

# Space Technology Enabled Village Resource Centre (VRC)



Telemedicine



Tele-education



Panchayat Planning



Training



Weather



Information



Drinking water



Watershed

## Village Resource Centres (VRCs) for Societal Development

There are more than 600,000 villages in India, wherein around 700 million people live. Many of these villages are considerably deprived of basic amenities and services, especially in the areas of education, healthcare, sanitation and empowerment. Improving the quality of life in the villages is an integral part of the overall national development endeavour in the country.

Space technology, as the powerful enabler, provides a variety of vital inputs for holistic and rapid development of rural areas, and villages in specific. India has been among the world leaders in developing end-to-end capability in both satellite remote sensing and communication. Indian Space Research Organisation (ISRO) has made remarkable progress in building state-of-the-art space infrastructure such as the Indian National Satellite (INSAT) for communication and the Indian Remote Sensing (IRS) satellites for earth observation. ISRO has also been a champion in demonstrating the use of space technology for societal good. ISRO has piloted several socially relevant space application projects like the Satellite Instructional Television Experiment (SITE), the Training and Development Communication Channel (TDCC), the Jhabua Development Communications Project (JDPC) using INSAT; and finding prospective groundwater zones to provide drinking water in villages, providing land and water resources development plans at watershed level using IRS.

Space based services, emanating from Satellite Communication (SatCom) and Earth Observation (EO) hold much value in transforming the village society. While SatCom provides the conduit for effective delivery of information and services across vast regions, the EO provides community-centric spatial information in terms of geo-referenced land record, natural resources, sites for exploiting groundwater for potable and recharge, incidence of wastelands having reclamation potential, watershed attributes, environment, infrastructure related information, alternative cropping pattern, etc. Synthesising the spatial information with other collateral and weather information, EO also facilitates locale-specific advisory services at community level. Space based systems are effective in supporting disaster management at community level, wherein the vulnerability and risk related information, early warning, forecast of unusual/extreme weather conditions, etc., provide for building resilience at village community level.

ISRO has embarked upon VRC programme to disseminate the portfolio of services emanating from the

space systems as well as other Information Technology (IT) tools, directly down-the-line to the rural communities.

VRCs essentially have: digital connectivity (for videoconferencing and information transfer) with knowledge centers and specialty healthcare providers enabled via INSAT; spatial information on natural resources generated using IRS data; a host of information pertaining to management of natural resources and socio-economic relevance; and facilities for primary healthcare services and distance education. With the involvement of stakeholders, VRCs will catalyse rural entrepreneurship; and facilitate e-Governance and other services of social relevance.

ISRO is implementing VRC programme in partnership with reputed NGOs, Trusts and other agencies including the Governmental ones.

### VRC Services - Portfolio

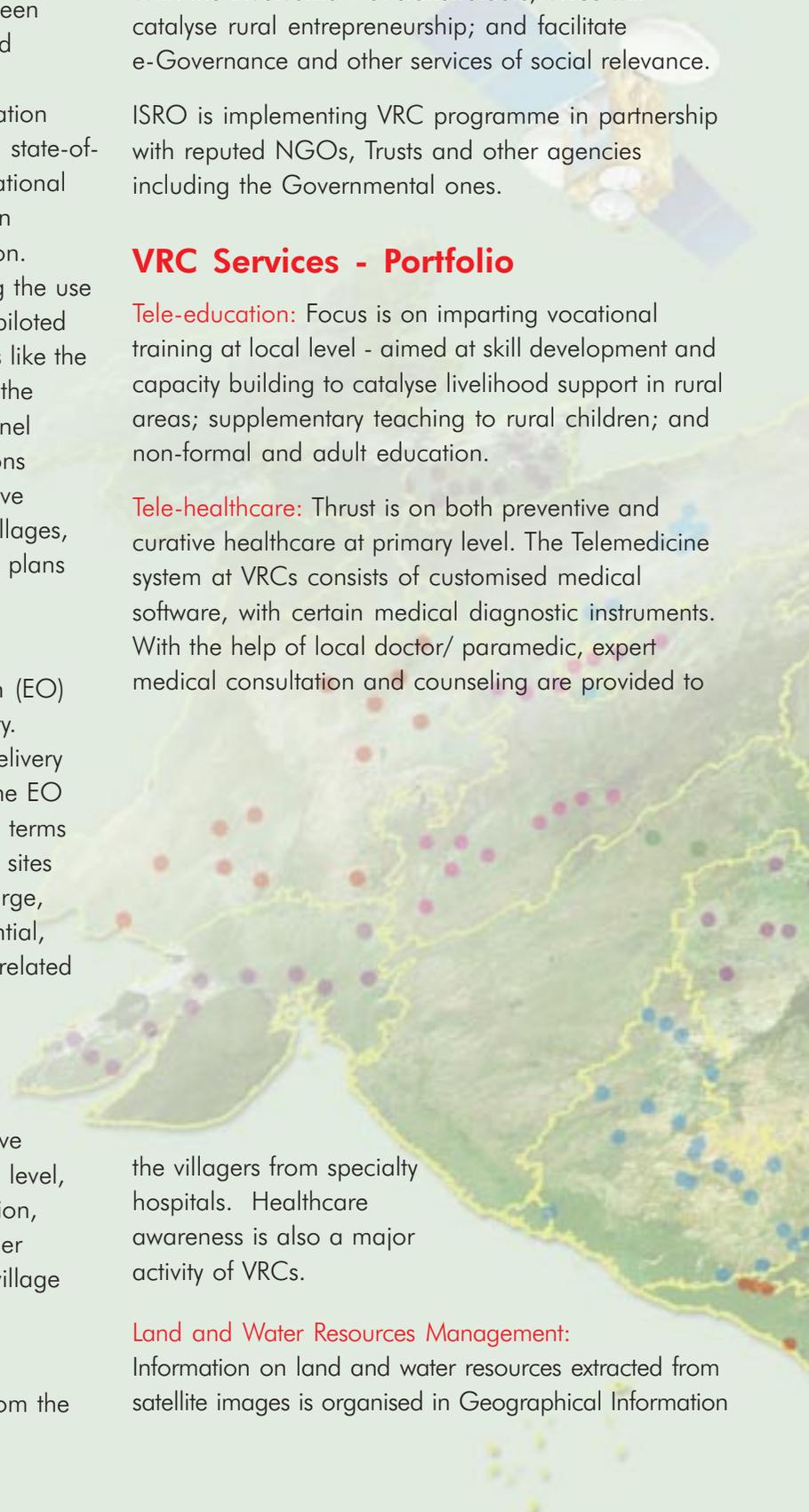
**Tele-education:** Focus is on imparting vocational training at local level - aimed at skill development and capacity building to catalyse livelihood support in rural areas; supplementary teaching to rural children; and non-formal and adult education.

**Tele-healthcare:** Thrust is on both preventive and curative healthcare at primary level. The Telemedicine system at VRCs consists of customised medical software, with certain medical diagnostic instruments. With the help of local doctor/ paramedic, expert medical consultation and counseling are provided to

the villagers from specialty hospitals. Healthcare awareness is also a major activity of VRCs.

#### Land and Water Resources Management:

Information on land and water resources extracted from satellite images is organised in Geographical Information



System (GIS), and provided to the villagers through the VRC. The local farmers, availing the support of the skilled/trained personnel managing VRCs, utilise this information for better management of their land resources.

**Interactive Advisory Services:** VRCs facilitate interactions between the local people and experts at knowledge centers - Agricultural Universities, Technical Institutions, etc - on a wide range of subjects such as alternative cropping systems, optimisation of agricultural inputs-like seeds, water, fertilizer, insecticides, pesticides, producer-oriented marketing opportunities, crop insurance, etc.

**Tele-fishery:** VRCs located at coastal tracts are being provided with near real time information on satellite derived Potential Fishing Zones (PFZ). Information pertaining to inland fisheries, aquaculture, etc., is also provided through VRCs as relevant.

**e-Governance services:** The services include information and guidance to local people on village oriented governmental schemes on agriculture, poverty alleviation, rural employment, social safety nets and other basic entitlements, animal husbandry and livestock related, micro-finance related, etc.

**Weather Services:** Short, medium and long-term weather forecasts, at local level; and agrometeorology advisory services are being enabled.

**Others:** Depending on the local needs, each VRC provides a host of other services.



H. E. The President interacting with farmers from different States, through VRC network, during Virtual Congress of Farmers (January 05, 2006)



Hon'ble Prime Minister Inaugurating the 1<sup>st</sup> VRC network in Tamil Nadu, South India (October 18, 2004)

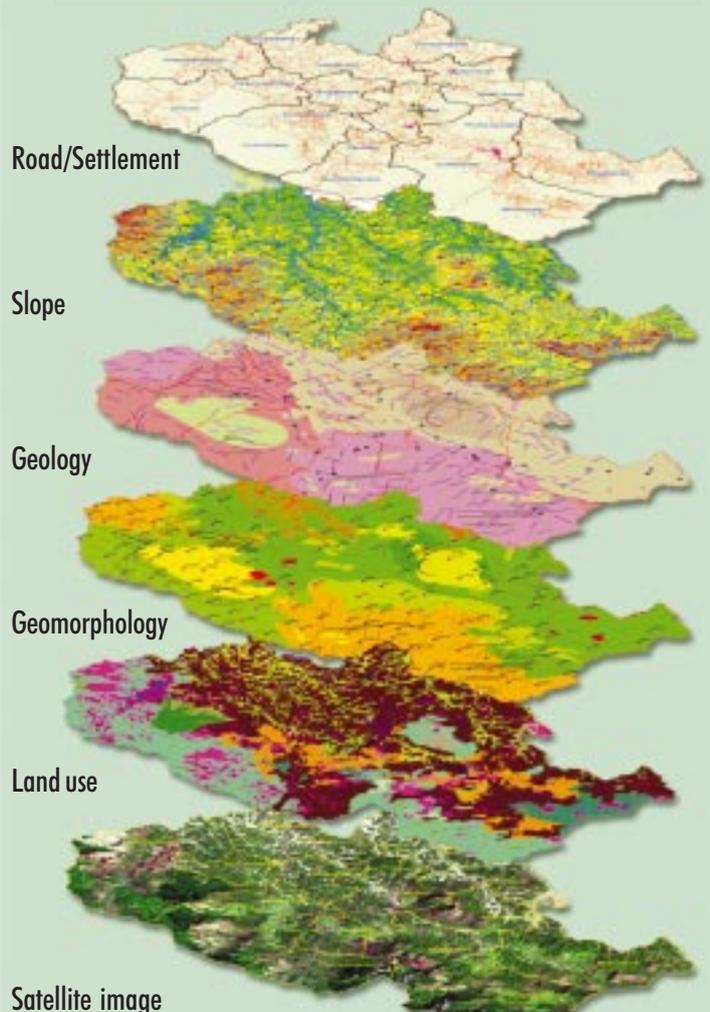
## VRC - Status and Future Plan

During the past two years, over 275 VRCs have been set up in the country across 16 States, in association with about 40 partner agencies. These VRCs have conducted over 3,000 programmes benefiting over 200,000 people.

During the coming years, the VRC programme will be expanded to cover the entire rural and semi-urban parts of the country. Together with the initiatives of other agencies, the benefits of VRCs will be able to reach all the villages in the country.



## VRC Network - Concept



## Natural Resources Database at VRCs



Local Need Assessment through Participatory Rural Appraisal (PRA)

Healthcare Services



Computer Aided Learning Programme (CALP)

Training on Organic Farming, Vermi-compost, Poltury and Herbal Healing for Human and Animal Diseases



Interaction with Self-Help Groups (SHGs)

Training on Use of Satellite derived PFZ and GPS for Fish Finding, Handling, preservation and processing of fish



Publication and Public Relations

**INDIAN SPACE RESEARCH ORGANISATION**

ISRO Headquarters, Antariksh Bhavan, New BEL Road, Bangalore - 560 094, INDIA

[www.isro.gov.in](http://www.isro.gov.in)

Designed by Imagic Creatives and Printed at Mapco Offset Printers