

# Japan's ODA: Rolling Plan for India

As of June 30, 2011

[Diplomatic Consideration, etc.]  
 ● Cooperate in a wide range of thematic areas, based on the Japan-India Strategic and Global Partnership, with shared values.  
 ● There have been annual summit-level visits and frequent ministerial-level meetings.  
 ● Mid-term policy objectives for economic cooperation with India: (1) the promotion of economic growth through strengthening bilateral economic interactions; (2) poverty reduction and social sector development; (3) cooperation in the field of the environment, climate change and energy

[Priority Area] Promotion of Sustainable Economic Growth through Assisting with the Infrastructure Development

[Background]  
 <Power Supply Capacity Augmentation, Efficiency Improvements for Transmission and Distribution Networks>  
 Energy consumption in India has been increasing due to the recent high GDP growth rate, which has been over 8% per year on average in the period between FY2003 and FY2010. India's primary energy consumption is the fourth largest in the world after China, the US and Russia amounting to 4.4% of the global consumption (equivalent to 524.2 million tons of oil in FY2010). India aims to achieve an annual GDP growth rate of 8-9% under the Eleventh Five-Year Plan (for the period between April 2007 and March 2012) and it aims to achieve the growth rate of more than 10% by the end of the period. In order to achieve such fast economic growth, it is important to continue providing a stable supply of energy in the country. According to the Integrated Energy Policy of the Government of India (GOI), in order to achieve economic growth of 8% or more on average for 25 years up to 2032, and meet the basic energy demands of all the people in the country, it is necessary to increase primary energy supply at least 3-4 times and power generation capacity and power supply 5-6 times larger (with the base year of 2003). While the current power generation capacity of India is 147,715 MW (as of February 2009), augmentation of energy supply capacity is not keeping pace with energy demand growth (11% shortage in power supply and 13.8% shortage at peak demand in FY2008 (as of February 2009)). The gap between supply and demand has been increasing since FY2003 and this has been one of the obstacles to increasing economic growth. The Eleventh Five-Year Plan places "Faster Growth" and "Inclusive Growth" as pillar strategies for development policies. The plan places the realization of stable energy supply as one of the highest priorities in order to achieve "Faster Growth." In addition, half of the rural population is not receiving enough energy (the electrification rate among rural households was approximately 44% according to the 2001 national census). Improving the low rural electrification rate is one of the challenges for closing the economic gap between the rich and poor.  
 The GOI aims to achieve the following four goals in the Eleventh Five-Year Plan, regarding the above-mentioned challenges:  
 (1) The development of 78,600 MW of new power generation;  
 (2) The reduction of transmission and distribution losses from 35% (FY2005) to 15% (2012), by continuing with the implementation of the Accelerated Power Development & Reform Programme (APDRP);  
 (3) Improving power generation efficiency;  
 (4) The promotion of energy conservation through demand-side management (approximately 10,000 MW).  
 In order to meet the huge investment demand in the power sector for the implementation of the above mentioned plans, the GOI is promoting the liberalization of the power sector to achieve 13.8% of new power developments (10,760 MW) through private capital. While it is imperative for electricity boards (to which electricity is sold) to recover financial soundness in order to promote private sector participation in the energy sector, the actual financial health of state electricity boards, in general, has worsened because the tariff rate for domestic-use and agriculture has remained low in India. This is because of the distorted tariff structure due to political decisions on the tariff rate in India and this has resulted in a tariff rate that is lower than the supply cost. Therefore, the improvement of the tariff structure is also an important issue.  
 <Energy Conservation, Energy Efficiency Improvements, New and Renewable Energy>  
 India faces an urgent need to promote the efficient use of energy (energy conservation) and renewable energy utilization in order to achieve a stable energy supply and environmental conservation, as energy consumption has continuously increased due to the rapid economic growth of the country. Thus, the GOI has planned, in its Eleventh Five-Year Plan, to promote energy conservation as well as to develop renewable energy resources equivalent to 10,000 MW, and 14,000 MW respectively. The GOI announced the National Action Plan on Climate Change (NAPCC) in June 2008 as a vision to achieve sustainable development. The plan includes the promotion of solar energy utilization and energy efficiency enhancement as priority issues.

[Japan's Assistance Policy]  
 1. In order to strengthen power supply and transmission/distribution capacities in India where energy demands are growing, the following areas of cooperation will continue to be given high priority: construction of efficient power supply facilities (power plants, transmission and distribution networks); energy efficiency improvements at existing facilities; and the reduction of transmission/distribution losses. Additionally, from the standpoint of climate change mitigation, demand-side energy conservation as well as new and renewable energy development will be further facilitated.  
 2. This area of cooperation would encourage Japanese private sector participation in the Indian economy through the realization of a stable power supply, leading to the promotion of economic growth in India through the enhancement of the Japan - India economic relationship. Therefore, consideration may be given in choosing target regions of cooperation where many Japanese companies have their businesses.

[Development Issue]	Program	Program Summary	Project	Scheme	Schedule						Assistance Amount (100 Million Yen)	Note			
					Before JFY 2010	JFY 2011	JFY 2012	JFY 2013	JFY 2014	JFY 2015					
Stable Energy Supply	Improvement of Energy Supply Capacity, Energy Saving and Energy Efficiency	In order to strengthen the capacity to generate and transmit/distribute electricity to meet the growing demand in India, continuous support in the following areas will be provided: the construction of highly efficient power supply facilities (power plants, transmission and distribution networks); the improvement of efficiency at existing facilities; and the reduction of transmission and distribution losses. Additionally, for climate change mitigation, support for the promotion of demand-side energy conservation as well as development of new and renewable energy resources will be extended.	Study on Improving Operations in Thermal Power Plants	TCDP								2.50			
			Study on Improving Operations in Thermal Power Plants (C/P (Counterpart) Training)	CTR											
			Thermal Power Engineering for Gas Turbine and Coal Fired Steam Turbine	CTR											
			Bakreswar Thermal Power Station Units Extension Project	LA										367.71	
			Umiam Stage II Hydro Power Station R&M Project	LA										19.64	
			Purulia Pumped Storage Project	LA										415.41	
			Transmission System Modernization Project in Hyderabad	LA										236.97	
			Bangalore Distribution Upgrade Project	LA										106.43	
			Maharashtra Transmission System Project	LA										167.49	
			Haryana Transmission System Project	LA										209.02	
			Micro, Small and Medium Enterprises Energy Saving Project	LA										300.00	
			Micro, Small and Medium Enterprises Energy Saving Project (Phase 2)	LA										300.00	
			Research Partnership for the Application of Low Carbon Technology for Sustainable Development	STC										2.70	
			Energy Conservation Techniques	CTR											
			Andhra Pradesh Rural High Voltage Distribution System Project	LA										186.00	
New and Renewable Energy Development Project	LA										300.00				
Madhya Pradesh Transmission System Modernization Project	LA										185.00				

[Priority Area] Promotion of Sustainable Economic Growth through Assisting with Infrastructure Development

[Background]  
 In its Eleventh Five-Year Plan (from April 2007 to March 2012) and in the National Urban Transport Policy (April 2006), the GOI is targeting the well-balanced nationwide development of a road network system. It addresses the need for new road development, the widening and strengthening of existing roads, the replacement of bridges, the introduction of Public-Private Partnership (PPP), safety, energy efficiency and environmental/social considerations. Improvements in accessibility to airports and ports, enabling the smooth and integrated flow of transportation is also among the issues to be addressed. In particular, the National Highway Development Program (NHDP) has been aggressively implemented since the year 2000 for road development in the Golden Quadrilateral, which links Delhi (one of the largest consumption and production areas in India), Mumbai and Kolkata (major port cities in the East and West) and Chennai (in the southeastern area). For the railways, the said plan and policy put an emphasis on arterial railway development for the mass transit of passengers and cargo, improvement of safety and reliability through modernization/upgrading of equipment and technologies, and appropriate fare policies. Prompt development of the Dedicated Freight Corridor (DFC) between Delhi-Mumbai and Ludhiana-Delhi-Kolkata as well as the need to improve port facilities and access to ports are also highlighted.

<Urban Transport (Metro Rails and Urban Ring Roads)>  
 The urban population in India was 217 million in 1991, but it had increased to 286 million in 2001 and reached about 377 million in 2011 (a provisional figure in the Census of India, 2011). It is expected that the urban population will continue to grow significantly. Due to rapid urbanization in recent years, the number of people in the six major metropolitan cities (cities with the population of over five million, namely Mumbai, Delhi, Chennai, Kolkata, Bangalore and Hyderabad) increased by 189% from 1981 to 2001. The number of vehicles registered has seen remarkable growth (775%) in the same period. In the meantime, public transport infrastructure has not been commensurate with such rapid population growth, which accordingly lead, by contrast, to a decrease in the use of urban public transport from 69% (1991) to 55% (2001). Urban areas are facing serious problems related to heavy traffic congestion as the number of cars and two-wheelers increases. Urgent countermeasures are needed because rising income levels are expected to continuously increase the percentage of residents who own private vehicles and to push modal shift from two-wheelers to cars. In particular, the six major metropolitan cities have witnessed severe congestion, resulting in economic loss and health hazards due to more pollution (air, noise etc.) being caused by automobiles. Mitigation measures such as large-scale urban transport infrastructure development like urban mass rapid transit systems or ring/radial roads, in line with appropriate urban planning, are urgently required.

In order to address the above mentioned issues, the GOI placed priority on the following policies in its Eleventh Five-Year Plan and the National Urban Transport Policy: the formulation of urban infrastructure development plans consistent with the urban development master plan (land use plan); the promotion of integrated multi-modal transport systems; the promotion of a modal-shift from the utilization of private vehicles to public transport systems; the application of advanced technologies for arresting vehicular pollution; the provision of diverse services and a sound tariff policy; capacity building for implementation agencies; and the promotion of PPP. In order to mitigate traffic congestion in the central congested urban areas, specific measures such as the strategic designing and construction of ring roads, the development of public transport systems and feeder transit networks are highlighted. In cities with a population of more than four million, the GOI encourages the development of mass rapid transit systems.

<National Arterial Transport Network (Railways, Highways, Airports and Ports)>  
 While the cargo/goods transport volume in India has been growing at about 15% per annum, infrastructure development has not kept pace and the transportation capacity of cargo railway systems will soon run out. The development and strengthening of railroad infrastructure is vital for further economic growth in the country. In particular, the "Golden Quadrilateral" railways account for around 65% of India's goods traffic. A growing volume of container cargo as well as agricultural, mining and industrial outputs have to be correspondingly matched by the augmentation of railway transport capacity in terms of speed, volume, and the development of efficient multi-modal transport systems. The road network also plays an important role in India's transportation system. Passenger and goods traffic by road has grown at the alarming rate of 60 times over the past 45 years and is still growing at around 9% per annum. However, road infrastructure has grown slowly at a meager six times over the same time period. Although the National Highways currently cater to about 40% of national road traffic, its total length remains at 70 thousand kilometers, merely 2% of the total 3,300 thousand kilometer-national road network. Thus, the development of National Highways is urgently needed to respond to the rapid growth in automobile traffic. Also India's main airport/port facilities are in need of capacity augmentation, modernization and upgrading to meet the surge in demand for transportation.

[Japan's Assistance Policy]  
 1. Urban Transport (metro rails and urban ring roads)  
 Focusing on six major metropolitan cities in India, Japan is assisting in the development of urban transport infrastructure such as mass rapid transit systems, ring and radial roads, with the aim of contributing to regional economic growth and improvement of the urban environment through the mitigation of traffic congestion, air pollution, etc.  
 2. National Arterial Transport Network (railways, highways, airports and ports)  
 With particular attention to industrial-integrated areas such as Special Economic Zones (SEZs) around six major metropolitan cities and economic corridors such as Delhi-Mumbai Industrial Corridor (DMIC), Japan pursues assistance for infrastructure development such as arterial railways and roads, large-scale airports and ports leading to regional economic development, enhanced goods distribution efficiency and foreign direct investment.

Program	Program Summary	Project	Scheme	Schedule						Assistance Amount (100 Million Yen)	Note
				Before JFY 2010	JFY 2011	JFY 2012	JFY 2013	JFY 2014	JFY 2015		
[Development Issue] Improvement and Maintenance of Transport Networks	City Transport Systems	Delhi Mass Rapid Transport System Project (Phase 2)	LA							2119.76	
		Kolkata East-West Metro Project	LA							817.17	
		Bangalore Metro Rail Project	LA							447.07	
		Bangalore Metro Rail Project (II)	LA							198.00	
		Chennai Metro Project	LA							2222.00	
		Hyderabad Outer Ring Road Project (Phase 1)	LA							418.53	
		Hyderabad Outer Ring Road Project (Phase 2)	LA							420.27	
		The Assistance for the Introduction of ITS Related to the Hyderabad Outer Ring Road Construction Project	TCP								
		Co-operation in the Field of Urban Development (Urban Development, Urban Transport)	MLIT-TA								
		Preparatory Survey for the Chennai Outer Ring Road Development Project	PS								
Strengthening Major Transport Networks	With a particular focus on the development of the Dedicated Freight Corridor which connects Delhi and Mumbai, this program promotes the improvement of passenger/cargo transportation efficiency by providing solutions to bottlenecks, supporting the sustainable development of major transport networks between major metropolitan cities and the development of logistics points. The program thereby supports economic and social development in India.	Visakhapatnam Port Expansion Project	LA							41.29	
		Dedicated Freight Corridor (Phase 1)	LA							4052.00	
		Capacity Development Project on Sustainable Development of Expressways	TCP								
		Capacity Building Adviser on Expressway Development	EXP								
		Policy Adviser on Expressway Development	EXP								
		Survey for Checking the Preparatory Situation for the Dedicated Freight Corridor Project (Phase 2)	PS								
		Survey for Checking Environmental and Social Considerations regarding the Dedicated Freight Corridor Project (Phase 2)	PS								
		Dedicated Freight Corridor (Phase 2)	LA							16.00	
		Preparatory Survey on the Jawaharlal Nehru Port Trust (JNPT) Access Road Project	PS								Project subject to a Preparatory Survey
		Bihar National Highway Development Project	LA							229.00	
Regional Road Sector III Investment Plan	ML	●	●	●				1 million USD	Asian Development Bank (ADB) Japan Special Fund		
Capacity Development for the Formulation of Transportation Projects and Improvement in the Monitoring of Results	ML	●	●					1.5 million USD	ADB Japan Special Fund		
Investment Strategy for the Karnataka Expressway Network	ML	●	●					1.5 million USD	ADB Japan Special Fund		

[Priority Area] Assistance for Economic Growth along with Employment Generation													
[Development Issue] Employment Generation	[Background] In India, the total population has increased by 520 million in the last 30 years since 1980 (a provisional figure in Census of India, 2011). In particular, the working-age population has been growing at a pace exceeding the total population growth rate. On the other hand, the employment rate has stagnated, resulting in an increase in unemployment rate from 6.8% (1999) to 10.8% (2010). Therefore, employment creation is an urgent issue. Employment in the agriculture sector accounts for 60% of total employment in India, but the employment growth rate for the sector has slowed to less than 1% per annum. The service sector such as information technology related industries - the engine of India's recent economic growth - has made a limited contribution to employment creation. On the other hand, the manufacturing industry has room for further employment growth as it accounts for a relatively small amount, 20%, of India's GDP in comparison with that of China and Southeast Asian countries such as Thailand. Thus, generating employment through industrial development in labor-intensive manufacturing industries, especially in the private sector, is expected, whereas the public sector is shrinking gradually due to the recent fiscal austerity policy. However, the continuous economic growth seen in India in recent years has resulted in an acute shortage of the highly-qualified human resources required by industry. Under these circumstances, in the Eleventh Five-Year Plan, the GOI considers the increasing young working-age population as an engine of further economic growth, calling the group a "Demographic Dividend." The GOI also foresees that it could turn out to be a "Demographic Nightmare" without adequate employment creation. Therefore, employment generation in line with rapid population growth is seen as an urgent issue. The Eleventh Five-Year Plan projects additional 50 million people entering the labor force during the period of the plan. It also calls for 70 million employment opportunities in non-agriculture sectors, taking into account that there will be additional employment needed for the unemployed and women. In particular, the development of labor-intensive manufacturing industries is addressed as a priority issue. Another important issue is human resource development; the Eleventh Five-Year Plan expects to boost employment through basic education and vocational training.					[Japan's Assistance Policy] 1. Industry (manufacturing industry) development: Support the development of industry and manufacturing industry in particular in India, which is expected to have the largest potential for employment creation, by providing the following support: productivity improvement and the strengthening of international competitiveness through quality management and technology transfers; soft infrastructure development such as the consolidation of intellectual property rights necessary for the development of manufacturing industry; improving access to mid-to-long term finance for small and medium-sized enterprises. 2. Industrial human resource development: Provide assistance for industrial human resource development in order to increase employment opportunities, by providing training for business leaders and engineers so that they can meet the demands of industry (particularly in the manufacturing industry sector), and by supporting the strengthening and expansion of training institutions and universities.							
	Program	Program Summary	Project	Scheme	Schedule						Assistance Amount (100 Million Yen)	Note	
					Before JFY 2010	JFY 2011	JFY 2012	JFY 2013	JFY 2014	JFY 2015			
	Private Sector Assistance (Industrial Development, Industrial Human Resource Development, etc.)	It is essential to enhance India's manufacturing industry sector that can generate large-scale employment. This program aims to support the GOI in promoting human resource development and improving the business environment for manufacturing industrial development.	Visionary Leaders for Manufacturing (VLFM) Program	TCP									
Human Resource Development for Delhi Mumbai Industrial Corridor Development Corporation Limited for Investment Promotion			METI-TA										
Strengthening Socioeconomic Empowerment of Women Living with HIV in Cambodia and India			ML	●							0.2 million USD	Japan and UNDP (United Nations Development Programme) Partnership Fund	

[Priority Area] Poverty Reduction

**[Background]**  
 In India, agriculture's share of GDP is in long-term decline; as it accounted for 50% of total GDP in the 1950s, declining later to 24% in 2001-02 and further down to 17.5% in 2007-08. However, 80% of the total population still lives in rural areas (a provisional figure in Census of India, 2011) and 60% of the workforce is employed in the agriculture sector, making the socio-economic development of agriculture and rural areas essential.  
 Agriculture in India achieved food self-sufficiency in the mid-1970s owing to the Green Revolution that took place in the 1960s. Today, India is a country that exports rice and wheat. At the same time, agricultural technology innovation (increase in the yield per unit area) and infrastructure development (e.g. irrigation facilities) has slowed in recent years, stagnating the growth rate at an average of 2.5% during the Ninth and Tenth Five-Year Plan periods. This has been an obstacle to economic growth. A low irrigation rate (40%) and high dependency on rainfall, which is easily affected by the Southwestern monsoons, are weaknesses in Indian agriculture that hinders stable production. In recent years, there is growing interest in food security in India due to global food insufficiency and the surge in the price of agricultural commodities.  
 In the Eleventh Five-Year Plan, the GOI gives priority to accelerating agriculture and has set an average growth rate of 4% for the sector during the period of the plan. On the other hand, it estimates that 10 million workers will move from the agricultural sector to non-agricultural counterparts. As part of agricultural and rural development efforts, the GOI has been implementing the Bharat Nirman Program (national rural infrastructure development program) since 2005, promoting the improvement of the rural environment and infrastructure development. In the Eleventh Five-Year Plan, infrastructure development targets have been set for electrification, the development of all-weather roads, safe drinking water, increasing telephone connectivity, irrigation development, etc. In addition, in order to improve food security, the National Food Security Mission was launched in 2007 with the objective of significantly increasing the production of major crops, e.g. rice, wheat, and pulses through productivity improvements.

Given the above-mentioned situation, the challenges to be tackled are as follows:  
 1. Rural environment and infrastructure development: In order to increase agricultural productivity and achieve stable production without being affected by weather conditions such as draughts, assistance for the development of infrastructure for agricultural production such as irrigation systems, market facilities and farm roads is required. In order to fill the gap between urban and rural areas by improving the living environment in rural areas where large numbers of the poor reside, assistance for basic infrastructure development (water, electricity, housing and roads) is also required. Such infrastructure requires appropriate operation and maintenance by governments and users, and thus, consideration must be given to the adoption of appropriate technologies that utilize local skills and technologies.  
 2. Agricultural productivity enhancement: When taking food security into consideration, assistance is needed in technological development for the stable supply of major crops and high-value agricultural products; the efficient use of agricultural water resources; improvements in farming methods towards crop diversification; dissemination of technologies and techniques; and expansion of low-interest rural credit. In order to accelerate the agriculture sector, detailed plans for improving productivity by taking advantage of regional diversity to a maximum extent are required.  
 3. Employment generation in rural areas: Through the promotion of small, medium, and marginal enterprises in rural areas, the voluntary migration of the agricultural workforce (with low income levels) to non-agriculture sectors needs to be accelerated in order to improve the rural economy. For example, assistance is needed for infrastructure and human resource development targeting tourism and local industries, which take advantage of historical, cultural heritage and natural resources in local areas. In order to achieve sustainable business management in rural areas, in addition to capacity building for individual entrepreneurs, collaboration with the private sector, NGOs and research institutions should also be kept in mind for product development, market surveys and research, etc. which are relatively difficult for individual entrepreneurs to tackle.

**[Japan's Assistance Policy]**  
 1. Support the development of agricultural production infrastructure and rural lifelines.  
 2. Support technological development for the stable supply of major crops and high-value agricultural products, efficient use of agricultural water resources, improvements in agricultural management towards crop diversification, dissemination of technologies and techniques, and expansion of low-interest rural credit.  
 3. Support infrastructure development and human resource development for the promotion of agricultural product processing and rural small, medium and marginal businesses including local industries and tourism utilizing the historical and cultural heritage as well as natural resources.

Program	Program Summary	Project	Scheme	Schedule						Assistance Amount (100 Million Yen)	Note
				Before JFY 2010	JFY 2011	JFY 2012	JFY 2013	JFY 2014	JFY 2015		
[Development Issue] Income Generation in Rural Areas	Improvement of the Rural Environment and Infrastructure	Kurnool-Cuddapah Canal Modernization Project	LA							47.73	
		Andhra Pradesh Irrigation and Livelihood Improvement Project	LA							239.74	
		Rengali Irrigation Project (II), (III)	LA							93.42	
		Rajasthan Minor Irrigation Improvement Project	LA							115.55	
		Rural Electrification Project	LA							206.29	
		Hogenakkal Water Supply and Fluorosis Mitigation Project	LA							223.87	
		Hogenakkal Water Supply and Fluorosis Mitigation Project (Phase 2)	LA							170.95	
		JICA Partnership Program in the Agricultural Development Sector (3 Projects)	JPP								
		Andhra Pradesh: Piloting Drought Adaptation Initiative	ML	●						0.96 million USD	The World Bank, the Japan Policy and Human Resources Development (PHRD)
		Capacity Building for the Poor for Water Resource Utilization and Life Improvement	ML	●	●	●				2.0 million USD	ADB Japan Fund for Poverty Reduction
Support for the Regional Urban Facility Supply Project Utilizing PPP	ML	●	●	●				1.5 million USD	ADB Japan Special Fund		
Enhancement of Agricultural Productivity	Taking food security into consideration, this program aims to promote technological development for the stable supply of major crops and high-value agricultural products; improvements in farming methods towards crop diversification; and dissemination of technologies and techniques. By making detailed plans for productivity improvements that takes advantage of local characteristics to the maximum extent possible, this program also aims to improve livelihoods in rural areas.	Mizoram Northern District Hilly Area Agriculture Development Study	TCDP			-----					
		Technical Cooperation Project on Maximizing Soybean Production in Madhya Pradesh	TCP							3.50	
		Himachal Pradesh Crop Diversification Promotion Project	LA							50.00	
		Technical Cooperation Project for Crop Diversification in Himachal Pradesh	TCP							5.00	
Employment Generation in Rural Areas	Through the promotion of non-agricultural sectors in rural areas, this program aims to promote the voluntary shift of the agricultural workforce with low income levels to non-agricultural ones in order to improve the rural economy. For example, the assistance is extended for: tourism promotion that takes advantage of the historical and cultural heritage and natural resources in rural areas; infrastructure development and human resource development necessary for the promotion of local industries in rural areas.	Ajanta-Ellora Conservation and Tourism Development Project	LA							73.31	
		Uttar Pradesh Buddhist Circuit Development Project	LA							94.95	
		Making Globalization Work for the Rural Poor in India	ML	●	●					1.7 million USD	The World Bank, the Japan Social Development Fund (JSDF)

[Priority Area] Poverty Reduction														
[Development Issue] Improvement of Basic Social Services	[Background] In order to achieve the Millennium Development Goals (MDGs), which include reducing child mortality, improving maternal health and combating HIV/AIDS, malaria and other diseases, it is essential for India, a country where one third of the poor in the world are said to be found, to improve its health indicators. However, the under-five mortality rate of 61/1,000 and the maternal mortality rate of 260 per 100 thousand cases means that India is far from achieving the MDGs by the end of the Eleventh Five-Year Plan (March 2012). Therefore, the country needs to make further efforts. In the Tenth Five-Year Plan, the GOI identified the health sector as one of the priority areas. The GOI formulated a national flagship program called the National Rural Health Mission (NRHM), aiming to improve health services in rural areas where development was slow, by particularly focusing on reproductive health. At the same time, the GOI is planning to officially announce shortly another national flagship program called the National Urban Health Mission (NUHM), the purpose of which is to strengthen health service delivery in urban areas, particularly slums. The Eleventh Five-Year plan identified health service delivery to all people as a key issue in order to eradicate inequity. In order to improve the health sector, there are a wide range of challenges to be tackled including: improvement of medical facilities; the need to solve the chronic shortage of qualified medical doctors and medical lab technicians at medical institutes for economically-challenged patients; health awareness building among people; improvement of nutrition and sanitation; and capacity development of local self-governance bodies. HIV/AIDS and bird flu are new health threats for India; the number of HIV positive people is an estimated 2.5 million.				[Japan's Assistance Policy] Given that India has a large geographical area and population, Japan sees the following three areas as priorities with particular attention on Japan's contribution to achieving the MDGs: 1. Decrease the infant mortality rate (IMR) and the maternal mortality rate (MMR); 2. Strengthen the strategy for controlling infectious diseases that are the main causes of infant mortality; 3. Improve access to health services that can directly benefit the economically-challenged. Cooperation in the health sector will be conducted in line with Japan's New Global Health Policy (2011-2015).									
	Program	Program Summary	Project	Scheme	Schedule						Assistance Amount (100 Million Yen)	Note		
					Before JFY 2010	JFY 2011	JFY 2012	JFY 2013	JFY 2014	JFY 2015				
	Improvement of Basic Social Services (Health and Sanitation)	This program aims to assist the GOI in strengthening health services that directly benefit the economically-challenged people through the projects which aim to: improve maternal and child health; improve access to health services; and prevent infectious diseases.	Reproductive Health and Women's Empowerment in the State of Madhya Pradesh (Phase 2)	TCP								3.20		
			Volunteers (2 volunteers)	JOCV										
			The Project for Eradication of Poliomyelitis (via UNICEF)	GA									1.92	
			HIV/AIDS Capacity Building in India	ML	●	●								The World Bank, the Japan Policy and Human Resources Development (PHRD)
			Prevention of Prejudice against HIV-Positive People and Groups Which Contain High Percentages of HIV-Positive People, Infection Prevention Measures for HIV-Positive People	ML	●	●							0.17 million USD	Japan Trust Fund for HIV/AIDS, IPPF (International Planned Parenthood)
Provision of Traveling Clinic Services for Urban Slums in the Asha Area, etc. (3 projects in total)			GHGA									0.30		
Japan Partnership Programme for the Health Sector (4 projects)			JPP											

[Priority Area] Assistance for Tackling Environment Issues and Climate Change

[Background]  
 In India, the pressure on the environment is increasing as a result of the growing population and economy. This is causing various development problems in urban areas such as poor solid waste management, air pollution, deterioration of the living environment, contamination of rivers and lake environments, etc.

<Environmental Pollution (Solid Waste and Air Pollution, Except for Water Related Issues)>  
 In urban areas, environmental pollution caused by solid waste, air pollution, etc. is a pressing issue. The Eleventh Five-Year Plan identified the following policy targets: (1) minimization of solid waste volumes through the incineration process, separation at and collection of waste from households, introduction of solid waste recycling and improvement of the solid waste disposal system; (2) bringing down the level of air pollution in all major metros to meet the air quality standards set forth by World Health Organization (WHO).

<Water Quality and Water Resource Management (Water Supply and Sewerage, River Basin Management, Conservation of Rivers and Lake Environments)>  
 In urban areas, securing safe drinking water and sewage treatment are pressing issues. They are expected to be major challenges into the future. In the water supply sector, 75 million people have no access to tap water in urban areas alone, and the rapid pace of urbanization leads to an expanding gap between demand and supply, causing insufficient quality, quantity, and duration of water supply services. In the sewerage sector, since the rate of individual connections to the sewerage system still remains at less than 30%, and since the treatment capacity for sewerage is insufficient, the untreated effluent is discharged and the living environment and hygiene of local people is threatened.

Considering the above-mentioned situation, the GOI has set a target of providing all urban populations with water supply systems and sanitation/sewerage treatment systems by the end of FY2011, in its Eleventh Five-Year Plan. The Plan, therefore, stipulates that each state and local government should formulate a comprehensive urban development plan and achieve the goals by utilizing the support provided through the Jawaharlal Nehru National Urban Renewal Mission (JNNURM).

Water pollution in rivers and lakes occurs when the inflow of untreated sewerage exceeds the natural treatment capacity. Therefore, the GOI has been promoting countermeasures such as the construction of sewage treatment plants based on the National River Conservation Plan (NRCP) and the National Lake Conservation Plan (NLCP). The Eleventh Five-Year Plan aims to: treat all urban effluent before releasing it into rivers; and enhance the water quality of major rivers in India to the designated level, by the end of FY2011 (the end of the period of the plan).

A decreasing water table caused by the excessive extraction of groundwater, and arsenic/fluoric contamination are apparent. Because of this, the prevention of the excessive extraction of groundwater, and techniques for water conservation are needed. The National Environmental Policy 2006 includes a detailed action plan for these issues.

[Japan's Assistance Policy]  
 The major areas of cooperation in the sector are as shown below. Collaboration with Japanese local governments, other donors, etc. shall also be considered.

1. Infrastructure development for water supply and sewerage systems (development of water and sewerage related facilities; increasing the area covered by water supply systems; the introduction of a metering system; reduction of water leaks; measures for the conservation of water; the development of sanitation facilities and sewerage systems; and recycling treated waste water)
2. Financial sustainability of the water authority (the introduction of appropriate tariff levels which is sufficient to cover the operation and maintenance costs; improvement of the tariff collection system; enhancement of revenue sources by increasing property tax revenue; reducing expenditure; and reducing of non-revenue water)
3. Capacity building for the water authority (improving the efficiency of the operation by the staff; the introduction of an operation manual; enhancement of human resource development and public relations; clarification of the roles and authority of each operational division and enhancement of its autonomy; improvement of information management systems and data collection; and transferring authority from states to Urban Local Bodies)
4. The expansion of public services to reach the economically-challenged (people living in slums).
5. The promotion of the participation process and awareness raising of people (improvement of relationships with beneficiaries through PR activities and the public hearing process; promotion of awareness campaigns regarding environmental conservation, improvement of sanitation and solid waste management; and the promotion of individual water supply and sewerage service connections)
6. Promoting the participation of the private sector for efficient operations and maintenance (such as outsourcing the operations and maintenance of the facilities using performance-based contracting)

Program	Program Summary	Project	Scheme	Schedule						Assistance Amount (100 Million Yen)	Note	
				Before JFY 2010	JFY 2011	JFY 2012	JFY 2013	JFY 2014	JFY 2015			
Pollution Prevention and Management (Except for Anti-Water Pollution Measures)	This program aims to improve solid waste management facilities, collection and transportation systems, the recycling of solid waste, and awareness campaigns, in order to improve urban solid waste treatment systems.	Kolkata Solid Waste Management Improvement Project	LA							35.84		
[Development Issue] Conservation and Improvement of the Urban Environment	This program aims to develop infrastructure for water supply and sewerage, ensure the financial sustainability of the implementation agencies, conduct capacity building activities for the implementation agencies, extend services to the poor (slums) and promote the participation process and awareness raising. In these efforts, the program promotes the participation of the private sector in order to improve the efficiency of the operations and maintenance.	Capacity Building Project for Operation and Maintenance of Sewerage Works	TCP									
		Yamuna Action Plan Project (II)	LA							133.33		
		Yamuna Action Plan Project (III)	LA								326.00	
		Ganga Action Plan Project (Varanasi)	LA								111.84	
		Hussain Sagar Lake and Catchment Area Improvement Project	LA								77.29	
		Bangalore Water Supply and Sewerage Project (II)	LA								703.55	
		Kolkata Environmental Improvement Project (II)	ML	●	●						0.4 million USD	ADB Japan Special Fund
		Project for Capacity Development on Non-Revenue Water (NRW) Reduction in Goa	TCP								3.70	
		Goa Water Supply and Sewerage Project	LA								228.06	
		Bisalpur Jaipur Water Supply Project (Transfer System)	LA								88.81	
		Project for Capacity Development on Non-Revenue Water (NRW) Reduction in Bisalpur Jaipur	TCP									
		Kerala Water Supply Project (I) (II) (III)	LA								575.01	
		Agra Water Supply Project	LA								248.22	
		Anritsar Sewerage Project	LA								69.61	
		Orissa Integrated Sanitation Improvement Project	LA								190.61	
		Tamil Nadu Urban Infrastructure Project	LA								85.51	
		Study for Formulation and Revision of Manuals of Sewerage and Sewage Treatment	TCDP								2.50	
		The Study on Improvement of Water Supply System in Delhi	TCDP								3.86	
		Guwahati Water Supply Project	LA								294.53	
		Development of a Novel Sewerage Treatment Technology with Minimum Energy Requirements	STC								3.50	
Advisor on Sewerage Sector Technology and Policy	EXP											
Co-operation in the Field of Urban Development (Water Environment)	MLIT-TA											

[Priority Area] Assistance for Tackling Environment Issues and Climate Change												
[Development Issue] Environmental Conservation	[Background] At the beginning of the 20th century, the forest coverage in India was around 40%. By 2005, however, the percentage had decreased to 23.4%, which is much lower than the world average (30.3%). A multitude of people including the economically-challenged mainly depend on forest resources for their livestock feed, fuel and income. In particular, the rapid increase in population in recent years has had an increasing impact on the forests and further accelerated the degradation of the forests. In addition to the decrease in forest resources, the moisture holding capacity of the forests has been weakened, leading to a shortage of agricultural water and drinking water. This in turn makes the life of the poor, who rely heavily on the forests, more difficult, resulting in a vicious circle that accelerates further negative impacts on the forests by the poor. Open forests in India account for 42.4 % of the total forest area (in 2003), which cannot offer the same level of forest resources as dense forests. Therefore, improving the quality of the forests and increasing the forest cover are important issues which need to be addressed. In order to respond to the above-mentioned situation, the GOI aims to increase forest cover by 5% by the end of the Eleventh Five-Year Plan period. In addition, it emphasizes the importance of sustainable forest management through joint forest management (JFM), the promotion of alternative income generation activities for those who rely on the forests, as well as the regeneration of degraded forests. The Eleventh Five-Year Plan also states that the development of information management systems and human resource development are to be strengthened in order to achieve the goal of sustainable forest management.			[Japan's Assistance Policy] 1. For conservation and the sustainable use of natural resources, Japan assists the GOI in improving both the quantity and quality of forests through the regeneration of degraded forests. It also assists with the prevention of soil degradation, preventing the water and soil conservation function of forests from declining and conserving biodiversity. In order to achieve this, Japan continues to support the promotion of JFM especially in areas where poverty is a major problem. 2. For sustainable JFM, Japan assists the GOI in strengthening the capacity of stakeholders such as frontline forest staff and communities; promoting cooperation between village councils and other government departments; creating systems to promote collaboration with NGOs/CBOs (community-based organizations). The socio-economic situation of the target areas shall also be taken into consideration when providing support. 3. In order to address the increasing demand for forest products in recent years, Japan supports farm forestry, which contributes to timber production in areas other than national forests. 4. When providing support for the said development issue, the potential of forest conservation as a climate change mitigation/adaptation measure should be taken into consideration.								
	Program	Program Summary	Project	Scheme	Schedule						Assistance Amount (100 Million Yen)	Note
					Before JFY 2010	JFY 2011	JFY 2012	JFY 2013	JFY 2014	JFY 2015		
		As per the various needs in different states in India, this program aims to flexibly support the quality improvement of forests and increases in forest cover, prevention of soil degradation, maintaining the soil and water conservation function of the forests, and biodiversity conservation, through the regeneration of degraded forests. In order to ensure the sustainability of forest management, the income generation for residents and capacity building for stakeholders are to be enhanced by supporting the GOI's initiatives toward JFM. For further capacity development for staff members in forest departments, the training capacity at both central/state levels will be strengthened through this program.	Project for Capacity Building of State Forest Training Institutions and SFS Colleges	TCP							3.20	
			Integrated Natural Resource Management and Poverty Reduction Project in Haryana	LA							62.80	
			Tamil Nadu Afforestation Project (Phase 2)	LA							98.18	
			Karnataka Sustainable Forest Management and Biodiversity Conservation Project	LA							152.09	
			Orissa Forestry Sector Development Project	LA							139.37	
			Tripura Forest Environmental Improvement and Poverty Alleviation Project	LA							77.25	
			Gujarat Forestry Development Project (Phase 2)	LA							175.21	
			Uttar Pradesh Participatory Forest Management and Poverty Alleviation Project	LA							133.45	
			Capacity Development for Forest Management and Personnel Training Project	LA							52.41	
			Swan River Integrated Watershed Management Project	LA							34.93	
			Sikkim Biodiversity Conservation and Forest Management Project	LA							53.84	
			Assistance for the Sikkim Biodiversity Conservation and Forest Management Project	EXP								
	Preparatory Survey for the Tamil Nadu Sustainable Natural Resource Management Project		PS									
	Tamil Nadu Biodiversity Conservation and Greening Project		LA							88.00		
	Preparatory Survey for the West Bengal Integrated Forestry Development and Biodiversity Conservation Project		PS									
	Rajasthan Forestry and Biodiversity Project (Phase 2)	LA							157.00			

[Priority Area] Other Important Areas													
	Program	Program Summary	Project	Scheme	Schedule						Assistance Amount (100 Million Yen)	Note	
					Before JFY 2010	JFY 2011	JFY 2012	JFY 2013	JFY 2014	JFY 2015			
	[Special Issue] Disaster Prevention and Management in South West Asia	This program aims to support disaster prevention and management, which is an important development sector outside the priority areas of the rolling plan for India.	Information Network for Natural Disaster Mitigation and Recovery	STC	—						4.80		
	[Special Issue] Acceleration of Bilateral Academic Exchanges in the Fields of Science and Technology	This program aims to support the acceleration of bilateral academic exchanges in the fields of science and technology. Assistance for the education sector will be provided in line with Japan's Education Cooperation Policy 2011-2015.	Preparatory Survey on Establishing the Indian Institute of Technology Hyderabad	PS		—							
			Campus Design Project for the Indian Institute of Technology, Hyderabad through Academic Exchanges and Interdisciplinary Collaborations	TCP		—	—	—				Supplementary project to a Loan Aid project	
	[Development Issue] Others	This program aims to support activities related to social sector development, e.g. the enhancement of basic nutrition, support for the physically/mentally challenged and the provision of education opportunities for them.	Street Children Rehabilitation Center Construction Project, etc. (17 projects in total)	GHGA	—						1.40		
			Project for Strengthening the Electronic Media Production Centre at the Indira Gandhi National Open University	GA	—							7.87	
		This program contributes to accelerating human resource development through sending volunteers and conducting training programs in Japan-related areas, e.g. Japanese language education and Judo.	Volunteers (9 volunteers)	JOCV									
			Youth Invitation Program (2 programs)	TR		—							
			Microcredit Project in Suburban Areas, etc. (2 projects in total)	JPP									

Legend: [PS] = Preparatory Survey, [DD] = Detailed Design using technical assistance which utilizes the loan aid budget, [TCP] = Technical Cooperation Project, [TCDP] = Technical Cooperation for Development Planning, [EXP] = Expert, [EQ] = Equipment, [CTR] = Country-focused Training, [TR] = Issue-based Training / Area-focused Training / Training Program for Young Leaders, [JOCV] = Japan Overseas Cooperation Volunteers, [SV] = Senior Volunteers, [TEXP] = Third-country Expert, [TTR] = Third-country Training, [STC] = Science and Technology Cooperation on Global Issues (technical cooperation projects and individual expert-dispatching projects), [JPP] = JICA Partnership Program, [xx-TA] = Technical Assistance implemented by organizations other than MOFA and JICA, [GA] = Grant Aid (other than the specific grant aid schemes listed below), [NPGA] = Non-Project Grant Aid, [GHGA] = Grassroots Human Security Grant Aid, [JNGA] = Grant Aid for Japanese NGO's Projects, [CGA] = Cultural Grant Aid, [GCGA] = Grassroots Cultural Grant Aid, [LA] = Loan Aid (Yen-Loan), [ML] = Multilateral Cooperation, [ ——— (solid line) ] = the implementation period, [ - - - (broken line) ] = the planned implementation period, [ ● (black circle) ] = the year in which the ML is implemented