

Definition of Infrastructure

While Infrastructure is recognized as a crucial input for economic development, there is no clear definition of infrastructure according to the current usage of the term in India. For policy formulation, setting of sectoral targets and monitoring projects, a clear understanding of what is covered under the rubric of 'infrastructure' is necessary to ensure consistency and comparability in the data collected and reported by various agencies over time. The National Statistical Commission headed by Dr. C. Rangarajan, attempted to identify infrastructure based on some characteristics.

2. This Note compiles definition of infrastructure from various reports / notifications of different agencies and concludes with decision taken by the Empowered Sub-Committee of the Committee on Infrastructure on this subject in the meetings held on 11th January, 2008 and 2nd April 2008 under the chairmanship of Deputy Chairman, Planning Commission.

Dr. C. Rangarajan Commission's Notion of Infrastructure (2001):

3. The Rangarajan Commission indicated six characteristics of infrastructure sectors, (a) Natural monopoly, (b) High-sunk costs, (c) Non-tradability of output (d) Non-rivalness (up to congestion limits) in consumption, (e) Possibility of price exclusion, and (f) Bestowing externalities on society. Based on these features (except b, d, and e), the Commission recommended inclusion of following in infrastructure in the first stage:

- Railway tracks, signalling system, stations
- Roads, bridges, runways and other airport facilities
- T&D of electricity
- Telephone lines, telecommunications network
- Pipelines for water, crude oil, slurry, waterways, port facilities
- Canal networks for irrigation, sanitation or sewerage.

4. The Commission further recommended that considering characteristics (b), (d) and (e) also, the above list may be extended to include the following in the second stage:

- Rolling stock on railways
- Vehicles, aircrafts
- Power generating plants
- Production of crude oil, purification of water
- Ships and other vessels.

5. However, the Rangarajan Commission recommended that the list of infrastructure activities should be finalized by the Ministry of Statistics and Programme Implementation (MOSPI) on the basis of the characteristics recommended by them for identification of infrastructure.

Dr. Rakesh Mohan Committee Report (1996) and the Central Statistical Organisation (CSO):

6. Dr. Rakesh Mohan Committee in “The India Infrastructure Report” included Electricity, gas, water supply, telecom, roads, industrial parks, railways, ports, airports, urban infrastructure, and storage as infrastructure. Except industrial parks and urban infrastructure, all these sub-sectors are treated by CSO also as infrastructure.

Reserve Bank of India (RBI) circular on Definition of Infrastructure:

7. As per the RBI, a credit facility is treated as “infrastructure lending” to a borrower company which is engaged in developing, operating and maintaining, or developing, operating and maintaining any infrastructure facility that is a project in any of the following sectors, or any infrastructure facility of a similar nature:

- i. a road, including toll road, a bridge or a rail system;
- ii. a highway project including other activities being an integral part of the highway project;
- iii. a port, airport, inland waterway or inland port;
- iv. a water supply project, irrigation project, water treatment system sanitation and sewerage system or solid waste management system;
- v. telecom services whether basic or cellular, including radio paging, domestic satellite service (*i.e.* a satellite owned and operated by an Indian company for providing telecom service), network of trunking, broadband network and internet services;
- vi. an industrial park or special economic zone;
- vii. generation or generation and distribution of power;
- viii. transmission or distribution of power by laying a network of new transmission or distribution lines;
- ix. construction relating to projects involving agro-processing and supply of inputs to agriculture;
- x. construction for preservation and storage of processed agro-products perishable goods such as fruits, vegetables and flowers including testing facilities for quality;
- xi. construction of educational institutions and hospitals;
- xii. any other infrastructure facility of similar nature.

8. For raising external commercial borrowings funds, the RBI has defined infrastructure to include (i) power, (ii) telecommunication, (iii) railways, (iv) road including bridges, (v) sea port and airport, (vi) industrial parks and (vii) urban infrastructure (water supply, sanitation and sewage projects) vide their circular dated 2nd July, 2007.

Insurance Regulatory and Development Authority (IRDA):

9. The IRDA vide their notification dated 14th July 2000, regarding Registration of Indian Insurance Companies Regulation, 2000 stipulates that every insurer in the business of *life insurance* shall invest and at all time keep invested not less than 15% of his controlled funds in *Infrastructure and Social sector*. Besides, those insurers who are in the business of *General Insurance (i.e. non-life insurance)* are required to invest and at all time keep invested not less than 10% of their controlled funds in *Infrastructure and Social sector*. For this purpose, IRDA defines infrastructure to include road, highway, bridges, airport, port, railways including BOLT, road transport system, water supply project, water treatment system, solid waste management system, irrigation project, industrial parks, sanitation and sewerage system, generation-transmission-distribution of power, telecom, project for housing, or any other public facility as may be notified in the official gazette

Income Tax Department:

10 For an infrastructure company, *Section 80-IA* of the Income Tax allows deduction of 100% profit from its income during initial 5 years of operation and then 30% deduction of profit from income during another 5 years. For this purpose infrastructure covers electricity, water supply, sewerage, telecom, roads & bridges, ports, airports, railways, irrigation, storage (at ports) and industrial parks/SEZ.

World Bank:

11. The World Bank treats power, water supply, sewerage, communication, roads & bridges, ports, airports, railways, housing, urban services, oil/ gas production and mining sectors as infrastructure.

Economic Survey:

12. The Economic Survey considers power, urban services, telecommunications, posts, roads, ports, civil aviation, and railways under infrastructure sector.

Decision of the Empowered Sub-Committee of the Committee on Infrastructure on definition of infrastructure:

13. The Empowered Sub-Committee of the Committee on Infrastructure in its meetings held on 11th January, 2008 and 2nd April 2008 under the chairmanship of Deputy Chairman, Planning Commission discussed the subject matter. There was consensus on including the following in the broad definition of infrastructure:

- (i) Electricity (including generation, transmission and distribution) and R&M of power stations,
- (ii) Non-Conventional Energy (including wind energy and solar energy),
- (iii) Water supply and sanitation (including solid waste management, drainage and sewerage) and street lighting,
- (iv) Telecommunications,
- (v) Road & bridges,
- (vi) Ports,
- (vii) Inland waterways,
- (viii) Airports,
- (ix) Railways (including rolling stock and mass transit system),
- (x) Irrigation (including watershed development),
- (xi) Storage,
- (xii) Oil and gas pipeline networks.

14. A Comparative Table on definition of Infrastructure sector and decision of the Empowered Sub-Committee of Committee on Infrastructure (CoI) is given at Annex-I

**Comparative Table on definition of Infrastructure sector and Decision of the Empowered
Sub-Committee of Committee on Infrastructure (CoI)**

Sector	Rangarajan Commission	Rakesh Mohan Report/ CSO	RBI	Income Tax	IRDA	Ministry of Finance-Economic Survey	World Bank	Decision of the Empowered Sub-Committee of CoI
Electricity	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes (incl. R&M of power stations)
Water supply	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sewerage	Yes		Yes	Yes	Yes	Yes	Yes	Yes(incl. SWM and street lighting)
Telecommunications	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Roads & bridges	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ports	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes(incl. Inland waterways)
Airports	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Rail (rolling stock)	Yes	Yes				Yes	Yes	Yes
Railways	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes(incl. MTS)
Wind Energy		Yes (CSO)						Yes (incl. Solar Energy)
Irrigation	Yes	Yes (CSO)	Yes	Yes	Yes			Yes(incl. watershed Development)
Storage		Yes	Yes	Yes(at ports)				Yes
Housing					Yes		Yes	
Urban services; as street lighting, Solid Waste Management (SWM)		Yes (Rakesh Mohan), -No (CSO)	Yes		Yes (SW M)	Yes	Yes	
Oil production & pipe lines	Yes						Yes	Yes (Oil Pipelines only)
Mining							Yes	
Gas distribution		Yes					Yes	Yes(gas pipelines only)
Aircrafts	Yes	Yes						
Vehicles, trucks, buses etc.(Road Transport System)	Yes	Yes	Yes		Yes			
Industrial Park/ SEZ		Yes (RM), No (CSO)	Yes	Yes	Yes			
Educational Institutions			Yes					
Hospitals			Yes					
Posts						Yes		