Vikram Sarabhai and his dream projects

The special issue of Current Science on Vikram Sarabhai covers tributes by many of his associates.

One of the dream projects of Sarabhai (which though has not found much mention in the special issue) was the Nuclear-Powered Agro-Industrial Complex. This involved large nuclear power plants combined with desalination of seawater plants (for coastal areas) integrated with fertilizers, caustic chlorine, alumina and other high-energy industries and agricultural farms. Typical locations in India, like Kutch, Saurashtra, Gujarat for the coastal complex (including seawater desalination) and Western Uttar Pradesh (for irrigation) were considered and details worked out involving multidisciplinary teams. Many young people like the present author joined the dream project at the Bhabha Atomic Research Centre. The project was gigantic and when a bureaucrat remarked ‘can a poor country like India afford such a big project?’, Sarabhai reported in his characteristic style, ‘because we are a poor country, we cannot afford not to have such big projects’! I remember the great enthusiasm and zeal with which he inspired the young team to work out the multidimensional programme.

The Agro-Industrial Complex was envisaged to provide a boost to the energy programme and a sustainable future for India. Though this dream project has not been realized, we do see several combined power-desalination plants coming up in the coastal areas now.

Sarabhai was not committed to one or two narrow areas, but worked for progress in every scientific field. The application of remote sensing in reaching farmers in all corners was another of his dreams. The Gujarat Agricultural University (GAU) established the GAU Satellite Krishi Gosthi (GAU SATKRU) with the help of scientists from ISRO. Under this programme, a studio was set up in Gandhinagar, Gujarat with one-way video and multiple audio connecting different villages with the GAU agriculture scientists. This is considered a big step in realizing Sarabhai’s dream project.

There are endless possibilities of ‘reaching the unreached’ through such a medium of communication, the seeds of which were sown by Sarabhai; and there is much to do.

Looking back, I feel we were perhaps much ahead of our time then, but the following messages remained with us: (i) we need to dream big, and (ii) good work is never wasted.

Video journals for science communication

Disseminating results of studies to spread knowledge for the benefit of humanity is an established practice in science and technology. Today, scientific publication is widely used as an intellectual metric of a researcher. It has undergone paradigm changes since the first publication – des savans and Philosophical Transactions of the Royal Society, in 1665. Before the advent and popularization of large-scale printing, the emphasis was more towards figurative description. However, in the industrial era, it assumed the form of typeset hard copies. With congruent advancement of information and communication technology, user preferences have moved from the printed journal format to electronic and on-line versions. Audiovisual contents are known to be an effective and popular means for communicating science. Recently, there is an increase in journal citations of YouTube-based video contents as references in research communication within different subject areas. Nevertheless, the potential offered by multimedia technology remains overlooked in scientific publishing as video journals.

Scientific video journals will help broadcast, publish and share unseen glimpses of the natural world, including the sighting of rare and unusual behaviour of organisms, new reports of insects and pathogens, etc. which can highlight interesting and lesser-known facets regarding wildlife as well as biological, agricultural and indigenous knowledge systems or successful case studies in conservation and sustainable use of resources. Thus, video journals will enthuse conservation biologists, anthropologists, botanists and others to submit media clips in a pre-determined scientific format, to be published as citable content. Such a multimedia repository could be an excellent resource for education, to promote awareness and in policy- and decision-making. A pre-release version of video journal content developed by the present authors is available at https://www.iitmk.ac.in/cvrlei/videojournal/index.html.

1. The Amsterdam printing of the Journal des savans, Dibner Library of the Smithsonian Institution, USA, 2019; https://library.si.edu/books-online

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