

Will South Africa's hosting of the twelfth TWAS Conference make a difference?

The 12th General Conference of the Academy of Sciences of the Developing World—still called 'TWAS' because of its original name, the 'Third World Academy of Sciences'—will be held in Durban from 20–23 October 2009. Hundreds of notable scholars from developing countries will attend a full programme of events, lectures by TWAS prize- and medal-winners, and symposia on topics as varied as the impact of the global recession on research and education in developing countries; astronomy; human pre-history in Africa; infectious diseases; and the role of science and technology education in development.

A special symposium on science and technology in South Africa will feature a presentation on national policy by Phil Mjwara, director-general of science and technology, as well as lectures on recent discoveries by most of the directors of the centres of excellence recently established at local universities. A new book, *The Status of Science in South Africa*, published by the Academy of Science of South Africa (ASSAf)—the first general review of its kind published for over 30 years—will also be publically launched at the conference.

TWAS is by far the largest and most significant individual-based, multi-national science academy. It is built on the core notion of a distinguished club of eminent scholars drawn from over 70 developing countries, but functions as a kind of yeast in the science-development system of the South. This it has done by deploying the funds entrusted to it by far-sighted sponsors (most prominently, the Italian government) in a strategic manner, allowing the bright ideas of its scholar leaders to flourish independently of bureaucracy. Amongst these are the world's largest south-south research fellowship scheme, and grants supporting research units and visiting professorships in the least-developed countries. It has active regional branches worldwide, and places a special emphasis on youth (ASSAf makes an annual young scientist award under its

auspices) and women, through its offshoot the Third World Organisation for Women in Science.

TWAS has evolved into perhaps the strongest and best articulated voice of developing countries, and arguably, of truly global science, as it serves four-fifths of the world's population. In this vast space it plays an inspirational function in awarding prestigious prizes and medals, of which the Trieste prizes can be considered the 'Nobels of the South'. The 2008 TWAS medal in health sciences, one of a set of eight highly competitive discipline-based annual awards, has been won by Salim Abdool Karim of the University of KwaZulu-Natal, who will give a lecture at the conference.

Recently, TWAS has begun to play a core role analogous to that of most modern national science academies, generating evidence-based advice and reports that focus on the key science-related topics of the age, mostly through another offshoot, the InterAcademy Council, including *Inventing a better future: A strategy for building worldwide capacities in science and technology* (2004), *Realizing the promise and potential of African agriculture. Science and technology strategies for improving agricultural productivity and food security in Africa* (2004); *Women for Science* (2006) and *Lighting the way: Toward a sustainable energy future* (2007) (see <http://www.interacademy-council.net/CMS/Reports.aspx>).

South Africa has only relatively recently—in the post-apartheid era—become involved in TWAS affairs. South African scientists have been traditionally (and fruitfully) connected to mentors and collaborators in the U.S.A., the U.K. and a few other European countries. The conference may highlight the advantages in supplementing—or even replacing—these with connections in China, India, Brazil, Mexico and other emerging nations with problems similar to our own. Many scientific leaders from the South have productive groups and are directing exciting projects,

offering opportunities for collaboration, sabbaticals and placement of promising doctoral graduates that are the equal of most of their peers in Europe and North America, and considerably more affordable in logistic terms. These scientists are generally working on problems and challenges similar to our own—with some trans-cultural stimulation thrown in for good measure.

There is talk at present of South Africa 'punching above its weight' in the developing world, in grouping together with Brazil, Russia, India and China. But in terms of TWAS involvement, South Africa is currently probably in the welterweight division relative to these heavyweights. We need to show more clearly that we belong in this strongly emerging company in terms of our scientific accomplishment.

Direct interaction with TWAS should also allow us to examine and define the complementary roles of national science academies and supra-national ones. There is pressure on science academies to change their composition from a traditional 'septuagenarian plus' version to embrace a younger, more active membership pattern (this year TWAS fellows were requested not to nominate any new candidates over 70 years of age). So should scientists in their prime devote such spare time they might have available to a national discipline-based organisation, a national academy, or a supra-national academy? This is a question not only for individual scientists, but also for developmental states themselves. Should supporting one's own national science academy have priority, or should regional cooperation be of overriding importance? It could be argued that close cooperation between coexisting, but clearly differentiated organisations is the most effective way that developing countries can improve their position in the world. These questions are amongst many that hosting the first TWAS conference to be held in this country may help us to address. □