# Valuing Estuaries Helps Student Win Award

***How does one calculate the economic value of the loss of services rendered by estuaries as a result of reductions in freshwater inflow? University of Port Elizabeth (UPE) Masters graduate George Dimopoulos earned himself the Founders Medal from the Economic Society (ESSA) of South Africa in an attempt to answer this question. Lani van Vuuren reports.***

*Prof Stephen Hosking, Head of the Department of Economics at the University of Port Elizabeth, Founders Medal winner George Dimopoulos and Dr Gerhard Backeberg, Water Research Commission Director: Water Utilisation in Agriculture.*

There are just over 250 functioning estuaries in South Africa. Of these, a growing number are subject to river inflow deprivation due to an increased demand for water upstream. As a result, the services rendered by these estuaries are eroded.

It is important for decision makers to be able to weigh the economic benefits from upstream activities against the loss of estuarine services, especially when decisions regarding water abstraction needs to be made. To date, this has proven a challenging process.

For his Masters Degree, Dimopoulos, who studied at the Department of Economics at UPE, researched the valuation of freshwater inflows into selected estuaries in South Africa using the contingent valuation method (CVM). CVM is a method gaining popularity to value public goods and especially those yielding services to passive users (such as environmental resources).

His research focused on the Knysna, Klein & Groot Brak estuaries and formed part of a larger project funded by the Water Research Commission. According to Head of the Department of Economics, Prof Stephen Hosking, Dimopoulos broke new ground in the generation of values of river water through the application of CVM. "Historically, the allocation of river water in South Africa has been guided mainly by considerations of cost factors, but the impact of this and related work is set to change this practice."

"(Dimopoulos') dissertation places environmental demand into river water allocation equation in South Africa," Prof Hosking continued. "The problem of reduced inflows into South Africa's estuaries is succinctly outlined, the method of CVM clearly explained and applied, and sensible conclusions are drawn on the basis of this analysis."

This was also recognised by the ESSA, who awarded Dimopoulos the Founders Medal. As Prof Hendrik Lloyd of ESSA pointed out, the purpose of the medal, awarded once a year, is to encourage research in the field of economics in South Africa and to recognise economic research of outstanding quality conducted at a South African university.

"Dimopoulos' dissertation showed innovation in the application of economics techniques," said Prof Lloyd. This is the first time a student from UPE's Department of Economics has been awarded the Founders Medal.

According to Dimopoulos he was drawn to the research after witnessing the degradation of the Knysna estuary, where he grew up. "The same development and commercial activities benefiting from the beauty of the estuary are now causing its demise," he told *the Water Wheel*. "By putting a Rands and Cents value to the services rendered by environmental resources, such as estuaries, we are able to ensure that the environment is viewed as a legitimate user of water, especially in the eyes of decision makers."