The role of JICA in India’s economic developments

April 16th, 2019
JICA India
Contents

1. India - Japan Relations
2. JICA’s Policy and Activities
3. Projects in India
   - Metro Projects
   - Western Dedicated Freight Corridor (WDFC)
   - Mumbai Ahmadabad High Speed Rail (MAHSR)
   - Energy Sector
   - Water Sector
   - Forestry Sector
   - Human Resource Development
   - Connectivity
1. India - Japan Relations
India - Japan Relations

● Both established **Special Strategic and Global Partnership.**
● For India, Japan is the **largest bilateral development partner.**
● For Japan, India is the **oldest** recipient of ODA.

- Apr. 1952  Established official diplomatic relations
- 1958  Japan's first ODA Loan in the world extended to India.
- Aug. 2000  "Japan-India Global Partnership in the 21st Century"
- Apr. 2005  Japanese PM Koizumi visited India. **Annual based PMs**
- Dec. 2006  "Joint Statement Towards Japan-India Strategic and Global Partnership"
- Sept. 2014  Indian PM Modi visited Japan.  "Tokyo Declaration for Japan-India **Special Strategic and Global Partnership**"

  a) Doubling Japan’s foreign direct investment in India within five years.

  b) Doubling the number of Japanese companies in India within five years.

  c) JPY 3.5 trillion (Rs. 2 trillion) of public and private investment and financing to India from Japan, including ODA, within five years.

- Sept. 2017  Japanese PM Abe visited India (Commencement ceremony of HSR in Ahmedabad)
Act East Forum

The Forum aims to further expand the cooperation between Japan and India in North East and to strengthen the relationship between Japan and North East, as well as that between Japan and India. In this regard, the Forum discusses cooperation in various fields and promotes Japan’s cooperation in the region.

1. Enhancing Connectivity
2. Forest Management
3. Bamboo
4. Disaster management
5. People-to-people exchanges
JICA’s Cooperation for NER
Continuous Cooperation for Sustainable Development including Connectivity Enhancement

- **Assam Guwahati Water Supply (2008-)**
- **Assam Guwahati Sewerage (2014-)**
- **Sikkim Biodiversity Conservation & Forest Management (2010-)**
- **Assam North East Connectivity Phase 3 Dhubri/Phulbari (New Bridge) (2018-)**
- **Meghalaya Umiam Hydro Power (2018-)**
- **Nagaland Forest Management (2016-)**
- **Mizoram North East Connectivity Phase 2 Tura-Dalu (NH-51) (2016-)**
- **Mizoram North East Connectivity Phase 2 Shillong – Dawki (NH-40) (2017-)**
- **Mizoram TCP for Sustainable Agri & Irrigation Dev. (2017-)**
- **Mizoram North East Connectivity Phase 1 Aizawl–Tuipang (NH-54) (2017-)**
- **Meghalaya North East Connectivity Phase 1 Aizawl–Tuipang 350.7km (NH-54) (2016-)**
Free and Open Indo-Pacific

- The Free and Open Indo-Pacific (FOIP) concept, originally advocated by the Japanese government, is based on the recognition that a maritime order that is free and open under the rule of law represents a foundation for the stability and prosperity of the international community. To ensure the stability and prosperity of the Indo-Pacific region, it is vital to maintain or bolster its free and open maritime order by eliminating various kinds of threats such as those from piracy, natural disasters, terrorism, the proliferation of weapons of mass destruction and illegal operations.

- The entire Indo-Pacific region’s economic activities will be stimulated by connecting Asian economies that have grown significantly through attaining a certain degree of political stability, with Middle Eastern and African countries that are expected to grow in the coming years and by boosting the regional connectivity.
Cooperation in the third countries

India and Japan welcomed progress in identification of specific cooperation, including but not limited to the following:

2.1 Cooperation in Sri Lanka, such as the development of LNG-related infrastructure;
2.2 Cooperation in Myanmar, synergizing development efforts in the Rakhine State by collaborating in housing, education and electrification projects;
2.3 Cooperation in Bangladesh, for enhancing connectivity by way of four-laning of road and reconstruction of bridges on the Ramgarh to Baraiyarhat stretch, and providing rolling stock and constructing the Jamuna Railway Bridge over the Januma River; and
2.4 Cooperation in Africa, such as organising an SME development seminar in Kenya and seeking a possibility of a collaborative project in the area of health service such as developing a cancer hospital in Kenya.
JICA’s contribution to Economic Corridors and Mekong Area

**Southern Economic Corridor**
- Cambodia National Rd No.5 (F/S)
- Cambodia National Rd No.6 & 7 (Grant)
- Cambodia National Road No.1 (Grant)
- Neak Loeung Bridge (Grant)
- Saigon East-West Highway (Loan)
- North-South Expressway (Loan)
- Cai Mep-Thi Vai Port (Loan)
- Sihanoukville Port Special Economic Zone (Loan)

**East-West Economic Corridor**
- Suvarnabhumi Airport (Loan)
- Laem Chabang Port (Loan)
- Map Ta Phut Industrial Port (Loan)
- Sihanoukville Port (Loan)
- Nam Ngum Hydroelectric Power (Loan/Grant)
- Wattay Vientiane International Airport (Grant)
- Lam Ta Khong Pumped Storage (Loan)
- Phu My Thermal Power Plant (Loan)
- Cambodian National Rd No.1 (Grant)
- Cambodian National Rd No.6 & 7 (Grant)
- Cai Lan Port (Loan)
- Hai Phong Port (Loan)
- Da Nang Port (Loan)
- Pakse Bridge (Grant)
- Lao National Road No.9 (Grant)
- Hai Van Tunnel (Loan)
- Mekong bridge (Spien KIZUNA)(Grant)
- 2nd Mekong International Bridge (Loan)
- Tansonnhat International Airport (Loan)
- Long Thanh International Airport (F/S)
- Phu My Thermal Power Plant (Loan)

Projects related to Southern Economic Corridor
Projects related to East-West Economic Corridor
Flagship Project
JICA’s contribution to Maritime ASEAN Economic Corridor

East-West Economic Corridor

Southern Economic Corridor

ASEAN RoRo Shipping Network

ASEAN 47 Network Ports

Flagship Project
JICA's activities for prosperity of the Indo-Pacific

- Trans-Maghrebin Corridor
- West Africa Growth Ring
- Nile Corridor
- Northern Corridor
- Central Corridor
- Nacala Corridor
- Djibouti-Addis Ababa Corridor
- The Fourth Trans-African Highway

Other economic corridors:
- Cross Boarder Project in North East India and Bangladesh
- Delhi-Mumbai Industrial Corridor (DMIC)
- Chennai-Bengaluru Industrial Corridor
- Bay of Bengal Industrial Growth Belt (Big-B)
- East-West Economic Corridor
- Southern Economic Corridor
- Maritime ASEAN Economic Corridor

- Bay of Bengal
- Cross Boarder Project
- Delhi-Mumbai Industrial Corridor
- Chennai-Bengaluru Industrial Corridor
- Bay of Bengal Industrial Growth Belt (Big-B)

- West Africa Growth Ring
- Nile Corridor
- Northern Corridor
- Central Corridor
- Nacala Corridor

- Djibouti-Addis Ababa Corridor
- The Fourth Trans-African Highway

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- Southern Economic Corridor
- Maritime ASEAN Economic Corridor

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- East-West Economic Corridor
- Southern Economic Corridor
- Maritime ASEAN Economic Corridor

- Cross Boarder Project in North East India and Bangladesh
- Delhi-Mumbai Industrial Corridor (DMIC)
- Chennai-Bengaluru Industrial Corridor
- Bay of Bengal Industrial Growth Belt (Big-B)
More than 1,300 Japanese companies have started business in India. (approx. 2.5 times more than 10 years ago)

Japanese citizens living in India have doubled in 10 years

Japanese companies in India
As of Dec. 2017

Japanese living in India
As of Oct. 2017

http://www.in.emb-japan.go.jp/Japanese/2017_co_list.jp.pdf

2. JICA’s Policy and Activities
**What is “JICA”?**

- **JICA** is a *governmental agency* of Japan that coordinates official development assistance (ODA).
- **JICA**, the world’s largest bilateral aid agency, works in over 150 countries and regions and has some 100 overseas offices.

*Part of grant aid is provided by the Ministry of Foreign Affairs.*
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
What is happening in developing countries?

- Can not go to school
- No water
- Hungry
- No hospital
- Malaria

Photo: Brent Stirton
CURRENT ASSESSMENT – SDG DASHBOARD

1. NO POVERTY
2. ZERO HUNGER
3. GOOD HEALTH AND WELL-BEING
4. QUALITY EDUCATION
5. GENDER EQUALITY
6. CLEAN WATER AND SANITATION
7. AFFORDABLE AND CLEAN ENERGY
8. DECENT WORK AND ECONOMIC GROWTH
9. INDUSTRY, INNOVATION AND INFRASTRUCTURE
10. REDUCED INEQUALITIES
11. SUSTAINABLE CITIES AND COMMUNITIES
12. RESPONSIBLE CONSUMPTION AND PRODUCTION
13. CLIMATE ACTION
14. LIFE BELOW WATER
15. LIFE ON LAND
16. PEACE, JUSTICE AND STRONG INSTITUTIONS
17. PARTNERSHIPS FOR THE GOALS

SDG INDEX AND DASHBOARDS REPORT 2018
IMPLEMENTING THE GOALS
GLOBAL RESPONSIBILITIES
© Bertelsmann Stiftung and Sustainable Development Solutions Network
**OVERALL PERFORMANCE**

Index score: 59.1

Regional average score: 64.1

SDG Global rank: 112 (OF 156)
JICA’s Policy: Towards sustainable development

**Business Environment Improvement**

1. Infrastructure development
2. Policy/institutional improvement
3. Human resource development

**Inclusive Development**
JICA’s Contribution to Development Agenda of India

Possible Contribution by JICA

Priority Areas and Sectors (Support through ODA Loans)

Urban Development
(Water Supply and Sewage)

Railway utilizing Japanese Technologies (High Speed Rail, etc.)

Private Sector Development
(Economic Corridor, Skill Development, Infrastructure for Industrial Development, Power and Energy)

Rural, Environmental Issues
(Forestry, Agriculture)

North East Region, Special Category States, Island Areas

Technical Assistance, etc.

Comprehensive Support for SDGs
(Policy Program Loans, etc.)

Development Agenda

Urbanization

Industrial Development

Inclusive Rural Growth

Other Agenda

Regional Cooperation
(Asia/Africa)

Assistance Policy

Sustainable and Inclusive Growth

Strengthening Industrial Competitiveness

Enhancing Connectivity

Regional Cooperation

SDGs

Comprehensive Support for SDGs
(Policy Program Loans, etc.)

JICA Country Analysis Paper (JCAP) FY 2017
India is JICA’s Largest Development Partner in the World

Grant Aid

- Two on-going projects in Varanasi & Bengaluru

Technical Cooperation

- Results in FY 2016/17
  - JPY 16.0 billion (about Rs. 850 crore)
- About 1100 Japanese experts to India
- About 250 Trainee from India to Japan

Operational Results in FY2017/18:
- Commitment: JPY 398.4 billion (equivalent to about Rs. 25,000 crore)
- Disbursement: JPY 264.3 billion (equivalent to over Rs. 16,000 crore)

Terms and conditions: (as of Jan. 2018)
- General terms: Interest rate 1.5%, repayment period 30 years (including 10 years grace period)
- STEP: Interest rate 0.1%, repayment period 40 years (including 12 years grace period)

Soft Loan

Accumulated Commitment by FY2017/18:
- JPY 5.3 trillion in total (equivalent to over Rs. 3 lakh crore)

Major Sector (FY2008/09-2017/18)

- Transport: 64%
- Metro: 33%
- DFC: 17%
- Others: 14%

- Water: 12%
- Energy: 9%
- Agri & Forest: 6%
- Others: 9%

Citizen Partnership / Public-Private Partnership

- Japanese Volunteers
- Japanese NGO activities
- Partnerships with Private-Sector Activities

Water: 12%
Energy: 9%
Agri & Forest: 6%
Others: 9%
Transport: 64%
Metro: 33%
DFC: 17%
Others: 14%
Prime Minister Modi expressed his appreciation for the significant contribution of Japan’s ODA to the socio-economic development of India. Prime Minister Abe expressed Japan’s intention to continue to support India’s efforts for social and industrial development, including through key quality infrastructure projects and capacity building. The two leaders reviewed with satisfaction the progress made, including the signing of the Exchange of Notes for yen loan, on the Mumbai-Ahmedabad High Speed Rail project, which is an important symbol of Japan-India collaboration marked by the 75th anniversary of India’s independence. They also welcomed the continued cooperation on Metro Projects which support smarter development of Indian cities. India further appreciated Japan’s role in promoting connectivity through quality infrastructure projects such as the Western Dedicated Freight Corridor and the Delhi-Mumbai Industrial Corridor.”
3. Projects in India
JICA is supporting metro projects in 6 major cities in India

**Ahmedabad Metro**
- Total Length: 38 km
- Project Cost: JPY 246 Billion (about Rs. 15,000 crore)
- Completion Year: 2020
- Under Construction

**Mumbai Metro**
- Total Length: 34 km
- Project Cost: JPY 621 Billion (about Rs. 39,000 crore)
- Completion Year: 2021
- Under Construction. New plan for Line 2 and 4 is coming up.

**Kolkata Metro**
- Total Length: 42 km
- Project Cost: JPY 307 Billion (about Rs. 19,000 crore)
- Completion Year: 2017
- Phase-2 is under construction

**Delhi Metro**
- Total Length: 351 km
- Project Cost: JPY 1,274 Billion (about Rs. 80,000 crore: Phase 1-3)
- Completion Year: 2020 (Phase-3)
- Phase 4 plan is coming up

**Bangalore Metro**
- Total Length: 53 km
- Project Cost: JPY 386 Billion (about Rs. 24,000 crore)
- Completion Year: 2020 (Phase-1)
- Phase-1 under construction

**Chennai Metro**
- Total Length: 38 km
- Project Cost: JPY 246 Billion (about Rs. 15,000 crore)
- Completion Year: 2020
- Under Construction
Safe, Timely, Comfortable Move for Better Life

- **Safe** operation
- **Timely & Stable** (with reliability, efficiency and comfort)
- Considerations for environmental harmonization, operation and maintenance, managerial/financial sustainability
- Coordination with various stakeholders for better operation/service

“Quality Infrastructure”
Industrial Corridors under Development (DMIC & CBIC)

DMIC and CBIC are being supported by GoI and GoJ.

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 backbone of DMIC (Delhi-Mumbai Industrial Corridor)

WDFC (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

Construction is underway (Almost all tendering are completed)
### Electric Traction System

<table>
<thead>
<tr>
<th>Property</th>
<th>DFC</th>
<th>NOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum speed</td>
<td>100 km / h</td>
<td>30 - 40 km / h</td>
</tr>
<tr>
<td>(Delhi – Mumbai)</td>
<td></td>
<td>(approximately)</td>
</tr>
<tr>
<td>Transport time</td>
<td>20 hours</td>
<td>48 - 72 hours</td>
</tr>
<tr>
<td>(approximately)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Double Stack Container Wagon**
Joint Feasibility Study (F/S) conducted by JICA and Ministry of Railway from Dec. 2013 to July. 2015.

- Both sides confirmed the use of Japanese high speed rail technologies (i.e. the SHINKANSEN system) and experiences, in line with the result of the joint F/S at the Japan-India Summit Meeting (December 2015).

Follow-Up Study conducted by JICA from Mar. 2016 to Feb. 2018

- In the latest Japan-India Summit Meeting (September 2017), the two Prime Minister welcomed:
  1. Steady progress, including the project commencement at the Sabarmati Station, witnessing the construction commencement of training institute in Vadodara
  2. Provision for a soft ODA loan amounting to JPY 100 billion
  3. Business matching efforts to establish Japan-India cooperation for advancing “Make in India” and technology transfer HSR projects

- JICA has been providing with utmost technical support (for CD);
  ✓ Formulation of technical standards,
  ✓ Safety certification measures,
  ✓ Strengthening the institutional capacity of NHSRCL
  ✓ Urban development planning of stations and surrounding areas for enhancement of the connectivity and non-fare revenue, etc.
The impact of HSR on development of India

Safe, comfortable and punctual HSR

- Boost economic development
- Stimulate regional development
  ✓ mitigate excessive concentration on large cities
  ✓ lead to balanced economy
- Promote “social innovation” by introducing Japan’s;
  ✓ Technology
  ✓ Discipline
  ✓ Perfection
  ✓ Teamwork Concept
Operation result

- **9.3GW** of generation capacity (3% of Indian total Capacity)
- **1.0GW** of Renewable Energy
- **85 Projects**
- **JPY 1.3 Trillion (≒ Rs. 80,000 crore, US$ 1.2 bil.)** (roughly 25% of JICA’s total cooperation in India)

- **ODA Loan**

- **Technical Cooperation**
  Study for Updating Exhausted Coal Thermal Power Plant

### Purulia Pumped Storage Project (I), (II), (III)

- 1995 – 2008, West Bengal
- 900MW : 12% of the peak demand of West Bengal

### Umiam Hydro Power Station Renovation Project

- 2004 – 2012, Meghalaya
- Capacity was improved from 18MW to 20MW
- 530 hours unplanned non-operation time due to malfunction (2002 before the project) → 0 hour for three years after the project completion
**Major issues in energy sector in India**

1. More involvement of private sector in RE
2. Ancillary service to take care of fluctuation caused by large scale RE
3. Better energy efficiency such as T/D loss reduction

**Other issues**

- Increasing demand for electricity
- Infrastructure/electricity demand for EVs
- Environmental issues from existing coal power plant
- Frail financials of DISCOMs
- Energy saving
- New technologies such as advanced battery

**JICA’s Activities**

- New and Renewable Energy Development Project with IREDA
- Pumped Storage Project with Soft Loan
- Transmission/Distribution Project with Soft Loan
- Training Programs
- Energy Saving Project with SIDBI
- Recent ODA Loan Projects -

- Haryana Transmission System Project (FY2007)
- Haryana Distribution Upgradation Project (FY2013)

- Odisha Transmission System Improvement Project (FY2015)


- Madhya Pradesh Transmission System Modernisation Project (FY2011)
- Madhya Pradesh Transmission System Strengthening Project (FY2015)

- Maharashtra Transmission System Project (FY2007)

- Bangalore Distribution Upgradation Project (FY2006)

- Tamil Nadu Transmission System Improvement Project (FY2012)

- Odisha Transmission System Improvement Project (FY2015)

- Transmission System Modernization Project in Hyderabad (FY2006)
- AP Rural High Voltage Distribution System Project (2010)

(More than two States)
- Rural Electrification Project (FY2005)
- New and Renewable Energy Development Project (FY2011, FY2014)

Legend
- Generation
- Transmission and Distribution
**Water Sector** Comprehensive assistance by utilizing Japanese knowledge

### Issues

**1. Demand / supply gap**
- Only a few hours of water supply can be provided per day, even in urban areas.
- Further increase in demand is inevitable due to the growth of population and economic development.

**2. Financial vulnerability in water-supply corporations**
- NRW* ratio is 52% in Delhi and 51% in Bengaluru, compared to 4% in Tokyo**

  *the difference between the water distribution volume and the billed volume
  ** Japan Water Research Center Dec 2017

**3. Environmental, sanitary and health issues**
- Decrease of groundwater levels and contamination of water by toxins such as arsenic and fluorine.
- Contamination of rivers due to lack of sewerage system, leading to health hazards such as diarrhea and hepatitis.

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**Low Quality of Service**
- Intermittent water supply: Only 1-6 hours of supply in major cities.
- Low water pressure: The need of electric water pumps.
- Water contamination: Infiltration of wastewater into the water pipes.

**Vulnerable financial structure**
- Water tariff: Rs.6/kL ～ 36/kL
- Charge collection ratio: Below 50% in some cities
- Non-revenue water ratio: Over 40%

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A countermeasure for non-revenue water: water leakage detection
Water Sector Comprehensive assistance by utilizing Japanese knowledge

Our Works
Non-revenue water (NRW) reduction
To reduce non-revenue water, renewal of water pipes and meters and installment of SCADA / GIS system are implemented. Capacity development is also addressed.

Projects throughout the country
In major cites, such as Agra, Varanasi, Bengaluru, Hyderabad, Jaipur and Delhi
   Total number of beneficiaries :
   Water Supply: approx. 30 million people
   Sanitation : approx. 15 million people

Rejuvenation of rivers
Assistance for rejuvenation of the Ganga River and Yamna river over the last 20 years toward hygienic environment.

Goa’s case of NRW Reduction

<table>
<thead>
<tr>
<th></th>
<th>Before (%)</th>
<th>After (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curtorim</td>
<td>45.1</td>
<td>18.0</td>
</tr>
<tr>
<td>Khadpaband</td>
<td>58.7</td>
<td>34.4</td>
</tr>
<tr>
<td>Moira</td>
<td>53.0</td>
<td>36.1</td>
</tr>
</tbody>
</table>

Assistance Policies
① Improving water and sewerage infrastructure in major cities and industrial areas

② Utilizing Japanese knowledge, experience, and advanced technology
   • Introduction of SCADA • GIS system
   • Advanced wastewater treatment
   • Cooperation with municipalities of Japan, with Tokyo City in Delhi and with Yokohama City in Jaipur

③ Enhancing Sustainability
   • Enhancing O/M capacity
   • Securing financial stability by ensuring the collection of water tariff
   • Enhancing of public awareness for safety water and sanitation
Improving water and sewerage infrastructure mainly in metropolitan areas and industrial areas

- Strengthening O&M capacity for Delhi Water Supply Improvement Project (Completed)
- Amritsar Sewerage Project
- Yamuna Action Plan Project
- Agra Water Supply Project
- Non-revenue Water Reduction for Jaipur Water Supply Project (Completed)
- Rajasthan Rural Water Supply and Fluorosis Mitigation Project (Nagaur)
- Goa Water Supply and Sewerage Project
- Capacity Development Project for Non-Revenue water (NRW) Reduction in Goa (Completed)
- Project for Pollution Abatement of River Mula-Mutha in Pune
- Delhi Water Supply Improvement Project
- Ganga Action Plan Project (Varanasi)
- Guwahati Water Supply Project
- Guwahati Sewerage Project
- West Bengal Piped Water Supply Project (Purulia)
- Orissa Integrated Sanitation Improvement Project
- Hussain Sagar Lake and Catchment Area Improvement Project (Completed)
- Hogenakkal Water Supply and Fluorosis Mitigation Project (Completed)
- Kerala Water Supply Project (completed)
- Bangalore Water Supply and Sewerage Project
- Tamil Nadu Urban Infrastructure Project (Completed)
- The Study for Formulation and Revision of Manuals on Sewerage and Sewage Treatment (Completed)

Water Sector Comprehensive assistance in major cities by utilizing Japanese knowledge
Issues

1. Forestry Management
   - Forestry coverage in India is 21.5% (2017), which is lower than the national target (33%) and world average (31%).
   - The population depending on forest is approx. 200 million, and most of them are below poverty line. (2011)
   → Supported by JICA assisted project’s IG Activities

2. Biodiversity
   - There are four biodiversity hotspots in India among world’s 35 hotspots (East Himalaya, West Ghats, India-Burma, Nicobar). The number of endangered species is increasing due to environmental pressure and human’s intervention.
   - There are many protection areas in India (102 National Parks, 515 Wildlife Sanctuaries) and these areas need to be conserved with associated ecosystem services.
   - Capacity development of Forest Department needs to be strengthened essentially in order to preserve sustainable biodiversity and harmonious environment.

3. Disaster Management
   - Flooding and landslide disaster in mountainous region occur frequently and need to be mitigated by improving the quality of forest.
**Progress**

JICA is the **largest donor** in the forestry sector in India.

■ **ODA Loan**

- Cumulative commitment since 1991 stands at JPY 257.7 billion (approx. Rs. 16,000 crore or USD 2.3 billion) in the forestry sector. (as of Mar. 2018)
- Supporting the policy of the Government of India on Joint Forest Management: participatory forest management targets sustainability and the following four major points are the core areas of JICA’s cooperation according to different features of each state:
  ① Sustainable Forest Management
  ② Livelihood Security
  ③ Institutional Strengthening and Capacity Building
  ④ Technology-based Management and Monitoring
- **Disaster prevention and preparedness** components are included in Uttarakhand Forestry Resources Management Project in addition to forestry related components (L/A: April 2014)

■ **Technical Cooperation**

- Capacity Development for Forest Management and Personnel Training Project (2009.3-2014.3)
- Project for Natural Disaster Management in Forest Areas in Uttarakhand (2017.3-2022.3)
Major Impacts

1. Environment, climate change, biodiversity
   - Afforestation and reforestation in nearly 3 million ha, improved forestry function, diversified biodiversity activities and accelerated research activities
   - Integrated Eco/Environment awareness activities through Children’s Forest Program

2. Poverty alleviation
   - Community development and IG activities uplifted people’s socio-economic life

3. Women empowerment
   - Self Help Group (SHG) activities were implemented in all projects and IG activities and micro credit/finance are incorporated

4. Disaster prevention/water resource conservation
   - Ground water level and agriculture production were improved.

5. Utilizing Japanese knowledge
   - Implemented technical cooperation on capacity development
   - Promoted collaboration with local governments (Akita, Oita and Okinawa)
Example of Visible Impacts in Afforestation:
Tamil Nadu Afforestation Project

Uttar Pradesh Participatory Forest Management and Poverty Alleviation Project

Satellite picture (Majholi)
2012 2016

Actual picture (Majholi)
2012 2016
Technical cooperation for “capacity development” includes the training of Indian officials and the dispatch of JICA experts.

<table>
<thead>
<tr>
<th>Total Number of (until FY 2016)</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainees from India</td>
<td>7,587 persons</td>
</tr>
<tr>
<td>Japanese Experts / Survey teams</td>
<td>8,218 persons</td>
</tr>
<tr>
<td>Japan Oversea Cooperation Volunteers</td>
<td>203 persons</td>
</tr>
</tbody>
</table>
Champions for Societal Manufacturing (CSM) Project
[Technical cooperation/Ongoing]

1. National Integrated Human Resource Development Program in Manufacturing by **Fostering Visionary Leaders** through five (5) courses

   - Course for Senior Manager Level
   - Course for SMEs (Vendors of OEMs & Tier 1-2)
   - Course for CEOs
   - Course for Middle Management Level
   - Course for Village Development and new business development

2. Implementation **in collaboration with Government, Industry and Academia**

   - Government of India
     - DIPP
     - MHRD
   - Industry
     - CII
   - Academia
     - IIM Calcutta
     - IIT Kanpur
     - IIT Madras
     - etc.

Prof. Shiba, the JICA expert, was conferred decorations both in India and Japan. Over 5000 CEOs and senior/middle-level managers have participated the programme.
Under CSM

“Godrej Edge Digi, Direct Cool Refrigerator Range”
won **India Design Mark (2014)** and **Japan Good Design Award (2015)**

- localized to the Indian market (Larger Vegetable Space, Larger Shelf Space, Larger Freezer Space, Larger Space for big water bottles)
- the graphic on its exterior shows a strong awareness for the Indian cultural sphere.
- the lowest energy consumption in India
- 24 hour cooling retention despite power cut with StayCool Technology
- the anti-bacterial property of Silver ions

The members of its design and production team are the training module director and demonstrators of JICA CSM Training course.
Japanese Language Educators to the Universities and Schools
Thank you!

धन्यवाद

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