LETTERS TO THE EDITOR

Climate change research still foggy

In the March/April 2006 edition, there are a number of issues that are of interest and I comment as follows on two issues which are interlinked.

By its very nature the letter (from AH Charnaud in the March/April 2006 edition of *the Water Wheel*) only scratches the surface, but there are interesting comments. The floods on the Orange River in 1988 were largely generated in the Northern Cape (note the same occurrence this year on an 18-year cycle) and the 1925 flood was one of the biggest to pass Fluitjieskraal just downstream of Vanderkloof. I know that we used this flood in the analysis of the floods for Gariep Dam in 1963/4. The floods your correspondent refers to all appear to be related to the lower Orange and would include the Vaal.

It is worth noting that the Weather Service put out a long-range forecast for the summer rainfall area which predicted average but more probably below average rainfall. At the same time our much maligned (mainly by climatologists) Prof WJ Alexander, Emeritus Professor of Water Resources Engineering at Pretoria University, forecast a wet summer based on his data-based model (not the process models of the climatologists) and it is my understanding that the Department of Water Affairs & Forestry disaster management unit based their contingency plans on the Professor's forecast. It is indeed fortunate that they did.

The climate model of NOAA in the US suggests drastic drying of the Sahel in the next 50 years. This runs counter to previous forecasts for a wetter period. How is it that different models give such vastly different forecasts? Are the climatologists playing games with us to get more research funding? Is the Water Research Commission funding some of such research without asking some really hard questions?

Prof Alexander has shown that the whole of South Africa has become on average wetter by about 9% to 10% over the last 80 years. (A similar finding has been made in the United States). These findings are all based on factual data that has been scrupulously analysed. He has also proposed reasons for the cyclical nature of our large floods as observed by Mr Charnaud in his letter. Using data-based models removes the need for the many assumptions that are inherent in the process models used by the Weather Bureau.

The climatologists appear to use process models almost exclusively but it is very difficult to get details of the assumptions they are making and how they arrive at their predictions. If their models are so accurate can they replicate the findings of Prof Alexander about our rainfall patterns or am I being too optimistic and will they duck the challenge? What are the weather mechanisms that have led to these changes? Do we really know?

The challenge to the climatologists is to stop claiming that all our problems are due to man-made interventions caused by CO_2 emissions. Could they first please explain what gave

rise to all the previous ice ages and the variations in sea level from 70 m above our present level 15 000 years ago to 60 m below our present level 11 000 year ago (approximately the end of the last ice age from which we presumably are still emerging). What are the forces at play and can man in fact make any impact? No one disagrees with the proposition that our climate (in whatever way it is defined – a check in the dictionary gives some interesting variations) is changing as it is a dynamic process and will always vary over time. We only need to ask why Greenland is so named to appreciate this proposition. The environmentalists and climatologists need to meet the challenges and play open cards with the public.

Robert Blyth, PR Eng, Cape Town

The Water Wheel values your opinion.
Write to the Editor at
e-mail lanih@wrc.org.za;
fax (012) 331-2565 or
Private Bag X03, Gezina, 0031.