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##### INTRODUCTION TO WATER RESOURCES MANAGEMENT

##### KM-01-KT02

##### MANDATE FOR WATER RESOURCE MANAGEMENT IN SOUTH AFRICA

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# Water resource management and the law

Water is needed by people, plants and animals to survive. Water is also necessary for health, religious and spiritual purposes as well as social and economical development, to create opportunities, jobs and for recreation. Water is therefore fundamental to life, the environment, power generation and food security and industrial production. Only if the water resources are protected, used, developed, conserved, managed and controlled in a sustainable manner, could water in the long-term be available for these purposes and provided in an environmentally sustainable manner.

Land use activities largely dictate the quantity and quality of water that is available for usage. Inappropriate land-use practices could impact negatively on the development and utilisation of the water resources. Certain of the activities associated with these uses require water of acceptable quantity and quality to be able to be sustainable. On the other hand, certain of the activities have the potential to contaminate the water resources depending on how the activities are performed, whether land disturbance takes place and how waste generated is dealt with. The problem is worsened as a result of changes in land uses with an increase in the quantity of waste entering the water resources.

South Africa’s water resources in global terms are scarce and extremely limited in extent. Within a few years the population growth, developing economy and urgent need to supply water to the millions of people will take us below of the internationally-used definition of water stress. More water will be needed than could be delivered at a given time and place.

South Africa is further lacking effective provision of water for certain sectors. This results in that, among others, many people in rural areas have no choice but to walk long distances to collect water to support life and personal hygiene. Great challenges remain to provide access to services to those still without and to maintain and improve those services already supplied in a sustainable manner.

The water problem is further one of conflict between

different uses and users in or between catchments;

present and future generations;

application of human and capital resources for water resource development relative to other investments; and

economic prosperity and preservation of ecosystems.

These conflicts should be resolved through well developed policies and measures to ensure that the water resources are protected, used, developed, conserved, managed and controlled in such a way to achieve optimum long-term environmentally sustainable, social and economic benefit for the society.

Water should eventually be used in the best public interest on a sustainable, equitable and efficient manner.

According to the Constitutional Court,[[1]](#footnote-2) Government should formulate policy and gives effect to the policy by securing the enactment of legislation. Thereafter a process of implementing and administering the policy is done by developing strategies and programmes, and then by applying legislation and other measures to these. This should be part of a process.

Legislation has been promulgated to provide the necessary to give effect to these policies and measures.

Effective water management therefore consists of “water resource management” and “provision of water services”. Although the two concepts are distinguishable they should not be separated.

Legislation dealing with “water management” and to ensure implementation of the necessary policies is among others the Constitution of the Republic 108 of 1996, Spatial Planning and Land Use Management Act 16 of 2013, National Disaster Management Act 57 of 2002, Public Finance Management Act with the Divisions of Revenue Acts, Promotion of Administrative Justice Act 3 of 2000 and Promotion of Access to Information Act 2 of 2000.

Legislation dealing with “water resource management” and to ensure implementation of the necessary policies among others the National Water Act 36 of 1998, National Environmental Management Act 107 of 1998, Mineral and Petroleum Resources Development Act 28 of 2002, Conservation of Agricultural Resources Act 43 of 1983, National Environmental Management: Air Quality Act 39 of 2004, National Environmental Management: Biodiversity Act 10 of 2004, National Environmental Management: Waste Act 59 of 2008, National Environmental Management: Integrated Coastal Management Act 24 of 2008, National Environmental Management: Protected Areas Act 57 of 2003 and various Ordinances of the nine Provinces.

Legislation dealing with “access to water services” (for the municipal sector) and to ensure implementation of the necessary policies is among others the Water Services Act 108 of 1997, Local Government: Municipal Structures Act 117 of 1998, Local Government: Municipal Systems Act 32 of 2000, Local Government: Municipal Demarcation Act 27 of 1998 and Local Government: Municipal Finance Management Act 56 of 2003.

# Constitutional mandate governing water

The constitutional mandate governing water gives every person a fundamental right to an environment in terms of section 24 of the Constitution of 1996 that is not harmful to his or her well-being, and requires the environment to be protected for the benefit of the present and future generations. The protection should be afforded through reasonable legislative and other measures that secure ecologically sustainable development and use of the water resources, while promoting justifiable economic and social development.

Every person has a fundamental right in terms of section 27(1)(b) and (2) of the Constitution of access to sufficient water. The State must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of this right. Giving effect to this right could also give effect to the constitutional right that a person has to have his or her dignity respected and protected and to the right to life.

There should be a commitment from the nation Section 25(4)(a) and (8) of the Constitution to bring about equitable access to the water resources. The State may take legislative and other measures to achieve water reform in order to redress the results of past racial and gender discrimination and giving the poor access to water.

When giving effect to these rights, the other fundamental rights should be respected, protected and fulfilled. These include the right to

equal protection and benefit of the law as contemplated in section 9(1) of the Constitution;

non-discrimination as contemplated in section 9(3) and (4) of the Constitution;

privacy as contemplated in section 14 of the Constitution;

access to information as contemplated in section 32 of the Constitution;

just administrative action as contemplated in section 33 of the Constitution s; and

disputes that could be resolved by the application of the law decided in fair public hearing before a court or, where appropriate, another independent and impartial tribunal or forum as contemplated in section 34 of the Constitution.

A person may only in terms of section 25(1) of the Constitution be deprived of an entitlement to water, the fruits of the entitlement, or the value that water adds to property, in terms of a law of general application which may not be arbitrary. Expropriation of these may take place in terms of a law of general application for a public purpose or in the public interest subject to compensation.

However, these rights are not absolute and may in terms of section 36 of the Constitution be limited in terms of a law of general application to the extent that the limitation is reasonable and justifiable in an open and democratic society based on human dignity, equality and freedom, taking into consideration certain factors.

## Environmental protection

A person has a right in terms of section 24 of the Constitution of 1996 an environment that is not harmful to his or her well-being, and requires the environment to be protected for the benefit of the present and future generations through reasonable legislative and other measures that:

Prevent pollution and ecological degradation;

Promote conservation; and

Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

Conduct of an organ of the State, a private individual or an organisation violating this may be challenged. The right imposes a duty on the State to take legislative and other measures to protect the environment. If the State fails to take these, the State could be forced to comply.

This right covers the conservation of the aquatic ecosystems and riparian habitat. Certain aspects of the environment merit protection purely for aesthetic reasons. It includes medical, spiritual or psychological aspects such as the individual’s need to be able to commune with nature and to use the water for religious or spiritual purposes such as baptising.

Sustainable development should be understood that it takes place in a way that allows the water resources to stay intact. Water resources should therefore be exploited in such a way that they will be able to sustain human, plant and animal life over the longest possible period.

A positive duty is placed on the State (all three spheres) to protect the environment, which must be achieved by legislation and administrative measures. Administrative measures include a wide field of measures. The goal of these should be to prevent pollution and ecological degradation, promote conservation and secure ecologically sustainable development and use of the water resources, while promoting justifiable economic and social development.

There is a duty on the State to monitor and regulate those activities that are or are likely to be harmful to water resources and to ensure that there is sufficient water to maintain the ecological integrity of the country’s water resources, and that water conservation and sustainable, justifiable economic and social development are promoted. A balance should be struck between environmental protection and development that is sustainable. The State has to play a role here to ensure that effective legislation is in place and that it is enforced. This has already occurred with the enactment and application of for example the National Environmental Management Act 107 of 1998 and the National Water Act 36 of 1998, Mineral and Petroleum Resources Development Act 28 of 2002, Conservation of Agricultural Resources Act 43 of 1983, National Environmental Management: Air Quality Act 39 of 2004, National Environmental Management: Biodiversity Act 10 of 2004, National Environmental Management: Integrated Coastal Management Act 24 of 2008, National Environmental Management: Protected Areas Act 57 of 2003, National Environmental Management: Waste Act 59 of 2008 and Ordinances of the Provinces.

## Measures to achieve water reform

Section 25(4)(a) and (8) of the Constitution of 1996 states that there is a commitment from the nation to reform in order to bring about equitable access to all South Africa’s natural resources. Natural resources include the water resources. The State is not impeded to effect water reform by taking legislative and other measures in order to redress the results of past racial discrimination so as to achieve socio-economic equity. This requirement should be met in such a way that effect is given to the protection of property as required in terms of section 25 of the Constitution.

There is a duty on the State to design and implement measures within its available resources to achieve the progressive realisation of the socio-economic rights, which include access to education, health care, food, water, shelter, land and housing. These rights could only be realised if effective water reform also takes place.

The Constitution requires that a balance should be struck between the interests of property holders (persons with entitlements to water) and the interest of the general public. It empowers the State to redress the injustices of the past through redistribution of, among others, the right to the water resources to the advantage of the previously deprived.

## Access to sufficient water

Everyone has a right in terms of section 27(1)(b) and (2) of the Constitution to have access to sufficient water. The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of this right.

This right is a component of an adequate standard of living and should also include water of sufficient quality and assurance of supply.

The right might be more than only water to support life and personal hygiene. It is unlikely that the right would include the use of water for productive or commercial purposes. What exactly sufficient water entails, is done by taking into consideration the different needs to develop communities and eradicate poverty, the fact that water is scarce (other resources also) and that the right is a socio-economic right. It should be determined on a case-by-case scenario and could even change over time. The emphasis up to now was mainly to support life and personal hygiene.

The right is one of “access to” sufficient water and not a right to “adequate water”. This right does not mean provision of water in all households or for all undertakings, but at least access by all persons to long-term sustainable provision of a level of water supply, and a basic minimum, potable water supply close to all households. Appropriate education in respect of effective water use should also be included. In order to achieve sustainable access to water services in the long term, the following are necessary to install, operate, maintain and use the necessary infrastructure to provide these services: Equipment, finance, technical and management skills. And for that, financial resources and management skills are in certain cases the critical element.

The extent of the State’s duties differs according to the economic resources available to the different sectors of the population. Those with sufficient economic means already have access to sufficient water as they could afford to pay water services providers to provide it to them. The different spheres of government should therefore direct their attention to those without the necessary means and without access to water.

In respect of the responsibilities of the various spheres of government, the Constitutional Court[[2]](#footnote-3) stated that “[A]ll levels of government must ensure that the … programme is reasonably and appropriately implemented.... [E]very step at every level of government must be consistent with the constitutional obligation to take reasonable measures to provide adequate [services] …”. The Court stayed away from delineating the responsibilities of the various spheres of government and rather emphasised the principles of co-operative government. “Each sphere of government must accept responsibility for the implementation of particular parts of the programme but the national sphere … must assume responsibility for ensuring that laws, policies, programmes and strategies are adequate to meet the State’s ... obligations. In particular, the national framework, …, must be designed in order for these obligations to be met. It should be emphasised that national government bears an important responsibility in relation to the allocation of national revenue to the provinces and local government on an equitable basis.” Therefore a right of access to sufficient water places a distinct responsibility on national government to ensure that its water delivery programmes enable local governments to deliver potable water services with the necessary support from the provincial government.

A considerable margin of discretion should be given to the State in deciding how it should go about fulfilling this right. As stated by the Court “[t]he precise contours and content of the measures to be adopted are primarily a matter for the Legislature and the Executive. They must ... ensure that the measures they adopt are reasonable. [Further,] legislative measures by themselves are not likely to constitute constitutional compliance. Mere legislation is not enough. The State is obliged to act to achieve the intended result, and the legislative measures will invariably have to be supported by appropriate, well-directed policies and programmes implemented by the Executive. These policies and programmes must be reasonable both in their concept and their implementation. The formulation of a programme is only the first stage in meeting the State’s obligations. The programme must also be reasonably implemented.”

The Court emphasises that “[r]easonableness must be determined on the facts of each case.” The measures should not overlook those most in need. Such an omission will be unreasonable and it would also be in conflict with the other constitutional obligations “to respect human dignity” and “the right to equality”.

The capacity of organisations involved to ensure access to sufficient water must also be taken into account in determining the reasonableness of the legislative and other measures. The Constitutional Court held that what constitutes reasonable must be determined in light of the fact that the Constitution created a three-sphere government. The Court went on to say “a reasonable programme therefore must clearly allocate responsibilities and tasks to the different spheres of government and ensure that the appropriate financial and human resources are available”. Whereas national, provincial and local governments share the function of water provisions a co-ordinated State programme must be a comprehensive one determined by all three spheres of government in consultation with each other. Provincial and local governments need not have their own programmes but should be in a position to contribute to the administration of national programmes under assignment or delegation from the national government. The Court emphasised that the national government bears an important responsibility in relation to the allocation of national revenue to the province and local government on an equitable basis.

The positive obligation to realise the right is further qualified by obliging the State to take only those steps within its available resources to achieve the “progressive realisation” of the right. The fact that the full realisation of the right can only be achieved progressively does not alter the obligation on the State to take those steps that are within its power immediately and other steps as soon as possible.

Therefore the State should take reasonable steps to realise this right. When challenged on policies, the State should explain why the policy is reasonable. It should disclose how policy was researched, selected and formulated. Each water service authority should determine how must water is sufficient for its specific situation.[[3]](#footnote-4)

How much is sufficient water, therefore is depended on each case. A typical water menu may be as follow:

Drinking requirement for loss through bodily functions: 3 to 5 l/c/d;

Washing of body: 5 to 15 l/c/d;

Washing of cloths;

Sanitation: 15 to 20 l/c/d;

Preparation of food: 10 l/c/d;

Washing of dishes;

Sickness like HIV/AIDS; and

Other.

This menu does not take into consideration the reuse of water, for example making use of washing water for sanitation services.

The duty to provide access to sufficient water could also be applicable to private persons. Whether there is such a duty would depend on, for example, the provisions of a contract between the water services authority, who has such a duty in terms of the Bill of Rights, and the private water services provider, who provides water services on behalf of the water services authority. It could also be by implication, for example, where labourers reside on a farm and the owner of the farm provides housing to them as part of the employment conditions. These conditions could also imply that water will be provided.

Giving effect to this right has already occurred with the enactment and application of for example the Water Services Act 108 of 1997, the Local Government: Municipal Structures Act 117 of 1998 and the Local Government: Municipal Systems Act 32 of 2000, as well as the strategies, programs and plans developed to give effect to these Acts.

# Structure of Government

South Africa is a democratic state founded on the rule of law. State actions should be lawful, and it could only be lawful if it is authorised by empowering legislation. “Whenever public power is exercised” it can only be done “if it is clearly source in law”.[[4]](#footnote-5)

The Constitution is the supreme law of the Republic. Any conduct of the government and the different government departments inconsistent with it is invalid and the obligations imposed by it must be fulfilled.[[5]](#footnote-6) Further, the Bill of Rights, as contained in the Constitution, binds the government and government departments.[[6]](#footnote-7)

Any conduct of the government or any of the government departments violating these provisions could be challenged by the public applying the common law principles of delict or interdict or both. Further if the government or the government departments fails to fulfil an obligation, it can be forced to comply.

The government and the different government departments have therefore to play a role to ensure that effective policy and legislation is in place and that it is enforced to ensure that, among others, the environment is not harmful to the health and well-being of the public and to have the environment protected for the benefit of the present and future generations as required by the Constitution.

A distinction should be made between legislative and executive authority of the Government.

Legislative authority is the authority to promulgate legislation. The circumstances when a legislature in a specific sphere of government may promulgate legislation are set out in the Constitution.

Executive authority, on the other hand, is the authority to implement the legislation and to exercise the powers conferred by the legislation. The circumstances in which an executive authority may exercise the powers conferred on it by legislation are determined primarily, not by the Constitution itself, but by the relevant legislation. However, the Constitution may allocate executive power to specific organs.

### Legislative authorities and their competencies

The Constitution does not state that for example “water resource management”, or any of its sub-components like for example “water quality management”, “the provision of bulk water or water services” or “water drought management’, is the responsibility of the national sphere of government or the Department of Water and Sanitation. Such a responsibility should be assigned or allocated to the various organs of state by Cabinet and/or legislation enacted by the various legislatures.

Whether the legislature in a specific sphere of government has the authority to make legislation on a matter depends on the functional area involved. A matter within a specific functional area could be an a concurrent competence of the national and provincial governments as contemplated in Schedule 4 or a exclusive competence of provincial government as contemplated in Schedule 5 of the Constitution.

Functional areas of concurrent national and provincial legislative competence include for example agricultural, disaster management, environment, housing, industrial promotion, nature conservation, pollution control, regional planning and development, soil conservation, indigenous forest and urban and rural development.

Functional areas of exclusive provincial legislative competence include for example abattoirs, provincial planning.

Water resource management are not listed as a functional area of concurrent national and provincial legislative competence (which are vested in Parliament and the 9 Provincial legislatures) or exclusive provincial legislative competence (which are vested in the 9 Provincial legislatures). It is therefore in terms of section 44(1)(a)(ii), read with section 104(1)(b)(i) and (ii) within the national government legislative competence (which are vested in Parliament). The same applies to for example mining and marine resources.

Further, a single piece of legislation may vest executive powers in different executive authorities of the different spheres of government and/or organs of state not in any sphere of government, despite the fact that the legislation has been created in terms of the legislative competence of one sphere of government. For example, an Act of Parliament may vest certain executive powers in a Minister in the national sphere of government and other powers in the Members of the Executive Councils of the provincial sphere of government and in the different Municipal Councils. The Water Services Act, the Local Government Systems Act and Local Government Structure Act are examples of this.

The National Water Act, on the other hand, is an example where an Act of Parliament vests certain executive powers in a Minister in the national sphere of government, namely the Minister of Water and Sanitation, and powers in catchment management agencies (CMAs), organs of State but not in any sphere of government, but established by a Minister in the national sphere of government.

### Executive authorities

The different pieces of legislation promulgated by the Parliament and 9 provincial legislatures place certain responsibilities on the different organs of state.

According to the Constitutional Court “[l]legislative measures by themselves are not likely to constitute … compliance. Mere legislation is not enough. The State is obliged to act to achieve the intended result, and the legislative measures will invariably have to be supported by appropriate, well-directed policies and programmes implemented by the Executive. These policies and programmes must be reasonable both in their concept and their implementation. The formulation of a programme is only the first stage in meeting the State’s obligations. The programme must also be reasonably implemented.”[[7]](#footnote-8)

In fact the promulgation of legislation may lull the public into a false sense of security that the problems are being addressed, whereas there can be no realistic expectation of success without an adequate framework to implement the law. The rights of persons may also be infringed. The body of law is essential only the establishment of a basis for action.

Further, section 156(1) of the Constitution states: “A municipality has executive authority in respect of, and has the right to administer (a) the local government matters listed in Part B of Schedule 4 and Part B of Schedule 5; and (b) any other matter assigned to it by national or provincial legislation.” Part B of Schedule 4 reads: “Water and sanitation services limited to potable water supply systems and domestic waste-water and sewage disposal systems.” A Municipality may in terms of section 156(2) make and administer by-laws for the effective administration of these matters. Further a municipality has the right in terms of 156(6) to exercise any power concerning a matter reasonably necessary for, or incidental to, the effective performance of its functions.

A municipality must in terms of section 73 of the Municipal Systems Act give effect to the provisions of the Constitution and give priority to the basic needs of the local community, promote the development of the local community and ensure that all members of the local community have access to at least the minimum level of basic municipal services. The Act then also sets out mechanisms to achieve this.

#### Co-operative government

The government in South Africa is constituted in terms of section 40 of the Constitution as national, provincial and local spheres of government. Each of the spheres contains the different organs of state (constituted as departments and administrations) necessary for the government to fulfil its obligations. Further, authorities exercising public powers or performing public functions in terms of legislation are in terms of section 239 of the Constitution also organs of state, although they do not form part of any of the spheres of government. The respective roles and responsibilities of the different spheres of government and the organisations involved within each sphere should clearly be defined within the framework of co-operative government and intergovernmental relations.

There is a degree of overlap between these powers, duties and functions, which results in a legislative and institutional fragmentation, both within and between the different spheres of governance. This fragmentation may lead to functional duplication and confusion, an undesirable reality in a country with significant resources constraints.

The provisions of the Constitution go a considerable way towards entrenching a co-operative federal type of system by requiring that all spheres of government and all organs of state within each sphere must in terms of section 41 follow the principles of co-operative government and intergovernmental relations. These principles are primarily aimed at promoting a co-operative form of federalism instead of a competitive form. These principles do not diminish the power of one sphere of government or organ of state at the expense of another. They place obligations on all the spheres and the organs of state in each sphere. They are there to shape the attitudes of government and the organs within each sphere to fit the co-operative form of federalism. These principles are concerned with the way how a power is exercised and not whether a power exists.[[8]](#footnote-9) These principles call for effective, transparent, accountable and coherent government in a manner that does not encroach on the geographical, functional and institutional integrity of the other spheres of government.

The different spheres of government and organs of state in each sphere may in terms of sections 40(2) and 41(1)(f) only exercise powers and perform functions conferred on them.

All spheres of government and all organs of State within each sphere must in terms of section 41(1)-

provide effective, transparent, accountable and coherent government;

respect the constitutional status, institutions, powers and functions of government in the other spheres;

not assume any power or function except those conferred on them in terms of the Constitution;

exercise their powers and perform their functions in a manner that does not encroach on the geographical, functional or institutional integrity of government in another sphere;

co-operate with one another in mutual trust and good faith by-

* fostering friendly relations;
* assisting and supporting one another;
* informing one another of, and consulting one another on, matters of common interest
* co-ordinating their actions and legislation with one another;
* adhering to agreed procedures; and
* avoiding legal proceedings against one another.

The Intergovernmental Relations Framework Act 13 of 2005 was promulgated “to establish a framework for the national government, provincial governments and local governments to promote and facilitate intergovernmental relations, to provide for mechanisms and procedures to facilitate the settlement of intergovernmental disputes and to provide for matters connected therewith”. The object of the Act is in terms of section 4 to provide within the principle of co-operative government a framework for the national government, provincial governments and local governments, and all organs of state within those governments, to facilitate co-ordination in the implementation of policy and legislation, including-

coherent government;

effective provision of services;

monitoring implementation of policy and legislation; and

realisation of national priorities.

There is a President’s Co-ordinating Council in terms of section 6 consisting of the President, the Deputy President, the Minister in the Presidency, the Minister responsible for provincial and local government, the Cabinet member responsible for finance, the Cabinet member responsible for the public service, the Premiers of the nine provinces and a municipal councillor designated by the national organisation representing organised local government. This Council is a consultative forum for the President to raise and consult on matters of national interest and implementation of policy and legislation.

A Minister in the Cabinet may in terms of section 9 establish a national intergovernmental forum to promote and facilitate intergovernmental relations in the functional area for which that Minister is responsible for. The forum consists of that Minister, the Deputy Minister concerned, the members of the Executive Councils of provinces who are responsible for a similar functional area in their respective provinces and a municipal councillor designated by the national organisation representing organised local government. A forum is a consultative forum to raise and consult on matters of national interest and implementation of policy and legislation. Two or more national intergovernmental forums may in terms of section 15 meet jointly when necessary to discuss and consult on issues which are intersectoral in nature.

#### Organs of State and their mandates

The organisational framework is one of the most important aspects of water management, because it determines the effectiveness of policy implementation. Various organisations are involved. Their respective roles and responsibilities should clearly be defined so as minimise overlapping mandates.

The framework should not be precise, but flexible with respect to scale of function and the type of organisation. For example, in the case of the provision of water services, a water services provider could serve one small rural community, one or more towns, a large metropolitan area or a whole region. It could be a municipality, a public utility (owned by local, provincial and/or national government), a community based organisation (CBO) or a private organisation. This flexibility recognises the diverse realities of the water issues and management in South Africa.

The organisations involved in water management could be grouped into

custodians of the water resources;

water resource developers;

regulators, which could be divided into those

* regulating the use of the water resources;
* regulating activities that may affect the water resources;
* regulating land uses; and
* providing frameworks for the provision of water services;

water services providers; and

conflict resolvers.

See diagram below for a layout of the organisations involved.

**Custodians of the water resources**

A custodian of the water resources is an organisation with the mandate to ensure that the water resources are protected, used, developed, conserved, managed and controlled in a socially equitable and economically beneficial and sustainable manner in the long term for the benefit of all the people in South Africa.

The National Government is in terms of section 3(1) of the National Water Act the public trustee of the nation’s water resources and overall leader of the water sector. The National Government acts through the Minister of Water and Sanitation to fulfil this role. The Department of Water and Sanitation, an organ of state in the National Government, assists the Minister to fulfil this role. This is done by setting goals and monitoring and assessing the water resources.

The Department oversees the activities of all water sector institutions and regulates the water resources and water services framework. The Department is responsible for water resource planning at the national and international levels and for decisions relating to inter-catchment transfers and international allocations. Most water licensing functions will ultimately be delegated to the different Catchment Management Agencies. Only licensing with significant strategic or inter-water management area implications will be retained by the Minister and the Department.

The Department is therefore responsible for implementing the National Water Policy and administering all aspects of the National Water Act and Water Services Act, such as the developing and implementing of strategies and internal policies, plans and procedures and regulatory instruments.

The Department fulfils on the moment a multipurpose role as a custodian of the water resources, a water resource developer, a regulator regulating the use of the water resources, a regulator providing frameworks for the provision of water services and a water services provider supplying bulk water, water to individual irrigators and water for domestic purposes. The Department is also responsible for the state-owned water infrastructure and the overseeing of certain water-related organisations. Some of the department’s activities also place the department in the group of regulators regulating instream and land-based activities that may affect the water resources.

The Department’s eventual role should mainly be as sectoral leader to provide the overall policy and regulatory framework within which the other organisations will take part in water management. The Department would monitor and maintain general oversight of these organisations’ activities and performances.

The Department will therefore form the first tier of the water management structure. The multiple roles of the Department will therefore progressively change as regional and local organisations are established and the responsibility and authority for water management are delegated and assigned to them. The Department should therefore adjust its role to concentrate on policy and strategic issues, overall regulatory oversight and institutional support, co-ordination and auditing. The Department should be responsible for sector policy, support and regulation.

The Minister and the Department should together are the custodian of the water resources.

**Water resource developers**

A water resource developer is an organisation with the mandate to develop the water resources. The functions of these organisations include: Planning of a long-term water resource development strategy; planning of projects to develop the water resources; implementing the projects; and managing the projects.

The Department of Water and Sanitation is responsible for developing water resources.

Cabinet approved the establishment of a National Water Resource Infrastructure Agency to ensure long-term water security for South Africa. This agency will take responsibility for developing and operating South Africa’s major national dams and water transfer schemes which are currently managed directly by the Department of Water and Sanitation.

**Regulators**

A regulator is an organisation with a mandate relating to or including certain elements of water resource management or the provision of water services. Regulators could be grouped into those

monitoring and regulating the use of the water resources;

monitoring and regulating activities that may affect the water resources;

monitoring and regulating land uses and the activities and processes associated with these land uses that may affect the water resources; and

providing the necessary framework for the provision of water services.

The first three are involved in water resource management and the fourth in the provision of water services. The part of the framework for the water resource management regulators is involved due to the following of an approach of integrated water resource management (IWRM) and the provisions of the Constitution dealing with the principles of co-operative government.

*Use of the water resources*

The use of the water resources is not restricted to the taking or removing of water from the water resource or the storing of water. It also includes the discharging of waste into the water resources, impacting or altering the characteristics or physical, chemical or biological properties of a water resource, instream uses such as swimming, fishing and canoeing and land-based activities such as afforestation and disposal or use of waste on land. Regulating the use of the water resources is done by way of authorising (generally or individually) the activities and by setting requirements to be complied with while executing the activities.

The Minister will in a progressive and phased manner establish catchment management agencies for the different water management areas as set out in the National Water Resource Strategy. Some of or all the functions of the Department of Water and Sanitation relating to the use of the water resources will gradually be assigned or delegated by the Minister to these agencies.

These agencies will eventually be responsible for water resource planning at catchment level and most water resource management activities in these areas, such as the licensing and monitoring of water uses, collecting water use charges, monitoring the quality of the water resources and overseeing land-use activities as this affects water management.

The water-related issues experienced in an area and the capacity of organisations in the area will determine the organisational structure within the area and what powers, duties and functions could be delegated and assigned to the second and third level organisations within the area.

Catchment management agencies (CMAs) on regional level will provide the second tier of the water management structure.

*Activities that may affect the water resources*

Various organs of state are involved in regulating instream and land-based activities that may affect the water resources. Only some are mentioned.

The Department of Environmental Affairs, an organ of state in the national sphere of government, is the custodian of the country’s environment. The National Environmental Management Act 107 of 1998 was promulgated to give legal effect to this responsibility as well as to the principles of sustainability and furthermore to ‘provide for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative government and procedures for co-ordinating environmental functions exercised by organs of state’. The department is responsible for regulating those components of instream and land-based activities that may affect the water resources.

The Department of Minerals Resources, an organ of state in the national sphere of government, is the custodian of the country’s mineral resources. The Mineral and Petroleum Resources Development Act 28 of 2002 was promulgated to give legal effect to this responsibility. The department is responsible for regulating those components of mining activities that may affect the water resources.

The Department of Agriculture, an organ of state in the national sphere of government, is responsible for sustainable agricultural development in South Africa. The department guides and supports capacity building, sustainable resource use, production, trade and research in agriculture in order to maximise the contribution of the agricultural sector to economic growth, equity and social development in a sustainable manner. The department is responsible for regulating those components of agricultural activities that may affect the water resources.

The provincial Departments, organs of state in the provincial sphere of government, are responsible for among others evaluating environmental impact assessments (EIAs) and issuing the necessary authorisations required in terms of the National Environmental Management Act 107 of 1998; assisting as agent the Department of Agriculture to exercise its functions on a local level; and siting of and regulating the operations at abattoirs, cemeteries, refuse dumps, markets and facilities for burial of animals.

*Land uses*

Various organs of state are responsible for development which require land. Some of the activities associated with a land use require water of acceptable quantity and quality to be able to be sustainable or the activities have the potential to affect the water resources. This depends on how these activities are performed, whether land disturbance takes place and how waste generated is dealt with. A wrongly located land use could impact very negatively on the utilisation of the water resources. The problem is worsened by the changes in land uses with an increase in the quantity of waste entering the water resources. Therefore these organs should ensure that effective land-use planning and development take place.

The Department of Rural Development and Rural Reform, an organ of state in the national sphere of government, is responsible for the constitutional duty to take reasonable steps to enable citizens to gain equitable access to land, to promote security of tenure and to provide redress to those who were dispossessed of property as a result of past discriminatory laws.

The Department of Hunan Settlement, an organ of state in the national sphere of government, is responsible for the constitutional duty to ensure that all persons have access to adequate housing.

The Provincial Departments of Local Government, Housing and Land Administration, organs of state in the provincial sphere of government, are engaged in the following functions:

provision of housing, industrial promotion, nature conservation, regional planning and development, trade, tourism and urban and rural development;

provincial planning, provincial recreation and provincial amenities; and

siting of abattoirs, cemeteries, refuse dumps, markets and facilities for burial of animals.

*Frameworks for the provision of water services*

Various organisations are involved in providing frameworks for the provision of water services.

The Department of Water and Sanitation is involved in providing the necessary frameworks governing the provision of potable water and sanitation services. The Department is responsible for sector policy, support and regulation.

The Department of Cooperative Governance and Traditional Affairs, an organ of state in the national sphere of government, is together with the provincial government responsible for the effective performance by municipalities of their functions, which include the provision of potable water and sanitation services.

The provincial Departments of Local Government, organs of state in the provincial sphere of government, are responsible for the day-to-day performance by municipalities of their functions, which include the provision of potable water and sanitation services.

*Water services providers*

Water services providers could provide-

services such as abstraction, conveyance, treatment and distribution of water, which could be potable in some cases, for example, for the support of life and personal hygiene, urban use, small-scale irrigation, commercial irrigation, industrial purposes and power generation;

services such as, for example, collection, removal, treatment and disposal of water-related waste due to the use of water;

services such as, for example, collection, removal, treatment and disposal of waste (which could include solid material) that impact or are likely to impact on the water resources;

services that are necessary to ensure that the water could be used in a sustainable manner in the long term;

services that might be necessary to enhance water resource management; and

resources, assistance and information associated with the provision of services (for example, financial and technical).

A water services provider need not be an organ of state and may even be a private organisation. The water services that are organs of state are known as public water services providers, while the others are known as private water services providers.

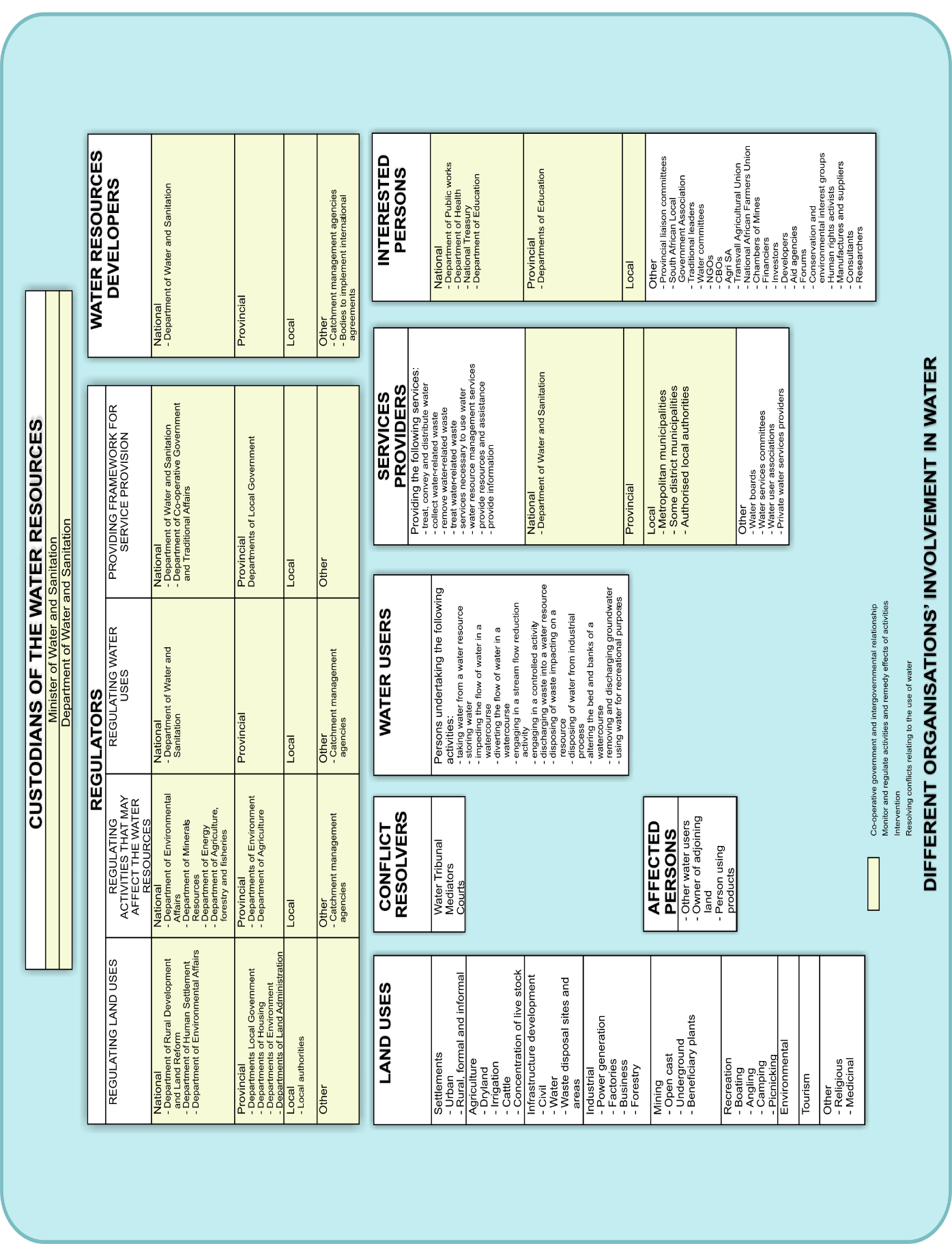
The Department of Water and Sanitation is involved in the provision of water to support life and personal hygiene as well as the provision of bulk water to other water services providers and to irrigators and individual users.

The provision of potable water and sanitation services is a constitutional local government function. Metropolitan municipalities, some district municipalities and authorised local authorities are water services authorities, who are responsible for ensuring provision of water services, mainly for domestic and industrial purposes within their area of jurisdiction. Some municipalities operate local water resource infrastructure (such as dams and boreholes) and bulk water supply schemes, supply water and sanitation to consumers (households, businesses and industries) and operate wastewater collection and treatment systems.

The Minister of Water and Sanitation may establish water boards. Water boards are organs of state, but do not belong to a sphere of government. Some water boards operate water resource infrastructure, bulk potable water supply schemes (selling water to municipalities and industries), some retail water infrastructure and some waste water systems. The primary activity of a water board is to provide water services, mainly potable water, to water services institutions within its service area.

The Minister may establish water user associations. Water user associations are not organs of state, except if they exercise a public power or perform a public function. The function of a water user association is to supply water services to the members belonging to that association. Catch Management Agencies may delegate their powers, duties and functions to these organisations.

Water user associations and other services providers on local level will provide the third tier of the water management structure.



# Linkages with National Development Plan and other governmental planning agencies

The National Development Plan (NDP) offers a long-term perspective for the development of South Africa. It defines a desired destination and identifies the role different sectors of society need to play in reaching that goal. The Water and Sanitation Ten-Year Plan as the water and sanitation pillar of the National Development Plan.

The plan was developed by the National Planning Commission in collaboration and consultation with South Africans from all walks of life.

The NDP is a plan for the whole country. Government will engage with all sectors to understand how they are contributing to implementation, and particularly to identify any obstacles to them fulfilling their role effectively.

The Minister responsible for the plan at that time, Trevor Manuel, stated in his speech at the launch of the NDP: “The plan is the product of thousands of inputs and perspectives of South Africans”. “It is a plan for a better future; a future in which no person lives in poverty, where no one goes hungry, where there is work for all, a nation united in the vision of our Constitution”

The NDP envisions a South Africa where “everyone feels free yet bounded to others”; where everyone embraces their full potential, a country where “opportunity is determined not by birth, but by ability, education and hard work”. A South Africa where “we participate fully in efforts to liberate ourselves from the conditions that hinder the flowering of our talents”. To realise such a society we need transform the domestic economy and focus efforts to build the capabilities of both the country and the people. To eliminate poverty and reduce inequality, there should be accelerated growth in the economy, growth that benefits all South Africans. The NDP serves as an action plan for securing the future of South Africans as charted in the Constitution. The Constitution requires that “we must build a united and democratic South Africa, able to take its rightful place as a sovereign state in the family of nations”. The NDP is founded on 6 pillars that represent the broad objectives of the plan to eliminate poverty and reduce inequality.

The NDP aims to achieve the following objectives by 2030:

Uniting South Africans of all races and classes around a common programme to eliminate poverty and reduce inequality;

Encourage citizens to be active in their own development, in strengthening democracy and in holding their government accountable;

Raising economic growth, promoting exports and making the economy more labour absorbing;

Focusing on key capabilities of both people and the country;

Capabilities include skills, infrastructure, social security, strong institutions and partnerships both within the country and with key international partners;

Building a capable and developmental state; and

Strong leadership throughout society that work together to solve our problems.

The NDP and its proposals will need to be implemented in the right order over the next years until 2030. Three phases have been identified. The long term plans of organs of state should be aligned with the NDP and areas are identified where policy change is required to ensure consistency and coherence. The Plan should shape budget allocation over the years until 2030.

The Plan identifies the improvement of the quality of public services as critical to achieving transformation. This requires provinces to focus on identifying and overcoming the obstacles to achieving improved outcomes, including the need to strengthen the ability of local government to fulfil its developmental role.

The underlying causes of poverty and inequality should be addressed by redirecting the focus of policy making from short- term symptom- based policies to longer- term policies based on sound evidence and reason. At the core of the NDP, the NDP aims to ensure the achievement of a “decent standard of living” for all South Africans by 2030. A decent standard of living consists of the following core elements:

Housing, water, electricity and sanitation;

Safe and reliable public transport;

Quality education and skills development;

Safety and security;

Quality health care;

Social protection;

Employment;

Recreation and leisure;

Clean environment; and

Adequate nutrition.

Government alone cannot provide a decent standard of living; it requires determined and measurable actions from all social actors and partners across all sectors in society, by drawing on the energies of its people, growing an inclusive economy, building capabilities, enhancing the capacity of the state, and promoting leadership and partnerships throughout society.. The NDP addresses the most pressing challenges facing South Africa and provides solutions to these challenges in the form of proposals and actions. The plan outlines sector specific goals and a vision for South Africa to be achieved by the year 2030.

The President and Deputy President will be the lead champions of the Plan within Cabinet, in government and throughout the country. Premiers and Mayors must be visible and active champions of the Plan, with their offices being the catalytic agencies to drive implementation at provincial and municipal levels.

The NDP acknowledges that South Africa is a water-scarce country and that climate change has the potential to reduce food production and the availability of potable water, with consequences for migration patterns and levels of conflict. Climate change has an effect on health, livelihoods, water and food, with a disproportionate impact on the poor, especially women and children. While adapting to these changes, industries and households have to reduce their negative impact on the environment. This will require far-reaching changes to the way people live and work.

The NDP further emphasises that water is a strategic resource critical for social and economic development and there is growing concern about the potential of water-related risks. All South Africans should have access to clean running water in their homes, while the environment is protected. The necessary framework should be put in place for this.

Further according to the NDP the accountability chain needs to be tightened. The public needs a clearer sense of who is accountable for what. There need to be systems to hold all leaders in society accountable for their conduct.

Chapter 4 of the NDP deals with Economic infrastructure, which is the foundation of social and economic development. It includes a part deal with water resources and services. Management of South Africa’s limited water resources must become more effective. This should include reducing the growth in water demand and water losses and improve water-use efficiency. Water users should be involved so that they understand and respond to emerging constraints.

Further, the golden line right through the NDP is that the State should design and implement measures within its available resources to achieve the progressive realisation of the socio-economic rights as contemplated in the Constitution, which include access to education, health care, food, water, shelter, land and housing including development and job creation. The organs of state involved to realise these rights have developed policies to achieve these rights and enacted the necessary legislation to implement the policies. These rights could only be realised if effective water reform also takes place with the necessary access to water services.

The Minister of Water and Sanitation must in terms of section 5 of the National Water Act by notice in the *Government Gazette* establish a national water resource strategy. The strategy should among others set out the strategies, objectives, plans, guidelines and procedures of the Minister and institutional arrangements relating to the protection, use, development, conservation, management and control of water resources within the framework of existing relevant government policy in order to achieve the purpose of the Act. When developing the strategy the different policies of other organs of state should be taken into consideration.

Effect should be given to this national water resource strategy when exercising powers and performing duties under the National Water Act.

# International obligations, shared watercourses and co-operation mechanisms

## South Africa and international water

Territorial borders are determined by political and historical considerations. This often results in rivers forming the border between states or crossing a border. The question posed is: “On what basis may the states involved develop the water resources within the catchments of these rivers and how?” The potential for conflict over these waters may be high, especially in times of water scarcity.

Further, rivers do not respect political boundaries. Some rivers cross international boundaries, known as successive international watercourses, and others, or parts of them (like the banks of rivers) provide the boundary between countries, known as contiguous international watercourses.

South Africa, for example, shares four major river systems with six neighbouring countries, namely:

the Orange/Senque system shared with Lesotho, Botswana and Namibia, as a successive watercourse with Lesotho, and as a contiguous watercourse with Namibia;

the Limpopo River shared with Botswana, Zimbabwe and Mozambique, as a successive watercourse with Mozambique, and as a contiguous watercourse with Botswana and Zimbabwe;

the Inkomati system shared with Swaziland and Mozambique, as a successive watercourse with both countries; and

the Usuthu/Pongola-Maputo system with Mozambique and Swaziland, as successive watercourses with both countries.

These river systems together drain about 60% of the surface area in South Africa and contribute about 40% of the country’s total surface run-off (see figure 1). Approximately 70% of the gross domestic product of South Africa and a similar percentage of the population of South Africa are supported by water supplied from these rivers.[[9]](#footnote-10) The situation is similar for the other 5 countries.



**Figure 1:** The drainage areas of the watercourse in South Africa shared with neighbouring countries

This complexity makes the judicious joint management of the water from the drainage areas from these watercourses of paramount importance to the 6 countries, through institutions created and within frameworks adopted for each shared system with the aid of treaties concluded by the executives of these countries. These institutions and frameworks should also conform to international water treaties and protocols. Further, each country should give effect to this within the framework of its own domestic legislation, and if necessary enact or amend the necessary legislation to that effect.

Water-related decisions are politically, economically, socio-economically, legally, technically and environmentally (ecologically) driven and are therefore very complex. The institutions should be capable to deal with all of these matters.

## Principles of the international water law

Modern customary international water law is the result of an evolutionary process arising from agricultural and navigational use of freshwater resources of international character. Early civilisations settled along many of the major watercourses and used the water for irrigation, flood control and travel and transportation.[[10]](#footnote-11) Many of these communities over time developed complex rules for the navigation, allocation and use of the available shared water resources.

With the growth of travel and commerce, navigational rules became pre-eminent over non-navigational use.

Prior to the industrial revolution, legal doctrine emphasised that continued water flow in rivers of international character should be ensured and harm to neighbouring countries should be prevented, particularly as flow related to navigation. Both common and civil law jurisdictions observed the doctrine of *sic utere tuo ut alienam non laedas* (use your property in such a manner that it does not injure another). This principle obliges states not to use, or allow the use of, their territory in a way that would harm the territory or rights of neighbouring states.

Industrialisation resulted in the non-navigational water uses becoming more and more important. It engendered innovation in the law as it applied to personal and sporting use, industrial and agricultural purposes and the conservation, sound allocation and management of the water resources.[[11]](#footnote-12)

In the early years of industrial development, there was no enforceable code for the division and utilisation of international water resources. The accepted international practice was to arrange the matter by bilateral treaties between the states involved in each instance. Typically, bordering countries would have entered into agreements for the sharing of a river or lake in the context of defining political borders, flood management, reallocating waters for growing populations, diverting river flow for agriculture and developing new industries.

Over the years the large variety of issues and cases resulted in considerable incongruity among the laws of countries with trans-boundary waters, especially where legal principles were devised or interpreted to fit specific interests or purposes. The following bases emerged as the means for allocating and sharing water resources of international character:

**Absolute territorial sovereignty**, which posits that a state has the right to unrestrained use of the water resources within its territory. The principle is also known as the Harmon Doctrine, named after the US Attorney-General Judson Harmon, who in 1895 declared that in the absence of established law to the contrary, states are free to exploit resources within their jurisdiction without regard to the extra-territorial effects of such action.[[12]](#footnote-13)

**Absolute territorial integrity**, which provides that downstream riparian states have the right to the continuous or natural flow of water.

**Use your property in such a manner that it does not injure another**. (*Sic utere tuo ut alienam non laedas*.)

**Limited (or restricted) territorial sovereignty**, which requires that a state may use the waters flowing through its territory only to the extent that this does not interfere with the reasonable utilisation of downstream states. This is akin to the principle of *sic utere tuo ut alienam non laedas*.

**Community of interest theory**, which advances the goal of optimal use and development of a trans-boundary water resource. It seeks to achieve economic efficiency and the greatest beneficial use possible, though often at the cost of equitable distribution and benefit among the states sharing the resource.

### The role of the “Helsinki Rules”

From the numerous treaties that have been concluded all over the world, certain principles have evolved and attained a certain measure of international recognition although they do not represent enforceable rights. In an effort to bring uniformity to the international water law, the International Law Association (ILA) at its 52nd conference in August 1966 approved a document containing certain principles. This document became known as the Helsinki Rules which are based on the known doctrine of equitable and reasonable apportionment. The Rules have been endorsed by the United Nation.

The Helsinki Rules have received little recognition as a codification of the international water law, mainly because the ILA operates as a private non-governmental organisation (NGO) and therefore enjoys no official status in the development of international law. The work of the ILA has always been regarded merely as aspirational in nature and not as hard and fast rules for state conduct.

The Helsinki Rules do not constitute a set of criteria by means of which a particular state’s share in the water of an international river should be determined. It is no more than guidelines to assist negotiating states in arriving at a fair division of a common resource. It includes provisions on both navigational and non-navigational uses of water. The Rules have, however, became best known for their non-navigational guidelines.

The Rules depart from the premise that each state in the catchment of a river is entitled to a reasonable and equitable share in the beneficial use of the waters of that catchment. It proceeds to list a number of varied factors that should be considered by the negotiating states in their efforts to reach agreement on actual allocations. These factors include:

the geography of the basin, including the extent of the drainage area in the territory of each state;

the hydrology of the basin, including the contribution of water by each state;

existing utilisation of the waters by each state in the catchment; and

the availability of other resources to the negotiating states, and any other factor of relevance to the states concerned.

### The “Convention on the Law of the Non-navigational Uses of International Watercourses”

In the late 1960s, the International Law Commission of the UN undertook a detailed study regarding the international water law. After more than a quarter of a century of work, the UN General Assembly on 21 May 1997 adopted a framework Convention on the Law of the Non-navigational Uses of International Watercourses.

The Convention codified the prevailing state practices, principles of the international water law and *opinion juris*.

The Convention serves as a framework for more specific bilateral and regional agreements relating to the use, management and preservation of trans-boundary water resources. It helps preventing and resolving conflicts over international water resources and to promote sustainable development and the protection of global water supplies.[[13]](#footnote-14) However, the Convention is flexible and open to a degree of interpretation. It is only a framework document, in the sense that it provides a framework of principles and rules that may be applied and adjusted to suit the characteristics of particular international watercourses.

The Convention further represents substantial progress in the development of the international water law. It addresses issues such as the non-navigational uses of international watercourses, measures to protect, preserve, and manage international watercourses, flood control, water quality, erosion, sedimentation, saltwater intrusion and ecosystems within the watercourses. Similar to the Helsinki Rules, the Convention offers principles such as equitable and reasonable use and no significant harm, with which states sharing an international watercourse are to conform when using these waters.

Although these principles are not enforceable in a court of law, they find application within a regional context. South Africa is a member of the Southern African Development Community (SADC) and parties to the Revised Protocol on Shared Watercourses that was adopted by the SADC in 2000 and entered into force in 2003. The overall objective of the Protocol is to serve as a framework to foster closer cooperation regarding the judicious, sustainable and co-ordinated management, protection and utilisation of shared watercourses in order to advance the SADC agenda of regional integration and poverty alleviation.

The accepted international practice is therefore to manage water matters of common interest by means of treaties and protocols, supported by good neighbourliness, as well as cooperation and participation between the states involved. This includes the fair and equitable allocation of the available water, the establishment of institutions for cooperation and liaison on the one hand and institutions to implement projects on the other hand, dealing with cross-border issues and the funding of projects for mutual benefit. A desktop study done confirmed this practice in the SADC region.

There is an inherent complexity in reaching consensus among the different sovereign states on these matters due to the different levels of development and opposing perceptions about their respective national interests. This may even result in reaching consensus on a matter based on the product of the lowest common denominator between the states.

## Institutional models

The following institutional models are available for managing transboundary water resources: A joint committee regarding an issue between the states; a joint authority to implement infrastructure; a structure for cooperation and interaction at basin or regional level; and a structure for regulation and management at a basin or regional level.

These models can be used as follows:[[14]](#footnote-15)

**Joint resolution of an issue of concern between the countries**: At its most basic, cooperation may be required between two (or more) states on a specific water issue at the border between the countries (such as water quality mitigation, flood control, water allocation or environmental flow releases). A joint technical (or permanent) committee is typically established to negotiate the terms of a treaty (which could be bilateral or multilateral) between the Parties and once in place to facilitate cooperation and monitor compliance with the treaty. Examples of this type of model may be found throughout Africa, Asia and South America, with the Indus Treaty being a specific example of a water allocation treaty of this type and the La Plata treaty between Argentina and Uruguay in South America around water quality (as well as navigation). The Cross-border Water Supply Agreement between Botswana and South Africa reflects this.

**Joint planning, development and operation of water infrastructure**: Following issue-based cooperation or recognition of the need for joint water resources infrastructure, a treaty (between two or more parties) may be concluded around an infrastructure project. This is usually negotiated by a technical planning committee, leading to the signing of a treaty that specifies both the Parties responsibilities to the project and the institutional arrangement (typically an authority) to develop, finance and/or operate the infrastructure. These authorities are typically mandated with management functions, unlike many other transboundary basin institutions. Examples of this type of model may be found in Africa and South America, with the Zambezi River Authority providing specific examples of project-initiated treaties in Africa. The Lesotho Highlands Water Project (LHWP) between Lesotho and South Africa reflects this institutional arrangement.

**Basin-level cooperation between Parties around stressed water resources**: As the water stress (for example allocation, flooding or quality) in a transboundary watercourse between the parties involved increases, there is an increasing imperative to cooperate at the basin-level and optimise the protection, development and utilisation of the basin. Fostering this type of multilateral cooperation is a long slow process requiring the sharing of information, the building of trust between parties and the development of confidence. This is typically a long-term process that requires simultaneous national level capacity building (to level the playing field), discussion of substantive issues and development of institutional arrangements for cooperation at the basin-level. This model is typically much more complex and difficult than the issue and infrastructure models as discussed under the previous bullet points. Examples of this type of model may be found primarily in Africa and to a lesser extent in Asia and the Middle East, with the Jordan River Treaty and Nile Basin Initiative being cases in point. The Orange-Senqu River Commission (ORASECOM) Treaty is at least in part motivated by the intention to initiate this process.

**Regional political and economic integration imperatives**: There are those transboundary water resources associated with regions that have a political or economic imperative to cooperate in the interests of regional integration under the auspices of a regional economic community (and even regional transboundary law, such as the SADC and United Nations Economic Community for Europe (UN ECE)). The driver in these situations is for cooperation and integration (often by a secretariat), with the concept of water sharing potentially leading to certain benefits. These processes are built around a multilateral agreement between the basin states, which often focuses on the basin institution with a mandate to advise the parties on water resources related issues. In many cases though, the basin institution takes on a permanent secretariat and becomes almost more important than the agreement or imperatives to cooperate. The regional community typically plays the facilitating role in promoting and supporting transboundary cooperation and institutional development. Examples of this type of model may be found primarily in Europe through the European Union, in Southern Africa through the SADC, and with the discussions on energy in South Asia (Ganges). The Revised SADC Protocol on Shared Watercourses also reflects the intention to follow this type of model.

**Trans-basin benefit sharing**: There is, however, an emerging recognition of the opportunities for regional power, food and water pools to support national development imperatives. These will often involve multiple basins and require a degree of regional trans-basin cooperation. While cooperation around regional power pools has evolved, the trans-basin water resources engagement and response is at a fledgling stage. This may involve multi-lateral (multi-basin) initiatives, multi-institutional cooperation at a basin-level or potentially multi-basin institutions involving the relevant countries. However, there are significant challenges to this approach, particularly in the absence of a formalised regional community. There are currently no examples of this type of model, but opportunities definitely exist in the Latin American, South Asian, South-east Asian, Southern African and West African situations.

**Basin regulation or management**: At the final end of the spectrum are those basin organisations established by countries with the intent to assign management or regulatory water functions them. This willingness for countries to give up their sovereignty requires significant trust and a historically stable legal, economic and political environment. The driver in these situations is for consistency and independence in the application of clearly outlined strategic objectives and rules for all parties in the basin. These processes tend to evolve through cooperation to a multilateral agreement between the basin states, with authority given to the organisation to control or regulate water use or waste discharge. It must be emphasised that these types of basin organisations emerge under very specific circumstances and after extended institutional and other evolution, in which the regional communities play an important role. Examples of this type of model may be found primarily in Europe and North America, where the conditions exist to surrender of sovereignty to a joint management body, and with the Danube and Rhine Commissions in Europe and the International Joint Commission between United States and Canada on the Great Lakes.

In giving effect to these models a distinction should be made between the following:

An institution for regional interaction and cooperation between the states involved, referred to as River Basin Organisation (RBO); and

An institution to develop, manage, operate and maintain a joint water project between the states involved within the legal framework provided for in the agreement between the states that established the institution, referred to as Joint Authorities (RA).

## South African co-operation with neighbouring states

### Southern African Development Community

#### South Africa as a member of the SADC

The Southern African Development Community (SADC) is a regional grouping of 14 countries in Southern Africa. It was formally established through the signing of the SADC Treaty on 27 August 1992 in Windhoek, Namibia. The SADC consists of Angola, Botswana, Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. There are 15 major shared rivers within the SADC’s area of influence and these resources account for about 70% of the available freshwater resources in these countries. See figure 2 which shows the major drainage areas of the rivers in the SADC area.



**Figure 2:** The major river basins in the SADC area

The SADC is governed by the Treaty of 1992 which provides for co-operation that will contribute to and foster regional development and integration on the basis of balance, equity and mutual benefit for all its members. These principles are central to the activities of the SADC and protocols that have so far been developed, negotiated and agreed upon by the members of the SADC.

Member countries agree to areas of co-operation on the basis of sectors. Appropriate organisations are established to harmonise and rationalise policies, strategies, programmes and projects within each sector.

A distinct and dedicated Water Sector was established by the SADC Council of Ministers and endorsed by the Summit of Heads of State and Government in August 1996. The overall objective of the Water Sector is to ‘promote co-operation in all water matters in the SADC region for the sustainable and equitable development, utilisation and management of water resources and contribute towards the upliftment of the quality of life for the people of the SADC region.’ When this objective is fully achieved, it will contribute to the attainment of the Southern African Vision for Water in the 21st century of ‘equitable and sustainable utilisation of water for social, environmental, justice, and economic benefit for present and future generations.’[[15]](#footnote-16)

#### Protocols on Shared Watercourses

The SADC Protocol on Shared Watercourses of 1995 was the first sectoral protocol of the SADC. The negotiation of this protocol started in 1993 and the protocol was signed and adopted in 1995 in Johannesburg.

Some member states had certain reservations about the contents of the Protocol on shared watercourses of 1995 at the time of signature. The members approved the Protocol subject to the concerns being addressed through a process of consultation and negotiation.

The process started with submissions on the concerns and reservations by the different members. The process took the form of making recommendations for amendments to the Protocol and culminated in a series of proposed amendments. The process was influenced by developments in the international water law, particularly the adoption by the UN of the Convention on the Law of the Non-navigational Uses of International Watercourses in April 1997. Both the Protocol and Convention were considered aiming to identify possible areas of conflict and disharmony with a view of aligning the Protocol to the Convention. The results of the process are evident in the provisions of the revised Protocol, especially with regard to environmental protection, planned measures and compensation for harm caused.

The Revised Protocol was adopted by the SADC Summit of Heads of State and Government at an ordinary summit meeting in Windhoek, Namibia, in August 2000.

The Protocol has been signed by all the SADC member states by June 2001 and came into force in September 2003. The original Protocol was repealed.

The Protocol of 2000 added the environment as a legitimate user of the water resources. It emphasises the rights, roles and responsibilities of the downstream and upstream members, especially in emergency situations. It clarifies the role of river basin organisations and their relationship to the SADC institutions.

The protocol commits the participating members to share water in the international basin in an equitable and reasonable manner and thereby improving the lives of those living in the region. It deals also with threats to the quality of the water, fresh water security, protection of the ecosystems and water governance.

### How South Africa interacts with neighbouring states

Despite the different viewpoints, in the earlier days the Helsinki Rules formed the basis of South African negotiations with its neighbouring states on the sharing of water from the rivers that are international in character. The Helsinki Rules and the Convention are both framework documents that provide very useful guidelines for future policies and agreements on the utilisation of these waters.

The National Water Act 36 of 1998 is one of the few Acts on water law in the world which makes specific provisions in water allocations for meeting the needs of neighbouring countries with which watercourses are shared. Various sections of the Act requires that effect must be given thereto or acknowledge the matter.[[16]](#footnote-17)

South Africa interacts with the neighbouring states on a variety of water-related issues, including negotiating agreements for water sharing in the rivers of international character. Co-operation takes place within the framework of the revised SADC Protocol on Shared Watercourses.

The Minister of Water and Sanitation in the South African Government may, in consultation with Cabinet, in terms of the NWA establish bodies to implement international agreements in respect with the development and management of shared water resources and to pursue regional co-operation on water matters.

In developing the most appropriate institutional arrangements, one has to consider that “form/institutions follow functions” (together with the need and purpose for co-operation). What should the purpose of the institution be, for example construction and management of infrastructure for the provision of water, water quality issues or hydropower generation?

The bodies so established could be known as Shared Watercourse Institutions or River Basin Organisations (RBO). They could be established as River Basin Commissions, Joint Water Commissions, Technical Committees or Joint Water Authorities. The establishment of these bodies should be guided by the following general principles of the international water treaties and protocols and customary law:

**Equitable and reasonable utilisation**: The shared watercourses shall be used and developed by the states involved (known as Member States) with the view to attain optimal and sustainable utilisation;

**Prevention of significant harm**: A state involved should, while utilising a shared watercourse in its territory, take all appropriate measures to prevent causing significant harm to the other countries involved (non-trivial harm), and to take all necessary measures to eliminate or mitigate such harm as may occur;

**Sharing of data information**: The member states should share and exchange available data and information regarding hydrological, hydrogeological, water quality, meteorological and environmental conditions of the river systems, not only water resources-related, but also regarding wider national policies and plans that might impact the shared basins; and

**Prior notification**: If a member state implements a planned measure that may have an adverse effect upon the other member(s), that member should provide the other member(s) with timely notification.

The Orange/Senqu River Basin Commission (ORASECOM) was established in 2000 with the intention of developing an integrated water resources management plan for the Orange/Senqu River basin. Similar commissions were established for the other three shared river basins.

There is an emerging perspective that these bodies should become more strategic in approach. Furthermore, Task Teams should focus on technical guidance to projects under instruction from the Commission and the Secretariat should perform operational management within parameters determined by the Commission (which should be consistent with international practice and with good corporate governance principles).

The following bilateral and multilateral commissions and committees have now been established between South Africa and its immediate neighbours, as forums for discussing co-operative arrangements for the utilisation and development of shared water resources:

Botswana/South Africa Joint Permanent Technical Water Committee (JPTWC);

Lesotho Highlands Water Commission (LHWC);

Limpopo Basin Permanent Technical Committee (LBPTC) involving Botswana, Mozambique, South Africa and Zimbabwe, which will be replaced by the Limpopo Watercourse Commission (LWC);

Mozambique/South Africa Joint Water Commission (JWC);

Orange/Senqu River Basin Commission between South Africa, Namibia, Lesotho and Botswana (ORASECOM);

Permanent Water Commission (PWC) between South Africa and Namibia;

Swaziland/South Africa Joint Water Commission (JWC); and

Swaziland/Mozambique/South Africa Tripartite Interim and Permanent Technical Committee (TPTC).

The role of these bodies is to foster sustained dialogue between the countries involved, leading to cohesive and effective co-operative management and optimal utilisation of shared resources. These bodies provide focal points for the joint formulation of development plans for the share basins, co-ordination of joint basin studies, collection of data and sharing of information.

These bodies should not be responsible for implementing projects, as their role should be promoting the implementation of regional water resource development project and oversight.

Examples of technical agreements on water sharing are:

The Cross-border Water Supply Agreement between South Africa and Botswana;

The Lesotho Highlands Water Project (LHWP) agreement; and

The Joint Development and Utilisation of the Water Resources of the Komati Basin agreement.

1. See *Government of the Republic of South Africa and Others v Grootboom and Others* 2001(1) SA 46 (CC). [↑](#footnote-ref-2)
2. See *Government of the Republic of South Africa and Others v Grootboom and Others* 2001(1) SA 46 (CC). [↑](#footnote-ref-3)
3. *Mazibuko and Others v City of Johannesburg and Others* 2010 (4) SA 1 (CC). [↑](#footnote-ref-4)
4. *AAA Investments (Pty) Ltd v Micro Finance Regulatory Council* 2007(1) SA 343 (CC). [↑](#footnote-ref-5)
5. Section 2 of the Constitution. [↑](#footnote-ref-6)
6. Section 8(1) of the Constitution. [↑](#footnote-ref-7)
7. See *Government of the Republic of South Africa and Others v Grootboom and Others* 2001 (1) SA 46 (CC) (2000 (11) BCLR 1169 paragraph [42]. [↑](#footnote-ref-8)
8. *Premier, Western Cape v President of the Republic of South Africa* 1999 (3) SA 657 (CC); 1999 (4) BCLR 382 (CC) para [57]. [↑](#footnote-ref-9)
9. See chs 8.5.7 and 11.1 of the *National Water Resource Strategy* 2nd Ed, published in Government Notice 845 in *Government Gazette* 36736 dated 16 August 2013. [↑](#footnote-ref-10)
10. Wouters P Editors foreword: *Current status of international water law*, in Wouters P (ed) International water law: Selected writing of Professor Charles B Bourne, London: Kluwer Law International, 1997. See also Hydropolitics in the developing world: A Southern African Perspective Turton A and Henwood R (eds) 2002, African Water Issues Research Unit (AWIRU) at 82. [↑](#footnote-ref-11)
11. Lien RA *Still thirsting: Prospects for a multilateral treaty on the Euphrates and the Tigris Rivers following the adoption of the United Nations Convention on International Watercourses* - Boston University International Law Journal 16, Moermond, JO and Shirley E A survey of the international law of rivers - Denver Journal of International Law and Policy 16 and Caponera DA Water laws in Moslem Countries 1954. [↑](#footnote-ref-12)
12. Eckstein GE *Application of international water law to transboundary groundwater water resources and the Slovak-Hungarian dispute over Gabcikovo-Nagymaros* Suffolk Transnational Law Review 19 at 67 and 73. [↑](#footnote-ref-13)
13. *Convention on the Law of the Non-navigational Uses of International Watercourses*, General Assembly Resolution 51/229, UNGA, 51st session, UN Doc A/RES/51/229, New York, UN. [↑](#footnote-ref-14)
14. See p 4 to 7 of the Report Southern African Development Community - Water Sector Support Unit - Gaborone - European Development Fund; *African Transboundary River Basin Support Programme: Case of the Orange-Senqu River in Botswana, Lesotho, Namibia and South Africa: Global Financial Commitment No. 9 ACP RPR 53: Institutional Analysis for ORASECOM* -Report No ORASECOM 006/2009 June 2009. [↑](#footnote-ref-15)
15. Adopted by the SADC Sectoral Committee of Ministers in 1999. [↑](#footnote-ref-16)
16. See for example the preamble and sections 2(i), 6(1)*(b)*(ii), 9*(a)*, 27(1)*(j)*, 36(2), 45(2)*(a)* and 102 of the Act. [↑](#footnote-ref-17)