

## AWARDS, HONOURS AND ACHIEVEMENTS

- Rose Hulman Award from the International Association of Impact Assessment (1999)
- Environmental Planning Professionals' Interdisciplinary Committee Premier Award for his contribution to training environmental professionals by means of the annual professional short courses (1990)
- Cape Times Tercentenary Medal for his unit's contribution to Environmental Conservation in South Africa (1986)

## DEFINING MOMENTS

The first defining moment in his professional life was when he was invited to be part of a team designing the first environmental science course in Canada. The next was when he was appointed the Shell Chair of Environmental Studies and took up a professorship at the University of Cape Town (UCT) that cemented his career. And after that, working for the Council for the Environment to shape environmental policy for South Africa – “it is not often you get to feel that you are right at the coal face! And now, nearing the end of my career, being able to give advice on big international projects is gratifying.”

## WHAT PEOPLE MIGHT NOT KNOW

Fuggle is part of the geocaching community. Geocaching is a global treasure-hunting hobby where enthusiasts use GPS to find hidden caches. “I’m keen on Earth Caches because of the educational side of it – they provide an earth science lesson through a visit to a unique geological feature.”

## A STEWARD OF CREATION

The forest people said the mine’s sewage water was destroying their rice paddies. The mine people said, ‘Impossible’, and were prepared to put their cups in the outflow to show that the water was clean enough to drink.

Who was in the right? What was really going on? Richard Fuggle, a world-renowned environmental expert, was sent in to investigate the problem by the World Bank, which had been supporting the sewage treatment plant in question.

“We trekked out through the steamy Indian jungle,” says Fuggle. “There was a small pump station that had to pump sewage from a village to the mine’s treatment plant. That pump station was leaking, indeed spilling sewage out onto the fields, so both parties were correct, but the people in the forest village didn’t have the language to explain or the expertise to know that the problem was the pump station, so they blamed the entire sewage treatment project.”

Fuggle has been serving as an advisor to the World Bank’s Inspection Panel for nearly 20 years. The role has taken him to interesting places all over the world, looking at projects as diverse as the sewage treatment facility in India, constructing a dam on the Nile and planning the world’s largest earth-wall hydropower project, all of which could cause inadvertent harm to the environment.

When things go wrong, the World Bank’s Inspection Panel investigates, drawing in needed scientific expertise,” explains Fuggle. His work has helped the Inspection Panel to shape the environmental policies of the World Bank and these policies then trickle down to many other financial institutions.

What originally brought Fuggle to their attention at the turn of the century was the Rose Hulman Award from the International Association of Impact Assessment, in recognition of his global contribution to environmental management.

At the core of his contributions to environmental management is his notion that people are not distinct from their environment. “Unfortunately, in modern science we tend to compartmentalise things too much, focusing on either natural science or social science, rather than the whole,” he says. “If you’re looking at housing, you have to look at the soil and the climate to understand how people have adapted the structures. When I see people planting crops, I put it into context by looking at the geology and the economy. In environmental science, if you look only at natural science, or if you rely only on computer models and don’t go out into the field, you’ll miss the bigger picture.”



As Fuggle puts it, "I am a product of my environment and my environment is a product of me." For him it is a question of ethics – he is committed to conservation because, as a Christian, being a steward of Creation is the right thing to do, and destroying it is plainly wrong.

## IMPACT OF HUMAN ACTIVITY

In 1973, when Fuggle, a trained meteorologist, joined UCT as Professor of Environmental Studies, the concept of environmental management was still in its infancy. "People couldn't even spell 'environmental'; they said it was just a phase. I said it is a rising tide, but individual waves will always ebb and flow."

Fuggle's work and teachings began to establish the idea that the impact of human activity on the environment needed to be considered and assessed as a matter of national policy in South Africa. "We had to look at air pollution, estuarine requirements of rivers and radiation monitoring around the Koeberg nuclear power station, for instance. And we needed to make sure the public was involved and informed," he recalls.

In the 1980s and 1990s he served on various advisory bodies including the Council for the Environment which later put forward proposals for South Africa's environmental impact assessment (EIA) legislation.

"When I started, there was no such thing as environmental consultancy," says Fuggle. "We had to invent it and build it into law by writing the White and Green Papers with the help of lawyers. We had to give people background on how to measure noise or pollution, or how to conduct social surveys." He set up the short courses under UCT's Environmental Evaluation Unit and over

those two decades, trained over 3 500 people. "It is incredible to see how many people involved in environmental management these days I may have influenced."

One of the strongest supporters of environmental assessments at the time was the African National Congress (ANC), because EIAs were one of the few mechanisms that allowed new developments to be put on the table for people to comment on, says Fuggle. Before that, development plans that affected communities didn't have to be made public.

Fuggle also advised on how the environment should be handled in South Africa's new Constitution and says the country's new government demanded sound scientific advice with regard to the environment. A scientist's role is to provide that information and to help enforce policy, but environmental activism may compromise a scientist's neutrality, he warns.

Fuggle, now Emeritus Professor of Environmental Studies at UCT, still consults internationally, most recently assisting the World Bank Inspection Panel in its investigation of the Uganda Transport Sector Development Project.

A special mention in a recent *Oxfam report* describes Fuggle as 'a brilliant environmental consultant,' noting that Fuggle would spend weeks in the field and would provide reports that helped shape the project. Fuggle says it was very gratifying to have an independent body like Oxfam commend the work he had done on an international oil and gas pipeline project.

He has always tried to be ethical in his work and says he has garnered respect for his candour. "If I disagree with someone, I'm prepared to look them in the eye and tell them so, and I have always been available to have a beer with them afterwards."



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# Legends of South African Science II

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