A CRITICAL ANALYSIS OF THE DEVELOPMENT OF WATER LAW IN SOUTH AFRICA

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Submitted as the dissertation component in partial fulfilment of the requirements for the degree Master of Laws - Environmental Law in the School of Law, University of Natal

1999
Pietermaritzburg
ABSTRACT

This paper entails a critical analysis of the development of water law in South Africa. It examines the historical development process of the law, discussing the tendencies followed in Roman and Roman Dutch Law systems. The principles of water allocations which had been adopted into the South African law system by the courts and legislature is analysed. A review of the water allocation mechanism of the Water Act 54 of 1956 indicate that the water law thereunder is outdated, no longer reflecting the needs of our society. Especially since it was based on antique systems of water allocation derived from European countries where the climate and hydrology are different to South Africa. With the advent of a new democratic Government, the principles of fairness and equity as embodied in the Constitution, demanded that South African water law be reviewed. This mammoth task was undertaken by the Minister of Water and Forestry Affairs, Professor Kader Asmal. After a two year consultative period process, the National Water Act 36 of 1998 was enacted. The provisions of this Act indicate a radical departure from the previous system of water allocation.
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1. INTRODUCTION

Water is one of the most basic ingredients of life, without which no form of life would exist. Water is also a major element in the economy of all nations. Too much water results in disastrous floods and too little results in crippling drought and famine. It is not surprising, therefore, that nations and neighbours have gone to war over water throughout human history. Those who control water wield enormous power and influence over the distribution of wealth in society. How a society regulates water and its uses is determined by the water law of the country.¹

South Africa is a country rich in natural resources, but fresh water is a glaring exception. The country’s average annual rainfall is 497mm, compared with the world average of 860mm. Rainfall is also unevenly distributed with 65 percent of the country receiving less than 500mm of rain annually and 21 percent receiving less than 200mm.² In South Africa, more than 12 million citizens lack access to clean water. Everyday, infants die from diseases bred from the unavailability of clean and potable drinkable water.³ South Africa is currently placed among the 20 most water-poor countries in the world. At present the Department of Water Affairs and Forestry (DWAF) is predicting a permanent water crisis after 2025. DWAF has recognised that such a situation cannot be allowed to persist. As such the Water Act 54 of 1956 (plus amendments) was overhauled and replaced by an integrated total catchment management system as embodied in the National Water Act 36 of 1998. The key to this new policy is the nationalisation of water and the establishment of a "realistic" water-pricing strategy. It also reflects a policy which intends to cut down on waste, embodying the conservation ethic required by South Africa's semi-arid climate.⁴

¹ Department of Water Affairs and Forestry You and Your Water Rights (1995) 2
³ K Asmal ‘Why a New Water Law’ (1997) vol.1 no.1 Land at 32
⁴ A Smith ‘Water for the Future’ (27 March 1998) Farmers Weekly 22
2. THE HISTORY OF SOUTH AFRICAN WATER LAW

In order to understand the need for the National Water Act 36 of 1998, it is necessary to examine from where South Africa's water law has come from and how it evolved.

South African water law was written largely in the interests of commercial agriculture and industry, and no consideration was given to existing unwritten customs and practices of the majority of the population with regard to water rights. Most of the old legislation was based on the legal systems of the countries from which the European settlers came. The evolution of the water law was also largely to meet the needs of the changing industrial, metropolitan and agricultural users which necessarily excluded a large sector of the black population.\(^5\)

A study of the historical development of water law in South Africa reveals that the system of water law which underpinned the water Act of 1956, derived from an unlikely amalgam of Roman Law and American Common Law. Surprisingly, Roman-Dutch Law had only a slight influence on these principles.

2.1 ROMAN LAW

Roman lawyers distinguished flowing waters as either public water or private water. The distinction depended upon whether the water in question flowed in a public river (flumen publicum) or a private river (flumen privatum). A public river was a stream that was sufficiently large to be a river and which flowed throughout the year. Water in a public stream was res publicae (for the common use of the public) while water in a private stream was privately owned and not for the public use.

As res publica, the water in a public river was available for the common use of the public and the state regulated the manner and circumstance in which the public gained access to the water. Navigation upon public rivers was open to everyone. Water could be diverted from a public river for domestic and agricultural purposes, provided the diversion did not affect the navigability of the river. The river might be used by the public for such recreational purposes as fishing, swimming

\(^5\) You and Your Water Rights op cit 7
and boating (Bulgereit v Transvaal Canoe Union. 1988 (1) SA 759 (A)). Roman law recognised that the Emperor had the power to regulate the manner in which the public made use of public rivers. In particular, it recognised that he might prohibit diversion from particular rivers or for particular purposes. These powers, however, did not amount to a principle that the Emperor was dominus fluminis.

2.2 ROMAN DUTCH LAW

Water was available in great abundance in Holland, to the extent that it was, as a South African judge put it, "rather a nuisance than an advantage". Not surprisingly, the focus of the Roman-Dutch Law was not upon the acquisition and allocation of rights to water, but rather matters such as navigation upon public rivers and the ownership of land reclaimed from waters. The Roman-Dutch writers, repeating the Roman Law distinction between public and private water, added little to the elements of Roman Law. They did develop the principle, under the influence of feudal law, that the Prince or sovereign was regarded as dominus fluminis, the owner of public rivers.

2.3 SOUTH AFRICAN LAW

The Dutch, in the form of the Dutch East India Trading Company, established a permanent settlement at the Cape of Good Hope in 1652. The water law regime applied by the company's servants was essentially the law of Holland. Water in those rivers that had perennial flow of appreciable volume was regarded as res publica. The Council of Policy (the organ established to govern the settlement) clearly assumed that, as regards perennial rivers in the settlement, the doctrine that the company was dominus fluminis applied. As such when grants to water were made the Council of Policy was always at pains to point out that these rights were a privilege which could be withdrawn at anytime. Owners of riparian land had no claim as of right to the use of the water in public rivers to the exclusion of all others, and licences to use water were granted also to owners of land not riparian to the particular river. This regime of water law prevailed throughout the seventeenth and eighteenth centuries, with the government remaining dominus fluvius and having the sole power. However, in the mid-century, the judges of the Cape supreme court began a process of redefining water in a way which removed control of public waters from the government and created rights to public water as a natural incident of the ownership of land at the Cape. This came

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6 J R L Milton 'The History of Water Law 1652-1912' LACP 1
7 Bell J in Retief v Louw 1874 Buchanans Report 166
8 Milton op cit 2
about as a result of the influence of the English ideas, introduced after the acquisition of the Cape as a colony of Britain in 1806. The beginnings of the process can be traced to the case of Retief v Louw (1855) as reported in 1874 Buchanans reports. This case involved a dispute between adjoining landowners regarding access to water flowing from the upper tenement of the defendant to the lower tenement of the plaintiff. Bell J in his judgement disposed of the principle as applied at the Cape for over 200 years, of the state as dominus fluvius by the simple expedient of ignoring the concept. Bell J adopted a formulation which was in essence, the Anglo-American doctrine of riparian rights. Namely that landownership provides rights in the waters flowing through the land. The right is not one of exclusive title to flowing water but rather a usufructuary sort of right, that of making reasonable use of the water as it flows past.

The judgement in Retief v Louw produced confusion as, on the one hand there was the traditional view that water in a perennial river was res publica, and on the other hand the doctrine, introduced by Bell J, that landowners riparian to a public river enjoyed, as of right, some sort of exclusive title to the flowing water. In the 1870's, the newly appointed Chief Justice, Sir J. H de Villiers, took it upon himself to clarify and regularise the water law of the Cape. The direction that this influential judge took in this regard was to prefer the doctrine of riparian rights as the fundamental principle of Cape water law. The seminal case Hough v Van der Merwe 1874 Buchanan's Reports 148, where de Villiers CJ adopted the Romanistic distinction between "public" and "private" streams. In relation to the latter, the doctrine of absolute ownership of water in private streams was adopted. As regards "public" streams, the doctrine was that riparian landowners enjoyed a co-ownership in the stream, subject to the common law rights of the public. In subsequent decisions the principle of "riparian rights" was further entrenched by the court, with the result that the water of public rivers ceased to be res publica and became the common property of a limited category of people viz, owners of land riparian to the particular river. Once established, the doctrine of riparian rights flourished.

The adoption of the doctrine of riparian rights must, in retrospect, be seen as unfortunate. It's basic premise that owners of riparian land had a virtual monopoly of all water flowing in public rivers, is surely most inappropriate in a country where water is a scarce natural resource. For all its inequity, the doctrine proved stubbornly resistant to change.

The Cape Parliament in 1899 enacted the Water Act 40 of 1899. This Act is an important landmark in the evolution of the water law, for it formed the basis of the adjectival provisions of all
subsequent water legislation. With the introduction of the water courts, an entirely new principle was developed by giving the water courts power to distribute and apportion the flow of any perennial public stream where no apportionment had previously been effected. One riparian proprietor could apply to the court for apportionment and so set the law in motion along the whole length of the public stream, with the result that the water had to be apportioned amongst all the riparian proprietors.

The provision of this Act which had the most far-reaching effect upon the water law, was that by which the Governor was authorised to proclaim regulations prescribing the principles and considerations which should guide the members of a water court in defining the reasonable use of the water of a public stream. As a result of this provision, nine regulations were promulgated based upon certain passages from English and American decisions which had been enunciated by the courts as the Common Law of South Africa. The regulations laid down two preliminary principle, named:

- what constitutes reasonable use depends upon the circumstances of each particular case and is a question of degree; and
- apart from acquired rights, the use of one riparian owner shall be defined with due regard to the similar rights of the other riparian owners.

The effect of these regulations was to codify the precept of the common law as to the reasonable use of public water which had been formulated by the courts during the previous three decades.9 The Irrigation and Conservation of Water Act No. 8 of 1912, which appeared just two years after the Union of South Africa, was the first fully South African piece of water legislation on the statute books. It's purpose was to promote the expansion of irrigation throughout South Africa.10 Furthermore, it promulgated the same regulations as previously applied, as the mode of applying the principles and considerations which shall guide a water court in defining the reasonable use of the water of a public stream.

2.4 SUMMARY

The history of South African water law during the period under review reveals that South African water law derived certain of its organising principles from Roman Law either directly or

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9 Milton op cit 3 - 8
indirectly. The influence of Roman-Dutch Law in the formulation of South African water law has been slight. The doctrine of state ownership of the rivers and all that pertained to them, was perpetuated and intensified in Holland under the influence of feudal tenure. This doctrine was applied in South Africa throughout the Dutch regime at the Cape, but was abolished by the judges in the mid-nineteenth century.

English and Scotch decisions have played a role in shaping South Africa water law, especially in relation to the distinction between the ordinary use of water for the support of human and animal life and for domestic purposes and its extra-ordinary use for the other purposes.

The eventual system of water rights was largely shaped from the principles derived from the state law of the United States of America, as a result of the adoption of the system of riparian rights in the important case *Retief v Louw* as argumented by the formulations of these principles in *Hough v Van der Merwe*.

There was only slight development of water law through legislative innovation (except for the introduction of water courts). For the most part the role of the Legislature in relation to water was to provide codifications of the principles of the common law enunciated by the judges.\textsuperscript{11}

\textsuperscript{11} Milton op cit 8 - 9
3. THE WATER ACT NO. 54 OF 1956

After the Second World War, when industrial development was on the increase, it became necessary to update the law, which resulted in the substitution of the 1912 Act with, the Water Act 54 of 1956. Until very recently the latter Water Act governed South African water law and amended many of the historical developments in water law over a period of about 300 years. The Act was an amalgamation of some of the principles of Roman Dutch Law and English Law, supplemental by rules developed here, for the specific conditions of South Africa. It was based on the riparian right of English Law, which is partially tempered by the so-called dominus fluminus doctrine of Roman-Dutch Law.

The law dealing with water rights as contained in the Water Act of 1956, as amended, and in another 33 other Acts, dealt with rights to use water out of specific water schemes or works or within demarcated areas. The Water Act of 1956 was a continuation of the codification of the water law already started in 1906. This Act, inter alia, regulated the control, conservation and use of water. The power to exercise executive authority in terms of the Act and the other 33 Acts dealing with rights to use water, vested in the Minister of Water Affairs and Forestry.

Water rights are not contained in this Act, as this Act only contained the mechanisms for determining and obtaining water rights. Water rights were contained in various documents, including notices in the Government Gazette, schedules for Government water schemes, schedules for irrigation boards, water court orders, purchase contracts, deeds of transfer, deeds of servitude, written permissions by the Minister of Water Affairs and Forestry and Acts dealing with specific water schemes, works or area. For many properties such documents did not exist, so that the water rights were still to be determined.

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12 Department of Water Affairs and Forestry You and Your Water Rights (1995) 8
3.1 PUBLIC AND PRIVATE WATER

The water allocation under this Act is based on a distinction between public and private water, which distinction was inherited from Roman-Dutch Law. This distinction was one of the most important aspects of South African water law under this Act. To make matters even more complicated one finds, besides the two classes of public and private water, four more categories of water, which may be either public or private water depending on the circumstances.

3.1.1 THE TWO CLASSES OF WATER

The concepts of public and private water are defined in section one of the Act. This distinction in the Act was not meant to determine who owned the water but who had the right to use it and how it could be used. It was therefore a method of allocating water to different users.

A) Private Water

Private Water is all water which naturally rises or falls on any land or naturally drains or flows on one or more original grants, but is not capable of common use for irrigation. It includes the following classes:

- **Spring Water:** Every person is entitled to exclusive use of all water rising on his own land, as long as such water is not public water and its use is not limited by the ancient custom rule.

- **Rain Water:** All water which falls on to the surface of the land is the property of the owner, as long as it does not join a public stream.

- **Drainage Water:** All water which naturally drains on the surface of land is the exclusive property of the owner of the land, as long as it does not join a public stream, for example water from marshes, forests, melting snows.

- **Water of Private Streams:** A Private stream is a stream which lacks the essentials of a public stream.

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14 Department of Water Affairs and Forestry 'Water Management and the Law' (March 1995) vol. 15 no. 1 Water Sewage and Effluent
15 F Visser 'Water: Laws and Management' (December 1989) vol.15 no.2 Southern African Journal of Aquatic Sciences
16 You and Your Water Rights op cit
17 According to the Ancient Custom Rule a landowner may acquire a right to a reasonable share of water rising on upper land and flowing down to his land in a known and defined channel, if he has been using water beneficially for 30 years.
Underground Water: This may be either public or private, but is normally private.18

All the above forms of private water, being the exclusive property of the same person, are the subject of ownership. Consequently at common law the owner could possess or store such water, or use, alienate or even waste it, and it consequently follows that the owner could part with these rights in the ordinary way ie., by sale, lease or donation; or he could lose his rights by prescription.19

Though private water could be used exclusively for any purpose by the owner of the land, certain uses such as industrial use needed state permission. The Act had a number of important restrictions on the use of private water such as:

- if other users have used the water for a long time, they had some rights;
- the water could not be taken across boundaries of the land which it was found, except with the approval of the Minister;
- groundwater could be brought under state control through the declaration of subterranean Government water control areas; and
- the building of dams and other waterworks could be brought under state control through the declaration Government drainage control areas.

One of the reasons for these restrictions was to prevent the sale of land which had been stripped of water rights. Other reasons were to keep used water near to the source, so that it could be used again possibly by other users, to ensure that water was not abused, and to enable the State to intervene especially where there is a large groundwater source that could be used to benefit the broader community.20

B) Public Water

Public water is any water flowing or found in or derived from the bed of a public stream, whether visible or not. A public stream is a natural stream of water which flows in a known and defined channel if the water therein is capable of common use for irrigation on two or more pieces of land riparian there to, which are the subject of separate original grants. A stream which fulfilled the foregoing conditions in part of its course only was public as regards that part only if the two original grants are irrigable only by means of surplus water, the stream was nevertheless public. The stream must be natural and not artificial.

19 Vos op cit 10
20 You and Your Water Rights op cit 9
The ordinary meaning of riparian land is land on the bank of the stream. Hence all land in contact with a stream would be riparian. The matter was, however, not that simple. Subdivisions had to be considered. Since a public stream is one which can irrigate two or more riparian farms, the question arose whether subdivisions would qualify. The legislature accordingly provided that the test was original farms. Hence, before a stream could be public, it had to be capable of irrigating more than one original grant. However, riparian land remained riparian even though the process of subdivision had geographically removed it from the stream. Thus a subdivision which has no contact with the stream remains legally riparian. Since it remains riparian land it was entitled to water form the stream and the owner could obtain the necessary servitude of abutment, storage and aqueduct.

There was no right of property in public water. It was a res communis similar to the air and the sea, and under common law, its use was common to all. Under the Act, however, its use was restricted largely to riparian owners. The general public had certain limited rights of use, for example, drinking and watering stock.

Public water was divided into two divisions or portions, namely normal flow and surplus flow.21

- Normal Flow

Only a portion of the stream water in a river constitutes normal flow, being the portion that is consistent enough for irrigation without having to be impounded first. It does not mean the flow must be strong enough to constitute an irrigation stream. Such a stream is normal flow, as the water can be accumulated in a storage dam for a few days, to constitute a practical irrigating stream. The flow provides a reasonable assurance that irrigation farmers will have enough water from the river to make reasonably consistent irrigation possible during the critical irrigation months. Normal flow is thus not a constant flow. Normal flow should rather be seen as a mechanism for dividing the available water equitably. Water has to meet two requirements to be classified as normal flow. It must first be able to be utilised directly for irrigation by means of furrows, pumps etc., but without the need for prior accumulation in a storage dam. It does not mean that irrigation had to actually occur, only that the possibility need exist. Secondly, the water must flow visibly in the stream.22

21 Vos op cit 12 - 14
22 C. Nel 'You and Your Water Rights (1) - Understanding the Water Act' 14 April 1989 Farmers Weekly 11
**Surplus Flow**

Surplus water was defined as all public water which was not normal flow. The complex interpretation of normal flow, therefore, applied to flood water. In practice, surplus water was the flow in rivers after good rains which was usually available for short periods and which had to be impounded to be of use. Most of South Africa's stored water is surplus water. Surplus water was available for beneficial use by riparian owners, irrespective of the needs of the downstream users. It could also be impounded although the Minister could restrict dam sizes.²³

There is no right of ownership in public water. A riparian owner has the right to use it reasonably, without waste. This right was enjoyed by all riparian owners and related to the whole of the flow. Non-riparian owners had certain limited rights to use public water, which were broadly called rights for domestic purposes. In general, the Act laid down three basic uses namely, agricultural, industrial and urban.²⁴

### 3.1.2 The Four Categories of Water

1. Surplus water is that water as discussed above.

2. Subterranean water, which is water naturally existing underground or subtracted there from as contained in areas which have been declared to be subterranean water control areas. (s27)

3. Water found underground is a category of water distinct from subterranean water. Although this category of water was not defined in the Act, one can assume that it is here referred to as water which also exists naturally underground, but which is not included in a subterranean water control area (s30A). Such water was classified as private.

4. This was water obtained with artificial means on a landowners property (s6(2)). If such water was not obtained from a public stream it could be classified as private water.²⁵

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²³ *You and Your Water Rights* op cit 10
²⁴ Vos op cit 27
²⁵ Visser op cit 168 - 169
3.2 WATER CONTROL AREAS

The right to use groundwater and public water was determined differently for an area which was not declared as a Government water control area and an area which was declared as such. A Government water control area was an area which was declared by the Minister when he/she considered it necessary to control water use from a river in the public interest. In such an area, the Minister could suspend existing water rights and re-allocate water rights in the public interest. The Minister could also declare a control area when he intended to construct a government water work which was normally a large state dam funded by the state, built to store water on a large scale, for distribution to users. Thus within a water control area, the right to the use of ground water and public water vested in the Minister subject to the beneficial exercising of certain rights. In an area not declared as a water control area, all the owners of land next to a public stream, had common property rights to all the water in that stream and each of them had a right to a share in that water for irrigation and urban purposes.

The rights to private water on the other hand, excluding groundwater, cannot be effected by declaring an area a Government water control area.26

3.3 IRRIGATION BOARDS

Chapter six of the Act allows for the setting up and running of irrigation boards. To this end irrigation districts were formed by a group of riparian owners to establish a communal scheme of water distribution. The district was managed by an irrigation board, whose main object was the conservation and distribution of water. The Minister assigned functions and powers to the board. Chief among these was the supervision of public streams and public water in the irrigation district, especially the storage and use of the water, and the construction of works to prevent waste or unlawful use of public water. An irrigation board could not infringe the rights of riparian owners and could only regulate the use of water. Such a board had only those rights conferred by statute.27

26 WRC Report no. kv 96/96 op cit 72
27 Vos op cit 93 - 94
3.4 WATER BOARDS

Chapter seven of the Act allowed for the establishment and functioning of water boards. A water board was a body constituted by the State President to establish a combined scheme for supplying water for urban, industrial and agricultural purposes, usually in bulk, in any region to local authorities, provincial authorities, the state, the Railway and others. It was in effect a body to supply water on a regional basis. A consumer was required to pay standard prices for water received from the board, which had to be economic prices, i.e., sufficient to cover the costs of running the water board.28

3.5 WATER POLLUTION CONTROL

Chapter two of the Act had many provisions aimed at controlling water pollution. These included, control of pollution caused by large urban centres, industry and agriculture, and allowed for action to be taken in special cases to reduce existing pollution. The Act also encouraged the return of treated water to the river. South Africa depended on these return flows to add to our limited natural water supplies.

3.6 DAM SAFETY

Measures aimed at making sure dams are built safely are covered in chapter two of the Act, together with inspections of dams to ensure safe operation and maintenance. Dams are unnatural structures which are a risk to down stream residents who have a right to be protected.

3.7 FLOOD PLAIN MANAGEMENT

Section 169A of the Act specified that development plans for urban areas must show floodlines. Provincial and local authorities were responsible for managing development within flood plains.29

28 Vos op cit 96 - 97
29 You and Your Water Rights op cit 11
3.8 SUMMARY

From the above and other provisions of the Act it may be concluded that:

- the allocation system is aimed mainly at agricultural use, specifically irrigation.
- Non-riparian owners are largely excluded from the allocation system.
- The water of smaller streams and groundwater (ie. private water) as well as flood water (ie. surplus water) is available for exclusive rights of use by single owners.
- The Minister has wide-ranging powers to assume control of water allocation in the public interest, while he also has the discretion to determine what the public interest is. \(^{30}\)

\(^{30}\) Water Sewage and Effluent (March 1995) vol. 15 no.1 op cit 17
4. THE INADEQUACIES OF THE WATER ACT 54 OF 1956

Conflicts among water users are escalating as South Africa's growing needs outstrip the natural geographic availability of water. Accordingly, water management is becoming more complex. The Water Act 54 of 1956, its institutional arrangements, conflict resolution mechanisms and methods of financing and cost recovery were not necessarily ideal to cater for looming requirements.

Regarding this Water Act, many of the concepts embodied in it originated in a temperate, better watered climate. Some stem from the outlook and technological limitations of ancient Rome, while others are attempts to express local natural phenomena in legal terms. Unfortunately, many of these terms have, through time, proved incompatible with actual physical conditions and are now regarded by some as impedients to sustainable water management. Concepts such as private water, public streams, normal and surplus flow, riparian rights, main streams and tributaries, have had enormous vested interests built upon them, while the fact that they were no longer relevant or meaningful in some situations, was not always noticed. This problem can be attributed to the poor understanding of South African hydrology which led to the adoption of inadequate legal terms to describe its characteristics.

In previous centuries, the most urgent need was to authorise abstraction, primarily for irrigation, and the requirement for comprehensive water management and the resolution of disputes on a more scientific basis could not have been appreciated. The successive adaptations for the semi-arid conditions in South Africa were no longer catered comprehensively for the resolution of the growing conflicts or the achievement of best joint utilisation within a climate of scarce resource allocation. Accordingly downstream users became more vulnerable to diminished flow and quality. New conflicts arising in the modern world were not foreseen during the evaluation of this Act. Thus as new situations presented themselves for which the law inadequately catered, if at all, recourse to common law and principles of Roman Law were insufficient.31

Rabie accordingly sums up that South African water law under this Act no longer provided adequately for the management of water resources for the following reasons:

The predominantly private law orientation of this law diverted attention away from the state's role to serve as custodian of the public interest in our water resources.

This water law had its roots in the needs of a predominantly agarian society, but our society has since undergone a transformation towards urbanisation and industrialisation, with several developing water user sectors having been identified.

South Africa water law was derived from legal systems, which were applicable in countries with vastly different climatological conditions.

A poor understanding of South African hydrology prevailed when this water law was developed and this was reflected in the different legal rules which applied depending upon the legal classification or the status of the water source in question.

Environmental considerations were not taken into account during the formative stages of this water law and did not even feature in this Act, while such considerations are today regarded as being of fundamental importance. Under this Act pollution control was dealt with and to a very limited extent also dealt with water conservation, whilst minimal provision, if any, was made for the protection of aquatic ecosystems involved.\(^\text{32}\)

This Act, as already stated, blended the principles of common law with those of English Law. On the one hand, the rights of riparian owners were 'established and entrenched', with agricultural interests being served by the Act. On the other hand, in order to accommodate urban and industrial water requirements, the Act largely returned to the old principle of Roman-Dutch law of the power of the state to control the use and disposal of public water. The net result of this mix of principles was that the majority of the general populace was severely restricted in its access to water. By basing rights to public water on riparian ownership, the Act effectively excluded non-landowners, particularly in rural areas, from having adequate access to water.\(^\text{33}\)

Although the Act did not contain any racially discriminating legislation, the enjoyment of water rights in South Africa was de facto disproportionately biassed along racial lines. Water rights were directly related to landownership because generally the only persons who had water were riparian landowners. Racially discriminatory land laws were one of the cornerstones of apartheid. Therefore, because the largest part of the land was owned by whites, they also enjoyed most of the water rights. This factor permeated all aspects of the water law.\(^\text{34}\)

\(^{32}\) A Rabie 'Water Law from a Conservation Perspective' (February/March 1998) vol. 20 no.2 SA Irrigation 22

\(^{33}\) R Keightly 'The History of the Water Act 54 of 1956 in the Light of New and Emerging Policy' LACP 13-14

\(^{34}\) You and Your Water Rights op cit 13
As far as the issue of state control was concerned, the Act was remarkable in the extent to which powers were granted to the Minister of Water Affairs to regulate almost every imaginable aspect of water use and supply. A large proportion of the more or less yearly amendments to the Act were aimed at extending this control. Not only was the Minister granted broad discretion under the Act, but he was also given wide powers of delegation. While the extensive state control established by the Act resulted in limitations on the riparian rights of landowners, it did not have the effect of a more equitable distinction with regard to access to water. On the contrary, the application of the Act, had in relation to water, entrenched broader-based social and political inequalities. This was partly due to the fact that the powers of the Minister allowed the regulation of water to be framed by government policy. Thus under the government, state resources were largely spent on ensuring adequate supplies of water for the privileged sectors of society. The apartheid infrastructure had of course been a contributing factor to the inequalities that existed in relation to water. The failure of the homeland administrations and of Black local authorities to provide basic services meant that a significant sector of South Africa's black population in both urban and rural areas did not have decent access to water.35

As is clearly evident from the above, the Water Act of 1956 was wholly inadequate to meet the needs of the majority of South Africa's populace. Racial bias towards a minority of people was inherent in the application of the Act, thus ensuring compliance with the apartheid policies of the government. As such inequity existed with regard to access to water. Although the government had extensive powers to regulate the manner in which water resources was controlled, in conforming to its apartheid policies, it failed to exercise its powers in a manner beneficial to all its citizens. Furthermore the government adhered to the adoption of legal concepts pertaining to water resources which was inappropriate for South Africa's semi-arid climate. Of importance, was that the government failed to afford adequate protection in respect to the environment. Also the government failed to take account of the fact that water in South Africa is a scarce resource.

35 Keightly op cit 14 - 15
5. SOUTH AFRICAN WATER LAW - A TIME FOR CHANGE

South Africa has been through a negotiated political change which is almost unique in history. The country has moved from a minority government with a very poor human rights records to a government of national unity with a new Constitution containing a Bill of Rights. With the adoption of the Constitution, every public institution in the country needed to be reassessed and all the laws of the country needed to be held up to the light and scrutinised to ensure that they are consistent with the new Constitution. This provided a unique window of opportunity to address a whole host of issues which were long overdue in the review of legislation in South Africa. It is for this reason that the then Minister of Water Affairs and Forestry, Prof. K Asmal, announced as one of his first activities on taking office in May 1994, that the water law of South Africa would undergo a thorough review.36

5.1 WHY A NEW WATER LAW

Water is a precious resource that belongs to all of us. Access to water has in the past been the privilege of those with access to land and those with access to economic power. In South Africa, more than 12 million citizens lack access to clean water. Everyday infants die from diseases bred of the unavailability of clean potable (drinking) water. Among the historically privileged population infant mortality rates are 20 per 1000 births. In some water-deprived rural areas we lose 370 infants per 1000 births. According to Kader Asmal, we cannot allow such a situation to persist - especially in the presence of our Constitution and Bill of Rights, which requires that all citizens be treated equitably.37

The need to review the Water Act 54 of 1956 had been expressed for many years by water law specialists, DWAF and the water sector generally in South Africa. This has been primarily from a technical perspective because there were fundamental problems and complexities in applying this Act in a modern industrial economy and in a semi-arid environment where limited and highly variable water resources are subject to increasing competing demands. There were also calls to review the water law from the perspective of equity of fairness. Although there are no overtly

37 K Asmal 'Why a New Water Law' (May 1997) vol.1 no.1 Land 32
discriminatory clauses in the Act, there could be no question that the rights to use water were extremely biased towards a minority of people, making it difficult for the majority of South Africans to gain access to water rights. The basis, therefore, of the Minister’s call for a review of the water law were equity, technical efficiency and relevance to modern circumstances, simplicity and ease of administration.\textsuperscript{38} Moreover, according to Prof. Kader Asmal, the victory of our democracy demanded that the national water use policy and the water law be reviewed. But there are other pressing reasons. The development of our society, our growing population and the legitimate demands of the disadvantaged majority for access to water have placed demands on what is, although renewable, a limited resource that can easily become polluted or over-used. There is only so much water that falls on our land every year. Unless we wish to begin to remove the salt from our vast resources of sea water (a very expensive process) we have to live within our means. The way that we use our water is far from ideal, we are not getting the social, economic or environmental benefits from our water use that we could, or should be getting, indeed that we need to get. This is therefore a significant challenge for us all.\textsuperscript{39}

5.2 THE CONSTITUTION AND WATER

The constitution which expresses the desires of the people of South Africa, is now the highest law of the land, and all law including water law, must follow the spirit and letter of the Constitution and should give force to the moral, social and political values that the constitution promotes. The need for the review of South African water law and for a fundamental change in our approach to water management is underpinned by the Constitution both in relation to the creation of a more just and equitable society and, in relation to the broad need, for more appropriate and sustainable use of our scarce natural resources, driven by the need to achieve the right of access to sufficient water.\textsuperscript{40}

5.2.1 PREAMBLE TO THE CONSTITUTION

The preamble to the Constitution expresses an acknowledgement by the people of South Africa of the "injustices of our past". It commits us to establishing "a society based on democratic values,

\textsuperscript{38} Fundamental Principles and Objectives for a New Water Law in South Africa op cit 2
\textsuperscript{39} DWAF White Paper on a National Water Policy for South Africa (1997) 2
\textsuperscript{40} White Paper on a National Water Policy for South Africa op cit 7
social justice and fundamental human rights through amongst other things (improving the quality of life of all citizens and freeing) the potential of each person."

5.2.2 THE BILL OF RIGHTS

The idea of social justice is taken further in Chapter Two of the Constitution which contains the Bill of Rights. The Bill of Rights lays out the rights of all people in the country and affirms the democratic values of "human dignity, equality and freedom" as well as "non-racialism and non-sexism". The Bill of Rights is binding on all citizens and all organs of government.

5.2.3 LIMITATIONS CLAUSE

The rights set out in the Bill of Rights are not absolute and may be limited by law if the limitation is reasonable and justifiable in an open and democratic society based on human dignity, equality and fairness.

5.2.4 THE RIGHT TO EQUALITY

One of the rights which is important for the development of the new water policy states that every person is not only equal before the law but all have the right to equal protection and benefit of the law. Equality is defined to include "the full and equal enjoyment of all rights and freedoms", while also stating that in order to promote the achievement of equality "legislative and other measures designed to protect or advance persons, or categories of persons, disadvantaged by unfair discrimination" may be taken. In the context of the reform of the law, the right to equality requires equitable access by all South Africans to, and benefit from the nation's water resources and an end to discrimination with regard to access to water on the basis of race, class or gender.

5.2.5 THE RIGHTS TO DIGNITY AND LIFE

Water gives and sustains life. The failure of the apartheid government to ensure the provision of sanitation and water for basic human needs such as cooking, washing, drinking, for growing crops, and for economic development impacted significantly on the right to life amongst the black majority. The Constitution provides that every person has a right to life and guarantees the
"inherent dignity" of all persons and the "right to their dignity respected and protected" and places a duty on the state to ensure that this right is respected, amongst other things, through access to water.

5.2.6 ENVIRONMENTAL RIGHTS

The Constitution also gives all citizens the right to an environment that is "not harmful to their health or well-being", as well as the right to have the environment protected for the benefit of present and future generations. It is, therefore, the duty of the Government to make sure that water pollution is prevented, and that there is sufficient water to maintain the ecological integrity of our water resources, and that water conservation and sustainable "justifiable economic and social development" are promoted. This section of the Constitution moves us away from the old approach that pitted environmental goals against economic and development ones, and requires, instead, that they be integrated.

5.2.7 PROPERTY RIGHTS

Although the Constitution guarantees certain protections in respect of property, there are different ways in which a person's property rights can be interfered with by the state. The Constitution draws a distinction between deprivation and expropriation. Expropriation means the complete removal of an established property right and will require compensation. Deprivation, however, which merely limits the extent of use of the property, does not require compensation. The property clause also makes specific provision for corrective action. It states that no provision of the property clause may stop the state from taking legislative and other measures to achieve land, water and related reform in order to redress the results of past discrimination.

5.2.8 THE RIGHT OF ACCESS TO SUFFICIENT WATER

The property rights question cannot be understood without looking at the constitutional provision which guarantees every person the right to access to "sufficient water and food", and to "health care services". This promises every child the right to amongst, other things, basic nutrition, and health care services. The reform of water must, therefore, put in place arrangements to ensure that all citizens gain access to sufficient water to meet basic domestic needs. Access to sufficient
affordable clean water for hygienic purposes should be seen as part of primary health care services.

5.2.9 CO-OPERATIVE GOVERNMENT

The management of water is, constitutionally, a national function and the role of public trustee of our water resources is, ultimately a duty imposed on national Government. 41

According to Kader Asmal, South Africa's water law must reflect the principles of our Constitution. The new water law must ensure that the values of the Constitution are felt by all citizens in their daily lives. All changes to the old Water Act are to take place within the context of fulfilling the rights enshrined in the Bill of Rights. 42

5.3 THE PROCESS

In keeping with the new democratic order, the process of reviewing and rewriting the water law was held by the Minister to be very important as it will have a direct effect on the result. The process was, therefore, designed to encourage maximum involvement of interested parties and the public at large. 43 According to the Minister, changing the law must be done very carefully least we end up with more problems than when we started. It is for this reason that DWAF proceeded cautiously, one step at a time. 44

The first phase of the process was the compilation of a booklet titled "You and Your Water Rights". This was written in the Ministry with input from the Department and a number of experts in the field. The document was published in March 1995. 45 In this document the Minister argued for the consolidation of the 34 existing Acts in one water law, and asked the public for submissions as to how this was to be done. 46 The document also set out some of the problems with the existing law and asked people for their ideas on how the law should be changed. This document was also sent to some international experts. There was a good response and many interesting ideas came

41 White Paper on a National Water Policy for South Africa op cit 8
42 K Asmal op cit 32
43 Fundamental Principles and Objectives for a New Water Law in South Africa op cit 2
45 Fundamental Principles and Objectives for a New Water Law in South Africa op cit 2
46 Department of Water Affairs and Forestry 'Water-Parched Policy' (31 March 1995) Financial Mail 50
forward. In fact, a total of 173 submissions were received from the public. The response filled 8 volumes comprising over 1000 pages. Submissions were received from a wide spectrum of individuals and organisations. Numerous workshops were held to discuss the document and formulate collective responses. It is significant, however, that no submissions were received from any community based organisations, rural communities or village level committees.

The next stage of the process was the establishment of a panel by the Minister to draft a set of principles on which a new water law could be based. This Water Law Review Panel met for the first time on 7 September 1995 and thereafter on 13 occasions for full day meetings. The mandate given to the panel at its first meeting by the Minister was to work from the perspective of a "blank slate" without disregarding the wealth of knowledge and experience that exists and has been built up over the years through the development and application of existing laws. The mandate was to further remain simple, logical and clear, without regard to any "holy cows". The approach of the panel was to ensure that there was a common "Golden Thread" running through all of the principles. It is clear throughout the work of the panel that they were covering both new ground and ground dealt with in the existing legislation. No attempt was made to distinguish between the new principles and those embodied in existing legislation. This was done to present a full and consistent set of principles. Concern was expressed on numerous occasions regarding the transition from the existing water Act to the new regime. It was considered of utmost importance that, wherever possible, the new law should not create greater administrative burdens and more uncertainty in the minds of the general public than there existed at present.

The above resulted in the document "Fundamental Principles and Objectives for a New Water Law in South Africa" which was presented to the Minister by the Water Review Panel. This document was launched by the Minister on the 6 February 1996. It was the start of a process marking the beginning of a new era in water management in South Africa, in which the twin objectives of equity in access and optimal uses would be put in place for the first time. In the document the fundamental principles are divided into nine categories:

- Principles in respect of the Hydrological Cycle
- Principles in respect of the Aquatic Ecosystems
- Principles in respect of the Legal Status of Water

47 Discussion Document op cit Preface
48 Fundamental Principles and Objectives for a New Water Law in South Africa op cit 3 - 4
49 Fundamental Principles and Objectives for a New Water Law in South Africa op cit 2 - 8
- Principles in respect of Water Demand, Apportionment and usage.
- Principles in respect of Water Quality and Management
- Principles in respect of the Value of Water
- Principles in respect of existing Rights to the Use of Water
- Principles in respect of Management, Administration and Enforcement
- Principles in respect of Water Supply and Sanitation Services

This document did not as such form the basis for the new legislation. Drawing from this document and other inputs, a set of principles was to be produced to serve as a basis for a further round of consultation. Thus in April 1996 a second discussion document stated some very fundamental principles on which water law should be based, and emphasis was on the reason why water should be managed and what the goal of management should be. The principles ultimately attempted to find out what was best for South Africa as a whole: what will meet the requirements of the Constitution; what makes most sense in terms of our present understanding of the environment around us on which we all depend, and how we should manage a scarce resource for development and property. This was followed by the water law review National Consultative Conference in East London in October 1996. The purpose of the conference was to finalise the water law principles; to review the implementation process and to charter the way ahead for the review process. At the conference the Minister gave the assurance that he is committed to formulating an Act which will provide a preamble to each separate section, giving users a simple overview of the new law. The regulations which follow will then deal with the more complicated details.

The final fundamental principles and objectives for a new water law for South Africa were approved by cabinet in November 1996. Eleven task teams were then appointed to translate the principles into practical proposals which formed the policy positions of the White Paper on a National Water Supply for South Africa.

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50 Department of Water Affairs and Forestry 'A Step towards Equity in Access and Optimal Use of Water' (March 1996) vol.16 no.1 Water, Sewage and Effluent 6-7
51 M Van Vee1an 'An Integrated Approach to Water Management' (March 1999) Civil Engineering 3
52 Discussion Document op cit 1
53 Department of Water Affairs and Forestry 'Full Steam Ahead for Water Law Review - Asmal wants a New Law by December '97' (December 1996) vol.16 no. 4 Water, Sewage and Effluent 11
54 White Paper on a National Water Policy for South Africa op cit 6
On the basis of the White Paper, a National Water Bill was drafted and tabled in Parliament and culminated in the enactment of the *National Water Act No. 36 of 1998*. Hence ended a "remarkable" two years of consultation over water legislation.\(^{56}\)

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\(^{56}\) Department of Water Affairs and Forestry 'Last Word Not Yet Spoken on Water Law' (October 1997) vol. 22 no.12 *Wood SA/Timber Times* 19
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\textsuperscript{56} Department of Water Affairs and Forestry 'Last Word Not Yet Spoken on Water Law' (October 1997) vol. 22 no.12 *Wood SA/Timber Times* 19
6. NATIONAL WATER ACT NO. 36 OF 1998

The Water Act of 1956 was totally overhauled and replaced in its entirety with the enactment of the National Water Act no. 36 of 1998.

6.1 MAIN OBJECTS

The National Water Act provides for the protection of the quality of water resources and for the integrated management of water resources with the delegation of powers to institutions at regional and catchment level, within defined management areas. The main object is to provide for the management of the nation's water resources so as to enable the achievement of sustainable use of water for the benefit of all water users. To that end it is necessary to provide for the protection of the quality of water resources and for the integrated management of water resources with delegation of powers to institutions at regional or catchment level, so as to enable everyone to participate in the processes.

The Act in terms of section 2 seeks to provide for the protection, use, development, conservation, management and control of the nation's water resources taking into account the following needs:

- to meet the basic human needs of present and future generations;
- to promote equitable access to water;
- to redress the results of past racial and gender discrimination;
- to promote the efficient, sustainable and beneficial use of water in the public interest;
- to facilitate social and economic development;
- to provide for growing demands for water users and their biological diversity;
- to reduce and prevent pollution and degradation of water resources;
- to meet international obligations;
- to promote dam safety; and
- to manage floods and droughts

The Act seeks to lay the basis for regulatory water use, including the taking and storing of water, activities which reduce stream flow, waste discharges and disposals, other activities which impact detrimentally on water resources, altering a watercourse, removing water found underground and
recreation. The Act also deals with measures to finance the provision of services as well as financial and economic measures to support the implementation of policies aimed at water resource protection, conservation of water and the beneficial use of water.

The Act seeks to provide for the progressive establishment of catchment management agencies so as to devolve water resource management to a local level and to involve local communities within the framework of the national water resource strategy. It also deals with the establishment of water associations which are co-operative associations of individual water users who wish to undertake water-related activities for their mutual benefit. The Act empowers the Minister to establish and operate government water works and to deal with existing government waterworks. It also contains provisions aimed at improving the safety of dams and provisions seeking to secure access onto and over property of others for purposes relating to water resource management and water use.57

6.2 FUNDAMENTAL PRINCIPLE

The national government, through the Minister, is appointed as the public trustee of the nation’s water resources. The national government has the power to regulate the use, flow and to control all water in the Republic. Accordingly, government does not own the water, but is given the right to control and regulate the use of water for the benefit of all citizens. (section 3)

The recognition of the government’s role as custodian of the “public trust” in managing, protecting and determining the proper use of South Africa’s scarce water resources is a central part of the new approach to water management. This is also a marked departure from the Water Act of 1956. The main idea of the public trust is that the national government has a duty to regulate water use for the benefit all South Africans. It is to do this in a way which takes into account the public nature of water resources and the need to make sure that there is fair access to these resources. The central part of this is to make sure that these scarce resources are beneficially used in the public interest.


58 White Paper on a National Water Policy for South Africa 14
6.3 WATER MANAGEMENT STRATEGIES

As soon as is reasonably practical, the Minister is required to establish a national water resource strategy for the protection, use, development management and control of water resources. The strategy is to be finalised only after public consultation. (section 5)

The strategy also envisages the progressive establishment of local catchment management agencies (CMAs). The object of these agencies is to provide a means of devolving the Minister’s powers to local committees living within any particular catchment area. The ultimate goal is to establish catchment management areas in all water management areas. Where no agency has been established, the Director-General of DWAF will act as an interim CMA. It is envisaged that CMAs will only be established after consultation with all stakeholders in the local community. In turn all catchment management areas are to establish catchment management strategies, which are not to be in conflict with the national strategy. In this way the Act envisages the control of water being self-regulated by local users.

6.4 PROTECTION OF WATER RESOURCES

The protection of the water resources is fundamentally related to their use, development, conservation, management and control. Of importance is Part 3 of Chapter 3 of the Act. This part deals with the Reserve, which consists of two parts – the basic human needs reserve and the ecological reserve. The basic human needs reserve provides for the essential needs of individuals served by the water resource in question, and includes water for drinking, for food preparation and for personal hygiene. The ecological reserve relates to the water required to protect the aquatic ecosystem of the water resource. The Reserve refers both to the quality and quantity of the water in the resource, and will vary depending on the class of the resource. The Minister is required to determine the reserve for all or part of any significant water resource.59

Therefore, the Act only recognises two user sectors with an inalienable right namely: water for basic needs and the aquatic ecology. The rest of the users are to compete for the available water on the basis of the greatest good for the country as a whole. The new rules no longer favour

riparian irrigators and for the first time recognises the aquatic ecology as an intrinsic part of the resource that needs to be protected. 60

The Act also makes further provision for the prevention of pollution in Part 4 of Chapter 3 of the Act. In particular the Act deals with the situation where pollution of a water resource occurs or might occur as a result of activities on land. Section 19 provides that the person who owns, controls, occupies or uses the land in question is responsible for taking measures to prevent pollution of water resources. In terms of section 19(3), a catchment management agency (as discussed below) may direct any person who fails to take the requisite measures to prevent pollution, to take such measures that are required to prevent such pollution within a specified period. Should a person fail to comply with the directive issued by the catchment management agency (CMA), the CMA may take the measures it considers necessary to remedy the situation. Section 19(5) entitles the CMA to recover all reasonable costs incurred as a result of the remedial measures taken by the CMA, jointly and severally from the persons responsible for the pollution. Therefore, the Act advocates the principle of the “polluter pays”. Of importance, is that section 151(1)(i) of the Act indicates that it is an offence should a person unlawfully and intentionally or negligently commit any act or omission which pollutes or is likely to pollute a water resource.

6.5 LAWFUL WATER USE

An important innovation of this Act is that a person is only entitled to use water if the use is permissible under the Act. In general, a water use must be licenced unless it is listed in Schedule one, is an existing lawful use, is permissible under general authorisation, or if a responsible authority waives the need for the licence.61 This is an important departure from the Water Act of 1956, in that riparian owners now no longer enjoy a preferent right to use of water. Rather they now form part of a group of water users, as do all of the citizens of South Africa.

- What constitutes an existing lawful use of water?

In terms of section 32 of the Act, an existing lawful water use means a use made of water at any time during a period of two years before the enactment of the Act and which:

(a) was authorised by the Water Act of 1956; or
(b) was permissible in terms of any law in force immediately before this Act was enacted; or

60 M Van Veelan ‘The Strategic Planning of Major River Systems’ (September 1997) Civil Engineering 3
61 Chapter Four - National Water Act 36 of 1998
was declared an existing use under section 34(1) of the Act which allows you to apply to the responsible authority for permission to make use of water, whether you have an existing right or not; or

is identified as a stream flow reduction activity in terms of Section 37(4) of the Act which, essentially allows the Minister, after public consultation, to regulate land-based activities which reduce stream flow; or

is identified as a controlled activity.

Essentially this section allows the Minister, after public consultation, to regulate activities which are detrimental to the water resource. It is apparent from the Act that the public must in all cases have an opportunity to participate before a decision is made by any responsible authority.

Individual Application for Licences

Section 41 of the Act provides that, if you wish to obtain a licence to use water, you have to apply to a relevant responsible authority, which in time to come will be the CMA. This section allows you to apply for a right to use water even if you are not currently a water user. To be successful you will have to show "good reason" why you need the water. If the responsible authority considers it appropriate, it may conduct its own investigation into the likely effect of one's proposal on the protection, use, development, conservation, management and control of the water resource in question.

Just Administrative Action

What if the responsible authority rejects your application? What do you do?

In terms of the constitution you have the right to administrative action which is lawful, reasonable and procedurally fair. If your rights are adversely affected by an administrative decision you have the right to be given written reasons. By an administrative decision is meant a decision taken by a public body. Water affairs authorities can be classified as public bodies. These are not courts of law but their decisions are nevertheless reviewable. These bodies must be just to all parties in the way they conduct their proceedings. If not, the Superior Courts will intervene and ensure that natural justice is done. The onus then rests on you to satisfy the Court that it has good grounds for reviewing the conduct you are complaining of. The Court reviewing a decision is essentially concerned with irregularities or illegalities in the proceedings, which may show that there has been a "failure of justice". A mere possibility of prejudice, which is not of a serious nature would not justify interference by a Superior Court. It is therefore important to ensure that the application
contains all the necessary and relevant information and that reasons are obtained from any administrative body for its decision. By examining these closely, it can be determined whether or not the decision was, on the facts, reasonable.\[62\]

6.6 LICENCES

Generally speaking if you are currently using water, and your use is lawful, that is, as authorised under the Water Act of 1956, you may continue to do so, until the responsible authority requires you to apply for a licence under the Act. But the Act is silent as to when, if ever, the responsible authority will require you to apply for a licence. It is submitted that the legislature's silence is appropriate. It is clear that the drafters of the Act intend water users in a particular catchment area to regulate their use themselves under the guidance of the responsible authority. It is not the legislator's intention that the responsible authority should assume unfettered control. It is, therefore, apparent that if the area one lives in has more than enough water, and all the trees are happy with their allocations, the responsible authority will not interfere with the status quo. It may take years, if not decades before this authority instructs any user to apply for a licence. However, if one is not a current water user, and one wishes to apply for an allocation, an application must be lodged with the responsible authority, and one will be required to give all your neighbours notice of your application. If all water users can settle any fresh request for an allocation amongst themselves, the responsible authority should endorse this. Settlement agreement between the parties, provides of course, that the water resource is kept intact and is not prejudicial in any way.

Problems will no doubt arise in areas where water is scarce. The Act refers to dry areas "under water stress". The Act isolates dry areas for special treatment where the responsible authority considers it desirable, it may issue a general invitation in the Government Gazette to people in a particular "dry area" to apply for a licence. In such a case the responsible authority is to adhere to the fundamental principles of the Act.

It is common knowledge that, in terms of the 1956 Act, specific quantities of water was allocated to various landowners for indefinite periods of time. The upshot was that, even if the landowner did not use his allocation, neither his allocation nor any part of it was available to any other user, except by agreement between landowner and his neighbour. Agreements were rare. More often than not

\[62\] D Oakes 'Who Owns Water - Part Two' 26 (June 1998) Farmers Weekly 24-25
disputes arose. While litigation took its course, billions of litres flowed into the sea. In essence, the theme of the Act is, "if you don't use it, you'll lose it." In pursuit of this objective, allocations will not necessarily be granted for indefinite periods of time. Licences will rather be granted in a manner which best promotes the objects of the Act. Therefore, it is clear that licences will not be allocated on the basis of one's existing rights to use water, one will now have to justify one's right in order to use water.

6.6.1 The Application Process

If the responsible authority publishes a notice in the Government Gazette calling for the application for a licence, it must then take all "relevant factors" into account once it has received all applications; before making a decision. These relevant factors are set out in section 27(1) of the Act and are indicative of the government's "thinking". Once the responsible authority has considered all applications in light of the relevant factors, it must propose an allocation schedule, specifying how much water is to be allocated to the applicants (Section 45(1)). The proposed allocation schedule must then be published in the Government Gazette, inviting written comments from interested parties. After considering all comments received about the proposed allocation schedule, the responsible authority must prepare a preliminary allocation schedule, and once again publish its findings in the Government Gazette, calling for objections. If objections are lodged it will be referred to the water tribunal for determination. If no objections are lodged against the preliminary allocation schedule, this schedule becomes a final allocation once it is final, the responsible authority issues licences in accordance with the format set out in the preliminary allocation schedule.63

What is clear is that any licence issued in terms of the Act replaces any existing lawful water use entitlement one may have. In this regard, two scenarios apply. Firstly, you may apply for a licence in terms of the Act. If you do, and you are granted a licence, the conditions governing your use of water will be stipulated in the licence. If you are not granted a licence, your continued use of water, as acquired under the 1956 Act will be unlawful from the date of refusal.

Secondly, there is the scenario where, for example in dry areas, the responsible authority may issue a general invitation to all water users to supply for a licence. In this case, if you do not apply for

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63 D Oakes 'Who owns Water - Part Three' (3 July 1998) Farmers Weekly 30-31
your licence by the closing date stated in the general invitation, your continued use of the water, as acquired under the 1956 Act, will be unlawful from the closing date specified in the general invitation. Therefore, it is clear that even if one has existing rights, such right to continue to use the water as before is not “set in stone”.  

6.6.2 Review and Amendment Licences

The Act empowers the responsible authority to review licences at times stipulated in the licences. A responsible authority may amend any condition of the licence if:

(a) it is necessary or desirable to prevent deterioration of the quality of the water resource or

(b) there is insufficient water in the water resource to accommodate all authorised water users, after allowing for the reserve and for international obligations

(c) it is necessary or desirable to accommodate demands brought about by changes in the socio-economic conditions and it is in the public interest to meet those demands.

Before amending any licence condition the responsible authority must afford one an opportunity of being heard. The responsible authority may not review any condition in the licence specifying the period of notice to be given before the termination of the licence. Any amendment will only take effect once written notice of the amendment has been given. Of importance, is the fact that the amendment can only be implemented once the conditions applicable to other water users in the same catchment area have been considered. In this regard the Act refers to a general review process, in terms of which, every person's rights must be considered before any amendment is implemented. This provision emphasises the state's "collective" approach to water use. This is a marked departure from the approach of the state under the Water Act of 1956, which gave preference to riparian owners.

6.6.3 Rectification of Contraventions

In terms of section 53 if you contravene your licence conditions, the responsible authority has to give you notice, in writing to take specified remedial actions by the date stated in the notice. The period allowed for taking the necessary steps may not, however, be less than two days. A failure
to implement the remedial action required may result in the responsible authority carrying out the necessary works to rectify the contravention and recovering its reasonable costs from your or applying to a competent court for appropriate relief. Implicit in this provision is that indiscriminant use of water will not be tolerated. This is clearly in keeping with the fact that water is a scarce resource and is to be utilised beneficially in the interests of all water users.

6.6.4 Suspension or Withdrawal of a Licence

The responsible authority also has the power, in terms of section 5(1), to suspend or withdraw a licence. The authority may only do this if it has directed the licensee to take certain specified remedial steps within a specified period, and the licensee fails to do so. The licensee is also entitled to make representations about any proposed suspension or withdrawal of the licence. The responsible authority may also, for good reason, reinstate a licence it has withdrawn or suspended.66

6.7 Compensation

Many farming operations naturally depend on an on going right to use water. Where you have an entitlement to use water, which was acquired under the 1956 Act, and your application in terms of the Act for the right to continue using your allocation is refused, or else you are granted less water than before, and this results in severe prejudice to the economic viability of your undertaking, you may claim compensation for any financial loss suffered as a result of your loss of rights. A claim for compensation must be lodged with the water tribunal within six months of the responsible authority taking the decision in question.

The water tribunal has jurisdiction in terms of section 148 to determine liability for compensation and the amount of compensation payable. In determining the amount of any compensation payable, the tribunal must be mindful of section 25(3) of the Constitution. This section provides that the amount of the compensation and the time and manner of payment must be just and equitable. The amount of compensation is to reflect an equitable balance between public interest and the interests of those affected. Of importance, is the purpose of the expropriation. In every case the competing interests will have to be weighed up and an equitable balance reached, following consultation between all interested parties.

Because of a water allocation, many landowners have paid additional monies for their land. The question arises whether landowners will be able to claim compensation for a possible reduction in the price of their farm due to a reduction in their water allocation.

*Is a reduction of water different from a reduction in the purchase price?*

Section 25(1) of the Constitution provides that no one may be deprived of property except in terms of a law of general application, and no law may permit arbitrary deprivation of property. The law of general application referred to here is the Act. On the face of it the Act should take precedence, at least in so far as a reduction of water is concerned.

*What about a reduction in the purchase price?*

In terms of section 25(2) of the Constitution, property may only be expropriated:

(a) for a public purpose or in the public interest and

(b) subject to compensation, the amount of which have either been agreed by those affected, or decided or approved by a court.

On the face of it the Constitution, as opposed to the Act, allows you to claim compensation, not for the reduction of your water allocation, but for the reduction of the value of your farm. This argument presupposes that the question of loss arising from a reduction of water is different from the question of loss arising from a reduction in the value of your property. There is little doubt that these issues will be argued in due course.67

### 6.8 FINANCIAL PROVISIONS

In South Africa people now have to start paying to ensure that there will still be water to be had in 50 years time. Out of 15 countries surveyed, the average price of water in South Africa was the fourth lowest in 1995. Only the USA, Norway and Canada came below South Africa. This Act recognises that in the absence of abundance, water should be priced according to its value as a commodity, since there is a definite relation between scarcity and price.68 As such the Act advocates the principle of the “user pays.”

Chapter 5 of the Act contains provisions for the determination of water charges. In terms of Part One the Minister may from time to time, after public consultation, set a pricing policy which may differentiate among geographical areas, categories of water users or individual water users. The

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68 Department of Water Affairs and Forestry '16 Million South Africans have no Clean Drinking Water' (January 1996) *Local Government Digest* 37
achievement of social equity is one of the considerations in setting differentiated charges. Water use charges are to be used to fund the direct and related costs of water resource management, development and use, and may also be used to achieve an equitable and efficient allocation of water. In addition, they may be used to ensure compliance with prescribed standards and water management practices according to the user pays and polluter pays principle. Waste charges will be used as a means of encouraging reduction in waste, and provision is made for incentives for effective water use. Non-payment of a charge will attract penalties, including the possible restriction or suspension of a water supply. To give effect to these objectives the Act authorises the Minister, from time to time by notice in the Gazette, to establish a pricing policy for charges for any water use.69

Financial Assistance

In terms of section 61 of the Act, the Director-General may provide financial assistance to any person, in the form of grants, loans or subsidies. The necessary money is to come from funds appropriated by Parliament or otherwise lawfully acquired by the Director-General for the purpose in question. Before granting any financial assistance, the Director-General must take all relevant considerations into account. Anyone who fails to comply with any obligation imposed by the Act will not be eligible for financial assistance.70

6.9 CATCHMENT MANAGEMENT AGENCIES

A catchment is an area of the surface of the land on which rains fall and then runs off to make up streams and rivers. If a catchment area is properly managed the amount of water in the streams and rivers can be increased and the quality improved. Chapter 7 of the Act has introduced institutions for catchment management to be known as catchment management agencies (CMAs).71

The purpose of CMA is to provide a vehicle by which water resource management may be delegated to the local level, so as to involve local communities in the implementation of both the national and local water resource strategies. These water strategies are to be established by the Minister in due course. It is envisaged that CMAs will be established progressively throughout the Republic, over a period of time. While the ultimate aim is to establish CMAs for all water

69 Milton and Chetty op cit 15
70 D Oakes 'The National Water Bill (8)' (7 August 1998) Farmers Weekly 30
71 Milton and Chetty op cit 16
management areas, until this aim is achieved, the Director General of DWAF will act as the CMA where one has not been established.

- **Functions of a CMA**

Section 80 of the Act sets out the main functions of a CMA as follows:

(a) to investigate and advise on the protection, use, development, conservation, management and control of the water recourse in the water management area;

(b) to develop a catchment area management strategy

(c) to co-ordinate the related activities of the water management institutions within its water management area.

- **Establishment of CMAs**

A CMA may be established on the initiative of stakeholders or by the Minister. In the absence of a proposal by stakeholders to establish a CMA, the Minister may establish the CMA on his own initiative. The Act is silent as to when or why the Minister will initiate a CMA. For all practical purposes and as a general rule, the majority of CMAs will be established and implemented by local stakeholders. The establishment of a CMA by stakeholders begins with a proposal submitted to the Minister. The information which must be submitted to the Minister is set out in Section 77 of the Act. Given the size of the Republic of South Africa, the number of streams and rivers and the lack of available resources, it is unlikely that the Minister will, at least in the foreseeable future, be able to establish a meaningful number of CMA's throughout the country. In the interim, the Director-General is to act as the responsible authority. Given that the Act places no obligation on stakeholders to establish a CMA, the question which arises is why any stakeholder would wish to establish a CMA. The simple answer is as follows:

(a) to avoid and settle disputes

(b) to promote the beneficial use of water

(c) to police water users

(d) to police rights

(e) to lobby for rights

Thus the Act seeks to encourage voluntary compliance on the part of water users, rather than prescriptive compliance. This being the case the eventual practical effect of the Act will depend largely upon the strategies and policies agreed upon between government and water users.\(^2^2\)

- **Governing Board of a CMA**

Section 81 of the Act specifies that the Minister is to appoint the managing members of a CMA. However, before doing so the Minister must establish an advisory committee as envisaged by chapter 9 of the Act, to advise him on who should be appointed to the CMA's governing body. Once the advisory committee has determined the relevant interest groups and consulted with them, it must make recommendations to the Minister. The Minister is then required to invite each of the interested parties to submit nominations to him from which nominees are then appointed.

- **Funding of CMAs**

Section 84 of the Act provides that a CMA must be funded by money appropriated by Parliament, water use charges and money obtained from any other source for that purpose.

- **Intervention by the Director-General**

Section 88 provides that if a CMA becomes redundant or ineffective due to financial difficulties, mismanagement or dissension in the ranks, or if it acts unfairly or in a discriminatory manner the Director-General may intervene. By this is meant that the Director-General may direct the CMA to take corrective action which he specifies. As a last resort the Director-General may assume any power or duty of an errant CMA. In terms of section 89, where there is no longer any need for a CMA, the Minister may disband it.

6.10 **WATER USER ASSOCIATIONS**

Chapter 9 of the Act deals with water user association, with the preamble to the Chapter stating that although water user associations are water management institutions, their primary purpose, unlike CMA's, is not water management. They operate at a restrictive localised level and are in effect co-operative associations of individual water users who wish to undertake water related activities for their mutual benefit. A water user association may exercise management powers and duties only if, and to the extent that, these have been assigned or delegated to it. It is submitted by Oakes that the preamble does not reflect the position correctly.\(^3\) The power which a water user association ultimately acquires will largely depend on water users determination to enforce their rights.

- **Establishment of a Water User Association**

A water user association can be established on the initiative of the stakeholders, or by the Minister. Stakeholders who want to establish a water association must begin by submitting a proposal to the Minister. The proposal must be drawn up according to criteria set out in section 9 of the Act, Schedule 5 of the Act provides a model constitution which can be used by those intending to set up such an association. The Act is silent on how the water user association is to be funded.\textsuperscript{74}

**Functions of a Water User Association**

The principle functions of this association include the following rights and obligations:

(a) to protect water resources;
(b) to prevent unlawful water use;
(c) to exercise general supervision of water resources;
(d) to construct, purchase or otherwise acquire control of waterworks considered necessary for supplying water to land for irrigation and other purposes; or
(e) to supervise and regulate the distribution and use of water according to all relevant water use entitlements, by erecting monitoring devices or measuring or controlling the diversion of the flow of water.

Also of importance in this regard is the water association's right to provide catchment management services to, or on behalf of, responsible authorities. This aspect is of particular importance. Essentially, the water association's task is to represent water users. The association being made up of interested persons who are voted into office by local water users.\textsuperscript{75}

6.11 INTERNATIONAL WATER MANAGEMENT

Many of our rivers are shared with neighbouring states. Under the 1956 Act, the control of rivers which cut across boundaries of neighbouring states was dealt with by local authorities set up for this purpose. These water authorities derived their rights and obligations from agreements entered into between the governments of the countries sharing the water resource. In terms of section 102 of the Act, the Minister is to establish like authorities to implement agreements entered into between the South African government and foreign governments, relating to regional co-operation, management

\textsuperscript{74}Ibid

\textsuperscript{75}D Oakes 'Who Owns The Water? - Part Four' (10 July 1998) *Farmers Weekly* 31
and use of common water resources. In terms of section 108 those authorities currently in existence, as established by the 1956 Act, will continue to remain in existence until disestablished by the Minister.

6.12 GOVERNMENT WATERWORKS

In terms of section 109 of the Act, the Minister may acquire, construct or take control of any government waterwork, in order to protect, manage and control the nation's water resource in the public interest. A waterwork is defined as any bore hole, structure, earthwork or equipment installed or used for, or in connection with, water use. Dams are clearly included. Of importance to environmentalists is that before constructing a water work, the Minister is required to carry out an environmental impact assessment study to determine the effects of the proposed waterwork. The Director-General may make water from any waterwork available to members of the public for their use. For this a charge may be levied. Both the water of the government waterwork and the surrounding state owned land may also be made available to the public for recreational purposes. Again a charge may be levied. The Minister may even sell, or otherwise dispose of any government waterwork to any person, for which the prior approval of the National Executive may be required.

6.13 THE SAFETY OF DAMS

In terms of section 117 of the Act, dam is defined as including an existing or proposed structure which is capable of containing, storing or impounding water. The owner of a dam is required, within a period to be specified, to provide the Director-General with any information, plans, specifications and the like concerning the structure of the dam that he may require. The object of this provision is to enable the Director-General to ascertain whether any dam is a "dam with a safety risk" or whether the owner of the dam has complied with the provisions of the Act applicable to the construction of dams. If the Director-General declares a dam to constitute a safety risk, he may direct the owner, at the owner's cost, to undertake specific repairs or alterations to that dam which are necessary to protect the public, any property or the water resource quality from a risk of failure of the dam. A failure to comply with such a directive, will result in the Director-General undertaking the necessary repairs or alterations and recovering the costs thereof from the owner. Furthermore, all owners of dams with a safety risk are required to register these dams.76

Section 214 of the Act empowers the Director – General or a water management institution to appoint, in writing, an “authorised person”, to carry out certain search and seizure duties referred to in the Act. Although it is not entirely satisfactory, to attempt to simplify this area of law, certain guidelines can and should be born in mind. If a person attempts to gain access to your property, you need to establish his/her authority. If the person attempting to gain access is from a responsible water authority, the provisions of Chapter 13 of the Act apply. In the first instance, you are entitled to be shown his or her appointment certificate, issued by the responsible authority in terms of section 124. It is also important that the purpose of trying to gain access be ascertained. In terms of section 125(1) of the Act, an authorized person may only enter premises without a warrant for the purpose of carrying out “routine inspections of the use of water under any authorization.” If the authorized person wishes to carry out any other work, such as maintenance, repair or construction work or brings earthmoving equipment on the premises, he or she is required to give reasonable notice first, state the purpose and obtain consent in terms of section 125(2). Without your consent, an authorised person will have to first obtain a warrant from a Judge or a Magistrate in terms of section 125(3). If the authorised person believes that the delay involved in obtaining a warrant is likely to defeat the object of the inspection, he or she may enter your property without a warrant in terms of section 125(5). However, this only applies where the authorized person is seeking access to your premises to determine whether there is a breach of any provision of the Act, or to check the accuracy of information supplied in connection with use of water. Section 125(7) states that under no circumstances may an authorized person enter any premises without the occupier’s prior consent or a warrant.77

The significance of the above provisions is that it allows authorised persons to enter and inspect properties for a number of purposes associated with implementing this Act (chapter 13-part1). Such provision is essential in order to ensure that the provisions of the Act are being complied with, for example to ensure that a water resource is being used in the manner authorised by the Act.

6.15 MONITORING, ASSESSMENT AND INFORMATION

- National Information Systems

Monitoring, recording, assessing and disseminating information on water resources is critically important for achieving the objects of the Act. Section 137 places a duty on the Minister, as soon as is reasonably practicable to do so, to establish national monitoring systems. The purpose of these systems to facilitate the continued and co-ordinated monitoring of various aspects of water resources by collecting relevant information and data, through established procedures and mechanisms, from a variety of sources, including organs of state, water management institutions and water users. 78

Access To Information
Section 147 of the Act provides that the Director-General must make information in any national information system available, subject to any limitation imposed by law, and the payment of a reasonable charge, to be determined by the Director-General.

Floodlines
Section 144 of the Act provides that, to ensure that everyone who might be affected, has access to information, about potential flood hazards. Moreover, a township may only be established, if the layout plan shows, in a form acceptable to the local authority concerned, lines indicating the maximum level flood waters are likely to reach, on average, once in every 100 years.

Duty to Make Information Available
Section 145 of the Act provides that water management institutions must use the most appropriate means to inform the public about anticipated floods, droughts, or risks posed by the water quality, the failure of any dam or any other waterworks or any other related matter. The Minister may establish early warning systems to anticipate such events.

6.16 APPEALS AND DISPUTE RESOLUTION

Water Tribunals
In terms of section 146, the Act establishes a water tribunal. This tribunal is an independent body, which has jurisdiction in all the provinces of the Republic, and may conduct hearings anywhere in the Republic. The tribunal is to consist of a chairperson, a deputy chairperson and any additional members the Minister considers necessary. Members of the tribunal must have expertise

78 National Water Act 36 of 1998 Chapter 3 – Part 3
in law, engineering, water resource management or related fields. The chairperson may nominate one or more members of the tribunal to hear any matter, and the decision by such the member or members, constitutes a decision of the tribunal. The function of the water tribunal is to hear appeals against certain decisions made by a responsible authority, CMA or water management institution under the Act.

Appeals Against Decisions by the Water Tribunal

Section 150 of the Act allows disputes to be settled by means of mediation. Generally speaking, mediation is a process in which a neutral person helps parties to a dispute to isolate disputed issues, consider alternatives and reach a consensual settlement which will accommodate their needs. It is a flexible process, the essential features being that participation is voluntary, the process is confidential and the mediator has no power to decide the issue or negotiate on behalf of any party to the dispute.79

7. IMPLICATIONS OF THE NATIONAL WATER ACT
36 OF 1998

The National Water Act 36 of 1998 now reflects the current thinking on water management in South Africa, which reflects a radical departure from the previous water law system. This departure has been regarded by some as long over due, while others have regarded it as "just another attempt to steal from those who have rights and giving them to those who do not". 80

1. The Act ends the privatisation of water by previously privileged land owners who derived great benefit from the riparian principle.81 The riparian system, linking the right to use water to a specific piece of land has been abolished by the Act.82 Under the riparian system, the farmer paid a premium for land which assured him unfettered first option on the water that could be economically utilized. The removal of this right will affect land values and only limited provision is made for compensation. It is argued that the net worth of farmers could seriously be affected, to the extent that their borrowing could be suspended.83

However, what is of greater importance is that for the first time a greater number of people now have access to water. The Act does not intend to extinguish farmers existing rights to water. The central theme is, in all cases, the criteria of beneficial use. Over the years, farmers have come to believe that their water rights form part and parcel of the farm. More often than not, the value of the farm was determined in light of these water rights. The approach advocated by the Act is that this approach does not enhance beneficial use. Rather much of the water allocated simply flows into the sea. The Act sets out a policy framework which vests enough flexibility in the Minister to regulate the use of water more beneficially than before. From a constitutional point of view, the principle of justification is paramount. Farmers existing rights will not be eroded, provided they can justify their need to use the water. The mere fact that they have an existing allocation is not enough. Beneficial use will have to be proved.84

80 C Havinga 'Ploughing a Furrow - The Case Against The Water Act' (8 May 1998) Farmers Weekly 33
81 Department of Water Affairs and Forestry 'Water Bill Unveiled' (6 February 1998) Farmers Weekly 47
82 Department of Water Affairs and Forestry 'New Water Law in the Pipe Line' (March 1996) vol.21 no.5 Wood SA/Timber Times 84
83 S Shone 'Let Local Users Have a Say' (9 - 15 April 1998) vol.76 no.14 Finance Week 31
2. The Act in this regard, also ends the distinction that existed between public and private water. Therefore, the uncontrolled use of groundwater, made possible by its definition of "private water" is to end.\textsuperscript{85} Under the new Act, there is no ownership of water but rather the right to use it. In the past, people had a right to priority use of water if it passed through their land. This will no longer automatically be the case, as the concept of private water has in the past lead to much abuse of water resources, especially groundwater. Hence a principle central to the Act is that all water, wherever it occurs, is subject to national control. All water is to have a consistent status in law irrespective of where it occurs.\textsuperscript{86} This entails a recognition by the Act that it is not sufficient to manage only groundwater and surface water resources, but that the hydrological cycle must be managed as a whole. This implies that changes in land use, which on the one hand can affect the rainfall/runoff characteristic of an area, or on the other hand change the water quality, is to be considered as part of water resource management.\textsuperscript{87} More importantly, the adoption of this principle enhance the government's ability to control the abuse of groundwater, where resources are over exploited or wasted unnecessarily on the basis of the water being "private" \textsuperscript{88}

The response of critics has been that this policy will effectively nationalise every drop of water in (and under) the country which the government has not already commandeered. At the same time, it will give the Minister extraordinary powers, should he choose to use them, to regulate how farmers and urban plot - owners (as well as foresters) may intercept rainfall and impede runoff. It is submitted by some that a sane policy would recognise that water per se is abundant, not scarce. What is scarce is the capital, infrastructure and ingenuity to impound it, reticulate, distribute it, clean it and where necessary, purify it economically. These are all jobs that would be done more efficiently and less contentiously if they and the water in them were privatised not nationalised. We do need and deserve better water law. It is argued by some that it should be founded on the better definition of private property in water, so that more effective markets can emerge, not just for water, but for all the services that make it valuable. DWAF'S response to this viewpoint is that the Act is about liberating water from the tyranny of landowners and that other water user sectors do not want to be artificially constrained because someone enjoys a privileged position.\textsuperscript{89}

\begin{footnotesize}
\begin{enumerate}
\item \textsuperscript{85} \textit{Wood SA/Timber Times op cit 84}
\item \textsuperscript{86} Department of Water Affairs and Forestry 'New Rules For Groundwater' (January/February 1997) vol.8 no.1 \textit{Environmental Planning and Management} 34
\item \textsuperscript{87} M Van Veelan 'An Integrated Approach to Water Management' (March 1997) \textit{Civil Engineering} 3
\item \textsuperscript{88} \textit{Environmental Planning and Management op cit 34 - 35}
\item \textsuperscript{89} S Fiske 'Kader Asmal's Socialist Solution' (5 - 11 February 1998) vol.76 no.5 \textit{Finance Week 33}
\end{enumerate}
\end{footnotesize}
However according to Oakes with whom I agree, there are three arguments which favour state control that invalidate the above criticism. Firstly, hydrographic surveys have shown that a very small percentage of South African river water is put to use. The greatest volume of river water simply runs into the sea. Secondly, given the costs of erecting dams, waterworks, pipelines and the like, the state is the only body capable of providing sufficient funding. Thirdly, given the natural growth of the population and the resultant increase in the demand for water, the regulation of the use of water would need to be determined by a central authority, the state. This latter argument carries weight. Often landowners become embroiled in costly and protracted litigation over the rights to allocation of a few cusecs from a river when literally billions and billions of cubic metres of water flow into the sea every minute. Given, human nature it would therefore appear necessary that some central and responsible authority at least in the determination of disputes. In countries such as Israel and Turkey, the policy is “not a drop into the sea”. Clearly we must adopt the same policy. 90

3. A major innovation which has attracted worldwide attention is the Act’s insistence that enough water is left in rivers and underground to maintain the environment. 91 In this regard, the Act provides rules under which water can be used in order to ensure equitable access, while at the same time striving to preserve the resource. 92 Therefore, apart from water to provide for basic human needs, the only other water that is provided as a right is the so-called Environmental Reserve, which is set aside to protect the ecosystems that underpin our water resources. The Reserve constitutes the resource base, it is not an allocation, but the base upon which other allocations depend. The Reserve enjoys priority by right, while the use of water for all other purposes will be subject to government authorization. 93

Thus the Act recognises only two user sectors with an inalienable right - water for basic human needs and the aquatic ecology. The rest of the users have to compete for the available water on the basis of the greatest good for the country as a whole. The new rules no longer favour riparian irrigators, but will ensure that the allocation of water is based not on only a favourable benefit cost ratio for local irrigation schemes, but on sound macro-economic principles. 94 With a new priority

90 D Oakes ‘Who own the water(1)”(19 June 1998) Farmers Weekly 28
91 Department of Water Affairs and Forestry ‘Water Bill Unveiled’ (6 February 1998) Farmers Weekly 47
92 M Van Veelan 'The Strategic Planning of Major River Systems' (September 1997) Civil Engineering 3
93 Rabie op cit 23
94 Van Veelan op cit 3
of users identified by the Act, existing riparian land owners will only rank fourth in the allocation of licences, with international requirements, the environment and previously disadvantaged communities ranking ahead of them. Critics submit that substantial investments made by farmers in irrigation and other infrastructure based on existing rights could be seriously challenged by new priority users.\(^9\)

Whilst one understand such a concern, one must not forget the basis on which such a priority of users was established. The underlying principle of the Act is that water is a scarce resource that has to be managed in conjunction with all other resources, such as land and minerals, to increase the prosperity of the nation as a whole. Prosperity is not expressed in financial terms, but also in terms of social well being and a clean and safe environment. In other words, what counts is the quality of life and not merely standard of living. This principle is fundamental to the Act’s provision of basic water rights and water for the environment.\(^9\) As such it is therefore, essential that all other categories of water users be accorded a secondary status to that of the basic human needs and the environmental reserve if the government is to ensure that there is sufficient water available for use in the years to come.

4. In terms of the new Act, all existing users of water will be required to apply for registration of their water use and where justified and possible, be allocated a licence. The licensing system will not grant such rights in perpetuity but for fixed periods.\(^9\) DWAF submits the aim is to have "rolling" licences. Therefore, if a licence for 40 years is reviewed and water use for the period is reduced by 5 percent, the period of the licence is extended for a further 40 years. Havinga submits that it boils down to a reduction of legally allocated water rights. He justifies this viewpoint by referring to the property rights clause in the Constitution, which allows the State to use legislation to implement affirmative action. If this viewpoint is correct, then the new water Act, he submits, is simply another device for applying affirmative action in agriculture, to irrigation farmers in particular. It would then mean that the whole Act becomes suspect in the eyes of those who are going to be disadvantaged. The repeal of ownership rights of water means that the human right of decision-making does not rest with the farmer concerned but with the State. The removal of decision-making from the farmer is a terrible thing as farming is wholly a private enterprise.

\(^9\) Shone op cit 3
\(^9\)M Van Veelen ‘An Integrated Approach to Water Management’ (March 1997) *Civil Engineering* 3
\(^9\) Department of Water Affairs and Forestry ‘Submissions Made to the Department of Water Affairs’ (November 1997) vol.18 no.10 *South African Sugar Journal* 60
Where governments of countries elsewhere have tried to take over farming and do it themselves, they have totally failed.

Furthermore, with riparian right being abolished and with them water rights which have not yet been exercised, with no or inadequate compensation, in this regard it is envisaged that the damage to hundreds of farms would be incalculable. Whilst it is easy to say that most farmers will not much be affected by the Act, a minority - irrigation farmers - will be most affected. The fact is that irrigation farmers have invested literally billions of rands to their projects, as well as much hard work and effort. This applies particularly to farmers with riparian rights. Thus if no proper compensation is paid, it will simply amount to highway robbery. Worse, agricultural production as a whole will be severely affected. However, as stated above, such redistribution is necessary and would not per se entail the extinction of farmers rights. Ultimately, such provision is essential if the results of past racial discrimination is to be redressed.

The new Act advocates that the redistribution of water is intended to be achieved through a pricing structure and tradable water rights. This is to be phased in over a period of time. The Minister will retain control and will not allow a completely free market to develop. This policy was adopted as it became apparent to DWAF that South Africa will deplete its water resources between 2020 and 2030, making DWAF realise demand management should start immediately. Therefore, the Act requires that all farmers making use of irrigation schemes and farmers using large quantities of groundwater, will have to start paying the full price for the water they use. This water pricing policy is considered to be the most effective way to achieve equity, because once the nation has to pay for a commodity according to its economic value. It is used with greater care.

Whilst it is clear that the Act empowers the Minister to levy a charge on water users, how the Minister is to establish the water pricing policy is unclear. A question which arises is how a water user is to go about determining whether or not any charge levied by the Minister is reasonable. The ultimate charge depends on, amongst factors, various vague criteria such as socio-economic aspects or the demographic attributes of the area. These criteria are open-ended in the extreme. They are also highly subjective, and depend largely upon the "state of mind" of the individual or body

98 Havinga op cit 33
99 Van Veelan op cit 3
100 H Kruger 'Proposed Water Policy Reform Not an Attempt to Destabilise SA Farming Community' (22 - 28 August 1997) vol.17 no.32 Martin Cremer's Engineering News 17
making the decision. It would, therefore, appear that the responsible authority has been given unfettered discretion to determine the pricing policy. Also, one can only imagine the number of inspectors, officials and backup personnel who will be required by the Minister to impose and police the provisions of the Act.\textsuperscript{101}

However, it should be noted that while the provisions of the Act relating to the pricing policy is open-textured in the extreme, what is clear is that the public have a right of participation before the publication of any regulation.\textsuperscript{102} It is explicitly set out in the Act in terms of section 56(7) that before setting out a pricing policy the Minister must invite written comment from the public and consider all comments received from the public. Inherent in this provision is the principle of transparency. Furthermore, whilst it is envisaged that a number of personnel will be required to implement the provisions of the Act, one needs to consider the positive aspect of such, namely that the policing by such personnel will ensure compliance with the Act and therefore help to eradicate abuse of the water resource. This in turn will ensure the availability of adequate water resources for the country.

6. A further innovation of the new Act is the decentralised management of water by CMAs. It is intended that many of the current water management functions of the Department will be progressively decentralised to the CMAs with significant delegated powers from the Minister, including the power to allocate water.\textsuperscript{103} Whilst the establishment of these institutions has been welcome, a number of concerns have been voiced. It is felt that the concept of a CMA is, in theory, no doubt of enormous value. However, from a practical point of view, the establish and ongoing management of a CMA will be no easy task. In essence what is required of water users is to establish and manage a statutory body, no only to liaise with government so as to ensure compliance with the national strategy, but also to carry out many of the governments tasks, such as the levying and policing of water uses charges. Much of the money levied from water users will no doubt be used to establish and maintain CMAs. Bureaucracy will no doubt flourish. Therefore, water users will have to take great care to ensure that only streamlined and efficient institutions are established in their area.\textsuperscript{104}

\textsuperscript{101} D Oakes 'The National Water Bill of 1998 [7]' (31 July 1998) \textit{Farmers Weekly} 31
\textsuperscript{102} D Oakes ‘The National Water Bill of 1998[8]’ (7 August 1998) \textit{Farmers Weekly} 31
\textsuperscript{103} Department of Water Affairs and Forestry ‘New Water Law Discussed at Agriculture Workshop’ (September/October 1997) \textit{vol.23 no.5 SA Water Bulletin} 6
\textsuperscript{104} D Oakes 'National Water Bill of 1998 [9]' (14 August 1998) \textit{Farmers Weekly} 31
Furthermore, imagine the cost of setting up and staffing CMAs throughout the country. Is it really going to happen?\textsuperscript{105} This therefore leads to another bone of contention, how the income (in the form of levies or whatever) from a water catchment area will be spent. According to Havinga the Act allows such income to be spent outside the catchment area for non-specific purposes, such that the catchment area and farmers will not derive any benefit from paying levies.\textsuperscript{106} Such provision of the Act should not be viewed in such a negative light, as ultimately the Act intends that such monies be used to develop the water resources of the whole country and thus benefit the nation as a whole. Furthermore, the establishment of CMAs is important in that it forms a basic management unit. This has important implications for institutional structures and means that water management will have to be an integrated effort drawing various institutions that share a catchment into a CMA. This creates the opportunity to move away from the command and control style of management to a more consultative approach where public participation in decision making will play an important role.\textsuperscript{107}

7. The Act has been accused of creating a plethora of institutions and of increasing bureaucracy. DWAF finds this ironic as the creation of institutions is intended to take the load off government. For example, the CMA is an institution closer to the people which gives them a more direct say in the management of resources at catchment level. A further accusation against the Act is that it allocates to the Minister too much power. In this regard it must be noted that the Minister, in terms of the law, is accountable for the management of our resources. DWAF's approach is that though the Minister has the overall control, operation and management will be decentralised. One cannot take away the Minister's accountability in a land where disparity has reigned. If one has to address the needs of all and ensure some for all forever, the Minister has to act as a watchdog for all the peoples rights. This country is not yet sufficiently developed for total decentralisation to work.\textsuperscript{108}

8. To summarise, I believe the National Water Act of 1998 to be an innovated piece of legislation which is a radical departure from the Water Act of 1956. This new Act is a consolidation of all previously existing legislation under a single Act. In its application the Act ensures the equitable

\textsuperscript{105} D Oakes 'National Water Bill of 1998 [10]' (21 August 1998) \textit{Farmers Weekly} 31

\textsuperscript{106} Havinga op cit 33

\textsuperscript{107} Van Veelen op cit 3

\textsuperscript{108} J Leitch 'Water Bill Still Facing Opposition' (December 1997) vol.17 no.4 \textit{Water Sewage and Effluent} 12
distribution of a scarce resource in a manner which is beneficial to all citizens, and in a manner aimed at promoting the sustainable use of water.

The Act has drastically changed the way in which water is managed in South Africa. Not only will the resource, now defined as the hydrological cycle, be managed as an integrated whole, but management will be delegated to some extent to CMAs. The DWAF will remain the principal custodian of the nation’s water resources but the management load will now be shared by a number of organisations and authorities. The Act entails an integrated approach to water management, with various checks and balances to ensure that the overall objective— the creation of prosperity is achieved.\textsuperscript{109}

\textsuperscript{109} Van Veelen op cit 3
8. WATER SERVICES ACT NO. 108 OF 1997

The provision of basic services, such as water and sanitation is important as it affects, amongst other things, the right to life, human dignity and the right to exercise economic activity. Of noteworthiness is that an estimated 12 million South African's lack basic sanitation. The lack of basic services is a key symptom of poverty and under development, and represented one of the government's most intractable challenges. This challenge was met head on by Minister Kader Asmal and culminated in the Water Services Act. The Water Services Act complements the National Water Act. Its aim is to provide a developmental framework for water services by clearly defining the different the roles and responsibilities of the different spears of government. This is to be affected in a manner consistent with the constitutional responsibility of local government to deliver services.

8.1 OBJECTS OF THE ACT

The main objects of the acts as set out in section 2 are to provide for:

- the right of all South Africans access to basic water supply and sanitation necessary to secure sufficient water;
- an environment not harmful to human health or well-being;
- the setting of national standards and norms and standards for tariffs in respect of water services;
- the preparation and adoption of water services development by water services authorities;
- a regulatory framework through local government for water services institutions and water service intermediaries
- the establishment and disestablishment of water boards and water services committees and their duties and powers;
- the monitoring of water services and intervention of the Minister or by the relevant Province;
- financial assistance to water services institutions;
- the gathering and dissemination of information in a national information system;
- the accountability of water services providers; and
the promotion of effective water resource management and conservation by different levels of government.

8.2 RIGHT TO WATER SERVICES

The Act provides that everyone has a right of access to basic water supply and basic sanitation and that every water services institution must take reasonable measures to realize these rights. Every water services authority must, in its water services development plan, provide for the measures to realize these rights. The rights mentioned here, are however, subject to the limitations contained in the Act.

8.3 STRUCTURES

In order to achieve these objects, the Act establishes a number of water service institutions. These are:

8.3.1 Water Services Authorities

The task of these institutions are to assume the responsibility of ensuring that water services are available to the community. In terms of the Act a water service authority is "any municipality including a rural or district council as defined in the Local Government Transition Act 1993". Thus all municipalities, whether metropolitan, district or local are water services authorities for the purposes of the Water Services Act. In terms of the Water Services Act every municipality, being a water services authority, has a duty to all consumers or potential consumers in its area of jurisdiction to progressively ensure efficient, affordable, economical and sustainable access to water service.(section 11(1)).

8.3.2 Water Services Providers

The task of these institutions are to provide water services to consumers. Treated bulk water is distributed by Water Services Providers. The Water Services Act defines a water services provider as "any person who provides water services to consumers or to another water services." Various public and private institutions may operate as water services providers. Water may only
be obtained from a water services provider nominated by the water services authority having jurisdiction for the area (section 6).

A. Water Services Authority as a Water Services Provider

When performing the functions of a water services provider an authority must in terms of the Water Services Act, manage and account separately for those functions. Furthermore the Act provides that a water services authority may act as a water services provider outside its area of jurisdiction, if contracted to do so by the water services authority for the area in question. A water services authority may enter into a written contract with a water services provider or form a joint venture with another water services institution to provide water services. The manner and terms of entering into such a contract or venture are prescribed in s 19 (2) (7).

B. Water Boards

A water board is a body corporate, and has the powers of a national person of full capacity, except those powers which by nature can only attach to natural persons, and which are inconsistent with this Act. The primary activity of a water board is to provide water services to other water services institutions within its service area.

The duties of water boards are as follows:

• to give priority to its primary activity;
• to enter into written contracts when performing its primary and other activities;
• to consider every request by a water services institution for the provision of water services within its service area and may only refuse such a request if, for sound technical and financial reasons, it would not be viable to provide those water services;
• to provide water services and other services to water services institutions, consumers and users in accordance with conditions prescribed by the Act; and
• to obtain a permit, authorisation or license from the relevant authority for abstracting water or discharging any effluent.

C. Water Committee (voluntary committee - based organisation)

A community-based water services provider is not expressly mentioned in the Act. However, by implication, an existing or new water committee may, with the approval of the water services authority, be the water services provider. Research shows that this is the most effective and
sustainable institutional option for rural areas.

D. Private Sector
A private business may also be the water services provider, again, with the approval of the water services authority.

8.3.3 Water Services Committees

It is the task of these institutions to take on the authority and provider functions in an area for as long as the water services authority is unable to do so. A water services committee will perform relating to both the water services authority and the water services provider. The Water Services Act empowers the Minister to respond to requests for assistance in the provision of water services in areas where the water services authority has no capacity to manage water services in its area.

A water services committee may not be established if the water services authority having jurisdiction in the areas in question is able to provide water services effectively in the proposed services area. A water services committee is to provide water services to consumers within its service area. A water services may not unreasonably exclude any person within its area from those water services.

8.3.4 Water Services Intermediaries

The task of these institutions to provide water services are incidental to their main business, for example, a farmer who provides water and or sanitation to farm labourers, or a mine with company housing or hostels. There are many such people and bodies in the country which provide water to people as a minor part of some contract. In the Act these people or bodies are called water services intermediaries. The definition makes its clear that this only applies where water supply and/or sanitation is a specific part of the contract between the two parties. The purpose of including this in the Act is to protect the interests of consumers who are supplied with water and/or sanitation from intermediaries. Where intermediaries have to provide a service through their contracts, it is important that the services they give meets minimum standards. Local government is authorised to intervene and make sure that the rights of consumers are protected.
8.4 SUMMARY

A review of the legislation related to water services reveals that one of the goals of the new water law is to achieve the greatest possible degree of local community involvement in water services. To this end the legislation requires the devolution of decision-making in relation to water and sanitation services and provision to local authorities. The Act tries to address what is seen as the absence of coherent policy and an institutional framework with clear areas of responsibility. It tackles the controversial issue of payment of services, adopting the approach that disadvantaged people should pay for water services. While this may seem harsh, according to DWAF evidence indicates that the worst approach is to regard poor people as having no resources. This leads to people being treated as objects rather than subjects of development. Therefore, the government's basic policy is that services should be self-financing at local and regional level. The only exception is in cases where communities cannot afford basic services, in which case the State may subsidise the cost of constructing basic minimum services, but not the operating, maintenance or replacement costs. It is envisaged that full payment for at least recurring costs in areas where consumers have not been paying for water will be introduced in two years. Water tariffs are to be geared to the ability of communities to pay for their service starting with a "Life-line" tariff to ensure that everyone has at least a basic level of service and is provided with not more than 25 litres of water a day.

The Act divides the State's institutional goals into three phases. The short-term aim is to maintain service delivery, rationalise the central government department and transform the water boards. In the medium term, to support institutional development at local level and provide technical and financial aid for the development of water and sanitation services. The long term goal is that the provision of services should be the function of competent, democratic local government supported by provincial administration.

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10 Milton and Chetty op cit 21-42
111 Water - No Pipe Dream' (25 November 1994) Financial Mail 50-51
9. CONCLUSION

The law is never wholly above the ruling values of the day and generally reflects the needs and demands of those who have power. In a democracy the law should reflect the will and the needs of the majority. Given that South Africa has been through a fundamental political transformation from a minority regime to a democratically elected Government, the fairness of the country’s entire legal system was called into question, including the laws governing water.\(^{112}\)

The study of the historical basis of the Water Act 54 of 1956 reveals that South Africa’s water law applied the rules of the well-watered colonising countries of Europe to the acrid and variable climate of South Africa. Water was used mostly by a dominant group which had privileged access to land and economic power. The victory of democracy demanded that the national policy on water use and water law be reviewed, as the above approach was no longer appropriate given the new constitutional dispensation.\(^{113}\) The policies which emerged in relation to water as embodied in the National Water Act of 1998 give clear indication of this. In the light of this it appears that what we are moving towards is a more or less complete break with the historical underpinnings of the 1956 Water Act. Such a move has been long overdue. The new Act’s approach is to be welcomed if the national goal of ensuring that there will always be some water, for all who need it, contributing towards growing prosperity and equity in our land. This goal is captured in the slogan of DWAF “Some, For All, For Ever”, which sums up the goals of access to a limited resource (some), on an equitable basis (for all), in a sustainable manner, now and in the future (forever).\(^{114}\)

In any society such a step would be regarded as a rather drastic one. In our society it is somewhat easier to justify. What is of crucial importance, and this is something the then Minister, Prof. Kader Asmal recognised, is that in creating a new history for water law, the powers that be take care to “get it right” this time.\(^{115}\) I have no doubt that the National Water Act of 1998 will prove invaluable in the maintenance and protection of South Africa’s water resources.

\(^{112}\) You and Your Water Rights op cit 3
\(^{113}\) White Paper on a National Water Policy for South Africa op cit 3
\(^{114}\) White Paper on a National Water Policy for South Africa op cit 5
\(^{115}\) Keightly op cit 17 - 18
BIBLIOGRAPHY

BOOKS


ARTICLES

1. Asmal, K 'Why a New Water Law' (May 1997) vol.1 no.1 *Land* 32 - 33
3. Department of Water Affairs and Forestry 'Water - Parched Policy' (31 March 1995) *Financial Mail* 50
4. Department of Water Affairs and Forestry 'New Water Law in the Pipeline' (March 1996) vol.21 no.5 *Wood SA/Timber Times* 84
5. Department of Water Affairs and Forestry 'A Step Towards Equity in Access and Optimal Use of Water' (March 1996) vol.16 no.1 *Water Sewage and Effluent* 6 - 7
7. Department of Water Affairs and Forestry 'Last Word not yet Spoken on Water Law' (November 1997) vol.81 no.10 *South African Sugar Journal* 634 -635
8. Department of Water Affairs and Forestry '16 Million South Africans Have No Clean Drinking Water' (January 1996) vol.15 no.6 *Local Government Digest* 35 - 37
10. Department of Water Affairs and Forestry 'Submissions Made to the Department of Water Affairs' (November 1997) vol.18 no.10 *South African Sugar Journal* 609
11. Department of Water Affairs and Forestry 'New Water Law Discussed at Agriculture Workshop' (September 1997) vol.23 no.32 *SA Water Bulletin* 6 -7
12. Fiske, Symond 'Kader Asmal's Socialist Solution' (5 - 11 February 1998) vol.76 no.5 *Finance Week* 32 -33


16. Nel, M ‘New Rules for Ground Water’ (January/February 1997) vol.8 no.1 *Environmental Planning and Management* 34 - 36


29. Rabie, Andre ‘Water Law from a Conservation Perspective’ (February/March 1998) vol.20 no.2 SA Irrigation 22 - 24

30. Shone, Steve ‘Let Local Uses Have A Say’ (9 - 15 April 1998) vol.76 no.14 Finance Week 31


32. Van Veelan, Martin ‘An Integrated Approach to Water Management’ (March 1997) Civil Engineering 3

33. Van Veelan, Martin ‘The Strategic Planning of Major River Systems’ (September 1997) Civil Engineering 3

34. Uys, M ‘Water Management and the Law’ (March 1998) vol.15 no.1 Water Sewage and Effluent 17 - 20


OTHER PUBLICATIONS


2. Department of Water Affairs and Forestry Fundamental Principles and Objectives for a New Water Law in South Africa (November 1996)


