

farmer's weekly

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SERVING AGRICULTURE SINCE 1911

Sandveld
POTATOES
go green

ANGORAS:
Surprising weaning findings

How the
Olifants River
DIED

REFLECTIVE
CATTLE EARTAGS
STOP ACCIDENTS

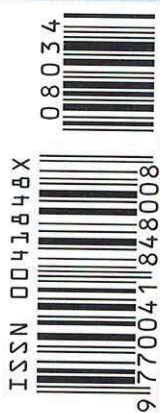
Irrigation focus

- Innovating in Mozambique
- Concern over BEE water rights
- Researching irrigation efficiency

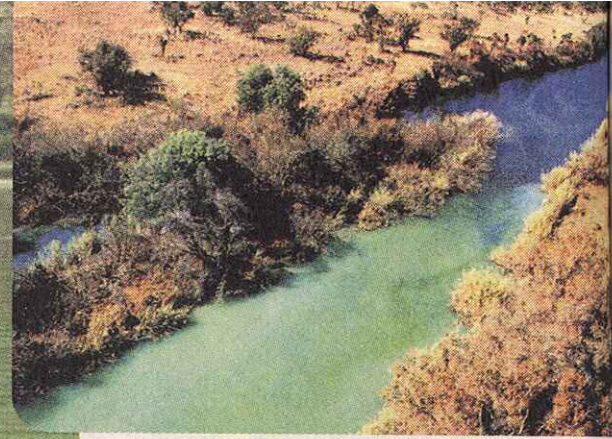
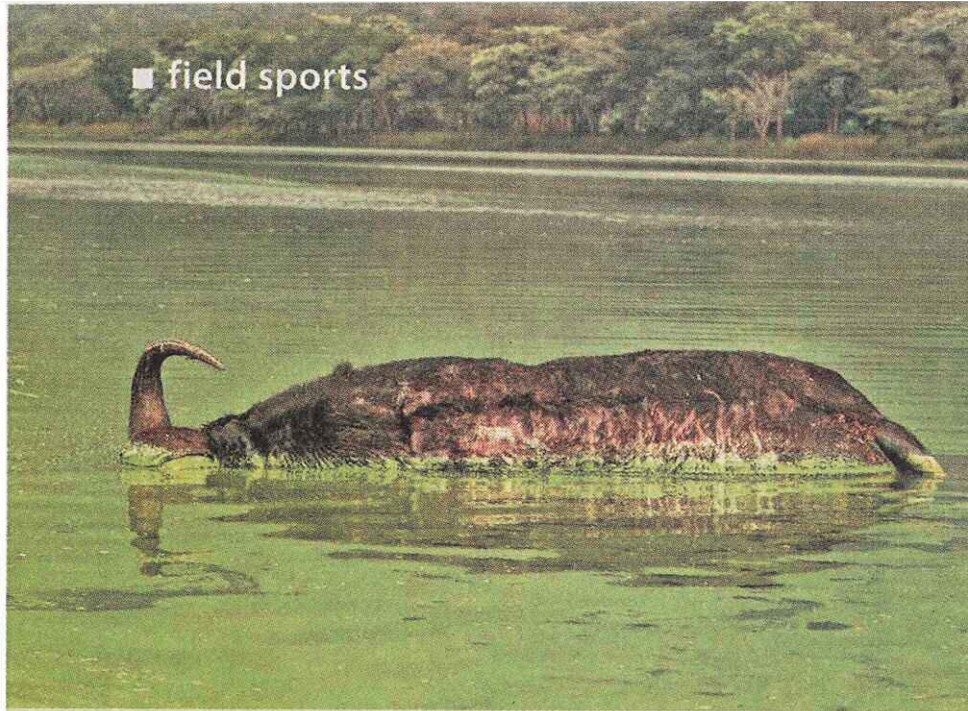
News:

- Massive canola plant for EC
- State rethinks farming
- Land Bank fraud scam

OXPECKERS
Nature's cheap
tick solution
returns



*Ecologically in the red ...
... and what we can do about it*



ABOVE: The merging of a stream of pollutants with our litter river as it enters the middlelevel on its way to Loskop Dam.

JANNIE COETZEE

LEFT: The blue-green alga *Microcystis* feeds on sewerage pollution and is toxic to many animals. This buffalo was recently found dead in Loskop. Zebra and several other antelope species have lately died of *Microcystis* in the Kruger Park.

ABRE J STEYN

THE DYING RIVER

pollution killed the Olifants

THERE ARE PROBABLY HUNDREDS of millions of planets out there without any life, because there's no water. Water is the source of life and no animal or plant can survive without it. Earth is the only blue planet we know.

If all the water on earth would fit into a 5l bottle, the available fresh water would fill only a tablespoon – less than one half of 1% of the total. About 97% of the planet's water is seawater – a toxic brew of salts that will kill you if you drink enough – the rest is locked up in icecaps and glaciers or so deep underground that it's beyond our reach.

SA is water-poor

Our country may have been endowed with a wealth of minerals, but as with oil, we stood at the back of the queue when the water bottles were dished out. With only two freshwater lakes in SA, compared to a country like Canada, who has 94 000 lakes in its Saskatchewan province alone, one realises how poor we are.

All the rain on land has its origin in the sea and the rivers are the pathways that carry it back, but of every 100 raindrops that fall on land, only nine silt-laden drops will make it back to the ocean. Some will penetrate deep into the soil where the water may remain for thousands of years, but

most will evaporate into the atmosphere to become part of the eternal cycle again.

Apart from the few trickles we pump out of boreholes, the only life-giving fresh water that we have is the nine drops of runoff in our rivers which must be used over and over again. To many aquatic creatures this water is their home and they can live nowhere else. If we must, we can live without diamonds or gold, even electricity or fuel, but if all fresh water suddenly disappears, the world will be a stinking graveyard of corpses within a matter of days. Water is the most valuable resource we have on this planet, yet we treat it like junk.

Although SA has many small river systems which drain the coastal plains, we only have two major systems that originate far inland, namely the Orange/Vaal and the Limpopo/Olifants. Of these, the most ecologically diverse and interesting river subsystem in the country is the Olifants. Together with its northern tributaries, the Letaba and Shingwedzi, it drains an enormous area, from Mavamba, just east of Thohoyandou in Venda, right down to the eastern highveld, just south of Kriel and Hendrina.

One of the most western of the numerous tributaries of this great system is born near Bapsfontein, with its water-filled underground dolomite caverns, close to

where I presently live, east of Pretoria. At first it meanders calmly northwards through lush, rolling grassveld, where birdsong echoes along its banks and the shiny scales of 14 species of indigenous fish often flash in its clear and bubbling water. It starts to quicken its pace as it approaches the edge of the undulating highveld plateau and drops over numerous frothing cascades until it enters the gateway to the bush-clad middlelevel. Here it is still a stream of life, but that is soon to change.

Corruption of the Olifants River

In the south-east lies a landscape where former productive farmland is now pockmarked by open cast coalmines, around the blackened town with the ironic name of Witbank and its sister-town Middelburg.

From here, milky green streams of corrosive acid and sewerage leach from a multitude of smouldering or abandoned coalmine dumps and informal settlements and flow towards the Olifants.

With the merging of the steams and mingling of its waters, a sentence of doom is passed over our once-virgin river. Like the infection of a fatal venereal disease, it will now bring death wherever its polluted water goes. Although it now flows through an untamed wilderness of

spectacular ravines and winding gorges, where few humans ever left their footprints, it is a valley of death, because a river runs through it that brought destruction to all that lived in, or drank from, its waters.

This is the stark and shocking 2008 reality of what has become of the Olifants River system and the once productive Loskop Dam. The very name of the river conjures images of pristine and untouched Africa, with great herds of game, roaming free in multitude and variety seen nowhere else on earth.

Unfortunately this idyllic picture is just a dream. The reality is nothing less than a nightmare. South Africa's rivers in general are in very bad shape, but as a system, none is at present more polluted by a deadly cocktail of mining acid, heavy metals, industrial effluent, agricultural pesticides, human sewerage, cattle-feedlot waste, and smothering silt than some of the streams that feed into the Olifants River.

We failed to act

It is not as if it happened overnight. It's been a long time coming and many, myself included, have warned for decades that our flagrant abuse of the Olifants's catchment would result in an ecological catastrophe of mammoth proportions.

What even we, perhaps, did not foresee is how far it would go and how dire and far-reaching the consequences would be. Our warnings were ignored by those

in power, who did nothing to prevent the catastrophe, and now that it's upon us, nobody can say where it will end.

In years gone by, fish-kills occurred on a regular basis in Loskop Dam but failed to be seen as signs of a looming disaster, but in the spring of 2006 thousands upon thousands of indigenous fish died and littered the surface and shoreline of the dam. It was the worst fish die-off ever in Loskop. It included masses of butter barbel, red-nose mudfish, yellowfish and a multitude of smaller species, but also thousands of huge blue kurper that made Loskop famous in the past. The situation reached

'The river brings death to all that lived in, or drank, its waters.'

alarming proportions but still few people took notice and the departments whose mission it was to protect the environment, were engaged somewhere else.

Water Affairs promised that someone would be sent to look into the matter, while their colleagues in Environmental Affairs were unable to look into anything, being too busy drafting new legislation aiming at eradicating any exotic fish that possibly survived the carnage. However, the massacre did not end in Loskop or with the fish. Fed by human and

cattle excrement, poisonous *Microcystis* algae multiplied out of all proportion and turned the water into a green toxic soup. Animals in the reserve that came down to drink were poisoned and even buffalo were found dead in the dam.

Although the *Microcystis* apparently does no harm to crocodiles, they also started to die in large numbers, not only in Loskop but beyond, which meant that more factors were involved.

Below Loskop lie the irrigation schemes of Marble Hall and Groblersdal, where vast quantities of agricultural pesticides are used which are already starting to affect the people living there. Runoff from these areas, of course, returns to the river and adds to the cumulative effect of the other pollutants.

Can we save the Olifants?

The questions may well be asked how this region and its river, which undoubtedly once were among the jewels of our country, could, through our demand for fuel and food and the disposal of our waste, have been damaged and contaminated to a point where we can only hang our heads in shame. What on this vandalised earth can we now do to stop this holocaust and turn the clock back? – *Abré J Steyn*

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RIGHT: This is what an open-cast coalmine looks like from the air. There is no sign of any protection to prevent acid and other pollutants leaching from the dumps to flow into the small wetland in the foreground, and then seep down a watercourse that goes to the Olifants River.

ABRÉ J STEYN

BELOW: A fraction of the huge number of large tilapia that died in Loskop Dam recently. Curiously, they were mostly male.

