REPORT

Two Day Seminar at NIAS, Bangalore

When Science Meets the Public: Bridging the Gap

Prof. V.S. Ramamurthy, Director, NIAS, Bangalore with Dr. S. Ramadorai, Chairman, NIAS, Bangalore

A politician once famously exhorted his followers not to vote for the ruling party since the dam it had built had squeezed out all energy from the water. Yet another chief minister is known to have consulted an astrologer when a supercyclone was heading towards the shores. The astrologer predicted that the cyclone would break into two and so there was nothing to worry about. Hundreds died as the cyclone hit the state.

Last year, despite serious misgivings about unplanned development in the hills and innumerable reports to that effect, the establishment took note only when a disaster struck Uttarkashi and thousands lost their lives. And, of course, even today we keep reading and hearing about people flocking to pay obeisance to fake sadhus and babas who have a penchant for irrational, unscientific and totally ridiculous utterances.

Despite mastering the most advanced mobile phones easily the public still remains confused whether transgenic technology is good or bad, whether nuclear reactors will solve our energy issues or create new radiation hazards, and whether development at all cost is advisable. Policy makers and lawmakers too continue to move ahead with unscientific development projects. Where does the problem lie?

Perhaps we are not doing enough in science communication, says Prof. V.S. Ramamurthy, Director, National Institute of Advanced Studies, Bangalore. He was delivering his opening remarks at a two-day seminar on *When Science Meets the Public: Bridging the Gap*, which tried to delve into the chasm between science and scientists and the lay public. Prof. Ramamurthy went on to say that taking the public into confidence on complex scientific issues was essential today.

The seminar was organised by the National Institute of Advanced Studies, Bangalore during 20-21 June 2014, catalysed by eminent journalist Pallava Bagla who is also a Visiting Professor at NIAS, Bangalore.

Mechanisms need to be worked out to foster greater networking and interaction between the scientific and the journalistic communities.

Engaging the civil society has become increasingly essential also because the public has today become sceptical of government communication, said Dr K. Kasturirangan, former member, Planning Commission, in his inaugural address. This is clearly demonstrated by the public outcry over stem cells, GM crops and nuclear reactors, he said. He cited the example of the Chandrayaan-1 project as a case of extremely successful engagement with the public that generated strong "trust plus" in contrast to "deficit plus". There was a need, he said, for independent communication agencies to engage with public bodies.

The two-day seminar brought together science journalists and communicators, natural and social scientists, science administrators, policy makers, researchers and even parliamentarians on one platform.

Prof. V.S. Ramamurthy (left) with Dr. S. Ramadorai and Dr. K. Kasturirangan (extreme right)

Former Environment Minister Mr Jairam Ramesh with Dr. Baldev Raj, Mr Pallava bagla, Dr. Shiv Vishwanathan and Mr Gauhar Raza

The seminar was timely especially in view of the growing cases of resistance against national projects. While more transparency in scientific projects is required to allay fears of the civil society, at the same time resistance from segments of the society needs to be understood in the proper perspective. Arguing that many knowledge bases are being bulldozed, sociologist Shiv Viswanathan said that the scientific community needs a "hearing aid to understand the dialects of resistance". We should stop seeing people as just those who obstruct science and understand the pluralisms our society has. He said different groups have different truths, which needed to be understood.

Prabir Purkayastha, editor of *Newsclick*, also said that technologies are always for the benefit of people, but people are not homogenous. So, while some may stand to gain, others may lose. He cited the example of GM crops in this regard. While farmers will benefit from increased yields, consumers will have to consume the transgenic crop without health hazards, if any, being taken care of, hence the resistance. Bt cotton did not have any such issues. In the same manner, people in the US simply do not accept climate change because they do not want to change their lifestyles. Prabir argued that it is important to address the belief systems of people to be able to communicate science well.

But do we have any idea of the belief systems and the scientific bent of mind of the citizens of such a large country like India with mindboggling diversities of language, culture, topography, social strata, educational status and so on? Gauhar Raza from CSIR-NISCAIR pointed out that no national level study had been carried out so far in India to gauge the level of scientific awareness of the Indian populace. Science communication and scientific awareness programmes will have to be designed based on such an understanding, he said.

Once people develop an understanding of scientific issues it is easier to take them along. This was beautifully exemplified in a presentation by Magsaysay Award winner Rajendra Singh. Singh said development work of the urban psyche involves displacement of water, soil, forests, people, etc. But local development work involves development of local resources. He recounted how he managed to create awareness in the villagers of Gopalpura in Alwar district of Rajasthan about their problems and the need to look for local solutions rather than depend on government aid. This led to building of embankments to store water, consequently raising the water level in dry wells and rejuvenating rivers. An excellent example of a communication initiative that yielded sustainable results.

Another issue that was raised by several speakers related to the lack of accessibility of information from scientific organisations and agencies. This is a problem often faced by journalists. The issue was raised by T.V. Jayan from *The Telegraph*, a Kolkata-based newspaper and T.V. Padma from *SciDev.net*, an online science news portal. Why this should be the case is somehow difficult to understand. On the contrary, scientific organisations, departments and agencies need to be professionally and ethically mandated to engage the public with the scientific projects they work on and the scientific products they roll out.

However, scientists and scientist-administrators had a different take on the issue. Srikumar Banerjee, former Chairman of the Atomic Energy Commission and Deepak Pental, former VC of the University of Delhi and a leading voice in favour of GM crops, while accepting that information needs to be made available to journalists, talked of the lack of trust among the scientific community about journalists turning out factually correct reports due to their penchant for sensationalising events. In fact, Banerjee even talked of a difference between "journalistic knowledge" and "scientific knowledge".

Perhaps, therefore, apart from bridging the gap with the public what is also required is bridging the gap between scientists and journalists. Mechanisms need to be worked out to foster greater networking and interaction between the scientific and the journalistic communities.

Throughout the two days of the seminar, however, there seemed to be no doubt that more efforts were required to engage the public with science at different forums. Of course, India can boast of a number of science communication initiatives, both at the national level as well as the regional level. However, these efforts are widely scattered. There has hardly been any effort to bring together such programmes and projects to amplify their effectiveness on a large scale.

Perhaps there is a need to chalk out a national science communication policy or strategy. Such a national policy or strategy could bring together all scientific departments, organisations and universities to forge effective science communication initiatives. It could also assess the level of scientific awareness of different segments of the society and devise science communication programmes accordingly.

It needs to be realised that today public receptivity to science is high. However, unimaginative and piecemeal efforts at communication will only transform this receptivity into serious misgivings about science. At the same time, effective communication programmes hold the potential to increase receptivity among the public for critical and national scientific projects and endeavours.

Hasan Jawaid Khan