WHAT'S IN A NAME:

Looking Back at the Start of Public Water Governance

Newly elected President Jacob Zuma's announcement that the Department of Water Affairs & Forestry will in future be known as the Department of Water & Environmental Affairs (DWEA) is not the first time that this government department has been subjected to a name change. Lani van Vuuren delves into the archives to discover what previous name changes have meant for the country's main water regulator.

The Department of Irrigation (as it was then known) was established in 1912, two years after South Africa became a Union, to administer the newly promulgated Union Irrigation and Conservation of Waters Act (No 8 of 1912). Before the promulgation of this Act there were few large storage dams in South Africa. The Union government aimed to aid the growth and development, through storage schemes, of irrigated agriculture, which, together with mining, was the mainstay of its economy.

SMALL BEGINNINGS

The first Irrigation Department was lead by a Director. He was aided in the department's headquarters by three draughtsmen, a hydrographic surveyor, two assistant hydrographic surveyors, an inspector of gauges, boring engineer and five boring inspectors. The department also had regional or 'circle' staff: there were nine circle engineers and nine assistant engineers. In addition, temporary staff was engaged in construction and reconnaissance surveys from time to time.

Assisting in the development of irrigation projects and settlements were the main activities of the Irrigation Department, together with the administration of the applications for loans from Irrigation Boards and individual farmers. The department also aided farmers to bore for water for agricultural and stock farming activities.

The first Director of Irrigation was renowned engineer Francis Edgar Kanthack, an expert in irrigation engineering who had worked in India prior to his appointment as Director of Irrigation in the Cape in 1906. He was the main drafter of the 1912 Act. Among others, he established the country's first meteorological service.

Interestingly, in Kanthack's first Annual Report there occurs a most familiar phrase which seems to run like a continuous thread through the history of the department: "The shortage of engineers was particularly badly felt." Right from the start there appears to have been conflict between the public demands on the department and the capacity of the department to satisfy those demands.

The young department had to deal with both droughts and unprecedented rainfall while, at the same time, suffering from the effect of a major portion of its staff being away at war. Kanthack himself played an important role in preparing

water supplies for Africa, and arranging water supplies along the planned route of invasion of German South West Africa (Namibia).

Despite these setbacks the years immediately following the war was the first 'golden era of dam building' in South Africa, with a number of large dams over 20 m in height being constructed. These include Hartbeespoort, Kamanassie, Lake Arthur, Van Rynveldspas and Lake Mentz (now Darlington Dam). In these early years, the development of water resources was generally straightforward. The single-purpose schemes at that time were relatively simply to build and administer. Expenditure peaked in about 1922, after which there was a decline, since existing facilities satisfied demand.

DEPRESSION YEARS

From 1924 to 1929 South Africa's economy flourished. The growth of the economy was mainly due to the discovery of new diamond fields, the protection of the agricultural industry and the promotion of local industries. However, after 1929 South Africa joined the rest of the world bearing the brunt of the Great Depression.

The economic situation, as well as a coincident eight-year drought, which started in 1925, gave rise to the second expansion of water infrastructure, accelerated by schemes to counter unemployment. Several large schemes were initiated during this time, including the Vaal, Buchuberg and Loskop dams, as well as the giant Vaalhartz Irrigation Scheme. In the mid-1930s, subsidies were also introduced to accelerate the development of private irrigation schemes. By 1938, expenditure on water matters was nearly ten times that of 1928.

In 1921, AD (Alfred) Lewis took over from Kanthack as Director of Irrigation, becoming the first South African to lead the department. Lewis laid the foundations for many of the country's bulk water supply schemes, both for

DWEA

AD (Alfred) Lewis was the second Director of Irrigation and the first South African to lead the department.

irrigation and industry. Among others, a detailed report written by Lewis following his extensive journey along the Orange River (much of it on foot in 40°C heat) served as an information source for planning for many years. Ironically, Lewis' greatest achievement was not in the true field of water engineering. With the aid of the South African Airforce, he managed to produce the first complete topographical map of the Union, without which the actual catchment areas of rivers could not be calculated.

By the end of the 1920s the activities of the Irrigation Department were expanded to include the collection and compilation of hydrographic data throughout the Union; meteorological services; systematic reconnaissance surveys; the maintenance and administration of irrigation works; professional assistance to farmers, Irrigation Boards and River Boards at a prescribed fee (although it is reported much advice was provided free of charge). The department also acted as the adviser of provincial administrations on all matters regarding water supply, drainage, sewerage or irrigation within the areas controlled by municipalities and public institutions.

WORLD WAR II

During World War II more than 50% of department staff were on active service, and only essential services could be carried out. The Director himself was seconded to the Technical Committee of Defence on Water Supplies. Planning for future schemes went ahead, however,

After the war there was a period of recovery during which schemes for industrial water supply increased in priority. The country's economy was stimulated by the production of gold. The income from the gold-mining industry diffused through the rest of the economy, leading to economic boom. South Africa had now developed into an agriculture-mining-manufacturing economy.

In 1946, the department established a Research Branch, while expanding its

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The 41 m high and 389 m long Kammanassie Dam near Oudtshoorn, completed in 1923, was one of the first large dams to be constructed under the Department of Irrigation.

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DWAE DG Pam Yako and former Minister of Water Affairs & Forestry Lindiwe Hendricks at the launch of the Water for Growth & Development Framework in March.

Hydrographic Survey Branch to organise, coordinate, ad increase the tempo of basic tasks of investigation and evaluation of resources.

WATER FOR MINING

From the early 1950s there was a major shift in emphasis in water policy from the provision of water for mainly agricultural purposes to the provision of water for an increasingly industrialised and urbanised country. The first regional scheme in which irrigation played no part included the scheme to supply the Orange Free State goldfields. Other schemes were to follow, some of which were multi-purpose schemes, such as the Umgeni and Pietersburg schemes in 1963, the Vaal-Gamagara scheme in 1964 and the Buffalo River and Springbok schemes in 1970.

The Water Act No 54 was passed on 13 July 1956, and the department was renamed the Department of Water Affairs (DWA). The focus of this new department was not only on irrigation alone, but had a wide scope in that it managed the water resources of South Africa for a wider user group.

The 1956 department had, among others, a Research Branch (which undertook preliminary investigations into the potential development of water resources for different uses); a Planning Branch, assisted by the Reconnaissance Section, and a Construction Division, which organised and carried out construction work. There was also the Superintending Division, a Mechanical Division, Hydrographic Branch, Hydrological Division, a General Administration Division and the Servitudes Branch. In addition, there were eight regional offices (known as Circle Organisations) which had their own headquarters.

In 1961 South Africa became a Republic and, in 1962, as South Africa faced increased world isolation because of its apartheid policies, the Prime Minister announced the go-ahead of the largest water development project yet to be undertaken in South Africa – the Orange River Project. The project was to stimulate investment in the country and restore confidence in its economy. The project included the construction of the Vanderkloof Dam (then the highest dam in the country), the huge Gariep Dam and the Orange Fish Tunnel, which at 82,45 km long remained the longest continuous water transfer tunnel in the world for many years.

MISSION OF ENQUIRY

A Commission of Enquiry into Water Matters was appointed in July 1966 to investigate all aspects of water provision and utilisation with the country. Its findings were published in 1970. Importantly, the Commission found that "unless the essential steps are taken to plan the exploitation and augmentation of our water resources to conserve and reuse our available supplies, and to manage and control our resources in the most efficient manner, serious shortages will be suffered somewhere before the close of the century."

In 1970, the government approved a national programme to enlighten the public on the importance of water in the economic prosperity of the Republic. Throughout the year the Minister of Water Affairs and the DWA kept the attention of South Africa focused on water matters. A number of dams were opened, and the programme culminated in an international symposium on water.

The Commission had important spinoffs, such as the development of the Hydrological Research Institute (now known as Resource Quality Services) within the department. Interestingly, the institute's first director was a woman, Joan S Whitmore. In 1978, the Division of Geohydrology was established, and in 1986 the department added a Dam Safety Office.

WATER RESOURCE DEVELOPMENT SLOWS

The 1980s saw one of the most severe droughts ever experienced in South

The Vaalhartz weir was one of the bulk water supply projects undertaken in the 1930s to create employment during the Great Depression.

Africa. Expenditure by the DWA on major water resource development was less than 1% of gross national expenditure. Of the funds allocated to the department, an increasing portion had to be spent on operating and maintaining a growing number of schemes, on the control of pollution and abstraction of water and on expanding other areas of activity, such as research and investigations needed due to the increased complexity of the planning function. Still there were a number of considerably large projects executed, such as the Drakensberg Pumped Storage Scheme and the Grootdraai augmentation project, in which the flow of the Vaal River was reversed.

In April 1980, due to government's rationalisation programme for the public service, the DWA merged with the then Department of Forestry and Environmental Conservation. However, this union was short-lived, and on 1 September 1984, the DWA was reinstated as an independent department. Regional organisations replaced the old 'circles' in 1987/88.

DAWN OF A NEW ERA

In the early 1990s South Africa experienced another severe drought. Various municipalities in the Karoo experienced water shortages and the levels of irrigation dams in the region were critically low. Assistance was given in the form of geohydrological surveys and the sinking of boreholes. In 1990, the Forestry Branch was incorporated and the DWA became the Department of Water Affairs & Forestry.

When the National Water Act (No 36 of 1998) was adopted in 1998, South Africa became the first country in the world to adopt a national water law in which water was seen as a tool in the transformation of society towards social and environmental justice. Whereas the Water Act of 1956 originated from the need to supply water to an ever-growing economy, the NWA was born from the inequalities of the past.

DWEA

Buyelwa Sonjica is the first Minister of the new Water & Environmental Affairs.

In the first decade following democratisation, DWAF's focus was on ensuring access to the poor to adequate water supply and sanitation services. The department inherited a backlog of 14 million people lacking access to safe water and 21 million (half the population) lacking access to safe sanitation. In addition to these enormous backlogs, the department was also faced with the fragmented institutional arrangements created by the previous regime. When the homelands existed, South Africa effectively had 11 water acts with various structures administrating them, which all needed to be transformed.

By 1997, one million additional people had been supplied with access to safe water. This number reached 10 million by 2004. Between 1994 and 2004 nearly 7 million people were provided with basic sanitation facilities, mainly through housing programmes. Today, around 91% of South Africa's population has access to clean water while around 74% has access to safe sanitation.

Prior to President Zuma's announcement that the DWAF would merge with the environmental branch of the Department of Environmental Affairs & Tourism, the department's prime responsibility, as custodian of South Africa's water and forestry resources, was to formulate and implement policy governing these two sectors. A number of its previous implementation functions were transferred to water and forestry institutions. Led by the Minister of Water Affairs & Forestry and a Director-General, the departmental structure included a Policy & Regulation Branch; Regions Branch; Corporate Services Branch; Financial Branch and a Forestry Branch.

WATER FOR GROWTH AND DEVELOPMENT

Earlier this year, the department launched its Water for Growth and Development Framework, the intention being to place water at the heart of all planning that takes place in the country so that any decisions that rely on the steady supply of water adequately factor in water availability. The framework further seeks to ensure that there is sustained investment in the water sector and that water management supports government's social and economic growth targets.

At the time of writing, the structure and vision of the department had not yet been finalised. However, there is no doubt that this name change signals a new era for the custodian of South Africa's most previous natural resource.

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