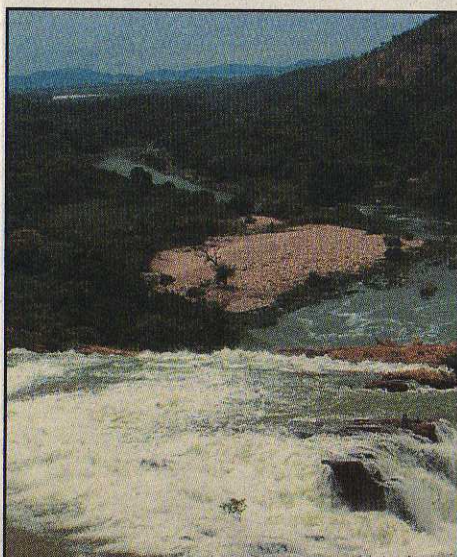


Water, water.....



South Africa is running out of water, regionally and nationally. In 2008 the average rainfall was only about half that of the global average - 497mm per year against the world average of 860mm per year.

The past week residents around Hartbeespoort Dam had another taste, as so often in the past, of a water dearth

with reservoirs running at under ten per cent of their capacity. In some suburbs taps ran completely dry for a

number of days while others still have no water.

A lot has been said and written in the past about the reasons for the water shortage - lack of capacity, lack of planning, lack of maintenance, lack of rain, etc., etc. The fact of the matter is that we are, nationally and regionally, running out of water. Dr Anthony Turton, then a research fellow at the CSIR, pointed out in 2008, in the famous address the CSIR tried to stop, that South Africa's average rainfall was only about half that of the global average - 497mm per year against the world average of 860mm per year. In addition, 98% of the country's water resources have already been allocated by 1998, meaning that there is

no dilution capacity left.

Also, unlike other countries where cities were developed round lakes or near rivers or the seashore, southern Africa's major urban developments took place on or near watershed divides. This is particularly relevant in the case of Hartbeespoort Dam which has to content with the effluent of the sprawling Pretoria/Witwatersrand urban industrial complex. As a water poor country the levels of pollution that South Africa has to cope with are unique in the world.

A campaign to encourage residents to harvest rainwater is to be launched on the tenth of next month. It is one of the activities planned as part as the Global Environmental Action Day against Climate Change. Thea Holm, who is organising the event in Hartbeespoort and Brits, says the 10/10/10 Global Action Day will entail 1 700 events in 140 countries around the world.

The local campaign would entail the donation of ten 5 000 litre water tanks to schools around Hartbeespoort Dam, as was reported earlier in *Kormorant*. On Global Environmental Action Day (10 October) the first tank will be installed at Meerhof School after which tanks will be installed at the nine other schools. The donation of the tanks is linked to a community programme in which a percentage of the purchase price of tanks bought by residents is paid into a fund to buy more tanks for schools. Several companies are participating in the rain harvesting project. These are Omnibus Engineering, represented by Thea and which specialises in the design and management of renewable energy systems; DOH Hardware in Brits which handles the retail sales and manages the fund for the schools tanks, and JoJo Tanks, which donated the tanks for the schools. Two

comma five to five percent of the selling price of tanks bought by residents in terms of this programme goes towards the schools tank fund. JoJo has also designed a 750 litre tank which it promotes as ideal for rainwater harvesting in smaller gardens in that it is leaner, less obtrusive and available in a variety of pastel colours unlike the squat dark green tanks that used to be the standard. Thea says there are several advantages in harvesting rain water. It is simple to install the elements required for the collection of rainwater. Apart from the roof surface area, one needs gutters acting as canals to take the collected water to the storage tank as well as a small pressure pump connected to the domestic distribution system if the water is to be taken directly to the house. Provision should also be made for a system to wash the roof, to clear and filter out pollutants. Purification can include filtration or ozone or ultraviolet light if the water is to

be used for cooking and drinking. Rainwater harvesting eliminates the need for pumped water, conserving energy, and if collected in sufficient quantities can be sufficient for domestic purposes. The average household uses 170 litres per person a day, with the toilet the biggest consumer of water requiring nine to 12 litres per flush. As far as schools are concerned there are 3 000 without access to water and 1 532 schools without toilets. The Global Environmental Action Day is the initiative of a body calling itself 350.org - one of a variety of non-governmental organisations concerned about the increasing levels of pollution. The organisation derives its name from the "safe" limit for particles per million of CO₂ that can be accommodated in the atmosphere - 350. At present the CO₂ count in the atmosphere is 390ppm. Last year was the

first time 350.org organised a global environmental day on 10 October and it managed to arrange 5 200 demonstrations in 181 countries. Thea says it is important that efforts to promote conservation are supported by the community. "The success of these community projects will send out a very strong statement to governments all over the world that the people of the world are ready to take action. We want governments to start taking action by putting laws and practices into place for greener technology solutions to ensure a future for upcoming generations." With the high levels of pollution of the Dam, the intensive purification required to bring it to a level suitable for domestic consumption and the inconsistency of the town's water supply, harvesting rainwater might just be the way to go to at least alleviate the problem.