

## India and the SAARC satellite

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On 30 June 2014, the Prime Minister Narendra Modi witnessed the Indian Space Research Organisation (ISRO) launch five foreign satellites into space using its own Polar Space Launch Vehicle (PSLV) C-23 rocket. On witnessing the excitement at the launch site in Sriharikota, Andhra Pradesh, the Prime Minister praised the scientists who had made such outstanding contributions to the country's space programme. He also asked the Indian space community to take up the challenge of developing a SAARC satellite that the country could dedicate to our neighbourhood as a 'gift' from India. Like a technocrat giving a popular science lecture, the Prime Minister spoke about the space technology benefits of telemedicine, disaster management, land records management, GIS-enabled watershed management and of providing satellite navigation system to cover the whole of South Asia. The ISRO scientists were impressed by the knowledge of their Prime Minister. Also, they did not consider making a SAARC satellite as a great challenge. What they were concerned was whether their 'gift' of this satellite would be accepted by a politically charged body of countries that form SAARC, viz. Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.

In the past several projects and programmes were proposed at various SAARC summits, but for political and economic reasons, most of them failed to take off beyond the pages of the Summit Declaration. Indian scientists had mooted the idea of a SAARC satellite way back in 1995, on the occasion of the 10th anniversary of the setting up of SAARC and on the eve of the 8th SAARC summit that was to be held in New Delhi in May 1995. At an International seminar titled 'SAARC 2000 and beyond', eminent South Asian academics, diplomats and political personalities presented several papers on various political, social, economic and technological aspects of cooperation within SAARC. In the field of technology, a detailed plan for formulating and implementing two specific technology missions (SARTEM), for the development of the SAARC region, were presented by Indian scien-

tists<sup>1</sup>. One component of the SARTEM was the development and launching of a satellite, specifically for the SAARC region, with emphasis on the survey of natural resources of the region and to augment satellite communication and broadcasting facilities by launching, what was then called a SARSAT. The suggestion was based on India's success of using the Indian National Satellite (INSAT) and other remote sensing satellites for such services. The concept of taking up such technology missions for the SAARC region was included in the recommendations of the seminar, that were submitted to the SAARC authorities.

In 1975 India's Satellite Instructional Television Experiment (SITE) had demonstrated how space technology could be used to connect people living in rural areas to local social and educational problems<sup>2</sup>. Media experts were excited by this opportunity. In December 1992, a concept paper SAARCSAT, was circulated by Sri Lankan media expert, P. P. Dias to the SAARC secretariat, which had suggested the launching of a SAARC Regional Communication Satellite (SAARCSAT), principally for the purpose of using the Direct Broadcasting by Satellite (DBS) for mass adult education in South Asia<sup>3</sup>. It was around the same time that India had initiated a new approach of trying to achieve socio-economic development benefits from science and technology using 'technology missions', ensuring inputs of science and technology into various sectors of development in a well-focused and coordinated way and in a time-bound manner. Using this mission approach, a few technology missions were recommended for SAARC<sup>1</sup>.

It appears that the proposal of a SAARC satellite was first discussed at length by SAARC Information Ministers in Dhaka way back on 26 April 1998 – probably based on the recommendations of the international seminar mentioned above. At the end of this two-day meeting, the Secretary-General of SAARC had made the following comments: 'We will examine the financial and technical feasibility of establishing a SAARC satellite'. He had then concluded that

enormous work had to be done for launching a SAARC satellite and said 'You cannot set up such a thing (SAARC satellite) overnight. We have called an expert group meeting next month'. Nothing further was heard of this expert group meeting. It appears that the idea could never be implemented, largely because of the India–Pakistan tensions as the Kargil War broke out one year later and the concept of SAARC satellite disappeared from the scheme of things, until Narendra Modi raised it again in June 2014 and announced it at the SAARC summit in November 2014.

A quick look at the status of space science and technology activities in the SAARC countries shows that only India has the capabilities of making, launching and tracking satellites.

In Bangladesh, the SPARRSO (Bangladesh Space Research and Remote Sensing Organization) is a multi-sectoral research and development agency of the Government under the Ministry of Defence. It is functioning as an autonomous organization and is engaged in developing peaceful uses of space science and remote sensing technology in the country. ISRO can perhaps offer to strengthen the infrastructure in the area of remote sensing so that the scientists in Bangladesh can collect and analyse the data that may be generated by the proposed SAARC satellite.

Amongst the SAARC countries, besides India, perhaps Pakistan has a fairly advanced space programme. But Pakistan does not have its own launch capabilities. The Pakistan Space and Upper Atmosphere Research Commission (SUPARCO) – the national space agency established in 1961 – works towards developing indigenous capabilities in space technology and its application for socio-economic uplift of the country. Pakistan's first communication satellite that was launched on 12 August 2011 was developed and launched by China Great Wall Industry Corporation (CGWIC). The service life of the satellite is 15 years. It is providing satisfactory services to a broad spectrum of national and international customers. The indigenous contribution of Pakistan to this totally commercial venture is not

clear. The Pakistan Remote Sensing Satellite (PRSS-1) project is currently under the process of approval from the Government of Pakistan. The satellite is envisaged to be designed, developed and launched in a low Earth orbit by 2015/16, through cooperation/collaboration with reputed international satellite manufacturers. There has been no collaboration between India and Pakistan in the area of Space Science. The political dialogue between India and Pakistan has been stalled. One wondered how Pakistan will agree to SAARC accepting the gift of the Indian satellite, if it is offered by the Indian Prime Minister. As expected, it was not!

Sri Lanka is another country in the region that has shown interest in utilizing space technology for national development. As part of its space science-related activities, in August 2012, Sri Lanka decided that its first Space Academy will be created with Chinese support. Taking advantage of Chinese technical assistance offered by Sino Satellite Communications Company Ltd and CGWIC, the Sri Lankan company Supreme Satellite Private Ltd (SupremeSAT) signed a joint agreement for the establishment of a first ever Space Academy. The proposed Space Academy will consist of a state-of-the-art Satellite Ground Station which will provide on-the-job-training to Sri Lankan engineers in order to handle operations of the already co-branded SupremeSAT/Chinasatcom satellite, in orbit since July 2012. The agreement will use Chinese expertise in space science to further boost the size and quality of the science and engineering pool in Sri Lanka, providing the country with skilled workers and accelerating the growth of the economy. This Chinese investment, worth US\$ 60 million, is the biggest foreign-funded private sector investment in Sri Lanka's Central Province and is expected to give confidence to

other private sector companies in the world to invest in Sri Lanka. A further agreement to build the first Sri Lankan satellite is expected to be signed soon in China. Built at the CGWIC facility, the satellite would be launched from Beijing and will orbit over Sri Lanka by December 2015.

The other SAARC countries of Nepal, Bhutan, Maldives and Afghanistan are focusing more on developing manpower in the area of space science and are aware of the benefits that space technology could offer for their national development.

What emerges from this quick assessment of the status of space science and technology development in the SAARC region is the fact that the countries are indeed keen to use this technology for national development, but, there seems to be heavy dependence on countries outside the SAARC region. India is not a natural choice for collaboration. The bigger and influential countries like Pakistan, Sri Lanka and Bangladesh seem to be dependent more on China than on India for providing support for their space programmes.

The 18th SAARC summit was recently held in Kathmandu in November 2014. Prime Minister Narendra Modi announced that India is ready to launch the SAARC satellite in 2016. Unfortunately, except for Sri Lanka, no other country welcomed the offer enthusiastically. If India is serious about its efforts to help the SAARC nations in the area of space technology, the country must point out, with humility, that it is the only one in the South Asian region that has shown the capability of building and launching space satellites and effectively used this technology for various facets of social, environmental and economic development of India. It is in this context that India is willing to help the other SAARC countries to make use of the benefits of

space technology for individual members of SAARC. Just as the Soviet Union and the United States helped India in its early development of an indigenous space programme, India is now willing to offer help to its neighbours to reap the benefits of this far-reaching technology for development.

It is under this scenario that one has to examine the recent suggestion of the Prime Minister about the SAARC satellite. The November 2014 meeting of SAARC did not show any interest in India's 'gift'.

This is not to suggest that the enthusiasm and commitment shown by the Prime Minister Modi towards working with neighbouring countries is not a workable idea. But it is more of a political challenge that he has to take up while dealing with his SAARC neighbours at the future SAARC summits. Can the Prime Minister entice the SAARC nations to accept the offer help to introduce the multitude benefits that space technology can offer to the participating nations? In the process, it should also help build national capabilities in each of the member countries that are aspiring to enter the space age.

1. Lama, M. and Lavakare, P. J., In *SAARC 2000 and Beyond* (eds Mehrotra, L. L., Chopra, H. S. and Kueck, G. W.), Omega Scientific Publishers, New Delhi, 1995, pp. 167–199.
2. [http://en.wikipedia.org/wiki/Satellite\\_Instructional\\_Television\\_Experiment](http://en.wikipedia.org/wiki/Satellite_Instructional_Television_Experiment) (accessed on 3 November 2014).
3. Mehrotra, L. L., In *The Dynamics of South Asia – Regional Cooperation and SAARC* (eds Gonsalves, E. and Jetly, N.), Sage Publications, New Delhi, 1999, pp. 131–156.

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