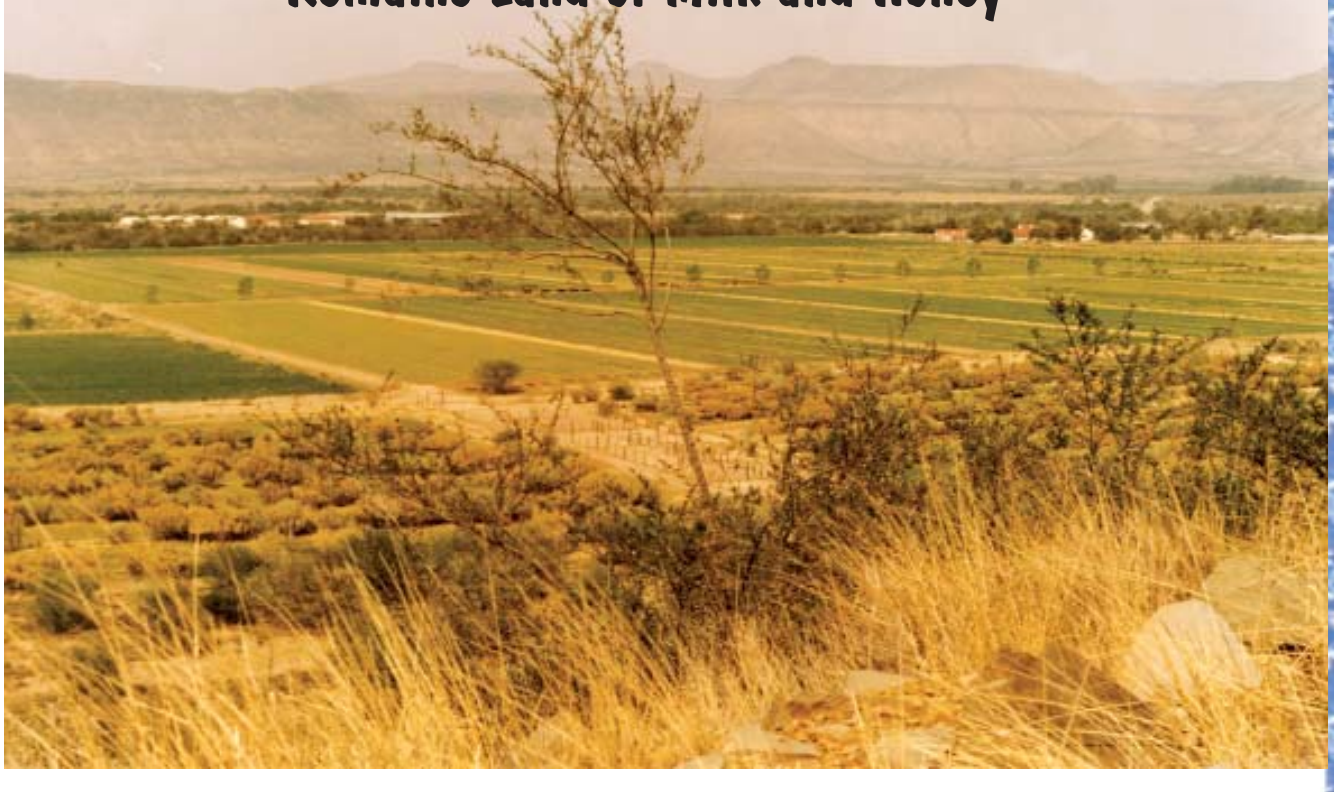
Water Control Ensures

Great Fish River Valley

Remains Land of Milk and Honey



Hippos once wallowed in pools of the Great Fish River; later African and European went to war on her banks. Today the river supports a flourishing agricultural industry yet water hasn't always been abundant. The Great Fish River Water User's Association is playing a crucial role in the administration of this vital resource to ensure the valley survives.

It's 1974 and the Great Fish River in the Eastern Cape is in flood. A newspaper photographer snaps a picture of farmer Oscar Evans wading, waist deep, across the swelling water. In his hand is a tiny mouse scooped up as it swam for its life.

The flooding river wreaks havoc but it cannot defeat those living on its banks, no matter how small. On dry land Evans gently lets the gasping creature go and continues on his way to buy candles at the trading store. The next day the picture makes front-page news – a symbol of the spirit of those living in the 200 km-long valley.

The Evans family have lived on their farm, Melrose on the Bedford side of the Great Fish River, since 1890. Then the Great Fish River was already a "sloot" ferrying water to an increasing number of farms in the valley. Before this though, at the end of the 1700s, the French ornithologist and explorer Francois Le Vaillant described the Great Fish as a series of marshy vleis filled with wallowing hippo. Today the giant Gariep Dam in the Free State feeds the river. It has become a rushing torrent that provides water to irrigate agricultural land throughout the valley.

The Great Fish has sustained mankind for centuries. The Xhosa, with their herds of cattle, regarded the river as their own after driving out the Bushman before the arrival of Europeans. The frontier wars between the European settlers and the Xhosa were based on

access to land and, more crucially, the river. Without water no one could survive and it was with the Great Fish River between them that European and African clashed in eight wars between 1779 and 1853. Most of the skirmishes were fought in the Great Fish River Valley.

When settlers arrived in the 1700s the river provided ample water for all farmers in the valley but by the 1950s the resource was under pressure as more and more land was irrigated.

For this reason Evans has been involved in the administration of water in the valley since he took over the farming of Melrose from his father.

For many years he served on the Renfield Irrigation Board, one of the sub-areas of the Great Fish River Water User's Association (formerly the Great Fish River Irrigation Board). He was also water bailiff for 14 years responsible for ensuring that farmers in the district shared the resource honestly.

WATER USER'S ASSOCIATION

The Water User's Association comprises 17 sub-areas each supervised by a water control officer reporting to a management committee of farmers.

Altogether there are 380 commercial farmers (including black land owners) farming 33 000 arable hectares in the Great Fish River Valley. The biggest crop is lucerne (60%), (produced for several major dairies in the valley and along the Eastern Cape's southern coast,) followed by maize (30%) and wheat (10%). Sheep, angora goats and bees are also farmed.

Irrigation is by far the biggest job provider for towns like Somerset East, Cradock, Cookhouse and Hofmeyr.

Mr CT (Chris) Troskie, former chairman of the Great Fish River Irrigation Board

Andreas Engelbrecht, CEO of the Water User's Association, explains that farms in the northern part of the valley between Teebus and Elandsdrif have a water quota of 13 500 m^3 per hectare per annum while those between Elandsdrif and Middleton receive 12 500 m^3 per hectare per annum.

Crops are irrigated with water led to farms by a series of open earth canals. Flood irrigation is the most popular means of watering although farmers are increasingly switching to the more economical and effective "pivot" irrigation.

"There is a growing awareness of the importance of protecting water as a resource," says Engelbrecht, "farmers know flood irrigation uses more water than is sometimes necessary and, when they can, they are switching to more economical ways of watering."

WATER LOSSES

Chris Troskie, owner of the farm Kokskraal near Cookhouse and a former chairman of the Great Fish River Irrigation Board for 19 years, says the open canal system used to transport water to farms loses as much as 15% of water through seepage, growth of vegetation on the canal banks and evaporation.

"When the Gariep Dam was finished in 1969 there were plans to build concrete furrows and pipelines through the whole distribution system but it never happened. I doubt it ever will because of a lack of funds," says Troskie.

Water for crop irrigation in the valley is released into the Fish River from the Gariep Dam via an 88,8 km tunnel, with an internal diameter of 4,8 m. The tunnel directs water southwards to the Brak River a tributary of the Great Fish. The Gariep distribution system is part of the great Orange River water distribution project that was first conceptualised in the 1920s. Without this water there is no question the valley would not be able to support the vast and sophisticated farming operation that has developed in recent years.

DROUGHT

After the drought in the 1950s, nearly 20 years before the completion of the Gariep dam, it was clear that the government irrigation dams in the Great Fish River Valley (Grassridge, Lake Arthur and Kommando) could not keep up with the demand for water and farming in the valley came under threat.

The former government was eager to please its rural electorate and awarded huge subsidies to those working the land, even so the drought meant many families were forced to abandon their farms. The government stepped in buying 70% of the agricultural property in the valley, reorganising it into

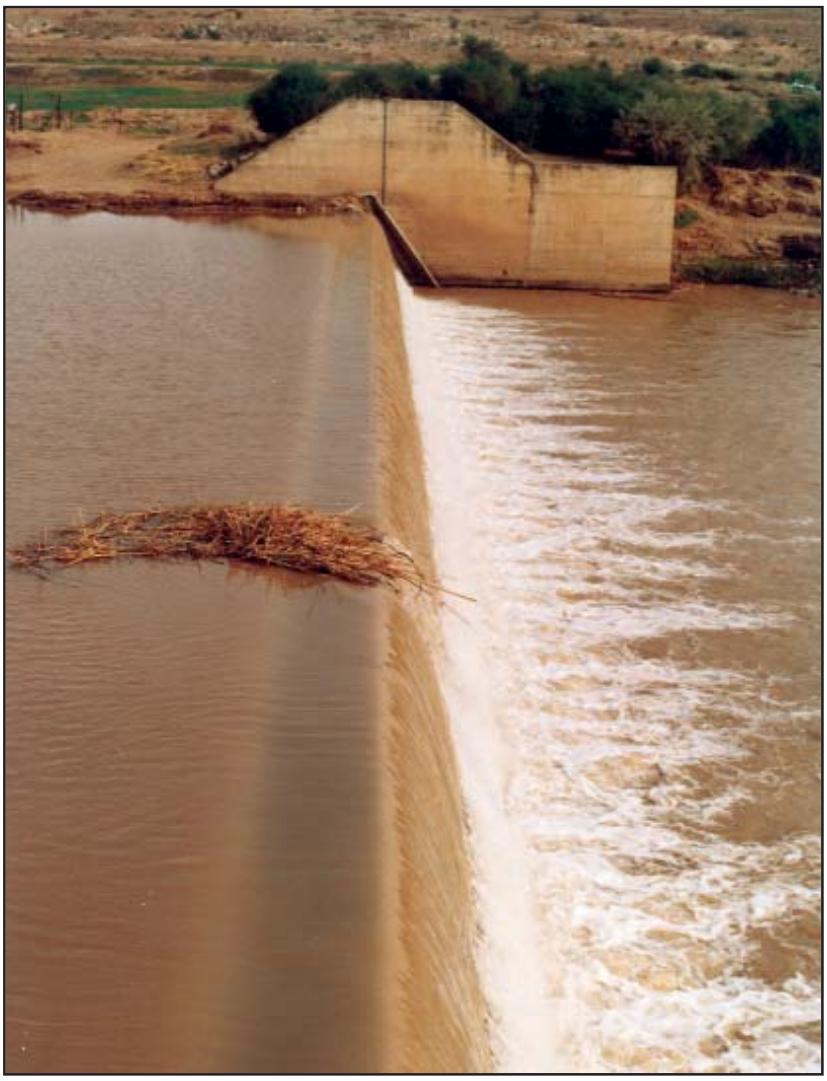
more economical lots before re-selling. Farms in the upper valley were 85 hectares, in the middle 60 hectares and in the lower valley 45 hectares. Today many of these smaller farms have been amalgamated into major agricultural operations measuring up to 500 hectares.

"With constant government support farmers had it easy. The problem is they looked for handouts when the going got tough and eventually many couldn't cope when that government support disappeared," explains Troskie.

INGENIOUS WAYS

When a resource is scarce or has to be shared it is inevitable there will be some who try to take more than is their right. Over the years farmers have thought up ingenious ways to redirect water onto their land and, in his time as water bailiff, Evans once had to remove a dead cow, legs in the air, which was apparently being intentionally used to block a furrow. In another instance a farmer complained he wasn't receiving his full quota. Evans elaborates: "We inspected his sluice and couldn't see anything wrong, it was the right height and width. It was only when we looked under the water that we found the farmer had blocked the sluice under the water forcing the stream onto his property."

Then there was the farmer who made his overweight wife sit in the furrow to block the stream. "The sheer size of her body gave him enough time to pack mud around her and redirect the water his way." In the most recent incident (only a couple of months ago) a farmer and water bailiff began throwing punches over access to water. "They both landed up in the canal," chuckles Engelbrecht.



The Scanlen weir in the Great Fish River

MEASURING QUOTAS

Measurement of water is a constant area of debate. Currently quotas are measured with a parshall flume.

"There is far more accurate technology available for measuring quotas," says Engelbrecht, "which would solve a lot of problems but it is prohibitively expensive."

New technology by farmers is improving the use of water in the valley. One example is a laser that is fitted to a scraper towed by a tractor. The laser measures the gradient of the land and constantly readjusts the tilt of the scraper. The end result means there is less run off and more effective irrigation keeping erosion and wastage to a minimum.

The Great Fish River Valley has a history as rich as its soil and continues to play a major role in South African agriculture. The river supports several towns and ensures work for thousands of people. "It's a resource we have to manage and protect," says Engelbrecht, "without it a thriving part of our country would suffer and an important landmark in local history would be lost."