

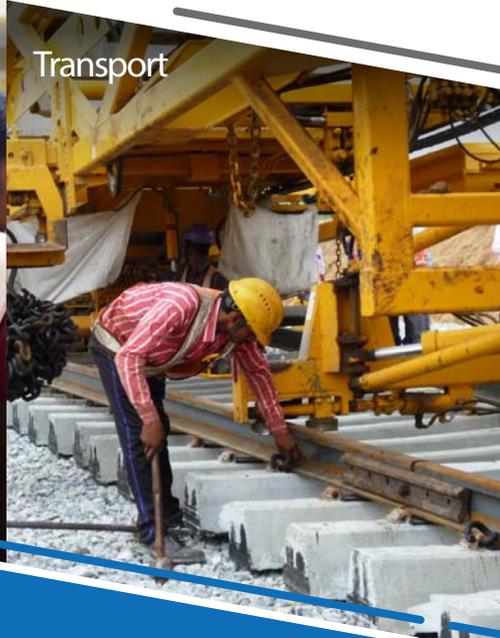
OPERATIONS AND ACTIVITIES IN INDIA



Japan International
Cooperation Agency



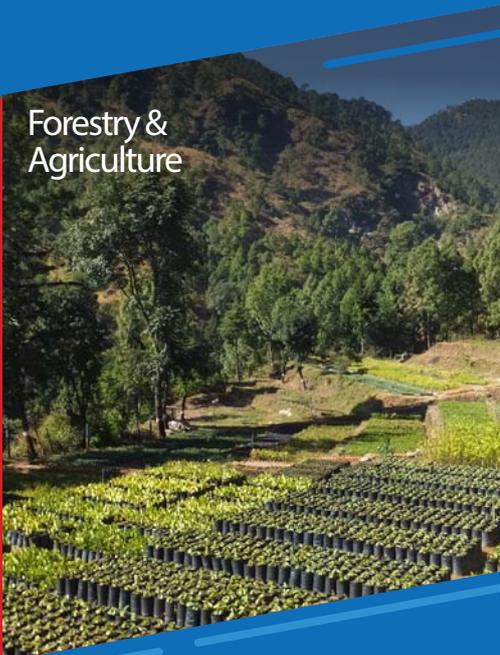
Education
& Health



Transport



Water &
Sanitation



Forestry &
Agriculture



Energy



Manufacturing

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Courtesy: Forestry Department, Government of Himachal Pradesh

FOREWORD

Strengthening the cooperation between India & Japan

Actively continue to cooperate with Indian friends for sustainable growth, poverty alleviation, environment conservation, and so on, with mutual trust.

India is one of the most rapidly advancing countries in the world, and is expected to have the highest population in some years. Very evidently India's potential as an economic powerhouse is immense, and is definitely a country which has a bearing on the stability and prosperity of the world at large.

The poverty rate in India is still high and the development needs are huge, and they vary from region-to-region. Hence, there is a lot of scope in terms of development and a need to create Sustainable Development Goals (SDGs) to meet the development requirements in the country for poverty alleviation.

I sincerely would like to utilize JICA's experiences and lessons from the high growth period of Japan and from the legacy of JICA's operations in India and in other countries. Japan and India have been long time friends. I can also foresee the relationship between both countries' relationship getting much closer in years to come.

For India to achieve sustainable overall economic development, it is imperative that improvement of infrastructure such as railways, roads, water/



Takema Sakamoto
Chief Representative | JICA India Office

sanitation and power is taken up on priority. Further, the manufacturing sector, which plays a pivotal role in economic growth and job creation, requires a greater impetus, and an enabling environment would facilitate a steady flow of investments.

In addition, both the Government of India and JICA are giving a fillip to inclusive development, wherein local communities actively partake of the process of and fruits of development, with due importance to environmental and social considerations. Cross sectoral issues, such as gender equity and equality, global warming and full utilization of Information & Communications Technology, are required to be addressed as well.

JICA, as the biggest bilateral donor of India, has been actively cooperating for economic growth, poverty reduction and environment conservation in India, through various forms of assistance including technical cooperation, concessional loan provision, grant finance provision, dispatching volunteers and partnership with the private sector. JICA has facilitated development across sectors, including transport, water and sanitation, power, forestry, agriculture, health and education, among others.

To take further such robust foundations, JICA would continue to work with the people of India in their quest for sustainable development.

2 | JICA & Official Development Assistance

A bridge linking Japan with the emerging countries



Villagers Gathered for Pani Panchyat, Kamakhyanagar, Rengali Irrigation Project



Providing Better and Smoother Connectivity to the People, Chennai Metro Rail Limited

About JICA

JICA is an independent administrative institution under the Government of Japan, established with the aim of promoting international cooperation. JICA works as a bridge between Japan and emerging countries, and provides assistance in forms of loan, grant and technical cooperation in an integrated manner so that the developing countries can strengthen their capacities.

JICA's Vision: Leading the World with Trust

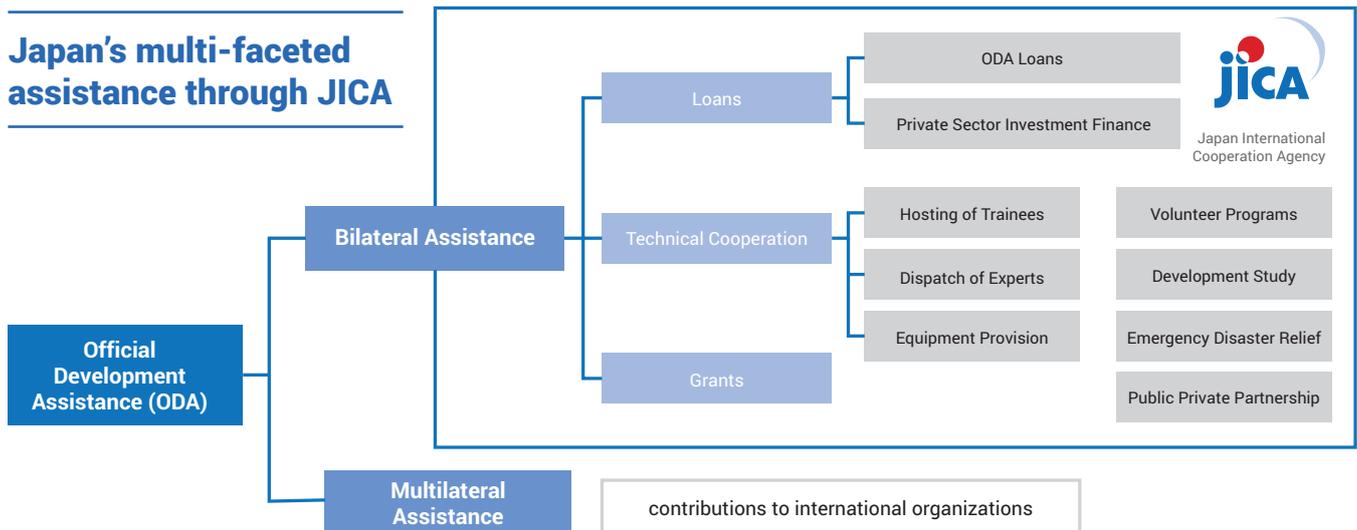
JICA, with its partners, will take the lead in forging bonds of trust across the world, aspiring for a free, peaceful and prosperous world where people can hope for a better future and explore their diverse potentials. The concept of trust is the backbone of Japan's development cooperation. JICA foster trust with a

range of domestic and international partners by putting themselves in their partners' shoes and thinking with them as equal partners. JICA will explore the diverse potentials of people, countries and private enterprises for a better future. And JICA, with its partners, will create a world where all people and countries are bound together by the trust.

What is Official Development Assistance?

Official Development Assistance, ODA, is undertaken by governments or government agencies to promote economic development and welfare in emerging countries. Since 1954, Japan has been providing financial and technical assistance through ODA, and the features of Japanese ODA have been promotion of self-help, sustainable economic growth and human security in emerging countries.

Japan's multi-faceted assistance through JICA



Women of Angul District Making Hand Fans as Part of Income Generation Activity, Odisha Forestry Project

ODA Loan

ODA loans support emerging countries providing low-interest, long-term and concessional funds to finance their development efforts. ODA loans are normally used for large-scale infrastructure and other forms of development that require substantial funds. ODA loans, which require repayment, promote efficient use of the borrowed funds and appropriate supervision of the project they finance, thereby underpinning emerging countries' ownership in the development process.

Grant Aid

Grant aid is the provision of funds to emerging countries without the obligation for repayment. Grant aid is used for development of social and economic



Providing Access of Treated Drinking Water to School Children at Dharmapuri, Hogennakal Water Supply and Fluorosis Mitigation Project

infrastructure such as for advanced transportation system, primary and secondary education, health and medical care, the environment and other areas.

Technical Cooperation

For human resources development and formulation of administrative systems of emerging countries, technical cooperation is extended. It involves dispatch of experts, provision of necessary equipment and training of personnel from emerging countries in Japan and other countries for co-creation of knowledge. Cooperation plans can be tailored to address a broad range of issues.

3 | JICA & INDIA

Japan's partnership with India is for nearly 61 years.

Japan's ODA to India started in 1958, when a concessionary ODA loan of 18 billion Japanese Yen was extended to supplement the implementation of the 2nd Five-Year Plan, at the request of the then Prime Minister, Jawaharlal Nehru. India was then the first recipient in the world of Japanese ODA loan. Since then, over 4,800 billion Japanese Yen (approx. Rs. 280,000 crores) in ODA loans have been committed for development across various sectors.

Technical Cooperation with India started in 1966. One of the early instances was establishment of Indo-Japanese Agricultural Extension Centres across the country, in which the Japanese method of paddy

cultivation was introduced and model farms were set up to contribute towards achieving food self-sufficiency in India. Since then, nearly 8,000 Indian personnel have participated in training courses in Japan and over 7,100 Japanese experts have come to India to offer their expertise.

Grant aid has also covered various areas in India including construction of hospitals and health facilities, and providing equipment for educational institutions.

Today, JICA is the world's largest bilateral aid agency and India is its largest development partner.

OPERATIONS IN INDIA: FY 2016-17

ODA LOAN



COMMITMENT

309 billion Japanese Yen
(approx. Rs 18,400 crore, World's biggest recipient)



DISBURSEMENT

206 billion Japanese Yen
(approx. Rs 12,300 crore World's biggest recipient)



NO. OF ONGOING PROJECTS

72

GRANT AID



1.5 billion Japanese Yen (approx Rs. 89.28 crore)

No. of ongoing projects: 1

*Currency rate JPY 1.68/INR is applied for the sake of explanation.

TECHNICAL COOPERATION



250 Indians visited Japan



1,101 Japanese experts dispatched to India

CITIZEN PARTICIPATION



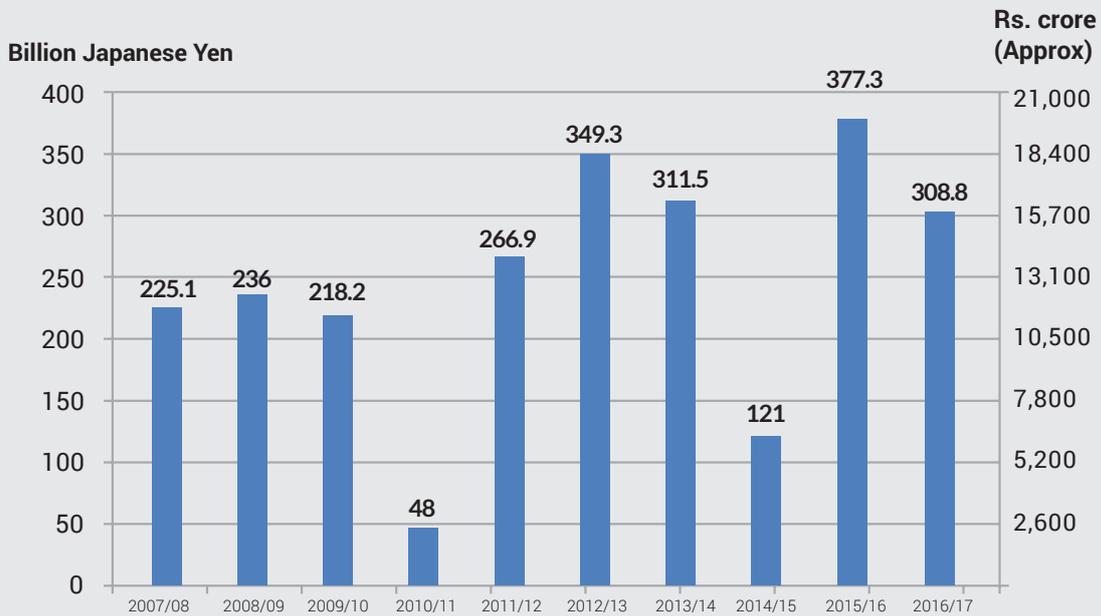
Japanese Volunteers: 24,
for Japanese language education, nursing instructor, community development



Japanese NGO activities:
Working with Indian Partner: 5

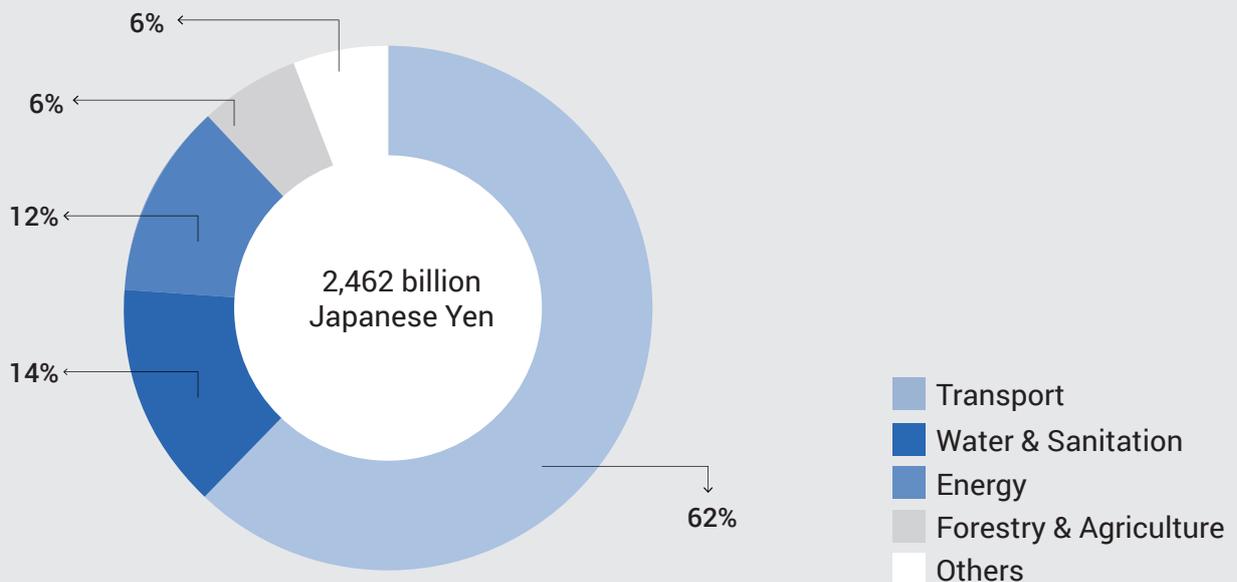
JICA's Assistance

Trends in ODA Loan Commitment for the Past 10 Years (FY 2007/08 - 2016/17)



*The great East Japan Earthquake occurred in FY2010/11
 *Prime Minister Modi's new administration in FY2014/15

Trends in ODA Loan Commitment by Sector (FY 2007/08-2016/17)



4 | ONGOING JICA PROJECTS IN INDIA: *FY 2016-17*

HIMACHAL PRADESH

- (L) Swan River Integrated Watershed Management Project
- (L) Himachal Pradesh Crop Diversification Promotion Project
- (T) Technical Cooperation Project for Crop Diversification in Himachal Pradesh (Phase 2)

UTTARAKHAND

- (L) Uttarakhand Forest Resource Management Project
- (T) Uttarakhand Capacity Development Project

HARYANA

- (L) Haryana Transmission System Project
- (L) Haryana Distribution System Upgradation Project

PUNJAB

- (L) Amritsar Sewerage Project

DELHI

- (L) Delhi Mass Rapid Transport System Project (Phase 3)
- (L) Delhi Water Supply Improvement Project
- (L) Delhi Eastern Peripheral Expressway Intelligent Transport Systems Installation Project
- (T) The Assistance related to Delhi Water Supply Improvement Project

RAJASTHAN

- (L) Rajasthan Minor Irrigation Improvement Project
- (L) Rajasthan Forestry and Biodiversity Project (Phase 2)
- (L) Rajasthan Rural Water Supply and Fluorosis Mitigation Project (Nagaur)
- (L) Rajasthan Water Sector Livelihood Improvement Project (I)
- (T) Capacity Development Project For Non Revenue Water Reduction in Jaipur

MADHYA PRADESH

- (L) Madhya Pradesh Transmission System Modernization Project (Phase 1, 2)
- (T) Technical Cooperation Project on Maximizing Soybean Production in Madhya Pradesh

GUJARAT

- (L) Gujarat Forestry Development Project
- (L) Ahmedabad Metro Project (I)

MAHARASHTRA

- (L) Mumbai Trans Harbor Link Project (I)
- (L) Mumbai Metro Line 3 Project
- (L) Project for Pollution Abatement of River Mula-Mutha in Pune

GOA

- (L) Goa Water Supply and Sewerage Project

TAMIL NADU

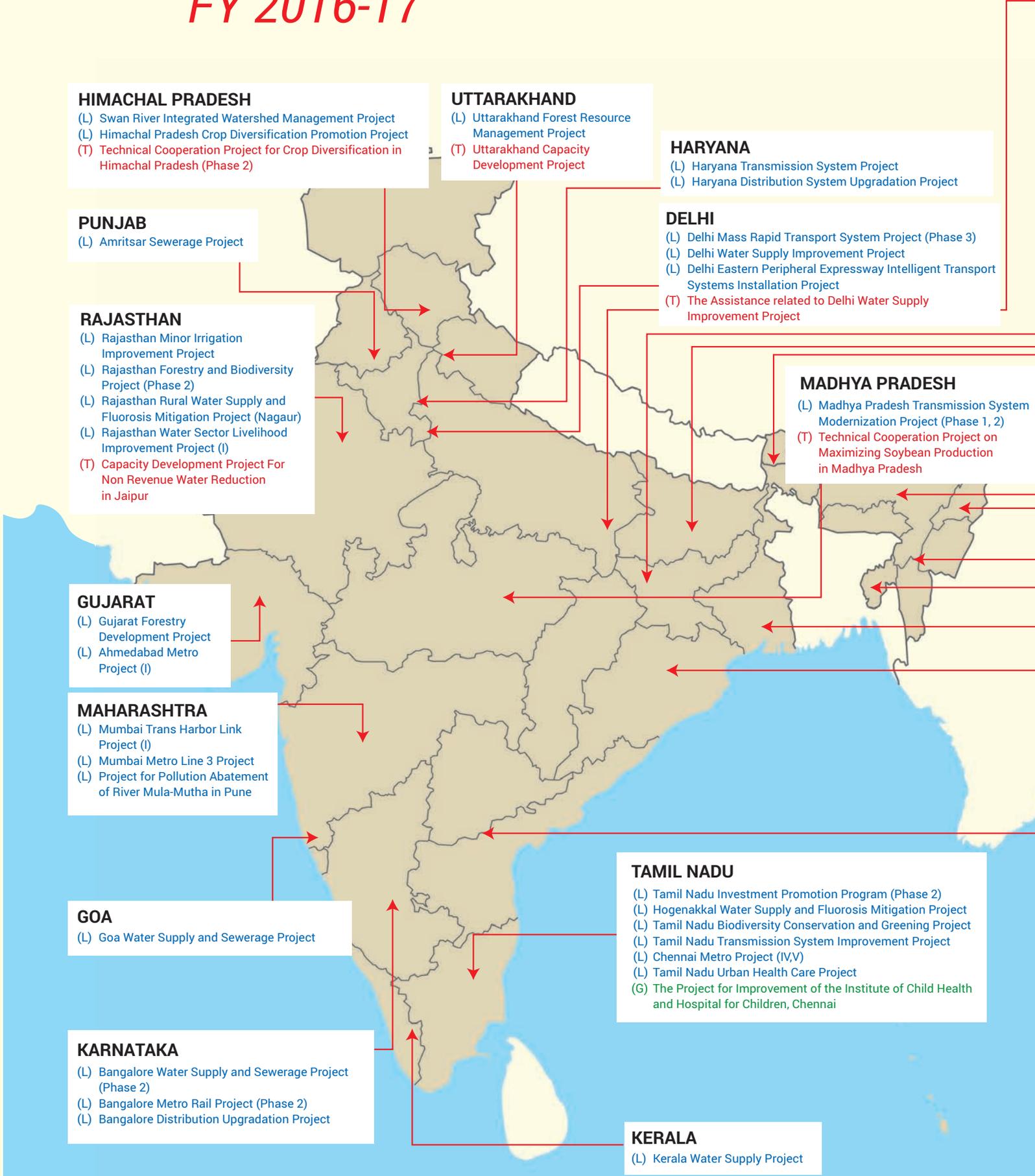
- (L) Tamil Nadu Investment Promotion Program (Phase 2)
- (L) Hogenakkal Water Supply and Fluorosis Mitigation Project
- (L) Tamil Nadu Biodiversity Conservation and Greening Project
- (L) Tamil Nadu Transmission System Improvement Project
- (L) Chennai Metro Project (IV,V)
- (L) Tamil Nadu Urban Health Care Project
- (G) The Project for Improvement of the Institute of Child Health and Hospital for Children, Chennai

KARNATAKA

- (L) Bangalore Water Supply and Sewerage Project (Phase 2)
- (L) Bangalore Metro Rail Project (Phase 2)
- (L) Bangalore Distribution Upgradation Project

KERALA

- (L) Kerala Water Supply Project



JHARKHAND

- (L) Jharkhand Horticulture Intensification by Micro Drip Irrigation Project

UTTAR PRADESH

- (L) Ganga Action Plan Project (Varanasi)
- (L) Agra Water Supply Project (Phase 1, 2)
- (L) Uttar Pradesh Participatory Forest Management and Poverty Alleviation Project

BIHAR

- (L) Bihar National Highway Improvement Project (Phase 1, 2)

SIKKIM

- (L) Sikkim Biodiversity Conservation and Forest Management Project

ASSAM

- (L) Guwahati Water Supply Project
- (L) Guwahati Sewerage Project

MIZORAM

- (T) The Project on Capacity Enhancement for Sustainable Agriculture and Irrigation Development in Mizoram

TRIPURA

- (L) Tripura Forest Environmental Improvement and Poverty Alleviation Project

WEST BENGAL

- (L) Kolkata Solid Waste Management Improvement Project
- (L) Kolkata East-West Metro Project
- (L) West Bengal Forest and Biodiversity Conservation Project
- (L) West Bengal Piped Water Supply Project (Purulia)

ODISHA

- (L) Odisha Forestry Sector Development Project (Phase 1,2)
- (L) Odisha Integrated Sanitation Improvement Project (Phase I,II)
- (L) Rengali Irrigation Project
- (L) Odisha Transmission System Improvement Project

NAGALAND

- (L) Nagaland Forestry Management Project

ANDHRA PRADESH & TELANGANA

- (L) Hussain Sagar Lake and Catchment Area Improvement Project
- (L) Transmission System Modernization and Strengthening Project in Hyderabad Metropolitan Area
- (L) Vishakhapatnam Port Expansion Project
- (L) Andhra Pradesh & Telangana Irrigation and Livelihood Improvement Project
- (L) Hyderabad Outer Ring Road Project (Phase 2)
- (L) Andhra Pradesh & Telangana Rural High Voltage Distribution System Project
- (L) Campus Development Project of Indian Institute of Technology, Hyderabad (Phase 1,2)
- (T) Project for Future Researchers at IIT Hyderabad to Enhance Network Development with Scholarship of Japan (FRIENDSHIP)

ACROSS VARIOUS PARTS OF INDIA

- (L) Capacity Development for Forest Management and Personnel Training Project
- (L) Micro, Small and Medium Enterprises Energy Saving Project (Phase 3)
- (L) New and Renewable Energy Development Project (Phase 2)
- (L) Yamuna Action Plan Project
- (L) PPP Infrastructure Financing Project
- (L) Dedicated Freight Corridor Project (Phase 1) (III) (Phase 2)
- (L) North-East Road Network Connectivity Improvement Project (Phase 1)(I)
- (T) Capacity Development Project for Highways in Mountainous Regions

- (T) Technical Cooperation
- (L) Loan
- (G) Grant Aid

Snapshot of JICA's Cooperation in Transport Sector in India

MITIGATING VEHICULAR CONGESTION IN URBAN AREAS



Facilitating development of over

400 KM of **METRO RAIL NETWORK** across Delhi, Mumbai, Bengaluru, Chennai, Kolkata and Ahmedabad.



212.60 km

Total Length of Delhi Metro Network

Facilitating construction of over

70 km of outer ring road at Hyderabad.

Facilitating deployment of **Intelligent Transport System (ITS)** in Hyderabad & Bengaluru.

PROMOTING REGIONAL CONNECTIVITY



Facilitating development of **ROADS AND BRIDGES** in various parts of India.

For instance,

Facilitated construction for **4-laning of 220 km** approx.

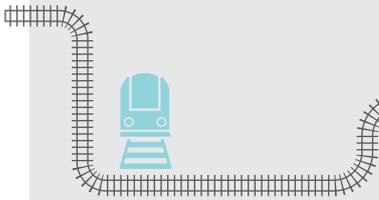
of National Highway 82 (NH 82) and National Highway 83 (NH 83) in Bihar.



Conducting Study for development of **ROADS, including BRIDGES AND TUNNELS** in the North East.



CONNECTING PORTS WITH INLAND AREAS



Facilitating development of

dedicated railway-freight corridor (**Western DFC**) around

1,500 km between National Capital Region of Delhi and Mumbai.



100 km per hour is designed for train speeds of

The travelling time has been reduced from

3 days to 1 day.

ENHANCING CAPACITY OF PORTS



Facilitating increase in

capacity and efficiency of cargo handling at the Vishakhapatnam & Chennai ports.



INDIAN RAILWAY'S **VISION 2020** ENVISAGES DEVELOPMENT OF **HIGH-SPEED CORRIDORS** FOR SPEEDS UPTO **350 KMPH**

Commenced the General Consultancy work for the **Mumbai-Ahmedabad High Speed Railway Project** providing designs and Tender assistance for its smooth implementation



Snapshot of JICA's Cooperation in Water & Sanitation Sector in India

CURRENT SITUATION



Intermittent water supply
(Daily water supply in major cities ranges from 1 hour to 6 hours)



69% of sewerage is discharged to rivers and lakes without any treatment.



11.7 million people are at health risk due to fluoride-affected water.



More than **40%** of non-revenue water loss exist in major cities.



Around **28%** of sewer service reaches across India.



A mere **30 - 40%** of operation and maintenance cost are recovered by utility bills.

WHAT IS JICA DOING



Approved **29** projects amounting to **677 billion** Japanese Yen (approx. **Rs. 39,800 crore**)

across Delhi, Agra, Varanasi, Pune, Amritsar, Bhubaneswar, Cuttack, Guwahati, Hyderabad, Bengaluru, Goa, Guwahati, Nagaur (Rajasthan), Purulia (West Bengal), Kerala & Tamil Nadu.



JICA projects are focusing on

1. Infrastructure development
2. Capacity development of water utilities
3. Access of water & sanitation by urban poor
4. Public awareness



Japanese advanced knowledge and experience are being utilized for water loss reduction in Delhi, Jaipur and Goa.



Fluorosis mitigation activities are carried out such as training to doctors and teachers, raising awareness among rural communities.



Enhancing operation and maintenance capacity and financial sustainability.



EXPECTED RESULTS BY JICA PROJECTS

30 million

People will receive water supply by JICA Projects

15 million

People will be benefitted by JICA sewerage Projects

24 x7

Water supply is expected in parts of Delhi, Goa and Jaipur



Snapshot of JICA's Cooperation in Energy Sector in India

INCREASING POWER GENERATION CAPACITY

Facilitated construction of **hydro and thermal power stations** across India.

9.3 GW POWER GENERATION CAPACITY DEVELOPED

which is about **4%** of total generation capacity



ENHANCING TRANSMISSION & DISTRIBUTION (T&D) NETWORK

FACILITATED ENHANCEMENT OF TRANSMISSION/DISTRIBUTION LINES & SUB-STATIONS across

Haryana, Madhya Pradesh, West Bengal, Odisha, Maharashtra, Andhra Pradesh/Telangana, Tamil Nadu, Bangalore, Hyderabad and so on.

For instance, electricity supply in **Hyderabad** has increased to

16,329 GWh, from **8,860 GWh** earlier.

INCREASING RENEWABLE ENERGY GENERATION CAPACITY

Extended **60 BILLION** Japanese Yen (approx. Rs 3,100 crore) since 2011

DEVELOPMENT OF RENEWABLE ENERGY SOURCES

through **IREDA** (Indian Renewable Energy Development Agency)

RURAL ELECTRIFICATION

FACILITATED DEVELOPMENT OF SUBSTATIONS & ELECTRICITY DISTRIBUTION NETWORK

in rural Madhya Pradesh, Andhra Pradesh/ Telangana and Maharashtra.

For instance, **85%** households in eastern **Madhya Pradesh** have access to electricity, from **37%** earlier.

PROMOTING ENERGY SAVING

Extending **90 BILLION** Japanese Yen (approx. Rs 4,700 crore)

SINCE 2008

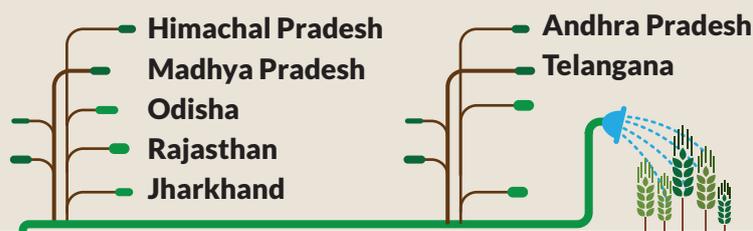
for deployment by Micro, Small & Medium Enterprises of energy efficient systems for power, lighting and manufacturing, through

Small Industries Development Bank of India (SIDBI)

Snapshot of JICA's Cooperation in Agriculture, Irrigation & Forestry Sector

TO INCREASE IRRIGATION FACILITIES TO MITIGATE DEPENDENCE ON RAIN-FED AGRICULTURE

FACILITATED DEVELOPMENT OF IRRIGATION FACILITIES IN



For instance,

Irrigated area will increase by
933,000 HECTARES

(more than 6 times the area of union territory of Delhi)



TO INCREASE PRODUCTION



Facilitated crop diversification in Himachal Pradesh



Enhancement of soybean production in Madhya Pradesh



Enhancement of silk production from bivoltine cocoons in Andhra Pradesh/ Telangana, Karnataka & Tamil Nadu.

For instance,

Farmer income per acre of **MULBERRY** on which silkworms feed

Cultivation has increased

Rs 50,000 to Rs 150,000

on an average in

Andhra Pradesh/Telangana, Karnataka & Tamil Nadu



MANAGE FOREST RESOURCES FOR SUSTAINABLE DEVELOPMENT

FACILITATING SUSTAINABLE FOREST RESOURCE MANAGEMENT ACROSS

in Rajasthan, Gujarat, Kerala, Tamil Nadu, Punjab, Karnataka, Haryana, Odisha, Tripura, Himachal Pradesh, Uttar Pradesh, Sikkim, West Bengal and Nagaland.

PROJECT FOR CAPACITY ENHANCEMENT FOR FOREST MANAGEMENT

under which training facilities have been refurbished/ newly built, training pedagogy developed and implemented, has received the National Award for 'Excellence in Training in State Forest Training Institutions'.

For instance,

in Uttar Pradesh afforestation of over **80,000 hectares**

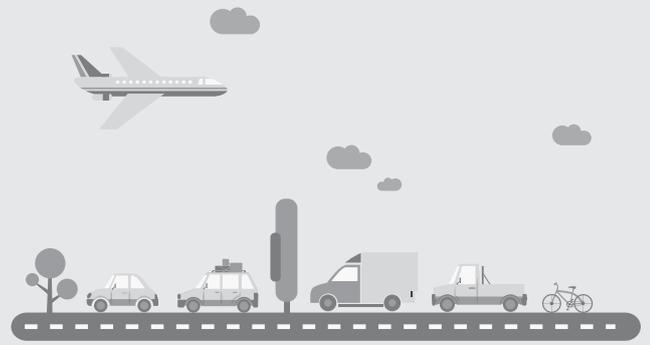
of non-timber forest produce such as *Aloe vera, bael and turmeric*

will be achieved to enhance income of forest dependent communities



JICA has extended ODA loan of 517 billion Japanese Yen (approx. Rs 30,600 crore) cumulatively since 1981/82 to enhance agricultural productivity and forest resource management in India.

9 | TRANSPORT



Sector Background & Challenges

Transport system in India, comprising roads, railways, ports and air services, is one of the largest in the world. However, efficiency of the transport system is low, in part because the average speed of movement through road, rail and coastal ships is lower than in developed economies. The 12th Five-Year Plan (2012-17) estimates investment of over Rs 56 lakh crore under the Plan for development of infrastructure capacity to support economic growth.

Figures at a Glance

2-wheeler & car ownership (per 1,000 people)



112 Year | 1994 **393 Year** | 2021 *estimated*



14 Year | 1994 **48 Year** | 2021 *estimated*

(source: Government of India Fact Sheet on Urban Development & Poverty Alleviation)

Daily trips by various vehicles



Year 2001 **92 million**

Year 2021 **216 million** *estimated*



Railways

Average speed of freight trains
25 km per hour

(source: 12th Five-Year Plan, volume 2)



Work in Progress at Dedicated Freight Corridor, Jaipur

use of ICT based applications is recommended to make public transport more efficient.

For railways, development of dedicated freight corridors to enable higher freight carrying capacity of trains and faster movement of such trains is clearly prioritized by the Government of India. Furthermore, the Indian Railways' vision 2020 envisages development by year 2020 of at least four state-of-the-art high-speed corridors of 2,000 km on which trains would travel at speeds up to 350 km per hour.

For the North-East India, the development of connectivity within the region and of the region with the neighbouring countries, as a means of expanding economic activities and development in the region is strongly anticipated.

In short, safe, timely and comfortable move is absolutely essential both for economic development and quality of life improvement, and obviously development needs for the transport field in India is still large.

Government of India's Strategy

For urban transportation, the Government of India recommends development of metro system in cities which have over 2 million population, among other determinants, as metro system is proving to be a successful mode of public transport. Additionally, the

Overview of Japan's Assistance

Assist for realizing "Safe, Timely, and Comfortable Move for better life" with "Quality Infrastructure" in transport system to facilitate sustained economic development.

ODA loans of 2,000 billion Japanese Yen, approx. Rs 115,000 crore, extended since 1982/83.

JICA's Assistance Strategy

JICA is supporting improvement of urban transport system through development of high-speed mass transportation systems (metros), feeder lines connecting the system (monorails, Light Railway Transport, etc.), ring & radial roads and intelligent transport systems (ITS).

JICA is supporting strengthening of arterial transport networks, including railways, roads, airports and ports, along the 'industrial corridors' between Delhi & Mumbai (Delhi Mumbai Industrial Corridor, DMIC) and between Chennai & Bengaluru (Chennai Bangalore Industrial Corridor, CBIC).

JICA is supporting improvement of transport infrastructure in North-East India, including roads, bridges and tunnels, for improved connectivity within the region and with adjoining countries.

Achievements



JICA facilitated development of Delhi Metro which now enables 2.7 million passengers to commute on the system each day. Furthermore, Delhi Metro reduces greenhouse gas emissions by 6.3 lakh tonnes annually, and has been certified by the United Nations to receive carbon credits which is the first in the world for a rail-based system.

JICA is facilitating development of Intelligent Transport System (ITS) in Hyderabad, Bengaluru & Delhi.

JICA is facilitating development of dedicated freight corridor between Delhi & Mumbai, which would deploy automated signal and communication system and high-speed, high-capacity locomotives.

JICA conducted feasibility study, jointly with Ministry of Railways, for high-speed rail corridor between Mumbai & Ahmedabad. Based on the study results and following G-to-G dialogues, both the Governments have agreed to cooperate on the development of the Mumbai-Ahmedabad high speed rail corridor, utilizing Japanese high speed rail technologies (i.e. the Shinkansen system) and experiences. Following the feasibility study, JICA has been conducting the Follow-Up Study and the General Consultancy work for the Mumbai - Ahmedabad High Speed Railway Project, providing support such as setting up technical standards, preparing designs, and providing tender assistance.

An Example of JICA's Assistance:



Delhi Metro

The economic growth is a stimulus in migration of people to metros like Delhi, in search of better opportunities. In turn Delhi's population has been increasing, from 16.8 million in 2011 to an estimated 23 million in 2021, with attendant increase in vehicles. This has led to decrease in vehicular speed and increase in traffic congestion and vehicular pollution.

As there is limited scope for enhancing capacity of existing road network, the local government proposed development of a multi-modal transport system which became the genesis for the Delhi Metro Rail Corporation.

For development of the Delhi Metro, JICA has extended ODA loan of 652 billion Japanese Yen (approx. Rs 38,300 crore) in phases. Under the first and the second phases of the Delhi Metro developed by 2011, 190 km serving 142 destinations in Delhi and neighbouring areas of Gurgaon, Noida, Ghaziabad and Faridabad were built. In the third phase, additional 116 km serving 76 destinations across Delhi and neighbouring areas would be added, majorly under JICA assistance. JICA's assistance is not only for the system and facility improvement but also for people's mindset change, such as safety measures, timely operation, and consideration to female passengers, which will provide women more mobility and would lead to their social achievement in the society.



10 | WATER & SANITATION

Sector Background & Challenges

As per 2011 census, 70.6 percent of urban population is covered by individual connections. However, per capita water supply is inadequate, is not supplied constantly or equally to all, and there is also disparity among regions in the service level. In urban areas, water supply quantity ranges from 37 to 298 litre per capita per day (lpcpd) for a limited hours, and metering for residential water connections is inadequate due to malfunctioning water meters. With that 70 percent of water leakages occur from consumer connections. As per 2011 census, about 13 percent of urban households do not have access to any form of latrine facility, and defecate in the open. About 37 percent of urban households are connected with open drainage.

Government of India's Strategy

Capital expenditure of Rs. 99,187 crore for development of urban water supply, sewerage, solid waste management and storm water drains was envisaged from 2012-2015. Achieving 100% water supply and sanitation in all urban areas of the country and eliminate open defecation. It is strongly anticipated to increase provision of public toilets for floating populations, improved sewage collection, conveyance and treatment services is necessary. The 'Swachh Bharat Abhiyan' launched in 2014 seeks to eradicate manual scavenging and generate support for urban local bodies in designing, executing and operating waste disposal systems, among other initiatives, to achieve the mission of 'Clean India' by 2019.

Figures at a Glance



1 to 6 hours a day

Water supplied by local municipal corporations in major cities

Source: Service level benchmark indicators, Ministry of Urban Development



40 to 50%

Non-revenue water, water lost in distribution system, in most cities

Source: 12th Five-Year Plan, Volume 1



72%

Sewage discharge not connected to any sewer network in India

Source: Central Pollution Control Board, 2009



80%

Sewage not treated before disposal in Class I & Class II cities

Source: Central Pollution Control Board, 2009



11.7 million

People at health risk due to fluoride affected water

Source: National Program for Prevention and Control of Fluorosis, Ministry of Health & Family Welfare



Rs 2,180

per capita annual economic cost of inadequate sanitation

Source: 12th Five Year Plan, Volume 2



Control Room of Water Pump House, Bangalore Water Supply and Sewerage Project

Overview of Japan's Assistance

Assist development of water supply and sanitation facilities for improved living environment and economic development.

ODA loan of 677 billion Japanese Yen, approx. Rs. 39,800 crore, extended since 1991/92

JICA's Assistance Strategy

JICA is supporting the development of water supply and sewerage treatment infrastructure for residential, commercial and industrial areas, together with introduction of volumetric based tariff system, metering system, improved billing, efficient tariff collection, non-revenue water reduction activities, promotion of recycle/reuse of wastewater.

JICA is also supporting water supply and sewerage infrastructure improvement in rural areas facing health issues such as fluoride and arsenic contamination in ground water.

Achievements



30 million people will receive water supply from JICA supported projects. 15 million people will benefit from JICA supported sewerage projects. 24x7 water supply is expected in parts of Delhi, Goa and Jaipur through JICA-supported projects.

An Example of JICA's Assistance:



Hogenakkal Water Supply and Fluorosis Mitigation Project (Phase 1 & 2)

JICA has extended 39,482 million Japanese Yen in ODA loan to Hohenakkal Water Supply and Fluorosis Mitigation



Doctor Performing Dental Fluorosis Check Up in a Girl's School at Dharmapuri, Hogenakkal Water Supply and Fluorosis Mitigation Project

Project in Tamil Nadu. The project aims at meeting the surging demand of water and improving health conditions of local residents, by constructing water supply facilities and by mitigating the health damage caused by excess fluoride contents in the ground water in Dharmapuri and Krishnagiri, the two areas in Tamil Nadu which have the most serious cases of water shortage and fluoride contaminated groundwater by fluoride. Through this project, JICA aims to provide safe and stable water supply for a population of approximately 3 million people in Dharmapuri and Krishnagiri districts of Tamil Nadu.

The project comprises three major components - Water Supply Facilities, Fluoride Mitigation, and capacity building for the Rural Local Bodies. Under the water supply facilities component of the project a Water Treatment Plant with a capacity of 160 million Litres Per Day (MLD) was inaugurated in May 2013. Raw water tapped from the river Cauvery at Hogenakkal is being treated at the WTP and distributed to people in Dharmapuri and Krishnagiri districts.

Fluorosis mitigation is one of the key components of the project, which is being implemented on three-pronged well-defined strategies, though health delivery outlets, school and community based. The main objective of the Fluorosis Mitigation component is to create awareness among residents about fluorosis and to reduce the health related cases as well.



Water Treatment Plant for Hussainsagar Lake and Catchment Area Improvement Project, Hyderabad

11 | ENERGY



Sector Background & Challenges

Resulting from its rapid economic growth and quality of life improvement, electricity consumption in India has been increasing by 7% each year in the last 10 years. India's main challenges in the energy sector include ensuring energy supply, enhancing energy efficiency, diversifying energy resource and mitigating regional difference in energy availability. In addition, grid stability is required to be addressed as sources of new and renewable energy increase. During the period of 2017-22, 22,470 MW in power generation capacity addition without renewable energy is targeted.

Figures at a Glance



329,204 MW

Installed Capacity (as of April, 2017)

Coal: **59%**; Gas: **8%**; Hydro: **14%**; Nuclear: **2%**;
Renewable: **17%**



Demand-supply gap

0.7% in energy supply:
supply 1,135,332 MU; demand: 1,142,928 MU

1.6% in peak demand:
supply 1,56,934 MW;
demand: 1,59,542 MW (in 2016-17)

1,075 kWh: Electricity consumption per capita
(in FY 2015-16)

22.77%: T&D losses (in 2014-15)

97.4%: Rural areas electrified
(as of November 2015)

Source: Central Electricity Authority

Government of India's Strategy

The Government of India's mission is 24x7 power for all by 2019. To achieve this mission, the Government of India is targeting doubling of coal production to 100 crore tonnes per year by 2020, increasing power generation by 50% by 2020, increasing renewable energy generation capacity 5 times to 175,000 MW by 2022 and increasing energy savings to 10% of current consumption. Additionally, the Transmission and Distribution (T&D) losses could reduce to the global benchmark of 7% by 2047, in the scenario of India moving aggressively towards energy independence and energy security, as per NITI Aayog estimates.

Overview of Japan's Assistance

Assist development of stable electricity supply to facilitate economic growth well into the future.

ODA loans of 1,490 billion Japanese Yen, approx. Rs. 89,000 crore, extended since 1958/59.



New and Renewable Energy Development Project through IREDA, Rajasthan

JICA's Assistance Strategy

JICA's assistance to develop stable electricity supply is substantially dedicated towards enhancing energy availability through deployment of state-of-the-art energy efficient technologies for power plants, transmission systems and distribution networks.

At present, about 88% of the electricity consumed in India is generated through thermal power plants. JICA is facilitating improving energy efficiency by reducing transmission and distribution losses and more efficient usage of coal. JICA is enhancing diversification of energy generation, including renewable energy such as solar and wind, which will also serve to lower greenhouse gas emissions. Recently, further utilization of new and renewable energy caused grid stabilization issue, therefore JICA is facilitating installation of grid stabilization technologies as well.

Among the measures to improve energy efficiency, JICA has been supporting energy efficiency among Micro, Small & Medium Enterprises (MSMEs), through ODA loans and Technical Cooperation to Small Industries Development Bank of India (SIDBI).

Achievements



JICA supported projects have contributed about 9.3 GW to India's total installed capacity of about 329 GW.



Maharashtra Transmission System Project



Small and Medium Enterprises Energy Saving Project – Phase 3, Uttar Pradesh

An example of JICA's Assistance:



Andhra Pradesh & Telangana Rural High Voltage Distribution System Project

JICA has extended 18,590 million Japanese Yen (about Rs 1,110 crore) in ODA loan to facilitate reliable power supply for agriculture in Andhra Pradesh & Telangana, across 16 rural districts there.

In Andhra Pradesh & Telangana, agriculture consumes about one-third of the power supplied, essentially to operate over 2.7 million irrigation pumps. The power is being supplied using Low Voltage Distribution System (LVDS) comprising high-capacity transformers, which tended to cause pilferage and distribution losses. In addition, there have been voltage fluctuations causing damage to the irrigation pumps, which hinders farm work and burdens farmers with pump repair costs. Converting LVDS to HVDS (High Voltage Distribution System) through JICA's assistance is leading to stabilization of power supply, and in turn agricultural production there.

Under the project over 69,000 km of high voltage Direct Current lines and over 195,000 low-capacity transformer units are being installed. The project is being executed by Central, Northern and Southern Power Distribution Companies of Andhra Pradesh Limited, and is scheduled for completion by end of FY2017/18.



12 | FORESTRY

Sector Background & Challenges

The livelihood of most inhabitants in rural and tribal area is heavily dependent directly or indirectly upon forest resources. They largely live off the land, putting undue pressure on the natural forests around them. This has led to degradation of forests and depletion of forest resources across the country.

Figures at a Glance



21.3%

Forest cover in India
(India State of Forest Report 2015)



30.6%

Forest cover globally
(FAO 2015 fact sheet)



7,044 million tonnes

Carbon stock in India's forests
(India State of Forest Report 2015)



200 million

15% of India's population using wood as fuel
(India State of Forest Report 2011)

Overview of Japan's Cooperation

Assist forest resource management and livelihood improvement of forest dependent communities.

ODA loans of 246 billion Japanese Yen, approx. Rs. 14,600 crore, extended since 1991/92.

JICA's Assistance Strategy

JICA's assistance is focused on blending forest resource management with sustainable livelihood improvement of local communities through Joint Forest Management (JFM) approach. JICA assistance also provides for biodiversity conservation, institutional capacity building of forest departments, soil and water conservation measures, research and extension and involvement of NGOs for facilitating implementation.

JICA's third generation projects lay emphasis on promotion of use of technology, such as Geographic Information System (GIS) and Management Information System (MIS) for planning, implementation

Government of India's Strategy

Government of India's policy on the sector is to 'manage environment, forests, wildlife and challenges due to climate change for faster and equitable growth, where ecological security for sustainability and inclusiveness is restored, equity in access to all environmental goods and eco-system service is assured through institutionalization of people's participation.'



Uttarakhand Forest Resource Management Project

and real time-monitoring, and linking of Self-Help Groups (SHGs) directly to markets.

JICA's assistance started in 1991, when JFM was in the stage of evolution. Projects supported by JICA then focused on afforestation, soil and water conservation, training, extension, and procurement of equipment.

Projects from 2002 onwards have aimed at equilibrium between forest resource management and sustainable livelihood improvement of the local communities through JFM, under which sustainable poverty alleviation and socio economic development activities have been undertaken. Going forward, projects will include technology based planning and monitoring. Additionally, JICA is facilitating capacity development of the frontline staff at Directorate of Forest Education (DFE) & Central Academy for State Forest Service (CASFOS), Dehradun, in collaboration with the Ministry of Environment, Forest & Climate Change (MoEF & CC).

JICA also supports eco/environment awareness activities, including environmental education at thousands of schools, in JICA-assisted projects.

Achievements



Plantation/regeneration activities under JICA supported projects have covered more than 2 million hectares (which is nearly half the area of Haryana state), across 14 states, Gujarat, Haryana, Himachal Pradesh, Punjab, Karnataka, Odisha, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh, West Bengal and Nagaland, and another 0.5 million hectares are expected to be covered in the next 5 years.

Over 16,000 JFM committees and 24,000 SHGs have been formed under JICA projects.

JICA assisted project for 'Capacity Development for Forest Management and Personnel Training' has received the National Award for Excellence in Training at the inaugural National Symposium on Excellence in Training (NSET).

An Example of JICA's Assistance:



Tripura Forest Environment Improvement and Poverty Alleviation Project

In Tripura, a high proportion of local communities rely on forests for livelihood. To regenerate degraded forests and improve livelihood opportunities, Government of Tripura's Department of Forest and JICA have partnered in 2007 to initiate the Tripura Forest Environment Improvement and Poverty Alleviation Project. The project is being implemented through 463 Joint Forest Management Committees (JFMC) and Eco-Development Committees (ECDs), whose members are drawn from over 36,000 local forest dependent families.

Under the project, 61,754 have been afforested and 8,533 hectares has been brought under agroforestry. Over 2,504 check-dams of different configurations have also been laid for soil and water conservation.

In addition, plantation of broom-grass, black cardamom and gandhaki have been undertaken to create a resource base for forest based Income Generating Activities (IGA).

In 2015-16, 771,000 kg of broom grass was harnessed from the forest by 4500 forest dependent households and they collectively earned INR 420 lacs from sale of broom grass. 500 artisans have been intensively trained in handloom, bamboo furniture, basketry and other bamboo products. The Project has developed a brand named "craft and more" to market products developed by artisans and other community members.



Broom Making Under the Tripura Forest Environment Improvement and Poverty Alleviation Project

13 | AGRICULTURE



Sector Background & Challenges

In India, about 70% of the population lives in rural areas and 49% of the work force is employed in agriculture. Agriculture accounts for 14% of GDP, its annual employment growth rate is less than 1% and agricultural productivity varies across India. The Government of India is targeting 4% growth in agriculture sector during the 12th Five-Year Plan (2012-17), to improve agricultural production and livelihood opportunities in rural areas.

farm inputs and management, agriculture credit, post-harvest management and value addition, agriculture research and extension, and watershed development. For instance, the National Food Security Mission is implemented to enhance the production of rice, wheat and pulses, and Rs 50,000 crore is allocated over 5 years for development of irrigation facilities under the scheme.

Overview of Japan's Assistance

Assist enhancement of agricultural productivity and livelihood improvement in rural areas.

ODA loans of 271 billion Japanese Yen, approx. Rs 16,000 crore, extended since 1981/82.

Figures at a Glance



328 million hectares

Geographical area of India



141 million hectares

Net sown area



68 million hectares

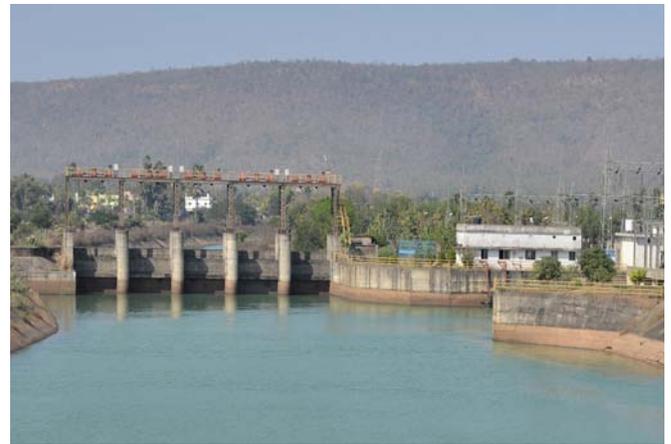
Net irrigated area (only 48% of net sown area is irrigated, 52% is rainfed)



Rs 2,56,000 crore

Net investment (gross capital formation) in agriculture & allied sectors in 2014-15

Source: Ministry of Agriculture, 2016-17 annual report



Left Bank Canal at Samal Barrage generation of Electricity upto 10 MW, Rengali Irrigation Project

Government of India's Strategy

The Government policy lays emphasis on improving the economic viability of farming as well as protection and improvement of land, water, biodiversity and genetic resources. A wide array of programs have been initiated and supported by various Ministries covering all the facets of agriculture including agriculture production,

JICA's Assistance Strategy

JICA has been focussing on uplifting and stabilizing farmers' income, and improving agricultural productivity through construction/renovation of irrigation facilities, enhancement of 'Water Users Association' (WUA), improvement of cultivation technology, crop diversification and strengthening market linkages.



Rajasthan Minor Irrigation Improvement Project

Achievements



JICA's association since 1991 with sericulture farmers of Karnataka, Tamil Nadu, Andhra Pradesh & Telangana has led to improvement in their skills in producing locally higher quality bivoltine cocoons. The demand for such cocoons is increasing, and in turn related employment opportunities are increasing. In Madhya Pradesh, JICA supported to develop soybean cultivation technologies for small and underprivileged farmers, which can be double the productivity of soybean cultivation from 1 t/ha to 2 t/ha.



Project for Maximization of Soyabean Production in Madhya Pradesh

An Example of JICA's Assistance:



Himachal Pradesh Crop Diversification Promotion Project

In Himachal Pradesh, over 70% of the working population is engaged in farming. However, 80% of the farmers are small landholders with 1.0 hectares (ha) or less in landholding, resulting in self-subsistence crop cultivation, and only 18% of the cultivated land of 583,000 ha in the state is under irrigation due to steep topography.

With the aim of securing food self-sufficiency and improving livelihood for small farmers through crop-diversification, the 'Himachal Pradesh Crop Diversification Promotion' project was started by Department of Agriculture, Government of Himachal Pradesh with support from JICA. JICA has extended a technical cooperation project and an ODA loan of over 5,000 million Japanese Yen (approx. Rs 300 crore) synergistically to maximize outcomes.

The ODA loan has facilitated development of agricultural infrastructure such as irrigation facilities, roads to access farms and post-harvest facilities, and the technical cooperation project has facilitated 'capacity building' through dispatch of experts from Japan to provide training on vegetable cultivation, processing and marketing to agricultural extension officers and farmers, and develop "Crop Diversification Guideline".



Himachal Pradesh Crop Diversification Project

14 | HUMAN RESOURCE DEVELOPMENT

Sector Background & Challenges

Development of human resource should be nurtured to the pace and scale of population increase in India, to maintain and accelerate economic growth in industrial and commercial fields. In addition to providing contemporary education and skills for the youth for enhanced career opportunities, there is an increasing need for developing higher education institutions in the areas of science and technology to address needs of the industrial sector and society, through technical innovation. Capacity development of senior and middle managers in the manufacturing sector is also needed for accelerating growth of this sector, which has remained flat for several decades at around 15% of Gross Domestic Product (GDP).

Government of India's Strategy

The enrolment in higher educational institutes is 18.8% of potential students (Gross Enrolment Ratio (GER)), which is below the world average of 26%. The Government of India intends to improve the ratio up to 25.2% by 2017, by achieving additional enrolment of 10 million students. Additionally, the Government of India has the vision of imparting skills and knowledge which not only meet the challenges of global competition but also contribute to improving the quality of life of the community.



The Graduate Team of CSM Training Course Receiving Award for Good Design for their Designed Refrigerator in Japan

Overview of Japan's Assistance

Assist development of education facilities, and human resource for manufacturing.

31 billion Japanese Yen, approx. Rs 1,600 crore, (ODA Loan: 23 billion Japanese Yen, Grant Aid: 7.8 billion Japanese Yen) extended since 1988/89.



Convocation Ceremony at IIT-H

JICA's Assistance Strategy

JICA is focussing on development of facilities for higher education and development of human resource to propel the manufacturing sector in India.

JICA has been extending ODA loan and technical cooperation synergistically for development of Indian Institute of Technology, Hyderabad (IIT-H) as a hub of academic and industrial collaboration between India and Japan.

JICA has been supporting distance education through a series of grant aids to Indira Gandhi National Open University (IGNOU), which has facilitated enhanced quality of teaching-program production and its reach across India.

JICA's 'Visionary Leaders For Manufacturing (VLFM)' Project implemented from 2007 to 2013 and succeeding 'Champions for Societal Manufacturing (CSM)' Project has aimed at creating visionary leaders in the manufacturing sector in India.

Achievements



JICA's ODA loan for IITH is facilitating development of infrastructure including International Guest House, Sports and Cultural Complex, Knowledge Center (Library), Research Center Complex, Technology Incubation Park, Convention Village, etc. and procurement of research equipment. Technical cooperation with IITH is facilitating linkages between IITH and academic institutions and private companies in Japan.

JICA's assistance to IGNOU has facilitated upgrade of equipment for satellite broadcasting, from standard definition to high definition. As satellite broadcasting forms integral part of IGNOU teaching, this is benefiting several thousand students across India.

An Example of JICA's Assistance:



Champions for Societal Manufacturing' (CSM), Project

The VLFM (Visionary Leaders For Manufacturing) Project started in 2007 to disseminate the essence of Japanese manufacturing, which is driven by innovations, and establish an Indian way of management. From 2013, the VLFM Project has been extended and enhanced to 'Champions for Societal Manufacturing' (CSM) Project.

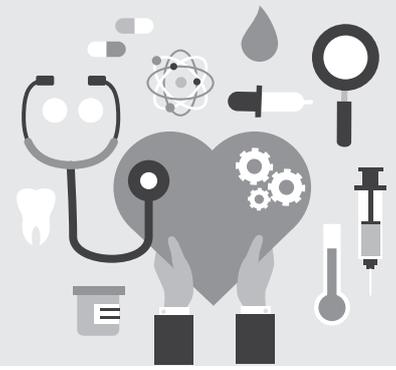
To conduct the CSM Project, a unique partnership has been forged between the government, industry and academia through Department Of Industrial Policy and Promotion (DIPP) and Ministry of Human Resource Development of the Government of India, Confederation of Indian Industry (CII), Indian Institute of Technology, Kanpur (IITK), Indian Institute of Technology, Madras (IITM) and Indian Institute of Management, Calcutta (IIMC).

The CSM Project has led to a number of successes across development of new products, new markets, new business processes and new business models, and training of over 4,600 executives to serve as visionary leaders of Indian manufacturing. The successes include development by Sona-Koyo of an electronic steering system for off-road vehicles like golf carts & tractors, and development by Godrej & Boyce of 'ChotuKool' portable refrigerator, which uses a thermochip rather than a traditional compressor and doesn't require constant electricity to operate. In addition to the leadership and management training, CSM Project introduced new aspect of training for rural development named 'Village Buddha'. In this very unique course, participants will be equipped of the effective way to catch the village people's insight and scratch new products / business model to solve the social challenges which rural people are facing.

Shoji Shiba, professor emeritus, Tsukuba University, Japan has guided the structure and implementation of the VLFM and CSM Projects from the beginning. The Government of India conferred 'Padma Shri' award on him in 2012 for his contribution to transforming India's manufacturing sector to become globally competitive. In 2015, the Government of Japan conferred 'Grand Cordon of the Order of the Rising Sun' on Dr. Sarita Nagpal, Principal Advisor, CII, for her contribution to the VLFM and CSM Projects, thereby promoting cooperation and friendly relations between Japan and India.



Project for the Visionary Leaders For Manufacturing Program



15 | HEALTH

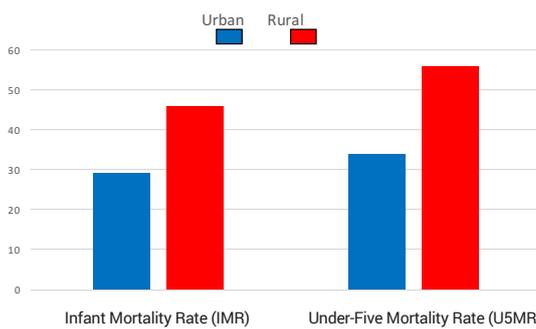
Sector Background & Challenges

Government of India aims to improve health status through concerted policy action in all sectors and expand preventive, promotive, curative, palliative and rehabilitative services provided through the public health sector with focus on quality.

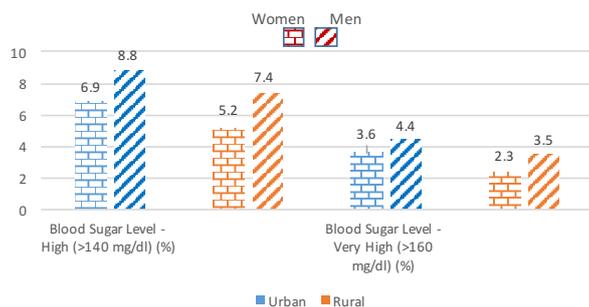
India's existing infrastructure is just not enough to cater to the growing demand. While the private sector dominates healthcare delivery across the country, a majority of the population living below the poverty line (BPL) – the ability to spend Rs 47 per day in urban areas, Rs 32 per day in rural areas – continues to rely on the under-financed and short-staffed public sector for its healthcare needs, as a result of which these remain unmet.

Figures at a glance

Infant and Child Mortality Rates (per 1,000 live births): Urban vs Rural



Blood Sugar Level among Adults (age 15-49 years): Women vs Men



Source: National Family Health Survey - 4, 2015 -16

Government of India's Strategy

The National Health Policy 2017, primarily aims to inform, clarify, strengthen and prioritize the role of the Government of India in shaping health systems in all its dimensions. The policy aims to reduce infant mortality rate to 28 by 2019 and under Five Mortality to 23 by 2025. The Government of India also supports an integrated approach where screening for the most prevalent Non-Communicable Diseases (NCDs) with secondary prevention would make a significant impact on reduction of morbidity and preventable mortality.



Doctor Treating a Child in the Out Patient Department (OPD)

Overview of Japan's Assistance

**Provision of quality healthcare services:
Reaching out to vulnerable population**

**ODA loans of 67 billion Japanese Yen, approx.
Rs 4,048 crore, extended since 1995/96.**

JICA intensively supports to improve access to health services to socially disadvantaged. Japanese technical cooperation has been focusing on enhancement of skills, knowledge and technical expertise of health sector personnel in various segments from grass-roots health workers to researchers.

JICA's Assistance Strategy

Given that India has a vast geographical area with a large population below the poverty line, JICA sees the following three areas as priorities: 1) Decrease infant mortality rate and maternal mortality rate, 2) Strengthen strategy for controlling infectious diseases, and 3) Improve access to health services for the underprivileged.

The major forms of JICA's assistance in health sector have been technical cooperation and grant aid.

JICA's grant aid focuses on improvement of medical facilities and technical cooperation focuses on enhancement of skills, knowledge and expertise of health sector personnel in various segments, from grass-roots health workers to researchers.

Achievements

JICA's financial support to the Institute of Child & Hospital (ICH) for Children to contribute to the quality improvement of health care services, especially for the children in low-income groups and medical education of ICH as a top referral hospital in Southern India. In the year 2016, JICA assisted in constructing the new technologically advanced Outpatient Department (OPD) building and provide medical equipment to the Institute of Child Health and Hospital for Children, Chennai (ICH).

The new "user-friendly" OPD building minimize the movement of patients and medical personnel



Grant Aid to Institute of Children Hospital (ICH), Chennai

and reinforces the life-saving functions through improved emergency department and provision of updated specialized equipment, thereby contributing to the quality improvement of health care services, and medical education of ICH. The technologically advanced ICH section provides specialized medical services for children in low-income groups. This contribute to provide the easier access to advanced healthcare services in the state of Tamil Nadu. JICA continue to support India's initiatives to improve health status of its population, by training and assisting the hospital management and senior staff members.

JICA has extended 17,000 million Japanese Yen (approx. INR 1,000 crore) through ODA Grant Aid since 1995 to enhance public health care facilities in India. The cumulative loan amount for ICH for Children amounts to 2,162 million Japanese Yen (approx. INR 1,286 Crore) for improvement of the Institute of Child & Hospital for Children (ICH), Chennai, a public tertiary-care hospital that provides services without charge and currently caters to over 2,500 children from the region encompassing Tamil Nadu, Karnataka and Andhra Pradesh daily in the Out Patient Department (OPD).

JICA also provided financial support to UNICEF for Polio Eradication Program in India, which eventually assisted India being a 'polio-free' nation in 2014.

An Example of JICA's Assistance:

Urban Healthcare Project in Tamil Nadu

The Urban Healthcare Project will strengthen the capacity of key hospitals by upgrading facilities and equipment, and human resources with the focus on Non Communicable Diseases (NCD), contributing to the improvement of the health sector in Tamil Nadu. The project is being implemented in 17 cities in Tamil Nadu with five major components at the core of the venture. The components and the cities have been decided based on the population size, needs, and priority for the health facility development. JICA is providing 25,537 million Japanese Yen (approx. INR 1,548 crore) Japanese Official Development Assistance (ODA) loan to improve the quality of urban healthcare services in Tamil Nadu.

16 | KNOWLEDGE CO-CREATION PROGRAMS

MULTIFACETED GROWTH AND DEVELOPMENT

Knowledge Co-Creation contributes to human resource development utilizing Japan's technology, skills & knowledge.



The Country Focused Training for Opportunity 'A' course on Project of Societal Manufacturing in Tokyo

JICA uses various forms of development assistance schemes to meet diverse needs of developing countries around the world. As one of the schemes, technical cooperation contributes to human resource development through utilizing Japan's technology, skills and knowledge. JICA's Knowledge Co-Creation programs are a form of technical cooperation that JICA carries out in Japan and in the third countries.

An example of this is the unique way of forming social systems and organizational structures, the so-called "Japanese model". If "seeing is believing", then experiencing is understanding. By joining JICA's program in Japan, people from emerging countries come to a setting surrounded by Japanese society and its organizations, where they can discuss the circumstances in their home countries and develop an understanding of social conditions and values very different from their own.



Participants from Various Countries during Knowledge Co-Creation Program Organized by JICA



Participants on a field-visit during a Knowledge Co-Creation Program.

This experience imparts valuable knowledge that could be obtained in no other way.

In addition to providing unique knowledge to personnel, this sort of technical cooperation stimulates people to make their own decisions, which is a crucial element for human resource development along with other assistance schemes. JICA's Knowledge Co-Creation programs are therefore a major component of Japan's international cooperation programs, receiving nearly 10,000 participants each year from all over the world. The majority of the participants are from governmental

or public organizations. However, there have also been participants from non-governmental organizations (NGOs) and private companies.

In terms of scale and available resources, there is no other program in the world that can compare to JICA's Knowledge Co-Creation programs, which have become one of the cornerstones of Japan's international cooperation.



Participants undergoing a Knowledge Co-Creation Program.



Mr. G.P. Upadhyaya, Principal Secretary, MHRD attending KCCP on Improvement of Education in Remote Areas- For the Achievement of MDGs and EFA(A) during Workshop in Shikoku Branch Office, Japan.

JICA's Knowledge Co-Creation programs is a form of Technical Cooperation which shares Japan's experiences.

17 | VOLUNTEERS

CREATING LASTING VALUES

Japan Overseas Cooperation
Volunteer (JOCV) and
Senior Volunteer (SV)

The JICA Volunteers promote international cooperation through the sharing of knowledge and experience and work as a bridge between the people of India and Japan.



JOCV Working as a Football Coach in an NGO in Ghaziabad



JOCV Working as a Nurse Having a Discussion with an Indian Counterpart

The JICA Volunteer and Senior Volunteer programs support a wide range of activities by Japanese citizens who intend to cooperate in the economic and social development as well as in the reconstruction of emerging countries. Through such activities, the Volunteers can not only contribute to the development of the recipient countries but also gain valuable experience in terms of international goodwill, mutual understanding and they are also able to widen their international perspectives. The JICA Volunteer

activities have earned high acclaim from the recipient countries and are also being praised in Japan. The JICA Volunteers possess backgrounds, knowledge and experience related to the requirements of the recipient countries. They live and work together with the local communities, speak their local languages and carry out activities with emphasis on self-reliant efforts and fostering mutual understanding. "Together with the local community" is the motto of JICA Volunteer programs.

Salient Features of JICA Volunteers

- They are dispatched based on the requests from the recipient countries.
- They develop work plans with their local counterparts, which reflect the needs and interests of the counterparts
- They have a voluntary mind and possess technical skills and practical experience.
- They work together with the local communities at the grass root level.



Community Development Officer Conducting a Baseline Survey in a Rural Area of Dehradun



Farmers with a JICA Volunteer

JICA's volunteer programs in India

In India, the JICA Volunteer program commenced in 1966. From the time of commencement till the present time, about 200 volunteers have been dispatched across India in various fields like education, health, agriculture, community development sports etc. Since the year 2014, the Senior Volunteer (SV) program has been introduced in India.

Comment from a counterpart of a JOCV

"Mr. YUKI YAMANAKA was working with us in organizing groups of silk-raising farmers in Hindupur (Andhra Pradesh). He was very active and energetic and his attitude towards his job was very positive. He was always assertively trying to communicate with the farmers to know more about them and speaking to them in the Telugu language. Therefore, he was trusted by them regardless of nationality. Moreover, he advised and helped the farmers on a timely basis in organizing workshops which enabled them to share the knowledge and techniques of the sericulture industry. The farmers were indeed able to improve their standard of living as a result of the deployment of Mr. YAMANAKA. - Dr. Satyanarayana Raju, Scientist, Regional Sericultural Research Station (Central Silk Board), Anantapuramu, Andhra Pradesh.



Acupressure Teacher Teaching Technique of Massage at a Blind School in Dehradun



Japanese Language Teacher Interacting with a Student During a Session at the Doon University, Dehradun

18 | JICA PARTNERSHIP PROGRAM

PARTNERS IN GROWTH AND SUCCESS

Partnership program was introduced in 2002 to support and cooperate with the implementation of projects formulated by Japanese NGOs, Japanese local governments, and Japanese universities.

Recognizing the growing importance of civil societies in international cooperation, the JICA Partnership Program (JPP) was introduced in 2002. The program supports the implementation of projects formulated by Japanese NGOs, Japanese local governments and Japanese universities to utilize their accumulated knowledge and experience in activities for developing countries. JPP projects aim to meet the diverse needs

of developing countries and to strengthen collaboration between communities in both developing countries and Japan. In India, JPP was started in 2004 and various projects have been implemented in the field of Agriculture, Rural development, Health, Women's empowerment and Tourism to contribute towards social and economic development at the grassroots level.



Photo courtesy: ASHA



Maternal and Child Health Project in Allahabad, Uttar Pradesh

"Improvement of Integrated Mother and Child Health by Collaboration between the Rural Health Volunteers (RHV) and Government Health Staff"/ASHA = Asian Sustainable Holistic Approach



Photo Courtesy: Wakayama Prefecture Government



Project for Supporting for Tourism development in the State of Maharashtra/ Wakayama Prefectural Government'

Project for Supporting Omotenashi (Japanese Hospitality) for Tourism Development in the State of Maharashtra, which will assist Ajanta Visitor Center play a Key Role of the Information Hub on the World Heritage stage and Act as Base of the Local Tourism Industry.



Photo courtesy: TPAK



Women's Safety Net Project in Dehradun, Uttarakhand

"Establishment of Prevention Programs against Gender Based Violence and Safety Net in High Poverty Rural Settlements"/Terra People ACT Kanagawa (TPAK)

Japanese NGOs, Japanese local governments and Japanese universities utilize their accumulated knowledge and experience in assistance activities for developing countries.

JAPANESE ASSISTANCE TO INDIA: TIMELINE

1958

First ODA loan to India to support 2nd 5-Year Plan.

1966

First Technical Cooperation to India, for paddy cultivation.
First Japan Overseas Cooperation Volunteers to India.

1981

First loan to agriculture sector, for fertilizer project at Hazira, Gujarat.

1982

First loan to transport sector, for Bombay suburban railways modernization.

1988

First assistance (grant aid) to education sector, for upgrading broadcast equipment at Indira Gandhi National Open University (IGNOU), Delhi.

First loan for energy savings, in Micro, Small & Medium Enterprises (MSMEs). Seven loan commitments made subsequently to continue this assistance until 2019.

First loan for irrigation, for 71 km canal development at Upper Kolab, Odisha.



1991

Emergency loan to mitigate economic crisis.

First loan to forestry sector, for afforestation along Indira Gandhi canal, Rajasthan.

First assistance (Technical Cooperation) for silk-farming, in Karnataka, Tamil Nadu, Andhra Pradesh & Telangana. The assistance continued till 2015.



1992

First loan to Yamuna Action Plan (YAP), for sewage treatment capacity augmentation. Two loan commitments made subsequently to continue this assistance until 2017.

1995

First assistance (grant aid) to health sector, for improving medical equipment at Karawati Saran Children's hospital, Delhi.

1997

First loan to Delhi Metro. 13 loan commitments made subsequently for development of 306 km of this metro.



Courtesy: Shinichi Kuno

2005

First loan for Ganga Action Plan at Varanasi.

2006

Loan for rural electrification in Andhra Pradesh, Telangana, Madhya Pradesh & Maharashtra.

First loan to Bangalore Metro. Two loan commitments made subsequently for development of 60 km of this metro.

Resumption of Japan Overseas Cooperation Volunteers program.



2007

Start of technical cooperation for Visionary Leaders For Manufacturing (VLFM) project, to strengthen Indian manufacturing sector.

2008

First loan to Chennai Metro. Three loan commitments made subsequently for development of 46 km of this metro.

First loan to Kolkata East West Metro for development of 27 km of this metro.

Loan for reducing dependence on fluorosis causing groundwater in Tamil Nadu.



2009



First loan for dedicated railway freight corridor between Delhi & Mumbai. Three loan commitments made subsequently for development of 1,500 km of this corridor.

2011

First loan for development of renewable energy sources. A loan commitment made subsequently to continue this assistance till 2020.

2013

Loan for innovative Tamil Nadu Investment Promotion Program to improve investment climate in Tamil Nadu.

Start of study for Intelligent Transport System in Bengaluru & Mysore.

Expansion of VLFM to Champions for Societal Manufacturing (CSM) project.



2014

Loan & technical cooperation for development of Indian Institute of Technology Hyderabad.

Loan for development of Mumbai Metro Line III.

2015

Preparation of Master Plan for Chennai-Bengaluru Industrial Corridor.

Completion of feasibility study, jointly with Government of India, for high speed railway system between Mumbai & Ahmedabad.



2016

First time Senior Volunteers (SV) were dispatched to India as Japanese Language Teachers.

Loan agreements signed for various projects such as Chennai Metro Project (IV) and Ahmedabad Metro Project (I).

JICA signed agreements with the Government of India to provide Official Development Assistance (ODA) loan for various projects such as the development of the metro rail system in Ahmedabad, Gujarat and Chennai, Tamil Nadu.

2017

Loan Agreement Signed with the Mumbai Metropolitan Region Development Authority (MMRDA) to Implement the Trans-Harbour Link Project in Mumbai.

Loan Agreement to Provide Assistance for North-East Road Network Connectivity Improvement Project (Phase 1)

Mumbai Trans Harbor Link Project (I) Loan Agreement Signing





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