REMOTE SENSING FOR NATURAL RESOURCES WITH SPECIAL EMPHASIS ON WATER MANAGEMENT

A National Symposium on Remote Sensing for Natural Resources with emphasis on Water Management and the Annual Convention of the Indian Society of Remote Sensing (ISRS) was organised by the Indian Society of Remote Sensing and jointly hosted by the university of Pune and the Centre for Advanced Computing (C-DAC), Pune.

Dr. C.D. Thatte, in his keynote address, outlined the basic issues associated with Water Resources Management specifically in the context of the future when the limited resource of water, available from rain for about 15-50 days over the year in the country has to be managed for utilization for the rest of the year, will have to be shared by an increasing population. Thus, the per-capita water availability will further decrease from the present levels. Dr. Thatte called for a holistic approach to water management–specifically by adopting inter-basin transfer approach and captive utiliztion of the surface water as part of major and minor irrigation projects, groundwater harvesting, *etc.* He also lauded the role of remote sensing in addressing the issues of groundwater targeting, flood mapping, surface water bodies, command area management, *etc.* He cautioned against the overselling of the remote sensing technology which leads to misconceptions about its real ability and eventually could unduly discredit its utility. Dr. Thatte was optimistic that with a proper understanding and a efficient use, the technology and its future developments held tremendous promise. He called for furthering the use of remote sensing for other applications such as understanding the relationship of SW monsoon and precipitation and run-off of river basins; demarcating discarded river channels; real-time flood movement; water pollution studies; loss of storage capacity, *etc.*

Dr. K.Kasturirangan delivered the prestigious Vikram Sarabhai Memorial Lecture on "A Space Agenda for Water: Challenges and Perspectives". This Memorial Lecture has been instituted by ISRS in memory of Dr. Vikram Sarabhai, the father of the Indian Space programme. In his talk, Kasturirangan stressed the need to adopt an integrated approach to managing water resources and a drive to initiate programmes at the local level while giving adequate thrust to major irrigation projects. He highlighted the role of space technology–both remote sensing and satellite communications in addressing this agenda and called for an urgent need to understand the hydrologic cycle and water resources accounting, inter-river basin management, tapping the resource at local- levels and a drive for conserving the use of the resource. Dr. Kasturirangan also mentioned that the Indian Department of Space had an ambitious plan for launching future remote sensing satellites with improved capabilities–spatial resolutions of 1 to 2.5 m with stereo, allowing for about 1:5000 scale thematic mapping, 6 multistage for discrimination of mixed-crops in small areas, Advanced Wide Field sensors for rapid inventory of crop and vegetation resources, missions for specifically observing the oceans, atmosphere and climate with a view to model the climate and weather for improving prediction capabilities.

Dr. Vasant Gowariker delivered a popular lecture on "Countdown to Remote Sensing" wherein he enumerated the early days of Space Science studies and activities in the country. He pointed out that the success story of Indian Satellite launch vehicle needs greater appreciation given that it made very humble beginnings in cow-sheds and abandoned church premises under the leadership of Vikram Sarabhai. He noted that this foundation now has supported an enormous infrastructure, which is now poised to take giant leaps and become one of the world leaders in space technology.

Some of the more important recommendations of the symposium are:

1. User agencies at State as well as national level should ensure its end-use, particularly focusing on identifying favourable areas for locating groundwater and emphasizing the usage of spatial data analysis.
2. The full potential of unique data sets offered by IRS-1C and IRS-P3 should be harnessed. Organisations and agencies equipped with expertise should demonstrate the results of studies depicting innovative and newer applications in thrust areas. State level appraisal workshops should be organised and ISRS Chapters can act as facilitators for ISRS.
3. The local and global market of value added products as services should be fully exploited by the Indian entrepreneurs. Necessary standardisation in mapping and classification accuracy should be established. The society may make necessary efforts towards this.
4. In future, we are likely to be more dependent on marine resources for our needs, especially for food. Research and academic institutes should be involved in developing models/algorithms for retrieving various oceanic parameters, such as chlorophyll, sediments, wind, wave and so on.
5. In view of global warming, understanding the Earth System has become a necessity. Remote sensing will provide the base data sets. In view of this, a large data base in understanding bio-geochemical cycle, land-water interaction in coastal zone, hydrological cycle, atmospheric chemistry has to be created, in GIS environment. The ISRS should form working groups to expedite this task.
6. It is realized that there is a need to upgrade the skills of scientists for the effective use of remote sensing data especially in analyzing stereo and spectrometer data for large scale mapping. Concerned agencies may establish necessary facilities.

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ISRS-1996, C-DAC.
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JGSI - Radhakrishna Prize

(To be awarded to the best research article published in the Journal of the Geological Society of India)

The Council of the Geological Society of Inida has instituted a prize to be awarded to the author(s) of the best paper published in the Journal of the Geological Society of India. The value of the prize is Rs.10,000. This has been possible through a donation made by the well-wishers of Dr. B.P. Radhakrishna on the occasion of his 75th Birthday. Papers published during the calender year 1996 (commencing from 1st January and ending with 31st December 1996) will be considered for the prize.

Nominations are invited and should include: 1. The title of the paper, 2. The issue in which it was published, 3. Author(s) name and address and 4. A statement giving full justification for making the nomination. Nominations should be addressed to the Secretary, Geological Society of India, P.B.No.1922, Gavipuram P.O., Bangalore-560 019. The last date of the nomination is 30th June, 1997.