(b) if so, the details thereof mentioning therein the total number of cases reported therein in the last years and from where and whether Government proposes to ban the entry of these foreign ships, if so, the details thereof and if not, the reasons therefor; and

(c) whether international laws are being violated by allowing the entry of such ships, if so, the details in this regard, and the steps being taken by Government in the matter?

THE MINISTER OF SHIPPING (SHRI G.K. VASAN): (a) and (b) No, Sir. No instance of any foreign ship carrying poisonous chemicals 'advancing towards Alang Shipyard in Gujarat and other ports throughout the country was reported to this Ministry and therefore there is no proposal in this Ministry to ban entry of any such foreign ships.

(c) No specific report of violation of any international law has been brought to the notice of this Ministry.

Development of satellite launch pads in the country

2459. DR. R. LAKSHMANAN: Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that Government has made significant progress in the field of Launch Vehicle Development, Earth Observation and Satellite Communication Systems; if so, the details thereof; and;

(b) whether Government has fixed any target in this field to be achieved during the Twelfth Five Year Plan; if so, the details thereof?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI V. NARAYANASAMY): (a) Yes, Sir. Indian Space Research Organisation (ISRO) has made significant progress in the field of Launch Vehicle Development, Earth Observation and Satellite communication systems. The highlights are given below:

Launch Vehicle Development:

India has made considerable progress to achieve self-reliance in launch vehicle development programme with the operationalisation of Polar Satellite Launch Vehicle (PSLV) and Geosynchronous Satellite Launch Vehicle (GSLV). The recent successful launch of GSLV-D5 with indigenous cryogenic stage on January 05, 2014 has demonstrated the self reliance in putting 2 tonne class satellites in Geo-synchronous

Transfer Orbit (GTO). PSLV has so far accomplished 25 flights out of which 24 flights have been consecutively successful. It is capable of launching 1.7 Tonne payload in Sun Synchronous orbit and 1.4 tonne in GTO. It has launched 35 satellites of 19 foreign countries.

Earth Observation:

India has one of the largest constellations of Earth Observation (EO) satellites with 13 operational Indian Remote Sensing (IRS) satellites in orbit including satellites for meteorological observations. These satellites provide data in varied spatial resolutions ranging from 1 km to 0.8 meter with varying revisit capability catering to diverse application needs of the user community. ISRO has further strengthened the EO capability by launching an indigenously designed Radar Imaging Satellite (RISAT-1) with imaging capability during day and night under all weather conditions. Also, a new dimension has been added to weather monitoring capability with the launch of an advanced weather satellite INSAT-3D. The first geostationary Atmospheric Sounding System, over Indian Ocean Region, onboard INSAT-3D provides vertical profiles of temperature, humidity and integrated ozone. These satellites are supporting crucial services like cyclone tracking, enhanced meteorological observations and monitoring of land and ocean surfaces.

Satellite Communication Systems:

India has constellation of 10 operational communication satellites (INSAT/GSAT), which is the largest domestic communication satellite system in the Asia Pacific region. These satellites are being used for Government, strategic, commercial and societal applications including Television, Direct-to-Home (DTH), data-communication, cellular backhaul, Very Small Aperture Terminals (VSATs) for ATMs, e-Governance, stock-exchange, Tele-education, Tele-medicine, Village Resources Centres (VRCs), disaster management, search & rescue etc.

(b) Yes, Sir. The Government has fixed programmatic targets for Launch Vehicle Development, Earth Observation and Satellite communication systems in the Twelfth Five Year Plan. The highlights are given below:

Launch Vehicle Development:

It is envisaged to continue operational flights of PSLV, developmental flights of GSLV with indigenous cryogenic stage followed by operational flights and undertake developmental flights of the next generation launch vehicle GSLV Mk III.

It is also envisaged to develop critical technologies for advanced launch vehicle systems.

Earth Observation:

It is planned to realize high resolution cartography satellites, build capacity for near real time observations for disaster management support and ensure continuity to the existing Earth Observation Systems through operational IRS satellites.

Satellite Communication Systems:

It is planned to realize an advanced Ka band communication satellite with multi-beam technology, initiate development of 6 tonne class communication satellites and augment transponder capacity to meet the domestic demand.

Delay in launching of GSLV-D5

2460. SHRIMATI WANSUK SYIEM: Will the PRIME MINISTER be pleased to state:

(a) whether International experts feel that India's recent successful launch of GSLV-D5 vehicle into space had been much delayed from the originally set three-five years to a long twenty years; and;

(b) whether India has still in its hand a much bigger task, of creating a rocket powerful enough to propel a full-fledged communication satellite into space that would weigh upward of four tonnes, double the weight of GSLV-D5, if so, the details thereof?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI V. NARAYANASAMY): (a) Recently on 5th January, 2014, India has successfully launched Geosynchronous Satellite Launch Vehicle (GSLV-D5), which incorporated an indigenously developed cryogenic engine and stage. Realization of the cryogenic engine and stage has taken a longer time than originally expected due to complexities of critical technologies. Even advanced countries have taken nearly 10 to 15 years for realizing flight qualified cryogenic stage.

International media reports and International space agencies during various interactions have appreciated India's achievement, with the recent successful launch of GSLV-D5 with indigenous cryogenic engine and stage.