GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

RAJYA SABHA

STARRED QUESTION NO. 174

TO BE ANSWERED ON THURSDAY, DECEMBER 22, 2022

SCIENTIFIC EVIDENCE TO INDIA'S HISTORY

*174. SHRI ANIL DESAI:

Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that history of India's ancient civilisation is not just a myth but there are some evidence available to prove it;

(b) if so, whether places like Ram Setu, submerged city of Dwarka etc., can also be scientifically proved by images taken by our remote sensing orbiting in space; and

(c) if so, whether the space programme may also include and complete such research on historical facts/evidence?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND IN THE PRIME MINISTER'S OFFICE

(DR. JITENDRA SINGH):

(a) to (c) A Statement is laid on the Table of the House.

*****

STATEMENT LAID ON THE TABLE OF THE RAJYA SABHA IN REPLY TO STARRED QUESTION NO. 174 REGARDING "SCIENTIFIC EVIDENCE TO INDIA'S HISTORY" ASKED BY SHRI ANIL DESAI FOR ANSWER ON THURSDAY, DECEMBER 22, 2022.

(a) India has rich cultural heritage and hosts a large number of archaeological sites spread across the country. There have been some studies carried out in India to explore the potential of space based remote sensing for archaeology. Some of these studies include mapping the paleochannels in northwest India using multi-sensor satellite data and understanding its migration and evolution. These studies have shown evidences of a prominent river system, which had become defunct and buried under sand cover of Thar Desert. This has been identified as an ancient river mentioned in many ancient Indian texts and epics. Also, the locations of sites belonging to Harappan civilization, when overlaid, were found to be on the banks of these paleochannels.

High resolution Satellite images show surface impressions of ancient civilisations of Harrapan age sites viz., Dolavira (Gujarat), Kalibanga (Rajasthan), Lothal (Gujarat) and mounds associated with Nalanda. The satellite images along with other associated technologies like Ground Penetrating Radar (GPR) have also been used to search buried sites. ISRO has also brought out an atlas showcasing synoptic view of 37 important cultural heritage sites, as observed from remote sensing satellites.

(b) Remote sensing observation can help in understanding proxies for archaeological sites. They do not directly provide details of such ancient civilization, but some surface features like mounds, paleochannels, morphological anomalies, tonal anomalies etc. can be identified, which may be the proxies of buried archaeological sites. These observations need to be supported by ground investigations.

Indian satellites have acquired high resolution images over Ram Setu region connecting India and Sri Lanka. However, satellite images cannot provide direct information about the origin and age of this structure.

Submerged city of Dwarka cannot be seen by remote sensing satellites, as it cannot acquire images below the surface.

(c) The present and future earth observation data, both in optical and microwave domain, could be used for the study of surface signatures, if any, of buried archaeological sites of ancient civilization. Satellite data alone is not sufficient for such research, and it can be used only as supportive information.

*****