on by any entity, local or foreign.
- Whether water management services are provided with private sector involvement or not, the Government is in violation of its duty to fulfil its obligation to citizens if it allows private water companies to arbitrarily disconnect water, or to adopt discriminatory or unaffordable increases in the charge for water.
- Preliminary indications are that international trade agreements could potentially impact on Government's ability to meet its service delivery obligations, but the exact nature and extent of this is not yet known with any degree of certainty.
- The relatively recent inclusion of services into international trade agreements constitutes a radical departure from the previous focus of merely opening up borders for the trade in goods. On the one hand, allowing for foreign service providers to enter a market, can improve service delivery quality and reduce prices due to increased competition. On the other hand developing countries, whose service sectors are less developed, are at a risk of exposing their markets entirely to foreign providers, with possible negative consequences for the development of their own services sector and for achieving domestic policy objectives. This dichotomy needs to be understood by trade negotiators in order to develop appropriate responses.

- While South Africa has not made GATS commitments for water service provision, other commitments made in different sectors could impact on water delivery and management. Trade negotiators need to be made aware of the complexities associated with this fact because the implications for the water sector are potentially profound.

A key element emerging from the review is that there needs to be greater interaction between the relevant government departments, as well as other stakeholders, on the links between water and trade. Trade policy cannot be developed in isolation from water-related social, environmental or economic realities in the country.

As stated in the report on recommendations for interdepartmental cooperation (see Appendix 2) there is some degree of cooperation between departments. With specific reference to the relationship between international trade negotiations and water services provision and water resources management the degree of interaction and cooperation is, however, relatively low. Strengthened cooperation was suggested in two distinct areas, the one being national and regional planning issues (how, where and when water-consumptive industries are being planned) and the other one being international trade issues (affecting both water services as well as water resources management). At this stage trade policy makers see little reason to incorporate water issues into their decision-making processes and that any change in the *status quo* will have to be initiated by the DWAF. It is suggested that, if this issue is of sufficient importance for the DWAF, requests for interaction with the DTI would have to be initiated from a high level within DWAF, preferably at Director-General level in order to make water resources a sufficient priority for trade policy makers.

The Discussion Paper on linkages between selected water policy goals and trade agreements aimed to be explorative and conceptual – providing an opinion on some of the hypothetical situations which could arise from the interaction between provisions of trade agreements and national water policy objectives (see Appendix 3 for the paper). There exists the possibility that national law around water resources management as well as water services provision could go against international law

instruments such as trade agreements. In most cases it is possible to introduce mitigatory measures (remedies) into the trade agreements while they are being discussed, in an attempt to preserve the rights government may wish to exercise in the future. However, these measures usually have to be explicitly mentioned in the agreement prior to it being concluded and cannot be added afterwards. It is thus important that water managers are aware of the possible threats to policy objectives as well as having knowledge of possible mitigatory measures which can be included. The exact implications of elements of trade agreements for water policy objectives is in this sense dependant not on national water law, but rather international trade law, where there are no clear outcomes unless they have been tested in the WTO's Appellate Body (the appeal panel established under the WTO's Dispute Settlement Mechanism).

Some of the key points discussed in the paper are:

- Subsidization from sources other than direct user charges is key to realizing the right to basic water and sanitation, but might be construed as being unfair or an unnecessary obstacle to trade, making the subsidy nationally acceptable but illegal under international trade law. Elements of this are presented in considerable detail in the report, including unintended risks arising from block tariffs and Free Basic Water (FBW).
- Water exports *via* Inter-Basin Transfer or other bulk schemes open up a specific area of complexity that decision-makers and negotiators need to be made aware of, with the possibility of a precedent being set once the first water exports are allowed.
- Regarding Catchment Management Agencies (CMAs), foreign private companies could carry out these key (operational) functions, specifically in outsourcing to contractors and re-delegation to other water-related institutions in a given Water Management Area (WMA).

The paper concludes with a set of nine mitigatory measures which could be developed. Whether the proposed mitigatory strategy would be allowed under the generic disciplines depends on the set of trade rules which are under negotiation.

Mitigation 1: Explicitly state any flexibility that South Africa wants to maintain, either through the horizontal commitments across all sectors (see definition under “Services – Schedule of Commitments” in the glossary below), or through sector specific limitations to market access or national treatment.

Mitigation 2: Specify that South Africa requires a system of rising block tariffs in any offer made.

Mitigation 3: Build in flexibility for local or national government to require and implement more than three tiers within the step tariff system.

Mitigation 4: Build in flexibility for local or national government to require a minimum amount of free water and to increase the quantity of the first (free) tier.

Mitigation 5: Explicit reference to South Africa’s preference for public provider would help mitigate any ambiguity and should be put into any offer related to municipal services under the GATS.

Mitigation 6: South Africa should develop its positions and offers regarding GATS and other trade negotiations in a more participatory and transparent way.

Mitigation 7: Monitor the (Committee for Trade and Environment – Special Session (CTESS) and Non-agricultural market access (NAMA) negotiations on environmental goods to ensure services are not inadvertently opened up.

Mitigation 8: Should any water transfers or exports be approved make sure that the full range of social and environmental legislation is implemented, as specified under the NWA. Under GATT strict standards can be relaxed later, if needed, but relaxed standards cannot be made stricter.

Mitigation 9: Develop a framework for the involvement of private sector entities in the performance of CMA functions, covering issues such as delegation of powers and access to subsidies.

3.2 Recommendations

The various project outputs make recommendations on aspects of water and trade policy interaction. These can broadly be grouped in three categories:

- Capacity development needs.
- Promoting greater organisational collaboration.
- Recommendations for further research.

Category 1: Capacity development needs

Trade negotiations are by their very nature, extremely complex, with a high degree of uncertainty inherent in the process. The jargon that is used is specific and is deeply embedded in the Legal and International Relations professional discourses. The trade negotiators of developed countries like the USA, or highly developed regional groupings like the EU, are supported by large contingents of professionals, all of who are trained in specific fields, but eventually deployed in harmony in order to maximize the advantage accruing from a specific negotiated outcome. South Africa is at a disadvantage in terms of capacity of trade negotiators for two reasons. One is that prior to 1994 the country was largely isolated from international trade agreement negotiation processes – so it did not get the opportunity to develop expertise in this area. The other is that as South Africa entered the global economy again after 1994 there were large and rapid shifts in trade rules – partly driven by the end of the cold-

war era and a general opening up of local markets to international companies. These two factors have resulted in South Africa's capacity in trade negotiators being low – with only a small team of permanent professionals available in the DTI. It has also meant that knowledge of trade issues is very limited in other national departments such as DWAF. This lack of capacity severely hampers efforts to become more proactive in developing positions on trade issues for specific sectors.

For South Africa to remain internationally competitive as well as being able to preserve policy space to pursue national development goals around water issues it is important that greater capacity in this field is developed. This capacity needs to be developed both within the DTI negotiations team – introducing them to the challenges and policy directives of other sectors, such as water – as well as within the water sector, providing them with an insight into the challenges, threats and opportunities for their sector as a result of international trade agreements. Developing such capacity will also contribute to enhancing institutional collaboration, discussed below.

The research team recommends offering a capacity-building workshop of between three and five days aimed specifically at professionals from the DWAF and possibly the DEAT, as an introduction to the various trade-related issues, which may impact on their ability to effectively manage water resources and water services. This would represent a first step in the DWAF being able to develop a position on future trade negotiations with regard to water issues – thus promoting a shift from a reactive approach to trade issues and towards developing a pro-active and pre-emptory capacity. The workshop would be largely based on materials developed through this project and would involve trade experts as resource persons offering modules on specific topics.

Category 2: Promoting greater institutional collaboration

Trade and water issues are highly inter-connected, with impacts from both felt through almost every sector, be it agriculture, health, mining, power generation or environmental management. Thus, effective responses to the challenges posed by international trade issues require a greater degree of inter-departmental cooperation, particularly at the national level.

The report on recommendations for institutional¹ collaboration (see Appendix 2 for the report) suggested strengthened cooperation in two distinct areas, the one being national and regional planning issues (how, where and when water-consumptive industries are being planned) and the other one being international trade issues (affecting both water services as well as water resources management).

At National Planning level the following recommendations are made:

- *DoA-DWAF cooperation*: The DoA specifically needs input on issues such as forthcoming water allocation reform and water pricing, as these have important resource economics implications. It is therefore proposed that structures be created on a technical level where water related issues can be discussed jointly between resource economists at the DoA and DWAF technical experts.
- *DTI-DWAF cooperation*: At present the DTI is in the process of developing a regional industrial development strategy (RIDS) for South Africa. The RIDS aims to stimulate industrial development outside of the three largest metropolitan areas of the country – Gauteng, eThekweni and Cape Town. This strategy categorises South Africa into various regions (regions with potential, regions with latent potential and declining regions) with specific interventions to promote economic development in these regions. It is important that the DWAF be involved in the development of the RIDS in order to give input on water related issues, particularly regional water resource availability. During the interviews it was proposed by the DTI that cooperation structures be established with the DWAF in order to discuss water related issues and take them into account in the RIDS planning process. This suggestion was also supported by one of the DWAF representatives consulted. These cooperative structures could take the form of a permanent institution – or may be an *ad-hoc* committee formed between the two departments specifically to provide input and exchange information on the RIDS.

¹ This report uses the term institutions, following the terminology used in the National Water Act. It should be noted that what is referred to as institutions in this report is in the terminology of some scientific disciplines (e.g. economics) referred to as organisations.

With respect to international trade issues the recommendations do not suggest the establishment of entirely new structures for cooperation. It is recognised that there are existing structures where international trade issues are discussed. It is however suggested, to strengthen these structures in various ways, including:

- Currently, water services provision and water resources management issues play no role in the formulation of trade policy in the DTI. At this stage trade policy makers see little reason to incorporate water issues into their decision-making processes and that any change in the *status quo* will have to be initiated by the DWAF. It is suggested that, if this issue is of sufficient importance for the DWAF, requests for interaction with the DTI would have to be initiated from a high level within DWAF, preferably at Director-General level in order to make water resources a sufficient priority for trade policy makers.
- The key structure for interdepartmental cooperation and policy coordination on international trade issues is the Permanent Trade Forum (PTF) convened monthly by the DTI. It is felt that the DWAF is underrepresented at this forum with the result that water issues are not considered to the necessary extent. Continuous and high level DWAF representation is recommended in order to create awareness within DWAF of international trade issues impacting on water and to create awareness of water issues within the other departments.
- It is also suggested that the PTF not only be strengthened by increased representation of DWAF but also through the creation of a specific Trade and Natural Resources Working Group. The proposed working group would discuss international trade issues impacting on water and other natural resources in more depth in order to inform the high level discussions at the PTF. In addition to representatives from affected departments (DTI, DWAF, DoA, DEAT, DME) the working group could also include Research Institutes (e.g. WRC, NRF, CSIR and others) in order to ensure a broad scientific base.

The various outputs of this project, specifically the Strategic Review and the Discussion Paper (see Appendix 1 and Appendix 3 respectively), have sought to explore water and trade linkages, looking both at the current situation as well as conceptualising possible scenarios on specific issues. The very nature of trade negotiations means that there is considerable uncertainty in the outcome of the process – witness the collapse of the Doha Round of WTO negotiations mid-way through 2006. As has been described in this report, there are potentially direct impacts for the management of water resources and water services in South Africa from trade agreements. The national government, supported by groups such as research organisations, NGOs, private sector and other stakeholders, needs to develop more knowledge around the nature and extent of the possible linkages between water and trade. This will allow mitigatory measures to be developed for various issues which may impact on the South African water policy goals. This current project is a first step towards developing local capacity to engage in such work, but what is needed is a long-term programmatic approach, with the flexibility to respond to the changing landscape around trade issues and adapt objectives to the strategic needs of water management institutions in the country.

Category 3: Recommendations for future research

Following is a summary of the key research areas recommended by the project team for further research. The list is by no means exhaustive, but draws on the inputs received by team members from various stakeholders during the course of the project (see Appendix 4 for the full set of recommendations).

The identified topics that are suggested for future research have been grouped in four clusters as follows:

1. International trade issues impacting on water resource management.
2. Water services provision and GATS.
3. The relationship between environmental services and environmental goods.

4. Improving institutional interaction.

International trade issues impacting on water resource management

A key consideration in trade policy negotiations should be the promotion of growth in the production of local products with a high value-added content that are at the same time relatively efficient users of water, both upstream and downstream of the production process. The concept of more value-added per drop is a sound one that should be mainstreamed in trade negotiations. Specific actions include:

→ Investigate how the value-added per drop aspect could be (further) integrated into the development of negotiation positions.

→ Investigate in detail the linkages between water resource management issues, agricultural policy and South Africa's trade strategies for the agricultural, manufacturing, mining and other sectors against the background of developments concerning international trade.

→ Investigate if water licensing and particularly compulsory licensing is affected by GATS provisions and, if so, what the potential implications for water allocation reform in South Africa would be.

→ Develop a better understanding of the legal ramifications of protecting the Reserve allocation of water over and above other legitimate users of water.

→ Investigate in detail how the GATS could impact on domestic regulation and if and how this could impact on the water management activities of CMAs (and other bodies responsible for water management).

→ Investigate how proposed disciplines on domestic regulation would impact on water management activities of CMAs (and other bodies responsible for water management).

→ Investigate in detail the linkages between national and regional economic development planning and develop mechanisms to integrate water resource management issues into industrial development planning processes and ASGISA.

Water services provision and GATS

Negative impacts related to service commitments under the GATS can be greatly reduced by having appropriate, robust national regulation that is enforced. The United States of America has some of the best regulation around service delivery in the world. Research could identify whether mechanisms used by the USA could be useful and appropriate for South Africa to implement. Specific actions include:

→ Commission research in terms of what the USA (and possibly other developed countries) has put in place to regulate itself and to protect national interest from the GATS, and see how it could be adapted for South Africa.

→ Investigate the impacts on costs of the full water services life-cycle to households and municipalities of outsourcing some of the water services, e.g. waste water treatment.

→ Investigate whether the Most Favoured Nation and the National Treatment principle could apply to WSA-WSP contracts.

→ Investigate whether and how bilateral or plurilateral agreements with a services component, to which one or more SADC countries (excluding South Africa) are partner, could impact on South Africa.

→ Investigate to what extent South Africa's possible offensive interests in the (water) services sector, impact on the country's negotiation options/ position and its ability to protect domestic policy space.

Relationship between environmental services and environmental goods

Negotiations were mandated in paragraph 31(iii) of the Doha Ministerial Declaration on the "reduction, or as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services". While many developing countries, including South Africa, are wary of opening their markets further, it is possible that some benefits could be derived by reducing tariffs and non-tariff barriers on environmental goods and services required to improve water resource management and services delivery. Specific actions include:

→ Identify goods, services and circumstances by which South Africa could benefit in Environmental Goods and Services liberalisation, for example through cheaper inputs for water treatment or exports of clean technologies.

→ Investigate the implications of the different approaches currently being negotiated at the WTO or arising in the future for integrated water resource management and water services.

→ Identify and develop criteria that could be used for listing Environmental Goods in projects that support IWRM and more effective services delivery.

Institutional interactions

A lot of the capacity for research on the linkages between trade and water issues sits outside government. This is exacerbated and entrenched through outsourcing policy-related research. In many instances, the sector specific capacity sits within government, but in different departments or sections. The linkages can be made by bringing people together in a learning and strategy-oriented forum. Research on the most appropriate mechanisms to do this would improve the applicability and uptake of research on trade and water. Specific actions include:

→ Develop mechanisms for government departments to do collaborative research so that less reliance is placed on external researchers and consultants.

→ Develop a strategy to inform trade negotiators of possible linkages with water so that they are able to solicit input from colleagues in DWAF (and other government departments) at appropriate times.

→ Analyse existing capacity, identify capacity gaps and develop and implement appropriate capacity building measures.

3.3 Conclusions

This research has sought to map out a highly complex field in order to shift the response time from being reactive to proactive, because that is what is needed to stabilize our new-found democracy. South Africa is engaging in two parallel processes simultaneously. Internal sovereignty is being applied to policy and legal reform in order to align the various pieces of legislation, including, but not exclusively, that governing water. External sovereignty is being exercised in terms of re-engaging in global trade processes and negotiations after decades of marginalization. The two parallel tracks have implications on each other that this research has sought to identify and report in a way that empowers the reader to become aware of the complexities, and then actively do something about this

situation. The initial intention was to do reconnaissance work, and that objective has been achieved. That has, of necessity, involved reflexivity and adaptation, as the team learned about the complexities involved. We now have a rough map of the complex terrain, at a level of resolution and order of magnitude better than when we started. More importantly, we are now collectively in a better position to define that, which we need to know, but do not yet know. In essence that becomes the research strategy for the future. In this endeavour the Research Team wishes to thank those individuals and Government Departments that gave so freely of their time and support, and offers this product as their contribution to nation-building and sustained economic development in our fledgling democracy.

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5 Appendices

5.1 Appendix 1: Strategic Review of the Implications of South Africa's Trade Policies for Water Policy and Water Resource Management

Strategic Review

of the

**Implications of South Africa's Trade Policies for Water
Policy and Water Resource Management**

Report to the
WATER RESEARCH COMMISSION

By

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Executive Summary

South Africa has emerged from the isolation of Apartheid and started to engage the global markets, largely from a position of structural weakness. This has been caused by the debilitating policies of Apartheid, which led to systematic isolation from the global arena, and created a national economy that was highly protected and inward-looking. All of this changed in 1994 when South Africa became a democracy. A period of vigorous legal reform ensued, resulting in a fundamental change in the way government is structured. An increase in the number of functional units within government, along with the Constitutional imperatives of Sustainable Development, Social Equity and Historic Redress, has increased the level of complexity in the overall system. Against this background, South African trade negotiators have engaged the global markets via a range of trade regimes. This report examines some of the potential ramifications arising from this re-engagement by specifically focussing on the implications of trade policy on water policy and water resource management. This is a highly complex field and the study is a preliminary one, designed only to get a feel for the issues that are potentially out there, with a view to stimulating debate within the water sector (and beyond), in order to develop a future research agenda.

At this interim reporting phase, the following issues are noted:

- South Africa is relatively water-scarce and this climatological fact can become an impediment to future economic growth and development, with significant consequences for a young democracy dealing with post-conflict reconstruction.
- Under existing rules, some of which are not yet fully clear, foreign private entities could have equal opportunity to bid for the contract to perform the operational tasks of Catchment Management Agencies (CMA).
- A foreign private entity could receive a subsidy for performing the operational tasks of a CMA.

- Technical aspects of the Water Services Act (WSA) indicate that partnerships with the private sector should be open to competition and can be bid on by any entity, local or foreign.
- Whether water management services are provided with private sector involvement or not, the Government is in violation of its duty to fulfil its obligation to citizens if it allows private water companies to arbitrarily disconnect water, or to adopt discriminatory or unaffordable increases in the charge for water.
- There is potentially scope for various private organizations, both local and foreign, to become involved in the management of water resources in the country, as well as the provision of water services.
- There are implications for sovereignty over a vital resource like water, most of which have not yet been identified for assessment.
- South Africa trades more with Europe than any other part of the globe, and the agreement between the parties tends to be asymmetrical in favour of the EU.
- Trade agreements within the SADC region do not include services at this stage, but the EU is showing interest in gaining access to the services market so this is likely to change in the future.
- The main weakness of South Africa's trade policy is that it has not been focussed on shifting South African comparative advantage away from natural resources, so that policy seems to have had little positive impact on employment and development. This has potential political ramifications so it should be evaluated in terms of future political risk.
- In general, water resources are not considered when trade policy is made, given the major drive to eradicate poverty as the legacy of Apartheid. This introduces

major forces that undermine the Sustainable Development imperatives inherent to the Constitution.

- Favourable market access conditions for South African products abroad could lead to increased exports with a substantial impact on future water demand and availability. The exact nature and magnitude of this is not known at this time, but the issue is being flagged as a strategic one.
- Increased import penetration by lowering tariffs could lead to a decline in local production with potential water savings to the country. The exact nature of these is not yet known, but the issue is being flagged as a strategic one in need of careful consideration by the policy-making and water resource management community.
- Textile production has undergone major changes due to the comparative disadvantage of South Africa, and this has a potentially positive spin-off for water resource management because it potentially reduces the pollution load associated with that industry.
- A key consideration in trade policy negotiations should be the promotion of growth in the production of local products with a high value-added content that are at the same time relatively efficient users of water, both upstream and downstream of the production process. The concept of more value-added per drop is a sound one that should be mainstreamed in trade negotiations.
- Subsidizing water use means that firms tend to become inefficient and get locked into technologies that are difficult to change over time. This has a negative effect on South African comparative advantage in a globalizing market, specifically when analysed against the background of endemic water scarcity constraints to economic growth.
- The importation of products that are water-intensive in their production has a potentially positive effect on South Africa's domestic water availability. This is known as virtual water trade, and is a complex field in its own right. Being a

strategic issue, current levels of research are inadequate to address this aspect of trade policy in a satisfactory manner.

- While some research efforts have been made to understand water-use efficiency at the local level, little has been done to analyse water-use efficiency at the global level.
- The Department of Trade and Industry (DTI) uses Industrial Development Zones (IDZs) as a vehicle for the promotion of economic development. This could lead to major increases in water demand in a given area, which is often not considered during the trade negotiations phase.
- Given the endemic water scarcity in South Africa, intra-SADC trade in water-rich crops will be increasingly difficult to withstand if the charge for water reflects the real social, environmental and scarcity value. This has implications for emerging farmers, domestic land reform and regional development in the context of SADC, making it a strategic issue of note that is currently under-researched.
- Indications are that water scarcity issues tend not to be explicitly considered during the process of domestic trade strategy-making. This suggests that trade conditions for agricultural products will be negotiated independently of water issues, while water pricing would effectively determine whether South African farmers would be competitive at all. This has implications for land reform and emerging farmers in South Africa, so it is a strategic issue of note that is currently not on the radar screen of policy research.
- A well developed understanding of the linkages between water resource management issues, agricultural policy and agricultural trade strategy is essential.
- Preliminary indications are that international trade agreements could potentially impact on Government's ability to meet its service delivery obligations, but the exact nature and extent of this is not yet known with any degree of certainty.

- The relatively recent inclusion of services into international trade agreements constitutes a radical departure from the previous focus of merely opening up borders for the trade in goods. The exact nature and extent of this is not known with any degree of confidence at this time. What is known is that there is a built-in bias against developing countries whose services sectors are less developed, so this needs to be understood by trade negotiators.
- While South Africa has not made GATS commitments for water service provision, other commitments made in different sectors could impact on water delivery and management. Trade negotiators need to be made aware of the complexities associated with this fact because the implications for the water sector are potentially profound.
- Some interpretations on the General Agreement on Trade in Services (GATS) suggest that quantitative restrictions on water use could have unintended legal implications. This is significant and not yet fully understood, but it has potential implications for compulsory licensing and therefore needs to be better understood.
- GATS covers regulatory measures of national, provincial and local government, as well as NGOs that are performing government functions. This has broad reach and could impact on CMA activities in the future. The exact nature of this is not known at the time of writing.
- Traditionally DTI has been the custodian of trade negotiations in South Africa, but negotiators tend not to be aware of the strategic linkages between trade and water policy.

An Overview of Water Policy and Strategy in South Africa: Resource Management and Service Provision

Introduction

South Africa is a country with marked spatial and temporal variability in the rainfall it receives (O'Keeffe *et al.*, 1992:278). The natural variability in the rainfall coupled with the high rates of potential evapotranspiration has placed the gathering, storage and reticulation of water high on the planning agenda from colonial times up until the present (Earle *et al.*, 2005; Turton *et al.*, 2004). Over time, as the country has industrialised, urbanised and developed, there has been an increasing acceptance of the need to recognise water as a scarce and precious commodity. This is essential in a country such as South Africa as “in several river basins the requirement for water already far exceeds its natural availability” (DWAF, 2004a). This condition is called basin closure, with a number of strategically important river basins in Southern Africa currently approaching this important threshold (Ashton & Turton, 2004; 2006; Turton & Ashton, 2006; Turton, 2003a, 2003b, 2005; Turton *et al.*, 2006). Water should be used in a productive way, contributing to the development of the country through the creation of jobs and generation of income, but if left unmanaged, it could drive conflict instead.

In South Africa, with its history of unequal access to resources, it is not enough to rely on the market alone to allocate water, because that would continue to favour the historically advantaged communities and merely perpetuate inequity. In addition to the goals of economic efficiency and environmental sustainability, there needs to be an explicit social component – addressing the need for equity and redress. This need of balancing the economic efficiency, social equity and environmentally sustainable aspects of water management in the country has necessitated a greater degree of intervention from the national government than may otherwise have been the case.

The national water policy, strategy and legislative environment in South Africa has undergone many changes since 1994. The Department of Water Affairs and Forestry (DWAF) has begun the evolution from playing multiple roles of operator, developer and regulator of water resources and water services towards becoming the sector

leader – focused on policy-formation, regulation and monitoring (DWAF, 2004a). The strategic target is the progressive decentralisation of the responsibility and authority for water resources management to Catchment Management Agencies (CMAs) and, at a local level, Water User Associations (WUAs). These institutions, representative of water users and other stakeholders, will facilitate effective participation in the management of water resources in their localized areas, under the principle of subsidiarity, which is a core component of the emerging paradigm known as Integrated Water Resource Management (IWRM).

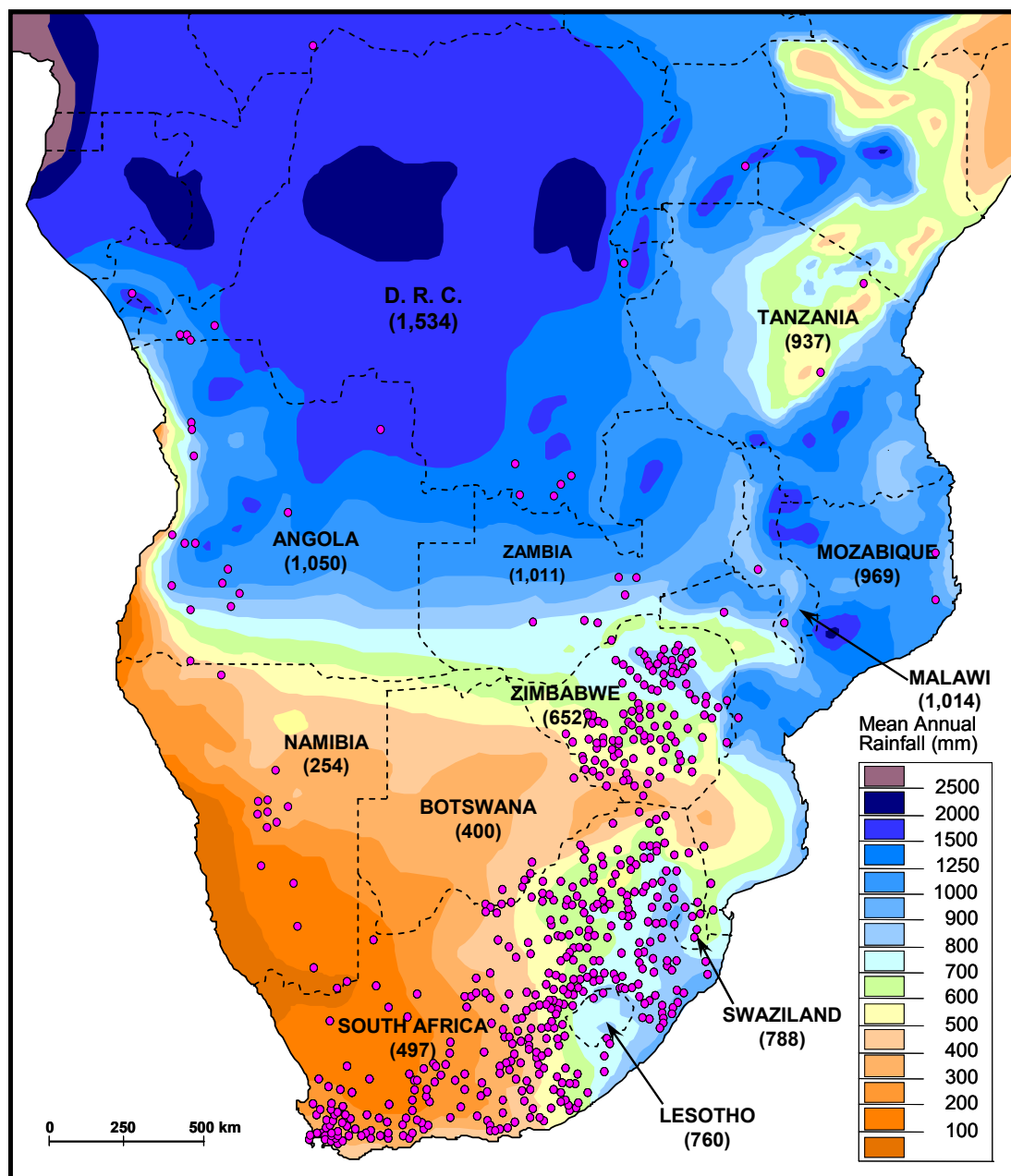


Figure 1. Map of Southern Africa showing the distribution of rainfall and the location of large dams needed to manage water scarcity as a limiting factor to economic development (Turton *et al.*, in press).

According to the National Water Resources Strategy (NWRS), which is the basic planning document within DWAF, “three fundamental objectives for managing South Africa's water resources, which are firmly grounded in the provisions of the Bill of Rights of the Constitution of South Africa, arise from the National Water Policy (NWP) of 1997 (DWAF, 2004a). These are designed to achieve:

- Equitable access to water, including equity of access to water services, to the use of water resources, and to the benefits from the use of water resources.
- Sustainable use of water by making progressive adjustments to water use, with the objective of striking a balance between water availability and legitimate water requirements, and by implementing measures to protect water resources.
- Efficient and effective water use for optimum social and economic benefit.

Important proposals to facilitate achievement of the NWP's objectives include:

- Water is an indivisible national asset. National government will act as the custodian of the nation's water resources and its powers in this regard will be exercised as a public trust.
- Water required to meet basic human needs and to maintain environmental sustainability will be guaranteed as a right, whilst water use for all other purposes will be subject to a system of administrative authorisations.
- The responsibility and authority for water resource management will be progressively decentralised by the establishment of suitable regional and local institutions. These will have appropriate community, racial and gender representation to enable all interested persons to participate” (DWAF, 2004a).

The above objectives and proposals of the NWP all imply some degree of government regulation and intervention in the way water resources and water services in South

Africa are managed. Words and phrases such as “achieve equitable access”, “striking a balance”, “implementing measures”, “national asset”, “guaranteed as a right” and “appropriate ... representation” all point to some of the key responsibilities which national government has assumed. It is this involvement of the national government which is potentially at odds with certain provisions contained under international trade regimes such as the various World Trade Organisation (WTO) regimes and bilateral agreements. In some cases these provisions are permissible – as long as they are made explicit at the time of the offer being made. The aim of this chapter is to provide a broad overview of the policy, strategy and legislative framework for the management of water resources and water services in South Africa and to highlight some of the potential points of divergence with current or future international trade agreements and regimes.

Resource Management under the National Water Act

The objectives of the NWP are implemented under provisions laid out by the National Water Act (NWA). The NWA is the principal legal instrument covering the protection, use, development, conservation, management and control of South Africa’s water resources (DWAF, 2004a). An important provision of the NWA – key to achieving many of the above NWP objectives – is the appointment of the National Government as the trustee of the nation’s water resources. In the NWA the responsibility of trusteeship is elaborated as:

“(1) As the public trustee of the nation's water resources the National Government, acting through the Minister, must ensure that water is protected, used, developed, conserved, managed and controlled in a sustainable and equitable manner, for the benefit of all persons and in accordance with its constitutional mandate.

(2) Without limiting subsection one (1), the Minister is ultimately responsible to ensure that water is allocated equitably and used beneficially in the public interest, while promoting environmental values.

(3) The National Government, acting through the Minister, has the power to regulate the use, flow and control of all water in the Republic” (RSA, 1998). The principal of

“trusteeship” does not give ownership of the water to the government (it belongs to the nation) but it does give responsibilities and authority to the Minister to achieve national policy.

Allocation of Water Resources

Through the Water Act of 1956 and its riparian access principle, the right of access and use of water resources was intimately linked to the ownership of land. This principle, inherited from English Law, tied water rights to land rights – a person owning land over which water flowed had a right to a share of the “normal flow” (MacKay, 2003:50). According to the Minister of Water Affairs and Forestry, Ms Buyelwa Sonjica “Since access to land was determined along racial lines under the apartheid system, access to water was thus similarly determined by skin colour” (DWAF, 2004a). The NWRS, a legal requirement in terms of the NWA, recognises water as a “tool for the eradication of poverty, providing a way for the poorest of our people to survive and make a living” (DWAF, 2004a). For water to become an agent of change and development in South Africa there will have to be a shift in the way it is allocated and used at present.

Chapter Four of the NWA outlines the way in which water is to be used in South Africa. Specifically it discusses how water is allocated in society and the various types of licensed and unlicensed water entitlements available. These include Schedule 1 Use (water used for domestic “non-commercial” purposes), a General Authorisation, Existing Lawful Use and Licensing. Chapter Four, Section 27 (Considerations for issue of general authorisations and licences) and Section 43 (Compulsory licence applications) prescribe factors which need to be considered when allocating water, whether licensed or unlicensed. The full range of impacts of a water-use need to be considered in relation to the public benefits of that proposed use. These impacts include the effect a water use will have on existing, legal, water users, the impact of a water use on water quality and ecosystems as well as the ability to provide water for the Reserve.

Part 1 of Chapter 2 of the NWA requires the development of a National Water Resources Strategy (NWRS). According to the NWA the “national water resource

strategy provides the framework for the protection, use, development, conservation, management and control of water resources for the country as a whole” (RSA, 1998). The NWRS is to be reviewed every five years, to reflect changes in water use, demography and development in the country, with the first edition released in September of 2004. If the NWA has the broad overall objectives of meeting the basic human water needs of present and future generations, to promote equitable access to water, and to redress the results of past racial and gender discrimination then the NWRS describes how the water resources of South Africa will be managed, used and conserved in order to achieve these objectives.

Part 2 of Chapter 3 of the NWRS deals with strategies for managing water use, providing more detail on the provisions laid out in the NWA. Thus, Schedule 1 of the NWA permits the use of relatively small quantities of water, mainly for domestic purposes (including non-commercial gardening and stock watering), but also allows use in emergency situations and for certain recreational purposes. There is no formal requirement for users to register a Schedule 1 Use. CMAs may impose limits on them where it is necessary in particular areas (DWAF, 2004a). The Schedule 1 water uses are mandated by the NWA - this is a legislative provision over-which the executive does not exercise control – suffice overseeing its implementation. According to the NWRS the NWA, “does not specify generally applicable numerical limits to any of the Schedule 1 uses. However, the extent of such uses must be reasonable with regard to users' needs and not be excessive in relation to the capacity of the resource and the needs of other users. The Department will regularly assess the extent of use under Schedule 1 with a view to specifying limits for the various aspects of the schedule. The limits will differ for different parts of the country.

A General Authorisation allows limited, but conditional, water use without a licence. The NWRS lists two General Authorizations made for water use - Government Notice No. 1191 on 8th October 1999 covering the taking and storage of water, re-use of water containing waste for irrigation purposes, the discharge of water containing waste and the disposal of waste. Following a programme of public consultation revisions to the above General Authorizations were published in the Government Gazette on 26th March 2003 under Notice No. 399. The validity of the revised General Authorisations after the final date of publication in the Government Notice is

five years in all cases, with review at intervals of three years. The next set of General Authorisations were established by Government Notice No. 398 on 26th March 2003 for morphological alterations to watercourses (altering banks, beds or courses or otherwise diverting or impeding stream flow) and removing water from underground.

The above sets of General Authorizations will come to an end by 2008, necessitating the issuing of licences in cases where the General Authorizations are not renewed. According to the NWRS a licence to use water:

- May only be issued by a responsible authority, to which a prospective user must apply;
- Replaces all previous entitlements, if any, to use water for the purpose specified in the licence;
- Is specific to the user to whom it is issued and to a particular property or area;
- Is specific to the use or uses for which it is issued;
- Is valid for a specified time period, which may not exceed 40 years;
- May have a range of conditions attached to it; and
- Must be reviewed by the responsible authority at least every five years (DWAF, 2004a).

Water Use Licences give existing or prospective water users authorisation to use water, or to access water resources, for beneficial purposes. South Africa is at the start of this licensing process (water allocation reform) – starting with the compulsory licenses in catchments experiencing some degree of water stress and eventually covering all water use not included under Schedule 1 of the NWA or future General Authorizations (DWAF, 2005).

The DWAF has developed a National Water Conservation and Water Demand Management (WC/WDM) Strategy, and subsidiary strategies for three identified water use sectors, namely water services, agriculture, and industry, mining and power generation. The strategies outline measures and interventions aimed at encouraging and supporting water institutions and water users to increase the efficiency of their water use and reduce their demand for water (DWAF, 2004a). Although the strategies

do not present rigid prescriptions to water institutions and users, they attempt to “create a WC/WDM culture within all the water management and water services institutions defined in the National Water Act and the Water Services Act (CMAs, WUAs, water services authorities, and bulk and retail water services providers such as water boards) and among water users (DWAF, 2004a). The promotion of such strategies could be in contravention of the GATS provision of not limiting the “*total value of service transactions*” (Sinclair, 2005). However, the issues involved are currently unclear and would require further analysis. Several of the economic incentives to promote the equitable and efficient allocation of water would prove to run counter to GATS provisions. This would not only apply to the allocation of water but also to the management of water quality through the *polluter pays* principle. Generally, the concept of a service provider having to increase the cost of a service in an effort to induce consumers to consume less of that product or service does not align well with the private sector’s commitment to abide to market forces. In most industries, bulk or repeat clients receive discounts as they consume more. Water provision is the opposite, as the aim is to use market instruments to reduce consumption, thus managing demand. This apparent dichotomy (Turton, 2002) can be resolved through the setting of water-use reduction targets, by a regulator, which the water service provider needs to attain. It is important that the right to set such regulations is made explicit in any future trade commitments on water services.

Another set of potential limits to the total value of transaction (of water supplied) is the need under the NWA to provide water for the Reserve. The Reserve is the quantity and quality of water to meet basic human needs and to protect aquatic ecosystems and takes priority over all other water uses (licensed or not) thus, has to be factored into all water allocation planning (DWAF, 2004a & RSA, 1998). Following the Reserve, water to meet international commitments and obligations also needs to be maintained in the system – possibly at the expense of other water users.

Water Management Institutions

The effective implementation of water policies and laws is dependant on viable institutions – at the national as well as the sub-national level. Commensurate with the principles of participative democracy, the NWA calls for the devolution of water

management to the lowest appropriate level – allowing the users a say in how water resources in their area are managed, developed, allocated etc – by means of the subsidiarity principle inherent to the IWRM paradigm. In addition to broadening the base of input into water management decisions, the NWA is explicit about promoting racial, gender, community and sectoral representation in these water management institutions (RSA, 1998).

At the national level DWAF's eventual role will mainly be to provide the national policy and regulatory framework within which other institutions will directly manage water resources, and to maintain general oversight of the activities and performance of these institutions. The Department will continue to manage South Africa's international relationships and activities in water matters, although some aspects of this may eventually also be handled through institutions established with neighbouring countries (DWAF, 2004a).

Over time the actual management of water resources in South Africa will be delegated to various water management institutions. The NWA in Chapter 1 (1) item XXVI states that “*water management institution* means a Catchment Management Agency, a Water User Association, a body responsible for international water management or any person who fulfils the functions of a water management institution in terms of this Act” (RSA, 1998).

According to the NWRS, the powers and duties of a water management institution relate to water resources management in general. The NWA also defines a *responsible authority*, whose duties relate specifically to water use, and particularly to the authorisation of water use by General Authorisation or Licence. The Act's provisions for authorisation of water use make it clear that only the Minister, or a CMA to which the appropriate powers and duties have been assigned, may authorise the use of water. Other water management institutions may not authorise water use.



Figure 2. Map of South Africa showing the 19 Water Management Areas and major Inter-Basin Transfers between them. (Source: National Water Resource Strategy preparatory workshops).

South Africa has been divided into 19 Water Management Areas (WMAs) – broadly along the lines of the major river basins in the country (see Figure 2). Each WMA will have a CMA, which will manage water resources and coordinate the water-related activities (including water allocation) of water users and other water management institutions within their WMA (DWA, 2004a). CMAs are statutory bodies established by the Minister through Government Notice. According to the NWA “a catchment management agency is a body corporate, and has the powers of a natural person of full capacity” (RSA, 1998) and is headed by a Governing Board, approved by the Minister.

CMAs are governed by the National Raw Water Pricing Strategy (NRWPS) of 2005, under-which water resources management charges will be recovered from water-use sectors (Schreiner, Pers Comm, 2006). These water use sectors are listed in the NRWPS as:

- Domestic and industrial – water services authorities, industrial, mining, power generation etc

- Agriculture - irrigation and intensive stock watering;
- Stream flow reduction - commercial forestry at this stage, other sectors may be added (RSA, 2005).

Water uses which will not attract pricing include those defined under Schedule I of the NWA (small-scale domestic use, gardening and stock watering where users have direct access to the water resource), the basic human needs component of the Reserve (set, at present, at 25 litres per person per day), the ecological component of the Reserve (to preserve aquatic ecosystems) and water for international obligations (except where specific agreements have been reached with the neighbouring state/s).

The charges for water need to promote the goals of economic efficiency (including WDM), ecological sustainability, social equity (including cross-subsidisation) and financial sustainability (RSA, 2005). The last item on financial sustainability includes the water management charges needed to ensure the long-term financial autonomy of CMAs, as well as other water management institutions. The water management activities which may be carried out by CMAs cover a broad range – as delegated by the Minister, including the development of a Catchment Management Strategy (CMS), resource directed quality measures, water use authorizations, control and enforcement of water use, disaster management, IWRM programmes, institutional development, stakeholder participation, weed control, terrestrial invasive alien plant control, monitoring of hydrology and geo-hydrology and administration (RSA, 2005).

Overall the CMAs are meant to operate on a direct-cost recovery basis and are not intended to show a long-term profit (Schreiner, pers comm., 2006). At most, they can accrue short-term profits to fund future operating expense increases or infrastructure development. They are allowed to engage in a diverse variety of activity – including consultancy services outside of the water sector and outside of their base WMA, as long as this does not limit their ability to perform their core functions in their base WMA (RSA, 2005). They are allowed to receive income from a range of sources, including central government grants, donor organisations, contractual payments and in-kind contributions, with the stipulation that any donor or sponsorship income above R350 has to be approved by the Minister. The NWRS makes provision for the initial

subsidisation of CMAs by the National Treasury to enable them to develop the capacity to carry out their duties – on the assumption that this will be phased-out as the institutions become financially viable from the collection of water-use charges (DWAF, 2004a). This represents a form of start-up capital provided by the central government.

At present, CMAs would not fall under the GATS framework as they are statutory public institutions (Muller, pers comm., 2006). They are created to perform specific regulatory tasks, as delegated to them by the Minister. Their regulatory activities cannot be delegated to other institutions, but they are at liberty to delegate their operational and management tasks to other water management institutions, including those in the private sector (RSA, 1998). Thus the regulatory and the operational functions of the CMA could be separated, with the latter being managed privately. If South Africa were to make a commitment on environmental services, such as water management, under GATS or *via* another agreement, it would impact on the outsourcing of CMA operational tasks. ***Under such a situation, foreign private entities would have to have equal opportunities to bid for the contract to perform the operational tasks of a CMA as what local entities would have – governmental or not.*** The outsourcing of CMA operational tasks would not represent a privatisation of the nation's water resources – the regulatory control would still remain in the public domain – either under CMAs or under the overarching role of DWAF. It would purely be the operational tasks which could be run by a private entity – on the condition that they can do it more efficiently and more effectively than other entities who bid on the contract.

A point of potential contention could emerge, under conditions of liberalisation of the environmental services sector, during the start-up phases of CMAs. As mentioned above it is foreseen by the DWAF that CMAs would receive direct subsidies from the central government until such time as they are financially independent. This start-up capital could be used to carry out some of the operational tasks of the CMA. As such it would be deemed an unfair and distorting trade subsidy if it was not made available to other entities, who may wish to bid to carry out the operational tasks of the CMA. ***As the GATS provisions now stand, a foreign private entity could thus receive a subsidy for performing the operational tasks of a CMA. This is not necessarily a***

problem, as many sectors have examples of private companies receiving subsidies, but it may prove to be politically contentious in the South African context. More research needs to be carried out on the implications of this scenario and likely remedy measures, because the complexity arising from this is simply beyond the scope of the current exploratory study.

Water management institutions may develop, operate and own water-related infrastructure such as dams, canals and pipelines. The authorisation to develop infrastructure can only be granted by the Minister or by the CMA, as part of its regulatory role. On a national scale, the Cabinet has approved the establishment of a National Water Resource Infrastructure Agency (NWRIA) by April 2008, to ensure long-term water security for South Africa. The agency will take responsibility for developing and operating South Africa's major national dams and water transfer schemes that are currently managed directly by the DWAF. Most of the financing for future projects will be off-budget (national) and will be raised through loans, with costs recovered through user charges for the water (RSA, 2005). State funding will in future be confined mostly to social, water resource development or betterment projects – aiming to promote equitable access to water and meet ecological and international commitments.

Water Services

As a point of departure it is necessary to sensitize the reader to the complexity arising from trade policy negotiations. The following overview of the various policies and laws, which have a direct impact on water services in the country, serves the purpose of providing an introduction to the field. The subsequent analysis on Water Services gives an in-depth overview of the interaction of South Africa's water policy with international trade regimes.

The Water Services Act (WSA) of 1997 (No. 108 of 1997), Section 3(1) states (that) “everyone has a right of access to basic water supply and basic sanitation” (RSA, 1997). According to De Visser, Cottle and Mettler (Earle *et al.*, 2005) “basic water supply” is the “prescribed minimum standard of water supply services necessary for the reliable supply of a sufficient quantity and quality of water to households,

including informal households, to support life and personal hygiene”. The 1997 *White Paper on a National Water Policy for South Africa* states that government is instructed to take reasonable legislative and other measures within its available resources to achieve the progressive realisation of these rights (Earle *et al.*, 2005). Obligations are placed on all three spheres of government - National, Provincial and Local to promote the right of access to basic water services. The state must ensure that all people have *physical* access to water. This means that the facilities that give access to water must be within safe physical reach for all sections of the population, especially for vulnerable and marginalised groups. The state must also ensure that all people have *economic* access to water. This implies that the cost of accessing water should be pegged at a level that would ensure that all people are able to gain access to water without having to forgo access to other basic needs.

The WSA sets out the rights and duties of consumers and places emphasis on ensuring the financial viability of water service providers. Water service authorities are defined in the WSA as “any municipality, including a district or rural council ... responsible for ensuring access to water services” (RSA, 1997). They may choose to provide water services themselves or can enter into a contract with a water service provider to supply water. The concept of “cost recovery” (of providing water) and private sector involvement in the provision of water is entrenched in the WSA (RSA, 1997: Ch3, Section 19, Paragraph B). ***The caveat contained in the WSA that, “a water services authority may only enter into a contract with a private sector water services provider after it has considered all known public sector water services providers which are willing and able to perform the relevant functions”, indicates that partnerships with the private sector should be open to competition and can be bid on by any entity – local or foreign.*** The chapter in this review on Water Services discusses these private entities, by asking whether in partnership with public institutions or not, they are eligible for government funding such as the Municipal Infrastructure Grant.

The 2002 *Draft White Paper on Water Services* states that charging for water is essential in order to generate funds for operating, maintaining and investing in water systems (DWAF, 2002:10). Block tariffs are geared at making the initial levels of consumption more affordable - or even free - while charging increasingly higher

prices as consumption levels rise, increasing the potential benefit of curbing consumption at the top end, thereby introducing conservation incentives (McDonald, 2002a: 2).

The key features of the 2002 *Draft White Paper on Water Services* are:

- Everyone is entitled to a basic supply of 25 litres of clean water per day, or 6 000 litres per household per month.
- No one should be without a water supply for more than seven days per year, and if a public supply is interrupted for more than 24 hours, the municipality should liaise with residents to arrange for emergency supplies.
- Local Government (municipalities) is responsible for the provision of water supply services.
- People who cannot afford to pay for water are still entitled to a free basic water supply.
- It is a criminal offence to connect to a public water supply without municipal permission.
- People who are unable to pay their water bill should make arrangements with their municipality.
- Municipalities may restrict people to the free basic amount, but may not withhold the basic supply.
- Municipalities must inform people before they discontinue their services and must also have a consumer service where people can lodge complaints.

The *South African Constitution* allows national government (DWA) to decentralise its power and attendant responsibilities to municipalities or other water service

authorities in keeping with the subsidiarity principle inherent to IWRM. In this way local government can assume the responsibility for the provision of water services and can contract with private companies to manage and provide water services. However – the national government, “bears the ultimate responsibility to ensure compliance with the state’s obligations” – as contained in the Bill of Rights of the Constitution (Welch, 2005:60). The Constitution recognises international law in the interpretation of the Bill of Rights. South Africa is a party to the International Covenant on Economic, Social and Cultural Rights of the United Nations which specifies that states must provide “sufficient, safe, acceptable, physically accessible and affordable water” to their citizens (Welch, 2005:59). ***Thus, whether water management services are provided with private sector involvement or not, the government, “is in violation of its duty to fulfil its obligation to citizens if it allows private water companies to arbitrarily disconnect water taps, or to adopt discriminatory or unaffordable increases in the charge for water” (Welch, 2005:61).*** Thus, although the sector is open to competition, as provided for under the WSA, it is a sector heavily regulated by various national laws, including the Constitution.

Under the WSA every Water Service Authority has to develop a Water Services Development Plan, covering a description on the physical and environmental conditions in the area, the types and numbers of water users, estimation of future water use needs and proposals on water conservation/recycling and pollution measures (RSA, 1997). This plan needs to be developed in conjunction with the Catchment Management Strategy of the CMA in that specific WMA. The NWA calls for supporting regulations of the NWRS in achieving the aims of the various Water Services Development Plans. These regulations cover issues such as basic levels of access to water and sanitation, quality standards for potable water (recognising the fact that the water quality of rivers and other sources in a catchment has a direct impact on the costs incurred by Water Service Providers), control of grey-water disposal, use of effluent and industrial discharges (DWAF, 2004a). These regulations need to be adhered to, by CMAs as well as by Water Service Authorities, and any Water Service Providers they may enter into contract with.

Conclusion

There is a degree of tension inherent in the relationship between the water management goals of equity, environmental sustainability and economic efficiency. In many over-allocated catchments of the country, this has resulted in zero-sum outcomes – one party's gain equates to another's loss. This can be equated to resource capture that has grown to reflect the power asymmetry, which has become associated with South Africa's history. The realities of water management in South Africa today - in which climatic and hydrologic challenges combine with the structural inequity arising from resource capture - call for a complex set of water management instruments. These instruments – the laws, institutions, policies and organisations developed over the past decade, represent the inputs, goals and aspirations of a broad cross-section of South Africans, as well as incorporating much international good-practise. The emphasis has been summed up in the “some for all forever, together” slogan of the DWAF, with rights and responsibilities of all parties clearly defined. The water-specific laws and policies described in this section have been developed in the context of various other laws and policies, which they may interact with – such as those on the environment, social development, local government, agriculture etc.

It is recognised by the DWAF that the goals of equity, sustainability and efficiency can only be achieved through the collaborative efforts of many role players – the three spheres of government, civil society, NGOs and the private sector. Partnerships between these groups need to be developed and strengthened to face the challenges of water management and service provision in South Africa. As the country has, over the past decade, moved from being closed to the international world to becoming open and integrated with the global economy it is recognised that these partnerships could include foreign entities – be they public or private, driven by profit or not. As it stands *there is scope for various private organisations, local and foreign, to become involved in both the management of water resources in the country, as well as the provision of water services.* However – this involvement is regulated by the policies and laws described in this chapter. As the country has not yet made commitments in the services sectors, which encompass water management and water supply, it is a relatively straight-forward matter of all entities needing to comply with the legislative framework. This could change once commitments in these service sectors are made

and the rights and duties are not made explicit beforehand – specifically on issues such as the access to central government funding or subsidies and limitations to water development and supply initiatives in accordance with the need to use water sustainably. These issues, and their interaction with the international trade regimes, would need to be analysed in greater depth. This is done in the ensuing portions of this report.

An Overview of South African Trade Policy

Introduction

Most governments act on the basic assumption that they can make the economy grow quicker through their own action. South Africa is no exception to this rule and government has used the tools of trade policy - mainly tariffs and subsidies - to stimulate the development of the economy. Trade policy is usually a small part of a wider industrial policy, but industrial policy in South Africa has tended to be inconsistent and often poorly coordinated across the State. Despite this, trade policy has been quite consistent and goal-directed. Trade policy has focussed on the liberalisation of South Africa's trade with a view to improving the competitiveness of the economy. However, this liberalisation has not been unilateral. South Africa has sought concessions from other countries in response to South African liberalisation in both the World Trade Organisation (WTO) and in bilateral trade agreements. Trade policy has mainly been articulated through these fora, especially in the more recent years. This is probably because the trade negotiations division of the DTI contains some of the most capable civil servants in the whole department.

This report examines South Africa's trade policy with a view to understanding and explaining the broad themes and drivers in which it is embedded. A possible future course of policy is also laid out, with the objective of stimulating debate around the nexus between water resource management and trade policy.

South African Trade Policy Since 1994

South Africa's trade policy pre-1994 was the product of policy for the wider economy. Sanctions in response to Apartheid had led to a steady increase in capital outflows and a diminishing of inflows. Government had two options at the time: either let the Rand depreciate steadily or act to ensure that the current account was in surplus in order to offset the capital account deficit. The Apartheid government chose the latter course. Tariffs were already high to facilitate import substitution. To these high tariffs, surcharges were added. This had the effect of restricting imports and artificially raising government revenue. Agriculture was subject to a wide range of

barriers to trade such as specific tariffs, quotas and the existence of state boards, which guaranteed prices and on the political front, carried support from the White minority.

When the transition to democracy took place in 1994, the new government inherited an uncompetitive economy, with high tariffs and an extremely complicated tariff schedule. The major decision in terms of trade policy was the adoption of a policy of export-led growth, as opposed to the previous government's policy of import-substitution, as part of the national growth strategy, GEAR. A policy of import substitution requires high tariffs to protect local infant industries, as they replace imports. Export-led growth implies that tariffs are lowered to make local firms more competitive by exposing them to international competition. As local firms become more competitive, they export more.

This policy is based in part on the experience of the Asian Tigers, such as Taiwan, South Korea, Hong Kong and Singapore, which grew rapidly throughout the latter half of the 20th century. By way of example, in 1960, South Korea's per capita income was roughly the same as Ghana's at 883 dollars per capita, compared to 873 dollars per capita, when measured in 1985 US Dollar terms. By 1989, South Korean GDP per capita had increased to 6,206 dollars while Ghanaian GDP per person had declined slightly to 815 dollars. Over that 29 year period, South Korea had achieved a per capita GDP growth rate of 6.82% (Rodrik, 1994). This led to per capita income increasing seven-fold, even in the face of population growth. Although there has been a lot of debate about how this spectacular trend was achieved, one key aspect appears to be the role of export-led growth. South Africa is attempting to replicate this process.

This policy was implemented through two different mechanisms.

- South Africa pursued a policy of unilateral tariff liberalisation, through the initial offer to the WTO upon accession.

- At the same time, South Africa also concluded regional trade agreements. These agreements only started applying from 2000. Most liberalisation prior to this was through the WTO.

South Africa's initial offer to the WTO was made in 1993. It consisted of efforts to reduce tariff levels, as well as simplifying the tariff schedule. In negotiating to join the WTO, South Africa had to engage the other members with an acceptable offer of liberalising their tariffs. South Africa agreed to bind their tariffs at certain levels, meaning that tariffs on imports from WTO members may only be set at, or lower than, the bound level. The offer was carried out from 1995 and consisted of a five-year offer to reduce tariffs. Certain sectors were granted longer adjustment periods. For example, clothing and textiles were granted a twelve-year period, paper was given ten years, and automobiles, footwear, rubber products and certain chemicals were given eight years. A quarter of all tariff lines were bound at 0%. Ninety-six percent of tariff lines were bound, implying that they could not be raised in the future. South Africa committed to reduce industrial tariffs by a third by 2000.

Tariff Liberalisation

The offer also reduced the number of tariff rates. South Africa bound itself to apply only six tariff 'bands', namely 0%, 5%, 10%, 15%, 20% and 30%. At the time of WTO accession, South Africa's tariff schedule contained over 200 different rates on over 12,500 lines. The complexity of the tariff schedule introduced a level of randomness in the application of tariffs and was thus a barrier to further imports. Agricultural quotas were converted into *ad valorem* tariffs (i.e. tariffs taxing a percentage of the value of the import). This process was mostly completed by 1994.

South Africa did not fulfil all of its obligations, but in many instances, the terms of the offer were exceeded. For example, tariffs were reduced more quickly than the offer stipulated; proof that the new government was committed to a more open trade policy. Instead of only a quarter of tariff lines being zero, over half of South African tariffs are now free. On the other hand, South Africa did not reduce the number of tariff bands sufficiently, but it should be noted that no country is considered to have abided perfectly by their WTO commitments. In general, South Africa has performed very

admirably. By 2005, of 5,525 HS 8 tariff lines, 5,502 are equal to or lower than the bound rate. Only 23 tariff lines at the HS 8 level exceed their bound level.

Most of the liberalisation took place between 1996 and 2000, but there has been some gradual liberalisation since then. This is illustrated by the example of the highest tariffs in the schedule. Nearly 20% of tariff lines in 1996 had rates higher than 40%, as can be seen in Table below. This has been reduced to just fewer than 4%, but most of the change had taken place by 2000. This understates the degree of liberalisation. Most of the tariff lines in the 40%+ category are actually 40%; only 18 tariff lines have rates greater than 40%. In 1996, the corresponding figure was 1,700.

Table 1: South Africa's Most Favoured Nation Tariff Schedule and Associated Imports, 1996, 2000 and 2004.

	1	2	3	4	5	6	7	8	9	10	11	12
	1996	2000	2004	1996	2000	2004	1996	2000	2004	1996	2000	2004
	# lines	# lines	# lines	%	%	%	R m	R m	R m	%	%	%
40%+	1,739	365	264	19.4%	4.6%	3.9%	14,594	7,948	4,041	13.2%	4.3%	1.3%
30%-39%	323	189	205	3.6%	2.4%	3.1%	1,745	18,466	21,797	1.6%	9.9%	7.1%
20%-29%	1,276	2,112	920	14.3%	27.0%	13.7%	8,129	12,183	45,566	7.3%	6.6%	14.9%
15%-19%	940	586	698	10.5%	7.5%	10.4%	6,558	6,370	10,181	5.9%	3.4%	3.3%
10%-14%	1,005	546	569	11.2%	7.0%	8.5%	7,760	6,663	10,966	7.0%	3.6%	3.6%
5%-9%	776	377	418	8.7%	4.8%	6.2%	6,098	10,052	12,220	5.5%	5.4%	4.0%
1%-4%	57	131	95	0.6%	1.7%	1.4%	121	1,034	4,631	0.1%	0.6%	1.5%
0%	2,831	3,518	3,538	31.6%	45.0%	52.8%	65,833	123,058	195,628	59.4%	66.2%	64.1%
Total	8,947	7,824	6,707	100.0%	100.0%	100.0%	110,837	185,774	305,030	100.0%	100.0%	100.0%

Source: Cassim & Van Seventer (2004) and own calculations.

There have been two processes at work in the tariff schedule. Firstly, the general level of tariffs has declined. Secondly, the number of tariffs has declined. The decline in tariff levels appears to have slowed down since 2000, but the reduction in the number of tariffs proceeded at the same pace throughout the period under review. Obviously this process cannot continue indefinitely.

Looking at the imports associated with tariff lines, it is clear that South Africa imports proportionately more free goods than would be expected. For example, only 52.8% of tariff lines are free but 64.1% of imports are free. As noted above, South Africa does

not impose tariffs when there is no domestic industry to protect. Thus the free goods that are imported are likely to be goods that do not need protection, inputs for production and resources, including oil.

The figures for imports in Table are nominal, so they should be interpreted with caution. Still, imports have increased from 18.6% of GDP in 1994 to 29.9% of GDP in 2005. It would appear that the policy of increasing South Africa's openness to trade has had an effect, but it should also be noted that this has occurred in a context of rapidly increasing world trade so the cause-effect linkage is not clear.

Other measures of tariff simplification can be seen in Table below. Simplification resulted from a number of actions. The number of tariffs has been reduced. There has also been a significant move towards *ad valorem* tariffs, as required in South Africa's offer to the WTO. Specific duties usually apply to agriculture. An example would be *HS 020810: Other meat and edible meat offal, fresh, chilled or frozen*, which has a specific duty of 8c/kg. The purpose of a specific tariff is to provide more protection as the charge for the imported commodity decreases. They are particularly useful for agriculture because of the large variation in prices from year to year. South Africa also used formula tariffs such as that for *HS 621510: Ties, bow ties and cravats*, which was 40% or 60% with a maximum of 7500c/kg. Obviously a complicated tariff such as this is a barrier to trade.

Table 2: Simplification of South Africa's Tariff Schedule

	1994	1998	2002	2004
1. Number of tariff lines	11,231	7,773	7,919	6,697
... <i>ad valorem</i>	7,707	5,793	5,916	6,492
... <i>Specific</i>	398	214	194	135
... <i>Mixed</i>	2,071	1,736	1,802	64
... <i>Formula</i>	1,004	24	5	5
... <i>Compound</i>	51	6	2	1
2. Tariff distribution by type of duty (%)				
... <i>ad valorem</i>	69	75	75	97
... <i>Specific</i>	4	3	2	2
... <i>Mixed</i>	18	22	23	1
... <i>Formula</i>	9	0	0	0
... <i>Compound</i>	0	0	0	0

3. Number of tariff bands	723	275		100
... <i>ad valorem</i>	37	45		38
... <i>Other</i>	686	230		62
4. Duty-free tariff lines (% all lines)	26	42	44	53
5. Domestic tariff "spikes" (% all lines) ^a	3.7	4.5	4.6	8.9
6. International tariff "spikes" (% all lines) ^b	43.5	39.4	35.1	21.2
7. Coefficient of variation ^c	1.1	1.2	1.1	1.4
8. "Nuisance" applied rates (% all lines) ^d	1.5	1.9	1.5	1.2

Notes: Calculations based on tariff schedules including *ad valorem* equivalents.

- a. Domestic tariff spikes are defined as those exceeding three times the overall simple average applied rate.
- b. International tariff spikes are defined as those exceeding 15%.
- c. Coefficient of variation is calculated as the standard deviation divided by the overall average.
- d. Nuisance rates are those greater than zero, but less than or equal to 2%.

Source: Adapted from Edwards (2005)

As can be seen in Table 2 above, South Africa has steadily eliminated all other tariff types in favour of *ad valorem* tariffs, consistent with WTO rules. As of 2004, only 2% of tariffs were specific, and 1% was mixed. It is clear from Table 2 that South Africa has not reduced the number of *ad valorem* bands to six, as was stated in the WTO offer, but that South Africa has exceeded the offer in terms of the proportion of free tariff lines. The number of tariff bands was higher in 2004 than it was in 1994. There has been some consolidation of tariff bands since 1998, but the progress has been slow.

International peak tariffs are any tariffs higher than 15%. This percentage has reduced steadily, consistent with tariff liberalisation. Domestic peak tariffs are defined as those that are higher than three times the simple average tariff. The number of domestic peaks has increased. This is probably due to certain sectors remaining protected, while the average tariff declined. Nuisance tariffs are greater than zero but less than 2%. They add little revenue, probably costing more to administer than they raise, and have no value in terms of protection. The proportion of nuisance tariffs has remained fairly constant throughout the period, varying between 1.2% and 1.9%. It appears that there has been a reduction in 2004.

Nuisance tariffs should be made free. Customs revenue is not a major part of South African government revenue. This means that South Africa is free to set the tariff for goods not produced locally at zero. Less developed countries, where customs revenue is a significant part of government revenue, do not always have this flexibility. For example, Madagascar generates over half of all government revenue from customs (Chang, 2005).

This point is emphasised in Table 3 below. The top half of the table contains the ten HS 2 Chapters with the highest weighted average tariffs, with the bottom half reporting the industries facing the lowest tariffs. The lowest tariffs are all zero.

Table 3: Tariffs and Import by HS 2 Chapters, 2004 (R m)

Ranking	HS Code	Label	HS 2 Unweighted Average Tariff (%)	HS 2 Weighted Average Tariff (%)	2004 Total Imports (R m)
1	04	Dairy prods; birds eggs; honey;	20.3	44.7	261
2	62	Apparel articles and accessories	36.3	39.5	2,135
3	61	Apparel articles and accessories	37	39.4	1,335
4	64	Footwear	22.6	29.6	2,594
5	98	Special classification for motor vehicles parts	29	29	26,098
6	63	Textile articles NESOI	25.1	28.9	509
7	42	Leather art; saddlery	25.2	28.6	646
8	66	Umbrellas, walking-sticks, riding-crops	25	27.6	36
9	87	Vehicles	12	27.4	25,708
10	65	Headgear and parts thereof	20	26	136
88	50	Silk	0	0	39
89	75	Nickel and articles thereof	0	0	1,154
90	78	Lead	0	0	128
91	79	Zinc	0	0	27
92	80	Tin	0	0	124
93	81	Base metals	0	0	373
94	88	Aircraft & spacecraft	0	0	11,923
95	91	Clocks and watches	0	0	361
96	92	Musical instruments	0	0	113
97	97	Art & antiques	0	0	256

Source: Own calculations.

We report both the unweighted and the weighted average because neither measure is totally satisfactory. The unweighted average is also known as the simple average, i.e. we add up the tariffs and divide by the number of tariff lines. We use imports as a weight to obtain a weighted average. The unweighted average gives equal importance to all tariff lines, regardless of the quantity of imports. Thus, the tariff on a good that had heavy imports is counted equal as a tariff line with no imports. For example, in Table 3 above *HS 87: Vehicles* has a fairly low unweighted average tariff of 12%. This is because unimportant tariff lines in this industry are free. Weighted tariffs overcome this problem because we give greater importance to tariff lines with greater imports. Most of the imports for *HS 87: Vehicles* are for tariff lines of 36%, so the weighted average of 27.4% is a better reflection of the level of protection in the industry. However, this ignores the problem that tariffs play a large role in determining the flow of imports. For example, if a tariff is over 100%, imports will be small or more likely, zero. When we use a weighted average, this tariff line will not contribute to the average and thus the weighted average will be biased downwards.

Table 3 shows that the most protected HS 2 Chapters are confined to three industries, namely dairy products, the clothing and textiles cluster and the motor vehicle industry. Dairy is highly protected. Most of the tariff lines in the HS 2 Chapter are free, but those that have large imports have specific tariffs with an *ad valorem* equivalent of up to 96%. Despite this high tariff, South Africa still imports large quantities of these products. The rationale behind these high levels of protection is to counter the subsidies granted to EU farmers.

Vehicles and the clothing and textiles cluster are special cases in that they have had consistent industrial policy applied to them. In a perfect world, trade policy would be part of a wider industrial policy. In South Africa, there has not been an overarching industrial policy framework. Many plans have been formulated, but few have been implemented consistently, resulting in a pattern of *ad hoc* interventions and poorly coordinated government programmes.

In the case of vehicles, government has implemented the Motor Industry Development Plan (MIDP). This plan called for slowly decreasing (but still high) protection of the industry. This was allied with an import-linked, export subsidy. Put

more simply, firms usually have to pay tariffs when they import inputs. In the case of the motor industry, firms get Import Rebate Credit Certificates (IRCCs), which allow firms free imports equal to the value of their exports. Thus, the more a firm exports, the more it can import free of duty.

The principal rationale for the MIDP is the widely-held view that the auto industry is subject to large returns on scale. In other words, learning effects are so large that over time, firms may be able to more than double output after doubling inputs. However, as a result of the previous government's policies of import substitution, the SA auto industry was characterised by a proliferation of vehicle models, with no local firm reaching the minimum efficient scale for auto assembly. The MIDP, by encouraging exports and allowing the importation of low volume vehicles, is intended to increase the scale of production in a smaller number of models. Other aspects of the MIDP include accelerated write-offs of investment in machinery, as well as support for specific products such as leather car seats and catalytic converters.

The MIDP is generally considered to be the standout success of South African industrial policy. Many commentators in 1994 thought the industry would not survive in South Africa. The MIDP has played a key part in its continued existence and indeed in its substantial growth in recent years. Exports grew from only 14,639 units in 1994 to over 111,273 in 2004. The MIDP was originally intended to only last five years. However, it has been extended twice to last seventeen years, and a third extension beyond 2012 is on the cards. A review of the programme is being conducted, which will inform the decision about whether the next extension should take place (Flatters, 2005).

The clothing industry had a similar scheme known as the Duty Credit Certificate Scheme (DCCS), which ended on 31 March 2005. The effect in this industry has not been nearly as successful as in the motor industry. Despite the high levels of protection and some government support, imports from China doubled between 2002 and 2004. The industry faces significant challenges and at this point it is unclear whether the industry will survive in its present form (Barnes, 2005).

To conclude, South Africa has liberalised tariffs significantly since 1994, but the lowering of tariffs has generally slowed down since 2000. Tariff simplification has continued, both in reducing the number of tariff bands, and converting tariffs to *ad valorem* equivalents. This process has continued, but there is limited room for ongoing simplification.

Other Barriers to Trade

Tariffs were the main means of protection for manufacturing. The agricultural sector was protected by a variety of instruments, including agricultural marketing and control boards, subsidies and quantitative restrictions, as well as tariffs. The boards ensured that farmers would have a guaranteed price for their product in any given year, no matter what the situation in the rest of the world market was. This was done through buying up all produce and limiting the amount released onto markets, depending on the harvest. In addition, certain imports were controlled and not allowed to enter the country. South Africa subsidised a large number of agricultural products. In the list of WTO members that may subsidise farm products, South Africa has the third highest number of products.

Between 1994 and 1997, the agricultural sector was liberalised significantly. The agricultural control and marketing boards were done away with, as were import controls and export subsidies. All quantitative restrictions were converted into tariffs. In general, South Africa's agricultural sector is now one of the most liberal in the world and South Africa has few defensive interests left in agriculture.

Barriers to trade in services are significantly more complex than those on trade in goods. There are no tariffs because no physical good crosses a border. Instead, the main barrier to trade in services is regulations. Regulations are usually used to correct for market failure, advance government policy in the sector or to protect consumers. In some cases regulations are used to prevent entry by foreign firms into local markets. South Africa made commitments in 102 services subsectors, but none of these commitments reflected any liberalisation. All of the commitments reflected the binding of the *status quo*, except the listing for telecommunications, which said that South Africa would introduce some competition into the fixed-line market. Listing the

commitments is a step towards liberalisation, because it means that in effect, the sector cannot be made less open, even if policy makers so desire. Many of the regulations listed in South Africa's WTO commitments have already been done away as part of sector policy, independent of the multilateral process.

Bilateral Trade Agreements

The liberalisation through the WTO was one of two major tools for trade policy, the other being bilateral free trade agreements (FTAs). South Africa has been a member of the Southern African Customs Union (SACU) since it was established in 1910. This agreement led to free trade between South Africa, Namibia, Lesotho, Swaziland and Botswana (as they are now known). The SACU partners apply a common external tariff (CET) to imports from countries outside the agreement. South Africa dominates SACU economically, so the agreement has probably not been of much benefit to the Republic.

South Africa trades more with Europe than with any other region of the world, so this was the natural first partner for democratic South Africa's first trade agreement. The EU-SA Trade and Development Co-operation Agreement (TDCA) came into effect in January 2000. The agreement was asymmetric in that the EU, as the dominant economic power, agreed to liberalise more trade at a quicker pace. By 2012, 94.9% of South Africa's exports to the EU will be duty free, while 86% of EU exports to South Africa will face no tariff. The TDCA did not include an agreement on services.

The other major agreement that South Africa signed was for an FTA with the Southern African Development Community (SADC). The membership of SADC is slightly fluid, but it currently consists of South Africa, Botswana, Namibia, Lesotho, Swaziland, Zimbabwe, Zambia, Mozambique, Angola, Malawi, Tanzania, Mauritius, the Democratic Republic of the Congo and the newest member, Madagascar. South Africa signed the FTA in 1996, but delays in ratifying the agreement by other members led to it becoming effective from 2000 only. As with the TDCA, the agreement is asymmetrical, but because South Africa is the largest economy in the region, the SACU region frontloaded their tariff cuts, starting tariff reductions from

2005, while the other SADC states only started their reduction in 2005. A full 97% of SADC exports to SACU were duty free in 2005. The SADC Trade Protocol does not include an agreement on services.

The importance of services trade is only being recognised now. This is especially so because the EU could gain preferential access to the SADC services market. The rest of the SADC countries qualify for preferential access for goods to the EU under the Cotonou Agreement, but this is scheduled to run out in 2008. Under WTO rules, any new agreements that are negotiated, must lead to at least 90% of trade between the partners being free within 12 years. This is important because it means that whereas the Cotonou Agreement did not require reciprocal trade concessions from LDCs, the new agreement will have to be two-way. The EU is also moving to include services in the new protocol, known as Economic Partnership Agreements (EPAs). ***South Africa currently dominates services trade in SADC and the rest of Africa, so it is quite likely that in the future, South Africa will attempt to add a services protocol to the SADC FTA in order to counteract any preferential access that the EPAs grant the EU in the SADC services markets.*** There is also no services protocol to the SACU agreement. Again, this shortfall will probably be remedied in the short to medium-term.

While SACU does not include services, the customs union as a whole has been strengthened significantly. In 2002 a new institutional structure was inaugurated. For the first time, a SACU secretariat came into being. The new arrangement also included a dispute settlement system and implicitly allows the SACU partners much greater say in the determination of trade policy. From now on, all trade agreements will be negotiated as SACU rather than with South Africa representing SACU.

SACU signed an agreement with MERCOSUR, the trade grouping of Brazil, Argentina, Paraguay and Uruguay, in December 2004. This agreement was a preferential trade agreement (PTA), covering a few hundred tariff lines (out of about five thousand), as opposed to a free trade agreement where all tariffs, or at least a substantial portion of them, are set to zero (as in the SADC trade protocol or the TDCA). The same would apply to an agreement with India, where negotiations are due to begin in 2006. Although the agreement with MERCOSUR has already been

signed, the smaller countries in both regions indicated that there was nothing in the agreement to benefit them. As such, negotiations have reopened. Other outstanding issues such as customs co-operation, sanitary and phytosanitary (SPS) standards and rules of origin still need to be finalised.

SACU has concluded FTA negotiations with the European Free Trade Area (EFTA), a grouping which consists of Switzerland, Norway, Iceland and Lichtenstein. This agreement only needs to be signed and ratified before it will come into effect.

The most difficult negotiations are taking place with the United States (US). The negotiations have been extremely difficult because they encompass a number of issues that South Africa does not usually negotiate on, such as investment. The inclusion of services has also complicated matters, because SACU does not have a services agreement, which means that the US has to conduct separate services negotiations with each of the SACU partners. The US often uses its dominance of world trade to “persuade” countries into accepting its proposals. Most of the agreements that the US has signed recently are very similar, coming from the same basic template. There are indications that one reason the US/SACU negotiations have been so drawn out, is that SACU has refused to accept this template. The parties were due to meet in the third quarter of 2005, but the US negotiators withdrew from the talks, citing the need to finish the negotiations with the Andean countries. This was interpreted by the SACU negotiators as a threat from the US negotiators, implying that if SACU did not make some concessions, then the US could very easily let the negotiations fail as the US has many countries requesting FTAs, so SACU is not necessarily a priority.

The US Congress grants the President Trade Promotion Authority, which allows him to negotiate trade agreements that may only be accepted or rejected by Congress, but not amended. This simplifies the negotiating process enormously. The current Trade Promotion Authority is due to expire at the end of 2006 and it is uncertain whether this Authority will be renewed. Accordingly, the US Trade Representative is prioritising their trade negotiations, giving precedence to the agreements that they believe can be concluded before January 2007. Apparently the SACU Agreement is felt to be too difficult to finish in this time span, so it will be shifted to the backburner

(Draper, 2005). Thus, *one can conclude that it is unlikely that SACU will have a trade agreement with the US before 2007.*

SACU negotiations with India will probably commence in the second half of 2006. As noted above, this agreement will probably be a PTA, with very limited coverage. Given that the level of market access gained will probably be minimal, and that this agreement will serve to complicate the SACU tariff schedule, it is likely that there will be little net benefit to the agreement economically. This agreement should probably be viewed as more important politically than it is economically.

Details are still sketchy about the negotiations to be held with China. At the time of writing (February 2006), the negotiations were still being delayed by SACU so as to undertake impact analyses. In the medium term, SACU is likely to undertake negotiations with Singapore and Nigeria. Some initial contact has been made with Japan, but it is unclear whether this will result in FTA negotiations or not.

Conclusion

South Africa's trade policy has been relatively consistent since the demise of Apartheid. The main feature of policy has been the liberalisation of trade. This has been pursued mainly within the WTO, but also through bilateral agreements. Tariffs have been simplified and reduced, although the pace of reduction seems to have slowed down since 2000. The only sectors that have been the subject of consistent industrial policy have been the clothing and textiles industries, and the motor vehicle industry. Part of this industrial policy has been subsidies of exports through duty-credit certificates. This policy has been quite successful in the case of motor vehicles, but it has been unable to prevent the decline (and virtual demise) of the textile and clothing industries.

The main weakness of South Africa's trade policy is that it has not been focussed on shifting South Africa's comparative advantage away from natural resources. Consequently, trade policy has had little direct effect on employment and development. Although government has spoken of beneficiation and industrialisation, there has been little action in terms of policy. All countries that have developed have

done so by industrialising and ignoring their comparative advantage. South Africa's trade policy has not attempted to replicate this method of development.

Government's new policy, Accelerated and Shared Growth – South Africa (ASGISA), makes very little mention of trade policy. The plan only says that government will increase its capacity in terms of trade negotiators. This implies that the policy of pursuing preferential access through bilateral trade agreements is likely to continue. ASGISA is not an overarching economic policy, but rather a series of limited but catalytic interventions, designed to boost growth. ASGISA contains little detail on what future course policy variables, such as the budget deficit and tax revenue, will take. There seems to be little role for policy in ASGISA. In this context, there are unlikely to be huge changes in the direction of trade policy. The outlook in the medium-term is for more of the same; more bilateral agreements, more tariff liberalisation and more tariff simplification. However, there are real limits to the sustainability and benefits of these processes. For example, once South Africa has concluded agreements with the USA, China, India and Japan, the large majority of world income will be covered by FTAs, and the benefits to this policy will decline markedly.

Water resources management and the new Regional Industrial Development Strategy (RIDS)¹ for South Africa

With water being an important input factor in nearly all economic areas, particularly agriculture, manufacturing and mining, future economic growth depends, among other factors, on the availability of a sufficient quantity of water at sufficient quality. In addition to an overview of current water resource availability and spatial distribution, the National Water Resources Policy provides an outlook on estimated future water availability and demand in the 19 Water Management Areas until the year 2025. The estimates are based on different economic growth scenarios – a base scenario, considered to be the more likely one, and a high growth scenario (DWAF, 2004a).

The estimated reconciliation requirements are based on the assumption of dramatic growth of water demand in urban areas (DWAF, 2004a) – due to increased migration into these areas and most economic growth occurring in urban areas. However, the generalised nature of the estimates does not yet allow for detailed localised predictions – these can only be based on scrutiny of more detailed information for individual Water Management Areas and the catchments within them (DWAF, 2004a).

In this context there is a two-way interaction between water resources management and regional industrial development planning. Important linkages are:

- A lack of available water resources could render certain regional economic development initiatives unviable, insofar as the planned activities are water intensive.

¹ The RIDS is currently still awaiting formal cabinet approval – the version that is published on the DTI web page (<http://www.dti.gov.za/publications/rids.htm>) and which forms the basis for this research is thus subject to possible changes.

- Alternatively, expensive water transfer infrastructure could be required, which increases the cost of water as an input factor with negative implications for the competitiveness of the planned economic activities.
- Increased economic activity could add pressure on the quality of the water resources in the respective catchments.
- Where water quality is already compromised, planned economic developments could be unviable due to the additional water treatment costs.

Whereas these are a few of the most obvious interdependencies, it is understood that there is a variety of additional linkages between water resources management and regional industrial development planning. Hence, there is a need to align the two planning processes.

Reconciliation of requirements for and availability of water for the year 2025 base scenario (million m³/a) (DWAF, 2004a).

Water management area	Reliable local yield (1)	Transfers in	Local requirements (2)	Transfers out	Balance (3)	Potential for development (4)
1 Limpopo	281	18	347	0	(48)	8
2 Luvuvhu/Letaba	404	0	349	13	42	102
3 Crocodile West and Marico	846	727	1 438	10	125	0
4 Olifants	630	210	1 075	7	(242)	239
5 Inkomati	1 028	0	914	311	(197)	104
6 Usutu to Mhlathuze	1 113	40	728	114	311	110
7 Thukela	742	0	347	506	(111)	598
8 Upper Vaal	1 229	1 630	1 269	1 632	(42)	50
9 Middle Vaal	55	838	381	503	9	0
10 Lower Vaal	127	571	641	0	57	0
11 Mvoti to Umzimkulu	555	34	1 012	0	(423)	1 018
12 Mzimvubu to Keiskamma	872	0	413	0	459	1 500
13 Upper Orange	4 734	2	1 059	3 589	88	900
14 Lower Orange	(956)	2 082	1 079	54	(7)	150
15 Fish to Tsitsikamma	456	603	988	0	71	85
16 Gouritz	278	0	353	1	(76)	110
17 Olifants/Doring	335	3	370	0	(32)	185
18 Breede	869	1	638	196	36	124
19 Berg	568	194	829	0	(67)	127
Total for country	14 166	0	14 230	170	(234)	5 410

- 1) Based on infrastructure in existence and under construction in the year 2000. Also includes return flows resulting from a growth in requirements.
- 2) Based on the assumptions given in paragraph 2.4.2. The assumed growth in urban and rural water requirements results from the anticipated high population growth and current ratios of domestic to public and business water use. Allowance has been made for known developments in urban, industrial and mining sectors only, with no general increase in irrigation.
- 3) Brackets around numbers indicate a negative balance.
- 4) More detail for each water management area is given in the corresponding tables in Appendix D.

The development of the RIDS

An opportunity for the alignment of the two planning processes would be the development of the Regional Industrial Development Strategy that is currently

ongoing at the DTI and of which the first draft has recently been published on the DTI home page.

The RIDS aims at reducing the regional discrepancies in industrial development, most importantly the growing gap between economic growth in South Africa's major urban centres compared to the rural and peri-urban areas. Thus the RIDS aims to stimulate industrial development outside of the three largest metropolitan areas of the country – Gauteng, eThekweni and Cape Town. To this end the RIDS defines three distinct types of regions - regions with potential, regions with latent potential and declining regions with specific interventions to promote economic development in these regions. These interventions form unique programmes for the various regions, based on their specific strengths and opportunities.

It is intended that RIDS should

- help to achieve the national industrial development objectives as set out in the NSDP and the Redistribution and Development Programme (RDP),
- further the goals of the Accelerated and Shared Growth Initiative for South Africa (ASGISA),
- conform with the principles of the Growth, Employment and Redistribution (GEAR) Strategy, the Integrated Manufacturing Strategy (IMS), the Microeconomic Reform Strategy (MRS) and the current draft National Industrial Policy framework,
- enhance the capacities and potentials identified in the Urban Spatial Competitive Framework and the proposed Local Economic Development (LED) framework that seeks to address spatial constraints and opportunities related to industrial development in municipalities,
- conform to principles of enterprise development and black economic empowerment (BEE), and

- conform to the government's environmental and other relevant policies.

(DTI, 2006)

In order to achieve its objective of stimulating industrial growth outside the major urban centres the RIDS aims to increase the effectiveness of existing, and introduce innovative new support measures under one overarching strategy (DTI, 2006).

These measures include:

1. The declaration of new and improvement of existing Special Economic Zones (SEZs)

The RIDS recognises Industrial Development Zones (IDZs), Spatial Development Initiatives (SDIs) and small towns as SEZs and proposes new policies and guidelines for the introduction of comprehensive governance criteria for these zones (DTI, 2006).

2. The establishment of Industrial Parks

Industrial Parks are areas set aside for industrial development, usually with good connection to transport facilities.

3. The establishment of Logistics Parks

Logistics parks are transport hubs with additional storage, logistics and freight forwarding facilities that are aimed at increasing the efficiency of cargo transport (DTI, 2006).

4. The creation of Industrial Estates

Industrial estates are similar to industrial parks, providing specific zoning for industrial activity but more tailor-made to the social and environmental conditions prevailing in the respective location (DTI, 2006).

5. Innovation Hubs

Innovation hubs are a form of SEZ that focus on the development of infrastructure that stimulates growth in high technology and science (DTI, 2006).

Linking planning processes

Natural resource availability, including water, is an important factor determining the economic potential and competitiveness of a region and the required interventions. Whereas this applies to a slightly more limited extent to innovation hubs and logistics parks, it is of critical importance for the establishment of industrial parks and estates – particularly where the development of water intensive industries is foreseen. The RIDS should therefore take water resources availability and quality concerns into account and include water management issues as a factor in the regional development planning process.

Yet, water is hardly mentioned in the draft RIDS. In the only relevant reference to water it is pointed out that “local governments routinely come up with targeted interventions, for instance, to meet the specific needs of a locally dominating major company, or a local cluster, in terms of real estate development, road infrastructure, water supply, electricity supply, training facilities and other factors” (DTI, 2006 p 24 No 43).

Overall, water issues have not been incorporated in the draft RIDS and the strategic link between regional industrial development and water resources management is not being made. This missing link becomes more obvious when comparing the basic assumptions of the National Water Resources Strategy and the draft RIDS. As

mentioned, the NWRS water demand estimates are based on the assumption of increasing economic growth in the major urban areas, whereas the RIDS are designed to slow down this trend by stimulating growth in rural and peri-urban regions. Thus there appears to be a misalignment between two planning processes that needs to be addressed. On the one hand the RIDS needs to take water resources management issues into account, on the other hand, the NWRS water reconciliation scenarios should consider the possibility of stimulated growth outside the major urban areas, provided the RIDS proves to be effective.

Interestingly, linking regional industrial planning processes and water resources management could also be relevant in an international context. Whereas being a strategy for regional development within South Africa, the RIDS takes cognisance of the growing economic integration in the SADC region. It is emphasised that, as international trade negotiations are conducted at customs union level, a customs union (e.g. SACU) should have a common trade policy, industrial policy and competition policy (DTI, 2006) and the RIDS has been drafted against this background. It is further emphasised that the RIDS needs to be implemented in a way that is compatible with any relevant development initiatives of New Partnership for African Development (Nepad) and the African Union (AU) (DTI, 2006).

If the draft RIDS takes cognisance of regional industrial development planning processes in neighbouring countries, or there could in the future even be cross-border planning, this would have an impact on transboundary water resources management. Regional industrial development in countries that South Africa shares water resources with, would stimulate water demand in these countries. The increased water demand would have to be accounted for in any basin-wide water sharing arrangement and, once agreed, would have to be recognised by South Africa as required by the National Water Act.

This once again proves the complex interrelationship between the different national and international planning processes. Appropriate responses need to be developed that take this into account.

As far as the planning processes on the national level are concerned, possible interventions would be:

- 1) Awareness needs to be created in the DTI that water resources management issues need to be considered in regional industrial development planning. At the same time awareness needs to be created in the DWAF about the ongoing RIDS planning process, so that DWAF can provide input to the process.
- 2) To establish and strengthen linkages between the DWAF and DTI as far as regional industrial development planning is concerned. There should be direct contact between planners of both departments and DWAF officials should be included in the industrial development planning.
- 3) The RIDS is based on a Geospatial Analysis Platform (GAP) developed by the CSIR for the DTI. It currently does not seem to include water resources data. Such data should be included in the GAP in order to widen the available data set and take water issues into account.
- 4) Where relevant the national planning processes should be linked to ongoing international planning processes, both as far as regional development planning is concerned as well as transboundary water resources management.

An Assessment of Trade in Non-Agricultural Goods

Introduction

South Africa's trade policy is aimed at increasing the competitiveness of the SA economy, thereby increasing exports and creating jobs, in an attempt to reduce the high levels of poverty and inequality that characterise the economy. *In general, water resources are not considered when policy is made, given the huge problems of ending poverty, which is of major concern given that South Africa has water resource limitations to future economic growth* (Turton, 2003; Ashton & Turton, 2006).

The issue of limitations to economic growth due to water resource limitations is a complex one and a comprehensive assessment is beyond the scope of this study. The National Water Resources Strategy (DWAF, 2004, Table 2.4) estimates that for the year 2000 97,3% of the available local yield were allocated. At the same time it needs to be noted that the figure provided for in the table do not take the development of further yield and the opportunities of productivity growth into account.

Following the example of the East Asian Tigers, South Africa has chosen to pursue a policy of opening the economy to trade. The theory behind this school of development argues that instead of aiming to produce everything it needs, a country should focus its productive capabilities on those goods in which it has a comparative advantage. According to traditional trade theories, as put forward by Smith, Ricardo, Heckscher and Ohlin, South Africa would maximise the benefits from international trade, by producing and trading goods that make intensive use of South Africa's most abundant factors, in exchange for goods that can only be produced at home at extremely great cost. Ideally, since South Africa is a water scarce country, South Africa's trade patterns should encourage the production of goods that use relatively small amounts of water. Imports, on the other hand, should be goods that are relatively water intensive in their production. By trading in this manner, South Africa would maximise the returns to every unit of water consumed domestically, depending on the availability of other inputs, and would thus manage to achieve optimum economic

development within the prevailing hydrological realities that constrain it (as mandated by the Constitution).

International trade negotiations at both the global and regional level, can play an important role in shaping a country's trade patterns. By nature, these negotiations involve give and take concessions between negotiating parties. Where South Africa is able to negotiate lower tariffs on certain goods, this might result from commitments to open up the country's own markets for the same products. Often this results in a process of trade-offs however, with concessions being made in other sectors (like for example services). *Favourable market access conditions for South African products, could lead to increased exports of these goods, which in turn could potentially mean an increase in water demand.* On the other hand, certain South African industries would be forced to compete with low priced import products. *Increased import penetration due to the lowering of import tariffs would lead to a decrease in the domestic production of these goods, and could therefore potentially result in water savings for the country, especially if the good is water-intensive in its production.*

Since the trade patterns that emerge from South Africa's trade negotiating process, depend on a multitude of factors (such as exchange rate movements and economic growth in importer and exporter countries), the outcomes it generates for the economy are difficult to predict. Despite this difficulty, it is important that negotiators be aware of the potential impact that changes to South Africa's trade patterns through trade negotiations, have on the country's scarce and already over-committed water resources.

The aim of this chapter is to examine which South African non-agricultural goods utilise water most efficiently (in terms of economic return to water consumed). This information will help inform trade policy negotiations at both the global and regional level, so that negotiations can help create more favourable trading conditions for these activities, and in so doing, promote the optimal utilisation of the country's scarce water resources.

The Current State of Play

South Africa's support for the launch of a new round of multilateral trade negotiations at Doha in November 2001 (the so-called Doha Development Agenda), and the ongoing negotiations in this round, is premised on the basis that negotiations ensure that issues of development are addressed. To achieve sustained global economic growth, developing countries such as South Africa must pursue industrialisation in sectors where they possess comparative advantage, and industrial countries need to undergo structural adjustment in sectors where they have lost advantage. This notion has informed South Africa's detailed positions in each of the areas under negotiations thus far. With regards to trade negotiations in non-agricultural goods, Gavera (2005) notes that South Africa's objectives in WTO negotiations aim to:

- *Enhance market access for products of export interests to developing countries.*
- *Eliminate industrial country subsidies and support to inefficient producers.*
- *Re-negotiate rules that perpetuate imbalances in the international trade regime.*
- *Ensure appropriate policy space for developing countries to pursue developmental objectives through meaningful implementation of the principle of special and differential treatment.*

As far as the mandate for current Non-Agricultural Market Access (NAMA) under WTO trade negotiations is concerned, this is contained in paragraph 16 of the Doha Ministerial Declaration:

“We agree to negotiations which shall aim, by modalities to be agreed, to reduce or as appropriate eliminate tariffs, including the reduction or elimination of tariff peaks, high tariffs, and tariff escalation, as well as non-tariff barriers, in particular on products of export interest to developing countries. Product coverage shall be comprehensive and without *a priori* exclusions. The negotiations shall take fully into account the special needs and interests of developing and least-developed country participants, including through less than full

reciprocity in reduction commitments, in accordance with the relevant provisions of Article XXVIII *bis* of GATT 1994 and the provisions cited in paragraph 50 below. To this end, the modalities to be agreed will include appropriate studies and capacity-building measures to assist least-developed countries to participate effectively in the negotiations.”
(WTO, 2005)

Furthermore, Annex B of the Decision adopted by the WTO General Council on 1 August 2004 (WT/L/579) was developed in order to help facilitate the various country Negotiating Group's efforts to fulfil the mandate laid out in paragraph 16 of the Doha Ministerial Declaration, with the specific purpose of establishing a framework for modalities in Market Access for Non-Agricultural Products. The two most critical issues where agreement between negotiating member countries is still required relates to the “agreed” formula for tariff reductions and the treatment of unbound duties.

At this stage Paragraph 4 of the NAMA framework is the element where movement is most urgently needed. Setting its structure is not only important in itself, but also because many other strategic issues revolve around it. The lack of consensus amongst negotiating members seems to be mainly related to the balance between the level of ambition and the flexibilities noted in Paragraph 8 of the NAMA framework, rather than the structure of the formula itself, where initial proposals were all based on the Swiss Formula (or variations thereof). As with the Round as a whole, the final solution will probably only follow from an agreement on agriculture. The Hong Kong Ministerial did lead to consensus regarding the use of the Swiss Formula. The most important technical aspect relates to which coefficients will be used, as this will have a much larger effect upon tariffs than the actual choice of formula. Another key issue is whether the developing world will be allowed some flexibility. In other words, poor countries may be allowed to exempt a certain proportion of their goods from tariff cuts.

Most of SACU's tariffs are significantly lower than the rate that was bound in the WTO accession offer in 1995. Because the formula will cut bound rates, SACU may be affected very little by the tariff cuts. If there is an effect, it would most likely be on the two sectors with the highest tariff protection, namely the clothing and textiles

cluster, and the motor vehicle industry. This could result in more imports and less local production in these industries. ***The effect on water could be positive, especially if there is less textile production in South Africa, given the fact that the industry is a major contributor to the pollution of water resources.***

Although many of the other technical issues require considerable work, the focus at present amongst trade negotiating countries, is on solving the issues of product coverage, and the calculation of *ad valorem* equivalents. With regards to the former, there is agreement in the Negotiating Group that the NAMA negotiations should encompass all products not covered by Annex 1 of the Agreement on Agriculture. However, technical work on product coverage will need to be pursued in order to clarify issues arising from *inter alia* Harmonized System nomenclature changes. With regards the calculation of *ad valorem* equivalents, members have signalled a preference for a conversion method that uses the unit value methodology and the Integrated Data Base wherever possible. In case of data gaps, technical tariffs, or distorted markets, or any other problems specific to non-agricultural products, the Negotiating Group will need give further consideration as to the alternative solutions that may be used in such cases (WTO JOB (05)/147).

With regards Non-tariff barriers (NTBs), which are an integral and equally important part of NAMA negotiations, a considerable amount of time has been spent identifying and categorizing the notified NTBs. The modalities being used in the NTB negotiations are bilateral, vertical and horizontal. Transparency in the process should be assured through substantive reporting in the multilateral setting. In addition, multilateral effect should be given to the results of NTB negotiations, which lend themselves to such an outcome, through *inter alia* incorporation of such results in Part III of the Schedule of Concessions (WTO JOB (05)/147).

Although consensus amongst negotiating nations was not reached at the 6th WTO Ministerial meeting in Hong Kong, negotiating parties reaffirmed the declarations and decisions adopted at the 4th WTO Ministerial held in Doha. This was also the case with the decision adopted by the WTO General Council on 1 August 2004, where full commitment was pledged to give effect to consensus. Furthermore, negotiating members renewed their resolve to complete the Doha Work Programme fully, and to

conclude the negotiations launched at Doha in 2006. It is hoped at the very least, that trade negotiations in 2006, under the auspices of the WTO, set out a clear roadmap for future global trade rules in a manner that promotes economic development and offers developing countries like South Africa increased access to markets of interest to them.

The Linkages between Trade and Water

South Africa has a relatively well-developed and diverse industrial base. South Africa is also a globally well-integrated trading economy, with over 50% of her GDP related to trade². Several dimensions of trade policy are pertinent to formulating policies that promote industrial production, yet protect and conserve the country's limited water resources. Since exports encourage the domestic production of industrial goods, a key consideration in trade policy negotiations should be to promote growth in production capabilities of dynamic, high value-added, industrial products that are at the same time relatively efficient users of water. Enhanced market access negotiations should ideally be informed by such considerations, and strive to eliminate, or at least reduce, tariff and non-tariff measures for these water efficient non-agricultural (NAMA) products.

To date, relatively few studies have been undertaken on industrial water demand. According to Pegram *et al.*, (2000) most studies confirm the expectation that the characteristics of water demand differ significantly between industrial sectors, and that sector studies are more useful than studies of aggregate industrial demand. Renzetti (1992) found that firms that have experienced relatively high water expenditures are also the firms whose water demands are predicted to be the most sensitive to changes in water prices. He interprets this to mean, “low industrial water prices may also discourage these firms from adopting water-conserving technologies, or undertaking research and development into water conservation. Thus *the most significant implication of under-pricing water for industrial use may not be that it encourages excess consumption in the short-run, but that it allows these water using practices to become embedded in the firm's technology and capital stock in the long-run*” (Renzetti, 1992: 401, emphasis added). In other words, ***subsidising water may***

mean that firms will not be efficient in water use, even after the subsidies end, which has strategic ramifications for a water-stressed country like South Africa.

For industrial use, water consumption is related primarily to the type of industry, type of technology used, management practice, level of production, and value of production (PDG, 1999). An effective measure of efficiency in water consumption per factory or industry is to assess water usage per Rand worth of production. Table 4 presents water consumption patterns in various economic sectors measured against the value of the sector's output.

Table 4: Water Use and Efficiency by Industry

	Water Usage		Water Efficiency	Exports	Imports
	m m ³	%	R/m ³	R (m)	R (m)
1 Agriculture, forestry and fishing¹	12,860	57.3	4	7,418	1,882
3 Manufacturing	1,940	8.7	260	86,975	107,124
2 Mining	1,460	6.5	70	42,365	19,379
23 Gold and uranium ore mining ²	912	4.1	58	17,040	19,235
331-333 Coke and refined petroleum products ²	626	2.8	58	4,076	609
22/24/25/29 Other mining ²	479	2.1	62	19,782	0
335-336 Other chemicals and man-made fibres	301	1.3	113	2,973	5,022
334 Basic chemicals ²	215	1.0	127	7,908	9,718
301-301 Food	187	0.8	362	5,020	3,464
305-306 Beverages and Tobacco	145	0.7	195	2,363	363
21 Coal mining ²	69	0.3	292	5,543	144
351 Basic iron and steel ³	66	0.3	565	13,210	1,188
323 Paper and paper products ²	60	0.3	418	4,500	1,474
321-322 Wood and wood products ²	59	0.3	176	753	761
311-312 Textiles	41	0.2	258	1,621	2,186
342 Non-metallic minerals ³	40	0.2	312	684	1,051
356-359 Machinery and equipment [356-359]	40	0.2	569	9,398	19,436
313-315 Wearing apparel	30	0.1	357	1,200	1,021
337 Rubber products	27	0.1	187	736	1,219
353-355 Metal products excluding machinery	23	0.1	1,163	4,003	6,865
352 Basic non-ferrous metals ³	21	0.1	980	6,329	1,106
384-387 Other transport equipment	10	0.0	397	2,913	4,164
391 Furniture	9	0.0	764	1,885	455
371-376 Radio, TV, instruments, watches and clocks	7	0.0	993	2,509	12,973
324-326 Printing, publishing and recorded media	6	0.0	2,210	235	1,423

361-366 Electrical machinery and apparatus	6	0.0	2,380	1,827	3,327
381-383 Motor vehicles, parts and accessories	6	0.0	9,650	8,940	21,486
341 Glass and glass products	5	0.0	505	387	450
338 Plastic products	3	0.0	3,697	594	661
392-393 Other manufacturing	3	0.0	2,203	1,895	5,318
316 Leather and leather products	2	0.0	1,205	945	561
317 Footwear	2	0.0	1,400	69	823
Urban and Domestic	3,220	14.4			
Environmental	2,950	13.2			
Total Usage	22,430	100			

Source: STATS SA (2000) Supply Use Tables & Own Calculations.

On average, industrial water-use produces goods worth R260 per m³ of water used, while the average value-added from agricultural and mining use is about R4 per m³ and R70 per m³ respectively. Nevertheless these figures highlight the significant difference between the various sectors, particularly when considering that the agricultural sector uses about six times more water than industrial production in South Africa.

It should be noted that looking only at the average Rand value added per m³ of water used does not take other relevant factors into account. Nieuwoudt et al. (2004) agree that agriculture is an inefficient user of water, but also point out that such data does not take forward and backward linkages between sectors into account, e.g. crop failures that usually have ripple effects through the economy. Furthermore, agriculture is a relative high volume and low value use of water. In contrast industrial and domestic use is low volume, high value use but also requires a high assurance of supply. Even if there is no agricultural use, the available water will not be taken up by industry or domestic use. Scarcity in an economic sense means that utility of a quantity of water demanded is higher than what can be supplied at a given time, place and form. A water shortage then means that more water is utilized than can be provided at the current price. With a fixed supply and given the value/price differentials, water rights will be traded from lower valued to higher valued use (both intra- and inter-sectoral trade) within the generally recognized requirements of a water market. This confirms that economic growth can take place under a situation of water scarcity.

The substantial subsidization of water through the charging of bulk water tariffs to the mining sector allows the sector to use on average 75% of the water consumption of the industrial sector, despite only contributing 20% of the value of its output. Table 4 also indicates that besides the mining industry that is known to be a water intensive sector of the South African economy, the other big industrial water users are coke & refined petroleum products, followed by chemicals & man-made fibres, food and beverages & tobacco. It is also interesting to note that the value added per unit of water in coke & petroleum, chemicals & man-made fibres is lower than the less water-intensive food and beverage & tobacco industries. This supports the assertion that the focus of improved market access for non-agricultural goods in South African trade negotiations at the multilateral and regional level, should be in industrial products originating from the food, beverages & tobacco and basic iron & steel industries, rather than the less efficient water using industrial products of the coke & petroleum, and chemicals & man-made fibres industries.

There is a strikingly direct and inverse relationship between the value of output per m³ of water consumed and total water consumed per manufacturing sub-sector, as shown in Table 4. As Eberhardt (2000) points out, this may indicate that the measure is not the most appropriate one to use to evaluate the water sector's contribution to value added. At the macro-economic level, it is hard to think of suitable alternative methods that are both easily measurable, and provide a more meaningful measure of the value of water. At the micro-economic level, it is possible to estimate the economic value of water in a number of ways (Gibbons, 1986). Time and resource constraints have not permitted the detailed estimation of the economic value of water as part of this review.

Imports satisfy local demand where there is no domestic production, and help reduce input costs, improve competitiveness and enhance overall consumer welfare. Since, competitive imports may threaten import-competing industries with possible negative implications for domestic production and employment, it is important to design tariffs and the resulting market access offers in trade negotiations with care. *From the perspective of conserving South Africa's limited water resources, imports of water-intensive industrial products generate a substantial saving, elevating this to a*

strategic level of consideration in the national policy arena. These national water savings are equal to the import values, multiplied by the volumes of water that would have been required to produce the commodities domestically (the so-called Virtual Water Value (Turton *et al.*, 2000)). Ideally, trade negotiations would favour the imports into South Africa of industrial products containing large proportions of virtual water³. As is evident from Table 4, this would involve increased import penetration by foreigners through improved market access conditions in the following South African economic sectors: the gold & uranium ore mining industries, the coke & refined petroleum products, the other mining industries and the chemicals & man-made fibres industries. It is very unlikely that South Africa will be a gold importer, even though the local industry is in general decline. The refined petroleum, chemicals and other mining sectors have been identified as growth industries. Thus we are unlikely to see large-scale imports of these goods.

Virtual water trade does not only generate water savings for importing countries - it also means water 'losses' for the exporting countries in the sense that the water cannot be used anymore for other purposes in the exporting countries - although this may not be an issue for water-rich countries. Virtual water trade between nations represents only one amongst many ways of increasing the efficiency of water use in the world (Allan, 2000). As Hoekstra and Hung (2002; 2005) argue, there are three levels of water use efficiency. At a local level, water-use efficiency can be increased by levying charges based on full marginal cost, stimulating water-saving technology, and creating awareness amongst users of the detrimental impacts of water abstractions. At the catchment or river basin level, water-use efficiency can be enhanced by re-allocating water to those purposes with the highest marginal benefits. Finally, at the global level, water-use efficiency can be increased if nations use their comparative advantage or disadvantage in terms of water availability, to encourage (or discourage) the use of domestic water resources for producing export commodities (respectively stimulate export or import of virtual water).

In this context it should be noted that moving to a trade regime based on the virtual water concept can have unintended consequences that at this stage are not fully understood. Implementing a virtual water trade regime might for example require interventions that could contravene the spirit of what free trade negotiations are trying

to achieve. Whereas much research efforts have been dedicated to study water-use efficiency at the local and river basin level, little efforts have been done to analyse water-use efficiency at the global level (Chapagain et al., 2005). A better understanding of the consequences of moving to a virtual water trade regime is therefore essential, both globally as well as from a South African perspective.

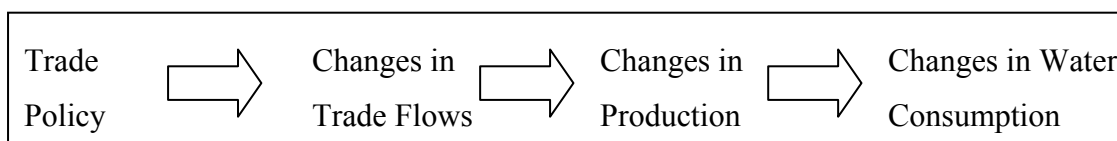
According to de Fraiture & Molden (2004) the following conclusions can be drawn with regards to virtual water trade:

- Trade in virtual water is indeed an appealing option when compared to finding more water, or increasing efficiency of water use. Unfortunately, the story is often a lot more complicated.
- While trade in virtual water does exist, most of it is not driven by water scarcity, but rather scarcity in other country resources like land, skills and know-how.
- Instead of shaping global trade flows, virtual water flows are most often a consequence of changes in prices, production levels and demand.
- The net effect of virtual water trade on the environment could be positive, but other times it could be negative.

Trade policy influences water through a number of linkages, as seen in Figure 3 below. It is clear that there are two types of changes when we talk about changes in trade flows and production.

- Firstly, if trade policy leads to an increase in the size of exports, this would have an effect on water.
- Secondly, trade policy may have an effect on the composition of exports, for example, by promoting the export of water-intensive goods, which would lead to greater water use, even without exporting more goods.

Figure 3: The Link between Trade Policy and Water



The question then of whether trade policy affects water, becomes a question whether each of the links is valid. While most of these links are quite strong, the cause-effect relationship is often very complex, because it is driven by a variety of issues. It is clear that changes in trade will lead to changes in production, and this in turn will lead to changes in water consumption. The weakest link would be the first one - the link from trade policy to changes in trade flows – with the rest becoming progressively more complex.

To understand why this is so, one has to realise that South Africa trades as a relatively small country. This means that South Africa has no capacity to influence world prices. In terms of economics it means that the export demand curves, and the import supply curves, are perfectly elastic. In practical terms it means that the barriers to South African exports are not related to demand; the world market can absorb as much of South Africa's products as the country can supply at the world price. The barriers to further exports are within South Africa, rather than in the export markets. This does not apply to all goods, but is true in the aggregate. Trade policy will affect trade flows in this sense by affecting the export demand curve, but this will only lead to a once-off change in exports. The long term effect of this change will be very small.

Another reason why trade policy (specifically with respect to bilateral free trade agreements) has little impact is that it affects prices, not incomes. In bilateral agreements, South Africa tries to boost exports to the partner country by getting that country to drop tariff barriers to South African goods. This will make them cheaper in that market, so hopefully exports will increase. This will have an effect, but the effect will generally be small. This is because demand is mainly determined by two factors, the price of the good and the income of the consumers buying the good. Most estimation shows that the elasticities of income (i.e. how much quantity demanded increases with an increase in income) are roughly twice as large as those of price. In

other words, income is a more important determinant of demand than price. In addition, trade agreements will lead to small changes in price compared to shifts in the exchange rate, which generally will change the price more than any tariff liberalisation.

In general, what small effect there is should have a positive effect upon water use. This is because countries generally protect their manufacturing sectors while allowing resource imports to enter cheaply (or with no duty). South Africa's exports are currently dominated by natural resources. If trade negotiators can get market access in manufactured goods, South Africa may start producing more manufactured goods. As Table 4 shows, manufactured goods use significantly less water than activities such as mining and agriculture. As was said above, the effect of increased market access on trade flows is likely to be small and as we shall see later, supply-side constraints are more important.

The story is similar on the import side. South Africa has liberalised trade quite significantly, but this has been more than offset by movements in the currency. It is only since the currency started appreciating (since the beginning of 2002) that the lack of tariff protection has been an issue to most producers. Even then, the major movements in price have been due to currency fluctuations and not tariff liberalisation. In this regard Edwards (2005: 27) concludes that, "no consistency relationship is found between the change in protection and changes in export orientation, import penetration or openness." In other words, the policy of liberalizing tariffs seems to have had little effect on either imports or exports.

Tariffs are not the only tools available to the policy maker. Subsidies also allow the promotion of a sector, or trade in a sector. South Africa has been steadily eliminating the use of subsidies, especially in agriculture. Two industries are still subsidised significantly however, namely the textile and clothing sector and the automotive sector. In the example of a subsidy for an input, the subsidies would have the effect of making firms use the subsidised input more than they otherwise would. In the idealised world view of economic theory, goods are used most efficiently when they are priced correctly. A subsidy is a distortion of this equilibrium, meaning that the input is used less efficiently. This same logic could be applied to output and exports.

A subsidy means that more of a good is produced, but this production will be less efficient than if a smaller amount was manufactured. This obviously has some effect on water usage, which in the context of South Africa, is very significant.

Casual observation would seem to suggest that the subsidisation of vehicle exports is not a problem for water usage. The vehicles industry is one of the most efficient users of water in industry, as can be seen in Table 4. There is a concern that one of its major inputs is iron and steel, which is quite water-intensive. Clothing, and especially textiles, is quite water-intensive. The textiles industry is often a significant polluter of water resources.

How Does Water Policy Affect Trade Policy?

South Africa's water policy may affect trade in non-agricultural goods through Government department efforts, which seek to change the behaviour of water consumers. The DWAF has formulated strategies in various sectors to promote sustainability and the economically efficient use of South Africa's water supply, consistent with the Constitutional requirements of sustainable development, against the background of the strategic imperative of historic redress. In an attempt to meet this goal, it is important that water policies are based on the true cost of water use by any good or service, by taking into consideration environmental externalities – something that has been largely ignored to date in strategic sectors like energy (Blignaut & King, 2002). Economic activities impact on both the quantity and quality of water available for sustainable use. For example an industrial production process may be very water intensive and present a potential pollution hazard, if it returns a substantial part of its water intake as effluent into rivers or aquifer systems. This pollution represents a cost to society, and if included in the price of the industrial product, would raise its price. Likewise, certain industries have low consumptive uses, but have a large impact on water quality due to effluent discharges (Wade *et al.*, 2002). When examining South Africa's comparative advantage relating to water, the external costs should be included, otherwise distortions may be introduced and inadvertently sustained over time. If pollution is priced correctly, there should be a level of pollution where the cost of polluting is equal to the benefit of the pollution (Claassen, 2005). Thus the correct way, in theory, to determine how much pollution

there should be, is to make sure that it is priced correctly. In practise, this is not very easy. It is very difficult to determine what the cost of pollution is because it is so diffuse. For example, how does one ascribe the fallout from air pollution arising from sulphur to one particular power plant that becomes acid rain and therefore pollutes surface water resources elsewhere? Thus, one often sees a situation where pollution tends to be undervalued, hence there is an overproduction of pollution and little incentive for firms to reduce their effluent.

Increasing industrial water-use in certain locations, and the movement towards Integrated Water Resource Management (IWRM) by DWAF, must be taken into account when considering trade policy and water resource management. In practise, this does not seem to occur however. *The Department of Trade and Industry (DTI) uses Industrial Development Zones (IDZs) as one means to promote development. Their aim is to encourage international competitiveness in the South African manufacturing sector by increasing manufacturing in these areas. This may then lead to large increases in industrial water demand in the IDZs that is not adequately catered for in terms of actual water availability. It does not seem as if water resources were considered in the promotion of the IDZ policy.* An important aim of the National Water Resource Strategy (NWRS) is to “identify areas where there are imbalances in availability and requirements” (DWAF, 2004a) of water resources. This is also of importance to trade policy and negotiation. Identification of areas of imbalance can inform future decisions about the location of IDZs, and also the viability of negotiating favourable trade agreements for industries concentrated in locations where imbalances have been identified. Clearly there needs to be significantly more consultation between the DTI and DWAF about the location of IDZs as regional water availability is a problem. The National Water Resources Classification System (NWRCS) currently under development will potentially play a role in harmonizing these spatial imbalances.

Industrial water use often leads to the production of effluents. These effluents should ideally be dealt with through adequate abatement and wastewater treatment before they cause unacceptable environmental damage. This does not always happen, thus allowing damage to occur. The pulp & paper, petrochemicals and basic chemicals

sectors were investigated, in order to estimate the costs associated with environmental externalities from the largest industrial water users.

A final comment relating to industrial water-use relates to the observation that water for general industrial use is not subsidised in South Africa. As such, current water tariffs pursued by DWAF in the area of commercial industrial-use, should at least in theory promote the economically efficient use of the country's water resources. Note, this applies only to water tariffs from the perspective of water as an input in industrial production and does not take into consideration the pricing of water from the perspective as a pollution sink. Experimental work being done at the CSIR is addressing this in the form of the ECO² model (Claassen, 2005), which is attempting to develop a quantifiable understanding of the inherent value of ecological sinks. Current water tariffs supported by DWAF do not take into account the impact on water quality of industrial effluents, but recent work by the CSIR has generated an encouraging solution in the form of the ACWUA Tool, which is now being mainstreamed (Hattingh *et al.*, 2005).

In industries where water usage is heavily subsidised through the charging of bulk water usage tariffs namely: the mining industry, the pulp and paper products industry, basic chemicals industry and the iron and steel industry, the efficient utilisation of water in these industry's production processes is undermined by granting a subsidy. The subsidisation of water usage tariffs in these activities is indeed a matter of concern. By promoting the wastage of water intake in these industries, such bulk water usage charges discourage the sustainable use of South Africa's scarce water resources. An additional source of concern relates to South Africa's past and current dependence on these industries' exports as major earners of foreign exchange for the country. *The research undertaken thus far highlights this as a future avenue for research in the field of South Africa's trade and water policies.*

Government Policy Direction

According to DTI, even if current trade negotiations at multilateral, regional and bilateral levels result in the signing of new trade deals between South Africa and her

trading partners, it is highly unlikely that new non-agricultural market access arrangements will bring about significant changes in the existing composition and level of South Africa's exports and imports in non-agricultural products. This view is supported by the findings of recent research relating to South Africa's trade and economic performance (TIPS, 2002). These findings suggest that even if current trade negotiations substantially improved market access in non-agricultural goods in the South African context, supply-side capacity constraints faced by many South African industrial sector producers would prevent the trade deals from having a significant impact on South African trade flows in these goods. The DTI has stated that the current gap between South Africa's bound and applied WTO tariff rates, particularly in the area of non-agricultural goods, is quite large and hence it is likely that current trade negotiations at multilateral levels will only have a small impact on proposed new market access arrangements in non-agricultural goods. There may be some impact on clothing and motor vehicles, but it is difficult to be certain so long as the final coefficients have not been agreed upon.

The DTI has stated that it is currently under no pressure to make any multilateral or bilateral trade commitments relating to water specifically. This applies both to water as an environmental resource (and as such any future negotiated trade commitments relating to this would fall under the category of non-agricultural market access (NAMA)) and to water as an environmental service (where future negotiated trade commitments in this area would fall under GATS).

Policies, Goals and Concerns of NGOs, Civil Society & Trades Union

From the perspective of NGOs and civil society, concerns relating to current trade negotiations centre on the social and environmental consequences of proposed new trade deals. From an environmental perspective, industrialised countries have expressed concerns relating to the trade competitiveness consequences of the uneven playing field arising from the exploitation of environmental resources in countries with lax environmental laws. The industrialised countries are in favour of tying market access arrangements in current trade negotiations to environmental compliance considerations - a move strongly opposed by developing country nations. As far as water resources are concerned, trade deals which promote international trade

in non-agricultural goods that are efficient users of water would go some way in addressing such environmental concerns, by encouraging the conservation of the world's water resources without unleashing a backlash from developing country trade negotiators. As Hoekstra and Hung (2002, 2005) argue, Virtual Water trade between nations is a potentially viable means of increasing the efficiency of water use in the world.

NGOs and civil society in South Africa, although strongly embracing the notion of sustainable development practices in trade policy negotiations, are often more concerned with the social dimensions of those trade negotiations. Given the problems of underdevelopment, unemployment and inequitable access to goods and resources in these developing countries, NGOs and civil society argue for trade deals which radically alter the current *status quo* by significantly boosting the development objectives of their economies through their special treatment in trade negotiations by way of vastly improved preferential market access. Highest on the agenda, is the call for the removal of industrial countries' state subsidies on agricultural and industrial products of economic interest to these developing nations.

Summary

International trade negotiations at the multilateral and regional level produce both "winners" and "losers". The emergence of trade patterns and their impact on the economy due to this process, remain contentious issues. Exchange rate movements, labour market conditions and economic growth amongst the trading nations, all have a role to play in shaping trade patterns. Uncertainty surrounding the prediction of the extent of gain or loss for the economies' "winners" and "losers", suggests that the resulting impact of trade reforms on South Africa's scarce water resources will be difficult to quantify.

In terms of exports of non-agricultural goods, negotiations related to increasing market access in these goods, are unlikely to generate significant changes in the level of the country's exports, even if these negotiations result in preferential market access for South Africa's non-agricultural exports. The main reasons for this are:

- South Africa trades as a small country in world markets, unable to influence the international prices of the goods she exports. The international market will thus accept as much of these non-agricultural goods that South Africa can supply.
- It is a well documented fact (TIPS, 2002) that the main reason South Africa's exports of industrial goods are not higher, is because of the serious supply-side constraints the country faces. Efforts by the state to address these constraints include measures to promote industrial restructuring, technology upgrading, investment and export promotion efforts and various SMME & BEE initiatives.
- In terms of imports into South Africa, although it is likely that trade negotiations will result in greater import penetration by foreign non-agricultural goods, South Africa has quite a large gap between its negotiated WTO bound tariff rates and the rates that she applies in practice. This suggests that extent of increased import penetration by foreign non-agricultural goods is likely to be quite small.

Taken together, the resulting changes for South Africa's exports and imports under current non-agricultural market access negotiations, whether these trade negotiations are held at the regional or multilateral level, are likely to be fairly insignificant. ***It is therefore unlikely, that current trade negotiations will have a significant impact on the country's scarce water resources as far as non-agricultural goods are concerned. The process of identifying which of South Africa's non-agricultural traded goods are water intensive, and which are more efficient users of water in their production, is nevertheless an important exercise.*** If nothing else, this process of identification can help inform the country's future trade negotiating agenda by sensitizing these negotiations to the conservation and sustainable use of South Africa's relatively scarce water resources.

An Assessment of Trade in Agricultural Goods

Introduction

Agriculture is a key component of the link between water and trade policy. On the water resources side, irrigated agriculture is the main water user in South Africa. On the trade negotiations side, agriculture is arguably the most contentious issue in the ongoing WTO Doha Round negotiations, and considerable resources and efforts of the DTI and DoA are directed towards achieving a fairer trade environment for agricultural goods. At the same time, South Africa pursues a policy of stimulating agricultural growth, largely driven by agricultural exports. Against this background the link between agricultural policy, trade negotiation strategy and water resources management is important and needs to be considered in policy and strategy development by the respective departments concerned.

Water Use and Economic Contribution of the Agricultural Sector

Agricultural irrigation is the largest user of water in the country with irrigation accounting for more than 60% of the total water withdrawals in South Africa (DWAF, 2004a), e.g. 62 % in the year 2000 (FAO, 2005). The direct contribution of primary agriculture to the GDP is relatively low, with the OECD (2006) estimating it at below 4 % and the DWAF at about 4.5 %, including the contribution of rain-fed agriculture (DWAF, 2004a). An estimated 25 -30 % of the GDP contribution results from irrigated agriculture, the remainder from rain-fed agriculture. The direct GDP contribution of irrigated agriculture is thus less than 1.5 % (DWAF, 2004b). The total GDP contribution of the agro-food complex – primary production plus the input and agro-processing sectors – accounts for about 14 % of GDP (DoA, 2001).

The agricultural sector's indirect contribution to GDP is substantially higher. Agriculture creates a strong demand for goods and services such as fertilizers, machinery and financial services, and agricultural raw materials contribute to the value of industrial production in general. Agriculture thus supports a significant part

of the manufacturing sector's contribution to the GDP, but in a complex manner that is difficult to unravel *via* simple cause-effect linkages.

The general indication is that the economic impact per unit of water used, in at least some parts of irrigated agriculture, is substantially less than in other sectors (DWAF, 2004b). Whereas the agriculture sector generates more jobs per value of output than other sectors (Nieuwoudt et. a., 2004), it is claimed that irrigated agriculture creates fewer employment opportunities per unit of capital invested. Whereas the employment/capital ratio is comparatively high for the total agricultural sector, irrigated agriculture does not hold above average employment-creation advantages due to the capital intensive nature of modern irrigation farming (DWAF, 2004b).

Employment in the agricultural sector (irrigated and rain-fed combined) in terms of percentage of formal employment is substantially higher than its contribution (in percent) to GDP, with agriculture accounting for approximately 11 % of national employment (DWAF, 2004b). As far as irrigated agriculture is concerned, employment is just over 1.5 per cent of the national total (10 to 15 per cent of the total agriculture sector), which is similar to its contribution to GDP (DWAF, 2004b). In addition to the employment of about 1 million farm workers, the commercial farming sectors accounts for livelihoods and housing for about 6 million family members of farm workers, who live on the farms and are dependent on the family head's income from farm labour (DoA, 2001).

Outside the large-scale commercial farming sector there are about 240,000 small farmers who provide a livelihood to more than 1 million family members and occasional employment to another 500,000 people (DoA, 2001). Predominantly in the communal areas of the former homelands there are an estimated 3 million household farmers who meet part of their family's total needs through farming activities (DoA, 2001).

For the above reasons, the agricultural sector as a whole, despite its relatively small contribution to GDP, remains an important economic sector for South Africa, particularly due to its contribution to employment creation and rural livelihood security.

In terms of staple food production, irrigated agriculture is not of significant importance. A mere 11 % of the total grain production in South Africa is based on irrigation, the rest arises from rain-fed agriculture (Otto, 2005). This might change over time with the anticipated effects of climate change. Climate change models, such as the HAD CM3 (Hadley Centre (UK) Climate Model version 3) predict that southern Africa as a whole, and central southern Africa in particular, will become significantly warmer and drier over the next few decades (Scholes & Biggs, 2004). Although there is still some uncertainty around the exact magnitude of the changes, it seems certain that significant changes are taking place. This will affect the central parts of South Africa, which are the main grain production areas in the country. In a situation of already growing water scarcity, which will be exacerbated by the effects of climate change, these aspects need to be part of the matrix from which to develop a coordinated agricultural policy that takes cognisance of water availability constraints.

As mentioned above, South Africa pursues a strategy of stimulating the growth of the agricultural sector, primarily through strengthening the export sector. The Strategic Plan for the South African Agriculture (DoA, 2001) as well as the Agricultural Trade Strategy (DoA) emphasise the need for the greater integration of the sector in the global economy and the creation of an export oriented culture. To fully utilise the export potential of the South African agriculture sector, the global liberalisation of agricultural trade is important. It is estimated that potential welfare gains for South Africa from agricultural trade liberalisation, mostly in OECD countries, could exceed US \$ 80 million per annum (OECD, 2006). This would represent about one-third of total welfare gains (with the bulk welfare gains effected in the manufacturing sector) the country could expect from increased global trade liberalisation (OECD, 2006). Consequently South Africa's trade strategy includes a strong focus on creating a fairer trade environment for agricultural goods.

The International Trade Environment for Agricultural Goods

WTO law regulates trade in agricultural goods, mainly in the Uruguay Round Agreement on Agriculture (AoA), which takes precedence over other WTO law, as far as agriculture is concerned (Malzbender, 2003). It provides regulations for the

three pillars that shape agricultural trade relations on an international level, i.e. domestic support, market access and export competition. Together, these three interlinked pillars create the trade framework that characterizes agricultural trade and international agricultural trade negotiations.

Although the system in its broader sense is applied by many other developed countries (most notable the USA, Japan, South Korea, Norway and Switzerland) the Common Agricultural Policy (CAP) of the EU is the most clear-cut example of the interrelation between the three pillars. Since the EU is still by far South Africa's most important trade partner with respect to agricultural goods (see Table 4 below), the example of the CAP will be used here to illustrate how the three pillars create the current framework for international trade in agriculture.

Table 4: Agricultural Exports from South Africa to Other World Regions

Region	Percentage Share		R million	
	1988	2001	1988	2001
EC	61%	38%	1 860	7 631
Eastern Europe and Central Asia	2%	3%	47	619
Asia & Pacific	22%	20%	681	3 919
Middle East	5%	6%	160	1 177
Americas mainly USA	1%	8%	44	1 574
SADC	8%	19%	231	3 817
Rest of Africa	1%	6%	29	1 274
	100%	100%	3 052	20 010

Source: South Africa Agricultural Trade Strategy – Annex (DoA, 2003).

The Three Pillars of International Trade in Agriculture

As illustrated by Malzbender (2003) and Zunckel & Malzbender (2004), the EU subsidizes its agricultural industries by guaranteeing them prices above world market level (domestic support). As above world market producer prices are consistently maintained, the market logically becomes attractive for external (and more

competitive) suppliers. In order to protect their producers from such competition, high tariffs are imposed on imported agricultural goods (market access). The highly protected market with guaranteed high producer prices therefore encourages internal producers to increase production, while at the same time depressing internal consumer demand. The result of this is overproduction and consequently the surplus produce must be disposed of on world markets. In order to enable exporters to export the surplus produce on world markets, the EU provides export subsidies, which amount for the difference between the world market price and the much higher EU price (export subsidization/export competition). As a consequence the EU, which would be a net importer under free trade conditions, is one of the biggest exporters of agricultural goods worldwide (Malzbender, 2003; Zunckel & Malzbender, 2004).

In an effort to make its agricultural support programme WTO law-compatible the EU is currently introducing a major change to its domestic support scheme. Under this reform programme, the guaranteed intervention prices will be reduced and previously production linked payments will be de-coupled from production output (and included into a single farm payment that is made to EU producers in future). In practice, the single farm payment is based on a reference amount, which is calculated from the amount that was paid under the previous production-linked system. In other words, although the massive support to EU farmers has effectively been maintained the majority of payments, since they are not directly linked to production output anymore, are in WTO-terms, viewed as a blue box (or even non-trade distorting green box measures), meaning that the support is not, (or only to a limited extent), subject to reduction commitments.

That reforms of this kind are in fact no less trade distorting than the production-linked subsidies, was proved specifically in the grain sector, where such reforms had been introduced at an earlier stage. The result of declining prices was not a lower production output. In fact, exactly the opposite effect was observed. Despite an almost 50% fall in prices, production expanded massively as a result of increased consumption (responding to lower prices) and better export opportunities, because, with prices being closer to world market level, a higher product volume could be exported on the allocated export refunds. The decreasing raw material prices also led to a sudden improvement in the competitiveness of cereal-based value-added food

products originating from the EU. Consequently, a massive increase in exports of value-added food products, particularly into markets of ACP (African Caribbean Pacific) countries, could be observed. This had the unintended consequence of undermining the development of the value-added food industry in those countries.

The trade-distorting effects for the market in value-added food products are further exacerbated by the tariff-escalation system. The EU charges tariffs, not only on imported raw materials, but also on the raw material content of certain value-added food products (particularly so with respect to sugar). In many cases, these tariffs even exceed the tariffs charged for the import of the respective raw material. This minimizes (or often completely diminishes) the comparative advantage developing countries would normally enjoy, in cases where they produce the raw materials at far lower costs (as is the case with sugar) (Malzbender, 2003). Therefore, the tariff-escalation system is a significant impediment for value-added food processing industries in developing countries, including South Africa, and severely undermines their export-competitiveness. Although the composition of South Africa's agricultural exports has nevertheless shifted towards processed products (64 % of export value in 2003) (DoA, 2003), the tariff escalation system is an impediment for the optimal exploitation of South Africa's export potential in value-added food products.

The Current State of Play in WTO Agriculture Negotiations

In essence, WTO agriculture negotiations focus on the three pillars outlined above. That said, the negotiations deal with a myriad of sub-issues, the details of which are of utmost complexity. In the context of this review, it will suffice to outline the progress made in the negotiations on the three pillars in the broader sense, in order to understand the impact on South Africa's negotiation position for agriculture, and the effect on water resource management.

After the September 2003 Cancún Ministerial Conference deadlock, the WTO agriculture negotiations had subsequently gained new momentum, which eventually resulted in the conclusion of the so-called 'July Package' on 1 August 2004. The July Package establishes modalities for more detailed negotiations on commitments with respect to the three pillars. Some of the modalities have been further refined at the

recent Hong Kong Ministerial Meeting, but overall progress can be called moderate at best. To date the state of play can broadly be described in terms of:

- Export Competition.
- Domestic Support.
- Market Access.

Each of these is dealt with in more detail below.

Export Competition

The two most commonly used means of providing support to exporters of agricultural goods are export subsidies (as mainly used by the EU); and export credits (as mainly used by the US) (Zunckel & Malzbender, 2004). Whilst the USA has previously indicated more willingness to make substantial reductions in the use of export credits, the EU position has showed very little movement. In the wake of the CAP reform, as currently being implemented, the EU is now also willing to eliminate export subsidies over time. This is because the EU will soon not need export subsidies anymore. As described previously, the current CAP reform will bring internal EU prices in line with world market prices over time, thus leaving no need for any form of export subsidization. That this is the underlying rationale for the recent willingness of the EU to eliminate export subsidies is confirmed by the statements of EU officials during the negotiations of the July Package, which they will push for the end date to export subsidization, being in about 12-15 years from then (2004). This is roughly the time-frame in which it is expected that the effects of the CAP reform will have fully filtered through the system and made EU raw materials, as well as value-added food products, fully competitive on world markets.

The EU was successful with this approach and the final declaration of the 6th Ministerial Conference held in Hong Kong in December 2005 now states that, “we agree to ensure the parallel elimination of all forms of export subsidies and disciplines on all export measures with equivalent effect to be completed by the end of 2013” (WTO, 2005). Essentially, this does not result in the elimination of the trade-

distorting effect of export subsidization, and consequently does not improve the situation of developing country producers that have to compete with the subsidized exports.

- The time-frame is relatively long, providing no short-term relief for developing country producers.
- Once export subsidies have been phased-out in 2013, they will in any case not be needed any more, because the subsidy is provided in the form of the single farm payment. The single farm payment is a matter that falls under the negotiations on domestic support. Currently the single farm payment is considered to be a 'green box' measure, meaning it is considered to be non-trade distorting and thus not subject to disciplines (reduction commitments). Unless the classification of the single farm payment as a green box measure is successfully challenged, and the payment subjected to reduction commitments, developing country-producers will continue having to live with its trade-distorting effects, despite the formal elimination of export-subsidization.

Domestic Support

With respect to domestic support (subsidies), the modalities of the July Package suggest using a tiered formula (WTO, 2004). A substantial reduction in the overall level of trade-distorting support from bound levels is envisaged, thereby making higher levels of support subject to deeper cuts.

This approach has now been confirmed in the Hong Kong Ministerial Declaration, Paragraph five of which reads "On domestic support, there will be three bands for reductions in Final Bound Total AMS (*Aggregated Measurement of Support*¹) and in the overall cut in trade-distorting domestic support, with higher linear cuts in higher bands. In both cases, the Member with the highest level of permitted support (*being the EU*) will be in the top band, the two Members with the second and third highest levels of support (*US and Japan*) will be in the middle band and all other Members,

¹ All passages in italics in this paragraph have been inserted by the authors.

including all developing country Members, will be in the bottom band. In addition, developed country Members in the lower bands with high relative levels of Final Bound Total AMS will make an additional effort in AMS reduction” (WTO, 2005).

Whereas the commitment to reduce domestic support measures over time at first sounds encouraging, it needs to be seen whether it will indeed have a positive effect in practice. Members have so far failed to agree on specific reduction commitments (percentage points) and there is strong resistance from the main subsidizers to accept large cuts.

What from a practical perspective is perhaps a more important provision in the July Package, is the provision on “blue box” measures (subsidies known to be trade distorting but nevertheless largely exempted from reduction commitments), which states that any criteria for disciplining blue box support “will not have the perverse effect of undoing ongoing reform steps of members” (WTO, 2004: Paragraph 14). This provision was successfully negotiated into the framework by the EU and is directly linked to the implementation of the EU CAP reform. With this the EU secures acceptance for the trajectory of its internal reforms, which in fact ensures that the overall support paid to EU producers will, in conflict with the “substantial reduction” objective of the Doha Round, only marginally be reduced (Zunckel & Malzbender, 2004). The majority of the payments under the single-farm payment scheme, despite the fact that they are in practice still trade-distorting, are qualified as non trade-distorting “green box” measures. The retention of the “blue box” with relatively minimal reduction commitments, ensures that other payment, which the EU admits are trade-distorting, can still be retained to a large extent. The July Package calls for a review and clarification of Green Box criteria, “with a view to ensuring that Green Box measures have no, or at most minimal, trade-distorting effects on production” (WTO, 2004 – Paragraph 16). This commitment is reiterated in the Hong Kong Declaration. However, there is fierce resistance from the EU to any change in the definition of Green Box measures that would disqualify the single farm payment from falling into this box. Given the negotiation power of the EU, it is nearly impossible that EU subsidies in the form of the single farm payment will be considered to be falling out of the Green Box in the near future, suggesting that the single farm payment will continue to be paid out in its current form. The Modalities Framework

on Domestic Support thus does not bring any substantial improvements in terms of reducing domestic support in the EU, making it unlikely that other subsidizers, like the USA, would be willing to make large concessions.

Market Access

The negotiations on market access (i.e. tariff reductions) are arguably the most contentious at present. The July Package took up the Doha Declaration's call for "substantial improvements in market access". To take member's different tariff structures into account, a tiered formula was agreed on in the July Package (WTO, 2004). In Hong Kong, WTO members agreed to adopt four bands for structuring tariff cuts (WTO, 2005). Again the parties failed to agree on relevant thresholds, and a lot of work lies ahead to reach agreement on the specific depths of the cuts. In this respect, it is important to notice that the July Package specifies that all members (with the exception of LDCs), have to make a contribution, and not only developed countries. Thus, developed countries, while at the same time being reluctant to reduce the levels of subsidization provided to their producers, are only prepared to give developing country producers better market access in exchange for better market access for their own (subsidized) products. The commitment to allow for the establishment of a Special Products category (allowing developing countries to develop special products that are exempted from tariff reductions), and the right for developing countries to use Special Safeguard Mechanisms (emergency measures to counter a sudden influx of imports in order to protect domestic producers), do not address the issue of market access in a sufficient manner.

Another noteworthy aspect is that tariff cuts will be made from bound rates. Since applied tariffs in most countries are already significantly below the bound rate, tariff reduction commitments are unlikely to lead to substantial improvements in market access for many products. A trade simulation model developed by the Australian Grains Research and Development Corporation, has indicated that truly substantial improvements in market access for grains can only be achieved if it is agreed to make cuts from applied rates, or have such massive cuts to bound rates that it eventually leads to cuts in applied rates (Zunckel & Malzbender, 2003). It therefore becomes

clear, with a cut from bound rates being agreed, that whether or not there will be actual market access gains depends on the scale of reduction eventually agreed on.

The Impact of Free Trade Agreements

Whereas the developments at the multilateral (WTO) level are of importance for South African agricultural trade, it is noteworthy that much of South Africa's agricultural trade takes place within the framework of (bilateral) Free Trade Agreements (FTAs). When concluding FTAs, trade partners in essence grant each other more favourable conditions than they grant the other WTO members who are not a party to the Agreement. This preferential treatment is provided for in Article XXIV of GATT. Table 4 indicates that, although the share is declining, the EU is still South Africa's most important trading partner for agricultural goods. On the other hand, more and more agricultural trade is with SADC countries. South Africa has concluded an FTA with both the EU and SADC, meaning that more than half of South African agricultural exports are taking place under free trade conditions (or will do so once the SADC FTA is fully implemented by 2012). Since South Africa has granted the EU virtually unhindered access to its markets for most agricultural products, the impact of trade distortion caused by European subsidies can potentially be even more harmful to South African agriculture, compared to a situation where no FTA has been concluded.

Trade between SADC countries is becoming increasingly important. Currently South Africa is a major exporter into other SADC countries, and - although one of the driest countries in SADC - even exports large amounts of maize into neighbouring countries. This is largely due to the fact that the agricultural sector in most SADC countries is comparatively underdeveloped. From a water perspective it is relevant that some SADC countries such as Angola, Zambia, Mozambique, are relatively water-rich and have the potential to become large-scale agricultural exporters in future. Whereas it holds true, as stated by Backeberg (1997), that it appears that at present there is no real prospect for virtual water imports in the form of cereals into South Africa from other SADC countries, it is possible that this potential could be realized in the long-run (requiring large-scale investments in agricultural research, transport infrastructure, financing infrastructure, harmonization of quality standards

etc.). This could give the opportunity to substantial regional water-savings as a result of increased regional trade in agricultural goods (Earle & Turton, 2002; Malzbender, 2005). *Given the endemic water scarcity in South Africa, such a scenario is likely to lead to more regional competition for South African agriculture, that will be increasingly difficult to withstand if the price for water in South Africa reflects its real social, environmental and scarcity value.*

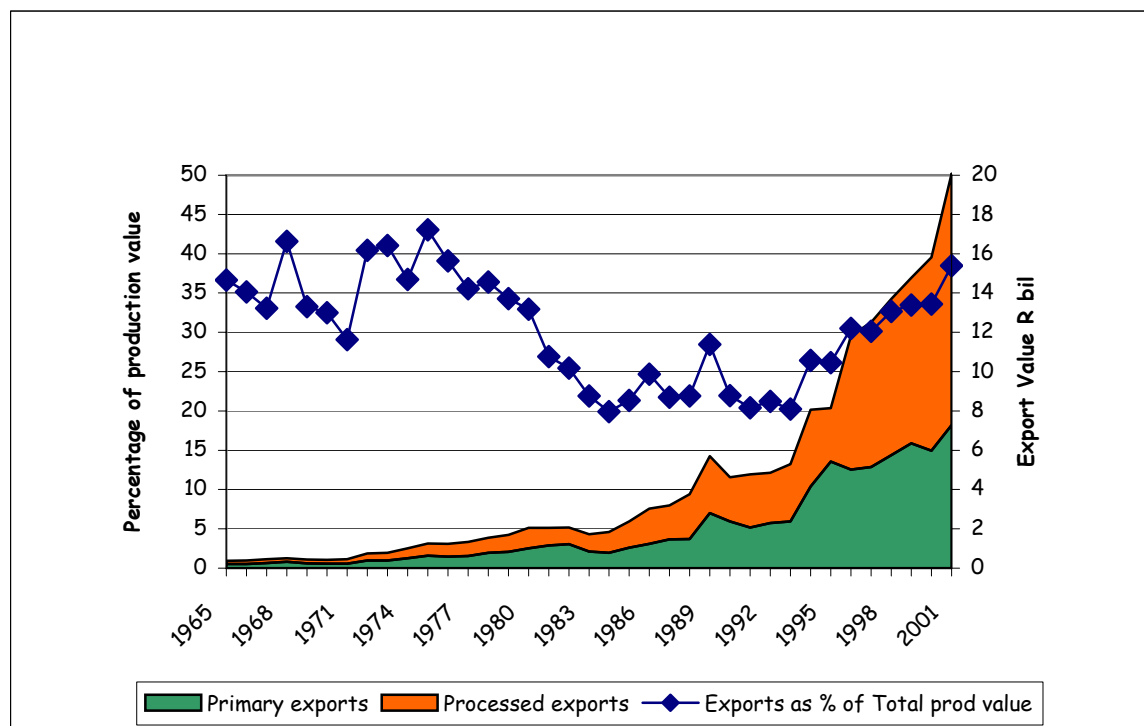
Although this scenario is still in the future, it could become reality over time. It is therefore useful to assess how South Africa's agricultural trade strategy takes water issues into account.

South Africa's Agricultural Trade Strategy

Given the relative water scarcity in South Africa, and the high percentage of water being used by irrigation, an option for South Africa would be to promote the import of water-intensive goods, and the export of less water-intensive products in its agricultural trade strategy. Another option, which is largely the one followed by South Africa, is to try to negotiate better market access conditions for South African export products in general and let market forces, through water charges, determine which products are being produced in which region (see more detail below).

South Africa's agricultural trade strategy is strongly export-driven, with exports composing nearly 40 % of the total value of agricultural production in 2001 (DoA, 2003). Whereas some of the exports, particularly into SADC countries, are grain products (maize), most of the exports to other trade partners (mainly the EU) are of high-value crops, such as fruit and vegetable, nuts, wines and other beverages. *The production of most of these high-value export crops requires irrigation. At present water issues are not explicitly being taken into account in agricultural trade negotiations strategy-making (Otto, 2005). Instead the country's agricultural trade negotiation strategy is driven by economic considerations and relies on market forces to regulate how much water is used for irrigation (see further detail below).*

Figure 4: Processed and primary exports and percentage of the value of agricultural production in 2001



Source: South Africa Agricultural Trade Strategy – Annex (DoA, 2003).

South Africa’s agricultural trade strategy is generally aimed at negotiating better trade conditions for agricultural products, which means priority is given to overcome the imbalances in international agricultural trade that have been described above.

South Africa is a member of the so-called G20, a group composed largely of developing countries and major agricultural exporters. In line with the group’s interests the G20 supports the drastic reduction of agricultural tariffs, as well as a reduction of the domestic support provided by the main subsidizers. Both in multilateral and bilateral trade talks, South Africa’s approach is not to negotiate trade conditions on a product basis, in order to support specific industries. The approach instead is to create a better trade environment generally, and for specific product-clusters.

There are a number of reasons for water issues not being considered explicitly in negotiation strategy-making. On the one hand there is a lack of awareness within the DoA, which leads the trade negotiations on agriculture, and the DWAF of the link between water resource availability and agricultural trade strategy. On the

other hand South Africa does negotiate in the SACU context, making the consideration of national (or even regional) specifics more difficult (Otto, 2005).

An example of the difficulty to respond to regional (in the sense of a region within a country) water scarcity by means of trade negotiations is the possible expansion of table grape production along the Orange River. Table grape producers in South Africa have a vested interest in securing favourable export conditions (low tariffs) for their produce to the USA in the US-SACU negotiations. Assuming that the agreement, despite recent uncertainties, will eventually be concluded, favourable export conditions in the form of low tariffs (provided they are supported by an improved exchange rate situation), could lead to the expansion of table grape production in South Africa. As most areas with suitable climatic conditions for table grape production have already been planted, the area where most expansion would take place is likely to be the lower Orange River. Production along the lower Orange River requires irrigation; hence, local water resource availability could be affected in an area that is already water stressed, and in all probability likely to become more so under current global climate change scenarios.

A decision of the DoA, not to try negotiating favourable export conditions for table grapes, would negatively affect table grape farmers in areas where local water availability is not a concern. Furthermore, in the SACU context, Namibia is interested in expanding table grape production along the northern shores of the lower Orange River, and aims at securing favourable export conditions for the product in the US-SACU negotiations (Otto, 2005). *As the interests of all SACU members have to be consolidated into a comprehensive SACU strategy, South Africa cannot unilaterally pursue a negotiation strategy that is strongly guided by national-level water resource availability criteria. As a result, water is at present not a factor influencing the decision whether the market for specific agricultural goods will be protected or opened up for external competition.*

Instead, reliance on market forces is the approach that is likely to be followed for the alignment of water resources management and agricultural trade strategy-making (Otto, 2005). Since 1994, the South African agricultural sector has undergone drastic changes, from a strongly regulated sector, towards a sector being driven only by market forces. The abolition of Control Boards, and discontinuation of subsidies

previously paid to farmers, are but a few examples of this process. This has generally led to more efficient resource-use in the sector, where survival in the market is purely based on competitiveness.

In line with this approach, water would purely be treated as a factor of production and market forces (prices for water rights) would adjust the market towards the increase in production of less water intensive goods. When following this strategy it is assumed that market forces will ultimately regulate whether or not, or to what extent, water-intensive goods are still being produced in South Africa. If water right prices are being increased as a result of increasing water scarcity, farmers would have to use appropriate adaptive technologies in order to improve water use efficiency. Backeberg (1997) suggests that this economic approach to water management can be significantly enhanced by, among other options, ensuring secure water rights for farmers and the tradeability of water rights.

This would mean that in trade negotiations no direct interventions will be made to promote or discourage the production of specific crops as a response to the country's water situation. Instead, water pricing would determine whether South African farmers would be able to produce competitively or not. In practice the value/ price of water for irrigation is derived from the price of crops. Depending on upward or downward movements of local and/ or international crop prices and adjustments in costs efficiencies, the value/ price of water for irrigation will vary and more or less water will be transferred to and used in agriculture.

DWAF's Water Conservation and Water Demand Management Strategy for the Agriculture Sector (DWAF, 2004a) places strong emphasis on increasing water-use efficiency. One of the key issues addressed by the Strategy, is the reduction of water losses that are due to inefficient irrigation practices (known technically as Intra-sectoral Allocative Efficiency), which are estimated to be between 30 % and 40 % (DWAF, 2004a). Although recognizing that the social value of agriculture, "warrants special consideration when deciding on the competitive allocation of water among sectors" (DWAF, 2004a: 7), the strategy also strongly refers to market forces. It is stated that, "market forces should motivate South African farmers to reduce the cost of water as an input in order to compete with other producers in global markets" (DWAF, 2004a: 8) for example. The DoA's approach of relying on market forces (i.e.

water as a production factor that has to be paid for) seem to be in line with the DWAF's approach to water conservation in agriculture (although the latter is broader and suggests the use of other instruments such as Inter-Sectoral Allocative Efficiency as well).

It needs to be seen whether the market principles will indeed be applied in its purest form. *Whereas there are no commitments in international trade agreements requiring water prices to be lower than their full social, environmental and scarcity value, there might be domestic political pressure to do so.* If water pricing would lead to the discontinuation of the production of certain products in entire areas, there might be strong pressure to make exemptions for those producers and supply them with water at a lower charge in order to mitigate the effects on GDP and employment.

Examples of exceptions to the purely market-related approach can already be observed. According to Otto (2005), the beef and dairy sectors are considered to be sectors where South Africa has defensive interests, and aims at protecting these sectors by keeping certain trade barriers in place. It is argued that this is to defend these sectors of South African agriculture from the effects of the imbalanced international agricultural trade system. However, this level of protection is not provided for producers of other goods (e.g. fruit and vegetables), which often are also exposed to the unfair trade conditions illustrated above.

The Need for Better Strategy Coordination

Whereas the Strategic Plan for South African Agriculture (DoA, 2001) highlights the need for better coordination between the DTI and DoA, there is also a need for policy and strategy coordination between these departments and the DWAF. *A well developed understanding of the linkages between water resource management issues, agricultural policy and agricultural trade strategy is essential.* Although it is unlikely that water resource availability will become the overriding factor in the development of the agricultural trade strategy (Otto, 2005), it is important that water-issue become a factor being taken into account by trade negotiators. Namibia's interest in expanding grape production on the lower Orange River is a good example for this. A large-scale expansion of grape production would require more water from the Orange River for Namibia – a matter that needs to be coordinated between the

DWAF and its Namibian counterpart (Ministry of Agriculture, Water and Resource Development - MAWRD). This could manifest as increased pressure on South Africa to consider dam development in an area where they might otherwise not consider such projects. Strategy-coordination between the DoA and the DWAF would ensure that the water-related aspects are taken into account, and assist the DoA in developing a consolidated negotiation position together with its SACU partner, Namibia.

In order to facilitate better strategy coordination, it is suggested that the DWAF becomes more involved in existing forums dealing with trade issues (Otto, 2005), so that water-related aspects can be considered in the strategy-making processes of other departments, particularly the DoA. The most suitable vehicle for this would be the Permanent Trade Forum regularly convened by South Africa's chief negotiator. DWAF representatives could possibly also attend the Agricultural Trade Forum, where agricultural trade-strategy is discussed between the DoA and representatives of the agricultural industry.

Summary

At present the trade environment for trade in agricultural goods is largely imbalanced. This means that more competitive developing country producers are put at a disadvantage when compared to producers from developed countries. Trade negotiations at the multilateral level are geared towards reducing (and ultimately) removing these imbalances, but are unlikely to achieve this objectives in the short-term. South African agricultural producers therefore have to compete in a distorted world market, which has negative implications for local economic growth and job creation.

South Africa's trade negotiation-strategy aims at creating a fairer trade environment for agricultural goods because the country's agricultural trade strategy is largely export-oriented. *At present water-issues are not explicitly considered in agricultural trade policy-making, and the tendency is to regulate water use by the agricultural sector through market forces such as water prices, instead of making use of policy interventions that promote less water-intensive goods in trade negotiations.* There is nevertheless a need for better strategy coordination between the DoA, DWAF and DTI and existing forums should be strengthened to facilitate this process.

An Assessment of Trade in Services

Introduction

Section 27(1)(b) of the South African Constitution guarantees everyone the right to have access to sufficient food and water. It obligates the state to achieve the progressive realisation of these rights in Section 27(2). The Water Services Act No. 108 of 1997 (WSA) elaborates on this and states that everyone has the right of access to basic water and basic sanitation. Minimum standards for what this means were published in Government Gazette in 2001 (GG no. 22355 GN 509, 8 June 2001. Reg. 3). Furthermore, the Constitution enshrines an environmental right, which includes the right to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that i) prevent pollution and ecological degradation; ii) promote conservation; and iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development (Section 24 (b)). With respect to water, this has been elaborated further within the National Water Act No. 36 of 1998 (NWA).

This raises the question as to whether international agreements relating to trade in services will impact on the government's ability to meet its service delivery obligations as enshrined in the Constitution. This includes raising standards of basic service delivery – something that was a central feature of the 2006 Local Municipal Elections - and can impact on government's ability to manage the water resource sustainably for current and future generations in line with its constitutional mandate.

The Prevailing Situation

The World Trade Organisation (WTO) General Agreement on Trade in Services (GATS), which entered into force in 1995, provides the framework for ongoing multilateral negotiations on liberalising services. Services are also on the table in bilateral and regional trade negotiations. In particular, they are included in the USA-SACU free trade negotiations, the EU-South Africa Trade Development and Cooperation Agreement (TDCA) (which reiterates commitments under GATS and

includes provisions for parties to endeavour to work towards deeper liberalisation commitments within five years) (Ullrich, 2004), and the EU Economic Partnership Agreement (EPA) negotiations. Although South Africa is not party to the EPA negotiations, its neighbouring states are, which means there could be implications for regional trade in services arising from this.

The relatively new inclusion of services into trade negotiations constitutes a radical departure from the previous focus of opening up borders for trading goods. The scope and implication of trade in services is far from clear at this moment in time. Referring to GATS, Renato Ruggiero in his capacity as WTO Director-General said, “I suspect that neither governments nor industries have yet appreciated the full scope of these guarantees or the full value of existing commitments” (Ruggiero, 1998 cited in Sinclair, 2005:6). This lack of clarity on scope and implication means that today there are heated negotiations and discussions on definitions of service sectors, rules of negotiation, extent of coverage amongst a wide range of technical issues.

GATS covers all measures affecting trade in services, and not just services themselves (GATS Art. I, 2, cited in WWF, 2003:14). ***This has far reaching implications for government policy and regulation.*** Trade in services is divided into 163 sub-sectors and into four different modes of supply:

- Mode 1 - cross border supply.
- Mode 2 - consumption abroad.
- Mode 3 - commercial presence.
- Mode 4 - presence of natural persons.

This goes beyond the scope of the General Agreements on Tariffs and Trade (GATT), which is applicable to trade in goods only, because it includes operations within a member country and not just trade across borders. Through Mode 3 (commercial presence), GATS contains elements of an investment agreement because it includes disciplines on how a country may regulate foreign companies operating within its borders (WWF, 2003). South Africa has already made significant commitments under GATS, particularly for a developing country (Sinclair, 2005).

These include commitments for consultancy services in sewage services (CPC¹ 9401), and sanitation and similar services (CPC, 9403), which are sub-sectors under environmental services (Wilson, 2003). In addition to this, South Africa has virtually made full commitments in Modes 1 to 3 for engineering and construction (Sinclair, 2005). Presence of natural persons (Mode 4) is limited to those with expertise listed in the horizontal section who can reside in South Africa for up to three years. The horizontal section lists limitations that apply to *all* the sectors for which commitments have been made. The vertical section specifies the sector or sub-sector in which a commitment is being made, along with any limitations on market access or national treatment applying to that sector or sub-sector. ***Although South Africa has made no explicit commitments in water delivery, a number of its existing and proposed commitments are likely to impact on water supply and sanitation*** (see following section for further discussion).

Negotiations for increased liberalisation of services are continuing under GATS. There are two main aspects to this. The first is market access, which proceeds along the lines of offers and requests. Each country submits a list of requests to other countries where it wants market access, and a list of offers for the services it is prepared to open up. In this way, countries can be selective about where they wanted to protect services (e.g. for public interest) and where they want to encourage international suppliers to enter their market. Once a country lists a service under GATS, a commitment is made and it is considered to be difficult (and expensive) to change that commitment, thereby locking countries in. Countries can attach conditions to the commitment, which should allow for some degree of protection. These conditions need to be explicitly stated however, and ***countries might either lack the capacity to assess the nature and level of protection needed, or the need for specific protection might only be apparent at a future date***. Article XIX of GATS also builds in “progressive liberalisation” whereby countries are required to continue opening up sectors.

The second aspect of services negotiations is on “rules”. These include the development of disciplines for trade distorting subsidies (GATS, Art. XV), an

¹ CPC refers to the United Nations Central Product Classification list.

emergency safeguard mechanism (GATS, Art. X), government procurement (GATS, Art. XIII) and a mandate for developing disciplines for domestic regulation (GATS, Art. VI.4) (WWF, 2003). *These negotiations have far reaching implications as they could apply horizontally, i.e. for all services, not just those listed under the market access schedules. These negotiations are supposed to be completed before the conclusion of market access negotiations (Benitah, 2004).* In recent pre-negotiations, members looked at how informal discussions on emergency safeguard measures should be structured. These measures would allow for temporary restrictions to be applied in cases where foreign competition results in negative impacts on domestic industry in liberalised sectors (ICTSD, 2006).

Due to the fact that very few countries submitted offers under GATS within the agreed time-frames, the focus of engagement has shifted to rules and methods of negotiation. In particular, the EU has introduced the concept of Benchmarking - also referred to as complimentary approaches - and horizontal commitments. These are significant changes to the existing rules because they shift away from voluntary commitments – the basis for offers and requests in specific sectors – towards mandatory commitments, and are being fiercely resisted by a number of developing countries. The intention behind them is to lock in commitments across a range of sectors. For example, the EU presented a paper on services at an informal consultation held on 27-28 October 2005 in which a target is set for developing countries to make commitments in 93 out of 163 sub-sectors (Khor, 2005a; Khor, 2005b). The EU has linked these demands for commitments in services to negotiations in agriculture and NAMA (Khor, 2005a). Furthermore, the USA has called for a “review of the GATS architecture” and introduced the negative list approach into some of its bilateral negotiations, whereby countries list the services sectors they *do not* want opened up (Keet, 2004). All other sectors are deemed to be included in a services agreement. Again, *this switching from a ‘positive’ list, whereby countries list the services they want to open up, to a ‘negative’ list where countries list what they do not want to open up, is a radical departure from the original emphasis of voluntary commitments. It means that the default is for all of a country’s services to be opened up.* This is highly problematic as countries would have to list *all* of the services they want to exclude. This might not be possible for several reasons.

- There is still disagreement on the definition of some service sectors.
- A country might not be aware of the economic potential of a services sector, which is currently small or non-existent, and by not listing it, curb its potential to grow. *This provides an in-built bias against developing countries whose services sectors are far less developed than those of industrialised countries.*
- Changing from a positive to a negative list approach, means that a country needs to analyse the likely impact of liberalisation of *all* services sectors, and not just those they intend opening up. Again, developing countries will be at an extreme disadvantage because they will have limited capacity to do this. SACU has resisted this approach in the USA-SACU bilaterals (Otto, 2005).

In brief, there is a high level of uncertainty as to how the negotiations on GATS and services chapters of bilaterals will move forward. *Areas that are likely to have a significant impact on water policy to consequently need to be monitored include:*

- **Protection mechanisms** – what mechanisms can a country put in place to protect vulnerable or public interest sectors?
- **The right to regulate** – to what extent will commitments under GATS limit South Africa's ability to define and change national and local regulatory systems?
- **Rules of negotiation** – should disciplines apply horizontally, or on a sector specific basis; what trade offs could be made between services and agriculture and NAMA?
- **Benchmarking** – will minimum commitments be required in terms of the number of sectors listed under GATS and the degree of liberalisation, and if so what will they be?

- **Sector specific market access** – what commitments will South Africa make in sectors that impact on water resource management or water services delivery?

We can now turn our attention to the way that these relate to water policy.

The Current Linkages between Trade and Water

In order to understand the context in which these linkages can be assessed, the reader can dwell for a few moments on two critical quotations, because they help to lay the foundation for the subsequent analysis.

“In order to protect water resources, regulators need flexibility to implement adaptive management plans, which can respond to changes in environment and use patterns. International trade rules, however, favour legal security and predictability, seeking to “lock in” policy choices once they are established. This is particularly problematic in light of the fact that domestic water laws are in a state of flux.” (WWF, 2003:1)

“...in a small way, the status of water services in GATS could well be seen as a test of commitment to the developmental nature of the Doha agenda, to the Monterrey decision, to the Millennium Development Goals, because they are all interrelated.” (Mike Muller, 2003, cited in Rudin, 2005:2)

The provision of water to households, industry and agriculture is inexorably linked with its management as a resource. Traditionally people have looked at GATS and how it might impact directly on water services delivery. But the delivery of water cannot be separated from the treatment of wastewater, the collection and storage of water and the management of catchments. All of these require a myriad of services such as construction, financing, government procurement, specialist consultancy, nature and landscape protection. All of these could fall under GATS and therefore become relevant.

Due to the fact that South Africa sees water delivery as a public function, with the responsibility for implementation being delegated to various levels of government, they have refrained from making commitments in water delivery. However, commitments have been made, and are being considered in sectors that could impact on water delivery and management.

The uncertainty surrounding the GATS negotiations under the Doha Round, and in associated bilateral negotiations, means that it is very difficult to assess what the current impacts on water policy of services commitments under GATS and other (bilateral) agreements are. *The DTI argues that because South Africa is making no commitments on water and sanitation services, that there will be minimal impact on water service delivery and policy. Others argue that water is a component of numerous subcategories under the list of service sectors subject to GATS (Flecker & Clarke, 2005).* Submissions from the European Commission (EC) and others have included requests for commitments in “collection, purification and distribution of water through mains”. This sub-category falls under “water for human use and wastewater management” in the category “environmental services” in the EC’s proposed new classification system (EC, 1999). Previously there was no specific category (or sub-category) for water reticulation. Definitions and scope of environmental services are continually under debate in the WTO. The EC has put forward its own classification system for core environmental services, based on multiple end uses, and it has asked South Africa to make its offers in line with this classification system (Wilson, 2003). *Although South Africa does not intend to grant these requests, the fluid nature of negotiations, and ambiguity around definitions, means that it is important to watch for commitments that could inadvertently include water.*

Aside from direct commitments in water services, water practitioners and policy makers will need to look at two indirect impacts on water supply and sanitation.

- *The first is the impact of general or “horizontal commitments” – i.e. those that apply across all sectors. This is important because it will affect policy space, encouraging a particular kind of governance that could apply to regulation, subsidies, government procurement and associated fields.*

- *The second is the impact of related sector-specific commitments, for example on wastewater treatment or construction services.*

What follows is a description of some of the areas where trade agreements could impact on water policy.

Water Allocation and the Reserve

South Africa's National Water Act of 1998 says that we cannot take all of the water out of a river. It designates a minimum reserve for basic human needs and ecological functioning. Water in excess of the reserve can be allocated to other uses, but should always be justified against the deterioration it causes in river health and services. South Africa has embarked on a process for Water Allocation Reform (under the unfortunate acronym of WAR), which is in an advanced stage of planning and implementation. It will provide a framework for the granting of licenses for water abstraction and use, first being rolled out in stressed catchments where water has been over-allocated. This will specify the licensee, quantity, location and duration of the licence of no more than forty years. If the license needs to be amended to ensure that there is sufficient water in the Reserve for ecological functioning and meeting basic needs, the State is not obliged to pay compensation (NWA, section 22(7), cited in WWF, 2003).

South Africa can put in place quantitative restrictions in sectors where it has made commitments provided these restrictions are specified explicitly. If they are not specified then, for example, in sectors where market access commitments have been taken, South Africa cannot limit the number of service suppliers, the total value of service transactions, the total number of service operations or quantity of output, the total number of people employed, or the participation of foreign capital (GATS, Art. XVI). Furthermore, it cannot put in place "measures which restrict or require specific types of legal entity or joint venture through which a service provider may supply a service" unless specified in the Schedule (GATS, Art. XVI(e)). This could have an implication for water allocation in future, but the current state of knowledge does not inform us sufficiently to make a firm prediction of how this will

be. Further research is necessary to assess this and ensure that proper mechanisms are put in place to maintain sovereignty over water abstraction and allocation.

In the absence of better knowledge of this critical issue, one can speculate about possible ramifications. An analysis based on an extreme interpretation of the Article is therefore potentially informative. Further verification is needed to assess the risks and likely interpretation. Nevertheless, ***it is important to point out that there are risks which could depend on how the article is interpreted.*** It is possible that quantitative restrictions could apply through a secondary effect to the total amount of water deviated or extracted from a particular catchment. For example limiting the number of water licences could put a de facto cap on the number of tourism operators in a particular area that could constitute a “limitation on the total number of service operations or on the total quantity of service output”. Whether or not this is in compliance with GATS depends on the interpretation of GATS, Art. XVI, and the nature and extent of South Africa’s services commitments (WWF, 2003). WWF argue that the extent of GATS could go even further if it is not clarified (WWF, 2003). If water is an input into a service sector, for example power generation, then limiting how much water can be abstracted from a river puts a de facto cap on the total value of services transactions, which is illegal under GATS (WWF, 2003).

Water Quality

One commentator notes that GATS could potentially limit South Africa’s ability to set standards for pollution discharge, or to require environmental impact assessments, if they are found to be a burden on international trade in services (WWF, 2003:1). This is a complex issue in its own right because it involves legal interpretations of technical terminology, and detailed analysis of the ramifications of this are beyond the scope and budget of the current study, so it is merely being flagged at this time as a possible issue for future consideration.

Water quality could be impacted by services related to ores and minerals or the production of electricity. Hydroelectric power plants and dams could fall under future energy services (WWF, 2003). These would obviously impact on both the quality and availability of water resources.

Water Service Delivery

The EC includes “water collection, purification and distribution services through mains, except steam and hot water” and “waste water services” as two categories under “water for human use and wastewater management”, in its definition of environmental services (S/CSS/W/38). It has made market access requests in these areas. To date South Africa has not made offers in response to these requests. However *if South Africa ever does concede to these requests, possibly in exchange for market access in other areas, it will be extremely important to look at what the direct implications are for services delivery.*

Even without direct commitments in water services, GATS is likely to impact on them through horizontal commitments. For example, negotiations on subsidies, government procurement and domestic regulation relating to services are under way and there is no agreement on whether these will apply to bound sectors only (i.e. those specifically listed), or to all services. It is prudent to assume that even if they currently apply only to services in which South Africa has made commitments, the mandate of GATS for progressive liberalisation, and the pressure by the EU and USA to include services in bilateral negotiations, means that whatever is set in terms of horizontal commitments, will apply to more and more sectors. Furthermore, the exclusion from GATS of public services supplied, “neither on a commercial basis nor in competition with one or more suppliers” (GATS, Art. 1.3 (c)), is insufficient to protect public services, because almost all service delivery occurs through a mix of public and private operators (Swenarchuk, 2004; Keet, 2004). *It is consequently almost impossible to talk about a pure, non-commercial, public service supplier.*

What does this mean for service delivery in South Africa? Key areas to look at are government grants to service delivery, such as the equitable share and Municipal Infrastructure Grant (MIG) and whether these could be considered as subsidies, subject to GATS; Free Basic Water and the water ladder; and Section 78 Processes. Section 78 Processes refers to section 78 of the Municipal Systems Act No. 32 of 2000, which *inter alia* outlines a process for municipalities to determine a model for delivery of water services.

Government Grants and Subsidies

Negotiations under GATS aim to develop multilateral disciplines to avoid trade-distorting effects of subsidies (Art. XV). The desirability and feasibility of developing these disciplines differs from member to member (Benitah, 2004). ***South Africa needs to make sure that whatever is negotiated, does not limit its ability to meet public policy objectives.***

Part of the payment for the provision of Free Basic Water comes from national government via the equitable share principle. Additional support to poor households for basic service provision comes via indigent grants, administered at a municipal level. The Municipal Infrastructure Grant (MIG) provides finances from national to local government for infrastructure development. Can any of these financing mechanisms be seen to distort trade in services? Benitah (2004) argues that because subsidies to consumers are not covered by WTO rules for goods, the same should apply for services. However it would be important to make this explicit in any definition of subsidy within the services sector (Benitah, 2004). If this is the case, then financial support to poor households to purchase services, such as through an indigent grant would not be covered by GATS rules. There is clearly room for debate over this critical issue and current knowledge on the topic is simply inadequate to suggest a probable outcome with any degree of certainty.

Other financial transfers such as the equitable share, tax breaks for local service providers, preferential credits and guarantees would have to be carefully examined to assess whether or not they could fall under the GATS subsidies disciplines currently being negotiated. Zunckel (2006) maintains that the GATT provides a good source of reference when speculating as to how subsidies disciplines may be interpreted under the GATS. Notably he point out that GATT Article 3.8(b) establishes an overarching principle that “provisions shall not prevent the payment of subsidies exclusively to domestic producers” thereby allowing countries to exclude foreigners from subsidy schemes. Keet (2004) argues that GATS will place constraints on public expenditures on services if it does not include limits in its offers. For example, if South Africa does not specify limitations on national treatment to

foreign service providers within the sectors it makes offers, they would be as eligible for financial support as local companies are. This might prove to be unaffordable. This could extend to national service-delivery NGOs, who could lose government funding on the grounds that it needs to be shared with foreign NGOs (Keet, 2004).

Free Basic Water and the Water Ladder

Free Basic Water has been set at 25 litres per person per day, or six kilolitres per household per month (Government Gazette, 2001). This is the minimum standard for basic water supply, which everyone has a right to in terms of the Constitution. It is envisaged that this quantity, which is insufficient for most households, will increase once it has been universally met. There are certainly known international agreements that could be interpreted in a way that suggests higher levels of delivery can be considered a basic right (Phillips *et al.*, 2006). This progressive increase in access to water is known as the water ladder.

GATS lists six types of quantitative restrictions that are not allowed in areas where countries have made full commitments (Sinclair, 2005). These include restrictions or limitations on the number of service suppliers, the total value of service transactions or assets, the total number of service operations or service output, the total number of people employed, types of legal entity or joint venture, percentage of foreign capital (Sinclair, 2005). *Because South Africa has not made full commitments, and does not intend to in water services, these restrictions will not apply directly in the short-term. However, should commitments ever be considered, a number of safeguards would need to be put in place to protect Free Basic Water and the Water Ladder.* In addition, it is important to explore some of the financial mechanism for supplying Free Basic Water as outlined above, to ensure that they are not in contravention with possible commitments in other services areas. *Other policy objectives, such as BEE or local ownership, could also be illegal unless explicitly listed.*

Section 78 Processes

Section 78 of the Municipal Systems Act No. 32 of 2000 outlines a process whereby municipalities select who will supply basic services, including water. The first stage is to assess whether the municipality has internal capacity to supply the service. If not they look to see if any other public entity such as a neighbouring municipality or water utility, can supply the service. If not they look to the private sector as a possible Water Service Provider (WSP). During this process, they are obliged to consult with civil society and organised labour. *GATS negotiations on government procurement are likely to have an effect on this process, and perhaps make it more difficult for municipalities to choose a public provider over a private one, when it might be deemed to operate, “on a commercial basis or in competition with one or more suppliers”.* The definition of “commercial basis” in GATS is unclear and problematic, because many municipal services are provided by a mix of public and private sectors (Swenarchuk, 2004). *The fact that Section 78 applies to all public service delivery, including energy and domestic waste, might also complicate which elements are covered by GATS and which are not.* This is clearly an area requiring further research and discussion because it is beyond the scope of the current project.

Regulation

Negotiations are mandated under GATS to develop disciplines on domestic regulation in order to ensure that it does not constitute a barrier to trade and is, “not more burdensome than necessary” (GATS, Art. VI, cited in WWF, 2003). The outcome of these negotiations will impact on South African measures relating to qualification requirements and procedures, technical standards, and licensing requirements. *The interpretation of, “not more burdensome than necessary” will not be for South African water policy makers to decide. It will be interpreted through the WTO system.* For example, a necessity test is proposed that would include a list of “legitimate objectives”, which could then be judged by the WTO panels. Objectives might not include those related to the conservation of water, wetlands and ecosystems (WWF, 2003). A second concern is that proposed South African domestic regulations might have to be submitted to the WTO for all members to comment on before it can be passed and implemented (WWF, 2003). This would be possible if

negotiations result in the establishment of a priori transparency disciplines (WTO, 2000, cited in WWF, 2003). This could complicate the existing South African multi-stakeholder process to develop a regulation strategy.

In their 2003 paper, WWF argues that the interpretation of WTO Secretariat notes implies that GATS would also cover self-regulatory or non-binding measures. This could cover “best practice” standards in South Africa (WWF, 2003).

Domestic regulation negotiations include provision for licensing fees. Although nothing is concluded, certain proposals indicate that it might be difficult to use licensing fees to internalise negative environmental externalities (WWF, 2003). This could impact on South Africa’s polluter pays principle, which is enshrined under the National Environmental Management Act (No. 107 of 1998) and recognised in the new Water Pricing Policy.

Water Resource Management Institutions

GATS covers regulatory measures of national, provincial and local government, as well as of non-governmental organisations that are performing government functions. This is a very broad reach and would apply to Catchment Management Agencies (WWF, 2003:25). Again, the relevance and applicability of this depends on the outcome of the negotiations on rules, and whether they apply horizontally or to bound sectors only, remembering that, “progressive realisation” means that more and more sectors will be subject to GATS rules.

Links to Other Service Commitments

Water resource management and service delivery is dependent on, or influences, a number of other service sectors. Swenarchuck (2004) lists engineering and project management services for water supply and sanitation work; sewage services; sanitation and similar services; business services; construction services; technical testing and analysis services including quality control and inspection; urban planning and landscape architectural services; architectural services; nature and landscape

protection services; other environmental services. WWF (2003) adds water service provider and waste water treatment providers; water infrastructure services; water-demanding services (such as construction, transport, tourism, energy/industrial production) and water polluting services. *It is important for water resource managers and water authorities to know what South Africa's commitments and intentions are in these service sectors. Analysis then needs to be done on how these impact on water policy and strategy, including how they restrict government policy flexibility over water services and water resource management.*

Government Policy Direction

South Africa has made no explicit offers on water services, although there are varying commitments in related services such as sewage, sanitation, engineering and construction. South Africa does not intend to make specific commitments in water services. However, many of the principles, laws and management objectives in South Africa's water delivery system are compatible with GATS and motivated by the same logic (Rudin, 2005). These include full cost recovery, separation between water service provider and water services authority, punitive measures for non-payment, financial sustainability at a municipal level amongst others.

Traditionally, DTI has been the key custodian of trade negotiations, requesting input from DWAF, DEAT and other departments when it deemed it to be relevant. This has had limited success because DTI is not aware of all the linkages between trade and water policy. As shown, there are implications for water services and resource management, even when the word "water" does not explicitly occur. DWAF and DEAT has had limited involvement in trade negotiations, aside from firmly stating the need to protect public services. This paper is a first step in articulating some of the linkages so that different government departments are able to sit together and discuss the likely impact of particular negotiation positions on policy options.

At the time of writing, limited thought within Government has been given to safeguards that can be put in place in order to protect public policies and policy flexibility.

Other Civil Society Actors

Internationally, and with support from many South African civil society organisations, there have been calls to, “stop the GATS attack”, “shrink or sink” the WTO and other measures aimed at curtailing what many civil society organisations see as the skewed and devastating impacts of economic globalisation. Tactics and strategies vary from policy engagement to changing the words in text, to mass mobilisation and demonstration. Civil society has been particularly vocal in its call to protect public services, and active in exposing the duplicity of many Northern governments that preach development, but secretly make strong-arm requests for market access in public services (WDM, 2003). Civil society has also played an important role in drawing the links between different commitments and their impact on poverty and sustainable development. Recently there has been a call for GAPS, a General Agreement on Public Services by Consumers International (CI) and other activist groups.

In South Africa, non-government players are consulted on trade policy through Nedlac, which provides a forum for business and labour to negotiate specific positions. It has very limited space for broader civil society groupings.

Summary

South Africa has taken a clear decision to protect water and sanitation services as a public good. It has no intention of listing them under GATS, or of including them in any of its bilateral negotiations. However, it has made commitments in related sectors including energy services, construction and wastewater treatment that could affect water delivery. The European Commission and other trading partners continue to put pressure on developing countries to open services further – including water – in exchange for movement in agriculture and NAMA negotiations. Ongoing negotiations under GATS related to horizontal commitments, benchmarking, positive versus negative approaches, government procurement, regulation, subsidies and other cross-cutting issues are also likely to impact on the water sector in a way that is not at all self-evident. It is therefore not possible to say that GATS will have no effect on South African government’s ability to deliver water and meet its constitutional obligations.

GATS applies to all levels of government. Commitments made by national government (DTI) will therefore be binding on local government and could, for example, influence Section 78 processes.

Conclusion

This study has been an exploratory one, with the sole purpose of seeking to come to terms with some of the potential problems and issues that arise from international trade agreements to which South Africa is a signatory. The study has reached that objective, within the time and other resource constraints that defined the structure of the team and the scope of work. It is clear that at least four major conclusions can be drawn at this preliminary stage. These are best dealt with as four individual categories:

- Issues of uncertainty arising from the inherent complexity of trade negotiations.
- Capacity building associated with South Africa in its transition to democracy and post-Apartheid re-engagement with the global economy.
- The need for a strategic shift in stance of Government from a reactive to a proactive footing.
- The need for a rigorous research agenda to underpin future decision-making.

Issue No. 1: The Inherent Uncertainty Factor

Trade negotiations are by their very nature, extremely complex. The jargon that is used is specific and is deeply embedded in the Legal and International Relations professional discourses. Attempts to work across disciplines is inherently difficult, partly because of the different language used by professionals in the various discourses associated with trade, but also partly because there are many grey areas associated with the large number of core processes at work. International trade involves a near infinite array of potential products and services, so the clustering and linkage factor is needed to simplify negotiations to the extent that they can take place

at all. But therein lies a danger that must be taken very seriously indeed. The specific dangers are as follows:

- There are just too many unknowns, which becomes a driver of risk in its own right. These need to be reduced considerably – a factor that is addressed below.
- Given this inherent complexity, it is impossible to say at this stage exactly what linkages exist between international trade policies and the water sector. We have noted some linkages that we believe exist, but in many cases the cause-effect relationship is complex and therefore nebulous at best. The balance of probability suggests that there are linkages, but we cannot say with any great degree of certainty, exactly what those linkages are and then ascribe a specific number (or value) to them. At best it is an inexact science given our current level of understanding.
- The prudent scientific way to deal with conclusions of this nature is to apply the Precautionary Principle, which in this case suggests two specific courses of action. The first is to develop greater understanding of the complexity through a rigorous research agenda (dealt with below). The second is to build capacity in the various functional actor groups that drive trade negotiations on the one hand, or are affected by those trade negotiations on the other (dealt with below).

Issue No. 2: The Challenge of Capacity Building

Having noted the issue of uncertainty above, we can now focus on the problem of capacity building. The global market is certainly not characterized by a level playing field. The trade negotiations of highly developed countries like the USA, or highly developed regional groupings like the EU, are supported by large contingents of professionals, all of who are trained in specific fields, but eventually deployed in harmony in order to maximize the advantage accruing from a specific negotiated outcome. It is probably true to say that the entire trade negotiations support team of continental Africa is considerably smaller than the team from either the USA or the

EU. So large is this disparity that the task is daunting indeed. Yet given the impact of the outcomes of such negotiations, it is vital that the developing world rises to the occasion and builds the capacity needed. South Africa is confronted by a dual challenge in this regard:

- The legacy of Apartheid has left the country isolated from world markets and largely uncompetitive in its fundamental structure – highly reliant on the export of primary resources.
- At the time when South Africa started to engage the global markets, there was a major shift in trading rules, which introduced new levels of complexity, necessitating a rapid catch-up game that is difficult to sustain.

These two elements are important if South Africa is to meet the strategic objectives of growing the economy in a way that creates sustainable jobs for all, in a way that continues to meet the aspirations of the previously disadvantaged majority. If we get this wrong, political instability is a likely outcome, to the detriment of all. The solution to this, at least as a point of departure, therefore lies in the two issues noted below. In order to be effective, capacity building will have to become part of an official Government strategy, which is given the type of support and range of resources needed to sustain it over time.

Issue No. 3: Need for a Strategic Shift from a Reactive to Pro-active Posture

It is clear that South African trade negotiations are characterized by a reactive posture at this time, specifically when it comes to the water sector. When a round of trade negotiations is imminent, DWAF suddenly receives a request for information at short notice. This is seldom well thought through and at best represents an *ad hoc* approach to a complex problem. This is clearly not the best way forward.

What is needed is a shift over time to a more pro-active posture. This will need to be predicated on a growing awareness within Government of the complexity of the issues

at hand, specifically with respect to the linkages between trade agreements and water. To start this process, the following is recommended:

- There is a need to sensitize the functional actors involved in trade negotiations (DTI), that their actions have significant implications for other sectors, specifically water. This needs to be raised as a strategic issue, given the fact that future economic growth and development in South Africa (and indeed in the four most economically developed countries in the SADC region) is water constrained. The uncertainty of global climate change merely exacerbates this basic fact by introducing yet another level of uncertainty into the overall process.
- There is a need to sensitize the functional actors representing economic sectors that are impacted on by trade negotiations that the national best interest will be served by cooperation. These functional actors include DWAF as the national custodian of water, DEAT as the national custodian for environmental and tourism affairs, and the Department of Agriculture as the national custodian of farming issues. Other actors are also likely to have an interest so this list is not exclusive.
- A series of workshops should be convened between these functional actors, possibly using this report as a catalyst. Those workshops should be designed in such a way as to sensitize the main functional actors to the complexity of the issues at hand, in a way that starts to move towards a common research agenda. That research agenda can then be deployed in such a way as to inform the decision-making process. This will enable a shift over time, from a reactive to a pro-active posture, for the unlocking of maximum benefit for the people of South Africa in the future.

Issue No. 4: The Need for a Rigorous Research Agenda

The need for a research agenda is self-evident. This report has shown that there are many uncertainties, but also highlighted the fact that linkages do exist. The Executive Summary lists 28 bullet points, each of which contains some component of a potential

future research agenda. In this regard, the authors of this report make the following recommendations:

- One of the outputs of the workshops called for under Issue No. 3 above is a list of strategic topics that need thorough research. In essence this will represent a list of research needs as expressed by the functional actors themselves.
- This should then be work-shopped within the research community, specifically between international trade lawyers, strategic water resource planners and managers, and major national research entities such as the HSRC, the CSIR and other recognized research institutes.
- Specific attention should be given during this process to establishing linkages with potential funders of that research, including foreign trading groupings.
- The research agenda should also focus on capacity building and therefore have an educational and training component built into it at the design phase.

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List of Acronyms Used

CMA	Catchment Management Agency
CPC	Central Product Classification
DEAT	Department of Environmental Affairs and Tourism
DTI	Department of Trade and Industry
DWAF	Department of Water Affairs and Forestry
EC	European Community
EPA	Economic Partnership Agreement
EU	European Union
GATS	General Agreement on Trade in Services
GATT	General Agreement on Trade and Tariffs
NAMA	Non Agricultural Market Access
NWA	National Water Act
NWRS	National Water Resources Management Strategy
RIDS	Regional Industrial Development Strategy
TDCA	Trade Development and Cooperation Agreement
WAR	Water Allocation Reform
WSA	Water Services Authority
WSP	Water Services Provider
WTO	World Trade Organisation
WUA	Water User Association

Glossary of WTO Terms and Key WTO Principles

Agreement on Agriculture

The WTO Agreement on Agriculture (AoA) is *lex-specialis* to the GATT and regulates trade in agricultural goods. Forestry products do not fall under the AoA and in the WTO are covered in the NAMA (see below) negotiations.

Bilateral

Bilateral agreements are agreements between two partners; that can be two countries, two groups of countries, or a country and a group of countries. An example for the latter one is for example the free trade agreement between the EU and South Africa (the SA-EU TDCA).

Boxes

The so-called “boxes” in WTO terminology are used to classify domestic support measures, in other words subsidies, according to their trade distorting effect. They are given the colours of traffic lights: green (permitted), amber (slow down – i.e. to be reduced) and red (forbidden). However, this categorisation only applies to **non-agricultural goods**.

- For **agricultural products** the (WTO) Agreement on Agriculture provides for a slightly different categorisation, the so-called “amber box”, the “blue box” and the “green box”.
- For agriculture the **amber box** covers domestic support measures considered to distort production and trade, such as price-supporting measures and subsidies directly related to production quantities (per ton payments). Such measures must be kept to a minimum (the so-called “*de minimis* level”), which is set at 5 % of agricultural production for developed countries and 10 % for developing

countries. The thirty-four WTO members, whose amber box subsidies exceeded these levels at the beginning of the Uruguay Round, have commitments to reduce these subsidies. The reduction commitments are expressed in terms of a total Aggregate Measurement of Support (AMS). The reduction commitments are based on the so-called “base total”, which is the starting level for reductions; the annual reduction commitment (for example 5 %) for the relevant year is the so-called “annual bound”. The level to be finally achieved is the so-called “final bound” level.

- The **blue box** is an exemption from the general rule that all subsidies linked to production must be reduced or kept within defined minimal (“*de minimis*”) levels. It covers payments directly linked to acreage or animal numbers, but under schemes which also limit production by imposing production quotas, or requiring farmers to set aside part of their land.
- **Green box** measures are defined as measures that have no, or at most minimal, trade distorting effects. They are not subject to any WTO limitations. These subsidies have to be government-funded (not by charging consumers higher prices) and must not involve price support. They tend to be programmes that are not directed at particular products, and include direct income support for farmers, which are not related to - or are “decoupled” from to use the technical jargon - current production levels or prices. Other green box measures include research assistance, pest and disease control measures, training services or payments under environmental programmes.

CAP

Common Agricultural Policy (CAP) is the EU’s comprehensive system of production targets and marketing mechanisms designed to manage agricultural trade within the EU and with the rest of the world.

Capital Account

The capital account is the account on the balance of payments that records movements of funds between countries. The capital account would include foreign direct investment (i.e. investment in South African companies, or building production, or retail facilities in the country) and foreign investment in the bond market, or the securities exchange.

Cotonou Agreement

The Cotonou Agreement is the successor of the Lomé Convention. It is a non-reciprocal trade agreement between the EU and the African, Caribbean & Pacific (ACP) group of countries. Non-reciprocity means the unilateral granting of trade preferences by one partner of the agreement (the EU in this case), without getting equivalent reverse preferences. Article 24 of GATT only provides for reciprocal trade agreements, thus the Cotonou Agreement does not qualify under this provision. Since the Cotonou Agreement is inconsistent with WTO law, it is based on a special waiver, which permits the granting of unilateral preferences on a transitional basis. In this transitional phase (until 2008) the Agreement needs to be replaced by Economic Partnership Agreements. Several Southern African countries are beneficiaries under the Cotonou Agreement.

Countervailing Measures

Countervailing measures refers to action taken by the importing country, usually in the form of increased duties, to offset subsidies given to producers or exporters in the exporting country.

Current Account

The current account is the account on the balance of payments that records international trade. Most of the current account is due to the trade in goods and trade in services. Small items such as transfers (i.e. aid flows) are also included.

Customs Union

The formation of customs unions is permitted by Article 24 of GATT. Like a Free Trade Area (FTA), a Customs Union (CU) provides for free trade between the respective members. The difference between the two types is that in a CU, all members apply the same tariffs with respect to their external trading partners, whilst within an FTA each member can unilaterally set the tariffs for its external trading partners. In other words, the external tariffs (with respect to non-members of the CU or FTA) can differ between the members of an FTA whilst they are applied identically by the members of a CU.

Distortion

Distortion is said to occur when prices and production are higher or lower than levels that would usually exist in a competitive market.

Economic Partnership Agreements

To replace the current Cotonou Agreement with reciprocal trade agreements, the EU currently negotiates so-called Economic Partnership Agreements (EPA) with its ACP partners. The first phase of negotiations with all ACP countries is now completed and the second phase, which sees the negotiations between the EU and different regional groupings, is currently in progress. Since the trade relationship with the EU is shifting from a non-reciprocal to a reciprocal one, the EPA negotiations bring major changes for the beneficiaries under the Cotonou Agreement.

Free Trade Agreement

The legal institute of a Free Trade Agreement (FTA) needs to be seen in the context of the “most-favoured-nation” principle, which together with the “national treatment” principle forms the two so-called non-discrimination principles in WTO law. Normally, setting up a FTA or CU would violate the WTO principle of equal treatment for all trading partners, since the partners of the FTA agree on preferential conditions among each other, which are not granted to their other trading partners.

Article 24 of GATT allows regional trading arrangements to be set up as a special exception, provided certain strict criteria are met.

- Article 24 says if an FTA or CU is created, duties and other trade barriers should be reduced on substantially all sectors of trade in the group. Non-members (to the FTA) should not find trade with the group any more restrictive than before the group was set up. FTAs can be entered into by countries of a region, like for example SADC, or by countries (or groups of countries) of different regions, like the SA-EU TDCA.

General Agreement o Trade and Tariffs

The General Agreement on Trade and Tariffs (GATT) regulates the trade in goods by means of agreed-upon rules at the global level.

General Agreement on Trade in Services

The General Agreement on Trade in Services (GATS) regulates the trade in services by means of agreed-upon rules at the global level.

Generalized System of Preferences

Generalized System of Preferences (GSPs) are programmes by developed countries granting preferential tariffs to imports from developing countries.

Harmonized System of Tariffs

This is an international nomenclature developed by the World Customs Organization, which is arranged in six digit codes, allowing all participating countries to classify traded goods on a common basis. Beyond the six digit level, countries are free to introduce national distinctions for tariffs and many other purposes.

Least Developed countries

These are Least Developed Countries (LDCs) in the WTO nomenclature.

Modalities

Modalities are numerical targets and formulae describing the framework for WTO member commitments. In practice the member's do not negotiate tariff reduction commitments on each and every tariff line. They would rather agree on an overall tariff reduction by a specified percentage. The Uruguay Round outcome saw an agreement to reduce tariffs by 36 % for developed countries. This 36 % figure is the modality for tariff reductions, and the members then work out the exact reductions for all respective tariff lines. An example for a modality on the reductions of export subsidies would be to reduce export subsidies by 60 % in value and 40 % in volume over a period of 5 years.

Most Favoured Nation

Most Favoured Nation (MFN) treatment means that a country, which grants another country a certain trade condition (a lower tariff for example), must grant this condition to all other WTO member countries. In other words, it must not discriminate against any country through this mechanism.

Multilateral

In terms of international trade and trade agreements, reference to the multilateral level means the WTO level. Most nations, including almost all the main trading nations, are members of the WTO system. However, some are not, hence the word "multilateral" is used to describe the system instead of "global" or "world" one. Multilateral also contrasts with actions taken regionally, or by other smaller groups of countries. This is different from the word's use in other areas of International Relations where, for example, a multilateral security arrangement can be regional.

- With the exception of Plurilateral Agreements (see below), all WTO agreements are multilateral agreements. A WTO agreement can only be concluded (or amended), if all members consent. If only one member objects, no agreement can be reached. On the other hand, any member that wants to accede to the WTO, and therefore to the multilateral trading system, has to accede to all agreements (the

so-called “single undertaking” mechanism), meaning that a new member cannot choose to accede to one agreement and not to accede to another agreement. By this means it is ensured that all WTO agreements remain multilateral agreements.

NAMA

This refers to Non-Agricultural Market Access in trade agreements.

National Treatment

After foreign goods have entered a market, they need to be treated equally to locally-produced goods. The same applies to foreign and domestic services, and to foreign and local trademarks, copyrights and patents. National treatment only applies once a product, service or item of intellectual property has entered the market. Therefore, charging customs duty on an import is not a violation of national treatment, even if locally-produced products are not charged an equivalent tax. Whereas the national treatment principle ensures the equal treatment of foreign and local goods and services in a market, the Most Favoured Nation principle ensures that foreign goods from all WTO member countries are treated equally when entering a market. Together national treatment and MFN are the two so-called non-discrimination principles.

Non-Tariff Barriers

A number of agreements deal with various bureaucratic or legal issues that could involve hindrances to trade, such as import licensing, pre-shipment inspection rules or customs valuation rules.

Plurilateral Agreements

For the most part, all WTO members subscribe to all WTO agreements. After the Uruguay Round, there remained four agreements, originally negotiated in the Tokyo Round, which a narrower group of signatories had agreed to, that became known as Plurilateral Agreements. This means that not all WTO members are signatories to these agreements, but a number of them are. All other Tokyo Round agreements

became multilateral obligations when the World Trade Organization was established in 1995. The four Plurilateral Agreements are:

- The Agreement on Trade in Civil Aircraft.
- The Agreement on Government Procurement.
- The Agreement on Dairy Products.
- The Agreement on Bovine meat. The bovine meat and dairy agreements were terminated in 1997.

Rules of Origin

Rules of origin are the criteria used to define where a product was made. They are an essential part of trade rules, since for a number of trade arrangements, it is necessary to determine where a product originates. For example, under the SADC Free Trade Agreement, only products originating in member states qualify for duty-free treatment. It is therefore necessary to have rules, which determine whether a product qualifies as a SADC product or not. The same applies to all FTAs and CUs such as the South African Customs Union (SACU).

Safeguards

A WTO member may restrict imports of a product temporarily by taking “safeguard” actions, if its domestic industry is injured or threatened by a surge in imports. Specific criteria exist to define when safeguards can be imposed, and for how long they may be in place.

Sanitary and Phytosanitary Measures

WTO law provides the legal basis for Sanitary and Phytosanitary (SPS) measures in the Agreement on Sanitary and Phytosanitary Measures, which sets out the basic rules on food safety and animal and plant health standards. It allows countries to set their own standards, but stipulates that regulations must be based on acceptable science. They should be applied only to the extent necessary to protect human, animal or plant

life or health. They should not arbitrarily or unjustifiably discriminate between countries where identical or similar conditions prevail.

Services – Schedule of Commitments

A specific commitment in a services schedule is an undertaking to provide market access and national treatment for the service activity in question on the terms and conditions specified in the schedule. When making a commitment a government therefore binds the specified level of market access and national treatment and undertakes not to impose any new measures that would restrict entry into the market or the operation of the service. Specific commitments thus have an effect similar to a tariff binding — they are a guarantee to economic operators in other countries that the conditions of entry and operation in the market will not be changed to their disadvantage. Commitments can only be withdrawn or modified after the agreement of compensatory adjustments with affected countries, and no withdrawals or modifications may be made until three years after entry into force of the Agreement. Such modifications of commitments may not affect the application of most-favoured-nation (MFN) treatment. Commitments can however be added or improved at any time.

The national schedules all conform to a standard format which is intended to facilitate comparative analysis. For each service sector or sub-sector that is offered, the schedule must indicate, with respect to each of the four modes of supply, any limitations on market access or national treatment which are to be maintained. A commitment therefore consists of eight entries which indicate the presence or absence of market access or national treatment limitations with respect to each mode of supply. The first column in the standard format contains the sector or subsector which is the subject of the commitment; the second column contains limitations on market access; the third column contains limitations on national treatment. In the fourth column governments may enter any additional commitments which are not subject to scheduling under market access or national treatment.

In nearly all schedules, commitments are split into two sections: First, “horizontal” commitments which stipulate limitations that apply to all of the sectors included in the schedule; these often refer to a particular mode of supply, notably commercial

presence and the presence of natural persons. Any evaluation of sector-specific commitments must therefore take the horizontal entries into account. In the second section of the schedule, commitments which apply to trade in services in a particular sector or subsector are listed.

Special and Differential Treatment

These are Special and Differential Treatment (SDT) provisions for developing countries that are contained in several WTO agreements.

Singapore Issues

There were four issues identified in the Singapore Ministerial Conference in 1996 in which the WTO agreed to create separate working groups. These became part of the WTO work program and are:

- The relationship between trade and investment.
- The relationship between trade and competition policy.
- Trade facilitation.
- Transparency in government procurement.

Subsidy

A subsidy is a grant paid to firms in order to encourage production. For example, the South African government subsidises bus transport, thus allowing the bus companies to provide more bus journeys at a lower cost to the consumer. Obviously the consumer ultimately pays for this through higher taxes.

Swiss Formula

The Swiss Formula is a formula to cut tariffs in the Non-Agricultural Market Access (NAMA) negotiations. The formula includes coefficients for developed and developing countries so that developing countries cut tariffs by less. There may also be some further flexibility to allow developing countries to protect sensitive sectors.

Tariff

A tariff is a tax on imports. The level of the tax will depend on the how much protection government thinks a sector needs. In South Africa, most tariffs are of the *ad valorem* type, i.e. they are levied as a percentage of the value of imports, e.g. 14%. Specific tariffs are levied by units, e.g. 30c/kg.

Tariff Binding

This refers to a commitment not to increase a rate of duty beyond an agreed level. Once a rate of duty is bound, it may not be raised without compensating the affected parties.

Tariff Escalation

This refers to higher import duties on semi-processed products than on raw materials, and higher still on finished products. This practice protects domestic processing industries and discourages the development of processing activity in the countries where raw materials originate.

Tariff Peaks

This refers to relatively high tariffs, usually on “sensitive” products, amidst generally low tariff levels. For industrialized countries, tariffs of 15 % and above are generally recognized as “tariff peaks”.

Tariff Schedule

A tariff schedule is an official list of tariffs. This will list the product code, the description of the good and the tariff.

Technical Barriers to Trade

The Technical Barriers to Trade Agreement tries to ensure that technical regulations, industrial standards, testing and certification procedures do not create unnecessary obstacles to trade. Having too many different standards, varying from country to country, makes life difficult for producers and exporters. If the standards are set arbitrarily, they could be used as an excuse for protectionism. The agreement recognises countries' rights to adopt the standards they consider appropriate. Moreover, members are not prevented from taking measures necessary to ensure that their standards are met. In order to prevent too much diversity, the agreement encourages countries to use international standards where these are appropriate, but it does not require them to change their levels of protection as a result. The agreement sets out a code of good practice for the preparation, adoption and application of standards by central government bodies. It also includes provisions describing how local government and non-governmental bodies should apply their own regulations. Normally they should use the same principles as apply to central governments. The agreement says the procedures used to decide whether a product conforms with national standards have to be fair and equitable. It discourages any methods that would give domestically produced goods an unfair advantage. The agreement also encourages countries to recognise each other's testing procedures. That way, a product can be assessed to see if it meets the importing country's standards through testing in the country where it is made. Manufacturers and exporters need to know what the latest standards are in their prospective markets. To help ensure that this information is made available conveniently, all WTO member governments are required to establish national enquiry points.

Trade Liberalization

Trade liberalization is the process of reducing barriers to trade. Usually this means lowering or eliminating tariffs systematically over time.

World Trade Organisation (WTO)

The World Trade Organization is the successor to the General Agreement on Trade and Tariffs (GATT). The WTO provides a forum for countries to negotiate market access in each other's economies. These negotiations are carried out in rounds and the agreement is signed by being applicable to all members. The organisation also has a Dispute Settlement Body (DSB) which ensures that world trade is carried out on a rules-based basis.

***5.2 Appendix 2: Recommendations for strengthening
interdepartmental cooperation on matters relating to international
trade and water and other natural resources***

WRC Project K5/1564

**Implications of South Africa's Trade Policies for Water
Policy and Water Resource Management**

Anthony Turton (Project Leader)

Anton Earle

Daniel Malzbender

Owen Willcox

March 2006

1. Introduction

The linkages between international trade negotiations, water services provision and water resources management are complex and cross-cutting. Due to their cross-cutting nature the issues domestically fall under the responsibility of a number of national departments, particularly the Department of Trade and Industry (DTI), Department of Water Affairs and Forestry (DWAF), Department of Agriculture (DoA) and the Department of Environmental Affairs and Tourism (DEAT). Consequently cooperation and policy coordination between these departments is essential in order to develop a consolidated national position that ensures optimal utilisation of trade opportunities and at the same time ensures that South Africa's social and constitutional commitments are being met.

The need for interdepartmental cooperation has been recognised in various pieces of legislation, most notably the South African Constitution (Act 108 of 1996). Article 41 of the Constitution enshrines the principle of cooperative governance and requires departments to consult one another on matters of common interest. This principle is also expressly included in the National Water Act (36 of 1998), Section 138 of which requires the Minister of Water Affairs and Forestry to establish mechanisms and procedures to co-ordinate the monitoring of water resources after consulting with, among others, relevant organs of state. Likewise, the National Environmental Management Act (107 of 1998) highlights the need for cooperation between national departments. The Intergovernmental Relations Framework Bill that is currently in the parliamentary process is going to provide a concrete framework for intergovernmental cooperation, thus highlighting the importance of the matter.

At present there is some degree of cooperation between departments. With specific reference to the relationship between international trade negotiations and water services provision and water resources management the degree of interaction and cooperation is, however, relatively low.

In order to assess the current level of interdepartmental interaction on trade issues and to develop possible suggestions to strengthen cooperation, interviews were held with

representatives from the DWAF, the DTI, the DoA and the DEAT. The interviews resulted in a number of suggestions being made on how the current interdepartmental cooperation could be strengthened. Following is an overview of the key outputs from the interviews, along with some recommendations by the project team on how interdepartmental cooperation on water and trade issues can be strengthened. The document is not intended to be either definitive or prescriptive – but rather to highlight possibilities which exist. It is hoped that this will lead to discussion within and between the departments on possible future modes of collaboration.

2. Recommendations to strengthen interdepartmental cooperation

In essence, strengthened cooperation was suggested in two distinct areas, the one being national and regional planning issues (how, where and when water-consumptive industries are being planned) and the other one being international trade issues (affecting both water services as well as water resources management).

2.1 National Planning Level

DoA-DWAF cooperation

The DoA, specifically the resource economics division, is interested in establishing closer working relations with the DWAF. There is currently an active coordination committee between the DoA and the DWAF, however, this committee is primarily looking at infrastructure development issues. The DoA resource economics division is responsible for all matters related to resources as inputs to agricultural production. With water being an important resource, it is felt that the current level of interaction with the DWAF is insufficient. The DoA specifically needs input on issues such as forthcoming water allocation reform and water pricing, as these have important resource economics implications. It is therefore proposed that structures be created on a technical level where water related issues can be discussed jointly between resource economists at the DoA and DWAF technical experts.

DTI-DWAF cooperation

The DTI has used the policy of promoting industrial development zones (IDZs) to support economic development in specific areas, with potentially significant implications for regional water availability or needs respectively. In the past water issues have not been considered when deciding on the location of IDZs and the DWAF was not part of the planning process. At present the DTI is in the process of developing a regional industrial development strategy (RIDS) for South Africa. The RIDS aims to stimulate industrial development outside of the three largest metropolitan areas of the country – Gauteng, eThekweni and Cape Town. This strategy categorises South Africa into various regions (regions with potential, regions with latent potential and declining regions) with specific interventions to promote economic development in these regions. These interventions form unique programmes for the various regions, based on their specific strengths and opportunities. Natural resource availability, including water, is an important factor determining the economic potential and competitiveness of a region and the required interventions.

It is important that the DWAF be involved in the development of the RIDS in order to give input on water related issues, particularly regional water resource availability. At this stage there is no cooperation between DWAF and DTI on this matter. However, during the interviews it was proposed by the DTI that cooperation structures be established with the DWAF in order to discuss water related issues and take them into account in the RIDS planning process. This suggestion was also supported by one of the DWAF representatives consulted. These cooperative structures could take the form of a permanent institution – or may be an ad-hoc committee formed between the two departments specifically to provide input and exchange information on the RIDS.

2.2 International Trade issues

With respect to international trade issues the recommendations do not suggest the establishment of entirely new structures for cooperation. It is recognised that there are existing structures where international trade issues are discussed. It is however suggested, to strengthen these structures in various ways.

1. Currently, water services provision and water resources management issues play no role in the formulation of trade policy in the Department of Trade and Industry. Trade policy makers are not overtly aware of the issues surrounding water scarcity or how their actions will impact on water resources. There is at this stage no connection between water and trade policy. This reflects the reality that at present there are no trade negotiations explicitly dealing with water-related issues. However, there are negotiations currently taking place which could have unintended impacts on water resource management or water services delivery in the country – such as the ongoing WTO GATS negotiations. At this stage trade policy makers see little reason to incorporate water issues into their decision-making processes and that any change in the status quo will have to be initiated by the DWAF. It is suggested that, if this issue is of sufficient importance for the DWAF, requests for interaction with the DTI would have to be initiated from a high level within DWAF, preferably at Director-General level in order to make water resources a sufficient priority for trade policy makers.
2. It is recommended that the DTI informs the DWAF (and other affected departments) of all available platforms (committees, working groups etc.) where international trade issues can be discussed on an interdepartmental level. At present the DTI has committed to involving the DWAF in any negotiations which will directly involve water (WRC, 2005). However – there may be certain specific objectives which the DWAF would like to achieve in international trade prior to negotiations opening explicitly on water issues. For instance the increasing involvement of the private sector in water services in South Africa over the past decade has, at times, become politically contentious – with fundamental differences in opinion on the subject being held by various groups involved (Earle et al., 2005).
3. The key structure for interdepartmental cooperation and policy coordination on international trade issues is the Permanent Trade Forum (PTF) convened monthly by the DTI. It is felt that the DWAF is underrepresented at this forum with the result that water issues are not considered to the necessary extent. Continuous and high level DWAF representation is recommended in order to

create awareness within DWAF of international trade issues impacting on water and to create awareness of water issues within the other departments.

4. The suggestion was made that the PTF not only be strengthened by increased representation of DWAF but also through the creation of a specific “Trade and Natural Resources Working Group”. It is suggested that the existing Terms of Reference of the PTF allow for the creation of special working groups. The proposed working group should discuss international trade issues impacting on water and other natural resources in more depth in order to inform the high level discussions at the PTF. In addition to representatives from affected departments (DTI, DWAF, DoA, DEAT, DME) the working group could also be comprised of Research Institutes (e.g. WRC, NRF, CSIR and others) in order to ensure a broad scientific base.
5. It was suggested to consider the possibility of creating a committee between DTI and DWAF dealing with water related aspects of international trade, particularly issues concerning water services and related sectors. This proposal seems to be in line with the above suggestion of establishing a working group dealing with natural resource issues and international trade and could thus also fall under the auspices of the PTF.

3. Conclusion

The complexity and cross-cutting nature of international trade negotiations requires cooperation and policy alignment on the national level in order to develop a consolidated position that is of benefit to the country. At present, interdepartmental cooperation in South Africa on issues relating to the nexus between international trade, resource use in general and water resource management and water services provision in particular, is arguably underdeveloped. On the other hand there is a growing realisation within the departments of the need for strengthened cooperation. The recommendations made in the interviews are evidence of the potential for strengthened cooperation and of the commitment to utilise this potential. It is hoped

that the existing possibilities receive high-level attention and lead to improved interdepartmental cooperation in the future.

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5. List of interviewees

Department	Representative	Division
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DWAF	Sugandree Muruvan	Water Service Regulation
DWAF	Kavitha Kassie	Water Service Regulation
DWAF	Bill Rowlston	Policy & Strategy Co-ordination
DWAF	Leo van den Berg	Directorate International Development Co-operation

DTI	Sudhir Sooklal	Multilateral Trade Negotiations
DTI	Nkhangwe Ramashia	Enterprise Industry Development Division

DoA	Dr. Dlamini	Resource Economics
DoA	Rolf Otto	Bilateral Trade Negotiations

DEAT	Blessing Manale	International Cooperation and Resources
DEAT	Judy Beaumont	International Cooperation and Resources

5.3 *Appendix 3: Discussion Paper on linkages between selected water policy goals and trade agreements*

**Implications of South Africa's Trade Policies for Water
Policy and Water Resource Management**

WRC Project K5/1564

Dr. Anthony Turton (Project Leader)

Anton Earle

Daniel Malzbender

Jessica Wilson

Executive Summary

The linkage between trade and water is a complex one. This paper is part of a series in an exploratory project that seeks to identify key issues that decision-makers in the water sector need to be aware of. In essence, there are two different sets of law that apply to water under different circumstances. National law such as the National Water Act and Water Services Act applies to domestic aspects, so there is no concern in this regard. The complexity arises when trade negotiations fall under international law, with implications for the water sector arising from potential dispute settlement in international trade for a dispute that could arise from a dispute in the trade sector, with direct implications for the water sector. It is this invisible second linkage that this paper seeks to explore, largely in an attempt to map out a course for more rigorous interrogation and investigation in the future. Given that the outcomes of such a process hinge on interpretation, not of national water law, but rather international trade law, there are no clear outcomes that can be predicted with a high degree of confidence. This paper consequently plots hypothetical aspects that could arise in order to sensitize the negotiators of future trade agreements on the one hand, and water resource and service managers on the other.

The National Water Act, supported by the Constitution, makes DWAF the custodian of water at the national level, but future trade commitments could impact on this national responsibility if left unchecked. Details are given in the report, but selected examples include the following:

- South Africa has made commitments in elements of water services, which could impact on the whole supply chain, including pricing, regulation and access.

- The key link between domestic tariff settings and the General Agreement on Trade in Services (GATS) relates to the use of subsidies, and more specifically, what would be interpreted as being a subsidy under the World Trade Organization (WTO) rules.
- A second link relates to regulation itself, which is also negotiated under GATS rules. Whereas the General Agreement on Tariffs and Trade (GATT) aims at reducing tariffs as a key barrier to trade for goods, the aim of GATS is to minimize unnecessary burdensome government regulation that hinders trade in services. There is a possibility that proposed disciplines on domestic regulation could impact on CMA functions, thus on the domestic water resources management framework.
- Subsidization from sources other than direct user charges is key to realizing the right to basic water and sanitation, but might be construed as being unfair or an unnecessary obstacle to trade, making the subsidy nationally acceptable but illegal under international trade law. Elements of this are presented in considerable detail in the report, including unintended risks arising from block tariffs and Free Basic Water (FBW).
- Regarding Catchment Management Agencies (CMAs), foreign private companies could carry out these key functions, specifically in outsourcing to contractors and redelegation to other water-related institutions in a given Water Management Area (WMA). Ramifications of this are presented in the report.
- Water exports via Inter-Basin Transfer or other bulk schemes open up a specific area of complexity that decision-makers and negotiators need to be made aware of. Details are given in the report.
- A series of specific mitigation measures are suggested for consideration by decision-makers and negotiators to avoid future problems arising from this complexity between national law and international trade law.

Five specific research areas are isolated. These include:

- South Africa should look at the implications of GATS for municipalities and service delivery with the objective of preparing a response that could contribute to a negotiating position within the GATS process.
- Investigate the implications and ramifications of the Most Favoured Nation (MFN) principle or the National Treatment principle that could apply to Water Service Authority (WSA) or Water Service Provider (WSP) contracts.
- Investigate the impact on costs of the full water services life-cycle to households and municipalities caused by outsourcing some of the water services.
- Gain clarity on the issue of the payment of subsidies to a private company carrying out delegated functions.
- Clarify the exact relationship between regulatory CMA functions and GATS commitments in the light of possibly forthcoming disciplines on domestic regulation.

Introduction

The typical water resource manager or water service provider believes that their actions are determined by national law and the Constitution of the land in which they operate. While this sounds intuitively correct, it is only partly true, because trade negotiations are conducted under international law, which exposes a second front of potential risk to managers who are not aware of this. It is the intention of this paper to sensitize the reader to these complexities. South Africa is a fledgling democracy, so governance systems are still evolving (Hattingh, *et al.*, 2004; Turton *et al.*, in press). This means that the water sector is not yet sufficiently integrated with the trade sector at the level where negotiating positions in international trade fora can be coordinated. This places South Africa at risk so urgent attention needs to be given to mitigating that situation. This paper seeks to sensitize readers to this fact so that the long journey can be begun in earnest. Consequently this paper is not a final destination, but rather a roadmap highlighting complexities in order to gain greater clarity on them in future. It deals with complex situations in which a key variable is the possible interpretation of very specific elements of our normal water management practise. A number of mitigation strategies are proposed as a short-term measure, but five distinct research areas are identified for a more robust long-term mitigation strategy.

Water services

This chapter examines two aspects of the Water Services Act – domestic tariff setting and contracting of Water Service Providers – to determine what impact international trade negotiations could have on them, and what mitigation measures can be put in place to safeguard national policy objectives related to water services. It begins with an update on the latest developments in trade negotiations with links to water services. Background and further information on these links can be found in the Strategic Review of the Implications of South Africa's Trade Policies for Water Policy and

Water Resource Management (Turton *et al.*, 2006). Because of the uncertainty in both the outcome of negotiations and the interpretation of agreements, much of the analysis that follows is hypothetical – describing situations that “could” be, rather than “will” be. Nevertheless, a cautious approach is advised because of the dire consequences of “worst case” scenarios.

Update on trade negotiations that link to water services

On 29 March 2006, South Africa made a conditional initial offer on services under the WTO’s General Agreement on Trade in Services (GATS) (TN/S/O/ZAF). In the preamble, South Africa highlights:

“This offer cannot be construed as offering in any way the privatisation of public undertakings or as preventing South Africa from regulating public and private services in order to meet national policy objectives.”

Furthermore, although the offer includes environmental services, it explicitly excludes the collection, purification and distribution of water for human use. In the offers on remediation and clean up of soil, and noise and vibration abatement services (both sub-sectors under environmental services) water is specifically excluded. All of these are important caveats in protecting South Africa’s autonomy in pursuing development objectives with respect to water.

However, water is implicit in South Africa’s offer to open up the following environmental services, although they are restricted to consultancy services only: A: **Sewage** services, C: **Sanitation** and similar services, D (a): cleaning services of exhaust gases, noise abatement services and **landscape protection services**. (Bold added). Water is also implicit in service offers on engineering, professional services, construction and others. Furthermore, pressure for progressive liberalisation, including through benchmarking, means more and more sectors will be covered under the GATS. Thus it is important to look also at negotiations on horizontal commitments¹ under GATS, which include subsidies, government procurement and

¹ Horizontal commitments stipulate limitations that apply to all of the sectors included in the schedule.

domestic regulation that would impact on all services in which there are commitments.

South Africa is currently developing a position on environmental goods as part of separate negotiations aimed at “the reduction, or as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services” (WTO, 2005 – Doha Ministerial Declaration). Environmental goods are being discussed in the Committee for Trade and Environment Special Session (CTESS) in preparation for the Negotiating Group on Non-Agricultural Market Access (NAMA). There is considerable interest by the OECD countries to liberalise environmental goods as much as possible through a ‘list approach’ that identifies goods used in various environmental services, such as wastewater management and sewage services (WTO, 2005a.). In an OECD paper on trade and environment, it is argued that the benefits of liberalising environmental goods and services simultaneously are much greater than liberalising trade in only one or the other (Steenblik *et al.*, 2005). Developing countries are putting forward alternative proposals to ensure that liberalisation advances sustainable development, rather than becomes an objective in and of itself.

The Doha Round of negotiations has been put on hold, and in the near future it is unlikely that timeframes will be agreed for concluding negotiations. Countries will use the ‘down time’ to fine tune their intentions and build support for their positions. The OECD will continue to lobby for increased liberalisation of environmental goods and services – the main category through which water resource management and service delivery will be affected. South African custodians of water need to understand how existing, or future trade commitments could impact on their national responsibilities. And also whether there are any conditions under which trade agreements could enhance their ability to meet national objectives.

Regulations under the Water Services Act provide a useful framework against which to assess the possible impacts of trade on water services.

Regulations under the Water Services Act

Water Services include both potable water supply services and sanitation (sewage and wastewater) services. It is important to bear this in mind when looking at the GATS as

South Africa has made commitments in elements of water services, which could impact on the whole supply chain, including pricing, access and regulation.

Setting tariffs for domestic consumption and contracting an institution (whether public or private) to provide water are regulated under the Water Services Act (Act 108 of 1997). These are two areas (of many) in which there are a link to trade agreements, particularly the GATS. The question is whether this domestic regulation strong enough – both in law and implementation – to protect national objectives related to water services? Where it contradicts imperatives under the GATS is it sufficiently robust to stand up to a dispute settlement that would happen internationally, not nationally? The first step in answering these questions is to look at what the regulations say.

Norms and standards for water services tariffs

The following is an extract from regulations under section 10 of the Water Services Act (Act 108 of 1997), (**bold added**):

3. Subsidisation of tariffs

3.(1) A water services institution may use any source of funds, including any **funds received from municipal rates and taxes or from transfers from national or provincial government** or from any other source, to subsidise a water services tariff.

3.(2) A water services institution must consider the **right of access to basic water supply and the right of access to basic sanitation** when determining which water services tariffs are to be subsidised.

6. Supply of water to a household through a water services work or consumer installation designed to provide an uncontrolled volume of water

6.(1) A tariff set by a water services institution for the supply of water through a water services work or consumer installation designed to provide an uncontrolled volume of water to a household must include a volume based charge that – **(a) supports the viability and sustainability of water supply services to the poor (b) discourages**

wasteful or inefficient water use (c) takes into account the incremental cost that would be incurred to increase the capacity of the water supply infrastructure to meet an incremental growth in demand.

6.(2) [The above requirements...] are met where the tariff is set as a volume based charge that **provides for a rising block tariff structure** which includes – (a) three or more tariff blocks with the tariff increasing for higher consumption blocks (b) a consumption level for each block defined as a volume consumed by a household during any 30 day period (c) a first tariff block or lowest tariff block with a **maximum consumption volume of six kilolitres** and which is **set at the lowest amount, including a zero amount**, required to ensure the viability and sustainability of water supply services (d) a tariff for the last block or highest consumption block set at an amount that would discourage high water use and that reflects the incremental cost that would be incurred to increase the capacity of the water supply infrastructure to meet an incremental growth in demand.

Risks related to tariff regulations

The key link between domestic tariff setting and GATS relates to the use of **subsidies**, and what could be interpreted as a subsidy under the WTO. Subsidies are one of several issues being negotiated under GATS rules, which will cut across all sectors offered under the GATS – and perhaps even apply to sectors in which no offers have been made. Although there is no agreed definition of subsidies, nor is there agreement on how they can be used, Article XV of GATS obligates members to develop multilateral disciplines to avoid trade-distorting effects of subsidies. Trade-distorting subsidies are inconsistent with the economic logic that drives the WTO.

The second link relates to **regulation** in and of itself, which is also being negotiated under GATS rules. Whereas for goods, tariffs are a key barrier to trade and so the General Agreement on Tariffs and Trade (GATT) seeks to reduce them, in services the key barrier to trade is government regulation. Thus one of the key intentions of GATS and the expansionist agendas of services-exporting countries is to minimise government regulation (Keet, 2004).

Could the provisions put in place by South Africa to regulate domestic tariff setting be seen in the light of trade-distorting subsidies? Could the regulations be seen as an ‘unnecessary obstacle to trade in water services? Perhaps.

Subsidisation of tariffs from sources other than direct user charges (regulation 3(2)) is key to realising the right to basic water and basic sanitation, but might be construed as unfair or an unnecessary obstacle to trade. In this case, the subsidy could be illegal under international trade rules. Benitah (2004) argues that subsidies to consumers are not covered by the GATS. But South Africa’s regulations are not explicit that subsidies should go directly to consumers. They could be built into the tariff structure, benefiting users of basic services in a less direct way, and directed through transfers to the water services providers. Foreign services providers could argue that they too are eligible for such subsidisation. Yet they operate on a for-profit basis, which means their shareholders would be making money from South African tax-payers and from a mechanism designed to make water affordable to poor people. The regulations put the onus on a water services institution (i.e. municipality or provider) to determine the total amount of subsidy available and who will be eligible. This process does not have quantitative limits and will vary over time according to the needs and resources of a particular area. It is, and needs to remain, flexible. The GATS applies to measures affecting trade in services taken at all spheres of government, including municipalities (Art. 3 (a) (i) GATS). It is not flexible.

Mitigation 1: Explicitly state any flexibility that South Africa wants to maintain, either through the horizontal commitments, or through sector specific limitations to market access or national treatment.

Funds generated from municipal rates and taxes, as well as transfers from national or provincial government can be used to subsidise water services (Regulation 3(1)). Specifically the Municipal Infrastructure Grant and the Equitable Share have been established to assist municipalities in service delivery. Under the GATS it is possible that a private water company could argue that a state’s ability to generate income for water services through rates and taxes is unfair because a private company cannot do this.

South Africa has chosen to use rising block tariffs for water supply to a household level to meet a number of objectives including economic access to water for poor households, water demand management and financial sustainability. Such a pricing structure goes against short-term market logic in which the marginal cost of supplying an additional unit of water to a high user is much lower than that of a unit of water to a new, low consumption user. In the long run, this argument can be turned around because of the high costs of increasing supply. Nevertheless, within a specified supply capacity, it is cheaper to get water to high consumers than low consumers. Thus the rising block tariff could be seen as cross-subsidisation from high consumption users to low consumption users and consequently an unnecessary obstacle to trade in water services (Rudin, 2005). Although sanitation regulations do not specify a rising tariff system, it is encouraged to base charges directly on usage, and including zero charges for basic sanitation.

Mitigation 2: Specify that South Africa requires a system of rising block tariffs in any offer made.

Loss of flexibility could affect the extent to which water services institutions are able to structure their tariff system. Whereas there are minimum commitments to a cheap first tier of 6 kilolitres per household and a minimum of three tiers, many municipalities will choose, for example, to increase the number of tiers and commit to Free Basic Water (FBW) for all, in order to meet local objectives such as service extension and water conservation. Cape Town for example currently has ten tiers and uses pricing to shift demand during times of drought. Also, there is pressure coming from civil society organisations to change the FBW policy so it truly helps to realise the right of access to sufficient water. Demands include increasing the quantity of water available, as 6kl is wholly insufficient in many cases, and ensuring that costs for providing FBW is not recovered in the second tier – i.e. from those very people who the FBW is targeting. It would undermine democratic policy space if the GATS were to lock in current practices and remove the space for local activism and grass-roots led change.

Mitigation 3: Build in flexibility for local or national government to require and implement more than three tiers within the step tariff system.

The tariff regulations do not say strongly that the first block of 6kl per household per month *must* be free. A water service provider could charge more than zero and argue that they are making it as cheap as is financially viable. This becomes problematic if part of a provider's financial viability includes a certain percentage of profits. Thus opening water services to private companies could put upward pressure on the charge for the first 6kl and 'lock-in' minimum standards, effectively turning them into maximum standards, which is clearly not the intention.

Mitigation 4: Build in flexibility for local or national government to require a minimum amount of free water and to increase the quantity of the first (free) tier. These could be included in the Schedule of Concessions and reference could be made to other service areas, for example financial services.

Water services provider contract regulations

If a municipality responsible for ensuring access to water services chooses to appoint an institution to provide those services, it must enter into a written contract. In terms of section 19(5) of the Water Services Act (Act 108 of 1997), Regulation 2, the contents of the contract must be consistent with –

(a) the main objects of the Act as determined in section 2 of the Act, namely

- the right of access to basic water supply and the right to basic sanitation
- the implementation of water services development plans
- a regulatory framework for water services institutions and water services intermediaries
- the monitoring of water services and intervention by the Minister or by the relevant Province

- the gathering of information in the national information system and the distribution of that information
- the accountability of water services providers

(b) provisions of the Local Government: Municipal Systems Act (Act 32 of 2000), in which a municipality has a duty to:

- use the resources of the municipality in the best interests of the local community
- encourage the involvement of the local community
- consult the local community about the available options for service delivery, as well as the level, quality, range and impact of municipal services provided directly or through a service provider
- ensure equitable access to services
- provide and undertake development in the municipality
- ensure sustainability of services
- promote a safe and healthy environment
- contribute towards the progressive realisation of constitutional rights, including access to water and sanitation

(Source: DWAF, Guidelines, 2002)

Risks related to contracts between WSAs and WSPs (whether public or private)

Contracting a Water Service Provider (WSP) is a form of **government procurement**, and as such will be affected by the GATS. Rules on government procurement have not yet been negotiated under the WTO umbrella, and as with subsidies and domestic regulation, it is not clear how they will apply to services sectors under the GATS. In one possible case scenario, they could apply to all sectors, not just those in which

offers have been made. There is a strong push by industrialised countries to bring government procurement into the WTO in other arenas as well – it is one of the four Singapore issues on which there is deadlock regarding how to move forward. If government procurement becomes subject to WTO disciplines, there could be far reaching implications. When a government (national or local) purchases a good or service, it will have to treat suppliers and service providers equally, regardless of whether they are South African or not. WSAs contracting WSPs would have to do the same.

The exclusion clause in GATS Article 1 (3) (c) relating to public services supplied “neither on commercial basis nor in competition with one or more suppliers” is inadequate to protect public provision of water services because of the mix of public and private operators used in many municipalities and because even public WSPs operate on what could be described as a “commercial basis”. The Municipal Systems Act presents criteria and process for deciding on a mechanism to provide municipal services. The first step is to assess the ability of the municipality to provide these services – an internal mechanism. After that, it can – but is not obliged to – explore the possibility of an external mechanism, which could be another municipality or state body; or a private company. Although the steps are laid out sequentially, it is possible that a foreign service provider could argue that all service delivery should be open to competitive bidding, even though an internal mechanism or external state body is able to meet the needs. Anything else would be unfair, they could argue.

Mitigation 5: Explicit reference to South Africa’s preference for public providers would help mitigate any ambiguity and should be put into any offer under the GATS (or bilateral services agreements) related to services currently supplied by municipalities or other public sector providers.

In the introduction to the Guidelines on Water Services Provider Contract Regulations, DWAF notes that, “It is the parties to the contract who are in a best position to decide on the detail of the contract within the broad framework set by the regulations.” (DWAF Guidelines, 2002, p89). This leaves a wide scope for WSAs and WSPs to navigate. It raises particular concerns if the WSP is a large multinational company with considerable power and backing, and the WSA is weak. Through the

Section 78 Process (of the Municipal Systems Act), it is likely that municipalities *without* much service delivery capacity will be looking to external WSP as they will not be able to fulfil the services delivery responsibilities internally. If these contracts are brought under the GATS additional support will be given to protecting the interests of the company and investment, rather than seeking a balance with development, environment and democracy objectives. It is unclear whether contracts that are already in place could become subject to the GATS.

Research 1: South Africa would be wise to look at the implications of GATS for Municipalities and services delivery, and prepare a response that could contribute to a negotiating position and strengthen their capacity to engage with the GATS. Access to information and the involvement of local communities are objectives of the WSA and MSA as well as numerous other national laws that seek to strengthen democratic decision making. Yet it is hard to obtain information on GATS negotiations until they are well advanced. This combined with complicated legal language makes it extremely difficult for local communities to engage. There is a strong risk that ongoing GATS negotiations will reflect the views of business and national government, with little relevance for, or consideration of, the needs and interests of local communities.

Mitigation 6: South Africa should develop its positions and offers regarding GATS and other trade negotiations in a more participatory and transparent way.

Obligations of contracted WSP's are essentially in the public interest – to fulfil the right of access to basic water and basic sanitation and to use the resources in the best interests of the local community. These could be in direct conflict with a private company that is also seeking to extract profits from its operations. Should a conflict arise between these conflicting objectives, the domain of resolution will not necessarily be in South Africa, but could be international. If this is the case it will not be a question of adjudicating on the basis of national objectives or balancing of rights, but on the basis of whether the private company has had its rights protected. Rudin (2005) raises a possibly more alarming measure to protect profits. Known as Material Adverse Actions (MAA), this measure already exists in some South African contracts,

and covers any post-contract measure that threatens profitability taken by any sphere of government. It allows a company to seek financial compensation for actual or prospective damages arising from post-contract adverse actions. Actions can extend to those of Councillors or staff “whether at a formal municipal council meeting, a ward meeting or in an informal context”. This could discourage Councillors or employees from raising concerns around the WSP or criticising how water is being provided. Under the GATS could it be reasonable to assume that if MAA is included in one contract, it should be applied to all? This is very unlikely, but not impossible if Most Favoured Nation and National Treatment are interpreted in a way that covers contracts and not just legislation and regulation.

Research 2: Investigate whether MFN and NT could apply to WSA-WSP contracts.

Offers made under GATS are permanent, not for a limited duration. Under South African regulations, contracts need to be consistent with the implementation of water services development plans (WSDP) which are reviewed and revised periodically. A conflict could arise if a water services development plan brings in new objectives – e.g. network expansion – to meet local needs, which were not anticipated when the contract was signed. Although there is no clarity on what the impact would be, it is possible that it could involve financial compensation to the private sector Water Services Provider. This could arise if the WSDP requires new commitments which the WSP cannot, or chooses not to, meet and withdraws from the contract. In essence, the risk of changing development priorities would rest solely with the WSA or South African public sector, and not shared with the WSP or private sector. This could also have a “chilling” effect.

Risks to maintaining public oversight and meeting water services national objectives: general

In addition to the specific risks highlighted above relating to tariffs and contracts, there are some general or overarching risks. These risks will apply to numerous aspects of water services and will also influence the probability and severity of the

specific risks. They are critical to bear in mind when developing a strategy to protect public oversight of water resources and service delivery.

Water is impacted by negotiations on horizontal commitments and “rules” under the GATS. These rules will apply to all services that South Africa has offered and might even apply to services that have not been offered. Negotiations on rules are aimed at reaching multilateral agreement on subsidies, government procurement, and domestic regulation. And domestic regulation should not be “more burdensome than necessary” (GATS art. VI). There is also a risk that negotiations will result in the establishment of *a priori* disciplines which could require South Africa to submit draft domestic regulations to WTO members before they are finalised (WWF, 2003).

Mode 3 (commercial presence) under GATS is essentially an investment agreement. According to Mann (2006), negotiators were precluded from using “investment” for political reasons, and thus “commercial presence” is merely a euphemism. This gives rights to finance (investors) which could impact on how they set prices, cost recovery, access to subsidies, openness of information, etc.

There is a risk that South Africa will eventually offer to open water services to international competition. This could happen because of progressive liberalisation which is built into Article XIX of the GATS, agreement on benchmarking that locks in a minimum number of services, or other pressure such as exchange for market access in agriculture.

Water services could be included in a bilateral or plurilateral trade agreement. This need not be a direct agreement with South Africa, but could be an agreement with other members of SADC or SACU, of which South Africa is also a member. Thus, for example, a services component to an Economic Partnership Agreement (EPA) between the European Union and one or more countries within SADC could affect South Africa.

Paragraph 31(iii) of the Doha Ministerial Declaration mandates negotiations with a view to “the reduction, or as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services” (WTO, 2005). Although negotiations on environmental goods have been separated from negotiations on environmental services, there is pressure from the OECD for simultaneous liberalisation. Thus water managers need to watch not only the GATS, but also the Committee for Trade and

Environment Special Session (CTESS) and Non-Agricultural Market Access (NAMA) negotiations to see what might be agreed in relation to goods that are used in water-related services. This could be a ‘back-door’ for opening up services not agreed to under the GATS.

Mitigation 7: Monitor the CTESS and NAMA negotiations on environmental goods to ensure services are not inadvertently opened up.

South Africa has already made commitments in sewage, sanitation and landscape protection services, which could impact on water. In the DWAF guidelines for compulsory national standards, the term Water Services is used to mean “potable water supply services and sanitation (sewage and wastewater) services”. In other words, separating these terms in GATS has little resonance with national policy where they are conflated. The financial implications of opening up some aspects of water services while protecting others should also be looked at – e.g. will there be an increase in the cost of treating / buying water or delivering sanitation that could impact on what a household pays for it.

Research 3: Investigate the impacts on costs of the full water services life-cycle to households and municipalities of outsourcing some of the water services, e.g. waste water treatment.

It has been argued that it is better to have clear regulations and standards in place prior to listing a service under the GATS, especially if they are listed as part of the offer (see for example Mann, 2006). In other words, a strong regulatory framework can mitigate some of the more problematic aspects of the GATS. Currently water services are not well regulated in South Africa. For example the equitable share and Municipal Infrastructure Grant are not being applied properly but no one is monitoring this (Deedat, 2006, pers. com.). The use of tricklers to restrict people’s water to 6kl per month violates the minimum flow rate of 10 litres per minute required as a ‘basic standard’. And in some municipalities, water is still being cut-off or there are threats of cut-offs as a mechanism to recover debt.

If there is a conflict between a foreign service provider and South African policy imperatives, it could be resolved through dispute settlement in an international forum. This would happen if the government of the service provider (or other service providers who believe they had been dealt with in a discriminatory way) challenged South Africa (see for example, Telmex dispute between Mexico and the USA). The criteria for resolution would largely rest on the rights of the international company to be treated fairly and have its interests or investment protected, not on the rights or obligations of the South African national (or local) government to its citizens. The right to development is unlikely to be considered seriously.

Water resource management by Catchment Management Agencies (CMA) in the light of GATS

Catchment Management Agencies will form a central part of South Africa's water management framework. Once established, CMAs will have prime responsibility for water management in their respective Water Management Area (WMA). Their powers as water management institutions include the making of water use charges (Thompson, 2006; RSA, 1998) and their powers as responsible authorities include the verification and authorisation of water uses, including water use licensing and compulsory licensing (RSA, 1998; Thompson, 2006; DWAF, 2002).

CMAs may not delegate the power of delegation or the power to make water use charges and the power to authorise water may only be delegated to a committee of three or more CMA board members (DWAF, 2002; RSA, 1998). Beyond these regulatory powers CMAs can exercise their functions in different ways, including delegating or contracting out their operational functions.

Muller (2006a) points out that a privatisation of CMAs is not possible by virtue of the statutory provisions of CMAs. Whereas this is agreed and clearly supported by the NWA, it is noted that the NWA does seem to allow for certain operational CMA functions to be exercised by private service providers. The following sections illustrate how this could be possible and what the possible implications would be.

Operational CMA functions

The apparent possibility of private companies carrying out operational functions of CMAs raises two issues. On the one hand it implies that foreign private companies could carry out those functions if South Africa made a commitment on service categories that could include services relating to water management. The question would be if it would be accepted or desirable if foreign providers carried out such functions.

On the other hand the possibility of private companies carrying out operational CMA functions has raised the question, if private foreign companies could receive parts of the initial government subsidy that is made available to CMAs, from central government, during the start-up phase (Turton *et al.*, 2006).

How private companies could become involved in CMA operations

Of the different options CMAs have to carry out their functions (see Figure 1 below), two potentially allow the involvement of private companies. These are “re-delegation to other water related institutions in the WMA” and “outsourcing to contractors”.

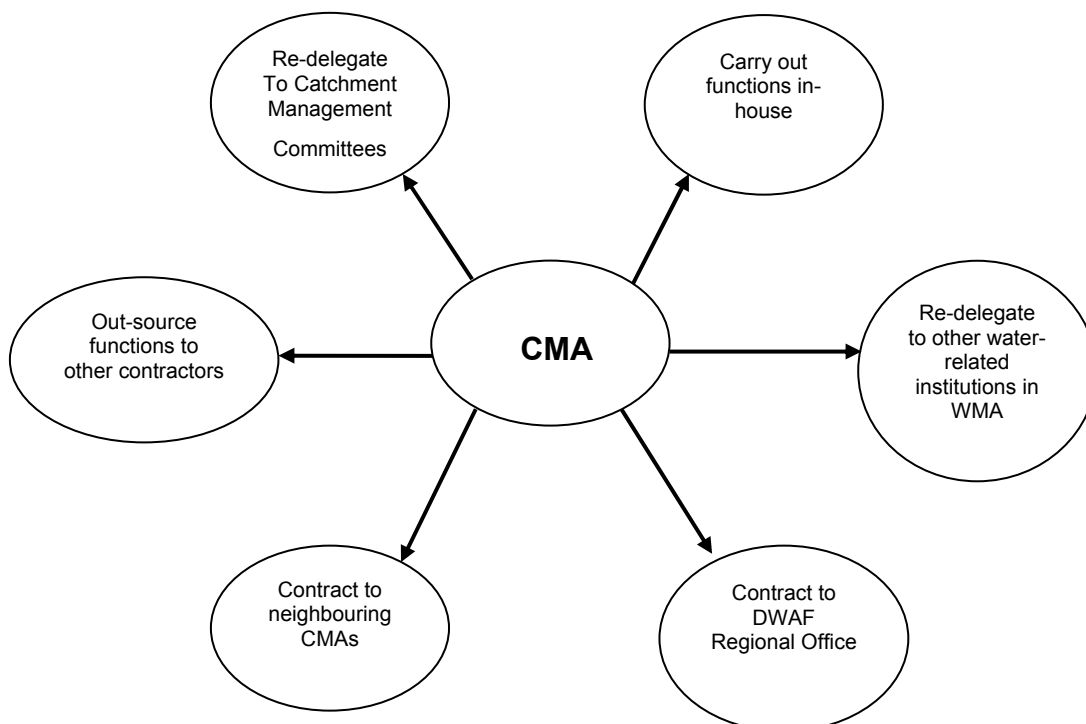


Figure 1: Ways CMAs may carry out their functions (DWAF, 2002)

Re-delegation under this category is possible in two ways. The one is delegation to an employee or office holder of a water management institutions – this possibility is authorised directly by Section 86 (1) (b) of the National Water Act. The second option is to delegate to “any other person or body”, which requires the consent of the Minister (Section 86 (1) (d)).

Delegation to office holder of water management institution

The Act defines water management institutions as “a catchment management agency, a water user association, a body responsible for international water management or any person who fulfils the functions of a water management institution in terms of this Act” (Section 1 (1) (xxvi)). A “person” is defined by the Act as a “natural person, a juristic person, an unincorporated body, an association, an organ of state and the Minister” (RSA, 1998). Since private companies are mostly juristic persons, they can be persons who fulfil the functions of a water management institution, leading to the conclusion that the delegation of CMA functions to employees of private companies is possible.

If a CMA has delegated any of its powers or duties to another water management institution, it can allocate funding to that institution to fulfil the duty (DWAF, 2002). The question whether a (foreign) private company could receive part of the CMA start-up subsidy from central government depends on how this subsidy is paid. The CMA will receive the payment as a general start-up payment without it being linked to a specific operational function. If the CMA specifically allocates part of the start-up payment to the delegated functions, it seems likely that these payments would have to be made available to private suppliers as well.

If a CMA delegates operational functions to more than one other body and makes part of the subsidy payment available to one of them, it appears that such payments would have to be made available to the other service providers as well, including to foreign private service companies if functions were delegated to them.

The question remains whether such subsidy payment would also have to be paid to a private company carrying out delegated functions, if not the delegating CMA in question, but other CMAs make payments to the companies they have delegated functions to. If so, it would mean that all CMAs would have to apply the same policy with regard to the way they use their start-up payments from central government in case they delegate functions to private companies. It is currently not clear whether this would be required but the issue should be further investigated in light of this aspect.

Research 4: Gain clarity on the issue of the payment of subsidies to a private company carrying out delegated functions.

Delegation to any other person or body

The National Water Act provides no specific legal definition of “body”, leaving it in doubt whether the term includes private companies as well. The CMA Guide of the DWAF only refers to Water Boards, Water Services Committees, local government, Catchment Management Fora or NGOs (DWAF, 2002). Yet, the list is not necessarily exclusive and the CMA Guide also has no legal status, meaning that it cannot be concluded that private companies are not included in the definitions.

Regardless of the above, private companies would appear to be included under Section 86 (1) (d) since the provision makes reference to “any other person”, with the term person having to be interpreted in the same manner as above.

With respect to potential subsidy payments to private companies the same applies as was said for the first delegation option (delegation to the office holder of a water management institution). This, though, only applies once an operational function has been delegated. Under this scenario - delegation to another person or body – the caveat applies that delegation requires the consent of the Minister, giving the Minister essentially the option to reject delegation to foreign private companies entirely. However, if delegation was not approved on the grounds that the private company is a foreign one, whereas delegation to like domestic private companies is approved, this

would in all likelihood be an unduly discrimination of the foreign service company, which would not be compatible with GATS.

Outsource functions to other contractors

The most likely way of including private companies would be through outsourcing certain operational functions to private contractors. In this case the private contractor provides agreed tasks to the public authority under the public authority's control and supervision, i.e. very little control is passed on to the private sector (Dhillon, 2003). Examples of such contracts include tariff collection, operations and maintenance (Dhillon, 2003). CMAs are entitled to out-contract operational functions to private contractors (DWAF, 2002), hence foreign companies could become involved in carrying out operational tasks of CMAs.

If the outsourcing option is used, the question whether subsidies provided to the CMA are going to a (foreign) private contractor instead, does in fact not arise from a legal perspective. The start-up subsidy would still be paid directly to the CMA and not to the contractor winning the bid to carry-out certain tasks. That the CMA uses the subsidy amount, or part of it, to pay the contracted company legally does not make it a subsidy payment to the contractor. What the contractor gets paid are the fees for their services as agreed in the contract with the CMA. The fact that the CMA uses a state subsidy to pay the company is legally irrelevant in this context as the payment remains a payment of fees and does not constitute the payment of a government subsidy to a (foreign) private company.

Implications of delegation of CMA responsibilities

The National Water Act does allow the delegation or contracting-out of operational CMA functions to private companies, including foreign ones if the respective service falls in a category for which South Africa has opened up its market under GATS. If South Africa wanted to prevent the involvement of foreign private companies in CMA management altogether, it would have to develop a policy for CMAs not to delegate

functions to private companies at all, since the exclusion of companies based on the facts that they are foreign would be an unduly discriminatory measure.

If South African CMAs would want to make use of the option to delegate or contract-out to foreign private companies, it is likely that subsidy payments made to domestic companies or other bodies would also have to be made available to foreign private companies.

Regulatory CMA functions

As has been pointed out above, CMAs may not delegate the power of delegation or the power to make water use charges, and the power to authorise water may only be delegated to a committee of three or more CMA board members (DWAF, 2002; RSA, 1998). These are regulatory functions that have been excluded from the possibility to delegate them in order to maintain these key functions in the hands of public decision-making bodies.

The question is, whether and to what extent the opening up of services sectors that have an impact on catchment management, could impact on the regulatory functions of CMAs. Generally GATS makes provision for domestic policy space and recognises the right to domestic regulation that meets the respective domestic conditions. Yet, there are currently talks being held under the WTO umbrella to develop disciplines (restrictions) on domestic regulation that unduly limits trade in services. To date it remains unclear what exactly such disciplines would look like and talks are still far from reaching conclusion. As much as the matter cannot be further investigated at this stage for that reason, it needs to be emphasised as a possible concern.

Research 5: Further research should be done to clarify the exact relationship between regulatory CMA functions and GATS commitment in the light of possibly forthcoming disciplines on domestic regulation.

Inter-basin transfers and water exports

Over the past decade in various parts of the world there has been concern about water being treated as an economic good – fully traded on the market as any other. The fact that water plays such a crucial role in supporting all life, as well as ecosystems and societies makes people uneasy about the thought of it being allocated purely through “the invisible hand of the market”. Yet in a water-scarce country like South Africa it is important that the true scarcity value of water is factored into allocation regimes. In recognition of this situation and the fact that water plays a crucial role in social development the South African government treats water as a “a social, environmental and economic good” (DWAF, 2004). In effect water has become nationalized under the National Water Act (Act 36, 1998) and placed under the trusteeship of the national government, acting through the Minister of Water and Forestry who “must ensure that water is protected, used, developed, conserved, managed and controlled in a sustainable and equitable manner, for the benefit of all persons and in accordance with its (the government) constitutional mandate” (RSA, 1998). Water in this context is seen as playing a role in livelihood security and poverty reduction with due recognition of the inequitable access to the resource and water services in the country in the past (Earle *et al.*, 2005).

Water as a good

As South Africa has become an active member of the global economy over the past decade it has become exposed to the various trends and agreements around trade issues. International trade in the region is nothing new, with evidence of pre-colonial trade with the Arab world and China with urban centres such as Mapungubwe around a thousand years ago as well as playing an important role in colonial trading systems (Earle *et al.*, 2006). What is comparatively new is the establishment of global formal trade facilitation bodies such as the World Trade Organisation (WTO) and the various bi-lateral and multi-lateral agreements associated with it. Through WTO instruments such as the General Agreement on Tariffs and Trade (GATT) and the General Agreement on Trade in Services (GATS) there has been an effort to provide more predictability to trade (and traders) and promote trade through the reduction or

elimination of tariff and non-tariff barriers and the introduction on rules surrounding the treatment of foreign companies in national economies (Mann, 2006).

It is the treatment of water under these various agreements as a tradable good or commodity – less subject to national law or policy than it is to agreements reached under the WTO or other institutions – which raises potential problems for South African water policy objectives. This chapter seeks to highlight some of the hypothetical (in that none have yet been tested before WTO dispute settlement bodies or other courts) issues associated with inter-basin transfers and water exports. The chapter is exploratory and not prescriptive, merely seeking to identify and elaborate on some of the potential issues which may need to be addressed, as well as identifying possible mitigatory strategies.

Water exports under GATT and GATS

It is hotly debated in trade-law whether under GATT or GATS countries become locked into water exports via pipelines, diversions, tankers or other bulk transfers (Mann, 2006). It is important to note that bottled water is indeed covered under GATT (Article XI), preventing governments placing quotas or other volume restrictions on imports or exports. Thus governments cannot control imports or exports of bottled water through the implementation of controls which are trade distorting. If one company is allowed to export bottled water then all subsequent applications to export bottled water have to be granted under conditions no less favourable than those enjoyed by the first applicant. Indeed, there has been a case taken to the WTO dispute settlement body by Canada against South Korea. In that case Canada argued (successfully) that South Korean regulations on the shelf-life and physical treatment (disinfection) of bottled water were inconsistent with GATT Articles III and XI, SPS Articles 2 and 5 and TBT Article 2 (WTO, 2006). What is less clear is the way bulk water trade, directly from natural sources, would be handled.

The natural spatial and temporal variability of South Africa's climate and specifically rainfall patterns has meant that the storage and transfer of water resources has enjoyed prominence in water management actions in the country. Of the 19 Water

Management Areas (WMAs) the country has been divided into all but one are connected by inter-basin transfer (IBTs) schemes (DWAF, 2004). Of these 19 WMAs eleven share international river basins adding a possible export dimension to the water transfers. At present the only international transfers of water which South Africa is involved in is to Botswana (from the Molatedi dam to Gaborone dam) and from Lesotho via the Lesotho Highlands Water Project (Ashton *et al.*, 2005). The agreement covering water exports to Botswana is between the Government of South Africa and the Water Utilities Corporation (WUC) - a parastatal wholly owned by the Botswana Government (WUC, 2006). The amount of water involved is relatively small – around seven million cubic metres a year – and subject to restrictions in years of drought (RSA, 1988).

What would the situation be if another party – a private company, foreign or local – were to start exporting water from South Africa? Such exports need not be through water transfer infrastructure, but could use tankers travelling by road, rail or sea. Relatively water rich areas of South Africa such as the east coast may provide a stock of good quality freshwater which could be pumped into a sea tanker and delivered to urban populations in need of supply.

Such a situation is not as far-fetched as it sounds – several projects have been proposed. A Canadian venture capital business, Global H2O Resources, has plans to export water from the Blue Lake in Alaska (USA) to a Chinese beverage company in Fujian Province (Ono & Maruyama, 2001). Similarly Isbre, a US company, has a 99 year lease to water from a glacial source in Norway. The company currently bottles its water in Norway and sells it in the U.S., Canada and Europe. Isbre is in the process of establishing a bottling facility in a port city in the Northeast United States. The company will ship its water in tanker ships directly from its springs in Norway to the U.S. bottling facility. The company is also seeking other global areas of sales for its water products (Isbre, 2006). Turkey is preparing to sell its water by shipping it on converted oil tankers and through pipeline from the Manavgat River to Cyprus, Malta, Libya, Israel, Greece and Egypt. Such tanker transfers, although costly (and needing on-loading and off-loading infrastructure to be built), would be competing against the cost of desalination, roughly one US dollar a cubic metre. Thus there is the potential for private companies to turn a good profit from redistributing the world's water

supplies. Some proposals to divert rivers or remove water by ship or truck transport have been argued on the basis of the small volumes involved as a proportion of the available resources. The other side of the argument, however, is the precedent which even a small removal would create for other proponents whose cumulative withdrawals could be much more problematic.

If such bulk water exports were to take place from South Africa the country, as a member of the WTO, would need to take recognition of the relevant provisions under GATT. Article XI of the GATT prohibits import and export restrictions of products. It covers bans, quotas and licences on exported and imported products, stating:

“No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licences or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party”.

There are exceptions to the prohibition, including allowing countries to impose temporary restrictions in the face of domestic shortages of essential products. These exceptions are generally inapplicable to environmental issues (Campbell and Nizami, 2001). Thus it could prove difficult to prevent a company from exporting bulk water purely on environmental grounds. By doing so the Government of South African could find itself in the situation of having to defend national law and policy in a WTO arbitration setting. International legal opinion is that it is unlikely that a government would in fact be compelled to export its water through various bulk transfers to other states, but the caveat is given that the issue has not yet been formally tested in the courts (Mann, 2006).

Safeguarding the regulatory space

Strengthening the case for being able to prohibit bulk water exports are the GATT general exemptions contained in Article XX. The two environment specific exemptions are listed below.

Article XX. “Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in the Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures: ...

(b) necessary to protect human, animal or plant life or health; ...

(g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption; ...”

The WTO’s Appellate Body (the appeal panel established under the WTO’s Dispute Settlement Mechanism) has outlined a detailed test for the assessment of how an evaluation of a conservation measure should be conducted. In this same decision, the Reformulated Gasoline case, the Appellate Body held that clean air is an “exhaustible natural resource”. It is possible that this same exception could arguably be used if measures were enacted to protect freshwater from bulk exports (Campbell and Nizami, 2001).

What is potentially more of an issue is what might happen should a private company be permitted to carry-out bulk water exports. Under trade law government regulations cannot discriminate against a specific company. Thus if a company was allowed to export bulk-water and the accompanying environmental or other controls were relatively lax another company wishing to export would have the same lax controls imposed on it (Mann, 2006). The importance of having in place the correct legislative environment prior to allowing an activity to take place becomes evident. There is also

no guarantee that high control standards initially imposed cannot be challenged later on as other competitors enter the market. According to Dr Howard Mann, an International Sustainable Development Law expert, it seems reasonable to assume that as long as standards are non-discriminatory, applying equally to domestic water withdrawals as for exports they would be sustainable (Mann, 2006).

Water exports under the NWA

This last point of standards being acceptable as long as they are applied in a non-discriminatory fashion may however cause complications in the specific South African setting, with the emphasis on the social value of water. If water is to play an active role in redistribution of resources and the means of production in the country it may be difficult to treat water for local use and that for export in the same way. The NWA does contain existing standards around the issuing of water use authorisations, several of which could be invoked to regulate any future water exports, should they ever be approved. These include the conditions for issue of general authorisations and licences (Section 29), stating:

- 29. (1) A responsible authority may attach conditions to every general authorisation or licence -
 - (a) relating to the protection of -
 - (i) the water resource in question;
 - (ii) the stream flow regime; and
 - (iii) other existing and potential water users
 - and;
 - (e) in the case of taking or storage of water -
 - (i) setting out the specific quantity of water or percentage of flow which may be taken;
 - (ii) setting out the rate of abstraction (RSA, 1998).

In addition the NWA stipulates that in catchments undergoing compulsory allocation processes there are provisions “to redress the results of past racial and gender discrimination in accordance with the constitutional mandate for water reform” (RSA, 1998, Section 45 (2) (c)). Thus an application for bulk water withdrawals for exports

would in any case only be considered once the above uses have been taken into consideration. This is further strengthened by Section 45 (3) which states that “a responsible authority is under no obligation to allocate all available water” (in a particular WMA). Although again, whether this provision would stand up in a WTO dispute settlement case remains to be seen.

What does seem clear is that the pricing strategy allowed under the NWA may fall foul of WTO provisions. Section 56 on water use charges states that:

- (3) The pricing strategy may -
 - (a) differentiate on an equitable basis between -
 - (i) different types of geographic areas;
 - (ii) different categories of water use; and
 - (iii) different water users;

The last item would possibly be viewed under the GATT as discriminating between parties. Thus it probably will not be possible to limit water exports by making the water supplied too expensive for it to be profitable. However, the fact that water is seen as a scarce and valuable resource in South Africa means that overall charges for water are likely to remain relatively high – compared with water abundant regions such as Canada and Norway. Thus the question of differential pricing would be a moot point as the standard price paid by all large water consumers would most likely be too high to make exports profitable.

Finally, two points from the National Water Resources Strategy are worth taking note of in the context of transfers of water outside of South Africa and by implication the basin:

- The allocation of water away from a catchment can only be justified if it results in an overall benefit from a national perspective. Any negative impacts, or the loss of opportunity as a result of the transfer, must be outweighed by the advantages that are created.

- Conforming to the principle in the NWA that water is a national resource that belongs to all people, no payment is to be made to a source catchment for the actual water transferred.

Based on the above the South African government could well argue that it will not authorise any water exports and certainly not allow profit to be derived from physical sales of such water.

Mitigation measures

In any trade negotiations, South Africa needs to ensure that the state retains:

- a) custodianship over natural resources;
- b) the right to regulate;
- c) policy flexibility and space.

This will require active engagement by DWAF and other responsible departments in trade negotiations. No commitments should be made which could inadvertently impact on national water resources management or water services objectives.

The following general measures could be applied to negotiations:

- do not commit to progressive liberalisation targets under GATS, or to a minimum number of sectors to be included (these negotiations are often referred to as ‘benchmarking’);
- exclude water from all bilateral and plurilateral negotiations and agreements;
- ensure that if a ‘project’ or ‘integrated’ approach is taken regarding environmental goods liberalisation that it does not include environmental services;

- resist all attempts to turn GATS from positive to negative list approach (and guard against this in bilateral negotiations)¹;
- check bilateral agreements for chapters on investment and make sure they do not extend to services sectors;
- specifically exclude water related services and investment from national treatment and most favoured nation status;
- ensure that water is not treated purely as an economic, tradable good under GATT by pre-emptively stressing the social and environmental components;
- ensure that space for regulation (whether existing or needed in the future) is kept open;
- explicitly exclude sectors of public interest.

Furthermore, South Africa could develop and submit a paper which outlines acceptable parameters for the negotiations on Rules under the GATS and explicitly states areas to remain within the public and or national domain. These could include:

- A clear statement limiting National Treatment and confirming that international companies are not automatically eligible for state grants, including the MIG, taxes, subsidies for CMA formation and operation etc. If these are granted they should not be at the expense of the regulatory power of bodies such as CMAs.
- Outlining a clear position on financial transfers that do not go directly to consumers.
- Domestic regulations are the domain of the state and do not need to be submitted to the WTO before national approval. Any agreement on transparency disciplines should be in line with this.
- Outline a clear position on the country's position with regards to the transfer and export of water.

¹ Currently the only services sectors covered by the GATS are those in which countries have made an explicit offer – a positive list. There is pressure from, e.g. the USA, to invert this to a negative list in which all services sectors are included, except for those explicitly listed for exclusion. See Turton *et al.*, (2006) for further explanation.

At a national level, mitigation could include the following:

- Put in place clear regulations and standards and ensure that they are implemented.
- Design and commission ongoing, interactive research (e.g. *know* what the impact of a particular negotiation is going to be on water).
- Research the implications of the GATS for Municipalities and their responsibilities in terms of services delivery.
- Brief SALGA and other local authority networks on the GATS and ensure that they have put mitigation measures in place at a local level because measures of local government are also subject to the GATS.
- Brief the newly-formed CMAs on the potential risks associated with delegating powers to private entities and make recommendations on points to include in contracts.

The following is a summary of the mitigation measures identified in various sections above that respond to the identified risks.

Mitigation 1: Explicitly state any flexibility that South Africa wants to maintain, either through the horizontal commitments, or through sector specific limitations to market access or national treatment.

Mitigation 2: Specify that South Africa requires a system of rising block tariffs in any offer made.

Mitigation 3: Build in flexibility for local or national government to require and implement more than three tiers within the step tariff system.

Mitigation 4: Build in flexibility for local or national government to require a minimum amount of free water and to increase the quantity of the first (free) tier.

Mitigation 5: Explicit reference to South Africa's preference for public provider would help mitigate any ambiguity and should be put into any offer related to municipal services under the GATS.

Mitigation 6: South Africa should develop its positions and offers regarding GATS and other trade negotiations in a more participatory and transparent way.

Mitigation 7: Monitor the CTESS and NAMA negotiations on environmental goods to ensure services are not inadvertently opened up.

Mitigation 8: Should any water transfers or exports be approved make sure that the full range of social and environmental legislation is implemented, as specified under the NWA. Under GATT strict standards can be relaxed later, if needed, but relaxed standards cannot be made stricter.

Mitigation 9: Develop a framework for the involvement of private sector entities in the performance of CMA functions, covering issues such as delegation of powers and access to subsidies.

Conclusion

South Africa's transition to democracy has been a remarkable achievement. Excellent water law is now in place and South Africa is starting to engage in negotiations that will re-connect the economy once isolated by sanctions. While this is all good news, there is risk involved because as things now stand there is simply too much of a disconnect between water resource and water service managers on the one hand, and those specialists who negotiate trade agreements on the other. Few trade negotiators are aware that their noblest endeavours actually expose the water sector to risk, and no water managers are as yet aware that trade negotiations have an impact on the way they manage their affairs in municipalities. This has specific implications for

emerging CMAs. Having noted this, we are now aware of the problem and have started to unravel some of the complexity associated with it. This paper has explored some of those ramifications with a view to sensitizing the reader and mapping out the terrain in order that greater awareness can be generated. A number of short-term mitigation strategies have been proposed, and five specific research areas have been isolated for consideration as future long-term mitigation strategies.

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5.4 Appendix 4: Recommendations for Future Research

**Implications of South Africa's Trade Policies for Water
Policy and Water Resource Management**

WRC Project K5/1564

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1. Introduction

This project looking at the linkages between international trade and water resource management and water services provision has been a first of its kind in South Africa. It was exploratory in its nature and given the complexity of the research topic and the fact that many of the issues being discussed are in a state of flux, the project results can neither be final nor cover the topic in its entirety.

As the impact of international trade on domestic water resource management and water service provision is potentially huge, it is important that further research is done in the field in order to build the necessary capacity in the country to develop appropriate responses to international trade questions that are in line with the country's policy objectives related to water.

To this end the project team has identified a number of issues for further research, which could not be covered in this project, because either the time and budget did not allow for it or because they are only beginning to unfold and becoming more prominent in the future.

The identified topics that are suggested for future research have been grouped in four clusters, which are as follows:

1. International trade issues impacting on water resource management.
2. Water services provision and GATS.
3. The relationship between environmental services and environmental goods.
4. Improving institutional interaction.

In each of the clusters a number of research topics have been listed. It needs to be pointed out, that this is a list of issues that are relevant at this point in time. Further research on the linkages between water and trade in the country will undoubtedly

reveal more issues as the flexible nature of trade negotiations ensures that topics are constantly changing. It is for this reason that it is of urgent importance to build more capacity in the country, ensuring a solid understanding of international trade issues in general and the impact on water in particular.

2. Suggested research clusters

2.1 International trade issues impacting on water resource management

A key consideration in trade policy negotiations should be the promotion of growth in the production of local products with a high value-added content that are at the same time relatively efficient users of water, both upstream and downstream of the production process. The concept of more value-added per drop is a sound one that should be mainstreamed in trade negotiations.

→ Investigate how the value-added per drop aspect could be (further) integrated into the development of negotiation positions.

Given the endemic water scarcity in South Africa, intra-SADC trade in water-rich crops will be increasingly difficult to withstand if the charge for water reflects the real social, environmental and scarcity value. This has implications for emerging farmers, domestic land reform and regional development in the context of SADC. Although a lot of work has been done on international trade in agriculture internationally as well as in South Africa, its linkages to water resource management and domestic agricultural policy issues has been under-researched, making it a strategic issue of note that is currently under-researched.

→ Investigate in detail the linkages between water resource management issues, agricultural policy and South Africa's agricultural trade strategy against the background of developments concerning international trade in agriculture.

Some interpretations on the General Agreement on Trade in Services (GATS) suggest that quantitative restrictions on water use could have unintended legal implications.

This is significant and not yet fully understood, but it has potential implications for compulsory licensing and therefore needs to be better understood.

→ Investigate if water licensing and particularly compulsory licensing is affected by GATS provisions and, if so, what the potential implications for water allocation reform in South Africa would be.

The National Water Act of South Africa defines the Reserve as “the quantity and quality of water required -

(a) to satisfy basic human needs by securing a basic water supply, as prescribed under the Water Services Act, 1997 (Act No. 108 of 1997), for people who are now or who will, in the reasonably near future, be -

(i) relying upon;

(ii) taking water from; or

(iii) being supplied from the relevant water resource; and

(b) to protect aquatic ecosystems in order to secure ecologically sustainable development and use of the relevant water resource” (RSA, 1998)

The Reserve thus takes precedence over all other uses of water, with water in any catchment being allocated for productive uses only once the provisions of the Reserve have been satisfied. Once water in a catchment has been allocated through the compulsory allocation procedure all uses need to take the Reserve into account. Thus, in times of drought other users may need to curtail their use in order to satisfy the requirements of the Reserve. Under the GATT such quantitative restriction measures are prohibited – unless applied to all users in equal proportion. However, Article XX of the GATT does make some degree of provision for the “conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption”.

→ Develop a better understanding of the legal ramifications of protecting the Reserve allocation of water over and above other legitimate users of water.

GATS covers regulatory measures of national, provincial and local government, as well as NGOs that are performing government functions. This has broad reach and could impact on CMA activities in the future. Currently proposed disciplines (i.e. restrictions) on domestic regulation are being discussed under the WTO umbrella. The exact direction and nature of these negotiations is difficult to predict at this stage, but it is possible that disciplines on domestic regulation could impact on the CMAs ability to make water management decisions.

→ Investigate in detail how the GATS could impact on domestic regulation and if this could impact on the water management activities of CMAs (and other bodies responsible for water management).

→ Investigate how proposed disciplines on domestic regulation would impact on water management activities of CMAs (and other bodies responsible for water management).

Although the project focus was on the linkages between water and international trade, the research has also revealed that there is currently a lack of integration between water resource management and industrial development planning. Water issues have for example not been considered in the development of the recently completed Regional Industrial Development Plans (RIDS) or the Accelerated and Shared Growth Initiative for South Africa (ASGISA).

→ Investigate in detail the linkages between national and regional economic development planning and develop mechanisms to integrate water resource management issues into industrial development planning processes and ASGISA.

2.2 Water services provision and GATS

Negative impacts related to service commitments under the GATS can be greatly reduced by having appropriate, robust national regulation that is enforced. The United

States of America has some of the best regulation around service delivery in the world. Research could identify whether mechanisms used by the USA could be useful and appropriate for South Africa to implement.

→ Commission research in terms of what the USA (and possibly other developed countries) has put in place to regulate itself and to protect national interest from the GATS, and see how it could be adapted for South Africa.

South Africa has stated very clearly that its services offer cannot be seen as offering to privatise in any way public undertakings. Furthermore, it explicitly excludes the collection, purification and distribution of water for human use. Yet included in South Africa's offer (although currently restricted to consultancy services) are sewage, sanitation and landscape protection, all of which are integral parts of the full cycle of water services delivery. Opening up these parts of the cycle could impact on, for example, the costs of supplying water and sanitation to households.

→ Investigate the impacts on costs of the full water services life-cycle to households and municipalities of outsourcing some of the water services, e.g. waste water treatment.

When a Water Services Authority (WSA) engages a Water Services Provider (WSP) to undertake all or part of services provision, they need to sign a contract. There are some alarming measures in existing contracts relating to Material Adverse Actions (see linkages paper). It is possible (but unclear without further investigation) that such measures within contracts could fall under the GATS, thus making it reasonable to assume that if they are in one contract, they should be in all.

→ Investigate whether the Most Favoured Nation and the National Treatment principle could apply to WSA-WSP contracts.

South Africa is a member of the Southern African Customs Union (SACU) and Southern African Development Community (SADC), both of which provide preferential trade access to fellow members. Some members are designated Least Developed Countries (LDCs) within the WTO and all except South Africa are members of the Cotonou Agreement (a non-reciprocal trade agreement in which the EU grant eligible developing countries preferential market access) between the Africa, Caribbean and Pacific Countries, and the European Union (EU). The Cotonou Agreement will soon be replaced by Economic Partnership Agreements (EPAs). In its negotiation of EPAs the EU wants to include provisions opening up the services markets of its trade partners. South Africa is not participating in EPA negotiations (as it is not a beneficiary of the Cotonou Agreement and has a separate FTA with the EU), but there will be implications for South Africa due to it having free market conditions with its SADC FTA and SACU partners.

→ Investigate whether and how bilateral or plurilateral agreements with a services component, to which one or more SADC countries (excluding South Africa) are partner, could impact on South Africa.

If South Africa's SACU and SADC FTA partners would grant the EU access to their services markets, it would be in South Africa's interest to reach an agreement with its partners that allows South African services suppliers access to their markets. In other words South Africa would most likely be interested in extending the current coverage of its FTAs with southern African states (which currently only cover goods) to services. A negotiation position promoting offensive interests (i.e. promoting services exports by South African countries) could impact on the country's negotiation position as far as the protection of its own market from foreign suppliers is concerned.

→ Investigate to what extent South Africa's possible offensive interests in the (water) services sector, impact on the country's negotiation options/ position and its ability to protect domestic policy space.

2.3 Relationship between environmental services and environmental goods

Negotiations were mandated in paragraph 31(iii) of the Doha Ministerial Declaration on the “reduction, or as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services”. While many developing countries, including South Africa, are wary of opening their markets further, it is possible that some benefits could be derived by reducing tariffs and non-tariff barriers on environmental goods and services required to improve water resource management and services delivery.

→ Identify goods, services and circumstances by which South Africa could benefit in Environmental Goods and Services liberalisation, for example through cheaper inputs for water treatment or exports of clean technologies.

Prior to the collapse of the Doha Development Round, definitions of Environmental Goods and an approach to their liberalisation were being negotiated within the Committee on Trade and Environment Special Session (CTESS). In general, developed countries were supporting a list approach, whereby agreement was reached on which goods could be listed for preferential access; whereas developing countries were putting forward a project or integrated approach that ensured goods receiving preferential access really were used to improve, or prevent the deterioration of the environment, and which would advance sustainable development.

→ Investigate the implications of the different approaches to Environmental Goods for integrated water resource management and water services.

→ Identify and develop criteria that could be used for listing Environmental Goods in projects that support IWRM and more effective services delivery.

2.4 Institutional interactions

A lot of the capacity for research on the linkages between trade and water issues sits outside government. This is exacerbated and entrenched through outsourcing policy-related research. In many instances, the sector specific capacity sits within government, but in different departments or sections. The linkages can be made by bringing people together in a learning and strategy-oriented forum. Research on the most appropriate mechanisms to do this would improve the applicability and uptake of research on trade and water.

→ Develop mechanisms for government departments to do collaborative research so that less reliance is placed on external researchers and consultants.

While South Africa has not made GATS commitments for water service provision, other commitments made in different sectors could impact on water delivery and management. Trade negotiators need to be made aware of the complexities associated with this fact because the implications for the water sector are potentially profound.

→ Develop a strategy to inform trade negotiators of possible linkages with water so that they are able to solicit input from colleagues in DWAF (and other government departments) at appropriate times.

Some international trade-related aspects that impact on water resource management and water services provision domestically fall within the responsibility of government departments (e.g. DEAT, DTI) other than DWAF. The interaction between the different departments is currently underdeveloped, making the development of sound responses accurately reflecting the interests of South Africa more difficult.

Capacity within government departments and in the country in general relating to the linkages between international trade and water resource management and water services provisions is very limited. Given the complexity of the issues and high rate of change, there is an urgent need to build more capacity inside and outside government.

→ Analyse existing capacity, identify capacity gaps and develop and implement appropriate capacity building measures.