

Supporting Environmental Conservation and Human Resource Development in China --Fiscal 2004 ODA Loan Package for China--

1. Japan Bank for International Cooperation (JBIC; Governor; Kyosuke Shinozawa) signed on March 30, loan agreements for a fiscal 2004 ODA loan package for China totaling 85.875 billion yen to support seven projects with the Government of the People's Republic of China. The package's priority areas are environmental conservation and human resource development.
2. The highlights of this year's ODA loan package for China are as follows:

(1) Support for environmental conservation

Of the seven projects in this year's package, six are environmental conservation projects, accounting for 94% of the total amount. Shaanxi Water Environmental Improvement Project, Changsha Diversion Works and Water Quality Environmental Project, and Guiyang Environmental Improvement Project aim at ensuring stable, hygienic water supply and improving the quality of water by developing water supply and water treatment systems. Xinjiang Uygur Autonomous Region Yining City Comprehensive Environmental Renovation Project is intended to support overall environmental improvement by upgrading water supply and sewerage, alleviating air pollution, solid waste treatment and afforestation. Baotou Atmospheric Environmental Improvement Project aims at converting energy sources from coal to natural gas by installing a natural gas pipeline, thereby curtailing air pollution. Eco-environmental Construction and General Treatment Project of the Yangtze Upper Reaches in Sichuan Province aims at containing soil erosion and mitigating flood damage through foresting activities, against the backdrop of forest degradation and increasingly serious natural disasters such as floods caused by inflows of soil to the Yangtze River.

(2) Support for human resource development

Of the seven projects, one is a human resource development project, accounting for 6% of the total amount. In China, prevalence of primary and secondary education has increased demand for higher (university-level) education. Meanwhile, there is an urgent need to develop human resources in inland regions to reduce regional disparities. This is particularly true in the areas of information technology, finance, accounting, and law, as there is a rising need to support increased adherence to market rule after China's accession to the WTO. Inland Higher Education Project (Regional Vitalization, Market Economy Reform Support, and Environmental Conservation) (Inner Mongolia Autonomous Region) aims at fostering skilled labor in such areas as well as competent persons who can conduct environmental conservation research in inland regions. In the human resource development area, JBIC has provided the cumulative total of 84 billion yen since fiscal 2001 for 18 provinces and autonomous regions. This Project is intended to support the promotion of education at eight universities in the Inner Mongolia Autonomous Region. The Project also includes a plan to offer training for the faculties of the targeted Chinese universities in Japanese universities and research institutes, thereby contributing to the promotion of mutual understanding between Japan and China.

3. For every project in this year's ODA loan package, JBIC has collaborated with Japanese local governments, public institutions and universities from the project's formation stage in an effort to draw on Japanese experience and knowledge, as it sought to provide aid with a distinct Japanese profile. JBIC has collaborated: with Kyoto Prefecture and Kyoto City, who are on friendly terms with Shaanxi Province and Xi'an City, in the Shaanxi Water Environmental Improvement Project; with Toyama Medical and Pharmaceutical University in the Inland Higher Education Project (Regional Vitalization, Market Economy Reform Support, and Environmental Conservation) (Inner Mongolia Autonomous Region); with Fukuoka City in the Changsha Diversion Works and Water Quality Environmental Project; with Hokkaido, Sapporo City, and UN-HABITAT in Fukuoka City in the Xinjiang Uygur Autonomous Region Yining City Comprehensive Environmental Renovation Project; with International Center for Environmental Technology Transfer in Yokkaichi City and Yokkaichi University in the Baotou Atmospheric Environmental Improvement Project; with Hiroshima Prefecture, who has friendly relations with Sichuan Province in the Eco-environmental Construction and General Treatment Project of the Yangtze Upper Reaches in Sichuan Province, and with Osaka City and Shiga Prefectural University in the Guiyang Environmental Improvement Project, respectively. Experts were sent out from these entities to join the appraisal mission organized by JBIC, shared their expertise and experience with, and made valuable recommendations to the Chinese executing agencies of the relevant projects. The ODA Charter approved in the Cabinet Decision in August 2003 called for broader public participation in ODA activities. JBIC will continue to seek greater public participation by incorporating a variety of partnerships in the implementation stage of the projects in this year's ODA loan package.

4. The loan amount and terms of individual projects are as shown below.

Project Name	Amount (Mil. Yen)	Interest Rate (%, p.a.)		Repayment Period/ Grace Period(Years)		Procurement
		Project	CS	Project	CS	
Shaanxi Water Environmental Improvement Project	27,264	1.5 (water supply and embankment) 0.75* (sewerage and training)	-	30/10 (water supply and embankment) 40/10 (sewerage and training)	-	General Untied
Inland Higher Education Project (Regional Vitalization, Market Economy Reform Support, and Environmental Conservation) (Inner Mongolia Autonomous Region)	5,073	1.5 0.75* (training)	-	30/10 40/10 (training)	-	General Untied
Changsha Diversion Works and Water Quality Environmental Project	19,964	1.5 0.75* (sewerage and training)	-	30/10 40/10 (sewerage and training)	-	General Untied
Xinjiang Uygur Autonomous Region Yining City Comprehensive Environmental Renovation Project	6,462	1.5 (water supply) 0.75* (others)	-	30/10 (water supply) 40/10 (others)	-	General Untied
Baotou Atmospheric Environmental Improvement Project	8,469	0.75*	-	40/10	-	General Untied
Eco-environmental Construction and General Treatment Project of the Yangtze Upper Reaches in Sichuan Province	6,503	0.75*	-	40/10	-	General Untied
Guiyang Environmental Improvement Project	12,140	0.75*	0.75*	40/10	40/10	General Untied
Total	85,875					

CS: Consulting Service

* Preferential Term

JBIC actively supports developing countries' efforts to address environmental issues and human resource development, by applying lower-than-ordinary interest rates to environmental conservation and human resource development projects.

(Click here for details.)

1. Shaanxi Water Environmental Improvement Project

(i) Project Background and Necessity

Xi'an (population about 7.17 million) is the capital of Shaanxi Province, which is located in the northwest inland region of China. The rate of sewage treatment in Xi'an is only 37% (2003). Because much of the city's sewage is untreated, river contamination in the city, such as the Wei River, is becoming more severe. Moreover, flooding by polluted water in the rainy season due to a lack of drainage channels causes serious damage to residents in terms of health and sanitation. On the other hand, not only is the supply and demand situation of tap water tight due to rapid industrialization and urbanization and population growth, but problems such as damage to health from infectious diseases caused by using unsanitary water and subsidence due to the excessive pumping of underground water are also serious. In addition, as most of the existing water supply facilities in regional cities in the province outside of Xi'an were constructed in the 1970s, water quality has deteriorated and leaks are apparent.

Under such conditions, the Shaanxi Provincial People's Government has formulated the Shaanxi Tenth Five Year Plan (2001-2005). It is working to promote improvements in the capacity to provide a clean and stable water supply and to improve sanitation and living conditions for the people of Shaanxi Province through the development of water resources and the establishment of water supply facilities, sewage treatment and drainage channels, to meet the demand for water in 2010.

(ii) Project Objectives and Overview

The project aims to improve water quality in the rivers, provide a clean and stable water supply, and improve sanitation by establishing sewage treatment facilities, a tap water pipe network and drainage channels in Xi'an in Shaanxi Province. At the same time, it also aims to provide a clean and stable water supply to 13 regional cities in Shaanxi Province by establishing water supply facilities, thus comprehensively improving the living condition in Shaanxi Province. The project is consistent with "environmental conservation," which is one of the priority areas in both the Japanese government's Economic Cooperation Program for China and JBIC's Strategy for Overseas Economic Cooperation Operations.

The project consists of the construction of water treatment plants in six locations, sewage treatment plants in three locations, water pipes and sewer networks. Officials from the executing agency are scheduled to receive training in Japan in collaboration with Japanese local governments with the objective of achieving sustainable project effect.

The loan will be provided for the construction of the facilities described above, the procurement of materials and equipment, and training programs in Japan.

The executing agencies are the Shaanxi Provincial People's Government (Address: Shaanxi Provincial Department of Water Resources, No.150 Shangde Road, Xi'an Shaanxi Province, The People's Republic of China, P.O. Code 710004; Tel: 86-29-87441740, Fax: 86-29-87441721) and the Xi'an Municipal People's Government (Address: Xi'an Municipal Development and Reform Commission, No.159 Bei Yuan Men, Xi'an, Shaanxi Province, The People's Republic of China, P.O. Code 710007; Tel: 86-29-87295821, Fax: 86-29-87210878).

2. Inland Higher Education Project (Regional Vitalization, Market Economy Reform Support, and Environmental Conservation) (Inner Mongolia Autonomous Region)

(i) Project Background and Necessity

Compulsory education has been popularized through China; the net primary school enrollment rate^[1] is 98.7% and the gross enrollment rate^[2] in lower secondary school (equivalent to junior high school in Japan) is 97.9%, and the need for higher education is increasing in terms of quantity. This includes a pressing need to develop competent human resources capable of addressing development challenges such as adaptation to the transition to a market economy and environmental conservation research in China's inland regions from the perspective of correcting regional disparities. The Chinese government has formulated the Tenth Five Year Plan, and it is working to expand higher education both quantitatively and qualitatively by aiming for a higher education (includes universities and graduate schools) gross enrollment rate of about 15% (13% in 2001), etc.

(ii) Project Objectives and Overview

The project will improve higher education quantitatively and qualitatively by providing support in facilities (buildings and facilities, etc.) and services (implementation of personnel training, etc.) to eight universities in the Inner Mongolia Autonomous Region, which is located in the northern border region of inland China. The project is consistent with "human resource development," which is one of the priority areas of both the Japanese government's Economic Cooperation Program for China and JBIC's Strategy for Overseas Economic Cooperation Operations. Based on this strategy, JBIC will focus on the three areas below in supporting human resource development in China.

(1) Regional vitalization and exchange: Supplying personnel with advanced skills to the key industries specified in the Tenth Five Year Plan formulated by the Inner Mongolia Autonomous Region will encourage economic growth in the region. Providing and strengthening vocational and adult education will encourage a deepening in the reform of state-owned companies and further structural adjustment in the economy following accession to the World Trade Organization (WTO). Training teachers in rural areas will also help to promote education in those areas.

(2) Strengthening of market rules: Human resource development in higher education institutions will promote the shift to market economy by enhancing the understanding of global standards and rules (including the WTO Agreement) and strengthening governance (greater transparency and efficiency in the rule of law and public administration).

(3) Environmental conservation: Human resource development in higher education institutions and wider efforts in environmental and infectious disease research and other academic fields will help to strengthen China's action against its numerous environmental problems, such as atmospheric pollution, water contamination and the prevalence of infectious diseases.

The project consists of facilities such as school buildings and educational equipment, and services such as training for teaching staff at eight higher education institutions. In particular, the implementation of training is expected to promote mutual understanding between China and Japan through exchange between the higher education institutions involved in the project and counterpart Japanese institutions (training of teaching staff and joint research, etc.)

The loan will be provided for the construction of school buildings, the procurement for the maintenance of educational equipment, and the training of Chinese teaching staff in Japan.

The project will be implemented as part of the support for human resource development in China that has been provided since fiscal 2001^[3].

The executing agency is the People's Government of the Inner Mongolia Autonomous Region (Address: Finance Bureau of Inner Mongolia Autonomous Region, No.1 Xinhua Street, Huhhot, Inner Mongolia Autonomous Region, The People's Republic of China, P.O. Code 010055; Tel: 86-471-6944886, Fax: 86-471-6965628).

3. Changsha Diversion Works and Water Quality Environmental Project

(i) Project Background and Necessity

As a result of an increase in household and industrial effluent accompanying the expanding population and economic growth, the rate of sewage treatment is only 37% (2003) in Changsha (population about 1.96 million), the capital of Hunan Province located in the southern inland region of China. The rivers in the city, including the Xiang River, are badly polluted, and the situation is also one of the causes of the water quality contamination of Dongting Lake, further downstream, and the Yangtze River. In addition, in the past few years, the Xiang River, which is the main source of drinking water, has suffered from severe water shortages for about three months in winter, and water contamination increases due to the decline in flow volume. As a result, it is difficult to secure good quality drinkable water, and damage to health, including infectious disease, also occurs because of the use of dirty water.

Under such conditions, the Changsha Municipal People's Government has formulated the "Outline of the Medium and Long-term Development Strategy for Changsha" (2002). It is working to promote improved capability in the stable supply of safe drinking water and to improve sanitary conditions and the living environment for residents by developing water resources and constructing water supply facilities, sewage treatment and drainage, in order to meet the demand for water in 2010.

(ii) Project Objectives and Overview

The project will construct water and sewage treatment facilities, water pipes and sewers in Changsha in Henan Province. It aims at improving the water quality in the city's rivers, supplying clean and stable drinking water and improving sanitation. The project is consistent with "environmental conservation," one of the priority areas of both the Japanese government's Economic Cooperation Program for China and JBIC's Strategy for Overseas Economic Cooperation Operations.

The project consists of the construction and maintenance of a water treatment plant at one location and sewage treatment plants at two locations as well as intake facilities, water pipes, drainage and sewers. Officials from the executing agency are scheduled to get training in Japan in collaboration with Japanese local governments with the objective of achieving sustainable project effect.

The loan will be provided for the construction of the facilities described above, procurement of materials and equipment, and training programs in Japan.

The executing agency is the Changsha Municipal People's Government (Address: Changsha Financial Bureau, No.193, Furong Road Central, Changsha City, Hunan Province, The People's Republic of China, P.O. Code 410007; Tel: 86-731-5164908, Fax: 86-731-5166989).

4. Xinjiang Uygur Autonomous Region Yining City Comprehensive Environmental Renovation Project

(i) Project Background and Necessity

Yining City (population about 420,000) is located in the innermost part of the Xinjiang Uygur Autonomous Region, which is situated in the northwest border region of inland China. As the capital of the autonomous district of Ili Kazakh, together with Urumqi, the capital of the Xinjiang Uygur Autonomous Region, it has an important position in the development of the region.

In recent years, the urban area of the city has seen rapid urbanization and population growth, but the provision of environmental infrastructure has lagged behind. Problems such as atmospheric pollution and the pollution of water in the Ili River, which flows through the south of the city, have become severe. Specifically, in terms of water, the inadequate network of water pipes, the aging of water supply facilities and the shortage of supply capacity (water supply rate: 70%) have a significant impact on the daily lives of people. Because untreated sewage is discharged directly into the Ili River due to the shortage of sewers and inadequate sewage treatment capacity (sewage treatment rate: 57%), the water quality in the Ili River is far below the Water Quality Standard Class II (the level for drinking water), which is the city's goal. Moreover, household waste is buried without any measures to prevent leachate into the ground, so the effect on the city's water resources is cause for concern. In terms of the air, the diffusion of clean energy such as central heating supply and natural gas has not kept pace, and because coal boilers are used for heating without adequate environmental measures and coal is used as a cooking fuel, the concentration of atmospheric pollutants, mainly Total Suspended Particulates (TSP), does not meet the concentration limit value for Ambient Air Quality Standard Class II (standard applied to urban residential areas). In addition, the area of forest outside the city is in a state of desolation due to excessive logging over many years. The loss of the multifunction of forests, including the prevention of soil erosion and mitigation of flooding, has resulted in dust storms and soil erosion, with more than 7000ha, or over 10% of the city's area, suffering from soil erosion. Furthermore, the banks of the Ili River are eroding away, and the river is prone to flooding, with floods occurring at a rate of three to nine times a year over the past five years.

Under such conditions, the Yining Municipal People's Government has formulated the "Yining Tenth Five Year Plan and Plan for 2010," and it is working to establish the environmental infrastructure of the city including water and central heating supply, sewage treatment, solid waste disposal and afforestation.

(ii) Project Objectives and Overview

The project will promote the establishment of environmental infrastructure in Yining City in the Xinjiang Uygur Autonomous Region, including (1) improvement and construction of water supply facilities and sewers facilities, (2) construction of new solid waste disposal facilities, (3) construction of new facilities for central heating supply and natural gas supply, and (4) afforestation that helps protect the condition of the city's environment. The objective is to contribute to improving the city's environment and raising the living conditions of people through a stable supply of clean drinking water, the reduction of water pollution and atmospheric pollutants and the safe disposal of solid waste. The project is consistent with "environmental conservation," one of the priority areas of both the Japanese government's Economic Cooperation Program for China and JBIC's Strategy for Overseas Economic Cooperation Operations.

The project consists of (1) provision of water pipes and water treatment plants at two locations, (2) provision of sewer pipes and sewage treatment plants at two locations, (3) construction of a sanitary landfill, a transfer station and a medical waste incineration station, (4) provision of coal-fired boilers, a heat exchange station and heat supply pipelines, (5) provision of gasification station of LNG and gas pipelines, and (6) afforestation of protection forests mentioned above. Staff from the executing agency are scheduled to receive training in Japan in collaboration with Japanese local governments with the objective of achieving sustainable project effect.

The loan will be provided for the construction of the facilities described above, the procurement of materials and equipment, and training programs in Japan.

The executing agency is the Yining Municipal People's Government (Address: Xinjiang Yining Financial Bureau, No.109 Shengli Road, Yining City, Xinjiang Uygur Autonomous Region, The People's Republic of China, P.O. Code 835000; Tel: 86-999-8039766, Fax: 86-999-8021654).

5. Baotou Atmospheric Environmental Improvement Project

(i) Project Background and Necessity

Baotou city (population about 2.4 million) is located in the Inner Mongolia Autonomous Region in the northern border region of inland China. It is the second largest city in the autonomous region, having developed as an industrial city. Its energy consumption has increased sharply with the rapid industrialization and urbanization in recent years. However, not only industrial users but also residential users mainly rely on coal as an energy source. Moreover, because boilers are used without environmental protection measures, there is severe atmospheric pollution caused by the sulfur dioxide and particulate soot emitted by coal combustion. Improvement of the atmospheric environment is urgent because the density of atmospheric pollutants in terms of Total Suspended Particulates (TSP) does not meet the density limits in Ambient Air Quality Standard Class II (the standard for urban residential areas), and Baotou city is ranked the 13th worst-air-polluted city among the 113 cities nationwide by the comprehensive atmospheric pollution evaluation.

Under such conditions, the Baotou Municipal People's Government has formulated the Tenth Five Year Plan for Protecting Baotou's Environment (2001-2005) and working on improving the atmospheric environment by reducing atmospheric pollutants, promoting conversion to clean energy such as natural gas.

(ii) Project Objectives and Overview

The project will improve the air quality of and will expedite the sustainable development of Baotou city, through the reduction of the amount of coal consumption by construction of a natural gas supply system. The project is consistent with "environmental conservation," one of the priority areas of both the Japanese government's Economic Cooperation Program for China and JBIC's Strategy for Overseas Economic Cooperation Operations.

The project consists of the construction of new gas pipeline networks (about 100km), replacement of pipelines (about 710km), and the procurement of pressure regulators and control units. Officials from the executing agency are scheduled to receive training in Japan in collaboration with Japanese local governments with the objective of achieving sustainable project effect.

The executing agency is the People's Government of the Inner Mongolia Autonomous Region (Address: Finance Bureau of Inner Mongolia Autonomous Region, No.1 Xinhua Street, Huhhot, Inner Mongolia Autonomous Region, The People's Republic of China, P.O. Code 010055; Tel: 86-471-6945263, Fax: 86-471-6945308).

6. Eco-environmental Construction and General Treatment Project of the Yangtze Upper Reaches in Sichuan Province

(i) Project Background and Necessity

Sichuan Province (population about 85.29 million) is located in the west of inland China, which is situated on the upper reaches of the Yangtze River. As it has a warm and humid climate, Sichuan Province used to have abundant forest resources. However, excessive logging in the process of rapid economic development and population growth of recent years has resulted in the decline and depletion of the forests.

The forest ratio (the forested area as a proportion of the province's total area) in the province is about 20%, which is higher than the national average of about 18%, and it can be described as abundant in comparison with the provinces in the Yellow River basin, which JBIC has provided loans in the past. However, because the province has neglected to manage its forests properly, the forest accumulation volume^[4] is 73m³/ha, which is lower than the national average (83.9m³/ha, Japan: 160m³/ha). The multifunction of the forests, such as preventing soil erosion and alleviating flooding, has been lost. As a result, an area of 22.34 million hectares, or about half the area of the province, is suffering from soil erosion, and about 600 million tons of sediment is being flowed into the Yangtze River each year, with natural disasters, including flooding, becoming more severe as a result.

Under such conditions, the Sichuan Provincial People's Government has formulated the Tenth Five Year Plan for Sichuan (2001-2005), and it is working to restore the multi-faceted functions of the forests by carrying out afforestation of 1.3 million hectares and planting of vegetation on 1.15 million hectares, as well as increasing the area targeted for prevention of erosion to 4.5 million hectares.

(ii) Project Objectives and Overview

The project will conduct afforestation and planting of vegetation as well as constructing marsh gas facilities to provide an alternative fuel in order to contribute to reducing logging for fuel in 12 county-level administrative units of Sichuan Province. The project aims to increase the area of forest in the region and reduce soil erosion, thus contributing to the improvement of the ecological environment in the area covered by the project. The project is consistent with "environmental conservation," one of the priority areas of both the Japanese government's Economic Cooperation Program for China and JBIC's Strategy for Overseas Economic Cooperation Operations.

The project consists of afforestation (about 70,000 hectares), planting vegetation (about 20,000 hectares) and the construction of marsh gas facilities for farmers (about 25,000 locations). Officials from the executing agency are scheduled to receive training in Japan in collaboration with Japanese local governments with the objective of achieving sustainable project effect.

The loan will be provided for afforestation, planting vegetation, the procurement of materials and equipment needed for the construction of marsh gas facilities, and training programs in Japan.

The executing agency is the Sichuan Provincial People's Government (Address: Sichuan Provincial Project Office for Foreign Investment, Sichuan Provincial Development and Reform Commission, No. 30, Duyuan Street, Chengdu, Sichuan Province, The People's Republic of China, P.O. Code 610016; Tel: 86-28-86605326, Fax: 86-28-86604752).

7. Guiyang Environmental Improvement Project

(i) Project Background and Necessity

Guiyang (population about 3.5 million) is the capital of Guizhou Province, which is located in the southern inland region of China. It is situated on the middle reaches of the Yangtze River, and it has developed as the economic, transport and trade center of the province. It has also been positioned as one of the centers of development in the Great Western Development Strategy. With the rapid industrialization and advancing urbanization of recent years, residential and industrial wastewater volumes have increased sharply (about 810,000 m³/day in 2003). However, there is only one existing wastewater treatment plant (Xiaohe Wastewater Treatment Plant: treatment capacity 80,000 m³/day), and the wastewater treatment rate is only 10%. Therefore, much of the wastewater is discharged untreated, and the water quality in the Nanming River and the Maotiao River, which run through the city, does not reach Water Quality Standard Class IV (the level for industry use).

Under such conditions, the Guiyang Municipal People's Government has formulated the "Guiyang's Environmental Tenth Five-Year Plan (2001-2005)" and it is working to increase the wastewater treatment ratio to at least 60% under the plan.

(ii) Project Objectives and Overview

The project will expedite the sustainable development of Guiyang City through improving the water environment in the city by the construction of wastewater treatment systems. The project is consistent with "environmental conservation," one of the priority areas of both the Japanese government's Economic Cooperation Program for China and JBIC's Strategy for Overseas Economic Cooperation Operations.

The project consists of the construction of wastewater treatment plants in five locations (total treatment capacity: 337,000 m³/day) and a wastewater pipeline. Officials from the executing agency are scheduled to receive training in Japan in collaboration with Japanese local governments with the objective of achieving sustainable project effect.

The loan will be provided for the procurement of the materials, machineries and equipment of the facilities described above, and training programs in Japan.

The executing agency is the Guiyang Municipal People's Government (Address: Guiyang Environmental Protection Bureau, Room No. B413, Municipal Government Building, Guiyang Municipal Administrative Center, Jinyang New District, Guiyang, Guizhou Province, The People's Republic of China, P.O. Code 550014; Tel: 86-851-7989422, Fax: 86-851-7989422).

[1] Net enrollment rate: Number of students enrolled (students of relevant age) / School age population.

[2] Gross enrollment rate: Number of students enrolled (including students outside of relevant age) / School age population.

[3] Fiscal 2001: Six projects totaling 30.722 billion yen. Fiscal 2002: Six projects totaling 27.504 billion yen. Fiscal 2003: Six projects totaling 25.482 billion yen.

[4] Represents the volume of tree trunks. Forest "quality" is measured using forest accumulation volume per unit area.