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This report is based on the discussions and findings of the Country Study Group for Development Assistance to the Federative Republic of Brazil organized by the Japan International Cooperation Agency (JICA). The views expressed in the paper are those of the members of the Study Group and do not necessarily reflect those of JICA.

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Foreword

Brazil is a major primary producer possessing abundant underground resources in an extensive and fertile country. It is a new land which has experienced extensive immigration and racial intermixture, and now consists of a great diversity of races and ethnic types. From the 1960s to the mid-1970s, Brazil achieved high economic growth of around 10 percent annually through an extensive injection of foreign capital, and policies for the expansion of aggregate demand which exploited to the maximum limit the country's potential and attractions. Much international attention was attracted by this so-called "Brazilian miracle."

The balance of international payments crisis which had its origin in the oil crises of the mid-1970s, however, engulfed Brazil in a host of problems: burgeoning foreign debts, expanding public-sector deficits and galloping inflation. In recent years, policies have been put in place to tighten money, restrict aggregate demand, and eliminate public deficits, but the results can hardly be termed satisfactory.

The Collor government inaugurated in March 1990 has implemented a bold policy to curb inflation. It sees economic modernization through the introduction of the principles of free trade and free competition as the medium- and long-term issue for Brazil. At the same time, it has identified environmental policy and poverty eradication as major tasks.

In the interests of achieving sustainable development, it is essential for Japan to upgrade its level of cooperation and support for environmental policies as well as for the modernization of the economy, and as a poverty policy, to seek in particular to adjust the disparities between social classes and regions which have created in Brazil an affluent South and a poor North.

This study group was set up in May 1990 under the auspices of the President of the Japan International Cooperation Agency (JICA). Since then, the group has met seven times including an public meeting, carried out surveys in Brazil, and held face-to-face discussions with persons associated with the government, investigated the current status of economic and social development in Brazil, and held discussions on the nature of Japanese development assistance to Brazil.

This report consolidates those surveys, studies, discussions, and reports. We would like to take the opportunity to mention not only the cooperation of the members of the group, but also the contribution of the staff of the appropriate sections of the Ministry of Foreign Affairs, and the great assistance provided by the task force drawn mainly from the staff of JICA.

This report is the result of that joint effort. Given the importance of the economic and social reform of Brazil, it is sincerely hoped that this report will contribute to the formulation of effective Japanese development assistance policies, to the development of Brazil, and to amity and goodwill in relations between Japan and Brazil.

February 1991

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Country Study Group for
Development Assistance to the
Federative Republic of Brazil

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I. Perspectives on Development Assistance to Brazil

Brazil is the fifth largest country in the world, with an area of 8,512,000 square kilometers. The landscape is extremely diverse, ranging from tropical rainforest and semi-arid areas to the temperate regions. The make-up of the populace, numbering approximately 150 million is also diverse and includes the original Indian inhabitants, European immigrants, African blacks, Japanese and other Asian immigrants, plus immigrants from neighboring countries.

The most singular features of the country are its size and its diversity of peoples and cultures. The appeal of Brazil is different from that of other newly industrializing countries, and lies in its extensive and fertile landscape, its abundant underground resources, and its diverse make-up of racial and ethnic groups. The source of Brazil's vitality lies in its diversity and creativity.

Brazil is large and embraces a diversity of climates, ethnic groups, and cultures, and therefore the extension of government services such as medical care and education and the organization of a social and industrial infrastructure are difficult. Striking disparities between regions and in incomes and the difficulty of finding an overall unity amongst the populace are the points which need to be kept in mind when considering the development of Brazil.

Although Brazil is a country rich in diversity, a single language - Portuguese - and a single religion - Catholicism have contributed positively to maintain the unity of the state and to exploit the diversity of political, economic and cultural developments in Brazil without producing major social tensions. Racial discrimination is prohibited by constitution; equality of opportunity is provided in principle in education, employment and social development, and efforts have been made to eliminate various forms of discrimination from social life.

Successive generations of those in power have pursued a variety of policies, such as: Pursue the Spirit of Brazil, Open up the Interior, Development-ism, National Unity, Social Unity, and most recently Poverty Eradication. Efforts have been made for national development, and consistent results have, in fact, been achieved in economic development through a combination of the unity and vitality mentioned above.

The reverse of this is that few positive results can be claimed in addressing income imbalances and regional disparities. Approximately 60 percent of all households in Brazil remain on low incomes of the minimum wage or worse, while regional disparities appear in such indicators as infant mortality rates and literacy rates. Against this background, successive governments have tended to place the priority on development and efficiency, while postponing reform and the achievement of social equity. This has been a source of the limiting factors on development which are discussed in this report.

To look at economic trends in recent years, a series of medium-term development plans enacted between 1968 and 1973 produced average economic growth rates of better than 10 percent annually, a phenomenon termed "the Brazilian miracle" by world observers. Still today, Brazil continues to have a GDP close to that of the industrialized G7 nations. The first oil crisis from 1973 year-end and into 1974, however, put an end to high economic growth in Brazil. By the end of the 1980s, severe hyperinflation had appeared and Brazil became the world's biggest debtor country, with foreign debts of \$112,700 million at the end of 1989.

With the contraction of job opportunities caused by the suspension of a number of development programs, and constrictive economic policies resulting from the economic crisis of the 1980s, Brazil's regional disparity—between the affluent South and the poverty-stricken North—was in danger of growing even greater. The background to the accession of the Collor government in March 1990 was thus a period of high growth over the 1960s and 1970s, a period of expanding indebtedness following the oil crises, and a period of economic contraction and structural adjustment during the 1980s.

The Collor government has set as its most urgent short-term task curbing inflation. For the medium and long term, it has begun moving to reform the taxation system, liberalize trade, and modernize industry, and has expressed its intention to redress social and regional disparities. For Brazil, the first half of the 1990s will be a crucial period for establishing the firm basis necessary to achieve success in social and economic reform. The important issue, therefore, in considering future development assistance to Brazil is how Japan should cooperate to support such a social and economic reform, and how Japan can contribute to the construction of an economic and social base which will allow Brazil to develop autonomously.

Awareness has been growing in recent years of the acute problems posed by the environment. Problems of pollution have become increasingly apparent in Brazil in recent years. Damage to the natural environment includes deforestation in the Amazon region as a result of the development of agricultural and animal husbandry, and desertification in the Northeast.

The problems in the big cities and mining and manufacturing areas are atmospheric pollution and the degradation of water quality by human and industrial effluents. Thus, the major developmental problem which faces Brazil is to effect social and economic reform at the same time as conserving and enhancing the environment.

The tropical rainforests of the Amazon basin account for about half the total area of rainforest around the globe. When the massive implications for the global climate as a whole are considered, it must be recognized that the problem of appropriate development and conservation of these rainforests is not simply a Brazilian problem, but a global one.

Given the vital position of South and Central America and the importance of a good long-term relationship between Japan and Brazil, Japan has been actively engaged in providing development assistance and cooperation in a variety of fields: agriculture, mining and manufacturing, health and medical care, and human resource development.

Most recently, there have been frequent demands for technical cooperation in the fields of advanced technology and the environment, as referred to above. Another recent development worthy of note is the activity of Brazil as a center for JICA's Third-Country Training Programs, on the basis of its advanced technological level and potential guiding role in the Third World. Brazil has adopted this role for the Central and South American region, but has also accepted trainees from further afield—from Portuguese-speaking countries in Africa such as Mozambique and Angola. This has created the potential for highly efficient and effective technical cooperation with Brazil as the base. It is desirable, therefore, that the friendly and cooperative relationship between Japan and Brazil expand further.

In considering cooperation with Brazil, it is important to support development aimed at growth and expansion exploiting the existing dynamic characteristics of Brazil. Beyond this, however, it is also necessary to be concerned with the realities of manifest regional and income disparities in Brazil, and cooperate to improve health, medical care, and educational services for regions and regional populations which are lagging in basic social and economic facilities. Standards of living and stability of incomes might be improved through vocational training, through improving technology and introducing new technology, and through the elaboration of infrastructures.

Moreover, if the diversity of development needs of recent years—from primary health care to advanced manufacturing technology—is to be responded to, it is essential that there be close communication between Japan and Brazil and that the system by which development assistance is provided be upgraded and expanded. It is vital to bring about economic development, but at the same time it is also necessary to provide encouragement and support in seriously addressing environmental problems and developing a deeper environmental consideration over all sectors in order to achieve sustainable development of Brazil.

II. Tasks and Limiting Factors in the Development of Brazil

1. Curbing inflation, balancing finances, and social and economic reform

Between 1960 and the mid-1970s, Brazil adopted a succession of medium-term development plans: The Three-year Economic and Social Development Plan, the Government Economic Action Plan, and the Medium-term Development Strategy. The intention was to industrialize for achieving leadership in the heavy and chemical industries through aggressive introduction of foreign capital, and through policies for aggregate demand expansion—expanding private-sector confidence, encouraging public enterprises to invest, and promoting exports. These policies were successful to the extent of achieving high annual growth rates of around 10 percent, and much admiration was expressed around the world at the so-called “Brazilian miracle.”

The first oil crisis of the latter part of 1973 and 1974, however, saw the end of high growth. The Second National Development Plan was the considered response. The aim of this plan was to develop energy sources, both oil and alternatives, and to seek import replacement of capital and intermediate goods as a response to the balance-of-international payments crisis. As a result, the public-sector deficit expanded, foreign debts grew, and inflation increased significantly. The second oil crisis of 1980, coming on the heels of the first, hit Brazil hard. With the advent of an internationally high interest regime on top of this oil crisis, foreign debts grew even more, and by 1982, Brazil had descended into a balance of international payments crisis.

The financial stringency adopted to deal with these economic problems and the measures taken to depress total demand—the abandonment of a range of development projects, in particular projects relating to infrastructure facilities—had a variety of effects. Productivity fell in a number of sectors, particularly mining and manufacturing industry, unemployment increased, and the informal sector expanded. All this ushered in serious economic stagnation.

Subsequently, inflation took off again due to the relaxation of policies designed to depress total demand, and the loss of the few policies making for stabilization of the economy brought hyperinflation and stagnation of economic activity.

The Collor government, which came to power in March 1990, has identified curbing inflation as the most urgent priority in dealing with this economic crisis and has moved decisively to suck up excess liquidity by freezing deposits. And it aimed to balance the national finances by strengthening the tax collection system and reducing expenditures. Although by now the inflation rate has fallen from hyperinflation levels, it remains at a level of around 10 percent per month, and has not been reined in. It is also rather difficult to be optimistic given the fall in productivity in the mining and manufacturing sectors due to capital insufficiencies and the increase in the unemployment rate.

The Collor government has further identified as medium-term tasks the improvement of industrial productivity and efficiency through the privatization of state enterprises, the liberalization of imports and the upgrading of technological capabilities. It has posted as its policy goals structural reform and the modernization of industry, designed to maintain international competitiveness.

The success of the Collor Plan is closely bound up with whether the government can solve the problems of inflation, the public deficit, and international indebtedness, restore confidence in the administration, and act decisively to bring about social and economic reform. Japan can provide positive support in such areas as skills training and technology transfer, which are necessary for industrial modernization.

2. Adjustment of regional disparities

The social and economic indicators for Brazil are those of a semi-developed country. This is due to the fact that the South, with its large modern cities such as Sao Paulo, is canceled out by the North and Northeast with its underdeveloped areas such as the Amazon. For example, when one looks at health and education indicators—rates of contraction of diseases, the rate of extension of preventative immunization, the primary school enrolment rate and literacy rate—limited to the North and Northeast, the situation is similar to that of one of the least developed countries, and the disparity with the South is striking. These extreme imbalances between regions, referred to as Brazil's North-South problem, are a prominent feature of Brazil's social and economic structure.

The North and Northeast regions of Brazil, not having developed a social infrastructure, received a double shock with the abandonment of a number of development projects resulting from the economic crisis of the 1980s. This led to a quantitative and qualitative decline in social services and economic depression caused a contraction of job opportunities.

Environmental damage continues to occur in these regions, with forests being harmed as a consequence of development of agriculture and livestock farming, with desertification, with water pollution resulting from development of mining and manufacturing, and with mercury pollution resulting from gold mining. In addition to the hard natural conditions of the Amazon region and the drought which came up every eight to ten years in the Northeast, the backwardness resulting from the lack of investment in developing basic social facilities and the existence of poverty amongst the greater proportion of the population, are structural hindrances to the social and economic development of these regions.

Because of these deeply rooted regional disparities, the development of the industrial sector in the least developed regions is behind. This leads to a vicious circle of underdevelopment of the social sector, causing a further lag in skills education, which in turn leads to the recreation of poverty and its institutionalization. This

vicious circle brought on by regional disparities is a limiting factor in the development of Brazil; breaking the chain is the most crucial task in development.

In the future provision of development assistance to Brazil, the highest priorities must be placed on basic human needs in particular, such as education, health and medical care, the integrated rural development program, and the improvement of social infrastructures for the North and Northeast with the objective of adjusting regional disparities. At the same time, profound concern must be exercised over the impacts on the environment.

3. The importance of human resource development

Since the educational reforms of 1968 and 1971, the level of tertiary education in Brazil has expanded, but it has not proven possible to guarantee the quality and modernization of primary and secondary education. Eight years of primary education are mandatory for those between the ages of 7 and 14. The primary enrolment rate has risen from 78 percent in 1970 to 85 percent in 1980. An acute problem, however, is that no more than 17.2 percent of children completed eight years of primary education in the years 1970 to 1980, and that dropouts and repeaters are numerous.

Secondary education is for three years, and corresponds to Japanese high school; there is a division into general and special courses. Although secondary enrolment rate increased from 9.51 percent to 20.42 percent between 1970 and 1980, as with the primary level, dropouts and repeaters are numerous, and no more than half complete their courses. Outside this system, there are state vocational/educational institutions such as the SENAI and the SENAC.

Regional disparities have led to variation in the availability of education. For example, although the national average literacy rate for the population 7 years and older in 1987 was 78.5 percent, the urban literacy rate was 85.0 percent, and the rural rate remained at a low 59.3 percent. It is believed that the cause of this discrepancy is the presence of a corresponding number of middle-aged and older people, who were largely given no opportunity to receive an education, in the farming communities.

For the many poor families in the rural area in particular, however, the longer the period of education for the children, the more difficult it becomes to bear the burden of education. It is frequently the case that repeaters and dropouts increase, or children are expected to work from an early age, and lose the opportunity to attend school. It will therefore be necessary to bring about radical social and attitudinal changes if there is to be a real improvement in this vicious circle of educational imbalances.

A further inescapable problem is that the increase in the juvenile population has not been accompanied by an increase in the supply of educational facilities or teachers and this will ultimately lead to a fall in the quality of education.

Educational backwardness and imbalances of this sort mean that it is difficult to provide a regular supply of human resources to shoulder the burdens of development of Brazil's society and economy. They also lead to regional disparities in the allocation of human resources, and a polarization between the small, tertiary-educated elite and the mass of unskilled workers with little or no education. In this context, it is necessary to provide support for promoting human resource development in education, and to establish educational services firmly in all regions.

Contemporary Brazilian industry, also, is urgently addressing the need to reach international competitiveness, by planning for an improvement in efficiency, productivity and product quality, and by making up for the slowness to modernize resulting from existing protective domestic industrial policies. For this purpose, it is essential to develop a large, skilled labor force which can maintain a high level of productivity and quality control. It is also vital for the development of Brazilian industry to bring up core engineers in such fields as information-processing equipment and advanced technology, and to organize and support a system of education and skills development.

4. Adjustment of social disparities and poverty eradication

Until the end of 19th century, Brazilian society was based on a system of plantation and slavery. With the abolition of slavery in 1888, a large number of coloreds, principally blacks and those of mixed race, accounting for 60 percent of the then total population, was emancipated. However, the emancipees had not received adequate training or education, and eventually formed an unstable floating, unskilled laboring population in the towns and villages, remaining as the lowest social class. The former slave-owning whites retained real political and economic power, and simply became a new social class at the top.

The urbanization and industrialization of Brazil which began in the 1920s created a new middle class from small and medium landlords, businessmen, white-collar workers, and skilled workers. The rapid growth of the middle class as result of industrialization, which has been particularly noticeable since the 1950s, has led to a transformation of the fluid society of Brazil's big cities. There is greater opportunity to rise up the social scale, and individuals have been seen to rise out of the new middle class to the upper levels of society by dint of work and education.

Those at the bottom, however, have not benefited similarly, and have not been given the opportunity to rise up the social scale. The class gap between the affluent and the greater mass of those on low incomes has widened further. Looking in particular at the system of landowning, in 1985, large farms of 1,000 hectares or more, accounting for no more than 0.83 percent of a production unit and 4.2 percent of those in employment, covered 43.8 percent of the total area of agricultural land. Conversely, the area of agricultural land held by small farms and petty proprietors with less than 10 hectares, accounting for 52.9 percent of production units and 39.8 percent of those employed, was no more than 2.6 percent of the total.

There is a decisive social gap between the rich and the poor, and movement between classes, socially or economically, has been rendered impossible. Economic disparity and the entrenchment of social division, which have their origin in the old slave and landowning system, are characteristics of Brazilian society. This trend is particularly apparent in the North and Northeast where the traditional social and economic structure is deeply rooted.

Another feature of contemporary Brazilian society is the widening gap between the rich and the poor as a result of industrialization. Over the last half of the 1960s and first half of the 1970s, Brazil achieved economic development at an annual rate of more than 10 percent, but the income gap between social classes expanded. As a result of industrialization occurring principally in the South and Southeast, the regional gap—both social and economic—also expanded.

Considering incomes, for example, the proportion of total national income accounted for by the top 25 percent of income earners increased from 62.5 percent in 1960 to 70.5 percent in 1985. By contrast, the proportion accounted for by the total income of the 50 percent of people comprising the middle and lowest strata of smaller income earners dropped from 15.9 percent in 1960 to 13.0 percent in 1985.

The problem of poverty is acute: In 1985, 11 million households, representing 35 percent of the total, were classified as families in poverty earning half the minimum wage or less. Of these, 4.7 million households were families in extreme poverty earning one quarter of the minimum wage or less. These poverty-stricken families accounted for 53 million people, corresponding to 41 percent of the total population of Brazil. Further, 48.6 percent of the poor and 59.4 percent of the extremely poor were concentrated in the Northeast. It is clear that the regional distribution of poverty is uneven.

Urbanization, which has also accompanied industrialization in Brazil, is another powerful force making for poverty. The 40 to 50 percent increase in the population of Sao Paulo between the 1940s and 1970s was mainly due to an influx of the poor from the Northeast, and these immigrants have created illegal settlements known as "favela" around the cities. It is forecasted that by the beginning of the 21st century, the urban population will account for 90 percent of the total population of Brazil, for which the level of urban development and facilities will not be adequate.

Because industrialization was promoted while social and regional disparities were left untouched, not only the gap between the rich and the poor has increased but also the social and regional disparities themselves have continued to expand. This social and regional structural distortion is the major limiting factor on the future social and economic development of Brazil, and its adjustment is an essential prerequisite for both socio-economic development and poverty eradication in Brazil.

III. Priorities in Development Assistance

The new Collor government is pursuing policies of international cooperation by promoting cooperation and dialogue with Western nations and by seeking the establishment of democracy. On the economic policy front, it is energetically promoting the Collor Plan, which places the priority on reining in inflation. The major medium- and long-term problem inherent in this strategy is the modernization of the economy, in particular, the improvement of the international competitiveness of Brazilian industry, through the privatization of public enterprise, and the liberalization of international trade.

The government has also identified as vital issues the balancing of the budget through a reform of the tax system and measures to deal with the foreign debts, together with policies for the conservation of the environment and eradication of poverty.

Japan is a close partner in economic and technical cooperation, and the new government is encouraging cooperation between Japan and Brazil through joint surveys and research. It has made clear its intention to deepen mutual understanding and awareness and make efforts to develop more effective, higher quality programs.

Given this situation, Japan is considering the implementation of plans for cooperation with Brazil regarding the new economic policies currently being pursued by the Brazilian government: adjustment of regional disparity and sustainable development in harmony with the environment. It will be necessary to adopt a comprehensive approach deploying a variety of types of development assistance organically and laterally across sectors, rather than adopting piecemeal approaches in terms of individual projects, sectors, or existing modes of cooperation. It is also important with regard to the "entrance" stage of project cycles that Japan work more positively and actively, and promote greater efficiency and ease of cooperation through joint surveys and research tasks and thorough discussions with the Brazilian side.

The specifics of development assistance actually provided should be based on the recognition that the particularly important things for the future of cooperation between Brazil and Japan are (1) the modernization and sustainable development of the economy, (2) policies aimed at those in poverty (health, medical care and the development of human resources), and (3) cooperation over the environment. Requirements in each of these areas are set out below.

1. Cooperation in economic modernization and sustainable development

For Brazil, the major problem of the 1990s is to bring about successfully the economic modernization and technological innovations needed to revitalize domestic industry, introducing the principles of free trade and free competition. In an international

society and economy which is becoming increasingly interdependent, Brazil could play a substantial role in the future. Success in modernizing and creating a stable sustained economy would also be of significance for the development and stability of the international economy and society. Based on such a perspective, it is necessary for Japan to provide active support and cooperation in the modernization of the Brazilian economy.

Specifically, such measures as sending advisors on development policy and planning to cooperate and give advice jointly on projects from the policy proposal, study and planning stages, and cooperation in technology transfer, for example, by sending management consultants to support planning to improve industrial competitiveness (PCI) and planning for productivity and product quality (PBQP), called for under the Collor government's new industrial policies, can be considered. At the same time, Japan will consider supporting and promoting investment activity and action to cooperate and become involved in exchanges at the private level, and organize a system for encouraging linkages with official development assistance (ODA).

Japan, in particular, can cooperate to transfer modern and advanced industrial technology, and the quality control techniques it has developed using its accumulated experience in such fields as data networks, and the know-how it has acquired in controlling and maintaining productivity at a high level. This can become a vital and effective support in the modernization of the Brazilian economy

Achieving sustainable development, but maintaining a balance between development and the demands of the environment is regarded as an urgent global problem. This has become a priority problem for Brazil, and there is now a particular necessity to consider the environment over and above the demands of economic modernization. But if it is first ensured that resources are exploited more effectively and efficiently and that energy consumption is reduced to the minimum, it can be expected that at the same time the competitiveness and productivity of Brazilian industry will increase, scarce resources will be saved and environmental damage effectively reduced. Cooperation to transfer both Japanese energy-saving technology and techniques for handling pollution would contribute to sustainable economic development in Brazil. Positive developments in this sphere are desirable in the future.

2. Expanding cooperation for health and medical services

2.1 Cooperation to adjust regional disparities

In Brazil, health and medical care are spheres in which striking regional disparities are seen. There are particularly glaring differences between the developed cities of the South, where endemic tropical disease is rare, and the major killers are malignant tumors and diseases of the circulatory system, and the Northeast. There the health situation is on a par with that of the least developed countries, with a prevalence of endemic tropical diseases including malaria and parasitic diseases as well as

Hansen's disease and diarrheal diseases, and the rate of immunized children with DPT vaccine is merely 50 percent.

In terms of achieving the WHO target of health for all people by the year 2000, expressed in the Alma-Ata declaration of 1978, it will be necessary firstly in providing health and medical assistance to Brazil to expand and improve basic medical services in the North and Northeast. Apart from this, cooperation in this field requires highly articulated responses which take account of the extensiveness of the regions mentioned above, their natural environments and cultural and ethnic diversity, rather than standardized programs targeted on the country as a whole.

Basic health and medical care is a task requiring much time and effort, given the need to have an effect on far-flung regional societies and to inoculate people one by one. The example might be mentioned of the Expanded Program for Immunization (EPI), a significant program for dealing with infectious diseases. Education in health and medicine in order, for example, to prevent malaria and counteract parasitic insects and endemic diseases is similar. Cooperation in this sphere requires a broad perspective and the participation of numerous human resources.

The core of Japanese cooperation has operated on a project basis concentrating on existing centers. It has assisted in tertiary medical care and the training of specialists. This center-based cooperation is important, but in order to extend and improve basic medical services in the North and Northeast, it is important also to cooperate in the area of primary health care. This involves support for the building of institutions oriented to the improvement of health and hygiene services in regional societies and to the training of paramedicals who will contribute to this institution building at the regional level. The mode of cooperation should support the decentralization of regional medical administration and the organization of systems of regional medical care which are to be developed in Brazil.

To look at strategies and techniques of assistance, Japan will be expected to participate in the planning of a variety of components for individual programs and projects with varying aims. It is therefore desirable that the nation cooperate with other aid agencies and support local costs and that cooperation be applied more actively and flexibly than hitherto.

2.2 Encouraging cooperative research and expanding regional international cooperation

Along with extending basic health services, it is vital to maintain the existing internal system, and encourage cooperation in fields where high levels of technology are required, where better results can thus be expected.

Technology transfer to Brazil for vaccine manufacture and quality control is going ahead satisfactorily. Currently, Brazil is acting as a Central and South American center for the Third-Country Training Program of JICA and recently has also accepted

trainees from Portuguese-speaking countries such as Angola and Mozambique in Africa. Vital tasks for the future of development assistance are the capacitation of researchers and the encouragement of cooperation in such areas as research into endemic tropical diseases and measures to deal with polio, in which technology transfer is well advanced and technological levels are thus high. The future, therefore, holds out the opportunity to expand regional international cooperation among Central and South American countries and Portuguese-speaking nations by further technology transfer through the Third-Country Training Program..

2.3 Supporting a system of medical care for the urban poor

Brazil has other tasks in addition to the improvement of a regional system of medical care. For example, organizing a system of medical care and hygiene for the poor and the low-income earners in urban areas. There has been a remarkable increase in population in the Favelas (illegal slum settlements), particularly in the big cities such as Sao Paulo. Between 1973 and 1987, Sao Paulo itself saw a 60 percent population increase. The population of the Favelas of Sao Paulo, however, was reported to have increased 1,000 percent. In view of the poor hygienic and sanitary environment of the Favelas, in November 1988 the State health authority embarked on a policy known as "Projeto Favela," under which common bathing and toilet facilities, clinics, and nurseries are to be provided. At the same time, the health and development of infants and children is being monitored, and the populace provided with education in health and hygiene. It has been difficult, however, for the health authority to secure the experienced medical and paramedical personnel needed to run the program.

It is feasible for Japan to cooperate in basic needs of health and medical care programs targeted on the urban poor such as the Favela Project, and assist in the development and education of the skilled personnel required in this field. This is a matter which both sides should investigate in the future.

3. Further cooperation in agriculture, livestock farming, forestry, and fisheries

3.1 Agriculture

Agriculture in Brazil has traditionally been pursued on a large scale through large farms capitalizing on the country's vast spaces. The Cerrado development project, in which Japan has been cooperating, is a project to develop large arable land in the extensive unexploited Cerrado area in the expectation of economic effects, generation of employment and settlement for the poor farmers. One of the issues in the future development of Brazilian agriculture, and a new task of development assistance, is to seek to move from horizontal to vertical expansion of agriculture, given the necessity to provide more closely articulated responses, such as improving

productivity, increasing added value and having a greater concern for the environment.

The agricultural sector draws in 30 percent of the working population, but accounts for no more than 10 percent of GDP, and is notably backward in efficiency and productivity. Future development assistance should be oriented, at each stage of development, to considering the optimum scale and the development of labor-intensive agricultural technology which capitalizes on distinctive regional characteristics, and to providing development assistance for "inward" initiatives which will improve production efficiency.

As one example, consideration might be given to the integrated rural development projects designed to prevent the deterioration of the land and environment, to maintain fertility, to reform the system of distribution and to cultivate new markets in accordance with changing needs. This might be achieved through the development and dissemination of techniques of storing, processing and packaging agricultural products, the development and spread of low-cost farming and irrigation techniques, and the improvement of products. If progress is to be made with Brazil's new economic measures, the crucial issues for agriculture are prices policies, modernizing the distribution system, and seeking efficiency in transport and storage. There is good potential for technical cooperation between Japan and Brazil in approaching new agricultural policies.

The bulk of Brazil's poor peasantry is concentrated in the Northeast, and thus the greatest policy issues for the Northeast are the eradication of poverty and the correction of regional disparities. This region was originally a semi-arid area with little fertile arable land. On top of the extreme natural conditions of drought which strike the area periodically, the land has been degraded (desertification) by human factors through over-cultivation and through slash-and-burn farming. This tendency has also been exacerbated by the cutting down of Caachinga, a thorny shrub which grows in the semi-arid areas of Brazil's Northeast, for charcoal and firewood to fuel bakeries, tileworks, and brickworks.

A further social and environmental problem for Brazil is that the great influx of population into the big cities such as Sao Paulo and Rio de Janeiro, and the large-scale immigration into the Amazon region, come mainly from amongst the poor peasants and small farmers of Northeast. Policies for these poor farmers of the Northeast must address not only agricultural technology to improve agricultural productivity or stabilize incomes through diversified farming activities, but also a more comprehensive approach to the problems of land ownership, improvement of social infrastructures which will encourage the regional population to remain permanently in the area, and educational action to raise awareness of the environment and hygiene. Japan should preferably use its economic and technical capacity to provide positive support and flexible responses.

3.2 Livestock farming

The livestock farming of recent years has seen the meat processors and others more active in the development of cattle-raising, mainly in the Amazon region, as a response to increased demand for meat. The method used is free-range pasturage of cattle after the forests have been burnt off, a technique in which costs are low but productivity is extremely poor. It is precisely in this area, however, that soil fertility is quickly lost, creating the need to clear new forest. The problem is thus that the cattle industry is the biggest source of damage to the forests.

The major issue in livestock farming is to restrict development of this sort which places such strain on the environment, and to find new techniques which can be sustained for longer. Specifically, it is first necessary to move from poorly productive natural pasturage to intensive cattle raising, and it is desirable that Japan further expand and upgrade technical cooperation to this end.

In the pig and poultry industries, cooperation is expected for improving production techniques for more efficient raising and for reducing the raising period.

3.3 Forestry

What the forestry industry requires above all is an environmental perspective—increased and strengthened technical cooperation to grow trees and conserve forests. Brazil's tropical rainforests have been particularly recognized as vital to the global environment as a whole. The target, however, is not simply the Amazon area where the rainforests are concentrated. It is essential to curb the desertification in the Northeast by developing tree planting and forest management projects and to complement the preservation of the rainforests of the Amazon region. Adequate consideration must be given to the nature and problems of each region as far as forestry industries are concerned. A total approach is required in which there are contributory relationships among regions.

The Indian inhabitants of the Amazon region traditionally have unique methods of forestry control appropriate to the ecology of the rainforests, and their lifestyle embraces natural environmental conservation. Apart from the Indians, the rubber planters—known as "seringueiro"—from the earliest have carried out their own traditional form of agro-forestry in order to co-exist with the forests which are the basis of their living. What is needed is total conservation of the forests with a view to the agro-forestry or social forestry which is part and parcel of the lives of those earlier inhabitants of the region. Japan should provide support by cooperating in research into the management and conservation of the ecology of the Amazon rainforests, show a concern for the society of the region and the lifestyles and culture of the people, and learn from their management of the forests.

Flooding in Rio de Janeiro is evidence that another pressing problem is damage to forests in river basins. A major task in particular is reforestation at the upper

zones of rivers which run through the city. Japanese cooperation and support is also desirable here.

The scale of projects in this sphere—the targeted area, project duration—tends naturally to blossom. Given that it is not easy for a single donor country or a single institution to achieve results by itself, it is particularly important for development in this field that there be cooperation and contributory relationships between associated donor nations and institutions.

3.4 Fisheries

Brazilian fisheries is an area in which much remains to be developed. From the point of view of improving the standard of living of the inhabitants of coastal regions and providing a supply of protein sources to the interior, the important things are the promotion of fish consumption, techniques of shrimp and crayfish culture, techniques of freshwater fish culture, and distribution infrastructure.

While there is much still to be developed in terms of resources and basic production facilities in Brazilian fisheries, Brazil possesses not a few high-standard marine and fisheries research institutions, and thus a basis for cooperation at an advanced level.

Fisheries are an area which is a Japanese strong point, and there is great potential for cooperation in areas from advanced research as mentioned above to the development of human resources in production skills, which currently are a little behind.

Further, given the existence of advanced research institutions, the possibilities should be investigated of transferring technology to other countries in the Central and South American region and other Portuguese-speaking countries—which include fishing nations such as Mozambique, Angola, Sao Tome and Principe—through JICA's Third-Country Training Program.

4. Expanding cooperation in environmental fields and a deeper environmental consideration

Brazil's environmental problems can be divided broadly into two: (1) Problems of the natural environment, such as destruction of the forests due to the development of agricultural and livestock farming in the Amazon region, the loss of species of flora and fauna, and desertification in the Northeast, and (2) problems of pollution caused by urbanization and industrialization, such as contamination of water, air pollution and problems of waste disposal. Regionally, natural environmental problems typically occur in the North and Northeast, while pollution problems are conspicuous in the cities of the Atlantic Coast and mining and manufacturing regions in the interior. A further characteristic of this problem is that it relates closely to a range of sectors including agriculture, mining and manufacturing, health and medical care, and human

resource development.

With regard to cooperation over environmental issues, problems associated with the exploitation of the Amazon region have received particular attention worldwide, and the importance of cooperation directed to conserving the rainforests is commonly recognized among aid donor countries. Apart from this, fields in which Japan has technology and know-how based on experience are the antipollution measures to deal with pollution resulting from mining, transport, industrial and domestic waste, etc. It is vital that cooperation in these areas be encouraged and expanded further.

The tropical regions of Brazil have diametrically opposite natural extremes of wetness and semi-aridity, and the effective and efficient exploitation of precious environmental resources in both zones will become a major issue from now on. Cooperation to transfer Japanese technology to be used in basic survey and research work on such matters as wild living species and genetic resources in the tropical forests of these two zones will be particularly significant. It will be vital to carry out joint long-term surveys and research together with Brazil. This must be vigorously approached as one aspect of cooperation from Japan which can bring about sustainable development.

It is essential for the future to approach problems of the natural environment and pollution in a comprehensive manner, outside the conventional framework. Consideration must be given to the distinctive characteristics of each region and complementary relationships among regions so that it is possible to implement policies laterally across all developing sectors. In the short term, Japan and Brazil both should seek to organize and strengthen a system for pursuing environmental concerns and policies. The Aid Study Group on Environment (JICA/December 1988) identified the following four issues to be addressed by Japan in the future:

- (1) Implementation of environmental consideration: To involve the environmental consideration in development plans at an early stage, and to emphasize sustainable development and improved lifestyles for regional communities;
- (2) Expansion and enhancement of environment-related projects: Cooperation in preparing basic data and human resources for developing countries, cooperation in the formulation of master plans, and action on measures to protect the environment;
- (3) Systematic development of environmental information; and
- (4) Institutional arrangement of aid agencies for the implementation of environmental consideration

4.1 Problems of the natural environment

The issue of conserving the Amazon rainforests has attracted attention worldwide. It is regarded by the Brazilian Government, also, as a high-priority problem,

and is one over which Japan ought to cooperate positively. The specific form that cooperation might take is to research and evaluate the environmental impact of forest exploitation and the resultant damage, and to provide technical cooperation in forestry management and conservation. It is also necessary to produce a comprehensive response to the problem of mercury contamination, which has become a major issue in recent years in the Amazon basin as a result of gold mining.

A comprehensive approach necessitates consideration of regional relationships in the North and Northeast. The desertification and the presence of increasing poverty in the Northeast has become a major source of pressure on the development policy of the Amazon region. A realistic and effective method of dealing with this would be to pursue the integrated rural development projects in the context of the society of the region, combining irrigation and development of the Cerrado to absorb those in poverty and retain them in the region, with control and management of the forest resources of the Caachingas areas of the Northeast, diversification of farming and improvement of agricultural productivity, vocational training and so forth. It will be necessary to support an even more thorough approach to maintaining the natural environment for sustainable development.

The fundamental principle in environmental policy is to preserve the livelihoods of the indigenous society. It is therefore necessary to curb development and conserve the total environment in areas where people live, in order not to threaten the lifestyles of the earlier inhabitants of the Amazon region, the Indian tribes, and the rubber planters.

4.2 Problems of pollution in urban and industrial zones

With the economic growth of the 1960s and 1970s, the pollution of rivers and oceans by industrial wastes and air pollution brought about by rapid industrialization, and how to handle it, had to be addressed as a major problem around mining and manufacturing belts. Further, problems of urban pollution due to increasing urbanization as a consequence of industrialization appeared—housing problems, noise, traffic problems and pollution, the pollution of water through human activity, and air pollution in the cities. In response, the Brazilian government over the first half of the 1970s set up a system of environmental administration, establishing an agency to be responsible for the environment and enacting legislation relating to the environment. The system thus organized achieved some success.

Japan has implemented a project covering the training center for mine control and a project covering forestry research in Sao Paulo, and has accepted trainees in environmental matters. Greater cooperation and support than hitherto will be sought, however, to maintain and improve the Brazilian city environment with its extremes of urbanization. Positive cooperation and support should be offered in fields in which Japan in particular has accumulated experience and technology—the monitoring and control of water and air contamination, the range of measures for dealing with traffic

problems and pollution, the treatment of waste water, and the disposal of hazardous wastes from mining and manufacturing.

The cause of the rapid growth of urban populations is the influx of the poor, chiefly from the Northeast, into the cities. They have formed illegal settlements known as favelas, in which they live socially and economically unstable lives amidst a poor environment for living. Appropriate urban planning for Brazilian cities is an immediate necessity. At the same time, it is essential to alleviate rural poverty, which is the dynamic force behind population movement into the cities. Japan should contribute to balanced, countrywide development, and should support and cooperate in the formulation and execution of both urban and rural development planning.

4.3 Efficient utilization of environmental resources and cooperation in basic research

For Brazil, which relies on oil imports, vital developmental tasks are to hold down growth in the demand for energy and improve the efficiency with which energy is used. Since the beginning of the 1970s, Japan has achieved results from moves to conserve energy, and it is important that Japan provide active support and technical cooperation, including recycling of resources.

With tropical forestry resources—tropical rainforest, tropical seasonal trees, and Caachinga—the necessity, apart from conservation, is to encourage systematic surveys of and research into the ecology of tropical forests and living species, to determine what the actual position is, and to adopt a global and long-term point of view in both using and conserving these resources effectively. Japan should cooperate in such surveys and research and give generous support.

5. Support for human resource development and scientific and technical cooperation

5.1 Support for human resource development

In the human resource development, the basic educational problem is the disparities among regions in primary and secondary enrolment and literacy rates. Causal factors such as the lack of skilled people to run education, the insufficiency of educational facilities and materials, and the problems of families in poverty might be considered. More support and cooperation is desirable to redress imbalances, improve the literacy rate amongst regional populations, and improve primary and secondary enrolment rates.

If Japan is to proceed with assistance and cooperation in the development of human resources, the vital elements will be technology transfer and the development of skills appropriate to the needs of the times, given the increasing demand in advanced technological fields and the high level of science and technology in Brazil. The most

urgent task in modernization of the economy under the new Collor Plan is the education of business-minded mid-level engineers and administrators. The positive participation of private enterprise of Japan is as essential as cooperation between governments in achieving this objective. Private-sector cooperation is particularly desirable in making industry more efficient and modernizing the business side.

5.2 Scientific and technical cooperation

Brazil already has a high standard of science and technology. Constructive mutual discussion and study is thus anticipated on schemes for additional and broader cooperation, not only in arenas for discussion within the framework of ODA, but also through such avenues as the Japan-Brazil Scientific and Technical Cooperation Agreement of May 1984 and the Japan-Brazil Scientific and Technical Symposium.

Consultations on technical cooperation on the basis of ODA can be centered around the annual discussions on Japan-Brazil technical cooperation. However, it is appropriate for the future to seek a higher and wider level by developing and expanding the cooperative relationship between the two countries both through governments and the private sector.

6. Improving infrastructures

Under Brazil's present situation of stringent economic policies, extensive public investment is not possible; only priority measures or those which relate to maintaining the infrastructure are being dealt with. In handling matters relating to infrastructures, Japan must respect Brazil's development priorities, and undertake studies into their implementation. A positive fundamental response must be found to such specific matters as highway networks for transportation, communication networks, regional electricity supply, and the provision of tap water and sewerage systems to contribute to the improvement of the quality of life.

In order to assist in the eradication of poverty in the North and Northeast, identified as a major issue in the economic development planning of the new Brazilian government, the highest priority requires involvement in improving the social infrastructure in these regions. Here, cooperation is anticipated in contributing to raising standards of health and hygiene, and medical services and education, which are particularly backward by Brazilian standards in the North and Northeast.

In implementing this priority, it is necessary to give adequate consideration and study to questions of sustainability, environmental impacts, and appropriate technological levels, in order to improve the social and living environment of the inhabitants and respect their rights.

7. Further cooperation in manufacturing, mining and energy

7.1 Manufacturing

The Collor government's manufacturing policies are aimed at the positive introduction of measures for internationalization and liberalization in order to reconstruct the Brazilian economy, and to that end establishing new manufacturing models and strengthening the fabric of industry. In facing up to this, Brazilian manufacturing industry is approaching a period of major change, deemed to be necessary to reform fundamental structures.

New industrial policies call for implementation of the Industrial Competitiveness Program (PIC) and the Quality and Productivity Program of Brazil (PBQP). As far as implementing specific policies is concerned, chief targets are the development of advanced technological areas—information industries, fine chemicals, biotechnology, precision equipment, new materials—and the improvement of productivity and product quality, which is fundamental to the restoration and maintenance of international competitiveness.

Japan possesses a high level of international competitiveness in a number of the advanced technological fields which Brazil needs, and has acquired technology and experience in improving productivity and thorough systems of quality control. It is feasible for Japan to transfer and introduce to Brazil such know-how based on this experience, together with advanced technology to support the revitalization of the manufacturing industry and the upgrading of competitiveness.

To correct the situation in which scarce resources and energy are being wasted, an area in which Japan might, in the future, cooperate constructively through technology transfer, energy-saving technology is required for greater efficiency. In order to encourage and institute the pursuit of economic efficiency, upgrade the commercial fabric, achieve thorough quality control and improve productivity, it will be essential to educate administrative staff to have clear management concepts appropriate for a free-market economy. It is desirable for Japan to cooperate in this skills training and development.

Japanese experience and technology in these areas has virtually all been accumulated by private enterprises. If cooperation is to be more effective and efficient, it is absolutely necessary to obtain the collaboration and participation of private firms. Thus, it is vital to encourage and expand the appointment of specialists from the private sector and the acceptance of trainees to be trained by companies, and to maintain the private investment environment of Brazil.

7.2 Mining and energy

In the mining industry, there is great scope to develop mineral resources by exploiting the economies of scale offered by the sheer size of the country. Brazil

has abundant reserves of such minerals as iron ore, bauxite, manganese, and uranium, and further development is anticipated. In this sector, Japan might strengthen and expand cooperation in the introduction of the latest technology in surveying, in the dressing, smelting and refining of non-ferrous metals, and in dealing with environmental problems such as air and water pollution associated with the development of mining industries.

At the same time, adequate concern must be exercised so that the mining industry in the gradually developing Northeast and Amazon regions does not, in its development, threaten respect for the rights and living environments of the Indians and other inhabitants. There have been recent instances of mercury contamination resulting from gold mining in the Amazon region, affecting people through fish taken from the rivers, and of poisoning by mercury vapor at mines. This is a very serious situation. The Brazilian government must take prompt action, and Japan should look at providing positive support and cooperation.

In the realm of measures to deal with an inadequate energy supply, it is vital to introduce resource recycling and energy-saving technology, and to improve the energy self-sufficiency rate by using recyclable resources. This means the development of alternative energy sources such as solar power and alcohol, and the development of domestic oil resources. Japan has acquired a considerable amount of experience and technology in recycling resources in energy conservation measures, and in the development of recyclable energy resources such as solar power. It should, in the future, cooperate in Brazil's energy policies from a long-term perspective in technical research and development, and technical transfer.

IV. Considerations in Providing Development Assistance

If Japan is to provide effective development assistance to Brazil and achieve stated goals, the points listed below must be considered in relation to the planning and implementation of cooperation.

1. Identifying promising projects through bilateral discussions

Brazil's purpose is to achieve a level of cooperation appropriate to current situations and needs most effectively, through well-defined joint projects with Japan. What is important for Japan in cooperating with Brazil is to collaborate fully with the Brazilian government from the entry-point stage of the project cycle, at which plans for cooperation are formulated and adopted, and to be actively engaged in setting and executing priorities.

Essential for this is to develop mutual awareness between the two sides, and well-defined projects over a range of areas of action, around the nucleus of the annual Japan-Brazil technical cooperation discussions.

2. A concern for regional disparities

Brazil is a country in which development conditions differ widely from region to region — the financial and technical capabilities of counterpart organizations handling cooperation, degrees of progress in social and economic development, and differences of culture, ethnic group, climate, and customs. In a country as extensive as Brazil, the important thing in future cooperation is flexibility in methods and conditions of assistance. In providing development assistance to Brazil, also, it is necessary to consider the great internal regional disparities when making major decisions on regional cooperation in all sectors, and when determining project sites. Where cooperation occurs under standardized conditions for all areas in Brazil, with uniform standards of implementing assistance derived from economic indicators such as Brazil's GNP, it will be necessary to adjust for the nature of the project and the specific region.

It is not that the internal diversity of Brazil should always be regarded as a regional disparity which must always be corrected as a negative factor. Rather, it is important to understand cooperative and complementary relationships across the country as a whole, and to exploit the distinctive features of each region to form a comprehensive viewpoint and achieve growth over a wider front.

For example, in environmental conservation, approaches must be considered which integrate nationally such tasks as conserving the tropical rainforest of the Amazon region, curbing and halting the desertification of semi-arid areas of the Northeast and reforestation in the catchment areas of rivers flowing through urban areas.

In policies for dealing with the urban poor, there must be a cooperative strategy which embraces not only such measures as improving medical care and conditions of hygiene or creating employment for urban poor, but also the improvement of agricultural productivity, the creation of employment and the retention of population in rural areas, in order to eliminate the pushing factors which are causing the drift of rural populations to the cities.

Further, it will be of major significance to assist Brazil's self-reliant efforts, by encouraging the transfer and extension of technology between regions within Brazil—from the Southeast, with its high technological levels and capacity to absorb cooperation, to the undeveloped North and Northeast.

3. Environmental considerations in providing development assistance

Responses to environmental problems involving environment-specific projects, which deal with the environment as a single independent sector, will not provide fundamental solutions. The first task is to establish a system for guaranteeing the implementation of an environment-integrated approach to problems, so that environmental considerations can be fed into the early stage of formulating development plans for all sectors.

According to a report of the Aid Study Group on Environment/JICA, in formulating development plans for all sectors there should be full awareness on the part of both the donor and recipient countries of three fundamental perspectives. Firstly, the recipient country is the implementor of the development project. Projects implemented in developing countries are to be carried out by free decision of the developing country and under related laws and regulations of that country. Secondly, it is important to secure sustainable development which accepts the need to strike a balance between the lives of the inhabitants and the natural resources in the vicinity of the development project. Thirdly, environmental considerations should be incorporated into the projects at the earliest possible stage—efforts should be made early to ward off any negative environmental impact of development insofar as it is possible.

Brazil possesses the world's largest tropical rainforests, which represent an extensive and precious natural resource: the global impact of damage to these forests as a result of their exploitation, or the desertification in the Northeast, presents very great problems. Pollution due to rapid industrialization and urbanization in recent years, however, is also noticeable in mining and manufacturing belts and in the cities, where the environment represents a major issue which cannot be avoided. It is very proper to be concerned about such environmental problems in the development of Brazil. It is desirable that Japan offer constructive support to set up a system of implementation of environmental considerations in short order, in the context of detailed discussions with the relevant authorities in Brazil.

4. Taking advantage of private-sector vitality

The Collor Plan identifies as major issues in the economic development of Brazil the encouragement of privatization, a more efficient industry, and the active introduction of private-sector dynamism.

It is initially necessary for Japan to emphasize projects and pilot projects to support the participation of the private sector and inject private-sector vitality, within the existing framework of government-to-government cooperation. It is also necessary for technical cooperation programs to consider the dispatch of specialist advisers in commercial management, and to provide technical training in private firms in Japan for core Brazilian technicians.

The participation of private enterprise in this kind of government-based cooperation is vital, but it is also important to encourage and extend cooperation on a private basis as well. Broad cooperative relationships at both government and private levels are to be encouraged in areas of economic cooperation and exchange.

5. Cooperation among federal, state and local governments

It is important to improve communication and coordination among local organizations, state governments and the federal government. In handling in a positive and specific manner all phases of development and the needs of all regions of Brazil, with its great expanses and diverse peoples and cultures, and in reflecting this in development assistance, Japan needs to give consideration to cooperation between the federal government and those regional government organizations which will become the main agencies for implementing projects. If required, it should make efforts to play a mediating role between the two.

At the entrance-point stage of the project cycle, also, it is important to carry out research and analysis of regional needs and to obtain the general consensus of opinion amongst inhabitants of the region involved. Where development impinges particularly intimately on the living environment or human rights of local inhabitants, it is necessary to seek the participation in all matters of those involved locally, organize local discussions, surveys, joint operations and research, listen to local opinion, and obtain a consensus concerning the project.

6. The experience and knowledge of Japanese Brazilians

When one traces the history of cooperation and exchange between Japan and Brazil, and considers the future, it is of great significance that Brazil has had an historic presence of a community of Brazilians of Japanese ancestry, who are well-established and widely active in contemporary Brazilian society. In future cooperation with Brazil, it will be important—from the point of view of expediting an understanding

of Brazil and achieving more effective cooperation—to learn from the knowledge and experience of these Japanese Brazilians.

Specifically, the possibility might be considered of obtaining the participation of Brazilian Japanese technicians active in a number of fields to act as a bridge for technology transfer through JICA's Third-Country Training Programs, which exploit the high technological capacities of Brazil, or for Japanese technical cooperation projects. There are numerous examples already in which the Japanese Brazilians have acted as Brazilian specialists and contributed to the smooth and effective implementation of projects. It may well turn out in the future to be a valuable and effective method of handling Japan's cooperation schemes to appoint Japanese Brazilian technicians as technical cooperation specialists in Spanish- and Portuguese- speaking countries.

When one considers Brazilian economic issues such as making industry more efficient and revitalizing the private sector, Japanese Brazilians, and in particular second and later generation Japanese Brazilians, could play a vital role as core staff and as coordinators between Japanese and Brazilian enterprises. It may well be possible to contribute more directly to the modernization of the Brazilian economy if people who are part of Brazilian society, but who understand Japanese technical and business concepts, can play a role in establishing them in Brazilian companies.

7. Consideration of the Role of Women in Development (WID)

The Development Assistance Committee's (DAC) policy statement, Development Cooperation in the 1990s, declared that "More active participation of women in the process of development at all levels is an essential element of sustainable, participatory development," clearly indicating the significance of the role of women in development cooperation. The relationship between development and the improvement of the status of women has in recent years been discussed extensively among advanced donor countries, the United Nations and other international organizations. In the future, WID will be an issue to be given full consideration in implementation of development assistance to developing countries, along with problems of poverty and the environment.

In providing development assistance to Brazil, it is necessary to follow three principles which represent the basic concept of WID: (1) Improving the overall status of women in developing countries; (2) Encouraging the participation of women as active agents in development, rather than simply as beneficiaries; and (3) Strengthening of cooperation with advanced countries and international organizations, giving full consideration to these matters. It is necessary to take WID concerns into consideration in all fields of development cooperation, from agriculture to health, medical services and the environment.

V. Recommendations concerning the system of Japan's Development Assistance

1. Developing a policy dialog for active and systematic development assistance

Japanese development assistance is fundamentally "request-based," emphasizing autonomy and self-reliance on the part of the recipient country. In recent years, however, there has been a recognition on the part of donor countries of the necessity to provide assistance in a more active and planned manner, and work towards more effective implementation of development assistance. In June 1989, Brazil also proposed joint action over technical cooperation with Japan, in effect keeping in step with moves towards promoting more efficient cooperation. The gist of this Brazilian proposal is that at all stages—from plan formulation and decisions on implementation priorities to monitoring and evaluation of projects—both parties have extensive discussions to decide on basic schemes of cooperation and apportion of roles between the two. A start has already been made on the joint programming of tasks in environmental fields.

It is important in cooperating with Brazil to have thorough policy interaction for schemes for medium- and long-term development assistance, looking at such things as limiting factors on development, policy priorities, and the outlook for Brazilian economic development. Various venues for the exchange of opinion and discussion should be exploited, starting with the current annual government-to-government talks on technical cooperation, to provide a broader framework for cooperation policy. It is also important here, given Brazil's intentions as set out above, to facilitate detailed exchanges of opinion to generate a common awareness from the first stage of establishing this framework.

One requirement in formulating development cooperation plans is full information on the characteristics of the region involved, apart from general information relating to Brazil. To this end, in addition to the dispatch of specialist advisors and missions to formulate proposals and projects, and planning and research personnel under the existing framework, it is desirable to encourage research and exchanges over a wider front. For example, contact and exchanges of opinion between academic economists, researchers concerned with the region involved, and leaders of regional activity from both countries will develop a common awareness and mutual understanding of the region involved.

2. The flexible application of development assistance

Japan's development assistance is carried out under the fundamental principles of respecting the sovereignty and autonomy of the recipient country, and of assisting in its self-reliant efforts. For a newly industrializing country such as Brazil, which

has a measure of economic strength, Japanese development assistance centers around technical cooperation, which requires that the recipient side provide technological and capital participation. And given its own economic and technical strength, Brazil itself says that it does not need measures in which the donor country bears such recurrent costs as the cost of maintaining the basic infrastructure, normally accepted within Japan's framework of implementing technical cooperation.

Due regard must be given to this fundamental in the future. However, when attempting to redress the striking social and regional disparities, in accordance with the needs of Brazil, which possesses social and regional diversity, the application everywhere of consistent and uniform standards to development assistance implementation is neither justified nor realistic. In the future, it will be necessary, when cooperating over environmental problems, or over backward regions such as the North and Northeast in particular, to apply development assistance standards flexibly in accordance with the local realities.

The flexible application of development assistance has two aspects. The first is to apply the conventional development assistance, which is restricted to implementation of development assistance in terms of economic indicators such as GNP for each recipient country, more flexibly in accordance with the target sector, or conditions in the target region or locality. This has the prime advantage that it makes it possible to implement quick and more suitable assistance for the region concerned and its inhabitants; it can also be expected that there will be a multiplier effect if such assistance is combined with conventional technical cooperation.

The second aspect is the flexible operation of conventional development assistance. For example, in the case of a project targeted on the poor in rural communities, in which Japan has slight experience, it is frequently the case that no adequate system for the reception of assistance can be expected. Moreover, it requires various components, and growing local cost and risks. It is not realistic to expect a regional counterpart organization to bear all this; it is necessary to find a way to reduce the burden for the recipient side, and gradually hand over all the management to the counterpart organization as the project stage proceeds.

Aid for basic human needs (BHN) such as literacy education or primary health care must have community participation if it is to have a broad effect on regional society. With regard to the burden of local costs necessary to run a project or provide resource materials, it is necessary that responses be flexible, rather than adhere to conventional methods.

This sort of flexibility in development assistance does not represent a special exception; rather, it is significant from the point of view of reorganizing Japan's system of development assistance in accordance with diverse needs and realities. It is desirable that these improvements be carried out rapidly through detailed discussion and exchanges of opinion between Japan and Brazil.

3. Greater cooperation among developing countries

Given Brazil's level of technology and its leadership role in the third world, it is anticipated that further cooperation and technology transfer among Central and South American countries and Portuguese-speaking countries in Africa will be encouraged. By supporting positively such cooperation among developing countries, Japan will be able to broaden the base and extend the effect of its development assistance. In future, such cooperation should be expanded in areas where a positive effect can be expected by technology transfer with Brazil, where similarity of languages and environmental or developmental conditions are advantageous.

Cooperation between Japan and Brazil has developed over a broad front from the transfer of basic technology to research cooperation at a very high level. There are a number of fields in which technology transfer is already very advanced. Of these, it will be useful to raise the standards of cooperation in areas where demand from other developing countries is high and further improve the capabilities of cooperating organizations. It is important for the donor side for the diversification of development assistance to transfer technologies which will allow further technical cooperation among developing countries.

It may be possible to encourage technical cooperation and technology transfer among developing countries, not only through JICA's Third-Country Training Programs based on Brazil, but also by sending Brazilian technicians to other developing countries. Such measures should be positively examined in the future.

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