

**GOVERNMENT OF INDIA
SPACE
LOK SABHA**

UNSTARRED QUESTION NO:4912

ANSWERED ON:26.04.2000

LAUNCHING OF SATELLITES

ANANDRAO ADSUL;ANANTA NAYAK;BHIM PRASAD DAHAL;CHANDRAKANT BHAURAO KHAIRE;MADHAVRAO SCINDIA;SUSHIL KUMAR SAMBAJIRAO SHINDE;TUFANI SAROJ

Will the Minister of SPACE be pleased to state:

- (a) the satellites launched by the Government into space till date and the total cost involved in launching them satellite-wise;
- (b) the reasons for continuous increase in cost of launching;
- (c) the number of satellite launched from Ariane Space Centre;
- (d) the main features of INSAT-3 series and how far it represents an improvement over the earlier satellites and benefits likely to be derived therefrom;
- (e) whether a INSAT-2D satellite similar to INSAT 3-B launched earlier had failed;
- (f) if so, the details and reasons therefor; (g) the number of new satellites proposed to be launched in the next two years; and (h) the average life of each of the satellite launched into the space so far?

Answer

MINISTER OF STATE IN THE DEPARTMENT OF SPACE

(SMT. VASUNDHARA RAJE)

- (a) The details of satellites launched into space till date and the total cost involved in launching, satellite-wise is given in Annexure-I.
- (b) The increase in cost of launching satellites is mainly due to increase in the weight of the satellite, requirement of different orbits and increase in foreign exchange rates as well as inflation over the period.
- (c) The number of satellites launched on the Ariane launch vehicle is eight.
- (d) The INSAT-3 satellites provide continuity of service in the INSAT system. INSAT-3 spacecraft series will have a multipurpose bus configuration capable of providing communication and meteorological services such as long distance tele-communications, meteorological earth observation and data relay, nation- wide direct TV broadcasting to augmented TV receivers, nation-wide radio networking, TV programme distribution, re-broadcasting to terrestrial transmitters, satellite based training and developmental communication, disaster warning, etc. The transponders of the INSAT-3B satellite are more powerful than the transponders on the INSAT-2 series of satellites. The INSAT-3 series of satellites also use improved sub-systems.
- (e) Yes, Sir. The INSAT-2D satellite launched in June, 1997 failed in October, 1997.
- (f) INSAT-2D was lost due to an electrical short circuit in the power bus. INSAT-2D satellite was launched on 4th June, 1997. The satellite was operating satisfactorily for about 4 months. On October 1, 1997 an unexpected massive short circuit in the power system was observed. All possible efforts were made to rescue the mission. However, due to non- availability of sufficient power and depletion of fuel, the satellite was declared in-operable on October 5, 1997.
- (g) It is proposed to launch Five to Eight satellites in the next two years of the 9th plan period.
- (h) The actual life of each of the satellite launched so far is given in Annexure-II.

Annexure-I

The details of satellites launched into space till date and the total cost involved in launching, satellite-wise

Sl.No.	SATELLITE	LAUNCH COST
--------	-----------	-------------

1	ARYABHATA	FREE LAUNCH
2	BHASKARA -I	FREE LAUNCH
3	BHASKARA-II	FREE LAUNCH
4	ARIANE PASSANGER PAYLOAD EXPERIMENT (APPLE)	FREE LAUNCH

5	ROHINI TECHNOLOGY PAYLOAD (RTP)	Rs. 1.5 Crores
6	ROHINI SATELLITE-1 (RS-1)	Rs. 1. 5 Crores
7	ROHINI SATELLITE-D1 (RS-D1)	Rs. 1.5 Crores
8	ROHINI SATELLITE -D2 (RS-D2)	Rs. 1.5 Crores
9	STRETCHED ROHINI SATELLITE SERIES-1 (SROSS-1)	Rs.6.00 Crores
10	STRETCHED ROHINI SATELLITE SERIES-2 (SROSS-2)	Rs. 6.00 Crores
11	STRETCHED ROHINI SATELLITE SERIES-C (SROSS-C)	Rs.9.00 Crores
12	STRETCHED ROHINI SATELLITE SERIES-C2 (SROSS-C2)	Rs.9.00 Crores
13	INDIAN NATIONAL SATELLITE-1A (INSAT-1A)	} US \$ 34.1 M
14	INDIAN NATIONAL SATELLITE-1B (INSAT-1B)	}
15	INDIAN NATIONAL SATELLITE-1C(INSAT-1C)	US \$ 34.8 M
16	INDIAN NATIONAL SATELLITE-1D (INSAT-1D)	US \$ 45.9 M
17	INDIAN NATIONAL SATELLITE-2A (INSAT-2A)	US \$ 55 M
18	INDIAN NATIONAL SATELLITE-2B (INSAT-2B)	US \$ 56 M
19	INDIAN NATIONAL SATELLITE-2C (INSAT-2C)	US \$ 64.88 M
20	INDIAN NATIONAL SATELLITE-2D(INSAT-2D)	US \$ 62.04 M
21	INDIAN NATIONAL SATELLITE-2E (INSAT-2E)	US \$ 68 M
22	INDIAN NATIONAL SATELLITE-3B (INSAT-3B)	US \$ 63.5 M
23	INDIAN REMOTE SENSING SATELLITE (IRS-1A)	Rs. 7.5 Crores
24	INDIAN REMOTE SENSING SATELLITE (IRS-1B)	Rs. 31.80 Crores
25	INDIAN REMOTE SENSING SATELLITE (IRS-1E)	Rs.45.00 Crores
26	INDIAN REMOTE SENSING SATELLITE (IRS-P2)	Rs.45.00 Crores
27	INDIAN REMOTE SENSING SATELLITE (IRS-P3)	Rs. 45.00 Crores
28	INDIAN REMOTE SENSING SATELLITE (IRS-1C)	Rs.60.312 Crores
29	INDIAN REMOTE SENSING SATELLITE (IRS-1D)	Rs.60.00 Crores
30	INDIAN REMOTE SENSING SATELLITE (IRS-P4)	Rs. 60.00 Crores

Annexure-II Details regarding the Actual life of each of Satellites launched so far

Sl.No.	SATELLITE	ACTUAL LIFE
--------	-----------	-------------

1	ARYABHATA	1 Year
2	BHASKARA -I	2 Years
3	BHASKARA-II	2 Years
4	ARIANE PASSENGER PAYLOAD EXPERIENT(APPLE)	2 Years
5	ROHINI TECHNOLOGY PAYLOAD (RTP)	Not applicable as the satellite went into sub-orbit.
6	ROHINI SATELLITE-1 (RS-1)	10 months
7	ROHINI SATELLITE-D1 (RS-D1)	9 Days (Non-nominal launch)
8	ROHINI SATELLITE -D2 (RS-D2)	2 Years
9	STRETCHED ROHINI SATELLITE SERIES-1(SROSS-1)	Not applicable as the satellites went into sub-orbit.
10	STRETCHED ROHINI SATELLITE SERIES-2 (SROSS-2)	- do -
11	STRETCHED ROHINI SATELLITE SERIES-C(SROSS-C)	56 Days (Non-nominal launch)
12	STRETCHED ROHINI SATELLITE SERIES-C2 (SROSS-C2)	6 Years (Still operating)
13	INDIAN NATIONAL SATELLITE-1A (INSAT-1A)	Less than 4 months (Pre-mature closure of the mission)
14	INDIAN NATIONAL SATELLITE-1B (INSAT-1B)	More than 8 Years
15	INDIAN NATIONAL SATELLITE-1C(INSAT-1C)	About 16 months (Pre-mature closure of the mission)
16	INDIAN NATIONAL SATELLITE-1D (INSAT-1D)	9 Years
17	INDIAN NATIONAL SATELLITE-2A (INSAT-2A)	More than 7 Years (still operating)
18	INDIAN NATIONAL SATELLITE-2B (INSAT-2B)	More than 6 Years (still operating)
19	INDIAN NATIONAL SATELLITE-2C (INSAT-2C)	More than 4 Years (still operating)
20	INDIAN NATIONAL SATELLITE-2D(INSAT-2D)	About 4 months (Pre-mature closure of the mission)
21	INDIAN NATIONAL SATELLITE-2E (INSAT-2E)	1 Year (still operating)
22	INDIAN NATIONAL SATELLITE-3B (INSAT-3B)	Launched in April,2000. Being operationalised
23	INDIAN REMOTE SENSING SATELLITE (IRS-1A)	6 Years
24	INDIAN REMOTE SENSING SATELLITE (IRS-1B)	More than 8 Years (still operating)
25	INDIAN REMOTE SENSING SATELLITE (IRS-1E)	Not applicable as the satellite went into sub-orbit.
26	INDIAN REMOTE SENSING SATELLITE (IRS-P2)	3 Years
27	INDIAN REMOTE SENSING SATELLITE (IRS-P3)	4 Years (still operating)
28	INDIAN REMOTE SENSING SATELLITE (IRS-1C)	More than 4 Years (still operating)
29	INDIAN REMOTE SENSING SATELLITE (IRS-1D)	More than 2 Years (still operating)
30	INDIAN REMOTE SENSING SATELLITE (IRS-P4)	About 1 Year (still operating)