

## **SCIENCE AND RESEARCH SHOULD BE USEFUL TO THE BETTERMENT OF MANKIND: VICE PRESIDENT**

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Vice President's Secretariat

### **Science and Research should be useful to the betterment of mankind: Vice President**

**ISRO should take up futuristic, innovative projects for societal benefits;**

**NRSC should come up with innovative citizen-centric applications for national flagship programmes;**

### **Addresses Scientists and Researchers at NRSC**

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The Vice President of India, Shri M. Venkaiah Naidu has said that Scientists play a key role in providing data and should focus on the requirements of the common man, more importantly of the farmer, and help in formulating strategies for better Governance. He was addressing the Scientists and Researchers at the National Remote Sensing Centre (NRSC), in Hyderabad today. The Chairman, ISRO, Dr. K. Shivan and other dignitaries were present on the occasion.

The Vice President said that ISRO with its state-of-the-art facilities has been harnessing space technology for rural and urban development. He further said that ISRO maintains one of the largest fleet of communication and remote sensing satellites with the versatile workhorse, Polar Satellite Launch Vehicle (PSLV) becoming a favoured carrier. After making every Indian proud with the success of Chandrayaan-1 and Mars Orbiter Spacecraft, now ISRO is gearing up for the launch of Chandrayaan-2 early next year, he added.

The Vice President said that rural development is vital for the country's growth and several national flagship programmes are being implemented in the country for the same. For effective implementation of those schemes, there is a need for optimal utilisation of satellite data for mapping and monitoring the resources and also take up impact assessment studies, he added.

Saying that India is committed to accord high priority to water conservation and its management through Watershed Development Component of Kisan Sinchaayi Yojana, the Vice President said that satellite data is being used to verify the execution of works under watershed development programme and also to assess the impact in terms of additional crop area.

While lauding ISRO for its innumerable achievements, the Vice President asked the prestigious organisation to take up futuristic, innovative projects for societal benefits.

The Vice President said that in view of the increasing demand for citizen centric services NRSC has to play an important role in providing Satellite Data and expand its technical interactions with various states for capacity building. Based on its expertise and capability, he was confident that NRSC will intensify its efforts to come up with innovative citizen-centric applications for national flagship programmes, he added.

Following is the text of Vice President's address:

"I am happy to be here today amongst the ISRO scientific community and understand firsthand the excellent work being carried out in this important centre.

I am also glad to see lot of youngsters here and appreciate them for choosing to work at ISRO. I am sure that many of you will get opportunities to work on challenging scientific projects and prove your calibre.

Since the launch of the first satellite, Aryabhata in 1975, Indian space programme has made rapid strides with India becoming a hub for the launch of Indian and foreign satellites.

With the successful launch of two satellites belonging to UK earlier this month, ISRO has so far launched 239 foreign satellites of 28 countries and proved to be a reliable and affordable global space agency. I am sure that in the coming years, ISRO would be a leading player in the commercial satellite launch market in the world.

Let me first congratulate all scientists for the success of the missions such as the launching of 104 satellites at a time, development of testing Crew Escape System which is a critical technology for human spaceflight GAGANYAAN and the launch of GSLV Mk-III with fully indigenous cryogenic technology.

ISRO with its state-of-the-art facilities has been harnessing space technology for rural and urban development. I am aware that ISRO maintains one of the largest fleet of communication and remote sensing satellites with the versatile workhorse, Polar Satellite Launch Vehicle (PSLV) becoming a favoured carrier.

Remote sensing satellites have enabled India to map, monitor and manage its natural resources. Data generated from them is being used for a variety of applications covering agriculture, water resources, urban planning, environment, forestry, ocean resources, hydrology, disaster management, biodiversity, drought monitoring, flood risk zone mapping and mineral prospecting.

After making every Indian proud with the success of Chandrayaan-1 and Mars Orbiter Spacecraft, I am glad to know that ISRO is gearing up for the launch of Chandrayaan-2 early next year.

I had visited this Centre in 2002 when I was Union Minister for Rural Development. I am happy to be here again after 16 years and share my thoughts with all of you. There have been several satellite missions every year since then.

Scientists play a key role in providing data and should focus on the requirements of the common man, more importantly of the farmer, and help in formulating strategies for better Governance.

When you look at the flagship programmes which are being implemented by various ministries, it is clear the data acquired from Earth Observation Satellites play a major role in generation of information. Frequent observations recorded by satellites are useful to know the past and

current status as also the future scenario.

Dear sisters and brothers,

Rural development is vital for the country's growth. Hence, several national flagship programmes are being implemented in the country. For effective implementation of those schemes, there is a need for optimal utilisation of satellite data for mapping and monitoring the resources and also take up impact assessment studies. I am glad that ISRO has facilitated geo-tagging of nearly 3.68 Crores of assets created under MGNREGA and uploading the details on Bhuvan geo portal.

I am told that Cartosat satellite data was extensively utilised by NRSC for monitoring the progress of 100 irrigation projects. Satellite derived information on periodic rainfall and groundwater prospects has facilitated the water resource planners for prioritisation of works. Satellite-based information should be available for supporting the management plans for rural development, particularly at village / taluk level to enable decentralised planning.

India is committed to accord high priority to water conservation and its management through Watershed Development Component of Kisan Sinchaayi Yojana. Satellite data is being used to verify the execution of works under watershed development programme and also to assess the impact in terms of additional crop area.

I am aware that the major efforts of NRSC will help the planners in relation to mapping of various cropping systems, analysing drought scenarios, preparing plans for crop intensification and locating the available proximate water resources.

I am glad that high resolution satellite data is being utilised in AMRUT scheme, which seeks to provide basic amenities and improve urban transport in 500 cities, as part of enhancing the quality of life of the people, especially the poor.

Periodic mapping, monitoring of natural resources like landscape changes, land utilisation, land degradation, wasteland database would facilitate several projects of rural development. Potential estimate of power generation in waste lands or suitable land parcels through satellite derived solar parameters is a classic case of utilisation of satellite data to harness the renewable energy.

While lauding ISRO for its innumerable achievements, I would like the prestigious organisation to take up futuristic, innovative projects for societal benefits.

It should take up the challenge to provide web-based analytics from satellite images for various users.

Inter-linking of rivers is a major effort which is under discussion for a long time and requires huge information in spatial domain from satellites. Several plans have to be drawn with the help of aerial / satellite data and I assume that ISRO has the capability to support this planning activity with help of high resolution satellite data and terrain / elevation information retrieval methodologies. I am told that a few river link studies have already benefitted from your expertise.

It is very difficult to manage disasters like Kerala floods or other such events due to the devastation caused by them. While the Disaster Management Support Programme of ISRO at NRSC is providing flood-related information to the State and Central Relief departments, I would like ISRO to come up with early flood warning and Inundation Simulation of all vulnerable river reaches and reservoirs for preparation of evacuation plans.

This may require launching of all weather satellites, experiments with unmanned aerial flights with imaging sensors to provide information to the field teams at frequent intervals during the floods. I am sure ISRO would take up this challenge.

Landslides are one of the major concerns for the country in hilly regions in eastern part of India and also in other areas. Hence, NRSC should utilise satellites to monitor landslide susceptible areas and prepare hazard zonation maps. I am sure this noble task would save many lives. We need an efficient retrieval of sufficient information for disaster risk reduction.

Though NRSC data is extensively utilized in forest management, there is a need to provide location specific information in near real time with greater accuracy.

Institutions like NRSC should also focus on ocean atmosphere studies in view of global warming and climate change. There is a need to look into climate patterns and atmospheric interaction processes for more reliable prediction of cyclones, their genesis, prediction of track, land fall and genesis of Tsunami, among others. As these processes are global in nature, we need to think of global collaborations and the utilisation of Indian and global satellites

In view of the increasing demand for citizen centric services NRSC has to play an important role in providing Satellite Data and expand its technical interactions with various states for capacity building.

Based on its expertise and capability, I am confident that NRSC will intensify its efforts to come up with innovative citizen-centric applications for national flagship programmes.

I am told that ISRO's future plans include development of heavy lift launchers, human spaceflight projects, reusable launch vehicles, semi-cryogenic engines, development and use of composite materials for space applications. It is also aiming to conduct 12 launches per year.

My best wishes to ISRO Chairman and his team for their future endeavours.

I wish you all a grand success for your targeted 12 launches per year.

Thank you all."

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