



# BAI CHUNLI: RWANDA IS “A BEACON OF HOPE”

*In remarks at the opening ceremony of the 27th TWAS General Meeting, TWAS President Bai Chunli praises the scientific progress of the East African nation.*

It is with great pleasure that I welcome you to the 27th TWAS General Meeting in Kigali, Rwanda. Convening in this nation marks a profound occasion for TWAS, and we are honoured and humbled by the generosity and warm welcome shown to us by the President's Office, the Ministry of Education, and indeed, so many people who have had a part in organising this meeting.

It is a profound occasion: 22 years ago, genocide against the Tutsi people left perhaps a million Rwandans dead. The nation was shattered. So, too, were its institutions of science and education. Schools were badly damaged. Equipment was destroyed. Teachers and professors were forced to flee, and many were killed.

Our meeting this week in Kigali is a testament to the vision of President Kagame and to the energy of thousands of people who have been working to rebuild the country. It is a testament to the resilience of the Rwandan people.

Rarely in history has science been summoned to address such challenges as Rwanda has faced. And yet, here we see a nation that embodies the TWAS ideal: It invests in science and science education. It is building South-South and South-North partnerships. It knows the importance of basic science, but it uses applied science to meet human needs and drive economic growth.

Now we are very pleased that Rwanda is establishing its own academy of science. This will be vitally important in setting standards of research excellence, supporting young

scientists, and connecting Rwanda to global science networks.

Rwanda has become a beacon of hope in Africa, and its sustained dedication to science, technology, conservation and innovation should be known throughout the world.

African farmers and researchers are pioneering new methods of farming and food production. Africans are sending satellites into orbit. The Square Kilometre Array, being built in South Africa, will have influence on science and engineering across much of the continent. Increasingly, African research institutions and policymakers are focused on the potential of the Big Data revolution.

African women are providing bold new leadership in research. School enrolment is soaring, and many nations are investing in new universities.

Cell phones in Africa are putting technology – and knowledge – in the hands of the people. Nearly 400 million Africans are cell phone subscribers. In Nigeria and South Africa, the rate of cell phone ownership is the same as in the United States. Today, just over 20% of Africans have mobile broadband connections – by 2020, that number will approach 60%. The phones are providing direct human benefit in health care, agriculture and other fields.

All of these developments are cause for optimism. But we must keep in mind: Significant needs remain. Some estimates say that, over the coming decades, Africa will need 1 million new scientists, engineers and technicians. They will be needed to research clean energy and

▼ TWAS President Bai Chunli addresses the opening ceremony of the TWAS General Meeting in Rwanda. [Photo: Robert Mugabe/Rwanda Ministry of Education]



health care. To address climate change and protect ecosystems. To build safe buildings and strong bridges.

And to teach and train new generations of scientists and engineers.

Rwanda is achieving success that should be studied throughout the developing world. It has the highest rate of primary school enrollment in Africa – just shy of 100%. At the time of the genocide, it had perhaps 50,000 students in secondary school. Today, that number has grown ten-fold. And sciences are by far the most popular field of study. Before the genocide there were about 3,000 Rwandans enrolled in universities. In 2015, that number passed 86,000.

These projects remind us that in Rwanda, and in Africa, partnerships are essential for progress – both South-North and South-South partnerships.

Educating and training young scientists, building global science networks – these are areas of strength for TWAS and its partner organisations.

Since the Academy’s earliest days, TWAS has been a leading advocate for science in sub-Saharan Africa. At this meeting, we celebrate that history and the successes we have accomplished together. But we also come here to consider the work ahead. There is so much more to do in Rwanda, in Africa, and throughout the developing world.

President Kagame knows the importance of investment, partnerships and long-term commitment. Rwanda knows that young people are the key to future progress – and we are pleased to see so many young Rwandans joining us for this meeting.

Abdus Salam, the founder of TWAS, was also deeply committed to nurturing young scientists. In 1979, just a few years before TWAS was born, Salam won the Nobel Prize in physics. In a brief speech at the Nobel banquet, he said:

“Let us strive to provide equal opportunities to *all* so that they can engage in the creation of physics and science for the benefit of all mankind.”

November 21 – next Monday – marks the

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*Bai Chunli, TWAS President*

20th anniversary of Salam’s death. I am certain that he would approve of our work here in Kigali. He would be proud of Rwanda, and proud of TWAS’s role in African progress. He would be proud of the many nations that are advancing science and education for a more prosperous and peaceful world.

President Kagame, dear colleagues from Rwanda and around the world – thank you very much. ◻

