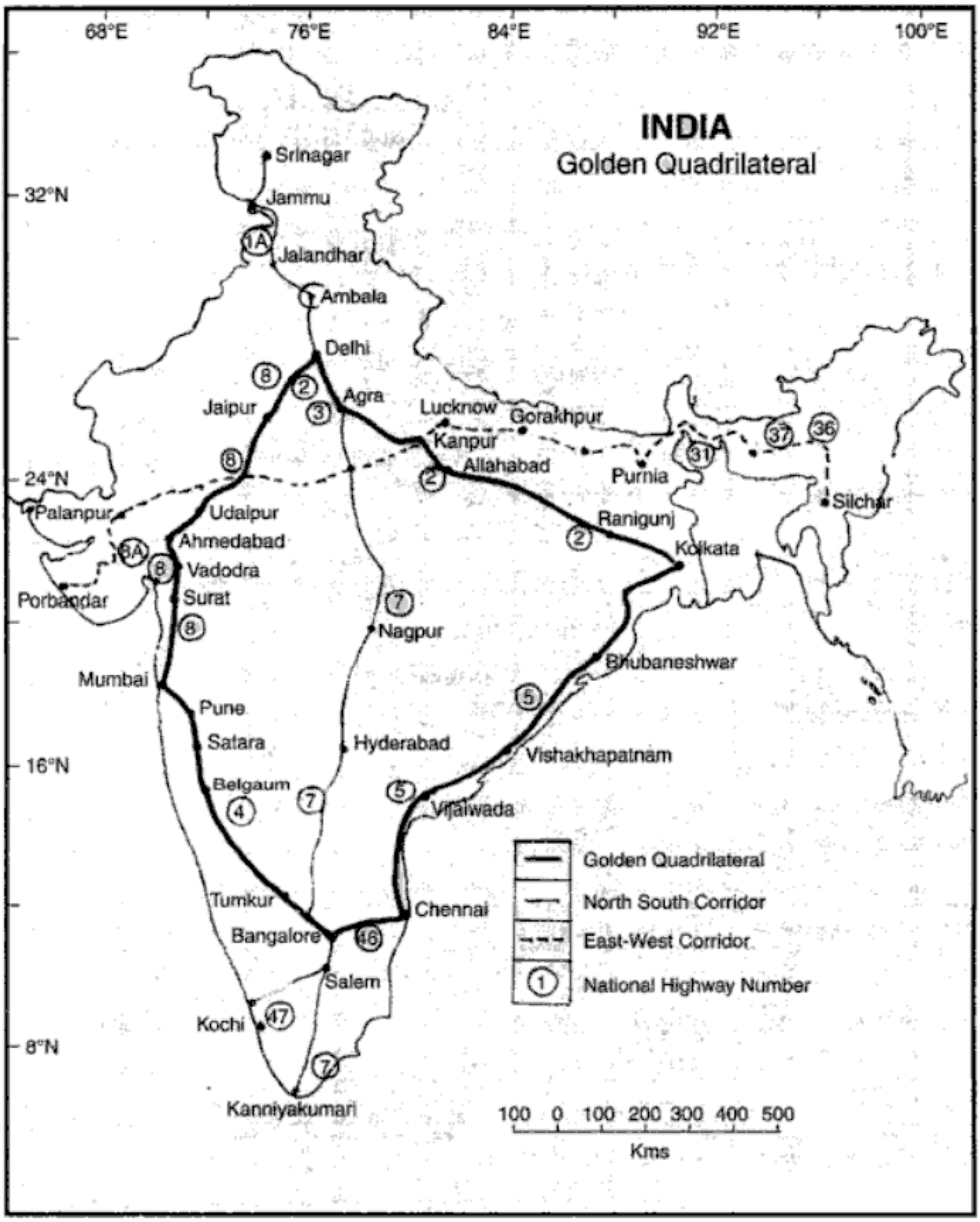

Fig. 12.2 National Highways Development Project

1. Declaration of the road sector as an industry.
2. Provision of capital subsidy up to 40 per cent of the project cost to make project commercially viable.
3. Full (100 per cent) tax exemption in any consecutive 10 years out of the first 20 years of the project.
4. Provision of encumbrance free site work, i.e., the Government shall meet all expenses relating to land and other pre-construction activities.

Fig. 12.4 Railway Network

Table 12.3 *India—Railway Zones*

Zones	*Date of Formation*	*Headquarters*
1. Southern	14.4.1951	Chennai
2. Central	05.11.1951	Mumbai (CST)
3. Western	05.11.1951	Mumbai (Churchgate)
4. Northern	14.04.1952	New Delhi
5. North-Eastern	14.04.1952	Gorakhpur
6. South Eastern	01.08.1955	Kolkata
7. Eastern	01.08.1955	Kolkata
8. North-Eastern Frontier	15.01.1958	Maligaon (Guwahati)

(*Contd.*)

9. New Mangalore Situated along the coast of Karnataka, it was developed about 9 km to the north of old port of Mangalore. The port is linked through Broad Gauge railway line and the National Highway NH-17 with Mumbai. Its main exports are cashew-nuts, coffee, forest products, iron-ore, manganese-ore, and timber, while the imports include crude oil, fertilisers, machiney, and petroleum and petroleum products.

10. New Tuticorin This seaport has been developed about 8 km to the south to the old Tuticorin port. The port has an artificial deep sea-harbour. It has a rich hinterland comprising the districts of Kanyakumari, and Ramanathapuram. It is well connected with railways and National Highway (NH-7A). Its main exports include cardamom, cotton, cotton goods, hides and skins, while the main imports consist of coal, fertilisers, hardware, and machinery.

11. Paradwip Situated along the coast of Orissa, it is a deep water seaport. In fact, Paradwip has the deepest harbour in the country. It exports cotton goods, iron-ore, iron-and steel, manganese, and scrap, while the imports include petroleum products, edible oils, machinery, and electric goods.

12. Vishakhapatnam Developed in 1933, it has the best natural harbour in the country. It has a huge hinterland in the states of Andhra Pradesh, Chhattisgarh, Madhya Pradesh, and Orissa. Vishakhapatnam port ranked first in India for the last six years in respect of cargo traffic. Its main

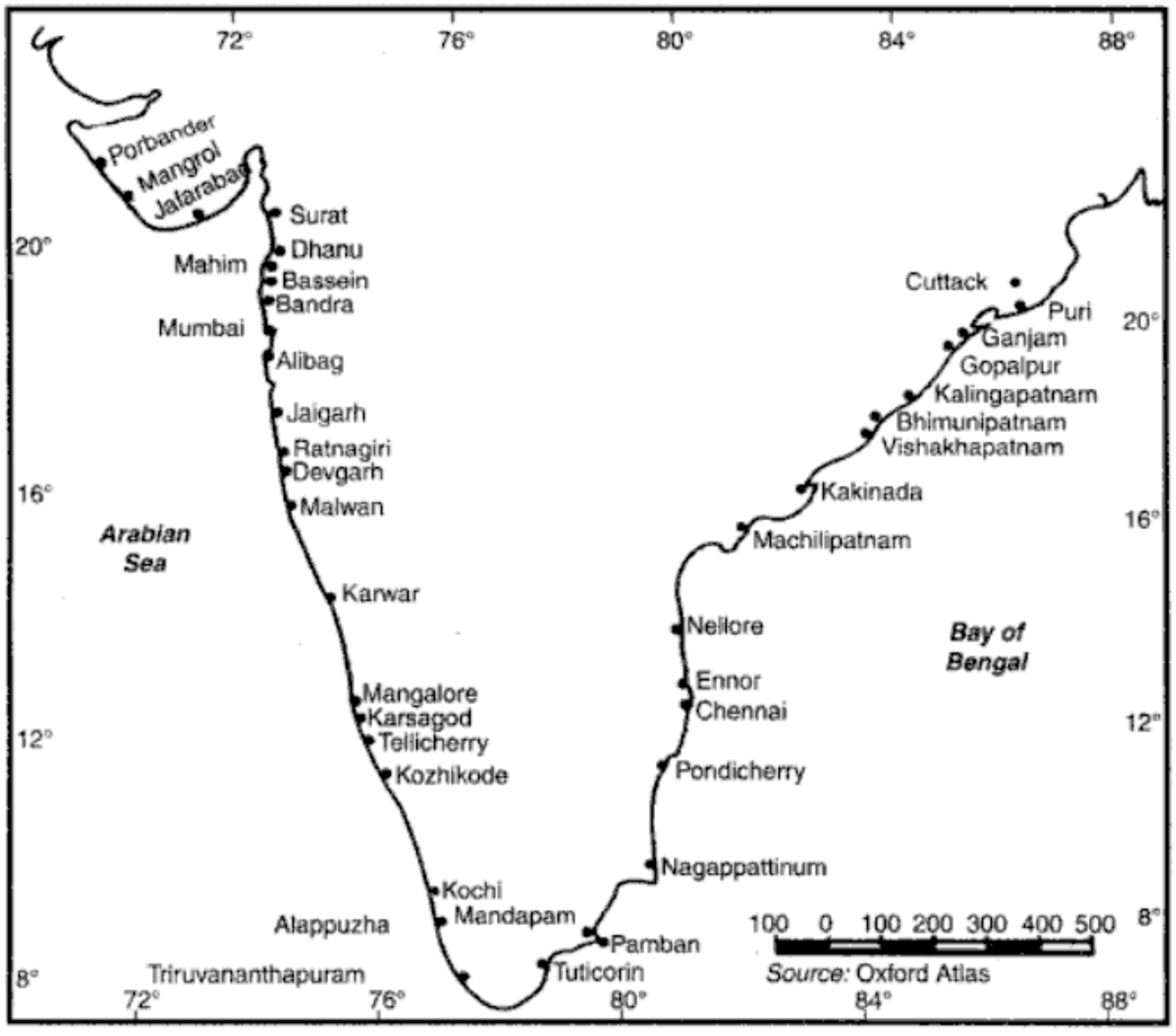

Fig. 12.7 Major Fishing Ports

7. **Infrastructure** The social amenities at the railway stations, bus-stands, and airports need a substantial improvement.

8. **New Technology** The new technology of transport is to be taken at a preferential bases.

9. **Involvement of Private Sector** For the generation of funds there should be more involvement of the private sector in the transport industry.

COMMUNICATIONS

Postal System

The establishment of modern postal system in India can be traced back to the second half of the 18th century. This postal system, established by Lord Clive in the year 1766, was further developed by Warren Hastings by establishing the Calcutta General Post Office (GPO) under the Post Master General in the year 1774. In the other Presidencies of Bombay and Madras, the General Post Office came into existence in 1786 and 1793 respectively. The Act of 1873 first regulated the Post Office on a uniform basis to unite the post office organisation throughout the three presidencies into one All India Service. The Post Office Act 1854 reformed the entire fabric of the Postal System, and Post Office of India was placed on the present administrative footing about one hundred and fifty years ago on October 1, 1854. The statute presently governing the postal services in the country is the Indian Post Office Act, 1898.

Besides providing postal communication facilities, the post office network has also provided facilities for remittance of funds, banking and insurance services from the latter half of the 19th century.

Postal Network

At the time of Independence there were 23,344 post offices throughout the country. In April 2005, the country has 1,55,516 post offices, of which 1,39,120 are in the rural areas and 16,396 in the urban areas. As a result of this seven-fold growth, today India has the largest postal network in the world.

The postal network consists of four categories of post offices, viz., (i) Head Post Office, (ii) Sub-Post Offices, (iii) Extra Departmental Sub Post Offices, and (iv) Extra Departmental Branch Post Offices. All the categories of Post Offices retain similar postal services, while delivery function is restricted to specified offices. In terms of management control, accounts are consolidated progressively from Branch Post Offices to Sub Post Offices and finally in Head Post Offices.

The Department has about 2.47 lakh departmental employees and about 2.93 lakh Gramin Dal Sevaks as on March 31, 2005.

Mail System

First class mail, viz., post cards, inland letters, and envelops are given airlift wherever found advantageous, without any surcharge, between stations connected by air. Second class mail, viz., book packets, registered newspapers, and periodicals are carried by surface transport, i.e. trains and road transport.

International Mails

India is a member of the Universal Postal Union (UPU) since 1876 and of the Asian Pacific Postal Union (APPU) since 1964. These organisations aim at extending, facilitating, and improving

(viii) Upgrading our infrastructural network, both physical and virtual, related to the entire foreign trade chain, to international standard.

(ix) Revitalising the Board of Trade by redefining its role, giving it due recognition and inducting experts on Trade Policy.

(x) Activating our Embassies as key players in our export strategy and linking our Commercial Wings abroad through an electronic platform for real time trade intelligence.

INDIA—SPACE PROGRAMME

History: India's experience in rocketery began in ancient times when fireworks were first used in the country, a technology invented in neighbouring China, and which had an extensive two-way exchange of ideas and goods with India, connected by the Silk Road. Military use of rockets by Indians during the Mysore War against the British inspired William Congreve to invent the Congreve rocket, predecessor of modern artillery rockets, in 1804. After India gained Indepenedence from British occupation in 1947, Indian scientists and politicians recognised the potential of rocket technology in both defence applications, and for research development. Recognising the fact that a country as demographically large as India would require its own independent space capabilities, and recognising the early potential of satellites in the fields of remote sensing and communication, these visionaries set about establishing a space research organisation.

Phase I: 1960–70

Dr. Vikram Sarabhai was the founding father of the Indian space programme, and is considered not only a scientific visionary by many but also a national hero. After the launch of Sputnik in 1957, he recognised the potential that satellites provided. India's first Prime Minister, Pt. Jawaharlal Nehru, who saw scientific development as an essential part of India's future, placed space research under the jurisdiction of the Department of Atomic Evergy in 1961. The DAE Director Homi Bhabha, who is regarded as the father of India's atomic programme, then established the Indian National Committee for Space Research (INCOSPAR) with Dr. Sarabhai as Chairman in 1962.

From its establishment in 1962, the Indian space programme began establishing itself with the launch of sounding rockets, which was complemented by India's geographical proximity to the equator. These were established from the newly-established Thumba Equatorial Rocket Launching Station (TERLS), built near Thiruvananthapuram in south Kerala. Subsequently, India developed indigenous technology of sounding rockets called *Rohini Family* of sounding rockets.

Recognising the need for indigenous technology, and possibility of future instability in the supply of parts and technology, the Indian space programme endeavoured to indigenise every material supply route, mechanism, and technology. As the Indian Rohini Programme continued to launch sounding rockets of greater size and complexity, the space programme expanded and was eventually given its own government department, separate from the department of Atomic Energy. In 1969, the India Space Research Organisation (ISRO) was created and finally the Department of Space was established in 1972.