Table 3-2. Gender Empowerment Measurement (GEM)

Country	GEM	Seats in the National Assembly occupied by women (%)	Administrative jobs held by women (%)	Professional and technical jobs held by women (%)
China	**0.481**	**21.0**	**11.6**	**45.1**
Japan	0.465	7.7	8.5	41.8
Philippines	0.459	11.5	33.7	62.7
Malaysia	0.422	10.3	11.9	44.5
Thailand	0.417	6.6	21.8	52.4
Indonesia	0.375	12.6	6.6	40.8
Bangladesh	0.273	9.1	5.1	23.1
India	0.228	7.3	2.3	20.5

Data: UNDP, Human Development Report 1997

graduates has been occurring in recent years. In addition, although women are said to occupy 42% of the positions in township and village enterprises, many of such enterprises have inferior working environments and hygiene conditions and do not observe various regulations pertaining to women.

Under these conditions, in order to support the reemployment of women workers who have been laid off in urban areas, particularly, in coordination with reemployment service centers and cooperation on employment training activities that target women in accordance with the needs of society and women workers will be desired.

3-5-2. Environmental Preservation

(1) Basic direction

China's environmental problems have accompanied advancements in reform, openness and the formation of a market economy. Environmental pollution centering on cities is particularly grave, and has been spreading to some rural areas, while the range of ecological systems being destroyed is expanding. Although air pollution has occurred primarily from soot and smoke, the damage from dust and acid rain is also increasing, making the extent of pollution severe. Since the 1990's, accompanying the development of township and village enterprise, the emission quantity of pollutants from these enterprises and factories has been increasing rapidly.

Box 5. Supporting the Reemployment of Women Workers

According to statistics from the end of 1997, there were 5.77 million unemployed people on the social register, out of which 3.04 million - 52.7% -- were women. Of the 2.84 million women temporarily laid off from state-owned enterprises, mostly were concentrated in the spinning industry, middle-aged, and of low levels both culturally and in terms of work skills, making their reemployment difficult. According to the 1997 sample survey conducted by the State Statistical Bureau, the reemployment rate for the temporarily laid off was 26.5%. However, the reemployment rate for temporarily laid off women was 23.3%, a lower level than for the whole. Many women "temporarily" laid off have not yet been able to be reemployed.

In order to resolve the issues of livelihood security and reemployment for women employees, the All-China Women's Federation, working in cooperation with the government, is developing its women's foundation movement and has proposed the goal of providing one million temporarily laid-off women with reemployment assistance. The Women's Federation and other NGO are conducting questionnaire surveys concerning the reemployment hopes of temporarily laid-off women workers and is conducting occupational training in accounting, the education of small children, clerical processing, foreign-style dressmaking, computers and the like corresponding to survey results and demand. In 1996, 470,000 temporarily laid-off women underwent vocational training, out of which 230,000 were able to become reemployed. Women's federations in 24 provinces and cities established training bases for temporarily laid-off women workers and also founded some employment information guidance centers and occupational introduction offices. These efforts have formed an active role in women's reemployment.

Source: Symposium of the International Women's Association in September 1998
Announced by Assistant Bureau Chief, Asia Bureau, International Liaison Department, All-China Women's Federation.

In addition, rivers, lakes and marshes are also extensively polluted, and with the exception of some tributary and interior rivers, a tendency toward substantial pollution overall exists. Pollution in four sea areas (Bo Hai, the East Sea, South Sea and Yellow Sea) is occurring from coastal regions, with a trend toward substantial increase. Moreover, the worsening of residential environments in urban areas is also grave, and the establishment of appropriate systems for collecting residential and industrial waste, which are increasing, and the construction of waste disposal facilities have not caught up. Moreover, exhaust from cars, noise pollution and other types of pollution are substantial.

With environmental deterioration exerting a grave influence on the health of residents, in 1996, respiratory system disease was the fourth leading cause of death in urban areas and the leading cause in rural areas. Moreover, in 29 provinces, autonomous regions, and municipalities nationwide, there were 65 cases of environmental pollution stemming from chemical pollutants and biosystem pollutants, with victims of fever, diarrhea, viral hepatitis, and communicable intestinal tract diseases reported.

Concerning the heavy metals contained in water discharged from factories, the problem of mercury pollution in the Song Hua Jiang River and Mao Tiao River of Guizhou province has been pointed out, and effective countermeasures must be established immediately. Moreover, in some impoverished rural regions, there has been grave damage from illnesses connected to environmental pollution that has its roots in long-term living habits (the fluorosis and arsenic poisoning detected in Guizhou province and Inner Mongolia).

China's woodlands currently account for an area of 133.7 billion ha. Although woodlands covered only 8.6% of the country at the time it was founded, the water and land preservation and afforestation of 40 years have increased this coverage rate to 13.9%. However, the area of water and land efflux has increased to 3.67 million square km (38% of China's total territory), and desertification since the 1980's has increased to an average of 2,400 square kilometers. In keeping, attention must be paid to the fact that 90% of the nation's impoverished rural population of around 50 million are residents of regions in which water and soil efflux and desertification are severe.

The summer of 1998 was marked with unprecedented flooding of rivers, including floods in the Changjiang Valley and northwest regions, and a lot of damage was caused. Although the Japanese government is also providing emergency assistance and the like, the direct economic damage from the flooding has been considerable. As of December 1998, the Chinese government indicated it had reduced economic growth for fiscal year 1998 by 0.5%. (See Box 6.)

Although China's environmental issues are extremely grave, as described above, the Chinese government is also sufficiently aware of the situation and is continuing to implement specific measures. One example is "the 9th Five-year

Plan and the Long-term Targets for 2010 for Environmental Protection", which was established in 1996. The appended documents, "Comprehensive Regulatory Plan for Emission Volumes of Major Pollutants Nationwide in the Period Covered by the Ninth Five-Year Plan" and "China Trans-Century Green Project (Phase I)" are basic plans that set forth environmental protection goals up to the year 2000. In line with these plans, the Chinese government is advancing its efforts to preserve and improve the environment. However, insufficiencies in environment-related budgets and in the provision of monitoring systems, specialized technology, and personnel have generated a situation in which results are not altogether satisfactory.

As for environmental preservation, a concrete direction for cooperation was indicated, with emphasis given to environmental protection and pollution prevention, recovery of forests, and afforestation, as important factors in the First Study Committee. With this as a turning point, cooperation in the environmental field started in full swing, mainly by the provision of grant aid and technological assistance. This started off with the Japan-China Friendship Environmental Preservation Project taking the lead and other assistance has been being extended in industrial pollution prevention, air and water pollution prevention, environmental monitoring, afforestation, desertification prevention, etc. Moreover, ODA loans are being used for developing water utility and city gas facilities as part of a build-up in environment-related infrastructure.

Japan and China concluded the Agreement of Japan-China Joint Announcement on Environmental Reservation Cooperation, and in May 1995, the first Japan-China Comprehensive Forum on Environmental Cooperation was held in Beijing with the central government, local goverments, and private organizations participating. The second Forum was held in Tokyo in November 1997. In addition, with September 1997 marking the 25th anniversary of the normalization of relations between Japan and China, former prime minister Hashimoto and premier Li Peng agreed on The Japan-China Joint Announcement on Environmental Cooperation Toward the Twenty-first Century. The content focused on" the Environmental Development Model City Concept "and "Environmental Information Networks." Concerning the former, in March 1998, the Japan-China Expert Committee selected Dalian, Chongging, and Guiyang as candidate cities.

Box 6. The Worst Flooding in History

In Changjiang in the south and Nenjiang in the north, the high precipitation volume that continued for days in the middle of June caused embankments to give way, causing flooding in regions in the basin. Although water damage occurred from China's two main rivers every year, Changjiang and the Yellow River, which flow west to east within China, the level last year was different. In terms of the scale of the damage, in the Changjiang basin alone, 30,000 people died, with the same as the flood in 1954 level. According to the Chinese government's announcement on August 26, 1998, the total number of victims came to 240 million, and 3,004 people died (1,320 of whom died from the flooding in Changjiang). Five million buildings collapsed, and the damage area accounted for 318 million "mu" (1 "mu" = 6.7 ares). The direct economic loss was 166.6 billion yuan (about 3 trillion yen), about 1/4 of the national budget. Giving an example of the scale of the damage, the number of victims accounts for twice the total population of Japan, and the size of the area damaged is on the order of the entire Kyushu region in Japan. According to the analysis of the Chinese Government's Office of State Flood Control and Drought Relief Headquarters in addition to the consecutive days of high precipitation caused Changjiang's flooding, deforestation in the upper-middle basins deteriorated water absorption capability and the lower-middle basin had declined as lakes and ponds were filled in, and with a 33% decline in water storage capacity since the beginning of the 1950's, the inevitability of a disaster caused by human neglect has been pointed out.

Because much food production for harvest in the summer season is cultivated for in the Changjiang basin, the large amount of income decreases before the harvest period. The Ministry of Agriculture indicated early on the difficulty of achieving 490 million tons, which had been the goal for the year's food production.

Although the Chinese government is investing 17 billion yuan in flood control measures, voices have been raised to indicate the aberrance of deforestation in basins, the filling in of lakes and marshes, and gravel collection in rivers and the like in economic development.

Along with conducting relief activities in damaged regions immediately after the flooding broke out, the Chinese government has also requested international emergency aid, beginning with Japan, in consideration of the huge damage. The Japanese government has both provided emergency disaster relief aid (on the level of 7,800) in the form of water purifiers, medicine, medical materials, tents, generators, and other goods. It has also given 1.2 million dollars and 250 million yen in emergency grant aid. In addition, domestic local governments, NGO, and the general public provided blankets(10,000 ps) to victims through JICA. England, the Netherlands, UNDP, UNICEF and others also provided emergency supplies and funds.

Although in this way, cooperation between Japan and China on environmental areas is developing certainly, the Second Study Committee recommends the importance of focusing cooperation on high-priority areas that China cannot resolve solely through its own efforts as its basic stance for handling aid to China, in consideration of Japan's ODA resource restrictions henceforth and the size of China's territory and population. In addition, in light of the fact that China's budget allocations for environmental measures are not necessarily sufficient, effective cooperation will be a major point in environmental areas.

In consideration of these points, the model city concept is a good idea. The effect of the model city concept can be actualized within a relatively short time, taking into consideration that funds and technology in line with the Japan-China cooperation will be applied in a concentrated manner.

However, the more difficult issue is how to engage in cooperation for a major demonstrated effect in which the experiences gleaned spill over to other regions. The crucial point is how to create circumstances that bring environmental preservation into accord with economic profitability. Directing attention to the fact that simply raising the combustion efficiency of factory facilities leads to environmental preservation, for example, is important.

Not only must focus be directed towards pollution problems of cities selected out as model cities, but also towards environmental measures whose use would become widespread regionally, i.e. in consdieration of the relationship with changes in the industrial structure (induced by transitions in the market economy), with adjacent areas, with the industrial structure of other industrial cities located both upstream and downstream of rivers, as well as with pollution situations must be viewed as crucial factors.

However, owing to Japan's aid resource restrictions, there have been limits to the development of cooperation that considers these many factors. Sufficient cooperation and information exchange with China's government agencies on each level (central, provincial, city, county, etc.), other aid agencies, and the private sector are also necessary.

(2) Cooperation on air pollution and acid rain

The air pollution in China's cities can be characterized as follows: the use of heaters causes severe air pollution in the winter in northern cities, and the high sulfur content of the coal used in southern cities pollutes the air there. Although problems with SO2 and acid rain are extremely grave in some southern cities, the air pollution in northern cities is worse, on the whole.

Since the 1990's, there has been striking development in township and village enterprise in rural areas, with the percentage of China's industrial production it occupies rising from 23.8% in 1989 to 42.5% in 1995. In keeping, the emissions volume of pollutants from township and village enterprise has also increased rapidly. According to a nationwide survey on pollution from town and village enterprises, SO_2 emissions from township and village enterprise in 1995 totaled 5.49 million tons, accounting for 28.2% of the quantity emitted by all industries throughout China. Moreover, 9.93 million tons of soot were emitted, 54.2% of the nation's total, and 13.58 million tons of dust, 68.3%.

The fall of acid rain occurs mainly in regions south of Yangzijiang, east of the Qingzang plateau, and poor regions in Sichuan. In regions of acid rain in central China, represented by Changsha, the pH is the lowest and the occurrence of acid rain the highest, with the situation tending to worsen every year. Acid rain covers a wide rage of regions in southern China and eastern China's coastal regions, and pollution is substantial.

In relation to such air pollution, China revised its Law on the Prevention and Control of Air Pollution in 1995 and began taking new measures, such as restricting the use of coal with a high sulfur content. Since 1997, the levels of SO_2, NOx and of total suspended particles (TSP) have been announced every week in the major cities. In addition, cleaner production plans (activities to reduce the emission of pollutants and to keep the consumption of energy and raw materials to a minimum) have been promoted to develop people who possess specialized technology for environmental measures and to conduct strict examinations of how enterprises are implementing cleaner production.

Through such measures, in 1996, 90% of soot was eliminated from industrial

fuel exhaust in China's counties, while 75.0% of the exhaust from production processes was purified, constituting improvements of 0.3 and 4.2 points respectively from the previous year. Although some cities have improved their SO_2 levels, they are still high, and desulfurization facilities have been installed for fixed emission sources only in a few cases.

In terms of Japan's specific cooperation on China's air pollution problem, the area of countermeasures to fixed emission sources in industries in which pollution is a major burden (steam-generated electricity, steel, cement, chemicals, etc.) and that account for around 75% of China's total quantity of industrial pollution emitted is being considered.

In addition, in regions utilizing coal, which has a high sulfur content, technical cooperation to promote the introduction of clean coal technology would be effective (washing coal, improving combustion efficiency, etc.). Moreover, research is also being done so that the vast quantities of lime removed from desulfurization facilities can be utilized to improve the soil in poor rural areas or region in which the soil quality is poor.

Based on Japan's experiences particularly in developing and introducing anti-pollution technology and looking at cases in which the Environmental Pollution Control Service Corporation, Japan Development Bank, Small Business Promotion Corporation, and the like have provided enterprises with long-term funds at low-interest, it should be studied how to use ODA loans to provide China with environment-related two-step loans (which are made through the development and financial agencies within the borrowing country for monetary support).

(3) Cooperation on countermeasures to water quality deterioration

According to monitoring stations throughout China, within the seven main river systems (Liaohe River, Haihe River, Huaihe River, Yellow River, Songhuajiang River, Zhujiang River and Yangzijiang River), pollution in three rivers (the Liaohe, Haihe, and Huaihe) is substantial. Pollution in the main freshwater lakes is substantial in the Southern Four Lakes, in addition to the "Three Lakes" (Chaohu, Dianchi, and Taihu).

Pollution in the Yangzijiang River and Yellow River systems has been worsening each year. Particularly in the Yellow River, upstream water volume decreases year by year, while because of the increase in water used for irrigation or urban supply, "dry-up" (dyanryu) at which the water downstream disappears is worsening.

In terms of pollution problems in the Huaihe River system, the main stream is substantially polluted during the water-shortage period, and heavily polluted sections upstream continue to prevail. The major pollutants of freshwater lakes and marshes are phosphorus and nitrogen, and the main environmental issue is eutrophication.

China has focused countermeasures to such water pollution primarily on its "Three Lakes and Three Rivers". In addition to such energetic efforts as obligating all factories in the basin of the Huiahe River, specifically, to meet the emission standards by the end of 1997, the closing of factories that do not meet the standards and other regulations of a compulsory nature are being implemented.

The Chinese government's main concern along with preventing pollution is the securing of water sources (volume). Promoting efficient water utilization, such as countermeasures to the Yellow River's "dry-up" in particular, is another crucial theme.

In terms of Japan's cooperation in these areas, improving pre-processing facilities in industries in which the deterioration of water quality is substantial (chemical, paper manufacturing, food, etc.) and constructing sewage and drainage processing facilities both to prevent the deterioration of rivers, lakes and marches as water sources and to counteract eutrophication are being considered. Moreover, although this is not directly linked to environmental preservation, the issue of efficient utilization of limited water resources, as represented by the Yellow River's "dry-up" problem, is growing in importance. Chances also exist to cooperate specifically to spread water-saving technology to industrial and agricultural areas.

(4) Preserving urban environments

Although Beijing's annual trash volume was under two million tons in the

1970's, by 1996 it had increased to about 4.83 million tons annually, or about 13,000 tons a day. Similarly, Shanghai's annual trash volume was around 2.7 million tons in 1995, or around 7,400 tons a day. Beijing has changed its trash collection method from garbage cans to collection centers, and in addition to constructing a sanitation landfill plant site in 1994, it invested 467 million renminbi in 1996 to construct two processing plants and a reshipment plant. However, processing cannot catch up with trash output, which increases annually.

In addition, although water service providers have spread to over 90% of urban areas and already meet certain levels, the increase in the volume of water used in daily life and the deterioration of source water quality have lowered water supply levels and caused other problems in some cities. In addition, although drainage has basically been left unprocessed to the present owing to the investment cost and other problems, as part of the effort to preserve the water quality, etc., of all of China's major rivers, beginning with the Huaihe, and its lakes and marshes, the rapid construction of such facilities is being promoted.

In cities throughout China, the pollution from car exhaust is severe and emissions of NOx, the major air pollutant in big cities, increasing. Pollution from NOx occurs in major cities of over one million people. The pollution in Guangzhou and Beijing is severe, followed by that in Shanghai, Anshan, Wuhan, Zhengzhou, Shenyang, Lanzhou, Dalian, Hangzhou and other cities. As a countermeasure to the air pollution emitted by mobile sources, thorough regulations on exhaust and the technology to handle it are necessary. Making lead-free gasoline should be the first priority, and since December 1997, several cities - beginning with Beijing -- have been engaged in this process. Even on the supply side, the petroleum refining industry, policy has been set forth for switching to lead-free gasoline in future.

Concerning noise pollution, in Guanzhou, because traffic noise is at 77.4 decibels in the day and 74.1 decibels at night, the use of horns has been prohibited since December 1997. In Beijing, as well, regulations to counteract the noise from horns are being investigated. Monitoring in the 44 cities in China's state pollution control network reveals that the average noise level for five cities-Luoyang, Datong, Kaifeng, Haikou and Lanzhou-exceeds 60 decibels.

Specific areas being considered for Japan's cooperation include the appropriate processing and reduction of disposed goods, the promotion of recycling, countermeasures to mobile sources of car exhaust in the major cities, and proposals on systems for securing the costs for sewage and waste processing.

(5) Woodland preservation, flood control, and disaster prevention

China's woodlands, which once accounted for a vast expanse of territory, have been plundered in the course of the country's long history. Moreover, accompanying the increase in its population, deforestation continues even to this day for securing timber, wood, and charcoal. In keeping, even the remaining woodlands continue to lose their economic and natural environmental protection functions. The Four-Direction Afforestation Policy instituted in the 1940's conveyed the importance of greenery to the people; although poplars became conspicuous in towns and rural areas as a result, a look at China overall reveals that the greenery is by no means abundant. In the large northwestern region and central zone, desertification, desiccated, treeless zones or a prevalence of yellow soil prevail. In addition, in zones in the central southern region that have no coal, poor farmers frequently cut down shrubbery even now; thus, the woodlands are in a desolate state and when storms occur, the soil in ravaged forests gushed onto farmland, causing damage that dispossesses many of their lives.

The 1992 United Nations Conference on Environment and Development (UNCED) was an opportunity to begin developing national efforts to help China achieve sustainable management of the woodlands, self-sufficiency in timber, and develop related technology. Such efforts include thoroughness in prohibiting the deforestation of trees of large diameter in natural forests in northeast regions and other legal regulatory measures, planting quick-growing trees in the flatlands of rural zones and regions of yellow soil, and as for small-diameter wood and wood material deriving from the thinning of man-made forests (both of which have potential for becoming a primary wood resource), the establishment and widespread use of wood processing techniques for developing their application with consideration given to value-added qualities. In keeping, Japan's support in line with these directions would be significant.

Last year's flood damage in the Changjiang basin was said to be the worst in

40 years. Although enforced measures to restrict the deforestation of the woodlands in the upper basin directly after the flood were taken, damage from various meteorological disasters has occurred in the past, as well. Japan has provided funds and technical support for flood disaster, such as project-type technical cooperation on The Pilot Scheme for Technological Development River Information Systems Project and grant aid for the Project for the Improvement of Equipment for the Flood Control System of Minjiang in Fujian. Japan has also provided emergency aid on several occasions, and continued enforced cooperation on flood control and disaster prevention will be necessary henceforth.

3-5-3. Agricultural Development and Food Supply

(1) Basic direction

The basic issues in China's agricultural development are to secure a stable supply of farm produce and to improve daily life by improving farmers' incomes. Improving farmers' incomes and daily life are closely related to the reduction of poverty and interregional disparities that the Second Study Committee has raised as priority areas for cooperation.

The important elements for stabilizing food production and supply in China would be to make available more arable land and water resources, reinforce agricultural productivity through research and development on production techniques, and conduct reforms on the food distribution and market system, with considerations given to changes in the food demand structures well as to the balance in regional supply and demand.

To improve farmers' incomes and daily life, diversifying production from cereal alone to vegetables, orchards, livestock, etc., by industrializing agriculture and expanding activities in rural regions to include the processing, distribution and sale of what is produced would be effective in rural areas that have a substantial surplus of laborers.

In addition, the income structures of farms should be diversified, particularly in view of the trend toward rapidly rising incomes in the nonagricultural sector, and the role of township and village enterprise should be seriously considered.

To make it possible for surplus laborers in rural areas to make a smooth transition to the industrial and service sectors of neighboring cities, systems must be established for farmers to voluntarily select other occupations by improving census registration, cultivating a sound labor market, and providing occupational training and introduction.

In terms of the connection to the reduction of poverty and interregional disparities, the improvement of farmers' incomes and daily lives can be taken to be one effective method for reducing relative poverty in China. Moreover, for those living in remote regions that are not favored either geographically or by nature, and for farmers suffering from absolute poverty in rural areas with restricted market access, it will definitely be necessary to adopt an approach for improving the standard of living through comprehensive policy that combines agricultural development, other education, improved health and sanitation, the creation of employment opportunities, the provision of social infrastructure and the like.

In China's agriculture-related sectors as well, awareness exists for establishing clear policy on short- and mid-term market fluctuations in food supply or long-term supply and demand prospects. In addition, efforts are being made to advance policy with the clear awareness of the necessity of facilitating integration with the international market, including achieving equilibrium in the incomes between the agricultural sector and the nonagricultural sector, providing infrastructure for breaking through resource limitations and technological progress, forming wide-area markets and providing distribution infrastructure, and future participation in WTO.

To the present, Japan's cooperation with China in the area of agriculture has been primarily "hard-oriented," focusing on facility construction, equipment and facility provision, the transfer production-related technology and the like; "soft-oriented" measures, such as joint surveys, policy establishment, instirution development for stabilizing food supply and reforming agricultural structure have not often been undertaken.

Although the transfer of technology for increasing food production continues to be important in future, as well, joint cooperation with China on technology for improving farmers' incomes will also be important. Considered on the regional

level, as well, Japan's agriculture-related cooperation (particularly grant aid and technical cooperation) is frequently for regions in northern China, with little going toward the central and western regions. To reduce poverty and interregional disparities, in future it will be necessary to focus on regional balance that emphasizes impoverished central and western regions.

Cooperation on China's agriculture must take into consideration of the fact that China's related administrative divisions for accepting agricultural cooperation are markedly divergent. In terms of China's central administrative organizations related to agriculture, production is mainly under the jurisdiction of the Ministry of Agriculture, domestic distribution under the control of Ministry of Internal Trade and State Grain Reserve Bureau, international trade under the control of the Ministry of Foreign Trade and Economic Cooperation, with inter-department regulations resolved by the State Council, based on the proposals of the State Planning Commission.

There exists a situation where the administration of the sectoral administrative system covers all the way down to its subordinate agencies, but where the cross-sectoral cooperation is not necessarily smooth. Particular attention should be paid to this fact when considering future aid in this area comprehensively. (Through the administrative reforms that the central government has been implementing since March 1998, some of the administrative agencies involved with agricultural development and food supply have been reorganized and consolidated. Specifically, the Ministry of Forestry and the Ministry of Domestic Trade were abolished, and the State Food Storage Bureau, which had been under the control of the latter, was placed under the control of the State Development and Planning Committee instead.)

(2) Cooperation linked to improving farmers' incomes and reducing poverty and interregional disparities

China's food production capabilities are steadily expanding, and for now it has escaped from being plagued by food shortages akin to large-scale famine. However, income disparities between agricultural and nonagricultural sectors, and cities and rural areas are increasing, and social problems linked to the excessive influx of the population from rural to urban areas are arising. In addition, around

the major cities, many opportunities exist for obtaining income from the nonagricultural sector. Thus, farmers' incentives to engage in food production are flagging, and regions in which food production volume decreases will be seen.

For this reason, the central government's agricultural policy sets the goal of improving farmers' incomes, in addition to increasing food production itself. In line with this policy, Japan's cooperation must focus on developing with China technology linked to improving farmers' incomes. Some examples of cooperation being considered that target the improvement of farmers' incomes, are reducing costs through low-investment-type technology; increasing the added value of agricultural products through the development and propagation of post-harvest agricultural product processing and utilization technology; and reducing transaction expenses by providing agricultural product distribution infrastructure and market information.

Moreover, with the central government's anti-poverty measures being both wide-ranging and general, there has been a shift to projects for selected regions, focusing on remote regions or regions in difficulty resulting from natural restrictions. In addition, although previous anti-poverty measures have taken the form of providing aid materials, policy has been changed in the direction of reducing the poverty problem by conducting projects with a strong preference for regional development, with residents striving to be self-reliant. As Japan contemplates cooperation on agriculture linked to the reduction of poverty and interregional disparities, it must consider the special features of each impoverished region targeted and adopt an approach that combines agricultural cooperation with the provision of other social services.

(3) Cooperating on the industrialization of agriculture

Although China's agricultural systems following reform and openness stimulate farmers' will to produce by introducing systems for contracting production and have achieved great increase in production on the whole, problems exist such as the tendency for each individual farming household to be managed in a non-coordinated manner due to the small-scale farming policy. The managing of farms cannot avoid but take a course of self-sufficiency, unable to be conscious of the market nor practice management which is linked to the market. This has obstructed

the development of a market economy in which agriculture is systematized, resulting in low profitability of agriculture itself, weak market competitiveness, insufficient potential development capability and the like.

The industrialization of agriculture means converting traditional self-sustaining and semi-self-sustaining agriculture to specialized, commercial agriculture and industry adapted to the market economy. For this purpose, individual, decentralized farms must be reorganized on an industrial basis. The proposed policy includes the integration of distribution, processing and production and the formation of major production bases, focusing on wholesale markets in the place of production. Although the industrialization of agriculture is an issue that the Chinese government has given priority to in its agricultural policy, the greatest bottleneck to such industrialization is the shortage of people of middle-level ability in fields who can carry out the industrialization. For this reason, dispatching specialists possessing not only production technology but also distribution and sales know-how, aiming for the transfer and spread of such technology and know-how, and supporting the activities of organizations and enterprises contributing to promote this transfer to China will be significant.

(4) Cooperation on infrastructure and market operations related to agricultural product distribution

The fact that a wide-area distribution system for agricultural products has not been achieved in China is a bottleneck to stable agricultural development, the relocation of the population accompanying industrialization, and food price stability. In terms of the reform of China's food distribution system, although systematic reform has been intermittently undertaken since 1985 in the direction of introducing the mechanisms of a market economy, a special feature of the food market system is that to the present, food distribution within provinces has been the main, and development of wide-area distribution is under way. In addition, farmers consume around 70% of the production volume, with 30% remaining for sale through a distribution system, making the self-sustaining nature of operations strong. Although state-owned food enterprises are the main agents of the distribution system, these enterprises are plagued by the contradicting duties of government and commercial affairs, with food production, distribution and trade duties monitored by different governmental departments.

The Chinese government does not treat this as a problem simply for its agricultural sector but gives weight to it from its relation to macro economic stability and sustainable economic development. China has also expressed its desire for Japan's cooperation on agricultural product distribution and market control. In future, cooperation on food storehouses, freezing, refrigerating and low-temperature facilities, wholesale markets and other infrastructure related to agricultural distribution, and market information networks and the transfer of technology for the know-how to operate them will likely be important.

(5) Agricultural cooperation that dissemination effect is expected

China's territory is vast, and the form of agriculture, regional characteristics and other conditions differ in kind. For this reason, a policy experimental approach is often employed in which various trials and experiments conforming to these regional features and other conditions are run. Adjustments are made in successful cases so that they can be spread to other regions or conditions.

An advantage of gaining a dissemination effect can be looked forward to by implementing the Agricultural Reform Trial District method with Japan's cooperation. This method is expected to contribute to agricultural progress and an increase in farmer income. Compared to the wide-area and macro-like approaches, this type of regionally limited cooperation is expected to be easy to control and its results easy to confirm. It thus can be said that familiarity with the schema of Japan's cooperation (project type technical cooperation, grant aid, loans, etc.) will be readily achieved.

In addition to the industrialization of agriculture, other themes in this type of experimentation and cooperation that would likely be highly effective include region-focused comprehensive agricultural development, market information network provision, and model cases of farm processing factories to which a share-holding collaborative system has been introduced.

3-5-4. Establishment of a Systematized Market Economy

(1) Basic direction

To support China in its establishment of a systematized market economy, World Bank, IMF, UNDP, other international agencies and bilateral aid agencies, the Ford Foundation and other private NGO, private enterprises, think-tanks and the like have introduced the systems used by developed countries and proposed policy in many cases.

China, in turn, has accepted the proposals of these countries, agencies, and private enterprises and through joint research, seminars, workshops, overseas training and observation, it has analyzed the advantages and disadvantages of the systems of each country and planned to establish systems that conform to its actual status. Thus, a basic direction of reform toward the formation of a systematized market economy has already been established.

Of course, determining whether the direction of these various systems and reforms is the most appropriate for China's future development will not only necessitate China's own evaluations but the objective evaluation of various countries, including Japan, and agencies. Although proposals for appropriate improvement must be continued with based on these evaluations, whether they are accepted or not is basically for China itself to decide.

Although Japan's support of China in establishing a systematized market economy has, to the present, been provided through public agencies, private enterprises and think-tanks, it has not necessarily been coherent.

In future, in order to advance support in this area, the actual results of Japan's aid to the present must be identified and comprehensively evaluated, and close relationships in mutual information exchange and cooperation among supporting agencies in Japan must be fostered and effective support comprehensively provided for the issues that China deems most necessary.

It can be said that China has a certain grasp on the making of systems for the establishment of a systematized market economy and a basic direction for

reform; thus, the stage of support for giving direction to policy seems to have come to an end.

As a direction for cooperation in this area in future, focus needs to be placed on how various systems can be fixated, the efficiency of operational aspects raised and reforms achieved.

In other words, it is necessary to systematically implement individual and concrete measures, in terms of managing various institutions, based on practical cases (both successes and failures) experienced by Japan and other neighboring countries. Another idea would be to jointly draft optimal measures which take China's current situations into account. Examples that can be considered include Japan's advancements in the textile industry and other specific industries, introduction of policy-like experience pertaining to structural adjustment or the privatization of national railways, and introduction of methods for policy formation based on the system of government councils, gathering public opinion and the coodination of various sectors.

In order to fixate various systems and implement policy thoroughly, the fostering supporting personnel is very important. It cannot be done quickly; what is important that personnel with practical abilities are raised through trial and error.

In addition, communicating to China the specific experiences it seeks will, in future, reveal contradictions with Japan's industrial sector. Friction between Japan and China should be avoided and harmonious systems established to deepen mutual understanding and the ability to coexist.

(2) State-owned enterprise reform

Within the support for establishment of a systematized market economy, the largest and most pressing problem is that of state-enterprise reform. What China is requesting of Japan concerning such reform is not the issue of finding the appropriate direction in which to advance reform but Japan's specific experiences with enterprise reform. For example, China has learned a good deal about Japan's industrial structure adjusntment and the like; what it seeks are basic setting methods

when downsizing factory facilities, experience with laying off employees and other specific, individual policies.

For smooth implementation of personnel restructuring in China's state-owned enterprises, the construction of social safety nets for the benefit of the employees subjected to restructuring is necessary; specifically, this involves enriching systems pertaining to housing, pensions, old age insurance, unemployment insurance, medical insurance and the like. In resolving the various problems that will arise in running such systems, there is sufficient room for making use of Japan's experiences.

In addition, concerning China's reform of state-owned enterprises, one specific measure not sufficiently employed is the fostering of able managers possessing practical experience. In future, when holding companies and the like are organized, personnel with the ability to monitor enterprises affiliated with them and manage operations as a whole will become increasing important. Concerning this point, personnel and fund support for dispatching Japan's enterprise managers, consultants, and specialists in legal affairs, financial affairs, technology, production and other fields to conduct on-site training, visit enterprises, conduct diagnostic surveys, hold exchange visits, and accept training will become important.

There is concern that the reform of China's state-owned enterprises will lead to monopolies of large enterprises that are internationally competitive, and to erode the function of competition theory. Japan's cooperation in the form of introducing Japan's systems for prohibiting monopolies and the activities of its Fair Trade Commission, etc., will be important in regards to this point.

(3) Fostering and supporting small- and medium-size enterprises

Although China's reform of state-owned enterprises is currently shifting toward large enterprises, at the Economic and Foreign Trade Conference held at the end of 1997 in Chengdu, following the proposed support of the liberalization of small- and medium-size enterprises, movement toward establishing policy for such enterprises has begun. In 1998, Department of Small and Medium sized Enterprises was established within the State Economic and Trade Commission to plan and propagate policy on small- and medium-size enterprises, and has enhanced

financing for them. At present, it is on the way to establishing firm policy on small- and medium-size enterprises.

The fostering and support of small- and medium-size enterprises is crucial to support the unemployed and the poor sector accompanying the reform of state-owned enterprises. Japan has not only domestic experience but also that in cooperating with other developing countries. In future, in addition to continuing efforts to have China recognize the importance of fostering and supporting small- and medium-size enterprises, the study of specific type of cooperation based on Japan's experience will also be necessary. For example, future growth can be expected for small- and medium-size enterprises, in keeping with China's restructuring of state-owned enterprises, one plan involves cooperating to establish small and medium-size enterprise modernization centers --- for diversifying related management and engaging in specialization and subcontracting -- at the local government (province, county, city) level. The model will be Japan's offices of commercial guidance, and the focus will be on the provision of founding guidance, consulting on business management, conducting market surveys and the like. It is important that the functions of these centers include environmental preservation as a crucial factor. At present, backing up environmental industry growth in China and positioning network formation as a crucial function are necessary.

In addition, in order to provide financial and technical support for fostering small- and medium-size enterprises, communicating the specific experiences of Japan's Small Business Finance Corporation, Japan Small Business Corporation and industrial laboratories will also be possible.

(4) Public finance and monetary systems

Although it can be said that there is considerable progress in the creation of financial systems, there is insufficient training for personnel who are in charge of the implementation of such systems. However, a compensation for this can still be made by an exchange of personnel with related Japanese agencies and organizations. For example, to dissolve the financial deficit, raising the tax collection rate by making technical improvements would be an effective method. China's tax system reform is currently in its infancy, with various contradictions emerging in the application stage.

Concerning Japan's experiences in operating tax collection systems, particularly in improving tax collection ability, it will be possible to communicate the experiences of its financial authorities, particularly the National Tax Administration Agency and tax offices of each region, on how various problems in the application stage were resolved.

In terms of China's financial sector, keeping monetary-related internationalization and entry to WTO in mind, securing personnel able to adapt to internationalization that conforms to the global standards will be important. For example, for operating monetary systems, fostering practical personnel and the provision of environments to expand the stock market, call market and other functions will be important.

In addition, to advance the reduction of poverty and interregional differences, environmental preservation, agricultural development, food supply and state-owned enterprise reform, fostering and support of small- and medium-size enterprises that the Second Study Committee cites as priority areas for assistance, further clarification of financial relations between the central and local governments will be necessary. There is a specific need to heighten the policy planning, implementation, evaluative capability and financial ability of local governments, and it is possible to make use of Japan's experiences in the future development of China's local self-government. For example, it is possible to pass on information on Japan's various managerial experiences to enable China to shift from its transfer of payment system (currently based on the revenue sharing system) to the systems such as those which feature local allocation tax and national treasury disbursement in Japan.

(5) Macro control

Although China's understanding of a basic direction for reform aiming at the establishment of a systematized market economy has progressed to a certain extent and progress in the formation of a systematic framework can be seen, concerning the macro control capability and administrative and social service capabilities to supplement market mechanisms in operating market economy systems, China is at the stage of demolishing the old systems and establishing the new.

As fluctuations in China's economy will have a great influence to foreign countries, the issue of how China will be able to sustain stable progress is the future is no longer faced by China alone. In view of this, it would be extremely important to improve China's macro control capability. The operating efficiency of the systems China has selected must be improved, and Japan's individual, specific experiences must be put to use in China, with efforts made to put down roots.

For this purpose, effective forms of cooperation will include enriching various types of training courses in China or in Japan to develop personnel who will support the establishment of a systematized market economy, expanding country specific training program targeting public servants in major economic government offices of the central and local governments, engaging in joint research with them,

Box 7. Structural Reform

At the Ninth National People's Congress held in March 1998, Premier Zhu Rougji and the new Cabinet were inaugurated. In addition, the basic resolution of achieving three major reforms within 3 years - in state-owned enterprises, finances, and administration - was adopted. The specific content of the Sanding Project (which will establish functions, structures and organization), which is the name given to a plan for administrative reform will both reduce the number of central government offices from 40, the present number, to 29, will reduce the over 200 bureau-level mechanisms of the State Council by 1/4, and will reduce the number of central government personnel, which currently stands at 80,000, by 47.5%. In his original explanation, Premier Zhu clarified that the policy was for completing the personnel reductions within 1998. In China, although government mechanisms were consolidated and abolished both in 1988 and 1993, the mechanisms were simply reformed with no personnel reductions made; in fact, personnel was increased. However, the scale of the current reform of government mechanisms will be the largest since 1949, when China was newly founded. Along with developing a socialist market economy, contradictions in the framework of the existing mechanisms formed under the planned economic systems have started to become conspicuous, which is the major reason that the reform of government mechanisms is being promoted. Economic systems are being reformed by the "Small Government," (a slim, simple administrative mechanism with mutual communication), and attempts are being made to quickly construct systems for the strategy to form a market economy.

However, it is said that serious attempts will not only be made in State Council reform but also in local mechanisms. Although Premier Zhu has put State Council Reform on track and is attempting to start on local mechanisms with the same vigor, several issues are at hand, including how to progress with the re-posting of personnel. (For the State Council's post-reform organization, see Appendix 6.)

and enriching the provision of statistical mechanisms and statistical information.

(6) Cooperation on energy

A special feature of China's supply and demand structure for energy is the fact that dependency on coal for primary energy stands at 77%, which is extremely high (the world average is 27%). The reason for this is the quantity of coal that can be mined in China is 62.2 billion tons, the third largest quantity in the world, and the production of petroleum and natural gas could not reliably substitute.

Petroleum production cannot keep up with the increased consumption that has accompanied rapid economic development. In 1993, China turned to a net-importing petroleum country. Recent annual petroleum consumption has grown to around 6%. In future, China will likely depend on vast quantities of petroleum from overseas, and in the year 2010, it is expected that its petroleum imports will exceed those of ASEAN and Korea.

China's primary energy consumption reached 1.29 billion tons in 1995. (an increase of 5.1% from the previous year on a standard coal basis), and increased consumption is expected to continue, accompanying its economic growth. Since 1992, in particular, its consumption volume has exceeded its production volume. Although China's per capita energy consumption is 1/6 of Japan's (as of 1992), it is expected to increase rapidly in future.

Since China has been engaging in reform and openness, its policy has emphasized both development and economizing, with short-term priority given to economizing. The 9th Five-year Plan also stresses achieving a balance between energy production and consumption, by economizing emphasized. In terms of the consumption of primary energy in 1995, coal accounts for 75%, followed by petroleum (17.3%), hydroelectric power (5.9%) and natural gas (1.8%). Although production and consumption of hydroelectric power is growing, owing to the decreased percentages occupied by crude oil and natural gas and the dependency on pure coal, it has risen from 69.4% in 1980 to 75.5% on a production basis. In future, as well, with coal resources abundant and prices cheap, it is thought that conversion to other energy sources will not progress much.

Owing to progress in the construction of electric power facilities, between 1985 and 1995, China's quantity of electricity generated grew 2.3 times. In 1995, the capacity of electricity-generating facilities stood at 210 million kilowatts, with one trillion kilowatts of electricity generated. However, generation cannot keep up with the rapid increase in demand, and over the past 30 years, electricity shortages have continued. At present, the gap between supply and demand exceeds 20%. Electricity shortages are grave in eastern coastal regions, northwest regions, some northern regions, Sichuan province, and other places. Moreover, 120 million people in 28 counties in China have no electricity.

From the perspective of developing clean energy (energy that pollutes the environment minimally), the percentage of hydroelectric facility capacity occupied by total electric facilities will rise to 24% by the year 2000, with 30% the long-term goal. Although as of 1996, nuclear-powered electric generation occupied merely 1% of total electricity volume, which is not at all high, the 9th Five-year Plan proposes an increase from three generators, 2.1 million kilowatts to eight generators, 6.60 million kilowatts.

A look at energy demand by region reveals that demand in the eastern coastal region alone accounts for 31.5% of the whole. The increase in this region's demand exceeds that of other regions and the region's share will likely continue to rise. Energy production bases tend to be in the mid-west, and China's energy distribution system is based on transporting coal from the mid-west to the eastern and southern regions. However, China is consistently plagued by insufficient capability in transport-related infrastructure, which will continue to be a bottleneck to its economic development.

Conserving energy saving, a look at China's energy elasticity (average growth in annual energy consumption/average growth in GDP) from 1953 to 1980 reveals that it was at 1.62 from 1953 to 1980, while since 1990, it has been around 0.05. This is comparable to Japan's elasticity of 0.53 between 1980 and 1992 and indicative of progress in energy saving. However, the combustion efficiency of China's coal-using thermoelectric power plants is low, and compared with developed countries, it requires much coal for its average of about 20% for unit electric power volume. Thus, there is still room for improving its energy savings.

In terms of Japan's cooperation in the area of energy, it is necessary to investigate, from the perspective of environmental consideration and coal transport, the possibility of constructing thermoelectric power plants using coal in areas adjacent to where coal is mined and constructing power transmission sites connected to energy-consuming areas. Moreover, in consideration of the 120 million people inhabiting places without electricity, the electrification of impoverished regions and provision of transmission and supply nets should be investigated.

As for clean energy development, continued cooperation is necessary for the development of hydraulic power generation. However, when it involves large-scale hydraulic power generation facilities, it would also be necessary to carry out environmental assessment to study effects on the particular region including the ecosystem, as well as to fully consider impact on local residents such as the necessity to relocate them to other regions. Energy saving is an important point in light of China's energy policy; Japan and China's joint research on and development of various policies concerning technological issues appropriate to China's current status based on Japan's experience will be effective.

(7) Cooperation on the provision of infrastructure

Henceforth, the greatest priority for the provision of infrastructure in China will likely be in the transport sector. In consideration of the issues of China's vast territory and interregional disparities, the transport sector plays a major role in smooth distribution logistics and human exchange and mobility.

Although Japan's cooperation in the transport sector began with railway and harbor development for the smooth transport of energy (coal), to achieve smooth mobility for the people and smooth distribution logistics, the demand for both regional expansion and simultaneously increased speed is rising.

As a basic direction for Japan's cooperation in developing infrastructure, similar to other priority areas, in consideration of restrictions on Japan's ODA resources henceforth and the substantial size of China's territory and population, important will be cooperation emphasizing high-priority projects that China has not yet been able to resolve through its own efforts. Moreover, while considering

the possibility of utilizing private resources and know-how in providing infrastructure, areas should be focused on those in which Japan's abundance of experience and technology can be put to work and that cannot be handled without Japan's ODA. In addition, concidering the connection to reducing poverty and interregional disparities and to preserving the environment as much as possible, it will also be necessary to engage in cooperation that extends service benefits to the residents of central and western regions, as much as possible, while paying attention to regional balance.

Railway Sector

Railway transport capacity is constantly insufficient and demand uneven. Freight transport occupies a high percentage of China's total transport: around 80% on a tons per km base. The fact that the dependence on coal accounts for 75% of the energy and the distance between the regions producing coal and the regions demanding it constitute the major reasons for the high percentage coal transport. In the central regions, policy has conventionally set railway freight costs low, and bearing the excess burden has become problem. In addition, there are many operation-related themes, such as low transport efficiency, pre-modern control methods and the like.

In investigating future cooperation in the railway sector, plans to increase shipment efficiency, from the source-producing sites, beginning with that of coal, and to smooth out physical distribution of the northern, inland and coastal zones will be important. To strengthen these freight transport capabilities, continued electrification, double tracking, and new line construction will be necessary. Moreover, for establishing multiple transport systems, attention should be given to planning more effective freight transport through connections between harbors and main lines and source-producing sites and main lines. In addition, from the perspective of transport costs, comparative investigation with other modes of transport will be particularly necessary in competing regions.

Road Sector

Similar to railways, the absolute supply capacity of existing roads (number of routes and coverage provided by high-grade roads) is insufficient (in 1995, high-grade roads covered 1.157 million km). Transport constantly exceeds planned capacity, causing traffic jams and deteriorating efficiency. The dencity of road

networks is extremely low in comparison with the area the territory covers. In addition, there are many low-grade (in terms of quality) roads, and they regularly host multiple forms of transportation (cars, horse-drawn carriages and bicycles), thus spurring on the deterioration of transport efficiency.

Because further expansion of the domestic economy and international trade has been predicted to accompany the continued formation of the market economy, the demand for forms of road transport appropriate for small-quantity, multi-destination freight (trucks) will inevitably increase henceforth. At present, along with the reinforcement of railways transport capacity as the main, road transport function must be expanded in parallel to supplement railway transport.

Water Transport Sector

The increase in freight volume handled has caused the problem of capacity that is constantly insufficient for handling the demand at each harbor. The average ship waiting time at major harbors exceeds four or five days. In addition to the shortage of special berths, major factors in the insufficiency of harbor capacity include low loading efficiency stemming from the transport of bulk cargo and the inefficiency of cargo work resulting from a lack of information systems.

Because of the low possibility of new harbor development in coastal zones, to cope with the increasing quantities to be handled, it is necessary to improve loading and unloading efficiency by expanding the existing harbor berths and renovating existing facilities. Specifically, what must be investigated is how to increase efficiency by planning harbors unified with roads and railways for transporting the freight handled and renovating cargo facilities throughout the entire harbor sector.

Air Transport Sector

The provision of the following types of infrastructure to accommodate the rapid growth in demand in terms of the number of passengers and the quantity of freight handled has lagged behind the airport facilities, such as airport terminal and control systems; facilities peripheral to airports, such as water supply and drainage and sewage processing systems; and the roads, railways, and accommodations for accessing airports. Thus, the need of building airports with the capacity to handle increased demand has emerged. Moreover, in order to

smooth out access to interior regions, rectify economic disparities between the coastal region and the construction and improvement of interior airports are also being hastened.

As a direction for cooperation in this sector, although it is necessary to continue providing "hard" infrastructure for airport facilities and the peripheral environment to accommodate the rapid rise in demand, cooperation on the "soft" aspects of training pilots, air traffic controllers and special technicians for safe air travel will also be necessary.

3-5-5. Priority Geographical Regions

Henceforth, aid should be advanced giving priority to poor regions in the central and western zones.

Concerning priority regions for aid, the First Study Committee adopted the method of dividing China in terms of a coastal zone, resource-abundant regions of the interior zone, and poor regions of the interior zone and made its aid proposals for each region in kind, rather than adopting a perspective of the regions Japan should particulaly emphasize and concentrate its aid on.

A look at Japan's ODA loans and grant aid from1991 to 1996 reveals a comparatively good regional balance: 40.3% of all ODA loans were made to the coastal zone, 27.4% to the central zone, 27.8% to the western zone, and 4.4% to projects that could not be classified. However, the coastal zone was emphasized over other regions. In terms of grant aid, 62.6% was provided to the coastal zone, 10.4% to the central zone, 11.5% to the western zone, 6.5% spread over multiple provinces and 9.1% to projects that could not be classified.

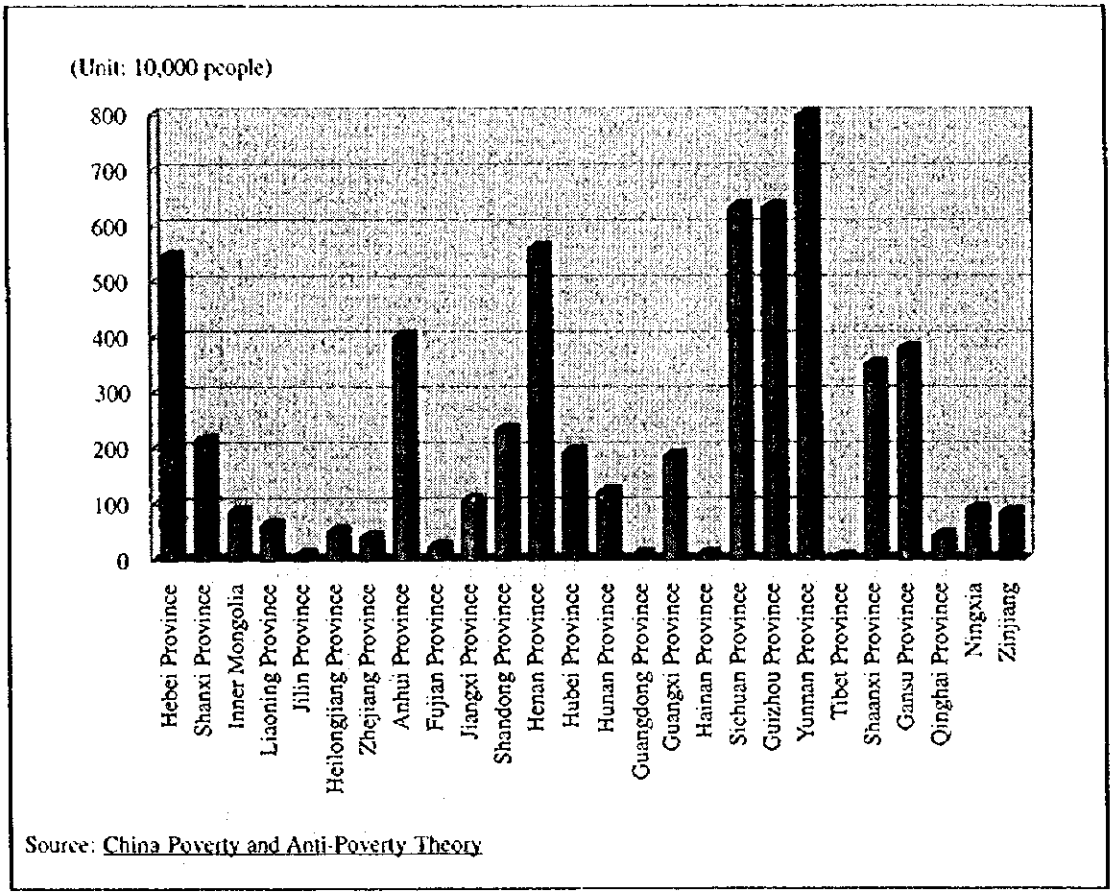
This regional distribution of Japan's ODA to China reflects the results of adopting the requested projects based on China's needs for development and support; differences in project formation ability, project readiness and aid acceptance ability in each region; Japan's fields of specialty, etc.

A look at the status of interregional disparities in China shows that per capita GDP (in 1997) averaged 10,161 renminbi for the coastal zone, 5,061 renminbi for the central zone, and 3,871 renminbi for the western zone, revealing an average difference of 2.6 times between the coastal zone and the western. In addition, a difference of roughly 10 times exists between Shanghai, where per capita GDP is highest (23,062 renminbi) and Guizhou Province, where it is lowest (2,199 renminbi), with no tendency toward a reduction in sight.

Of the impoverished counties specified in the National 8-7 Poverty Reduction Plan (a total of 592 counties nationwide, including the old counties that have long been bases of revolution, ethnic counties and frontier counties and other impoverished counties), 307 are in the western zone, 192 in the central, and the remaining 93 in the coastal zone. The order, beginning with the greatest number of impoverished counties, includes Yunnan Province (73 counties), Shaanxi Province (50 counties), Guizhou Province (48 counties), Sichuan Province (43 counties), Gansu Province (41 counties), Hebei Province (39 counties), Shanxi Province (35 counties), the autonomous region of Inner Mongolia (31 counties), the autonomous region of Guangxi (28 counties), and Henan Province (28 counties). Excluding Hebei Province in the coastal zone and the autonomous region of Guangxi, the remaining counties are located within the central and western regions.

The order, beginning with the largest absolutely poor population, includes Yunnan Province (7.97 million), Guizhou Province (6.32 million), Sichuan Province (6.32 million), Henan Province (5.58 million) Hebei Province (5.44 million), Anhui Province (4.01 million), Gansu Province (3.78 million), Shaanxi Province (3.49 million), Shandong (2.33 million), and Shanxi (2.14 million). Excluding Shandong Province and Hebei Province in the coastal zone, the remaining provinces are located in the central and western regions. Of course, it cannot be overlooked that many people living in absolute poverty exist in rural and urban areas outside the counties specified as impoverished.

Figure 3-1. Poor Population in Provinces and Autonomous Regions (within impoverished counties)



Source: China Poverty and Anti-Poverty Theory

This is a crucial point in the reduction of poverty and interregional differences proposed as an important field for aid by the Second Study Committee and for promoting aid for the areas of agricultural development and food supply, which closely relate to it.

A look at environmental pollution reveals that as the transition to a market economy progresses, the problem is spreading from the coastal zone to the inland. Urban air pollution (soot and acid rain), for example, affects cities in the central and western zones, such as Guiyang (Guizhou Province), Chongqing City, Taiyuan (Shanxi Province), and Yicang (Hubei Province), more severely than cities in the coastal zone.

In addition, in relationship to supporting the establishment of a systematized market economy, national investment in industrial development and the like in the central zone has been increasing in recent years, with the delay of reform in the western zone and labor problems severe; thus, contradictions are mounting.

From such perspectives, the shift in priority regions for Japan's aid to China henceforth should be made from the coastal zone to the interior zone, with particularly impoverished regions in the central and western zones targeted. Of course, although the uniqueness and special features of each region, the formation and acceptance capability of aid projects, and the like must be sufficiently considered in selecting specific aid projects, per capita GDP, poverty-related indicators and the like basically must be considered in selecting regions to extend aid to.

Applying these criteria, the most important regions are eight of the nine provinces in the western zone -- Sichuan, Guizhou, Yunnan, Tibet, Shansi, Gansu, Qinghai, and Ningxia - and two of the nine provinces in the central region, Anhui and Jiangxi.

Box 8. Criteria for Selecting Model Regions

Even if regions in the central and western zones are selected as priority regions for aid, 18 of China's 30 provinces and autonomous regions, are in the central and western zone, accounting for over 719.32 million (about 58%) of the total population of 1.23626 billion. Moreover, the impoverished counties of the central and western regions alone comprise 487 (about 82%) of the nation's 592 counties. The impossibility of Japan targeting aid toward all of them makes it necessary to establish some sort of criteria for selecting model regions.

The following is one concept the Second Study Committee wishes to set forth concerning these criteria. This premise is wholly tentative and should be gradually improved upon surveying the special features of each region in future.

<Concept for Selection Criteria>

(1) Make selections on the provincial, city and county level within the central and western zone.

Although provinces and cities have been mainly targeted to the present, the involvement of government agencies on the county level, if possible, would be investigated. The reason for this is that the vertical split within each area of central government offices has been basically flexible on the county level, and coordination between areas has become comparatively easy. Also, the responsibility for implementing projects related to poverty, environmental preservation and other areas is on the county level. (In this case, as well, provincial government agencies would make the requests.) Levels below the county, i.e., townships and villages, could either be entrusted to China's self-reliance efforts or cooperation with other aid agencies and NGO targeted. (In cooperation with the State Council's Leading Group Office of Poverty Alleviation and Development, in October of 1998, UNDP and World Bank conducted on-site surveys to counteract poverty in China. In the report on the results of this survey, which is expected to be completed in March of 1999, it proposed that in future, poverty reduction programs should target not the county level but the township, village and rural levels. This is because over one-third of the poor population resides in places other

than State-identified impoverished counties. The indicator of populations targeted for anti-poverty measures, rather than impoverished counties, should be emphasized (because funds to counteract poverty often continue to remain on the county level and are not being directly or effectively used).

(2) Select regions in which satisfactory results from accepting Japan's aid have been seen.

Select regions (provinces, cities and counties) that have accepted Japan's aid, at least, or that of other aid agencies. Special care must be directed when selecting regions which have no experience in receiving Japanese aid. Where possible, places in which there are personnel with knowledge and experience concerning Japan's aid system and its features would be desirable.

(3) Select regions for which counterparts in China have secured budgets and personnel and with which there has been good cooperation experience and intend to spread the positive results of cooperation to other regions.

Regions in which budgets and personnel can be sufficiently secured, through China's own efforts, not only while cooperation is in force but particularly after it has ended would be essential. In addition, not only the chosen regions but other regions with the active intention to spread and demonstrate the cooperation model, specific plans and preparations would be desirable. Additionally, it would be preferable for places in region to have research agencies to facilitate investigation of the formation of cooperative models and demonstrated effects.

(4) Select regions based on specific indicators.

In selecting specific provinces, cities and counties, the following factors are referred to: population, per capita GDP, human development index (HDI), number of impoverished counties, the poor population, the performance of Japan's aid and that of other major aid agencies. However, give special consideration to remote regions (Tibet, Qinghai, Ningxia and the like) in which the population is comparatively small.

It is, of course, impossible for Japan's ODA to handle all of these regions' development needs. Japan must carefully select high priority areas that are difficult for China to develop by its own efforts alone. Japan aid to China constitutes the largest foreign aid to this country. Accordingly, if Japan clearly establishes intensely impoverished regions as being aid recipient targets, this will work as a primer for more domestic aid to these regions, thus enabling consistent cooperation and coordination with other bilateral and multilateral aid policies to China.

In terms of ODA loans, although allocations have been made with comparative regional balance achieved since fiscal year 1991, in future, with emphasis placed on the central and western zones, consideration should be given so that the percentage provided to both these regions would exceed that provided to the coastal zone.

Grant aid, which is expected to play a solid role in reducing poverty and enriching social services, would be greatly increased to the central and western zones, and further project-formation efforts in both these regions will likely be necessary.

Although it is difficult to clearly determine a sum for the technical cooperation given, in the number of projects it is necessary to strive to increase the percentage in the central and western zones. Particularly for regions of cooperation in the area of agriculture, a shift must be made from northern regions, in which aid projects are numerous, to the central and western zones.

In order to shift priority regions for aid from the coastal zone to the interior zone and effectively pursue aid for impoverished regions in the central and western zones, close cooperative relations must be established with the local governments at the provincial, city and county (or township and village) levels of impoverished regions. It is very likely that Chinese specialists on each of these levels are more precisely aware of current situations and problems in impoverished regions than their Japanese counterparts. It will thus be effective to take an approach which will enable optimal problem solving, with respect given to the independent status of autonomous regions and municipalities, at each stage in each project of cooperation (finding, forming, planning, implementing and evaluating), and providing the necessary advice from the Japanese side based on the knowledge and experience of the Chinese side.

Cooperation on the regions in the western zones selected as model cities for environmental preservation, Chongqing City and Guiyang City (Guizhou Province) must be made successful, and the knowledge and experience gained from such cooperation, applied to cooperative policy and implementation in other interior regions. More than anything, a clear understanding of the problems faced by each region and the selection of local governments with leaders' intent on self-reliance efforts will be crucial.

The Second Study Committee clearly set forth a stance of focusing on the interior zone and the impoverished regions of the central and western zones. Restrictions pertaining to project formation, implementation ability and aid acceptance ability and aid implementation restrictions from the acceptance systems of specialists from Japan exist in these regions. Naturally, increasing aid distribution to these regions in one sweep will not be easy.

However, in the coastal zone, as well, it is also highly possible that excellent projects for demonstrating the effects of Japan's cooperation exist. The Second Study Committee does not completely deny the extension of cooperation to the coastal zone. Particularly in Beijing, Shanghai and other major cities, the gathering of trainees from all over China and the implementation of projects with a high demonstration effect would likely be an effective method that must be continued henceforth. One example is Japan-China Friendship Environment Protection Center, in which technical experts on the environment are gathered from all over the country and the necessary technical training given. The Center and similar places have a good effect on environmental preservation in all of China; also, the Center in Beijing has the advantage of being able to obtain the latest environment-related technical information on the international level.

Not only in Beijing and Shanghai but also in core cities in the interior zone (Xi'an, Wuhan and Lanzhou, for example) the formation of projects with a high demonstration effect should also be investigated. These cities have comparatively ready access to neighboring impoverished provinces, cities, counties and the like and are also equipped with acceptance systems, to an extent. In planning cooperation projects with a high demonstration effect in these cities, such consideration should be taken that travel expenses for training and expenses for technical assistance would be sufficiently provided to trainees taking part in such projects.

Until now, the administrative units-provincial, city, county, etc.-of the central and western zones have been targeted as important areas for aid. However, possibilities for cooperation on a regional economic development concept that exceeds the bounds of administrative divisions should also be investigated. Investigating cooperation on Changjiang basin development plans and the Eurasia Land Bridge concept, for example, would certainly be valuable to study.

3-6. Specific Methods and Points to be considered in Providing Aid

The Second Study Committee proposed the reduction of poverty and interregional disparities, environmental preservation and the agricultural development, food supply and establishment of a systematized economy that are closely linked to the former 2 areas as priority areas for aid. In terms of priority regions, the Study Committee specified particularly impoverished regions of the central and western zones.

Table 3-3. List of Indicators by Province

Regional Classification	Province	Population (unit: 10,000 people)	GDP (unit: 100 million renminbi)	Per capita GDP (renmibi)	HDI	Number of impoverished provinces	Absolutely poor population (unit: 10,000 people)	Total amount of aid received from Japan (unit: 100 million yen)
Coastal zone	Beijing	1,240	1,810	14,598	0.874	0	0	2,141
	Tianjin	953	1,240	13,016	0.827	0	0	318
	Hebei	6,525	3,954	6,059	0.591	39	544	1,822
	Liaoning	4,138	3,490	8,434	0.719	9	63	493
	Shanghai	1,457	3,360	23,063	0.884	0	0	589
	Jiangsu	7,148	6,680	9,346	0.652	0	0	1,004
	Zhejian	4,435	4,638	10,458	0.659	3	41	74
	Fujian	3,282	3,000	9,142	0.587	8	24	204
	Shandong	8,785	6,650	7,570	0.608	10	233	1,536
	Guangdong	7,051	7,316	10,375	0.716	3	9	777
	Guangxi	4,633	2,015	4,350	0.547	28	186	1,034
	Hainan	743	410	5,516	0.6	5	10	240
	Subtotal	50,390	44,564	10,161	–	105	1,110	10,231
Central zone	Shanxi	3,141	1,480	4,712	0.596	35	214	591
	Inner Mongolia	2,326	1,095	4,706	0.547	31	86	410
	Jilin	2,628	1,447	5,506	0.611	5	9	119
	Heilongjiang	3,751	2,708	7,221	0.626	11	50	357
	Anhui	6,127	2,670	4,358	0.523	17	401	115
	Jiangxi	4,150	1,715	4,133	0.522	18	107	521
	Henan	9,243	4,079	4,413	0.556	28	558	366
	Hubei	5,873	3,450	5,875	0.571	25	193	476
	Hunan	6,465	2,993	4,630	0.551	10	122	695
	Subtotal	43,704	21,638	5,061	–	180	1,740	3,650
Western zone	Chongqing	3,042	1,350	4,438				
	Sichuan	8,430	3,320	3,938	0.523	43	632	261
	Guizhou	3,606	793	2,199	0.445	48	632	1,070
	Yunnan	4,094	1,644	4,016	0.46	73	797	477
	Tibet	248	77	3,104	0.356	5	3	18
	Shaanxi	3,570	1,326	3,714	0.536	50	349	1,015
	Gansu	2,494	781	3,133	0.488	41	378	424
	Qinghai	496	202	4,074	0.469	14	42	31
	Ningxia	530	211	3,980	0.53	8	90	179
	Xinjiang	1,718	1,050	6,113	0.553	25	84	115
	Subtotal	28,228	10,755	3,871	–	307	3,007	3,591
Grand total		123,626	74,772	6,048		592	5,857	20,084

Notes: In calculating the total aid received from Japan, the performance figures for projects that could not be classified by province were added to for each province.

Figures for population, GDP and per capita GDP were taken from China Statistical Yearbook 1998. Although military personnel are not included in the population figures for each province, they are included in the total population. In addition, in the Statistical Yearbook 1998, the figures given for total GDP by province (7.6956 trillion renminbi) and for total GDP (7.4772 trillion renminbi) do not agree.

HDI was taken from The Major Issues of the Regional Development Strategies in China (OECF, January 1997).

The number of impoverished provinces was taken from the National 8-7 Poverty Reduction Plan. Numbers for the absolutely poor population were taken from China Poverty and Anti-Poverty Theory.

The total aid received from Japan was calculated by the secretariat based on the ODA White Paper, Overview of ODA to China, (OECF, January 1997) and JICA project statistics.

This proposal implies that the present conventional aid to China should be shifted from aid to establish basic economic infrastructure and the transfer of "hard-oriented" technology, in which Japan has much experience, to cooperation on the provision of policy support, management and operation know-how, organization and structure formation, education, medicine, social security and other social services.

As for priority areas, it is suggested that aid should be shifted from areas with a high capacity of aid reception, i.e. areas that are used to the Japanese aid system and that have a lot of experience in receiving aid, to areas that are unused to Japanese aid and with little experience in receiving aid, with limitations in public financial terms and human resources, and with a diverse nature and culture.

Setting forth such priority areas and regions could mean a change from the areas of specialty and regions for which Japan has accumulated a certain extent of knowledge and experience and many technical specialists to areas and regions it does not specialize in. For this reason, aid efficiency would temporarily drop, and the necessity of handling projects that would require a long time to achieve results could possibly occur.

However, it would be extremely difficult for Japan to substantially expand its aid resources. In the midst of this trend toward aid reduction, Japan could adopt, in its aid to China, an approach that stresses enabling a more direct effect on the people who most need Japan's aid.

The question thus arises of how to implement this type of careful aid. Here, we wish to consider this issue using examples of model projects to counteract poverty.

3-6-1. Examples of Model Projects to Counteract Poverty

(1) World Bank's poverty reduction projects

Although from the 1970's to the 1980's World Bank conducted projects that combine multi-sector rural development and the eradication of poverty in many developing countries, the results were not always evaluated as satisfactory. The major reason for this is that projects covering multiple sectors involve many agencies, coordination between which is extremely difficult. These factors often prevent projects from being implemented.

From these experiences, World Bank stated that effective methods would include taking the individual activity-based components that are comprised of the conventional multi-sector projects and implementing them simply as individual projects under different government offices and related agencies. They also include establishing units for total coordination in agencies not in charge of specific sectors like central government planning offices, prime ministers' offices and engaging in the formation of systems and organizations that are sustainable over the long term.

In addition, the following factors are necessary for making poverty reduction projects: the strong commitment of the central government and related government offices, a good macro-economic environment, reliance on familiar local technology with proven effect (results of trial-and-error research and development often do not occur in time for project implementation); making supplementary technical investment from the aid-providing side necessary, such as in giving advice at the planning and implementation stages; making the framework for plans to implement projects flexible; establishing methods and systems for monitoring project effectiveness; and obtaining the full participation of local residents.

Based on such experiences, World Bank is implementing poverty-related sector surveys and poverty reduction projects like the following.

* Sector surveys
  - 1992: Strategies for Reducing Poverty in the 1990s
  - 1997: China 2020, Sharing Rising Income

* Poverty reduction projects
  - Southwest Poverty Reduction Project, SWPRP
  - Shanxi Poverty Alleviation Project
  - Northwest Poverty Reduction Project
  - Qinba Mountains Poverty Reduction Project

Appendix 7 is an overview compiled of the Southwest Poverty Reduction Project, SWPRP. A special feature of this project is that it focuses on poverty reduction and adopts a multi-sector approach that involves the residents' participation. The reasons for adopting a multi-sector approach include extreme restrictions of resources for regions and the fact that when single-sector projects

were implemented in the past, they did not lead to sustainable poverty reduction.

To smoothly coordinate agencies involved in multi-sector anti-poverty projects based on the aforementioned experiences in developing countries, SWPRP has positioned the State Council Leading Group Office for Poverty Alleviation and Development (LGPD) as central coordinating agency and adopts a method of entrusting the implementation of the individual project components and related coordination to the local governments at each level of the targeted region.

Since the result has been the relatively smooth advancement of project coordination and implementation, and upon discovering effective methods for counteracting poverty in several components, World Bank deemed it important to spread the experiences from this project so that it serves as a model for China's anti-poverty projects. This project's achievements include the facts that the provision of educational, medical and agricultural infrastructure, in particular, have been welcomed by the poor people who are the beneficiaries; the residents' active participation is obtained in planning and implementation; and relatively quick advancement of labor mobility also occurs. In contrast, the necessity of sufficient advance preparation for activities in the area of agriculture, the difficulty of monitoring projects, and the difficulty of implementing the support for township and village enterprise, owing to the difficulty of securing financial resources, are points for consideration that have been raised. The increase in staff duties in places under the county level, on the whole, has also been pointed out.

(2) Examples of Japan's projects related to countermeasures to poverty (Appendix 8)

Although at present there is not experience with projects directly targeting countermeasures to poverty in China, examples of projects related to such countermeasures include The Polio Control Project in the People's Republic of China (project-type technical cooperation) The Study on the Integrated Agricultural Development Project in Taixingshan, Hebei (development study), and The Study on the Integrated Agricultural Development Project of the Mountainous District in Anze, Shaanxi (development study).

The Polio Control Project is based on support reinforced by both the Japanese and Chinese governments to eradicate polio. The project is becoming a good model

for health and medical cooperation targeting impoverished areas, for the following reasons: a major synergistic effect was achieved from the various types of investment and activities organically conducted; region-based activities are well-reflected in government planning; smooth cooperation was achieved between the departments at each level that are involved with countering polio; teams of specialists, beginning with project leaders, have engaged in continuous activities over the long term; and reliable relations have been fostered between related parties in both Japan and China.

In addition, the fundamental part of the Study for Taihang Shan Integrated Agricultural Development Project in Hebei Province, the People's Republic of China (development study) is expected to begin in future, and for the poorest valley regions within Hebei Province, including the planning not only of the provision of an agricultural infrastructure and other "hard" aspects but the establishment of plans on "soft" aspects, such as farm operation and farmer support, processing and distribution, and environmental preservation, the proposal of development plans for model regions, etc., would serve as a reference for Japan's cooperation for impoverished rural regions.

Appendix 8, as another reference, provides an example of a project - Implementation Support for Integrated Area Development Project in the Barru District in Indonesia's Slawesi Province -- related to countering poverty in a place other than China. This is an example of a project for countering poverty for which teams of Japan Overseas Cooperation Volunteers were dispatched. In addition to the teams of volunteers dispatched, comprehensive agricultural planning and surveys (development study) pertaining to countermeasures to poverty were done and project-type technical cooperation and ODA loans were provided. Although each is an individual project, there is implication that the overall aid provided by Japan is providing a solution for poverty in the Barru District of South Sulawesi Province.

Viewing these projects from the organizational aspect of the related parties reveals that Japan's projects related to countermeasures to poverty, compared to the World Bank's projects, have little related organization, and cooperative components are established within the framework of the areas and regions under the jurisdiction of those organizations. As the World Bank examples indicate, broad

development of multi-sector projects on countermeasures to poverty that require the coordination of many related agencies may not benefit Japan at present.

In consideration of aid schemes by type (ODA loans, grant aid, technical cooperation and its various forms) and the support systems on Japan's side, methods should be studied in the meantime, based on the sectoral relationship of related Chinese agencies, for forming projects which center on activities which are within the jurisdiction of related agencies and for gradually applying other public services. Specifically, adopting methods for adding drinking water supply and like issues to agriculture-related projects and health and hygiene as well as the components of vocational training to education-related projects, would be effective for gradually expanding targeted ranges and related agencies.

Table 3-4. Approaches to Poverty Reduction

Approach	Multi-sector (ex.: World Bank)	Single sector (ex.: JICA)
Agencies responsible	Central government's related ministries and regional governments' related offices, townships, villages and rural areas	Central government's individual ministries (bureaus), offices of the regional governments under them, etc.
Coordinating agencies	Coordination of the agencies under LGPD is crucial.	LGPD's participation is comparatively low.
Components	* Providing agricultural and rural production infrastructure * Providing agricultural structures, markets, and distribution mechanisms * Expanding rural social services (in medicine, education, nutrition, sanitation, etc.) * Enhancing related rural industry * Establishing small-scale financial services * Improving poverty reduction policy planning capability (compiling statistics and training personnel)	<Cases of agricultural and rural development> * Developing and spreading appropriate technology for improving agricultural production * Providing agricultural and rural production infrastructure * Providing agricultural organizations, markets, and distribution mechanisms * Rural social services are being expanded on a limited basis.
Advantages and disadvantages	The range of countermeasures to poverty is wide and the effect large. Coordination between related agencies is difficult.	Effect is limited to a narrow range. Coordination with related agencies is comparatively easy.

As in the case of Barru District in South Sulawesi Province, Indonesia, methods should be studied by which a specific impoverished province in China (cities or districts in provinces, or agency in charge may differ) is selected and a number of technical cooperation projects covering diverse fields in poverty reduction (including dispatching JOCV, carrying out development studies, and providing project-type technical cooperation) are provided. Grant aid and loans for supplementary purposes can also be provided in a concentrated way during a given period.

Anhui Province, for example, is the poorest province in China, with an absolutely poor population of 4.01 million. To the present, Japan's cooperation has only focused on providing loan assistance of around ¥11 billion (not just for Anhui Province but other provinces, as well), with almost no grant aid and technical cooperation. Preparations to implement a PHC-related project are currently underway in Anhui Province: one plan focuses on the parallel dispatch of JOCV pertaining to the issue of poverty in Anhui Province, the conducting of development surveys, and the provision of grant aid and loan assistance. Other aid agencies are implementing anti-poverty projects in Anhui Province, such as UNICEF (with social development programs in Changfeng County and Yuexi County), Germany's KfW (for drinking water supply in Anqing County, Fuyang County, and Huaiyin County), Australia's AusAid (for fishery training in Funan County). Therefore, project formation that also emphasizes information exchange, linkage and cooperation with these agencies is necessary.

Even if such projects are formed, the target should definitely be focused on aid for impoverished regions where the people's need is greatest. Sufficient time must be taken to conduct baseline surveys to grasp a region's natural conditions, socioeconomic status, cultural features, and the needs of its impoverished residents. Also important to generating a sustainable cooperative effect are the planning of a flexible framework for cooperation, having both Japan and China study causes and countermeasures when unforeseen restrictions are encountered, and then revising plans in a focused range.

3-6-2. Methods for Developing Cooperative Models and its dissemination

Here, specific methods concerning another basic stance of the Second Study

Committee -- making models to disseminate the results of cooperation -- shall be studied.

Working out models of cooperative projects and applying these for other areas is an extremely important method for the effective utilization of limited ODA resources. This method is not only applicable to cooperative projects in China but has always been a method pursued for such projects in other developing countries. For example, in model agricultural and rural development projects in Thailand and Indonesia, in order to spread methods for planning and designing agricultural and rural infrastructure and introduce new products and farming methods, investment resources and fund support have been put toward the research and development of new technology, the holding of various seminars and workshops, the education and training of personnel to spread the agricultural and rural effects, and the introduction and propagation of new technology.

A number of reports indicate that these methods have resulted in the expansion of cooperation project effects into other regions. However, there are not a few cases reported where there had been restrictions and limitations for such expansion, as only specific regions and the population thereof to which the cooperation was directed were affected.

One factor in the difficulty of spreading results from such models is that the newly introduced technologies and accompanying infrastructure and materials are more complicated, advanced, and expensive than the technologies and methods traditionally used in the targeted country. In particular, the materials, facilities and input used for actualizing the technologies and methods are special (not being produced in the country itself) and expensive. Thus, the costs for maintenance and administration are also difficult to bear. Infrastructure construction, operation, maintenance and administration also necessitate large-scale investment to cover expenses, resulting in financial pressure. In addition, considerable expense and time are needed in training personnel to master the technology and methods. There is also a substantial separation between the technologies and methods commonly used in other regions in the targeted country; without eliciting the understanding of regional residents on the economic rationality of introducing it, related incentive would be low. The recognition of such conditions is the result of experience. Based upon these experience, many aid agencies are attempting trial-and-error research and development of technology and methods

appropriate for local environments, adopting a phased approach or a participatory approach for gradually improving technology that has traditionally proven effective, with the participation of local residents and technical specialists from the project planning, formation and technology and method selection stages.

In Japan's cooperation with China to the present, both countries have recognized the importance of spreading results and have adopted methods to further the process. For example, the comparatively large-scale centers established in major cities, such as Beijing and Shanghai, place importance on inviting trainees from all over China for training in order to spread results throughout the country. Examples of such centers include Beijing Vegetable Research Center and Japan-China Friendship Environment Protection Center. At these centers, even after trainees who have received training return to the original agencies they were dispatched from, they undergo periodic follow-ups in an effort to fortify the results of training, which have been evaluated as comparatively good. However, the agencies dispatching trainees do not have sufficient budgets for providing the materials used in training at centers; in addition, some are of the opinion that it will not be possible to locally apply the new technologies and knowledge gained from the training.

In the formation of cooperative models for spreading results to other regions, to solve the specific issues China faces, it is necessary to select newly introduced technology, knowledge and accompanying materials that are suited to the acceptance environment (the overall technical level, ability to secure professional technical personnel, financial status, etc.) of other regions in China. In terms of the technology, knowledge and materials generally introduced, those mainly developed and advanced based on Japan's experience, those developed and advanced by other leading countries, or those that have been utilized in cooperation for other developing countries facing similar development issues as China are usually selected.

However, for spreading results throughout China, it is nessesary that technology, knowledge and materials that conform to the specific nature of China's development issues, technical environments, and financial status and that are jointly developed by specialists in both Japan and China. In planning development projects, what should be considered is having the appropriateness of development discussed together not only by the specialists of the region for cooperation or its agencies but also the specialists and agencies in other regions, factory and enterprise managers, and residents leaders

who are the beneficiaries in regions to which it is possiblely to spread results. It is also necessary to plan systems for the sustainable supply of technology, knowledge and materials to other regions and agencies, even after Japan's cooperation has come to a close.

In the area of environmental preservation, which the Second Study Committee has specified as crucial, the concept of environmental model cities is being studied. This concept supposes the implementation of planned comprehensive countermeasures to the environmental problems of the cities selected as targets for cooperation (Chongqing, Guiyang, and Dalian). It is also important to apply the form of cooperation for each city to other regions and cities with similar environmental problems, to verify the effectiveness of the technologies and methods, and to spread them throughout China.

In general terms, the approach for cooperation in building an environmental model city differs from the approach of providing assistance regarding environmental pollution issues, such as remediating specific polluted rivers and wetlands, or improving pollution prevention measures at specific industrial plants and corporation facilities. First, a cooperation includes that an approach would focus on one city's overall environmental problems and aim to restore a good environment by coordinating with the urban development plans and infrastructure provision plans directly or indirectly related to those problems. Work to establish comprehensive environmental preservation plans for maintaining and preserving the restored environment would also be included. Second, the main factors should include the following: providing and improving the systems and structural mechanisms necessary for implementing these plans; establishing and improving legal systems; implementing appropriate regulations and effective guidance; securing and training professional technical personnel; constructing infrastructure; introducing materials; providing technical, financial and monetary support to improve the environmental measures adopted by individual factories, enterprises, etc., that are sources of pollution; and investigating policy to foster environment-related industry (ecobusiness).

In terms of individual cooperation projects, although it is thought that the experience, knowledge and technology that Japan's major cities have accumulated since around 1955 is sufficiently useful. Particularly, Japan and China must work together to develop the methods and technology for establishing plans that are in accord with resolving the special environmental problems in each model city; to research and

develop anti-pollution machinery, materials, infrastructure, etc., that match China's technical level and financial and fund conditions; and to plan and design support systems that will provide incentive for factories and enterprises introducing environmental measures. Actions like the following will also be important: inviting specialists, factory and enterprise managers, and residents leaders from regions other than the targeted model cities to cite tests and give demonstrations to verify related effectiveness and thoroughly considering financial measures for maintaining and controlling the technology, machines, materials, infrastructures, and systems and for spreading them.

3-7. Coordination and Cooperation with Other Aid Agencies and South-South Cooperation with China

3-7-1. Coordination and Cooperation with Bilateral and Multilateral Aid Agencies

Since 1979, Japan has been a major-and the largest-donor of bilateral aid (ODA) to China, supporting China's modernization, reform and openness. (Japan's aid accounted for 41% of China's bilateral aid for 1995.) Germany, Denmark, Sweden, Canada, Australia are some of the other countries providing bilateral aid, with Korea also providing cooperation of late. In addition, multilateral aid has been provided by World Bank, Asian Development Bank (ADB), U.N.-related agencies (UNDP, WFP, UNICEF and IFAD), among others, with the European Union (EU) cooperating in agricultural and other areas recently.

In 1995, the total sum of ODA provided to China was $2.941 billion dollars (51% bilateral, 48% multilateral and 1% NGO), out of which the total aid from Japan, World Bank and ADB comprised around 84%.

As a major source of aid for China, Japan has continued to heighten the efficiency of its aid by advancing policy discussions with the Chinese government on aid while simultaneously closely engaging in information exchange with other aid agencies and actively cooperating with them. While continuing to lead the direction for aid, Japan must actively contribute to the formation of aid policy that is coherent in terms of China's development needs. In consideration of future restrictions on the aid resources of other aid agencies, including Japan's, and the fact that World Bank has been

considering stopping IDA to China next year, close cooperation with other aid agencies will become increasingly important, as well consideration of how to make the investment of limited aid resources even more effective.

The basic thinking of the Second Study Committee is one of concentrating cooperation on the most important issues that China cannot resolve through its own efforts and planning models of them. From this perspective, important are both the joint possession of the results, cooperation methods and problems in the basic research and surveys and specific programs implemented by other aid agencies, and the formation of systems that make use of the methods adopted in Japan's successful cases of cooperation and model projects in the cooperative efforts of other aid agencies.

Looking at the status of cooperation and coordination with other agencies on aid to China to the present, from this perspective, among JICA's development surveys, the Study on Entrophication Control of Tai Lake, which was determined through cooperative meetings between World Bank and JICA, was implemented. WHO and JICA implemented the Polio Control Project in the People's Republic of China through project-type technical cooperation and grant aid. Although certain results were achieved with both, sufficient results were not necessarily achieved in terms of other cooperation.

The following specific conditions must be prepared for Japan to actively advance cooperation with other aid agencies being active in China and to lead a direction for aid.

First, meetings should be periodically held between the major aid agencies focusing on China and China's related agencies on aid overall. In countries other than China, such as Indonesia, the Philippines, and Vietnam, for example, Consultative Group (CG) meetings are periodically held in which the national government of the targeted country indicates development plans, priority projects, and the sum of aid needed and each aid agency presents its aid policy and the sum of aid it expects to provide for the relevant country. Through such CG meetings, the national government of the targeted country and each aid agency will be able to determine the overall picture of aid activities and will be able to achieve consistency and coordination with development plans and aid policy.

At present, United Nations Development Programme (UNDP) issues a collective

report on the content of the cooperative projects of each aid agency acting in China and on major areas ("Development Cooperation, The People's Republic of China," UNDP, which covers poverty, environment, agriculture, and governance). Also issued in China are the quarterly "China Brief," which is a professional journal on trends in aid to China, and the monthly "Poverty and Developments." In addition, meetings are also held with aid agencies and the like such as in related to agriculture (sponsored by FAO), governance (sponsored by Ford Foundation), AIDS (sponsored by WHO/ UNAIDS), environment (supported by CIDA), poverty (sponsored by UNDP), women's issues and development (sponsored by UNDP). However, any opportunity such as CG meetings that discuss overall aid have not been established to the present.

Within this context, the China Council for International Cooperation on Environment and Development ("China Council," for short) meets once a year concerning cooperation on the environment. Participating in this meeting are China's ministers and vice ministers, scientists from the major countries, civilians, and others as private assembly members. It functions as an international advisory organization where meetings are held for 6 different fields and specialists discuss matters such as energy issues, pollution and biodiversity, etc. (Personnel from Japan's Ministry of International Trade and Industry and its Environment Agency participate.)

Likewise, there are several cooperative meetings held in China on individual areas and themes, with evident awareness of the necessity of having the aid agencies and parties on China's side exchange information on the current status of cooperation on each area and theme and on future directions.

In future, it would be important for Japan to have specialists and those who are in charge of aid agencies actively participate in such cooperative meetings and to lead the way in terms of directions for cooperation, as well as to spread the results and experiences of Japan's cooperation. Also, for Japan to heighten the effects of its cooperation, it will be important to unearth possibilities for cooperation and coordination with other aid agencies, while simultaneously encouraging China to hold meetings on aid overall. In addition to active participation in aid meetings, it is also important to hold roundtable discussions in which related donors participate in conducting advance surveys on new projects in order to engage more regularly in timely, informal information exchange. (Poverty-related projects, in particular, have been subjected to overlapping aid for the same region or different micro credit programs for the same region, indicating the increasing importance of donors exchanging information.)

Second, at meetings that pertain to aid overall or meetings to cooperate on individual areas and issues, specialists from Japan and China will need to jointly produce materials (on joint research and evaluations, as well as other data and information) to generally convey Japan's cooperation-related results and experiences to other aid agencies or China's domestic related parties and general public. Actively introducing Japan's results and experiences with cooperative projects (including experiences of failures or overcoming difficulties) at cooperative meetings and the like and providing valuable information to specialists at other aid agencies and to China's specialists striving to resolve common issues and difficulties would be a crucial, steady activity for heightening interest in Japan's cooperation.

To the present, Japan's cooperation has centered more on only sharing results and experiences among specialists in Japan and China who are directly related to projects, without actively dispatching information to sectors beyond the projects. The result of a large percentage of aid, the actual fact of Japan's cooperation has been basically unknown by the outside. Although various aid agencies, beginning with World Bank, have recently been advocating the sharing of knowledge, efforts must be made henceforth to provide valuable experience gained from Japan's aid projects, in a form that is easily shared.

Third, in order to cooperate and coordinate with other aid agencies, in addition to creating the aforementioned materials, fixed budgets and personnel will be necessary for holding cooperative meetings, conducting joint research on specific themes of cooperation, and forming and implementing cooperative projects. These are the minimum necessary conditions for conveying Japan's results and experiences in cooperation and for Japan to lead directions for aid.

Japanese governmental agencies located overseas, as well as overseas offices of Japanese organizations for providing aid, do not necessarily have sufficient budgets or personnel for carrying out the above, despite the large sum in the aid extended by Japan. Therefore, publicity effects of Japanese aid activities in China are yet not full fledged and there exists a situation where there is little impact on the formation of aid policies. Owing to Canada, northern Europe, UN agencies, etc., secure fixed budgets and personnel, and they are positively engaged in activities to share aid publicity and experience and knowledge on cooperation, although aid budgets are small, the effect on aid policy formation is becoming substantial.

In future, for Japan to concentrate on highly effective aid that meets China's development needs and develop models to spread the results throughout China, active cooperation with other aid agencies must be pursued and the sharing of Japan's cooperation-related experiences and knowledge and its impact on aid policy formation must be heightened. The first stage for achieving these purposes necessitates stationing basically one advisor[6] at each of the overseas offices of the aid agency responsible for cooperation in each of the four crucial areas that the Second Study Committee has recommended (poverty, the environment, agriculture and the establishment of a systematized market economy) and to allocate budgets for publicity, the sharing of experiences and knowledge, and cooperation and coordination with other agencies.

3-7-2. Cooperating with NGO, Local Governments and the Private Sector

For Japan to make its cooperation with China more effective, in addition to the conventional practice of cooperating through the central government, cooperation with the non-governmental organizations (NGO) active within China and China's local governments and private sector will also be necessary. The discussion arising from this concept, based on the viewpoint of the providers of ODA and considering future restrictions in Japan's ODA resources, is on determining channels that most effectively enable Japanese aid to reach those who need it most. Because NGO (here, this includes Japan's, China's and international NGO), local governments, and the private sector (which at present means Japan's local governments and private sector) all have their own activity-related goals, principles and motives, the debate will also have to include, along with the perspective of heightening the effectiveness of ODA, the perspective of cooperation that respects their activity-related goals, principles, motives and the like of each cooperating body.

A look at cooperation with NGO, local governments and the private sector in Japan's cooperation in China reveals that in terms of NGO, program providing supplementary funds to Japan's NGO through the Ministry of Foreign Affairs and grassroots grant aid for the private sector (local governments, NGO, research and

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6 The specific function of the advisors responsible for cooperation include dispatching information within China and to other agencies, participating in cooperative meetings and introducing Japan's experiences with cooperation, forming public opinion on directions for cooperation, and finding projects for cooperation. In addition, they should inform China of the results of Japan's cooperation in China in the four crucial areas, overview of aid projects, results, how failures and difficulties were overcome, special features as models that can be applied to other regions, and the like.

educational agencies, etc.) to implement relatively small-scale projects in China are extended. Such programs are positioned more in terms of support than cooperation. Much of grassroots grant aid is directly linked to the needs of the particularly impoverished, and because of the major reverberations throughout China, including the locality itself, aid effectiveness is considered to be comparatively high for the sums provided. In future as well, both increasing the budgetary framework for grassroots grant aid and the like and heightening the relatedness to other loans, grants, technical cooperation and other projects should be considered. In addition, it will be necessary to have JICA specialists and JOCV participate in planning, selection, implementation and evaluation of grassroots cooperation projects and to devise ways to develop highly sustainable projects.

Moreover, to achieve greater aid effectiveness for the priority areas proposed by the Second Study Committee (poverty, the environment, etc.), it will be important to investigate how to make use of the know-how of Japan's and China's NGO from the aid project formation and planning stages.

Second, concerning cooperation with local governments, firm results have been increasing since the First Country Study Committee met. For example, Osaka's cooperation on Shanghai's environmental issues and Kita Kyushu City's development survey on Dalian are cooperative efforts that have made use of the know-how on the environment gained by Japan's local governments and have been highly effective. Because many of the local governments in China and Japan have originally been sister cities to one another, it will be necessary to advance cooperation from the level of international friendship exchanges to the areas of the environment, poverty, education, medicine and the like and to strive systematically to provide each local government with the experience and knowledge gained to the present.

Third, concerning cooperation with the private sector (private enterprise), assigning a wide meaning to the term "cooperation," it is clear that in the three activity areas of aid, trade and direct investment, long-term contributions have been made to China's modernization, reform and openness. Also, as long as focused on the area of aid alone, cooperation that has made use of the know-how of private enterprises and consultants has been indispensable to effective aid implementation. In addition to this conventional cooperation with the private sector, since the 1990's, the building and operation of basic economic infrastructure, which has been the main target of aid to the present,

management improvement and privatization of state-owned enterprises operation, and reform of monetary and accounting systems of state-owned enterprises are seeing an increase in the volume of projects in which the funds and know-how of the private sector are utilized. For example, in terms of basic economic infrastructure, "Build, Operate and Transfer" (BOT) and like methods have utilized the funds and know-how of the private sector in the construction of power plants, toll roads and the like. In addition, in improving the management, switching to private operation of state-owned enterprises, and reforming the monetary and accounting systems, Japan's manufacturers, credit agencies, consultants from research institutes, auditors and the like have been involved in proposals for specific reforms and improvements and the training of employees. Although the majority of these efforts have been on a contract basis, a portion have taken the form of grant-type cooperation.

In this way, because the funds and know-how from the private sector are starting to be utilized also in the areas that conventionally have been major targets for official development aid, aiming for effective cooperation sufficiently recognizing the status of such activities in the private sector is crucial. Private sector activities emphasize the pursuit of economic efficiency and rationality, competitive theory, etc.; in terms of areas in which the first goal can be effectively achieved by entrusting related pursuits to private-sector activity, it will be important to leaving these areas to the private sector as much as possible and to particularize government-based aid for areas in which the private sector's activities are restricted.

3-7-3. South-South Cooperation with China

China is a country that provides aid in the form of grants, technical cooperation and loans primarily to regions in Asia and Africa. In its medical cooperation in Africa, China regularly dispatches around 1,000 doctors, nurses and other medical personnel. In line with such cooperation, medical cooperation agreements are made between China's Ministry of Health and the aid-receiving country. Each province in China is assigned a country in Africa to which it should give aid, and the medical personnel from each province are dispatched. Even the small province of Qinghai was assigned one country, Burundi, to which it dispatched a medical team of five people. The large province of Sichuan has been assigned three countries, including Mozambique and Burkina Faso. In addition, grant aid has been given to Mongolia, Myanmar, and Cambodia; scientific technical cooperation in the area of recycled energy has been

provided for Zimbabwe; and interest-free loans and the like have been made to Nambia for water supply projects.

In this way, China has had experiences with giving aid to developing countries and has abundant experience for the South-South cooperation partnership that Japan is promoting. When the leaders of both countries met in 1997, they agreed to promote South-South cooperation. The specific plan calls for third country training based on Meat and Food Research Center, which Japan cooperated on (with project-type technical cooperation between 1985 and 1991). In addition, there is also a high possibility that third country training in the areas of the environment, human development, agriculture, medicine and the like can be done. One plan involves utilizing professional personnel from China's universities and research institutes and engaging in cooperative research or holding seminars and workshops that focus on various problems in Asia, including the monetary and currency problems linked to universities and research institutes in Hong Kong.

While this type of South-South cooperation proceeds one step at a time, the conventional method of triangular cooperation targeting impoverished regions and countries in Asia and Africa should also be investigated. To advance South-South cooperation with China, respecting China and the third country initiative and developing cooperation of a nature that cannot be handled by Japan alone will be necessary. Also important will be having Japan and China clearly achieve a spirit of active commitment to jointly developing impoverished regions in Asia and Africa.

3-8. Conclusions and Advancement of Aid Study Henceforth

3-8-1. Conclusions of the Second Study Committee

Utilizing the First Study Committee's proposals, the Second Study Committee investigated China's development and the results of aid since that time, analyzed the current status and issues in China's development, and proposed goals, basic directions, priority areas and regions, specific methods, and points to heed in Japan's aid to China over the next seven years.

The Committee's conclusions as follows;

(1) Since the First Study Committee proposed (and over the past 20 years), Japan's aid has contributed greatly to China's modernization, reform and openness.
(2) Compared to when First Study Committee met, China's socioeconomic status has changed considerably, with issues that must be seriously dealt with-such as poverty, the environment, food, the establishment of a systematized market economy-increasing from the past.
(3) In consideration of Japan's ODA resource restrictions henceforth and the great size of China's territory and population, it will be important for Japan to focus cooperation on the most important themes that China cannot resolve through its own efforts alone and to create models for spreading positive results.
(4) Japan's goal in providing aid is to contribute to stable development in China that is also good for other Asian regions, including Japan, and for the rest of the world.

Of course, these conclusions have been drawn in the present, September 1998, with China and the circumstances that surround it changing moment by moment. In particular, it is possible that the recent developments in Asia's currency and monetary situation will have a major influence on China's socioeconomic status. The Second Study Committee believes these conditions must adequately follow. In addition, in each of the crucial areas and regions proposed, specific cooperation methods and the like must be investigated in greater detail.

In order to increase the effectiveness of its future Japan's aid to China and to make the effects of its aid widely known to China's related parties, professionals and general public, the Second Study Committee wishes to propose the following.

3-8-2. Advancing Aid Study Henceforth

To Establish a permanent committee for studying aid to China.

The first proposal is to establish a permanent committee for studying aid to China.

As was just stated, the circumstances surrounding China change moment by moment, and in the next five to seven years until the third country study committee for official development assistance to China is established, circumstances in Japan, China and other regions throughout Asia will likely change considerably. To ensure that Japan's aid to China conforms to China's development needs in proper consideration of these changes, it will be necessary to establish a permanent committee to follow the Second Study Committee's proposals and to investigate new issues. In terms of scale, the permanent committee would be smaller than the Second Study Committee and would meet basically once every few months. However, the concentrated holding of meetings for issues that require emergency investigation must also be considered.

To Implement Japan and China's joint evaluations of Japan's aid to China.

Second, Japan and China's should jointly evaluate Japan's aid to China, and questionnaire surveys should be administered to the Chinese people concerning Japan's aid.

Although Ministry of Foreign Affairs, aid agencies and related parties all evaluate Japan's aid to China, overall or in individual projects, and announce their results, most evaluations to the present have been from Japan's perspective. Here we propose that Japan and China make joint evaluations from their own perspectives. Of particular interest is how related parties and specialists in China evaluate Japan's aid. Moreover, through the cooperation of China's research institutes and the like, questionnaire surveys should be administered to determine the extent to which China's general public knows about Japan's aid and how they perceive it.

Joint research in Japan's aid to China.

Third, we propose that Japan conduct joint research with China's research institutes on Japan's aid.

As described in Section 3-7, sharing the knowledge and experiences that Japan

has derived through its aid projects with specialists from China's research institutes, to spread Japan's models of cooperation to other regions in China and have the people of China understand the advantages to Japan's cooperation are extremely important activities. To the present, steady efforts have been made to share Japan's aid experiences. Beginning in 1998, for example, seminars have been held, through the State Planning Commission (at the time), on JICA's methods in planning comprehensive regional development, introduced by China's related parties and specialists as Japan's models of cooperation. In addition, the results of joint research on interregional disparities in China done primarily by OECF's development aid research institute and the economic development research of the State Council, have been compiled. However, at present, there are not many researchers in China or research results focusing on Japan's aid. One conceivable reason for this is the difficulty of accessing information pertaining to Japan's aid projects.

In future, to heighten the interest of China's specialists on Japan's aid in the priority areas that the Second Study Committee has proposed, which include poverty and the environment, methods specifically to heighten the effectiveness of aid should be jointly developed and with the clear goal of spreading Japan's cooperation models to other regions in China, it will be necessary to promote even more actively that Japan and China conduct joint aid research. One plan specifically calls for having Japan and China support the creation of networks of researchers interested in Japan's aid to regularly provide information on Japan's aid projects (such as by having overseas diplomatic establishments and the overseas offices of aid agencies create Internet home pages on aid projects); using a contest format to solicit themes for joint research; establishing methods to supplement research expenses for superior proposals; and, in future, erecting research institutes like "East Asian Aid Research Center" (tentative name) in China.

Appendix

Appendix 1. Japan's ODA Disbursements to China (by province), 1979 to 1990

Appendix 2. Japan's ODA Disbursements to China (by province), 1991 to 1996

Appendix 3. Japan's ODA Disbursements to China (by province), 1979 to 1996

Appendix 4. World Bank's ODA Disbursements to China (by province), 1982 to 1997

Appendix 5. Asian Development Bank's ODA Disbursements to China (by province), 1987 to 1997

Appendix 6. Diagram of China's State Council Following Structural Reform

Appendix 7. Examples of World Bank's Poverty Reduction Projects

Appendix 8. Examples of Japan's Poverty Reduction-related Projects in China/outside China

Appendix 9. Results of Poverty Reduction Aid from Other Multiple/Bilateral Cooperation Aid Agencies

Appendix 10. Japan's Main NGO Active in China

Appendix 11. Local Governments of Impoverished Interior Regions and Local Governments in Japan with Sister-City Connections

Japan's ODA Disbursements to China (by province), 1979 to 1990

Regional Classification	Province	Population (unit: 10,000 people)	GDP (unit: 100 million renminbi)	Per capita GDP (renminbi)	Loans (I) (unit: 100 million yen)	Percentage (%)	Grants (II) (unit: 100 million yen)	Percentage (%)	Technical cooperation: Development studies (III) (unit: 100 million yen)	Technical cooperation: Project-type technical cooperation (IV) (unit: 100 million yen)	Technical cooperation: Individual equipment provision (V) (unit: 100 million yen)	Total I (III + IV + V) (unit: 100 million yen)	Percentage (%)	Total II (I + II + III + IV + V) (unit: 100 million yen)	Percentage (%)
Coastal zone	Beijing	1,240	1,810	14,598	795.625	8.01	425.41	69.13	8.60	68.56	2.80	79.96	25.41	1,300.99	11.97
	Tianjin	953	1,240	13,016	159.087	1.60	0.00	0.00	5.38	19.58	0.00	24.96	7.93	184.05	1.69
	Hebei	6,525	3,954	6,059	1,135.933	11.43	0.00	0.00	0.98	0.00	0.00	0.98	0.31	1,136.91	10.46
	Liaoning	4,138	3,490	8,434	213.670	2.15	0.43	0.07	15.86	8.48	0.00	24.33	7.73	238.43	2.19
	Shanghai	1,457	3,360	23,063	173.753	1.75	21.59	3.51	11.58	9.93	0.74	22.25	7.07	217.60	2.00
	Jiangsu	7,148	6,680	9,346	749.707	7.55	0.00	0.00	5.06	0.00	0.00	5.06	1.61	754.77	6.95
	Zhejiang	4,435	4,638	10,458	41.827	0.42	0.00	0.00	4.73	0.00	0.52	5.25	1.67	47.08	0.43
	Fujian	3,282	3,000	9,142	51.367	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51.37	0.47
	Shandong	8,785	6,650	7,570	1,345.323	13.54	0.00	0.00	3.87	0.00	0.00	3.87	1.23	1,349.20	12.42
	Guangdong	7,061	7,316	10,375	581.872	5.86	0.42	0.07	5.89	0.00	0.00	5.89	1.87	588.19	5.41
	Guangxi	4,633	2,015	4,350	386.875	3.89	0.00	0.00	2.98	0.00	0.00	2.98	0.95	389.86	3.59
	Hainan	743	410	5,516	97.630	0.98	0.00	0.00	4.46	0.00	0.00	4.46	1.42	102.09	0.94
	Coastal zone total	50,390	44,564	10,161	5,732.669	57.71	447.85	72.78	69.40	106.54	4.06	180.01	57.20	6,380.52	58.55
Central zone	Shanxi	3,141	1,480	4,712	21.000	0.21	0.00	0.00	1.72	0.00	0.00	1.72	0.55	22.72	0.21
	Inner Mongolia	2,326	1,095	4,706	25.030	0.25	13.60	2.21	0.00	0.00	0.00	0.00	0.00	38.63	0.36
	Jilin	2,628	1,447	5,506	19.777	0.20	56.10	9.12	3.36	0.00	0.00	3.36	1.07	79.24	0.73
	Heilongjiang	3,751	2,708	7,221	65.787	0.66	4.52	0.73	10.49	27.34	0.00	37.84	12.02	108.14	1.00
	Anhui	6,127	2,670	4,358	24.330	0.24	0.00	0.00	0.85	0.00	0.00	0.85	0.27	25.18	0.23
	Jiangxi	4,150	1,715	4,133	0.000	0.00	0.00	0.00	1.74	0.00	0.00	1.74	0.55	1.74	0.02
	Henan	9,243	4,079	4,413	290.039	2.92	0.00	0.00	0.55	0.00	0.00	0.55	0.17	290.59	2.67
	Hubei	5,873	3,450	5,875	147.390	1.48	0.00	0.00	5.43	0.00	0.00	5.43	1.72	152.82	1.41
	Hunan	6,465	2,993	4,630	485.365	4.89	0.00	0.00	7.51	0.00	0.52	8.03	2.55	493.40	4.54
	Central zone total	43,704	21,638	5,061	1,076.718	10.86	74.22	12.06	31.65	27.34	0.52	59.51	18.91	1,212.45	11.16
Western zone	Sichuan, Chongqing	11,472	4,670	4,071	24.000	0.24	4.91	0.80	2.64	0.00	0.00	2.64	0.84	31.55	0.29
	Guizhou	3,606	793	2,199	437.125	4.40	15.00	2.44	0.54	0.00	0.00	0.54	0.17	452.67	4.17
	Yunnan	4,094	1,644	4,016	26.330	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.33	0.24
	Tibet	248	77	3,104	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Shaanxi	3,570	1,326	3,714	344.313	3.47	0.00	0.00	3.99	0.00	0.00	3.99	1.27	348.31	3.21
	Gansu	2,494	761	3,133	250.636	2.52	0.72	0.12	2.20	0.00	0.38	2.58	0.82	253.93	2.15
	Qinghai	496	202	4,074	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Ningxia	530	211	3,980	27.860	0.28	2.68	0.44	0.00	0.00	0.00	0.00	0.00	30.54	0.28
	Xinjiang	1,718	1,050	6,113	0.000	0.00	15.19	2.47	4.52	0.00	0.00	4.52	1.44	19.71	0.18
	Western zone total	28,228	10,755	3,871	1,090.264	10.97	38.50	6.26	13.89	0.00	0.38	14.28	4.54	1,143.04	10.52
Projects involving multiple provinces					0.000	0.00	12.20	1.98	33.78	9.38	0.00	43.15	13.71	55.35	0.51
Unclassifiable					2,032.570	20.46	42.58	6.92	0.00	17.16	0.58	17.74	5.64	2,092.89	19.26
Total		123,626	74,772	6,048	9,934.221	100.00	615.35	100.00	148.71	160.42	5.55	314.69	100.00	10,864.26	100.00
Other technical cooperation (unit: 100 million yen)			Acceptance of participants for training											70.70	
			Inviting youth from abroad											6.32	
			Dispatching JOCV's											6.12	
			Dispatching experts											21.45	
Grand total														10,968.85	

Sources: Figures for population, GDP and per capita GDP were taken from China Statistical Yearbook 1998. Although military personnel are not included in the population figures for each province, they are included in the total population. In addition, in the Statistical Yearbook 1998, the figures given for total GDP by province (7.6956 trillion renminbi) and for total GDP (7.4772 trillion renminbi) do not agree. ODA White Paper, "Overview of ODA Loans to China" (OECF, January 1997) and JICA Project Statistics.

Japan's ODA Disbursements to China (by province), 1991 to 1996

Regional Classification	Province	Population (unit: 10,000 people)	GDP (unit: 100 million renminbi)	Per capita GDP (renminbi)	Loans (I) (unit: 100 million yen)	Percentage (%)	Grants (II) (unit: 100 million yen)	Percentage (%)	Technical cooperation			Total I (III + IV + V) (unit: 100 million yen)	Percentage (%)	Total II (I + II + III + IV + V) (unit: 100 million yen)	Percentage (%)
									Development studies (III) (unit: 100 million yen)	Project-type technical cooperation (IV) (unit: 100 million yen)	Individual equipment provision (V) (unit: 100 million yen)				
Coastal zone	Beijing	1,240	1,810	14,598	627.579	7.31	135.96	37.91	0.02	74.75	1.29	76.06	27.01	839.60	9.11
	Tianjin	953	1,240	13,016	102.560	1.20	23.00	6.41	0.00	7.41	0.73	8.14	2.89	133.70	1.45
	Hebei	6,529	3,954	6,059	681.302	7.94	0.00	0.00	0.07	4.08	0.00	4.15	1.48	685.46	7.43
	Liaoning	4,139	3,490	8,434	220.649	2.57	10.13	2.83	11.26	12.78	0.00	24.05	8.54	254.73	2.76
	Shanghai	1,457	3,360	23,063	349.340	4.07	1.28	0.36	15.00	5.66	0.00	20.66	7.34	371.28	4.03
	Jiangsu	7,148	6,660	9,346	216.420	2.52	19.81	5.52	12.52	0.00	0.00	12.52	4.45	248.75	2.70
	Zhejiang	4,435	4,638	10,458	19.999	0.23	1.83	0.51	4.82	0.00	0.00	4.82	1.71	26.64	0.29
	Fujian	3,282	3,000	9,142	117.540	1.37	25.60	7.15	2.08	7.75	0.00	9.81	3.48	152.98	1.66
	Shandong	8,785	6,650	7,570	172.712	2.01	0.42	0.12	0.71	12.69	0.00	13.40	4.76	186.54	2.02
	Guangdong	7,051	7,316	10,375	184.432	2.15	2.45	0.68	2.37	0.00	0.00	2.37	0.84	189.25	2.05
	Guangxi	4,633	2,015	4,350	630.582	7.35	2.79	0.78	10.37	0.00	0.00	10.37	3.68	643.74	6.98
	Hainan	743	410	5,516	136.640	1.59	1.02	0.28	0.00	0.00	0.00	0.00	0.00	137.66	1.49
	Coastal zone total	50,390	44,564	10,161	3,458.648	40.32	224.32	62.55	59.20	125.12	2.00	186.36	66.18	3,870.31	41.98
Central zone	Shanxi	3,141	1,480	4,712	559.725	6.52	7.96	2.22	0.62	0.76	6.54	0.00	7.30	2.59	371.70	4.03
	Inner Mongolia	2,329	1,095	4,706	363.550	4.24	0.94	0.26	0.76	6.54	0.00	7.30	2.59	39.38	0.43
	Jilin	2,628	1,447	5,506	11.790	0.14	12.52	3.49	14.78	0.00	0.29	15.08	5.35	248.69	2.70
	Heilongjiang	3,751	2,708	7,221	242.469	2.83	2.23	0.62	3.69	0.00	0.50	4.20	1.49	89.86	0.97
	Anhui	6,127	2,670	4,358	86.030	1.00	2.50	0.70	1.33	0.00	0.00	1.33	0.47	519.06	5.63
	Jiangxi	4,150	1,715	4,133	509.570	5.94	0.05	0.01	9.44	0.00	0.00	9.44	3.35	75.33	0.82
	Henan	9,243	4,079	4,413	59.692	0.70	10.00	2.79	0.51	5.03	0.00	5.54	2.00	323.09	3.50
	Hubei	5,873	3,450	5,875	318.920	3.72	0.05	0.01	0.43	3.69	0.00	4.12	1.46	201.41	2.18
	Hunan	6,465	2,993	4,630	199.660	2.33	0.99	0.28	0.76	0.00	0.00	0.76	0.27	2,437.12	26.43
	Central zone total	43,704	21,638	5,061	2,351.406	27.41	37.24	10.38	32.42	15.26	0.80	48.48	17.22	229.37	2.49
Western zone	Sichuan, Chongqing	11,472	4,676	4,071	216.887	2.53	2.91	0.81	9.58	0.00	0.00	9.58	3.40	617.19	6.69
	Guizhou	3,606	793	2,199	615.200	7.17	1.93	0.54	0.00	0.00	0.00	0.00	0.00	450.64	4.89
	Yunnan	4,094	1,644	4,016	442.682	5.16	7.96	2.22	0.00	0.00	0.00	0.00	0.00	18.05	0.20
	Tibet	248	77	3,104	10.153	0.12	7.90	2.20	0.00	0.00	0.00	0.00	0.00	666.46	7.23
	Shaanxi	3,570	1,326	3,714	662.400	7.72	2.30	0.64	1.76	0.00	0.00	1.76	0.63	190.31	2.06
	Gansu	2,494	781	3,133	180.563	2.10	9.75	2.72	0.00	0.00	0.00	0.00	0.00	31.16	0.34
	Qinghai	496	202	4,074	30.153	0.35	1.01	0.28	0.00	0.00	0.00	0.00	0.00	146.59	1.61
	Ningxia	530	211	3,980	141.140	1.65	0.57	0.16	1.32	5.57	0.00	6.89	2.46	95.76	1.04
	Xinjiang	1,718	1,050	6,113	88.900	1.04	6.86	1.91	0.00	0.00	0.00	0.00	0.00	2,447.48	26.55
	Western zone total	28,220	10,755	3,871	2,388.078	27.83	41.16	11.48	12.66	5.57	0.00	18.23	6.47	50.58	0.55
Projects involving multiple provinces					0.000	0.00	23.13	6.45	13.90	13.56	0.00	27.45	9.75	414.27	4.49
Unclassifiable					380.460	4.43	32.76	9.14	0.64	0.00	0.41	1.04	0.37	9,219.77	100.00
Total		123,020	74,772	6,048	8,579.590	100.00	368.63	100.00	118.81	159.51	3.23	281.56	100.00		

Other technical cooperation (unit: 100 million yen)	
	Acceptance of participants for training
	Inviting youth from abroad
	Dispatching JOCV's
	Dispatching experts
	71.67
	16.36
	25.05
	16.28
Grand total	9,349.13

Sources: Figures for population, GDP and per capita GDP were taken from China Statistical Yearbook 1996. Although military personnel are not included in the population figures for each province, they are included in the total population. In addition, in the Statistical Yearbook 1996, the figures given for total GDP by province (7.8956 trillion renminbi) and for total GDP (7.4772 trillion renminbi) do not agree. ODA White Paper, "Overview of ODA Loans to China" (OECF, January 1997) and JICA Project Statistics.

Japan's ODA Disbursements to China (by province), 1979 to 1996

Regional Classification	Province	Population (unit: 10,000 people)	GDP (unit: 100 million renminbi)	Per capita GDP (renminbi)	Loans (I) (unit: 100 million yen)	Percentage (%)	Grants (II) (unit: 100 million yen)	Percentage (%)	Technical cooperation: Development studies (III) (unit: 100 million yen)	Percentage (%)	Technical cooperation: Project-type technical cooperation (IV) (unit: 100 million yen)	Percentage (%)	Technical cooperation: Improvement equipment provision (V) (unit: 100 million yen)	Percentage (%)	Total I (IV + IV + V) (unit: 100 million yen)	Percentage (%)	Total II (I + II + III + IV + V) (unit: 100 million yen)	Percentage (%)
Coastal zone	Beijing	1,240	1,810	14,598	1,423.204	7.69	561.37	57.64	8.62	3.22	143.31	44.79	4.10	46.65	204.03	25.62	2,140.59	10.66
	Tianjin	953	1,240	13,016	261.647	1.41	23.00	2.36	5.38	2.01	26.99	8.43	0.73	8.30	43.54	5.47	317.74	1.58
	Hebei	6,525	3,954	6,059	1,817.235	9.82	0.00	0.00	1.06	0.39	4.08	1.28	0.00	0.00	6.80	0.85	1,822.37	9.07
	Liaoning	4,138	3,490	8,434	434.219	2.35	10.56	1.08	27.12	10.14	21.26	6.65	0.00	0.00	65.17	8.18	493.17	2.46
	Shanghai	1,457	3,360	23,063	523.090	2.83	22.87	2.35	26.59	9.94	15.59	4.87	0.74	8.42	57.72	7.25	586.67	2.93
	Jiangsu	7,148	6,660	9,346	966.127	5.22	19.61	2.03	17.58	6.57	0.00	0.00	0.00	0.00	24.16	3.03	1,003.52	5.00
	Zhejiang	4,435	4,638	10,458	61.817	0.33	1.83	0.19	9.55	3.57	0.00	0.00	0.52	5.95	13.64	1.71	73.71	0.37
	Fujian	3,282	3,000	9,142	168.907	0.91	25.64	2.63	2.06	0.77	7.75	2.42	0.00	0.00	13.00	1.63	204.39	1.02
	Shandong	8,785	6,650	7,570	1,518.035	8.20	0.42	0.04	4.58	1.71	12.69	3.97	0.00	0.00	22.95	2.88	1,535.73	7.65
	Guangdong	7,051	7,316	10,375	766.304	4.14	2.87	0.29	8.27	3.09	0.00	0.00	0.00	0.00	11.36	1.43	777.44	3.87
	Guangxi	4,653	2,015	4,350	1,017.457	5.50	2.79	0.29	13.35	4.99	0.00	0.00	0.00	0.00	18.34	2.30	1,033.60	5.15
	Hainan	743	410	5,516	234.270	1.27	1.02	0.10	4.46	1.67	0.00	0.00	0.00	0.00	6.12	0.77	239.75	1.19
	Coastal zone total	50,390	44,564	10,161	9,192,315	49.65	672.17	69.01	128.60	48.07	231.67	72.41	6.04	69.35	486.83	61.14	10,230.84	50.94
Central zone	Shanxi	3,141	1,480	4,712	580.725	3.14	7.96	0.82	2.34	0.87	0.00	0.00	0.00	0.00	3.21	0.40	591.02	2.94
	Inner Mongolia	2,326	1,095	4,708	388.586	2.10	14.54	1.49	0.76	0.28	6.54	2.04	0.00	0.00	9.63	1.21	410.42	2.04
	Jilin	2,628	1,447	5,506	31.567	0.17	68.62	7.05	18.14	6.78	0.00	0.00	0.29	3.36	25.22	3.17	118.82	0.59
	Heilongjiang	3,751	2,708	7,221	308.256	1.67	6.75	0.69	14.18	5.30	27.34	8.56	0.50	5.74	55.88	7.02	357.04	1.78
	Anhui	6,127	2,670	4,358	110.360	0.60	2.50	0.26	2.16	0.81	0.00	0.00	0.00	0.00	3.00	0.38	115.04	0.57
	Jiangxi	4,150	1,715	4,133	509.570	2.75	0.05	0.00	11.18	4.18	0.00	0.00	0.00	0.00	15.36	1.93	520.80	2.59
	Henan	9,243	4,079	4,413	349.731	1.89	10.00	1.03	1.19	0.43	5.03	1.57	0.00	0.00	8.19	1.03	365.92	1.82
	Hubei	5,673	3,450	5,875	466.310	2.52	0.05	0.01	5.80	2.19	3.69	1.15	0.00	0.00	12.89	1.62	475.90	2.37
	Hunan	6,465	2,993	4,630	665.025	3.70	0.99	0.10	8.27	3.09	0.00	0.00	0.52	5.92	11.88	1.49	694.81	3.46
	Central zone total	43,704	21,636	5,081	3,430.124	18.53	111.46	11.44	84.07	23.95	42.60	13.32	1.32	15.02	145.26	18.24	3,649.57	18.17
Western zone	Sichuan, Chongqing	11,472	4,670	4,071	240.887	1.30	7.82	0.80	12.22	4.57	0.00	0.00	0.00	0.00	16.79	2.11	260.92	1.30
	Guizhou	3,606	793	2,199	1,052.329	5.68	16.93	1.74	0.54	0.20	0.00	0.00	0.00	0.00	0.75	0.09	1,069.80	5.33
	Yunnan	4,094	1,644	4,016	469.012	2.53	7.96	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	476.97	2.37
	Tibet	248	77	3,104	10.153	0.06	7.90	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.05	0.09
	Shaanxi	3,570	1,329	3,714	1,008.713	5.44	2.30	0.24	5.76	2.16	0.00	0.00	0.00	0.00	7.91	0.98	1,014.77	5.05
	Gansu	2,494	781	3,133	411.199	2.22	10.47	1.07	2.20	0.82	0.00	0.00	0.38	4.35	3.40	0.43	424.25	2.11
	Qinghai	496	202	4,074	30.153	0.16	1.01	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.16	0.16
	Ningxia	530	211	3,980	169.000	0.91	3.25	0.33	1.32	0.49	5.57	1.74	0.00	0.00	9.13	1.16	179.13	0.89
	Xinjiang	1,718	1,050	6,113	88.900	0.48	22.05	2.26	4.52	1.69	0.00	0.00	0.00	0.00	6.21	0.78	115.47	0.57
	Western zone total	26,226	10,755	3,671	3,478.342	18.79	79.68	8.18	26.56	9.92	5.57	1.74	0.38	4.35	44.17	5.55	3,590.53	17.88
Projects involving multiple provinces					0.000	0.00	35.33	3.63	47.67	17.82	22.93	7.17	0.00	0.00	95.59	12.01	105.94	0.53
Unclassifiable					2,413.030	13.03	75.34	7.74	0.64	0.24	17.16	5.36	0.99	11.28	24.39	3.06	2,507.16	12.48
Total		123,626	74,772	6,048	18,513.811	100.00	973.98	100.00	267.53	100.00	319.94	100.00	8.78	100.00	796.24	100.00	20,084.03	100.00
Other technical cooperation (unit: 100 million yen)					Acceptance of participants for training												142.37	
					Inviting youth from abroad												22.68	
					Dispatching JOCV's												31.17	
					Dispatching experts												37.73	
Grand total																	20,317.98	

Sources: Figures for population, GDP and per capita GDP were taken from China Statistical Yearbook 1998. Although military personnel are not included in the population figures for each province, they are included in the total population. In addition, in the Statistical Yearbook 1998, the figures given for total GDP by province (7.6956 trillion renminbi) and for total GDP (7.4772 trillion renminbi) do not agree. ODA White Paper, "Overview of ODA Loans to China" (OECF, January 1997) and JICA Project Statistics.

Appendix 4. World Bank's ODA Disbursements to China (by province), 1982 to 1997

World Bank's ODA Disbursements to China (by province), 1982 to 1997

Regional Classification	Province	Population (unit: 10,000 people)	GDP (unit: 100 million renminbi)	Per capita GDP (renminbi)	Totals by Province				Percentage (%)	HDI Points by Province		Impoverished Counties
					IBRD	IDA	Mixture	Total				
Coastal zone	Beijing	1,240	1,810	14,596	220.41	263.98	33.50	517.89	1.92		0.874	
	Tianjin	953	1,240	13,016	497.61	184.74	55.13	737.48	2.73		0.827	
	Hebei	6,525	3,954	6,059	291.14	261.85	35.42	588.41	2.18		0.591	39
	Liaoning	4,138	3,490	8,434	591.29	493.48	55.13	1,139.90	4.22		0.719	9
	Shanghai	1,457	3,360	23,063	1,654.50	204.34	54.56	1,913.40	7.08		0.884	
	Jiangsu	7,148	6,680	9,346	1,132.50	278.18	169.89	1,580.52	5.85		0.652	
	Zhejiang	4,435	4,638	10,458	1,703.70	276.46	16.51	1,996.67	7.39		0.659	3
	Fujian	3,282	3,000	9,142	421.10	190.47	25.43	637.06	2.36		0.587	6
	Shandong	8,785	6,650	7,570	623.10	307.20	20.94	951.24	3.52		0.608	10
	Guangdong	7,051	7,316	10,375	577.50	364.20	40.33	982.03	3.64		0.716	3
	Guangxi	4,633	2,015	4,350	212.14	261.60	18.92	492.66	1.82		0.547	28
	Hainan	743	410	5,516	34.00	103.90		137.90	0.51		0.600	5
	Coastal zone total	50,390	44,564	10,161	7,956.99	3,190.40	525.76	11,675.16	43.22	Coastal zone average	0.719	105
Central zone	Shanxi	3,141	1,480	4,712	502.00	232.49	12.01	746.50	2.76		0.596	35
	Inner Mongolia	2,326	1,095	4,706	87.91	250.67	28.64	367.22	1.36		0.547	31
	Jilin	2,628	1,447	5,506	21.42	296.27	65.20	382.89	1.42		0.611	5
	Heilongjiang	3,751	2,708	7,221	405.85	179.17	1.54	586.56	2.17		0.626	11
	Anhui	6,127	2,670	4,358	138.85	257.94	16.78	413.57	1.53		0.523	17
	Jiangxi	4,150	1,715	4,133	10.65	275.41	33.94	320.00	1.18		0.522	18
	Henan	9,243	4,079	4,413	2,136.40	375.57	4.09	2,516.06	9.31		0.556	28
	Hubei	5,873	3,450	5,875	350.51	211.17	40.43	602.11	2.23		0.571	25
	Hunan	6,465	2,993	4,630	374.65	271.45	13.36	659.46	2.44		0.551	10
	Central zone total	43,704	21,638	5,061	4,028.24	2,350.14	215.99	6,594.37	24.41	Central zone average	0.560	180
Western zone	Sichuan, Chongqing	11,472	4,670	4,071	1,692.40	498.45	94.80	2,285.65	8.46		0.523	43
	Guizhou	3,606	793	2,199	62.70	148.49		211.19	0.78		0.445	48
	Yunnan	4,094	1,644	4,016	318.90	175.44	0.46	494.80	1.83		0.460	73
	Tibet	248	77	3,104					0.00		0.356	5
	Shaanxi	3,570	1,326	3,714	260.50	227.81	102.51	590.82	2.19		0.536	50
	Gansu	2,494	781	3,133	80.00	330.47	0.40	410.87	1.52		0.488	41
	Qinghai	496	202	4,074		14.60	0.23	14.83	0.05		0.469	14
	Ningxia	530	211	3,980		44.90	18.18	63.08	0.23		0.530	8
	Xinjiang	1,718	1,050	6,113	541.50	239.00		780.50	2.89		0.553	25
	Western zone total	28,228	10,755	3,871	2,956.00	1,679.16	216.58	4,851.74	17.96	Western zone average	0.232	307
Projects involving multiple provinces					2,591.15	1,302.30		3,893.50	14.41			
Grand total		123,626	74,772	6,048	17,534.38	8,522.00	958.33	27,014.77	100.00	National average	0.596	592

Sources: "The World Bank Group in China: Facts and Figures." For population, GDP and per capita GDP: China Statistical Yearbook 1998. Figures for population, GDP and per capita GDP were taken from China Statistical Yearbook 1998. Although military personnel are not included in the population figures for each province, they are included in the total population. In addition, in the Statistical Yearbook 1998, the figures given for total GDP by province (7.6956 trillion renminbi) and for total GDP (7.4772 trillion renminbi) do not agree. For HDI points by province: "China's Regional Development Strategy: Current Status and Issues." For number of impoverished counties: National 8-7 Poverty Reduction Plan.

Appendix 5. Asian Development Bank's ODA Disbursements to China (by province), 1987 to 1997

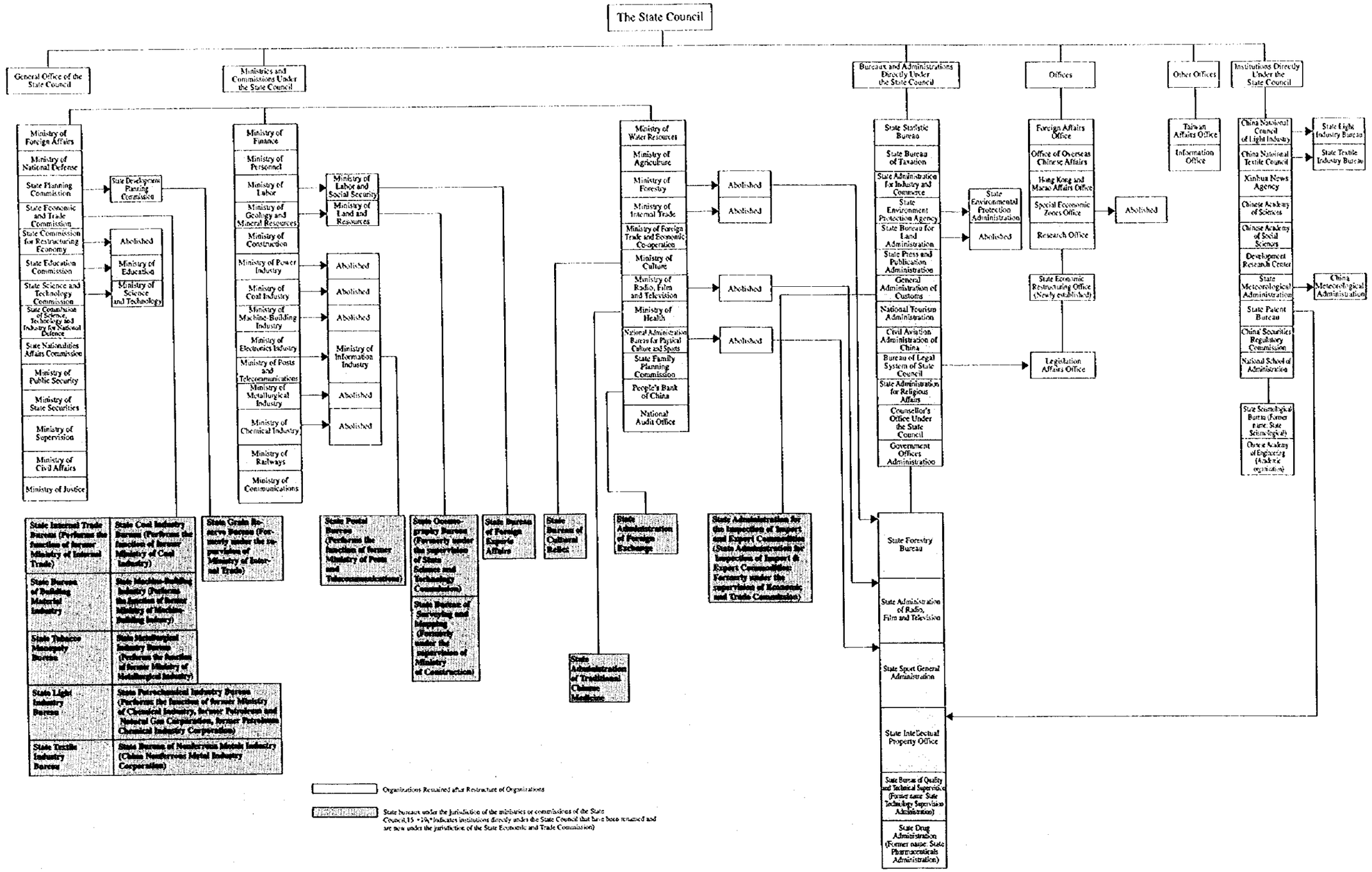
Asian Development Banks's ODA Disbursements to China (by province), 1987 to 1997

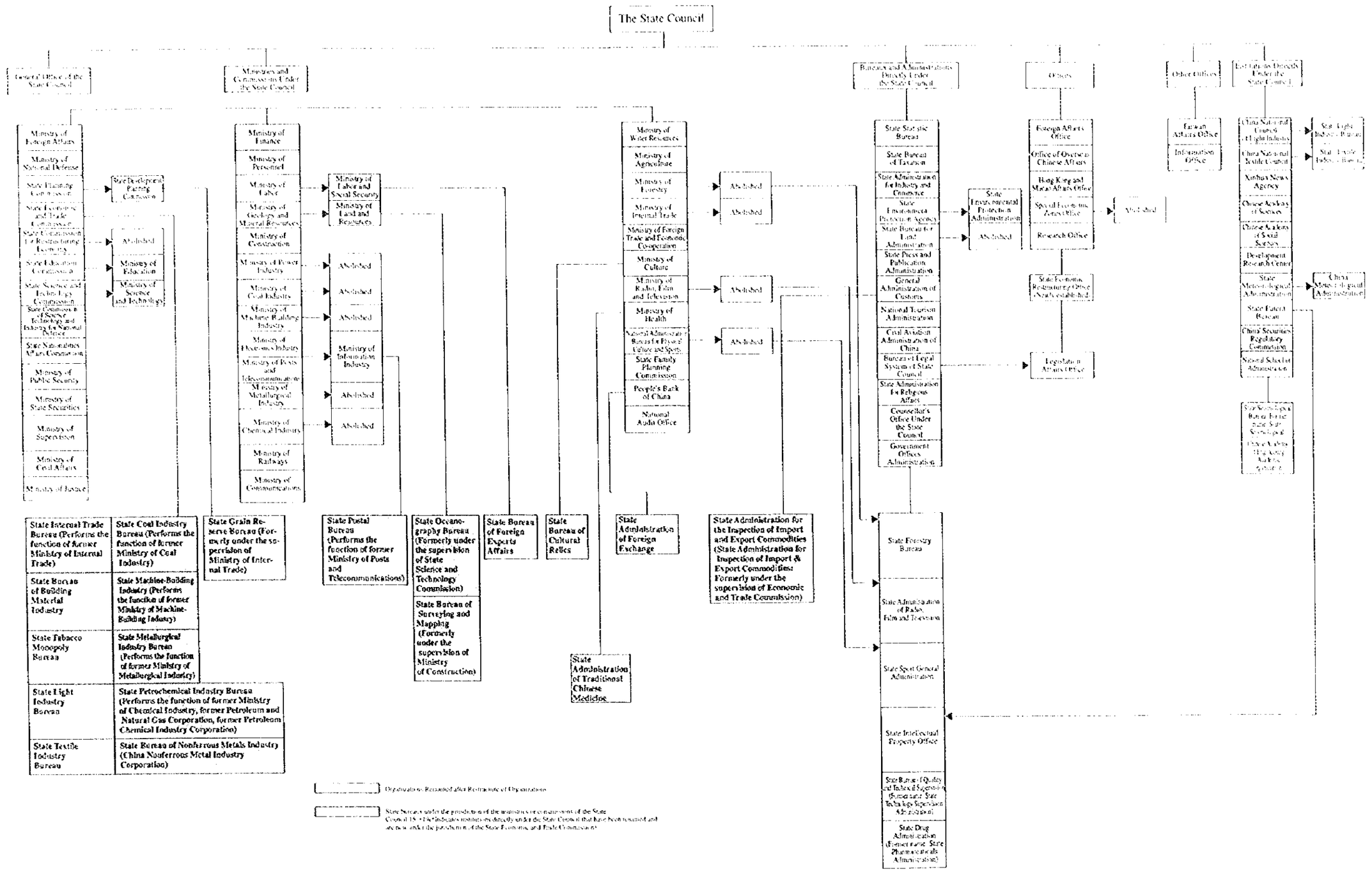
Regional Classification	Province	Population (unit: 10,000 people)	GDP (unit: 100 million renminbi)	Per capita GDP (renminbi)	Totals by Province		HDI Points by Province		Impoverished Counties
					Sum (unit: U.S.$1 million)	Percentage (%)			
Coastal zone	Beijing	1,240	1,810	14,598	557.00	9.24		0.874	
	Tianjin	953	1,240	13,016	0.00	0.00		0.827	
	Hebei	6,525	3,954	6,059	360.00	5.97		0.591	39
	Liaoning	4,138	3,490	8,434	310.00	5.14		0.719	9
	Shanghai	1,457	3,360	23,063	255.00	4.23		0.884	
	Jiangsu	7,148	6,680	9,346	0.00	0.00		0.652	
	Zhejiang	4,435	4,638	10,458	0.00	0.00		0.659	3
	Fujian	3,282	3,000	9,142	285.00	4.73		0.587	8
	Shandong	8,785	6,650	7,570	252.80	4.20		0.608	10
	Guangdong	7,051	7,316	10,375	255.00	4.23		0.716	3
	Guangxi	4,633	2,015	4,350	46.50	0.77		0.547	28
	Hainan	743	410	5,516	53.00	0.88		0.600	5
	Coastal zone total	50,390	44,564	10,161	2,374.30	39.40	Coastal zone average	0.719	105
Central zone	Shanxi	3,141	1,480	4,712	39.70	0.66		0.596	35
	Inner Mongolia	2,326	1,095	4,706	0.00	0.00		0.547	31
	Jilin	2,628	1,447	5,506	126.00	2.09		0.611	5
	Heilongjiang	3,751	2,708	7,221	307.00	5.09		0.626	11
	Anhui	6,127	2,670	4,358	247.00	4.10		0.523	17
	Jiangxi	4,150	1,715	4,133	150.00	2.49		0.522	18
	Henan	9,243	4,079	4,413	274.00	4.55		0.556	28
	Hubei	5,873	3,450	5,875	0.00	0.00		0.571	25
	Hunan	6,465	2,993	4,630	116.00	1.92		0.551	10
	Central zone total	43,704	21,638	5,061	1,259.70	20.90	Central zone average	0.560	180
Western zone	Sichuan, Chongqing	11,472	4,670	4,071	250.00	4.15		0.523	43
	Guizhou	3,606	793	2,199	0.00	0.00		0.445	48
	Yunnan	4,094	1,644	4,016	227.00	3.77		0.460	73
	Tibet	248	77	3,104	0.00	0.00		0.356	5
	Shaanxi	3,570	1,326	3,714	156.00	2.59		0.536	50
	Gansu	2,494	781	3,133	0.00	0.00		0.488	41
	Qinghai	496	202	4,074	0.00	0.00		0.469	14
	Ningxia	530	211	3,980	0.00	0.00		0.530	8
	Xinjiang	1,718	1,050	6,113	0.00	0.00		0.553	25
	Western zone total	28,228	10,755	3,871	633.00	10.50	Western zone average	0.232	307
Projects involving multiple provinces					782.00	12.98			
Unclassifiable					977.10	16.21			
Grand total		123,626	74,772	6,048	6,026.10	100.00	National average	0.598	592

Sources: "Loan, Technical Assistance and Private Sector Operations Approvals." For population, GDP and per capita GDP: China Stausical Yearbook 1998. Figures for population, GDP and per capita GDP were taken from China Statistical Yearbook 1998. Although military personnel are not included in the population figures for each province, they are included in the total population. In addition, in the Statistical Yearbook 1998, the figures given for total GDP by province (7.6956 trillion renminbi) and for total GDP (7.4772 trillion renminbi) do not agree. For HDI points by province. "China's Regional Development Strategy: Current Status and Issues." For number of impoverished counties: National 8-7 Poverty Reduction Plan.

Appendix 6. Diagram of China's State Council Following Structural Reform

The State Council and Ministries and Commissions Under the State Council After Restructure of Organizations



Appendix 6. Diagram of China's State Council Following Structural Reform

The State Council and Ministries and Commissions Under the State Council After Restructure of Organizations