Japan’s Role in Building India’s Economic Infrastructure

Katsuo Matsumoto
South Asia Department
Japan International Cooperation Agency
Direct Investment from Japan

- Japan > Other countries in direct foreign investment
- Ranked at 4th, 7.4% out of total investment 2000-2015

Source: Department of Investment Policy and Promotion, Ministry of Industries and Commerce, India
• 1 September 2014, Prime Ministers called their meeting **the dawn of a new era in Japan-India relations**.

• Developed from “Strategic and Global Partnership” since 2006

• Main Pillars:
  - Political, Defence and Security Partnership
  - Global Partnership for Peace and Security in the Region and the World
  - Civil Nuclear Energy, Non-proliferation and Export Control
  - Partnership for Prosperity
    ◆ Ambitious vision for **accelerating inclusive development** in India, by **transforming the infrastructure and manufacturing sectors**
    ◆ **3.5 trillion Yen of investment and financing in 5 years**
      (JICA: DMIC, DFC, CBIC, Investment Promotion, HSR, Northeast connectivity, etc)
    ◆ “Japan Industrial Townships”
      - Exploring Science, Inspiring Innovation, Developing Technology, Connecting People
      - Leading for the future
Challenges for Investment (1) – Doing Business

Behind ASEAN and other emerging countries

<table>
<thead>
<tr>
<th></th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thailand</td>
<td>26</td>
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<tr>
<td>Russia</td>
<td>62</td>
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<td>China</td>
<td>90</td>
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<td>Vietnam</td>
<td>78</td>
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<tr>
<td>Brazil</td>
<td>120</td>
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<tr>
<td>India</td>
<td>142</td>
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<tr>
<td>Indonesia</td>
<td>144</td>
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<tr>
<td>Bangladesh</td>
<td>173</td>
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</table>

Doing Business 2015, World Bank

- Construction Permits
- Enforcing Contracts
### Global Competitiveness Index

<table>
<thead>
<tr>
<th></th>
<th>Rank</th>
<th>Score</th>
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<tbody>
<tr>
<td><strong>GCI 2015–2016</strong></td>
<td>55</td>
<td>4.3</td>
</tr>
<tr>
<td>GCI 2014–2015 (out of 144)</td>
<td>71</td>
<td>4.2</td>
</tr>
<tr>
<td>GCI 2013–2014 (out of 148)</td>
<td>60</td>
<td>4.3</td>
</tr>
<tr>
<td>GCI 2012–2013 (out of 144)</td>
<td>59</td>
<td>4.3</td>
</tr>
<tr>
<td><strong>Basic requirements (60.0%)</strong></td>
<td>80</td>
<td>4.4</td>
</tr>
<tr>
<td>1st pillar: Institutions</td>
<td>60</td>
<td>4.1</td>
</tr>
<tr>
<td>2nd pillar: Infrastructure</td>
<td>81</td>
<td>3.7</td>
</tr>
<tr>
<td>3rd pillar: Macroeconomic environment</td>
<td>91</td>
<td>4.4</td>
</tr>
<tr>
<td>4th pillar: Health and primary education</td>
<td>84</td>
<td>5.5</td>
</tr>
<tr>
<td><strong>Efficiency enhancers (35.0%)</strong></td>
<td>58</td>
<td>4.2</td>
</tr>
<tr>
<td>5th pillar: Higher education and training</td>
<td>90</td>
<td>3.9</td>
</tr>
<tr>
<td>6th pillar: Goods market efficiency</td>
<td>91</td>
<td>4.2</td>
</tr>
<tr>
<td>7th pillar: Labor market efficiency</td>
<td>103</td>
<td>3.9</td>
</tr>
<tr>
<td>8th pillar: Financial market development</td>
<td>53</td>
<td>4.1</td>
</tr>
<tr>
<td>9th pillar: Technological readiness</td>
<td>120</td>
<td>2.7</td>
</tr>
<tr>
<td>10th pillar: Market size</td>
<td>3</td>
<td>6.4</td>
</tr>
</tbody>
</table>

**Stage of development**

- Factor driven (1)
- Efficiency driven (2)
- Innovation driven (3)

Source: Global Competitiveness Report 2015-16, World Economic Forum
Challenges for Investment (3) – Logistics Performance

**Custom**: Efficiency of the clearance process (i.e., speed, simplicity and predictability of formalities) by border control agencies, including customs

**Infrastructure**: Quality of trade and transport related infrastructure (e.g., ports, railroads, roads, information technology)

Source: Logistics Performance Index 2014, World Bank
Infrastructure and legal enforcement are major obstacles

<table>
<thead>
<tr>
<th></th>
<th>India</th>
<th>Indonesia</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td><strong>Infrastructure</strong></td>
<td>51.6</td>
<td>Labour Cost</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>Competitive Environment</td>
<td>36.7</td>
<td>Legal System</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>Legal Enforcement</td>
<td>35.1</td>
<td>Competitive Environment</td>
</tr>
<tr>
<td><strong>4</strong></td>
<td>Taxation System</td>
<td>28.2</td>
<td>Infrastructure</td>
</tr>
<tr>
<td><strong>5</strong></td>
<td>Labour Conflict</td>
<td>24.5</td>
<td>Human Resources (Management level)</td>
</tr>
</tbody>
</table>

Source: 「わが国製造業企業の海外展開に関する調査報告2014年度 海外直接投資アンケート結果（第26回）」 (JBIC)
JICA’s Operation

“Infrastructure Development”

“Capacity Building”

Support to Faster and Inclusive Growth
Official Development Assistance and JICA

JICA is “One Stop Shop” of Japan’s Bilateral ODA.

(Expenditures and contributions to international organizations)
JICA at a glance

Japan International Cooperation Agency

- President: Shinichi Kitaoka
- Establishment: August 1974 Reorganized 2008
- Staff: 1,827 (Full time)
- Recipient Countries: 150
- Overseas Offices: 92
- Offices in Japan: HQ (Tokyo) and 17 sites

JICA’s Vision
Inclusive and Dynamic Development

Mission 1
Addressing Global Agenda

Mission 2
Reducing Poverty through Equitable Growth

Mission 3
Improving Governance

Mission 4
Achieving Human Security
JICA’s Cooperation Strategy for India

India’s Development Strategy

“Faster Growth”
- Stable Energy Supply
- Improvement of Transportation Networks

“Inclusive Growth”
- Employment Generation
- Income Generation in Rural Areas
- Improvement of Basic Social Services

Global Environmental Issues
- Conservation and Improvement of Urban Environment
- Environmental Conservation

JICA’s Cooperation Strategy for India

Stable Energy Supply
- Improvement of Energy Supply Capacity,
- Strengthening Major Transport Networks (Railways/Roads/Airports/Ports)
- City Transport System (Metro/Outer Ring Roads)

Employment Generation
- Private Sector Assistance

Income Generation in Rural Areas
- Improvement of Agricultural Productivity
- Improvement of Basic Social Services (Health and Sanitation)

Conservation and Improvement of Urban Environment
- Pollution Prevention and Management
- Water Resources Management
- Afforestation, Forest Preservation, Biodiversity Conservation
- Energy Efficiency and Conservation
- Renewable Energy
Achievements in India (Loan) (1)

Trends in Commitment by Sector (2003/04〜2014/15)

Total
JPY 2,400 billion
(Approx. Rs.126,000 crore ) *JPY1.9/INR

- Transportation: 51%
- Water & Sanitation: 17%
- Power: 15%
- Agriculture & Forestry: 10%
- Others: 7%

Commitment
Disbursement

<table>
<thead>
<tr>
<th>Year</th>
<th>Commitment</th>
<th>Disbursement</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>1,250</td>
<td>1,345</td>
</tr>
<tr>
<td>2004</td>
<td>1,555</td>
<td>1,555</td>
</tr>
<tr>
<td>2005</td>
<td>1,849</td>
<td>1,555</td>
</tr>
<tr>
<td>2006</td>
<td>2,251</td>
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<tr>
<td>2007</td>
<td>2,360</td>
<td>2,360</td>
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<td>2008</td>
<td>2,182</td>
<td>2,182</td>
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<tr>
<td>2009</td>
<td>480</td>
<td>480</td>
</tr>
<tr>
<td>2010</td>
<td>480</td>
<td>480</td>
</tr>
<tr>
<td>2011</td>
<td>2,669</td>
<td>3,115</td>
</tr>
<tr>
<td>2012</td>
<td>3,493</td>
<td>3,115</td>
</tr>
<tr>
<td>2013</td>
<td>3,493</td>
<td>3,115</td>
</tr>
<tr>
<td>2014</td>
<td>1,210</td>
<td>1,210</td>
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</tbody>
</table>
Achievements in India (Loan) (2)

Comparison to other countries

(JPY 100 million)
## ODA Loan Project List (since 2013/14)

### 2015/16 (as of October)

<table>
<thead>
<tr>
<th>Project</th>
<th>Commitment Amount (JPY million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odisha Transmission System Improvement Project</td>
<td>21,787</td>
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</table>

### 2014/15

<table>
<thead>
<tr>
<th>Project</th>
<th>Commitment Amount (JPY million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rengali Irrigation Project (Phase 2)</td>
<td>33,959</td>
</tr>
<tr>
<td>Guwahati Sewerage Project</td>
<td>15,620</td>
</tr>
<tr>
<td>Uttarakhand Forest Resource Management Project</td>
<td>11,390</td>
</tr>
<tr>
<td>New and Renewable Energy Development Project (Phase 2)</td>
<td>30,000</td>
</tr>
<tr>
<td>Micro, Small and Medium Enterprises Energy Saving Project 3</td>
<td>30,000</td>
</tr>
</tbody>
</table>

### 2013/14

<table>
<thead>
<tr>
<th>Project</th>
<th>Commitment Amount (JPY million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mumbai Metro Line 3 Project</td>
<td>71,000</td>
</tr>
<tr>
<td>Tamil Nadu Investment Promotion Program</td>
<td>13,000</td>
</tr>
<tr>
<td>Campus Development Project of IITH</td>
<td>5,332</td>
</tr>
<tr>
<td>Bihar National Highway Improvement Project (Phase 2)</td>
<td>21,426</td>
</tr>
<tr>
<td>Campus Development Project of IITH (Phase 2)</td>
<td>17,703</td>
</tr>
<tr>
<td>Delhi Mass Rapid Transport System Project Phase 3 (II)</td>
<td>148,887</td>
</tr>
<tr>
<td>Agra Water Supply Project (II)</td>
<td>16,279</td>
</tr>
<tr>
<td>Haryana Distribution System Upgradation Project</td>
<td>26,800</td>
</tr>
</tbody>
</table>
Achievements in India (Technical Cooperation)

**Commitment Amount (FY)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Commitment Amount (JPY 100 million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>18.55</td>
</tr>
<tr>
<td>2010</td>
<td>16.81</td>
</tr>
<tr>
<td>2011</td>
<td>26.93</td>
</tr>
<tr>
<td>2012</td>
<td>24.8</td>
</tr>
<tr>
<td>2013</td>
<td>34.82</td>
</tr>
<tr>
<td>2014</td>
<td>37.76</td>
</tr>
</tbody>
</table>

**Number of People Exchange (FY)**

- **Indian Participant for Training**
  - 2009: 295
  - 2010: 298
  - 2011: 322
  - 2012: 268
  - 2013: 363
  - 2014: 282

- **Japanese Expert / Study Team**
  - 2009: 368
  - 2010: 298
  - 2011: 322
  - 2012: 268
  - 2013: 363
  - 2014: 282
Implications of JICA Good Practices in India to other Emerging Countries

1. Quality Infrastructure
   - 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: shortcut 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 Sectory↑ = Employment↑ = Consumption↑ = Boost in economy↑
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.
Cooperation on Metro Projects

Japan is supporting metro projects in 5 major cities in India:

**Delhi Metro**
- Total Length: 329km
- Project Cost: 1,274 Billion JPY
- Loan Amount: 684 Billion JPY
- Completion Year: 2016 (Full)

**Mumbai Metro**
- Total Length: 33 km
- Project Cost: 347 Billion JPY
- Loan Amount: 188 Billion JPY
- Completion Year: 2019 (Full)

**Kolkata Metro**
- Total Length: 14 km
- Project Cost: 140 Billion JPY
- Loan Amount: 82 Billion JPY
- Completion Year: 2017 (Partial)

**Bangalore Metro**
- Total Length: 42 km
- Project Cost: 307 Billion JPY
- Loan Amount: 65 Billion JPY
- Completion Year: 2017 (Full)

**Chennai Metro**
- Total Length: 45 km
- Project Cost: 331 Billion JPY
- Loan Amount: 150 Billion JPY
- Completion Year: 2016 (Full)
List of JICA-financed Projects in India

Total Number of Projects: 72 (Generation 54, Transmission & Distribution 18)
Total Amount of Lending: 1,064.4 billion Japanese yen

Uttarakhand

Haryana
- Haryana Transmission System Project (2007)
- Western Yamuna Canal Hydroelectric Project (1981)

Uttar Pradesh
- Anpara B Thermal Power Station Construction Project (I – V)
- Anpara Power Transmission System Project (I・II・III)

Gujarat
- Gandhar Gas Based Combined Cycle Power Project (I・II・III)

Madhya Pradesh

Maharashtra
- Maharashtra Transmission System Project (2007)

Karnataka
- Bangalore Distribution Upgradation Project (2006)
- Raichur Thermal Power Station Expansion Project (1988)

Tamil Nadu
- Tamil Nadu State Micro Hydro Power Stations Construction Project (1983)
- Basin Bridge Gas Turbine Project (1990)
- Tamil Nadu Transmission System Improvement Project (2012)

More Than Two States
- Rural Electrification Project (2005)
- Northern India Transmission System Project (1997)
- Meghalaya

- Umiam Hydro Power Station Renovation Project (1997)
- Umiam Stage II Hydro Power Station R&M Project (2004)

West Bengal
- Bakreswar Thermal Power Station Project (2002)
- Purulia Pumped Storage Project (1994, 2005)

Assam
- Assam Gas Turbine Power Station and Transmission Line Construction Project (I・II・III)

Jharkhand

Andhra Pradesh
- Transmission System Modernization Project in Hyderabad (2006)
- Srisailam Power Transmission System Project
- Simhadri and Vizag Transmission System Project
- Kothagudem’a’ Thermal Power Station Rehabilitation Project (1995)
- Srisailam Left Bank Power Station Project
- AP Rural High Voltage Distribution System Project (2010)

Legend
- Generation
- Transmission and Distribution

More than Two States
Cooperation Strategy (Transport)

• **Measures in the priority areas from the upstream stage:** Dialogue to study priority development areas and growth strategy, high regards for plans and visions including formulation of master plan (M/P) in developing countries, incorporation of diverse tools of support for development, approaches from a comprehensive and borderless viewpoint such as development of international corridors.

• **Development of human resources:** In each stage of the cooperation, implement technical cooperation and trainings for regulation formulation, operational and maintenance, and management, taking advantage of Japan’s experiences.

• **Utilization of ICT:** By using ICT tools for improving efficiency and effectiveness of cooperation, realization of **safety, timeliness and comfortableness**.

• **Japanese technology/financial resources:** Information sharing and coordinated collaboration with the Public Works Research Institute, universities, the private sector, railway/airport corporations and municipalities.

### Needs of developing countries

- Improvement of efficiency and effectiveness
- Continuous development
- Human resources and management capacity enhancement

### Packages offered by Japan

- **Japan’s strategies**
  - Japan’s experience and technology
  - Domestic resources (public/private)

- **Japan’s technology/ JICA’s approaches**

- High quality growth (pursuit of subsumption, strength and sustainability)

- High regard for dialogue and planning from the upstream stage, utilization of diverse tools, promotion of high quality cooperation, making use of domestic resources.
Industrial Corridors under Development (DMIC & CBIC)

DMIC and CBIC are being supported by GoI and GoJ.

Delhi-Mumbai Industrial Corridor

Amritsar Kolkata Industrial Corridor

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
The project aims to build a freight railway line to connect Delhi and Mumbai (with yen loans of ¥650 billion). As a Japan-India joint regional development initiative, it will construct infrastructure in areas along the railway, including industrial parks, logistics bases, power plants, roads, ports, housing, and commercial facilities, mainly through private investment.

In December 2006, during Prime Minister Singh’s visit to Japan, both leaders agreed to promote DMIC. In October 2010, during Prime Minister Singh’s visit to Japan, both leaders issued a joint statement in which they (1) agreed to establish a PPP dialogue between Japan and India, (2) agreed to establish a DMIC-PPP Promotion Council, and (3) welcomed the further progress of smart communities.

In December 2011, during then Prime Minister Noda’s visit to India, both leaders agreed on (1) the launch of a $9 billion financial facility, (2) Japan’s active involvement in DMICDC through investment and personnel dispatch, and (3) support for specific infrastructure projects. Prime Minister Noda also draw the attention of the Indian government to the issue of financial deregulation.

In May 2013, during Prime Minister Singh’s visit to Japan, both leaders welcomed the progress and appreciated the formation of the DMIC Project Implementation Trust in India as well as the listing of possible projects for Japan’s public and private financing as Japan’s USD 4.5 billion facility.

In January 2014, during Prime Minister Abe’s visit to India, both leaders shared the view that all instruments of funding of JICA including STEP may be explored on mutually beneficial terms.
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 lines**
  2. installation of **automated signal & telecommunication**
  3. introduction of **electric locomotives** with high-speed & high-capacity transportation
- Procurement for Civil and Signalling Packages have been started
Eight Nodes have been identified based on land availability and growth potential. Three Nodes have been selected for prioritised implementation.
Development Plan of Ponneri node

Infrastructure Plan

Road / Rail Connectivity:
- Direct Road access to Chennai
- Northern Port Access Road
- New line from logistics hub to Ennore Port

Water supply:
- New desalination plant
- TTRO plant at Kodungaiyur

Solid Waste Management:
- Regional waste treatment facility

Power:
- Prioritized supply for 24 X 7 reliable supply

Land Acquisition Status of Ponneri Node

<table>
<thead>
<tr>
<th>Phase</th>
<th>Area (ha)</th>
<th>Area (acre)</th>
<th>Nature of Land</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1 &amp; 2</td>
<td>385</td>
<td>950</td>
<td>Land owned by TIDCO</td>
<td>Completed</td>
</tr>
<tr>
<td></td>
<td>1,100</td>
<td>2,720</td>
<td>Central Gov and Private Land</td>
<td>To be acquired</td>
</tr>
<tr>
<td></td>
<td>330</td>
<td>810</td>
<td>Others</td>
<td></td>
</tr>
<tr>
<td>Phase 3</td>
<td>8,565</td>
<td>21,163</td>
<td>Central Gov and Private Land</td>
<td>To be acquired</td>
</tr>
</tbody>
</table>

1. Total direct employment: 337,000
2. Industrial investment: Rs. 201,000 crore

Economic Impact

1. Total direct employment: 337,000
2. Industrial investment: Rs. 201,000 crore
Regional M/P: Priority Infrastructure (Road, Water Supply, Power, etc.)

- **Karnataka**
  - Tumkur – Davangere (New Line)
  - Hamavathy Canal water
  - Tumkur City 24x7 Water Supply Project
  - Yettinahole regional drinking water project
  - Industrial township / Smart city project by private developer (CBIC region)

- **Andhra Pradesh**
  - Sewage recycle and industrial wastewater recycle in Andhra Pradesh
  - Power plant / transmission project in Andhra Pradesh
  - Four Lanning from Mulbagal to Naidupeta
  - NH-4 stretch from Mulbagal to AP border
  - Chittoor to Renigunta and SH-61 (now NH-71), from Renigunta to Naidupeta
  - AP border to Chittoor

- **Tamil Nadu**
  - Line upgradation of some sections along Chennai-Bengaluru route
  - Sewage recycle and industrial wastewater recycle in Tamil Nadu
  - Power plant / transmission project in Tamil Nadu

**Legend**
- Num: 18 Priority Projects selected by Preliminary Study
- Num: 16 Additional Priority Projects
JICA’s assistance in CBIC area

Financial Assistance

Short term (2013-2016)
- Bengaluru Metro
- Chennai Metro
- TN transmission project
- Bengaluru distribution project
- Bengaluru water supply & sewerage
- TNIPP
- Investment Promotion Program loan to 3 states
- TA for Chennai Port operation improvement
- Bengaluru ITS master plan study and implementation

Medium term (2017-2023)
- Bengaluru Peripheral Ring Road
- Chennai Peripheral Road
- USC thermal power plant in AP
- Water supply & sewerage in Nellore
- Bengaluru water supply & sewerage (New Phase)
- Chennai Desalination Plant
- AP irrigation (New Phase)

Long term (2024-2033)
- Financial assistance for other prioritized project

Technical Assistance

CBIC: Implementation of Node development
- CBIC: Invest climate improvement of existing industrial area
- CBIC: Regional Perspective Plan

On-going project/program
- Candidate project/program
Tamil Nadu Investment Promotion Program

◆ **Program Description**:
- To further improve the investment climate through strengthening the policy framework and enhancing the quality of urban infrastructure mainly of roads, power, waterworks, sewerage, and other infrastructure facilities thereby attempting to increase foreign direct investments in the state.
- Government of Tamil Nadu and JICA monitor progress of action plans in the agreed policy matrix. Based on achievement, JICA disburses the loan amount by dividing into three tranches (corresponding to each fiscal year action plan).

◆ **Loan Amount and Disbursement**:
- JPY 13 billion
  (7 billion for 1st tranche and 3 billion for 2nd & 3rd tranche)

◆ **Program Duration**:
- 3 years (FY2012/13 - 2014/15)

◆ **Achievement**:
  - A comprehensive action plan for ease of doing business has been elaborated.
  - Global Investors Meet is to be held in September 2015.
  - Development of industry related infrastructure (road, water supply, sub-station) has been accelerated.
Basic Concept of Program Loan

- **GoTN**: Tamil Nadu Investment Promotion Program
- **JICA**: Japan International Cooperation Agency

Policy Dialogue

- Tamil Nadu Eleventh Five Year Plan
- Vision Tamil Nadu 2023 and other state government's policies
- Voices from Investors (i.e. JCCI)

Policy Matrix

- Policy Implementation and achievement of target

Loan Agreement

- Monitoring of Policy Actions

Disbursement

GoTN to JICA
Policies and Infrastructure projects under TNIPP

Policies integrated in TNIPP

- Infrastructure Project Coordination and Prioritization
- Investment Application Process
- System Integration for Investors
- Promotion of business environment for MSMEs
- Human Resource Development
- Land Pooling System
- Master Planning/Land-Use Conversion

Prioritized small infrastructure project
Regional Connectivity in North East of India
Long List – 19 Regional Road Corridors

Base map data: Google

Regional Road Corridors

- RO1
- RO2
- RO3
- RO4
- RO5
- RO6
- RO7
- RO8
- RO9
- RO10
- RO11
- RO12
- RO13
- RO14
- RO15
- RO16
- RO17
- RO18
- RO19

Alignments are indicative only

Port
Potential Port
Major Border Crossing Point
Shortlist – 11 Regional Road Corridors

- Nepal
- Bhutan
- India
- Bangladesh
- Myanmar

Base map data: Google

Regional Road Corridors

- RO1
- RO2
- RO3
- RO4
- RO5
- RO6
- RO7
- RO8
- RO9
- RO10
- RO11
- RO12
- RO13
- RO14
- RO15
- RO16
- RO17
- RO18
- RO19

Port
Potential Port
Major Border Crossing Point

Alignments are indicative only
Potential Road/Rail Projects for JICA Assistance (1/3)

**Nepal**
- Type: Road tunnel
  - Name: RO3-f: Thankot-Nagdhunga-Naubise Tunnel
- Type: Road Section
  - Name: RO3-g: ADB road section
    - Ghinaghat-Biratchowk (spur)

**Bhutan**
- Type: Road Section
  - Name: RO3-b: AH-2 Beldanga to Panchagarh

**India**
- Type: Road Section
  - Name: RO3-j: Improvement of Survabinayak-Dhulikel road

**Bangladesh**
- Type: Railway
  - Name: RA9-a: dual gauging/double tracking as necessary between Chittagong-Akhaura
  - Name: RO1-a: AH-41
    - Chittagong to Cox’s Bazar
  - Name: RA1-c: Other ADB RCI Projects across the Bangladesh rail network

**Note:** Projects shown are those scoring high or medium priority from the long list. It is not envisaged that JICA will provide assistance for all these projects, but provides basis for the next steps.

**Alignments are indicative only**

**Base map data:** Google

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**RO1:** Chittagong-Cox’s Bazar-Teknaf-[Myanmar]-[Thailand]

**RO3:** Chittagong/Mongla-Dhaka-Banglabandha-Phulbari-Kakarbhitta-Kathmandu

**RA9:** Kolkata–Gedes/Darsana–Padma River crossing–Dhaka–Chittagong
Potential Road/Rail Projects for JICA Assistance (2/3)

Note: Projects shown are those scoring high or medium priority from the long list. It is not envisaged that JICA will provide assistance for all these projects, but provides basis for the next steps.

Base map data: Google

Alignments are indicative only

**Type: Road Section**
Name: RO9-c: Dawki to Shillong NH-40 and construction of Dawki Bridge

**Type: Road Section**
Name: RO15-a: Alternative route between Silchar-Guwahati Road + Tezpur Bridge

**Type: Road Section**
Name: RO9-d NH-44 NHAI scheme from Jowai to Assam border plus the NH-44 Badarpurghat Bridge

**Type: Road Section**
Name: RO2-a: AH-1 Benapole to Jessore

**Type: Road Section**
Name: RO2-b: AH-1 Jessore to Bhatiapara

**Type: Road Section**
Name: RO2-c: Padma Bridge

**Type: Road Sections**
Name: RO2-e-g: potential road sections in West Bengal in and around Kolkata and Haldia

**Type: Road Section**
Name: RO2-d: NH-37 (old NH-53) Imphal to Jiribam (bridge in Silchar on NH-53)

**Type: Road Section**

**Type: Road Section**
Name: RO9: Samdrup Jongkhar–Guwahati–Tamabil–Shillong–Sylhet–Dhaka-onward to India

**Type: Road Section**
Name: RO15: North East Region’s East-West Corridor–Moreh–[Myanmar]–[Thailand]
Potential Road/Rail Projects for JICA Assistance (3/3)

Note: Projects shown are those scoring high or medium priority from the long list. It is not envisaged that JICA will provide assistance for all these projects, but provides basis for the next steps.

Type: Bridge and/or Road Section
Name: RO7-a/b: ADB SASEC Phuentsholing Northern Bypass/Bridge

Type: Road Section
Name: RO16-a: NH-2 (old NH-39) Imphal to Kohima

Type: Road Section
Name: RO17-a Feni Bridge Ramgarh (Sabroom)

Type: Road Section
Name: RO17-b Chittagong to Ramgarh (alt 1) via NH-1 and R152

Base map data: Google

Alignments are indicative only

Port
Potential Port
Major Border Crossing Point

RO7: Chittagong/Mongla–Burimari–Chengrabanah–Jaigon–Phuentsholing–Thimphu

RO16: Guwahati-Dimapur-Kohima-Imphal-Moreh-Mandalay

RO17: Chittagong-Ramgarh-Sabroom-Agartala-North East Region
JICA’s activities for prosperity of the Indo-Pacific

- Chennai-Bengaluru Industrial Corridor
- Nacala Corridor
- North-South Corridor
- Northern Corridor
- Central Corridor
- Nile Corridor
- Djibouti-Addis Ababa Corridor
- Cross Boarder Project in North East India and Bangladesh
- Delhi-Mumbai Industrial Corridor (DMIC)
- Bay of Bengal Industrial Growth Belt (Big-B)
- East-West Economic Corridor
- Southern Economic Corridor
- Maritime ASEAN Economic Corridor
- The Fourth Trans-African Highway
- West Africa Growth Ring
- Trans-Maghrebin Corridor
- North-South Corridor
- Delhi-Mumbai Industrial Corridor (DMIC)
JICA’s Main Infrastructure Projects in the Indo-Pacific

1. Southeast Asia
   (1) East-West Economic Corridor
      - 2nd Mekong International Bridge (Loan)
      - Hai Van Tunnel (Loan)
      - Da Nang Port (Loan)
   (2) Southern Economic Corridor
      - Cambodia National Road No. 5 (Loan)
      - Neak Loeung Bridge (Grant)
      - Cai Mep-Thi Vai Port (Loan)
   (3) Maritime ASEAN Economic Corridor
      - ASEAN RoRo Shipping Network
      - Maritime Safety (Loan, Grant, Technical Cooperation)
   (4) Institutional connectivity for Economic Corridors
      - Projects for E-Customs and National Single Window for Customs Modernization in Vietnam and Myanmar (Grant)

2. South Asia
   (1) Bay of Bengal Industrial Growth Belt (Big-B)
      - Dhaka-Chittagong Railway Development (Loan)
      - Matarbari Ultra Super Critical Coal-Fired Power (Loan)
   (2) Cross Border Projects in North East India and Bangladesh
      - North East Connectivity Improvement (F/S)
   (3) Delhi-Mumbai Industrial Corridor
      - Dedicated Freight Corridor (Loan)
   (4) Chennai-Bengaluru Industrial Corridor
      - Chennai Metro (Loan)
      - Bangalore Metro Rail (Loan)
      - Tamil Nadu Investment Promotion Program (Loan)

3. Africa
   (1) Northern Corridor
      - Mombasa Port Development in Kenya (Loan)
      - Master Plan on Logistics in Northern Economic Corridor (Technical Cooperation)
   (2) Nacala Corridor
      - Nacala Port Development (Loan and Grant)
   (3) Central Corridor
      - Comprehensive Transport and Trade System Development Master Plan in the Tanzania (Technical Cooperation)
   (4) West Africa Growth Ring
      - The Corridor Development for West Africa Growth Ring Master Plan (Technical Cooperation)
Mumbai Station

धन्यवाद Thank You

Maximum Speed 320km/h