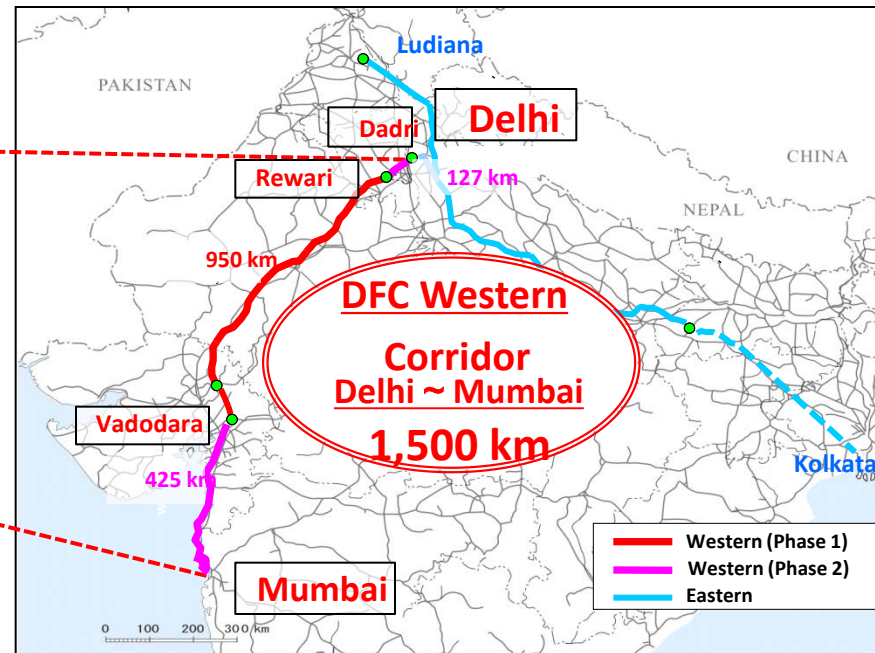


# Western Dedicated Freight Corridor project

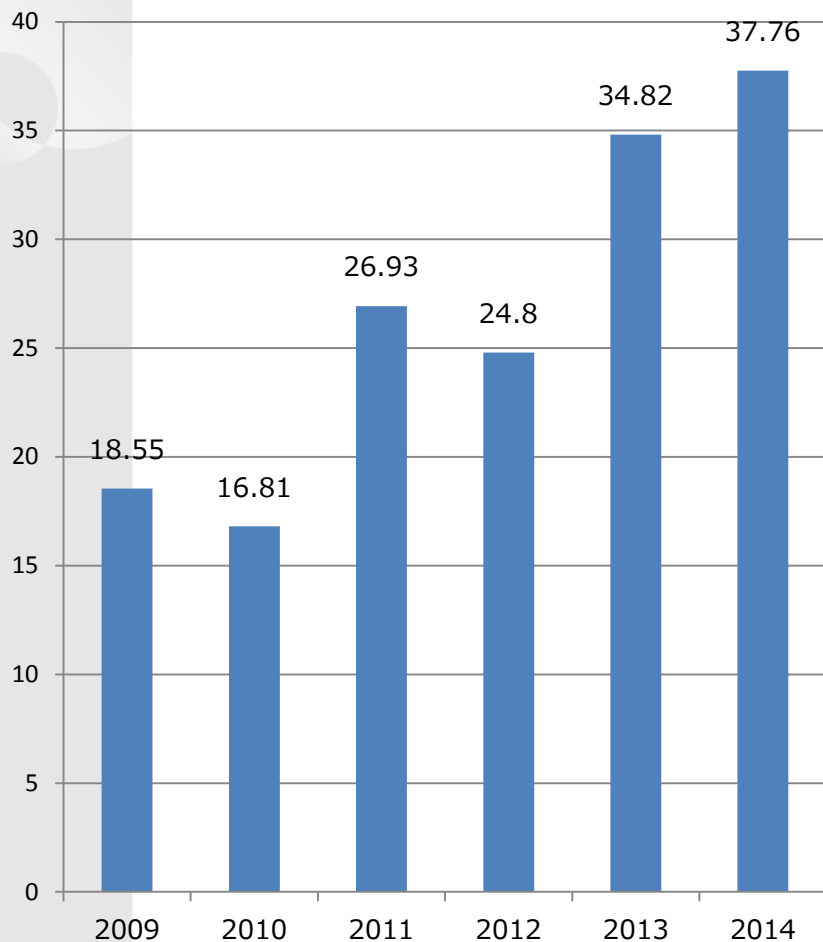
- Backbone of DMIC (Delhi-Mumbai Industrial Corridor)
- The Western DFC project (**Delhi-Mumbai: 1,500 km**) will focus on:
  - (1) construction of **new dedicated freight**
  - (2) installation of **automated signal & telecom**
  - (3) introduction of **electric locomotives** with high-capacity transportation
- Procurement for Civil and Signalling Packages have been started



# Achievements in India (Technical Cooperation)

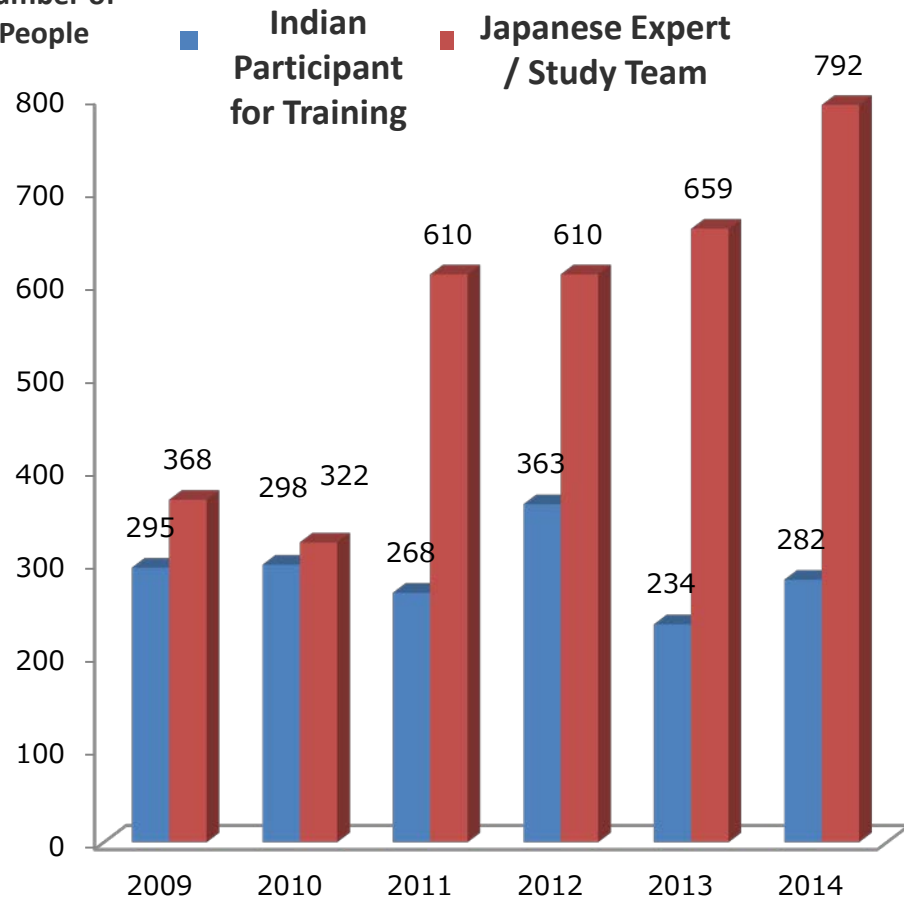
## Commitment Amount (FY)

(JPY 100 million)



## Number of People Exchange(FY)

Number of People



# **Implications of JICA Good Practices in India for other Emerging Countries**

## **- Toward Win-Win Relationship -**

**ESRI International Conference  
30 October 2015**

**Katsuo Matsumoto**  
**Deputy Director General,**  
**South Asia Department**  
**Japan International Cooperation Agency**

# OUTLINE

## **1. Quality Infrastructure**

(Delhi Metro and Purulia Pumped Storage Station)

- JAPAN Brand with Competitive Lifecycle Cost

## **2. Corridor Approach**

(DMIC and CBIC)

- From Planning to Implementation

## **3. Alignment with “Make in India” (Investment Promotion Program)**

- Involvement of Private Sector / Investors

# Implications of JICA Good Practices in India For other Emerging Countries

## 1. Quality Infrastructure (reliable, sustainable and resilient )

- Massive demand for Infrastructure
- Key driver for direct investment & economic development
- Life-cycle Cost Saving **backs country economy in a long run**

## 2. Corridor Approach

- Suitable allotment of resources: **royal road for development**
- Project prioritization at the level of semi-region (corridor)

## 3. Alignment with “Make in India”

- Policy promotion and easing regulations
- Delivering **real private sector's voices** to Government
- Timely input and support when required (urgent small infra.)
- Manufacturing Sector $\uparrow$  = **Employment $\uparrow$  = Consumption $\uparrow$**   
**= Boost in economy $\uparrow$**

# 1-1 Quality Infra: Delhi Mass Rapid Transport System Project

## [Background]

- Sharp increase in the **population** of urban Delhi 9.42 M in 1991 → 16.75 M in 2011
- Deterioration of environmental damage and traffic congestion due to an increased number of automobiles.

Number of registered **cars** in Delhi: 1.83 M in 1990 → 6.93 M in 2011

## [Project summary]

The project consists of the construction of a rapid transport system (public works, electric / telecommunication / signal works, etc.) and the procurement of vehicles.

- Phase 1 (65 km) from October 1998 to November 2006.
- Phase 2 (125 km) from April 2006 to August 2011.
- Phase 3 (116 km) from June 2011 to April 2016.



## [Result]

- 2.5 million people use the metro every day (cf. 3 million people use underground railways per day in London).
- The system has contributed to decreasing the number of vehicles by 120,000.
- “Regenerative brake system” , introduced to metro as **Japanese company's energy-efficient technology** is expected to reduce CO2 emission by 22 million tons (total reduction between 2002 and 2032), which was registered in the United Nations as the world's first CDM project in the railway sector.

# 1-2 Quality Infra: Purulia Pumped Storage Project

## [Background]

- Constant power shortage  
Since 1998, about 11% to 13% of the peak-hour supply capacity;  
about 6% to 8% of the annual supply
- Necessity for well-balanced composition of electrical source

Under the power structure where thermal power generation exceeded 90% of the total, it was necessary to eliminate the peak-hour supply-demand gap by developing a pumped storage hydropower by the use of nighttime surplus power supplied from thermal power plants.



## [Project summary]

In the Purulia district 300 km to the northwest of Kolkata City in the Province of West Bengal, the peak-hour power supply capacity is improved by the construction of a pumped storage power plant with an output of **900 MW (225 MW × 4 generating units)** and electric transmission and substation facilities for the plant.

## [Result]

- The pumped storage power plant with four generating units of 225 MW is still the largest in India.
- The plant has been operating without any serious trouble since the beginning of operation in 2008.

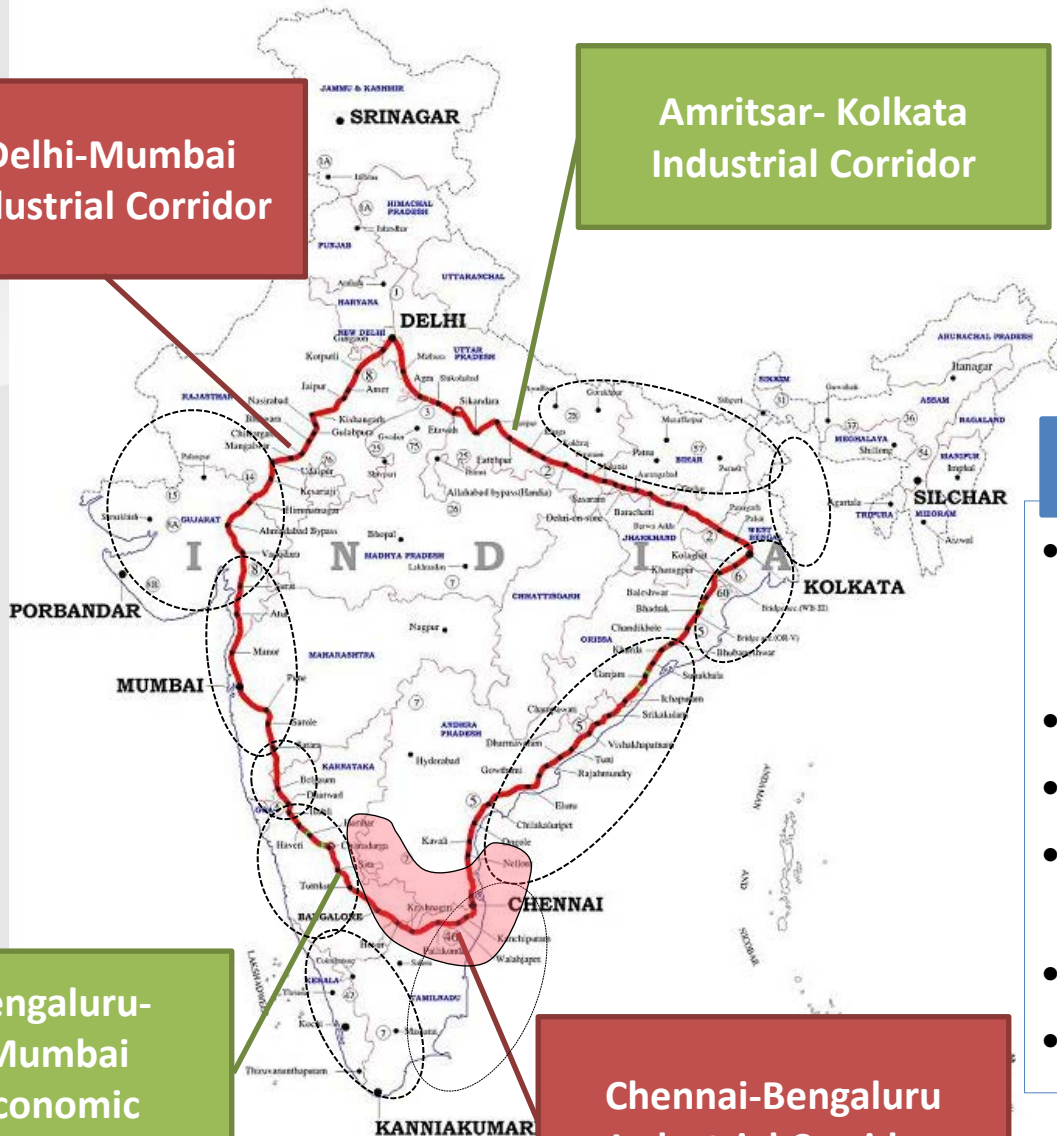


## 2-1 Corridor Approach : Industrial Corridors under Development (DMIC & CBIC)

Delhi-Mumbai  
Industrial Corridor

Amritsar- Kolkata  
Industrial Corridor

DMIC and CBIC are being  
supported by GoI and GoJ.



Bengaluru-  
Mumbai  
Economic  
Corridor

Chennai-Bengaluru  
Industrial Corridor

### National Manufacturing Plan Targets

- ~15% y-o-y growth in manufacturing sector to achieve 25% contribution to GDP by 2022
- 100 million jobs by 2022
- Skill development for inclusive growth
- Improved *technology* orientation & *value addition*
- Global Competitiveness
- Environmental sustainability