




BRINGING ENERGY TO POLICY AND PEOPLE

At a TWAS science diplomacy workshop, developing-world researchers and policymakers were exposed to new problem-solving approaches in energy policy.

 by Sean Treacy

The government of a small, landlocked developing country wanted to provide electricity to the 40% of its citizens who had none. But there was no clear way to do so, and they could not count on their neighbours for help. So what creative strategy would allow them to connect their people to the national grid?

The country was a fictional example from an exercise for scientists and policy experts from the developing world who attended a workshop on energy policy and science diplomacy held recently at TWAS headquarters in Trieste, Italy. The hypothetical nation also had vast crude oil reserves it could use for trade, but was cut off from potential markets by the unfriendly powers bordering it in the north, west and east. Worse yet, it was blocked from the sea by a nation to the south that had been unstable for years.

So a committee of workshop participants – playing the role of energy policy officials – went to work. Maybe because most of them were scientists, the first thing that came to mind was to fund research and development. But as time went on, something became startlingly clear: The best policy for providing power to their citizens left little money for scientific research.

Carlos Meza-Benavides, a renewable energy technology researcher from Costa Rica, said that after realizing that research and exports could not be the priority, the group found that their best resource was actually their own citizens. That shifted their focus – they decided it would be more effective to develop

local processing of their crude oil by investing in infrastructure and foreign technology, while improving relations with their neighbours over the long term using science diplomacy.

“We can have a technology programme for people in neighbouring countries to come to our country to do some research on energy or contribute to our development and we will repay them,” he said. “In this way, we’ll have a better relationship with our neighbours.”

This exercise was a centrepiece in the week-long workshop held 9-13 December 2013 that brought energy-sector scientists and policymakers from throughout the world to TWAS to explore the relationship between science, policy and diplomacy. The participants, more than 20 in all, came from 16 nations: Bangladesh, Cameroon, China, Costa Rica, Egypt, India, Iran, Italy, Nepal, Nigeria, Pakistan, Senegal, South Africa, Tanzania, Uzbekistan and Zimbabwe.

The workshop was financially supported by Sida, the Swedish International Development Cooperation Agency. It was part of TWAS’s larger science diplomacy programme, organizing lectures and workshops to bring together highly regarded experts and early-career scientists and diplomats.

The case of the landlocked country was one of three hypothetical situations workshop attendees tried to resolve through a mix of science and diplomacy. Another group managed the budget for a country that was



For a deeper look at the workshop, visit: www.twas.org/node/1975

Learn more about the science diplomacy programme at www.twas.org/science-diplomacy

▼ Participants in the TWAS diplomacy workshop discussed energy policies during a breakout group of experts in non-traditional, high-technology energy sources such as hydrogen fuel cells.

very underdeveloped but had a rapidly growing economy and young population, most of whom make their living through agriculture.

“When you’re writing [a policy document], you want to assume the people who are reading are laymen,” said Willie Davison Ganda to his group-mates. He advised that avoiding dense language was important so that everybody can understand what the government’s policies are. Ganda is the director of research development and innovation for the Ministry of Higher and Tertiary Education, Science and Technology Development in Zimbabwe. He was also one

in green energy and decision-making power each interested party would have. “Foreign debt owners would have a lot of power and low interest in green energy,” pointed out Heba Khalil, an associate professor at Cairo University in Egypt, during the discussion. “They’ll want to get their money back.”

In addition to the exercises, the workshop featured several presentations. Vaughan C. Turekian, director of the Center for Science Diplomacy at the American Association for the Advancement of Science [AAAS], provided an overview of science diplomacy. Also, the group toured Termovalorizzatore Errera, a waste-incinerating energy plant in Trieste.

Mirabbos Khujamberdiev, a hydrogen-power technology scientist with Tashkent Institute of Chemical Technology, said the hypothetical landlocked country faced a situation similar to Uzbekistan, his home country. Uzbekistan has an interest in trading with China and Russia, he said, but has neighbours that necessitate pipeline negotiations. They are also cut off from the sea by the unstable nation of Afghanistan. His familiarity with Uzbekistan’s geopolitical reality allowed him to illustrate the situation in the exercise to his group.

“I was able to provide the current situation with my landlocked country as an example, and provide what is going on politically, economically, socioeconomically,” said Khujamberdiev.

The workshop opened up a new professional and personal horizon, for Tabassum Mumtaz, a biologist with the Bangladesh Atomic Energy Commission. Mumtaz received her PhD from the Universiti Putra Malaysia through a fellowship sponsored by the Organization for Women in Science for the Developing World [OWSD], a close partner of TWAS. She was also central to a spirited discussion during the workshop about nuclear power in the developing world because her home country of Bangladesh is making progress toward establishing its first-ever nuclear plant.

TWAS’s future workshops on science, diplomacy and policy are likely to cover such issues as sustainable water management, food security and climate change, and sustainable exploitation of the oceans. ■



“ A key idea of science diplomacy: you can pursue development and build better relationships with neighbouring nations. ”

of the workshop’s four “science diplomacy ambassadors” – scientists with policy experience.

A third group managed a hypothetical petro-state with an oil-reliant economy and a massive unpaid debt. As they planned their budget, they created a chart detailing how much interest