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The WWF

WATER

blueprint

A blueprint for ensuring that healthy freshwater ecosystems underpin economic growth in South Africa

While there are critical warning signs, for the most part South Africa's freshwater ecosystems are not yet showing the widespread collapse typical of many other rapidly developing countries. Groundbreaking water and environmental legislation means that the country can become a model for sustainable development...

But sustained use of our limited water resources will only be possible with concerted, coordinated action on a number of fronts...

Preface *(continued)*

South Africa's National Biodiversity Strategy and Action Plan indicates that 82% of our rivers are threatened, while 44% are considered critically endangered. However, for the most part our freshwater ecosystems are not yet showing the wide spread systemic loss of ecosystem functioning that is typical of rivers in many other rapidly developing countries. Groundbreaking legislation and policies put in place since 1994 are starting to have positive effects, and South Africa can become a model for sustainable development for poor and developing nations.

But there are worrying signs....pollution from failing infrastructure in densely populated urban centres and rapid expansion of industry, and particularly coal mining, is threatening many systems. Economic growth, inefficient and unlawful water use may also rob already stressed water ecosystems of more water, unless action is taken now. A much more integrated implementation environment, the political and social demands to address the legacy of the past and create jobs, and the devolution of powers to local levels require new sets of skills and renewed dedication from all South Africans.

Demographic changes, urbanisation and a growing middle class society, with higher water, food and electricity demands, create a whole new set of challenges for the country. Climate change poses a further level of complexity, with projections of up to 10% reductions in river flows in the Western Cape by 2015, gradually moving eastwards. Changes in rainfall patterns, with

shorter more intense rainfall events, will also influence both water quantity and quality, as well as risks of flood events. These challenges place all of us at risk, and we must act together to address them.

We can only prevent collapse of our threatened freshwater ecosystems, and sustain use of our limited water resources with concerted, coordinated and proactive action on a number of fronts. This requires intervention from all three spheres of government, the private sector – including agriculture and industry, as well as the involvement of civil society. The time for this action is now.

Failure to act soon could place the country on a slippery slope, not only leading to the irreversible loss of more critical freshwater ecosystems, but also threatening the sustainable economic growth which depends on healthy and functional freshwater ecosystems. This will ultimately impact on all South Africans, as well as affect the ability of the private sector to do business. This report distils a blueprint of 10 key actions for government, the private sector and civil society to take into the next decade, and is the result of a careful analysis of the challenges and risks facing the country – and the opportunities for us to address these.

Failure to act soon may lead to the irreversible loss of critical ecosystem functions, and may compromise sustained economic growth... We all share in the risks that this holds...

The Blueprint

10 Key Actions to ensure that healthy freshwater ecosystems underpin economic growth in South Africa

Ensuring that healthy freshwater ecosystems underpin economic growth in South Africa is going to require cohesive action from government, the private sector and civil society. Here we outline 10 key actions that need to be taken forward. Although actions are listed according to lead sectors, in reality concerted action will be required around all 10 actions. WWF will be working with these sectors and committing its resources to bolstering these actions.

Government

1. We need to invest in new skills for a new development paradigm

More integrated approaches to sustainable development and environmental protection, the need to redress the inequities of the past, to create jobs, and the devolution of decision making to local levels, require new sets of skills.

2. We need to implement pragmatic and adaptive management approaches

Limited human and financial resources and the challenges of the new implementation paradigm demand a greater focus on adaptive management and simpler more pragmatic approaches to water resources management.

3. We must plan ahead and make timely and informed investments

Failing water and wastewater infrastructure poses considerable threats to aquatic ecosystems and human health. Poor planning for the future may result in water shortages in some areas, or limited investigation of alternatives to new infrastructure (i.e. in many cases water infrastructure can be avoided or minimised with proper planning). Spatial conservation planning methodology needs to be applied in order to minimise social and ecological impacts and allow for wise investments.

Private Sector

4. Partnerships between government and business are required

Faced with limited resources for implementation, government and big business must form partnerships aimed at giving effect to policies and legislation.

5. Corporate stewardship for water should be fostered

Big business has a vital role to play in ensuring economic growth, but it must also play a stronger role in helping sustain our growth, and helping to protect aquatic ecosystems' functioning.

6. Self-regulation and responsible corporate citizenship will determine our common fate

Big business must recognise that sustainable growth, and their future in South Africa relies on a greater environmental responsibility. As such, the corporate sector needs to self-regulate.

10 Key Actions to ensure that healthy freshwater ecosystems underpin economic growth in South Africa *(continued)*

Civil Society

7. We need to build a strong civil society that holds government and business accountable

The people of South Africa need to hold government and business accountable for sustainable development and environmental protection – recognising the full economic and environmental costs of their actions.

8. Market pressure must be used to incentivise water wise behaviour

Civil society and business need to recognise and understand the full water related impacts of the products and raw materials they buy, and should use their influence to pressurise for products based on efficient water use.

9. All South Africans need to use water responsibly

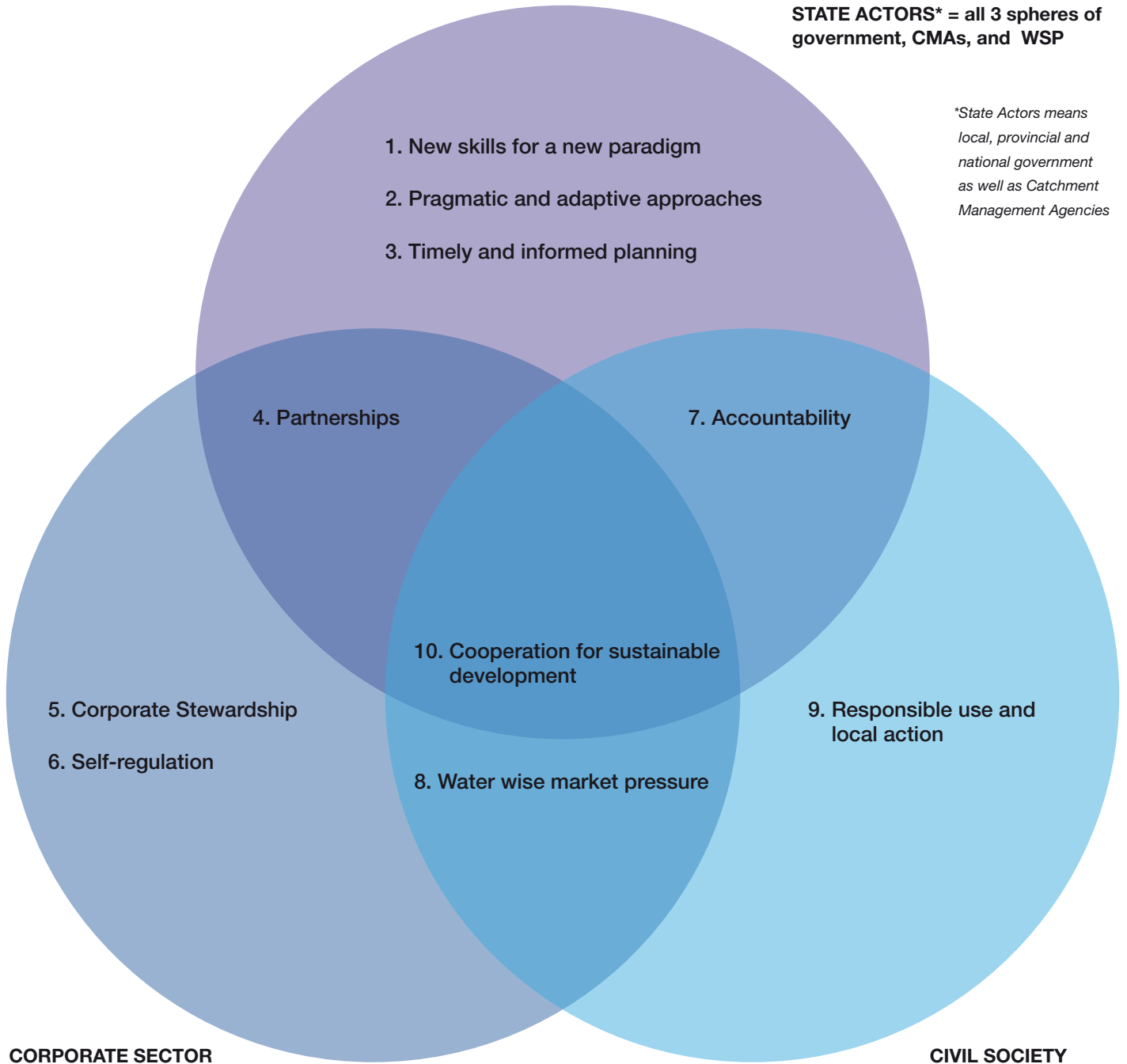
The people of South Africa need to take responsibility for the way they use water and waste services. We all need to recognise that local action is necessary to realise national goals.

All

10. Better cooperation is needed for sustainable development

The need to ensure that healthy ecosystems continue to underpin economic growth requires improved cooperation across all three spheres of government and with the corporate sector, focussed on commonly agreed goals for the nation.

Messages and audiences



How was this blueprint developed?

Noting the threatened status of most of South Africa's river and estuarine systems highlighted in the National Biodiversity Strategy and Action Plan, WWF-South Africa recognised the need for different approaches to arrest the deterioration of these vital ecosystems. These approaches must recognise the particular nexus of economic growth, social development, and poverty facing the country. This blueprint was, therefore, developed by examining the underlying causes and challenges to water quality and quantity problems facing the country. This was offset against the enormous difficulties of sustaining economic growth underpinned by healthy ecosystems, and the need to address the race and gender inequities still prevalent in South Africa. This included examining the institutional challenges associated with devolving the key responsibilities for redress to local levels, and the need for new skills to face this new development paradigm.

This was used as a basis for scenario planning, which identified the key drivers that may lie behind potential trends in increased water stress and deteriorating water quality and aquatic ecosystem health. Messages were developed to help address these underlying drivers, and to raise awareness of the threats posed by not remaining vigilant to the risks we face as a developing nation.

We know that sufficient water of an acceptable quality can be made available to support economic growth for many years into the future, without irreversibly compromising the functioning of aquatic ecosystems. Groundbreaking legislation means that threats to our freshwater ecosystems can be minimised, and South Africa can become a model for sustainable development for poor and middle income countries...but only if proactive action is taken now on a number of fronts. This blueprint is therefore aimed at stimulating concerted, coordinated and proactive action on key challenges for the nation.

South Africa can become a model for sustainable development for poor and middle income countries, but only if proactive action is taken **now** on a number of fronts...

Key overarching challenges

South Africa is at a particularly challenging environmental, socio-political and economic growth nexus - which sets the context for this blueprint. Socio-politically, the country is still dominated by the post apartheid condition. The majority of South Africa's population remains poor and poverty is still predominantly race and gender based. Redressing these inequities, and creating jobs through economic growth will be one of government's key focus areas, and must be the major thrust of government policies, for the foreseeable future. Government's focus on redress and service provision since

South Africa can avoid a
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1994 has already seen significant demographic changes and improved quality of life for many South Africans. A rapidly growing middle class society is increasing the demand for energy, food and water. The provision of water and sanitation services to the poor has increased the costs of preventative maintenance of water and waste water infrastructure, and has posed new challenges for local government – increasing the risks of water pollution from urban centres.

Economic growth is placing increased demands on already limited water resources, and the Department of Water Affairs and Forestry is already planning large scale water storage

infrastructure to cope with growing demands from electricity production and economic growth. The Department of Water Affairs and Forestry is currently implementing 6 major water resources infrastructure projects, to be completed between 2008 and 2012. These included the De Hoop dam in Limpopo and Berg Water dam in the Western Cape and the Vaal River East-Subsystem Augmentation Scheme, which will supply water to Eskom power stations and Sasol. A further 9 major water storage projects are at the planning stage which will be built in the next 5-10 years.

However, minimising the impacts of this infrastructure on aquatic ecosystems, and ensuring that the water needed by these ecosystems remains available, is only possible if this planning translates into timeous action. Moreover, protection of freshwater ecosystems (and South African environmental law) requires investigation of less damaging alternatives to large scale infrastructure development. The Department of Water Affairs and Forestry is certainly aware of these options, and is placing increased attention on addressing unlawful water use, water use efficiency, and mechanisms to share water more fairly – making provision for environmental needs. But, these interventions also need to be translated into timeous action.

To complicate matters, climate change is likely to reduce water availability. Predictions suggest that the Western Cape could see a 10% reduction in runoff in rivers by 2015, and reductions in water availability will move gradually westwards reaching the east coast by 2060. Changes in rainfall patterns will also have impacts on infrastructure and the timing of ecological events. Higher flood peaks will require changes in dam spillways, while urban stormwater systems may not be able to cope with more intense rainfall events – increasing the risks of pollution. Breeding seasons for aquatic species may shift in response to earlier or later summer rains and warmer water. Warmer water may also exacerbate algal growth and the problems associated with eutrophication of many of our inland water systems.

Why are the key actions behind the blueprint important?

1. We need to invest in new skills for a new development paradigm

The National Water Act poses significant new implementation challenges for the Department of Water Affairs and Forestry and the newly formed Catchment Management Agencies. Its implementation is based on a decentralisation of decision-making powers to the Catchment Management Agencies, to be constituted in each of the 19 Water Management Areas. This will require water management institutions to consider varying water availability, protection of aquatic ecosystem functioning, redress of past inequities, existing water entitlements, and the promotion of economic growth and efficient use. Often the most appropriate, or optimum solutions, will not be immediately obvious from the available information, and water resource managers will increasingly face difficult decisions based on limited information. Powerful tools in the Act, like compulsory licensing, 'Classification' and the 'Reserve', water trading, 11 recognised water uses and water pricing create significant opportunities to improve water management, but require water managers to make ever more difficult compromises. This often requires water managers to engage new and unfamiliar areas of expertise, and needs multi-skilled practitioners. Fundamentally, it will require water managers to have a clear understanding of how freshwater ecosystems function and not simply to rely on engineering and administrative solutions.

Much of the burden of service delivery and local economic growth has fallen on local government. However, we appear to have underestimated the challenges of devolving these new responsibilities to local levels. Local government faces enormous pressures to provide higher levels of services, which are often unaffordable – leading to inadequate spending on preventative maintenance. Cross subsidisation of services is often difficult in smaller centres, and higher local rates and taxes are often perceived to be chasing investment away from the town. Faced with these challenges local authorities often make poor investment decisions not recognising the full economic costs of failing systems in terms of poor community and ecosystem health. A history of inadequate investment in preventative maintenance has consequently left huge investment backlogs.

As a result, water and waste water services in many towns and cities across the country are suffering frequent and sometimes systemic failure, polluting rivers and densely populated poor settlements. The real costs of these failures are often borne by downstream users in increased treatment costs and lost ecotourism opportunities. Similarly, poor communities bear some of the burden as their health deteriorates. National government is reluctant to enforce pollution management – recognising that this simply adds to local government's financial burden. Understanding and managing this disconnect between environmental degradation, poorly maintained services and increased health care and other environmental costs requires new skills sets – in all spheres of government. Raising awareness of these issues at the local political level also requires skills not often found in local and provincial government.

We need to build and support these new skills and teams both in government and in water management institutions.

2. We need to implement pragmatic and adaptive management approaches

Much of the promise of South Africa's National Water Act depends on implementing the Integrated Water Resource Management (IWRM) principles inherent in its provisions. The Global Water Partnership defines an Integrated Water Resources Management as follows:

“An IWRM approach promotes the coordinated development and management of water, land and related resources, in order to maximise the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.”

GWP TEC – Policy Brief

This comprehensive nature of IWRM makes the paradigm particularly challenging for developing countries where implementation resources are often limited, and perhaps even more so in South Africa where the process also needs to redress race and gender inequities in water use. Coordinated implementation of the range of different provisions of the NWA is proving to be difficult, given the broad mandate of IWRM.

Why are the key actions behind the blueprint important? *(continued)*

Finding solutions that maximise the social and economic benefits as well as protect vital ecosystems is often time consuming and technically demanding, and rely on solutions which are politically and socially risky. Most importantly, maximising economic and social welfare requires interventions from outside the water sector, and relies on resource hungry cooperative governance processes.

Faced with the complexities of IWRM, many protagonists therefore tend to over elaborate approaches, making the “best become the worst enemy of the good”¹ rather than simpler more pragmatic approaches. IWRM practitioners often spend significant resources on trying to refine answers – delaying implementation. Optimal solutions, or maximised benefits, are proving to be elusive, and will most probably rely on gradual changes set in motion by all the messages in this blueprint, rather than on specific implementation events.

Often water resources interventions are seen as the end point of the IWRM process, and the panacea of all the water and environmental issues in any catchment. Current proposals for the Classification of our rivers suggest that these interventions need to be implemented together to better give effect to IWRM principles. However, this is not required by the National Water Act, and implemented individually, as needs demand and resources allow, these interventions can still realise significantly improved water resources management and protection of the environment.

This does not mean that water resources managers should abandon IWRM principles, but rather that we need to recognise that we often have the information (and legislative provisions) to make ‘good’ decisions now. Similarly, water resource managers need to recognise that the National Water Act allows for adaptive management – allowing for the periodic revision of water use entitlements and even Reserve requirements to adapt to changing circumstances and as our knowledge of these complex systems grows. Synchronised implementation of all the provisions of the NWA is likely to prove beyond our immediate means, but as long as we ensure that the

requirements of the Act are met, most interventions – even if not optimised – will help protect aquatic biodiversity.

3. We must plan ahead and make timely and informed investments

There are two major components to this Action; firstly water and waste water infrastructure in local government, and secondly the role of large scale water storage infrastructure in helping to meet future demands. Adequate ecological, fiscal and management planning underpins both components.

Firstly,

Water supply and sanitation infrastructure provision is a local government responsibility, with oversight from the DWAF. However, local government is struggling to effectively operate and maintain water supply and sanitation infrastructure on limited budgets. A history of poor investment in preventative maintenance has left a significant investment backlog. National and provincial government is often unwilling or unable to support the massive reconstruction and reinvestment needed from the national or provincial fiscus. Increasing demands for unaffordable levels of services and misuse of sanitation systems in densely populated urban settlements create further challenges.

Poor maintenance of these systems is therefore leading to periodic and sometimes systemic failure, resulting in rapidly deteriorating water quality, disease and human health issues (including cholera and dysentery outbreaks), a loss in biodiversity, and more frequent fish kills – particularly near the large urban centres. This problem is receiving increasing attention in the press, and the DWAF is coming under increased pressure to prosecute polluting local authorities. However, while prosecution may pressurise local government to invest more in infrastructure maintenance, solutions to the problem need to be more innovative. These solutions must recognise that the root causes of the problem are financial / institutional as well as social and physical. More innovative solutions to supporting water supply and sanitation infrastructure in local government are needed, which specifically recognise the potential long-term pollution effects, and impacts on aquatic ecosystems. Similarly, more comprehensive evaluations of the costs of failing

¹ From the World Bank Water Sector Strategy – Message 3

Why are the key actions behind the blueprint important? *(continued)*

infrastructure (including downstream costs) need to be offset against investments in infrastructure maintenance.

Ultimately, the financial resources must be found if the country is to avoid the water and environmental crises currently prevalent in Ghana².

Secondly,

The National Water Resources Strategy (NWRS) indicates that sufficient water “can be made available” to meet the water demands of a growing economy. This is only going to be possible if by both supply and demand is managed. There is evidence that water infrastructure has mitigated the economic impacts of droughts, and the current development of the economy would certainly not have been possible without previous investments in water infrastructure. However, South Africa is fast approaching full utilisation of surface water yields and running out of new sites for dams and there is a new focus on the utilisation of ground water.

Despite this, the DWAF already has a number of large water infrastructure projects in the pipeline. The World Commission on Dams has indicated that for the most part large dams have had negative ecological and social consequences. Appropriate planning and timing of South Africa’s new water infrastructure in order to minimise ecological and social impacts, as well as investigation of viable alternatives, is therefore important. Alternatives to find water certainly do exist, for example: water conservation and demand management, removal of water intensive invasive trees, appropriate water pricing and ‘cap and trade’ systems which can push water towards sectors which can contribute more to GDP for less water, and addressing unlawful water use. However, these interventions require long lead times to be effective without causing damage to the economy. Timeous planning, investigation and implementation of viable alternatives are therefore vital.

² *In Ghana, widespread failure of water supply and sanitation infrastructure has lead to a water crisis in the cities, forcing people to use untreated water in urban rivers – in spite of abundant supplies in the Volta Lake. This has lead to massive disease outbreaks.*

Of more concern, are the impacts of severe and more frequent droughts, perhaps as a result of climate change. South Africa is littered with ‘emergency schemes’ implemented when there are severe water shortages. By their very nature, emergency schemes do not always make adequate provision for the maintenance of environmental flows. Moreover, in emergency situations, the water available as the ecological Reserve may be compromised.

In spite of these concerns, South Africa has a long history of effective long-term water resources planning. It is important that these skills are maintained, and expanded to incorporate more ecologically sustainable infrastructure development paradigms.

4. Partnerships between government and business are required

In any situation, sustainable development and protection of freshwater ecosystems must be a partnership between business and government, but this is even more critical in a developing country like South Africa. Pressures for economic growth and job creation are significant, and government resources to manage an increasingly complex implementation environment are limited. The potential for this situation to be deliberately or inadvertently exploited is high.

Big business must consequently recognise that ultimately their long-term investments in South Africa can only be assured through ecologically sustainable development and supporting government to achieve this. Specific partnerships around supporting economic growth while minimising the impacts on water resources should therefore be developed, and supported by big business. Similar partnerships around crime prevention, and more recently around the energy crisis have already proved effective. Similar partnerships around the water related impacts of business should be developed.

5. Corporate stewardship for water should be fostered

The corporate sector is now, more than ever, recognising both the contribution they are making to global environmental problems, but also the contribution they can make to the

Why are the key actions behind the blueprint important? *(continued)*

solution. More importantly, they are recognising that their ability to continue to do business depends on a greater commitment to both poverty reduction and the environment. Recognising this, the World Business Council for Sustainable Development has recently funded a scenarios development process, based on the recognition of growing importance of water in business.

Large corporations and big business therefore need to promote a greater environmental responsibility within their own ranks by making clear commitments for more water wise development and growth. The CEO Water Mandate, which pledges 6 large multinational companies to particular action on water, is a good example of this stewardship, and recognises the positive role big business can play. This pledges these companies to particular behaviour in the following areas:

- 1. On their direct operations** – To understand their full water footprint, and take proactive steps to reduce their impacts on the water resource, and to raise awareness within the corporate culture.
- 2. On the supply chain and watershed** – To encourage similar actions in their suppliers, building the capacity to understand and respond to watershed issues.
- 3. On collective actions** – To build ties with civil society, government (at all levels), and to be actively involved in initiatives related to their water footprint.
- 4. On public policy** – To use advocacy and influence to encourage changes in public policies.
- 5. On community engagement** – to understand the challenges facing communities where they operate and to be actively involved in awareness raising and education – working with public authorities.
- 6. On Transparency** – To report on actions using performance indicators, and to share their water strategies.

Importantly, business should avoid “a race for the bottom”, which tries to maximise short-term competitive advantages by exploiting environmental resources. As such, more needs to be done to publicize this form of stewardship, and large business needs to take more of a leadership role in this regard – particularly with regard to Pledge 2 above.

6. Self-regulation and responsible corporate citizenship will determine our common fate

Clearly, sustainable development rests on ensuring that we have the water to both maintain healthy freshwater ecosystems and to support economic growth. This will reduce the costs of using water, will help maintain flows in dry periods (and hence provide for assured water supply), and will reduce the risks of water-borne diseases which can place severe limitations on growth. Big business therefore has a stake in responsible use of our water resources.

Given the complexities facing water management institutions and the limited human and financial resources they have at their disposal, big business can follow two paths. Firstly, they could deliberately or unconsciously exploit the situation, using their financial and labour muscle to push through authorisations to develop without appropriate impact assessments. Secondly, they can take on a measure of the burden of good water and environmental governance. While the first option may allow for short-term gains, it does not recognise the longer term costs of irresponsible growth trajectories. Most importantly, by taking on a measure of responsible corporate citizenship, big business recognises a common destiny for the nation as a whole – thereby securing a future for themselves. This means not only implementing good environmental practices within their own businesses, but also building in self-policing mechanisms into their respective sectors.

Similar responses to the crime situation has seen the corporate sector becoming more involved in safety and security, while international good business practices increasingly recognise the longer term threat posed by these practices. Internationally, large corporations are recognising the value of minimising their impacts on the environment, while the 6 CEO statement described above represents an example of good corporate citizenship with respect to water.

7. We need a strong civil society that holds government and business accountable

Government and big business can not give effect to this blueprint without the grassroots support from the people of South Africa.

Why are the key actions behind the blueprint important? *(continued)*

People at all levels of society also need to recognise the commonality of our future, and must hold government and business accountable for their actions. Environmental and water legislation is built on the recognition that people must ultimately lie at the heart of sustainable development initiatives. But this can only be effective if the people themselves demand effective implementation of this legislation, and their right to ecologically sustainable development as outlined in the Bill of Rights.

Unfortunately, awareness of the water environmental impacts of rapid economic growth is not deeply entrenched in civil society in South Africa. The impacts of degraded catchments and water resources on rural livelihoods, and the community health impacts of failing water and waste services are often poorly understood. The perception that goods and services offered by government count more than goods and services offered by aquatic ecosystems does not fully recognise the long-term impacts of a loss of ecosystem functioning on people. More, therefore, needs to be done to make civil society aware of these wider impacts, so that the people of South Africa can start to hold government and business accountable for their environmental impacts.

8. Market pressure must be used to incentivise water wise behaviour

Ultimately, the strategic response to maintaining long-term economic growth with limited resources is to shift water use into sectors that offer higher GDP and jobs per drop of water used. Unfortunately, government's ability to proactively intervene to push economic growth in this direction is restricted, and water pricing can only have limited impact without causing severe economic disruption.

Ensuring more efficient use of our scarce water resources will not only depend on interventions by government and business, but will require market forces which encourage wise water use. These forces will help grow businesses that can maximise the benefits of their water use, allowing them to expand, and if necessary to buy water from businesses that are not able to derive the same benefits. This will be a slow process, not reliant on a single event or intervention by government, but

will be a process driven by the people of South Africa and by business itself.

Beyond this, consumers can use market pressures and competition to encourage businesses to implement water efficiency measures and cleaner production, by selectively buying products that are produced using less water, and which result in less discharge back to river systems.

The role the public and business can play in encouraging shifts towards more efficient water use and limiting pollution is therefore vital. Internationally more and more businesses are recognising that their environmental impact extends along their full supply chain, and that wise water use must go beyond the factory floor into the catchment that supplies their raw materials, and into their customer base. Similarly, consumers are becoming increasingly aware of the environmental impacts of the products they buy. This means consumers must be made more aware of both water efficiency and business' track record on pollution and cleaner production.

Eco-labelling is becoming more common, and information on the carbon footprint of certain products is becoming more available. Similar awareness of the 'water footprint' of products can help support more efficient water use. Big business can also use their influence to promote water conservation practices in their raw materials suppliers. Government should therefore look at introducing "water efficiency" labelling, or should do more to make the public aware of water use efficiency measures put in place by business.

9. All South Africans need to use water responsibly

But once again it is not sufficient for people to only hold government and business accountable; everyone needs to contribute to the solution. South Africa's National Water Resource Strategy has shown that economic growth in some of the key growth areas of the country can only be maintained if water use efficiency measures are put in place. Fortunately, already high water demands in these areas create significant opportunities for these measures, but this will require concerted effort from all South Africans.

Why are the key actions behind the blueprint important? *(continued)*

Similarly, the people of South Africa need to recognise that indiscriminate use of water and sanitation services has significant impacts on the country as a whole. People therefore need to take responsibility for their own behaviour, recognising sustainable use of our water resources in the face of economic growth requires local action.

Clearly, the nature of this action will differ with the level of wealth. Wealthier citizens can reduce their water consumption and pollution loads through a variety of mechanisms, but the poor (particularly in urban centres) can also play an important role in reducing water consumption. Misuse of water and sanitation systems in poor areas contributes significantly to pollution and failing infrastructure, which not only affects nearby water resources, but also poses huge community health risks.

10. Better cooperation is needed for sustainable development

Better cooperation is needed between the different spheres of government, and between government Departments. The new development and ecological approaches to natural resource management demand much more integrated approaches. However, practicality demands that the mandates for environmental protection, conservation, water resource management, social and economic development, and water services provision are spread across several government Departments, in all three spheres of government.

More importantly these government Departments face different mandates and pressures, and often single-mindedly pursue that mandate. Cooperative government, while being a Constitutional requirement, is also resource hungry and time consuming. Often government Departments, pursuing specific goals, do not realise the full implications of these actions on sustainable development and the environment. As a result authorisations to develop housing, initiate mining, or establish industries are often rapidly given with limited recognition of the possible water and environmental impacts.

While all government departments and the different spheres of government are committed to cooperation, the resources and costs of cooperative government are often underestimated

and consequently given inadequate attention. Similarly, a lack of a clear national guideline for realising the Constitutional requirement of:

“ecologically sustainable development and use of natural resources while promoting justifiable economic and social development” [S24 (b) iii]

makes it difficult to balance the mandates of the different government agencies. Underpinning this are the fundamentally different approaches to assessing and protecting aquatic ecosystem health in DEAT and DWAF. DEAT primarily has a biodiversity protection mandate, and based on this has estimated that some 82% of our rivers are threatened while 44% are critically endangered. DWAF’s mandate is, however, protection for sustainable use, and is based on maintaining ecosystem goods and services on which sustained use of the water resource depends. South Africa’s river systems have, for the most part not seen the widespread loss of functioning typical of many other rapidly developing nations.

Legislation exists in the form of the Intergovernmental Relations Framework Act (IGRFA) to develop Implementation Protocols where the implementation of a statutory function depends on participation from different organs of State. These Implementation Protocols provide the mechanisms to identify challenges, describe roles and responsibilities, outline desired outcomes and provide for oversight. As such, the IGRFA can play a significant role in “enforcing” particular cooperative procedures in cases where development holds significant environmental risks. However, experience has shown that the Act is largely used as a facilitative tool for alignment and awareness, rather than to specify specific operational procedures. Implementation and compliance has been difficult to ensure in cases where government Departments are not already cooperating.

However, it is also clear that the corporate sector can play a significant role in supporting cooperative government arrangements by supporting coordinated decision making on development options. Ultimately, this will reduce the red tape required for authorisations, and could speed up ecologically sustainable development. As such, better cooperation either through Implementation Protocols or other mechanisms could benefit big business.

What is WWF already doing?

The WWF Water Blueprint will serve to refocus WWF and its partners' efforts to ensure that healthy freshwater ecosystem underpin South Africa's economic development. However, WWF is already engaged in number of projects that make a significant contribution to these 10 key actions. These projects are listed below:

Developing skills of the new water governance structures (Action 1)

WWF has worked with DANIDA, freshwater ecologists and educational specialists, to develop a training course for Water User Associations and Catchment Management Agencies. The course aims to increase the understanding of freshwater ecosystems and develop the skills of trainees to be able to implement solutions that are ecologically sound. The training course was piloted in the Olifants/Doorn Water Management Area and is ready for national roll-out.

Review of the implementation of the 'Reserve' (Action 2)

Without doubt the most progressive, and also most challenging, aspect of the National Water Act, is its fundamental provision for the 'Reserve'. Simplistically, this is the amount of water in a system required to sustain basic human needs and the ecological functioning of the system (these rights supersede all other water requirements). Despite examples of good progress, many have become disillusioned about South Africa's ability to implement this ambitious provision of our law. Without doubt a pragmatic and adaptive management approach is required. WWF is working with DWAF and freshwater specialist to review South Africa's progress, lessons learnt and to make pragmatic recommendations for future roll-out.

Identifying national freshwater ecosystem priority areas (Action 3)

WWF is working with a number of agencies (including the WRC, SANBI, CSIR, & DWAF) to identify South Africa's freshwater ecosystem priority areas using systematic conservation planning methodology. These outputs will play a significant role in the structured and informed planning of South Africa's water infrastructure. i.e. the outputs will allow planners to quantify ecological impacts of different infrastructure options and to agree on those that have least impacts.

The WWF Water Neutral project (Action 4 & 5)

The WWF Water Neutral project seeks to harness corporate support for the wise management of South Africa's water resources. This is done by encouraging corporates to become water neutral through a three step process of: Review, Reduce and Replenish. Corporates are encouraged to review their water consumption and make this publically available, implement a water reduction strategy, and then to replenish an equivalent amount of water back into our freshwater ecosystems through the removal of infestations of water-intensive introduced invasive trees.

WWF partnerships with responsible corporates concerned about water (Action 6)

WWF has developed partnerships with South African corporations that share our concern about our water resources and freshwater ecosystems. These include Sanlam, Mondi, SAB Ltd, De Beers and Pick n Pay.

These corporations not only contribute to freshwater conservation and management initiatives and are committed to improving their own business practices, but are also working with WWF to investigate how they can 'go beyond compliance' and utilize their market influence to drive broader uptake of better water practices.

Sustainable Agricultural Products (Action 8)

Agriculture uses more than 60% of South Africa's allocated water resources. WWF is working towards the development of more sustainably produced agricultural products. Our initial success has been with the Sugar industry, where WWF has worked with the Noodsberg Cane Growers to develop a Sustainable Sugar Farm Management System (SuSFarMS) which is currently being implemented by almost 600 growers. WWF recently partnered with the South Africa Sugar Association (SASA) to ensure national roll-out of the Farm Management System.

What is WWF already doing? *(continued)*

WWF is also engaged with the wine industry through the Biodiversity and Wine Initiative (BWI), and is also seeking to drive more cohesive interaction with the retail sector through the GreenChoice initiative.

WWF is now working to develop a generically applicable and standardized Farm Management System that can be applied to other crops.

Public Awareness campaigns (Action 9)

WWF is seeking to drive greater water awareness amongst the general public through awareness campaigns. This includes WWF's recent "Heroes" as well as staff outreach campaigns with our major corporate partners.

Driving greater cooperation between government agencies through management effectiveness tools (Action 10)

WWF is working with the CSIR to develop and implement a management effectiveness assessment tool that seeks to drive better cooperation between government agencies and departments. The tool is focused on the implementation of the agreed cross-sector policy objectives for freshwater ecosystems.

Key References

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