

THE MINISTER OF STATE IN THE MINISTRY OF SOCIAL JUSTICE AND EMPOWERMENT (SHRI VIJAY SAMPLA): (a) No such information is available in this regard.

(b) The Committee constituted by the Ministry of Housing and Urban Affairs on Urban Homeless as per the order of Hon'ble Supreme Court, in its final report has pointed out that there is a huge gap in number of urban homeless and capacity of the shelters available in the State/UT. Due to on-availability of land at the required place for construction of shelters and lack of proper survey of the urban homeless by the respective States/UTs, lack of institutional preparedness at the level of ULBs/Municipal Corporations, the progress of completion of Shelter Homes/Rain Baseras is slow.

(c) Ministry of Housing and Urban Affairs has informed that as per census 2011, the total urban houseless population in India is 9,38,348. Scheme of Shelter for Urban Homeless (SUH) component of the Deendayal Antyodaya Yojana–National Urban Livelihoods Mission (DAY-NULM) provides that the Shelter Management Agencies should ensure access to various entitlements and benefits of the urban homeless including identity proof, Elector's Photo Identity Card, Aadhaar Card etc. However, the scheme is implemented by State Governments/UT Administrations.

Upgrading of aerospace technology

773. SHRI K. RAHMAN KHAN: Will the PRIME MINISTER be pleased to state:

(a) the reasons for the failure of PSLV C-39 mission on the 31st August, 2017;

(b) what steps would the Department propose to constantly upgrade the aerospace technology;

(c) what is the budgetary allocations for the Research and Development Programmes' of ISRO;

(d) where it stands when compared to the R&D of other countries which are in space programmes; and

(e) what efforts the Department is making for obtaining certification for the products developed by our aerospace scientists?

THE MINISTER OF STATE IN THE DEPARTMENT OF SPACE (DR. JITENDRA SINGH): (a) The 41st flight of PSLV (PSLV-C39) that took place on August 31, 2017 with Indian Regional Navigational Satellite (IRNSS-1H weighing 1425 kg) could not reach the designated orbit, due to non-separation of Payload Fairing (also known as heat shield)

during the 2nd stage of the flight. The root cause of the failure was understood after analysing the various flight and ground test data in more detail. For the Payload Fairing separation to happen successfully, the horizontal and vertical jettisoning system needs to function. Based on the flight data, it was observed that the command for horizontal and vertical jettisoning system was successfully issued. Though the horizontal jettisoning system functioned normally, there was malfunctioning of the vertical jettisoning system, due to which the Payload Fairing did not separate. The cause for the malfunctioning was the non-initiation of detonation in the vertical jettisoning system.

(b) The Department constantly undertakes various Research & Development activities, technology developments and experimental missions towards technological upgradation and achieve significant improvement in the performance of the launch vehicles, satellites and ground systems. The recent experimental missions that were successfully accomplished were the Reusable Launch Vehicle – Technology Demonstrator in May, 2016 and the first experimental flight of a sub-scale Scramjet engine in August, 2016, towards reducing the cost of access to space. The Department has also undertaken technology development and upgradation in the propulsion systems to increase the payload capability of the space transportation systems such as the development of a Semicryogenic engine, high thrust liquid engines and Cryogenic stages with increased propellant loading. The Department has also undertaken the development of high thrust electric propulsion systems towards an all-electric communication satellites to replace the relatively heavier Chemical propulsion system.

(c) The budget allocation of Department of Space during the FY 2017-18 is ₹9093.71 crore. – 20% of the total allocation for Department of Space are deployed for R&D activities.

(d) As per the report "The Space Economy at a Glance 2014" published by OECD (Organisation for Economic Cooperation & Development), India stands at sixth position among the space faring nations, in terms of space budget as percentage of GDP.

(e) The products developed by the Department undergo rigorous design reviews, qualification tests and acceptance tests before they are inducted into the systems. ISRO has a well-defined Quality Assurance mechanism that certifies the products before they are inducted into the various systems for its space missions. The procedures for quality assurance and quality control are well documented and disseminated to the in-house and external work centres in order to ensure the product reliability.