

Finally, it must be pointed out that cooperation in the fields of human resources development and finance is very important for boosting exports, also. Emphasis must be placed on technical cooperation for fostering Indonesian entrepreneurs, engineers and skilled workers, technology transfer, and research and development. In regard to financial cooperation, it is vital to expand both "two-step loans" and an investment/loan program which will prompt private-sector investment from Japan.

2.3.5 Fiscal reconstruction

Indonesia's accumulated debt, unlike that of countries in Central and South America, is largely public debt, bearing interest rates that are lower than private-sector interest rates. However, looking at the interest on the accumulated debt in recent years, it is estimated at 2.3 billion U.S. dollars in 1987/1988. Added to the principal debt of 3 billion dollars which must be repaid, the sum reaches 5.3 billion U.S. dollars. It cannot be compensated for by using government savings which is the difference between domestic fiscal revenues and operating expenses in the government's current fiscal situation. Looking at the budget for 1989 - 1990, a difference of 1.8 trillion rupiahs between revenues of 25.2 trillion rupiahs and outlays of 23.4 trillion rupiahs makes up only 14% of the development budget of 13.1 trillion rupiahs. The remainder is to be obtained from foreign assistance financing. Various public projects must be implemented using these loans.

The government borrowing and repayment sums which underlie the Fifth Five-Year Development Plan of the Indonesian government are presented in the following table.

Government Borrowing and Repayment Plan

(Million dollars)

	88/89	89/90	90/91	91/92	92/93	93/94
Special program assistance	2,225	2,302	1,641	1,042	545	245
Project assistance	2,866	4,080	4,654	5,159	5,475	5,550
Repayment of capital on government borrowing	-3,909	-4,081	-4,429	-4,434	-4,319	-4,389

It is immediately evident that a significant increase in project aid can be forecasted for 1989 - 1990 and thereafter. Without this aid, it would be impossible to either pay back the accumulated debt or build up government capital reserves. This large increase in borrowing, however, will result in an increase in the amounts which must be repaid in the near future. It goes without saying that the fundamental solution is to rebuild fiscal health by increasing domestic revenues.

The total amount of outstanding loans to Indonesia from Japan in 1988 was, the largest of any aid donors in the world, surpassing even that of the World Bank, and the influence of Japanese assistance on the fiscal administration of Indonesia became stronger. Therefore, Japan must actively assist Indonesia in promoting self-development and in reducing its fiscal deficit from a middle and a long term

viewpoint, while at the same time Japan must support the economic policy that Indonesia is pursuing and provide appropriate short-term financial assistance by means of on-going program assistance, particularly in view of the fiscal crisis which the country is facing at present. It is possible to shrink the fiscal deficit by earning foreign currency through exports and to repay the accumulated public debt by securing tax revenues. To realize this goal, Indonesia must focus economic policy on the following four points, in addition to boosting export industries and developing human resources as discussed previously.

- (a) Stimulate domestic savings and capital building.
- (b) Promote a technological revolution in export industries and encourage increased international competitiveness.
- (c) Implement the necessary reforms in the system, laws, and regulations to accomplish above.
- (d) Make economic and fiscal management by government bureaucrats both effective and appropriate.

It is important for Japan to encourage these steps and examine the proper form of assistance for them. One problem in particular should be pointed out in this connection. In debates on public finance in Indonesia, foreign loans are calculated in with the revenues. Since these are guaranteed by the IGGI, some might call this a balanced budget. However, this does not conform to sound fiscal theory. Moreover, the fiscal deficit is serviced by using borrowed foreign funds, and domestic savings are not mobilized effectively. While it is understood that, based on historical lessons, the Indonesian Government regards this as a very serious matter, for a part of these

government borrowings using public savings should be carefully considered now that Indonesia's per capita national income has reached 500 U.S. dollars. Recently there has been a considerable increase in savings by Indonesian farmers and there is a debate over the best practical use of these funds. On the other hand, excessive consumption by the urban wealthy and entrepreneurial classes is quite conspicuous. Issuing government bonds and half-government half-private bank bonds that are denominated in the rupiah, encouraging the public to buy this commercial paper and using the proceeds for effective public investment, should all be seriously assessed. This would integrate the public spirit of the Indonesian people and business spirit of the nation's entrepreneurs. It would also give government bureaucrats an opportunity to verify the propriety of public financial administration and to reconfirm that they have a strong interest in the livelihood of the people of their country. These would certainly do more than anything in the past to guarantee the implementation of the four points outlined above. In regard to cooperation on these points, Japan should provide Indonesia with practical advice and guidance on the management of public finances.

One proposal in this connection is for Japan to offer cooperation to Indonesian for the establishment of a public policy research institute. To lead the Indonesian economy along the optimum path for development, a comprehensive research institute which could contribute significantly to the formulation of government development policies is needed. In Thailand, there is the Thai Development Research Institute (TDRI) and in Korea, the Korean Development Institute (KDI). This type of research body is required

in Indonesia, too. Japanese cooperation for the establishment and operation of such an institute would no doubt make a very important contribution to the development of Indonesia.

When the cooperation of individual projects is viewed as a whole, such an institute should work to evaluate the overall contribution of foreign assistance to the development of Indonesia and to coordinate assistance in accordance with the actual status of projects reviewed. There are many specialists who earnestly anticipate the contribution that such an institute could make. This "Indonesia Public Policy Research Institute" (provisional name) could work to meet their expectations. Cooperation would cover construction of buildings and facilities by capital grant aid and cooperation in research by means of technical cooperation. A new type of cooperation by defraying the costs of commissioned research should also be examined. One method of establishing such a research institute might be to start as a joint project with Indonesian universities and economic organizations without necessarily adhering to the Indonesian Government. To this end, technical cooperation with the support of Japanese government agencies and universities should be expanded.

2.3.6 Developing small and medium-sized enterprises

Looking at the experience of Japan, small- and medium-sized enterprises played a major role in the nation's industrial development. Small- and medium-sized enterprises in Indonesia must be nurtured so as to secure the steady development of its industrial development. Small- and medium-sized enterprises should be supported to promote the development of domestic and export-

oriented industries by effectively using foreign capital and technology. Such enterprises should be in labor-intensive industries, such as the intermediate goods and parts manufacturing industries as well as the batik and rattan processing industries.

Strengthening support by the Indonesian government for small- and medium-sized enterprises in both funding and technology is vital. Japan, meanwhile, should forge measures which make it easier for Japanese small- and medium-sized enterprises to form joint ventures with counterpart enterprises in Indonesia.

With respect to financing, it is necessary for Indonesia to build up a new system of funding such as institutional financing. The experience of Japan's credit unions and mutual financing banks should be applied to technical cooperation for building up an effective financial system so as to nurture Indonesian small- and medium-sized enterprises. Further, while respecting the overall financial system of Indonesia, financial cooperation should be carried out through the official financial support system. Japan's ODA loan is provided at the low interest rate of 2.5% for the "Two-step Loan". However, when the loan is passed through the Indonesian financial system, the converted interest rate becomes 12 - 15%. A number of owners of small- and medium-sized enterprises complain that these rates are too high in comparison with the commercial interest rates of 19 - 24%. Although the World Bank apparently wishes to unify different levels of interest rates with commercial ones, there is still ample room for debate as to whether this method is appropriate for fostering the growth of small- and medium-sized enterprises.

How to open the path for optimum utilization of the "Two-step Loan" by small- and medium-sized enterprises in Indonesia is an issue that must be examined. Joint surveys and research with the Indonesian side concerning the best method of providing assistance to improve the current state of the official financial system should be considered.

2.3.7 The rational use of natural resources and environmental conservation

The total land area of Indonesia consists of 191 million hectares, of which 144 million hectares are tropical rain forest. This is the equivalent of 10% of all tropical forests in the world. Ninety seven percent of this tropical rain forest lies outside Java Island. Each year, from 900,000 to 1,000,000 hectares of the tropical rain forest is lost, first to slash-and-burn farming, and then to land clearing, timber felling, and forest fires. The area of tropical rain forest lost since 1950 is estimated at 49 million hectares, 34% of the total forest area. Up to 4.25 million hectares of mangrove forest have been lost, prompting fears of adverse effects on fisheries and of coastal erosion. Further, environmental deterioration, for example, air pollution and industrial pollution in urban areas and industrial zones, is progressing. For sustainable development, the development plan must be examined not only in the short and medium term but also in the long term, giving consideration to the conservation of natural resources and the environment. It is also necessary to strengthen an environment management system and to foster qualified personnel for it. An assessment of the impact on the environment of a development project (environmental assessment) must be started, if required, at an early stage of the development plan and the results of the assessment should be reflected in the plan formulated at a later stage.

For Japan, which possesses financial resources and technology for protecting the environment, it is crucial to actively contribute to the

protection of tropical rain forests and to optimum utilization of resources so as to stop the destruction of tropical rain forests.

A considerable amount of assistance has already been provided for measures aimed not only at reforestation but also at the treatment of solid wastes and sewage. Since the Indonesian Government is paying close attention to conservation of the environment and natural resources, Japan should extend as much cooperation for it as possible. For example, the institution building of the relevant agencies involved in environmental administration and management should be assisted at both the national and local levels. Technical cooperation should be extended to support the development of human resources involved in this work, too. It is also important to provide assistance to such environment-related projects as reforestation, soil conservation and the control of air and water pollution. It is anticipated that the environmental problem will become more and more serious as Indonesia's industrialization and urbanization progress in the future. Therefore, it is important that cooperation be extended to train Indonesian personnel to be specialists in fields related to conservation.

3 Methods of Planning and Implementing Assistance and Organizational Issues

Along with discussion of the contents of assistance to Indonesia, equally important issue is the method of planning and implementing assistance. This issue is by no means limited to Indonesia. Since the amount of Japan's ODA has been increasing rapidly, it is time to re-examine this issue from an overall perspective. Therefore, an outline of the main points will be discussed, with special reference to Indonesia.

3.1 Improving the effectiveness of planning and implementation

3.1.1 Promoting dialogs with the recipient country

In order to respond appropriately to the requests of recipient countries, which are becoming more diverse and require higher expertise, policy dialogs between the donor country and the recipient country regarding assistance programs and their implementation must be extended. There must be more frequent opportunities to carefully integrate the assistance policy of Japan with the development policy of the recipient country. Further, it goes without saying that on-going consultations between Japan and other donor countries and international organizations should be held so that coordinated economic cooperation can be promoted. Maintaining this type of dialog between the administrators and specialists of both countries would be very fruitful in terms of both the contents of cooperation and its implementation.

If the identification and formulation of development projects is undertaken based on the results of this kind of dialog, better projects could be established together with the current type of request-based assistance. A good example is the Major Foodcrop Production program (1986 ~ 1990). Thus, on-going dialogs between the development administrators and specialists of the recipient country and the officials of the Japanese embassy and the overseas resident office, as well as experts, should be vigorously promoted to establish good projects. The results of these dialogs should be reflected, as required, in the official policy dialog on assistance between both countries so as to enable more effective cooperation.

3.1.2 Enhancing post evaluations

It is extremely important to make the proper post evaluation of assistance carried out in the past and to make sure that the results of the evaluation are reflected in the formulation of future projects and used for more effective implementation of assistance. The Economic Cooperation Evaluation Committee was established within the Economic Cooperation Bureau of the Ministry of Foreign Affairs at the beginning of the 1980s, and since 1982 the results of its post evaluations have been made public in annual reports. An inspection report about "Current Status and Issues in Japan's Official Development Assistance" was released by the Administrative Inspection Bureau of the Management and Coordination Agency in 1988 and 1989. The report recommends improvements in the institutional aspect of development assistance. Post evaluations of individual projects have also been carried out by the Japan International Cooperation Agency (JICA), as an executing agency, and

the results have been reflected in planning new development projects implemented by JICA. In addition, the Overseas Economic Cooperation Fund (OECF) and the Institute of Developing Economies which received consignments for evaluation work from the Ministry of International Trade and Industry, have published the results of their evaluations of assistance, respectively.

Now that the amount of assistance is growing, as a duty to the Japanese public, it is more than ever a necessity to improve the contents of evaluations. Therefore, it is vital to redouble efforts to make the method of evaluation more accurate, to strengthen the evaluation system, to make public the results of evaluations at regular intervals, and to establish a system which can utilize these results in an organized manner. Japan has already had aid evaluations conducted by third parties, both at home and overseas, and has made public the results of these evaluations. In order to make fairer evaluations of assistance, evaluations by third parties must be encouraged and efforts must be made to ensure that the results of these evaluations are made known far and wide, both domestically and overseas.

3.1.3 Enhancing the quality of assistance

The untied ratio of Japan's ODA loans is already quite high by international standards. Japan, however, must aim at further expanding untied assistance. By extending technical cooperation and capital grant aid, the donation ratio and grant element of Japan's ODA should be increased. Continuous efforts will be required from now on

both to increase the amount and to enhance the quality of assistance. This is the surest path to raising Japan's international prestige and improving the understanding of Japan among all developing countries, particularly those in Asia.

3.1.4 Proper assistance for local costs

To smoothly implement a project and ensure appropriate effectiveness, it will sometimes be necessary for Japan to bear part of the local costs which in principle the recipient country should carry, depending on its economic and financial circumstances. If it is decided that Japan should carry the burden of local costs for the continuity or completion of a project, the procedure and criteria on which decisions are made should be examined carefully and agreed upon beforehand. Local costs have been borne as required by Japan's assistance. However, there have been instances in which the recipient country could not make the necessary budgetary allocation for buying land for infrastructure development projects implemented with loan assistance; the projects reached an impasse and the development plans were impeded. Japan should respond with careful deliberation to the issue of assistance for local costs that involve purchasing land. In technical cooperation involving land surveying and registering, on the other hand, Japan should respond as needed.

Japan has expanded measures to defray various types of local costs even in technical cooperation, including costs for the construction of necessary infrastructure facilities required for project

implementation, and costs of training middle-level technicians in the recipient country. The number of items which can be defrayed should be further increased and the conditions under which Japan can provide local costs should be relaxed. The Japanese Government should be more flexible on this matter so long as such measures do not deter the self-help efforts of the recipient country.

3.2 Strengthening the administrative structure for assistance

3.2.1 The organization of aid agencies

In response to the expansion of Japan's ODA, greater efforts should be made to increase the number of staffs of aid agencies and to strengthen their systems of recruitment and training. In order to effectively implement assistance that genuinely meets the needs of developing countries, it is essential to enhance surveys and analyses of each individual country, and to effectively link technical cooperation with financial cooperation. For this purpose, an assistance implementation system must be built for individual developing countries.

Along with the vast increase in the amount of assistance being provided, very close communications with the recipient country are being maintained and the opportunities for direct negotiations with counterparts concerning the implementation of assistance are increasing. There are many occasions when it is appropriate for overseas resident offices to hold talks with counterparts of a recipient country as extensively as possible and to respond on the basis of their observations in an opportune fashion. For this purpose,

It is necessary to not only shift the authority for budgetary decision-making and the management of local administrative affairs to the overseas resident offices, but also to increase the Japanese staff and the outstanding local staff at these offices. Strengthening the information collection capabilities of those offices and enhancing their ability to conduct basic surveys for finding new projects and making post evaluations are also required. Using local consultants or academicians from local universities and research institutes for the collection and analysis of basic information and the promotion of information exchanges with the overseas representative offices of other aid agencies would also be effective in this regard.

3.2.2 Preparation and effective usage of related information

Information, survey reports, and experts' reports regarding recipient countries collected by JICA, OECF, and other concerned agencies contain many items of value. So that people concerned with development assistance can effectively apply such information, along with information in publications by other donor countries and international organizations, they must be classified by different fields and countries. It would thus be useful to develop databases which could be utilized as required.

On the other hand, greater efforts must be made to improve the abilities of overseas resident offices to collect different types of information pertaining to a recipient country. Information gathered locally by experts and overseas offices such as embassies and the resident offices of JICA and OECF should be filed in an integrated manner and placed in the proposed "Development Materials Center,"

which would provide information to people concerned as needed. These measures would contribute to more effective utilization of information.

3.2.3 Effective linkage of technical cooperation and financial cooperation

The needs of developing countries for program loans such as Commodity Loans, Two-step Loans, and Structural Adjustment Loans are growing ever higher. In making this type of loan assistance highly effective, the number of cases in which technical cooperation is required to make economic and financial policies more effective is increasing. To facilitate planned execution of this kind of assistance, therefore, information exchanges and cooperation between JICA and OECF should be further promoted. The effective linkage of financial cooperation with technical cooperation would bring about a synergistic effect on the effectiveness of Japanese assistance.

3.2.4 Strengthening linkages with universities, research institutes, and local public bodies

Universities, research institutes, and local public bodies have many personnel with expertise who could contribute significantly to international cooperation. These institutions have been contributing a great deal by training people from developing countries and by dispatching experts. Recently, requests for cooperation, particularly in academic and research fields, not only from central governments but also local governments of developing countries have been increasing. Also, in the implementation of assistance, the emphasis

is on basic research, including sociological and anthropological studies, and development must now be examined from a multidisciplinary viewpoint. It is necessary to strengthen the linkage between governmental agencies involved in development assistance and universities, research institutes, and local public bodies in order to respond to the needs of development in developing countries and contribute to more effective assistance.

II. Summary of Analysis

1. Macro-economy

1.1 Current status

The Indonesian economy in the 1970s achieved a high economic growth rate of 7%, based on industrialization for import substitutes backed by expanded exports and abundant fiscal revenues due to the rise in the price of petroleum. However, from 1982 onwards, prices for petroleum began to drop and repayments for external debt increased. The growth policies which the Indonesian Government had been leading became increasingly difficult to implement. On the one hand, the Government was forced to impose policies of fiscal retrenchment. On the other hand, the Government implemented economic deregulations by means of financial and tax reforms, in order to use the vitality of the private sector to best advantage. However, her economy ended up with low growth in the first half of the 1980s. In 1986, the price of petroleum fell sharply and at one time sunk to US\$10 dollars per barrel, causing the economy to face the most difficult situation. To cope with these problems, the Government devalued the rupiah against major currencies, relaxed financial controls, and strove to increase foreign investments and exports of non-petroleum/gas (NONMIGAS) products through a series of comprehensive policies. Meanwhile, after the Plaza Accord in 1985, the yen revalued against the dollar, as did the Taiwan yuan and the Korean won in turn. Thus, the adjustment of foreign exchange rates was carried out under conditions of high economic growth in East and Southeast Asia. The economic upturn of the

industrialized countries was also sustained. As a result, NONMIGAS exports in 1988 increased by 34% and the permitted amount of direct investments from abroad also rose sharply by 257% as compared to the previous year. Stimulated by this good trend in the export sector, domestic demand also rebounded steadily. According to new statistical estimates of national income released recently, the economic growth rate rose by 4.8% and 5.7% (GDP base) in 1987 and 1988, respectively. This trend indicates that the economy has turned on to an expansion track. Furthermore, the permitted amount of domestic investments grew 37% more in 1987 than in the previous year.

Indonesia is making strides gradually toward breaking away from an oil-dependent economy. The share of the mining sector fell to 12% of gross domestic product (GDP) on a nominal base from a high of 24% in 1981, when petroleum prices were at their highest levels. During the same period, the share of the manufacturing sector rose from 11% to 19% and the share of NONMIGAS exports rose from 18% to 60% of total exports.

The problem of external debt, however, is most serious. Due partly to the revaluation of the yen from 1985 onwards, the outstanding balance of external debt reached 52.6 billion dollars in 1987, and the debt service ratio has gone up extremely high, to 34.7%. The ratios of debt repayment to ordinary revenues were 39% and 48% in fiscal years 1987 and 1988, respectively. The debt repayment problem will be most serious for the next few years. The Government is attempting to come through this tight situation by obtaining increased assistance from IGGI.

1.2 Issues

Imminent economic issues include getting over the external debt problem as described above, and expanding NONMIGAS exports on a sustained basis. In particular, for the continued expansion of NONMIGAS exports, it is necessary to maintain the international competitiveness of these industries. Following the brisk economy in 1988, in the first four months of 1989, imports increased at a rate of 22.8% over the same period in 1988, outstripping the 9.4% growth of exports. For the maintenance of competitiveness, price stability becomes the key policy issue. Since Indonesia currently holds a large amount of external debt, a sharp devaluation of the rupiah cannot be undertaken to maintain market competitiveness. Besides, it is necessary to build up the infrastructure, including electric power, telecommunications, transportation, and industrial zones, in order to lead the upward trend in direct investment from abroad.

The long-term and lasting issue is expansion of employment opportunities. In the breakdown of the population by age as of 1985, there are 8.23 million people between the ages of 15 and 19, and 10.11 million people between the ages of 10 and 14. The number of these youths who enter the labor force will steadily increase in the next ten years. In addition, more equitable distribution of incomes among social classes or regions, as well as regional development, is becoming a crucial issue.

1.3 Future prospects

The Fifth Five-Year Plan that began in 1989 is considered a preparatory stage for consolidating the foundation for an economic

takeoff and self-reliant growth from the Sixth Five-Year Plan onwards. In the former Plan, priorities are given to (1) agricultural development centered on food self-sufficiency and crop diversification, and (2) industrial development aimed mainly at export promotion, labor absorption, and promotion of the agro-industry and the machinery industry. The target annual economic growth is set at 5% on average. It is almost certain that the growth rate for 1989 will be more than 5%. However, economic prospects for 1990 and onwards depend on many factors. These include a stable shift in the price of crude petroleum above current levels, relatively stable domestic prices, and stable economic growth of the industrialized countries. A sharp downturn in crude petroleum prices is unlikely to occur, but the industrialized countries will probably face slow economic growth from 1990 onwards after the long economic upswing. The U.S. economy has already entered a phase of slower growth. Hence, during the period 1990-1992, Indonesia will not be able to maintain the growth in terms of exports and foreign investment that was achieved during the period 1987-1989. Besides, if domestic inflation adds more pressure, the international competitiveness of the country will become weak. Accordingly, whether the growth target of 5% is achieved will depend on the success in further promoting exports and in curbing inflation rates. The Indonesian Government will probably manage to overcome these obstacles, in view of its efforts as well as those by aid donors.

2. Official Development Assistance to Indonesia

2.1 Trends in official development assistance

The total amount of official development assistance (ODA) to Indonesia increased steadily through 1981 when it peaked at 975 million dollars, but thereafter began to taper off. This trend turned up again in 1986, when the total amount of ODA was 711 million dollars. There was a sudden upturn of ODA in 1987, when the total amount leaped to 1.245 billion dollars. This was due mainly to the fact that the amount of Japanese assistance increased from 161 million dollars in 1986 to 707 million dollars in 1987 with a sharp increase in loan assistance.

Looking at the comparative shares of bilateral and multi-lateral assistance in the total amount of ODA, bilateral assistance accounts for the major share. The ratio stood at 91% in 1987.

In terms of bilateral assistance, Japan is the largest donor. Along with a decrease in ODA since 1981, the ratio of Japanese bilateral assistance fell to 26% in 1986. However, the ratio turned up to 62% in 1987 due to a sharp increase in Japan's ODA.

2.2 Japanese assistance

(1) Trends in assistance

Since diplomatic relations were established between Japan and Indonesia in 1958, close and friendly relations have prevailed between the two countries. Indonesia is a core member of ASEAN,

and is an important partner for Japan both politically and economically. Indonesia is one of the largest recipients of Japan's ODA. Japan has been the largest donor of bilateral assistance to Indonesia on a net disbursement basis of ODA since 1974, and it finally became the largest donor of both bilateral and multilateral aid, surpassing even the World Bank.

(2) Assistance by type

The cumulative total of Japanese loan assistance up to the end of 1987 reached approximately 1.471 trillion yen on the basis of Exchange of Notes. Japanese assistance widely covers various sectors such as public infrastructure, agriculture, public health, etc.

Grant aid cooperation has focused mainly on agriculture, human resources, and public infrastructure. The cumulative total up to the end of fiscal year 1987 amounted to approximately 95 billion yen.

In terms of technical cooperation, the cumulative total up to the end of fiscal year 1987 is approximately 7,000 in the number of trainees accepted and 2,700 in the number of experts dispatched. In addition, equipment worth about 15.5 billion yen was provided; 45 project-type technical cooperation programs were implemented and 196 development studies were conducted during the same period.

2.3 Assistance from major aid donors

The FRG has steadily been increasing its assistance to Indonesia and was the number two donor from 1981 to 1986. As the amount of assistance from the FRG was halved in 1987, however, the

Netherlands became the number two donor instead. The U.S. was the largest donor country to Indonesia until the beginning of the 1970s, but thereafter its assistance was gradually reduced. The U.S. was ranked seventh in bilateral assistance in 1987. With respect to assistance from international aid agencies, the amount of aid provided by the International Development Association (IDA) was more than 40% of total multi-lateral assistance during the first half of the 1980s, but the amount from the IDA dropped to only 8% in 1987. On the other hand, the World Bank (IBRD) has increased its assistance remarkably since the beginning of the 1980s, and its loan assistance totaled 1.004 billion U.S. dollars in 1987. In addition, the United Nations Development Plan (UNDP), United Nations Children Fund (UNICEF), and the World Food Plan (WFP) are also major aid agencies, each of which accounted for more than 10% of the total multilateral assistance in 1987.

3 Agriculture, Fishery, and Forestry Industries

3.1 Agriculture

Rice is the staple food of Indonesian people; it is an extremely important food crop both politically and economically. As a result of persistent efforts by the Government to increase rice production, Indonesia became self-sufficient in rice in 1984 and import substitution was no longer necessary. Thereafter, the government's target for increased food production was switched from rice to *palawija* crops such as maize and soy beans. Because government revenues were inadequate, however, a new direction was taken in the irrigation sector where, instead of building new irrigation facilities, efforts were focused on making effective use of existing facilities, with emphasis on maintenance and proper management. The government is again planning to reduce supplementary funds for fertilizer and agricultural chemicals. In this way the correction of high-cost agriculture is in progress. However, some of the conditions which contributed to self-sufficiency in rice are about to be lost and stabilization of rice self-sufficiency is proving difficult.

Japan is carrying out comprehensive cooperation for building up and maintaining the foundations of agriculture (Major Food Crop Production Program), through integrated processes from seed production to post-harvest processing, for rice, soy beans, and potatoes. This plan combines technical assistance, a grant aid program, and yen loans. It comprises a concentrated and organized type of cooperation which has been called "umbrella-type" cooperation. This form of cooperation can be successively applied to other food crops such as corn, vegetables, and beans, keeping pace

with progress in increasing the production of food crops in Indonesia. By so doing, the structure of agricultural production can be stabilized and self-sufficiency in major food crops can be achieved. By advancing a cooperation plan aimed at comprehensive development of rural area and at development of a healthier market mechanism, more employment and incomes will become possible in rural areas. It is forecasted that during the period of Fifth Five-Year Plan, more than 2 million new workers will join the labor force each year. Revitalizing the rural sector is the key to absorbing the newly generated labor force.

In order to eliminate heavy dependence on revenues from petroleum and natural gas, the government is promoting the export of agricultural primary products. Among these, exports of rubber, coffee, spices, palm oil, lumber, and plywood are the most conspicuous. While crops produced on nationally managed estates are internationally competitive in price, there is still a great deal of room to improve production in small-scale agriculture. Since estate crop production by small holders is very important for expanding opportunities for employment, improving productivity in this sector must be accomplished. Build up of the market system and dissemination of technology also must not be overlooked for their effectiveness in improving the quality of estate crops. There is still a need, however, for knowhow and financing to improve the systems of harvesting, collection, and processing, to eradicate pests and diseases, and to renew estate crops.

3.2 Animal industry

After succeeding in attaining rice self-sufficiency, diversification of agriculture was encouraged in Indonesia and the development of animal industry has been given priority. In particular, once into the 1980s, poultry raising on a large scale was encouraged, along with development of the dairy farming industry. The large-scale poultry industry and the dairy farming industry have been developed to become export industry and import substitute industry respectively. Among policies to support the development of production in these industries, improvement of the breed of livestock, measures to ensure adequate livestock feeds, and enforcement of higher standards of hygiene are indispensable.

Since Indonesia is blessed with a climate very suitable to agricultural production and there is much potential land on the outlying islands, it is believed that the country has the potential elements to enable development of the animal industry through the spread of farming cooperatives.

The government intends to upgrade the livelihood of impoverished farmers using private-sector capital and technology. In this way, the revitalization of farming villages must be enhanced by strengthening a suitable agricultural system which combines animal husbandry with other farming and by stimulating agri business.

3.3 Forestry industry

The Indonesian government prohibited the export of logs in 1985 and is currently encouraging the export of milled lumber and

plywood. As a result, lumber and plywood are the leading earners of foreign currency after petroleum and natural gas. However, due to destruction caused by uncontrolled exploitation of forest resources and shifting cultivation, the forestry resources of Sumatra, Sulawesi, and Kalimantan are edging toward exhaustion. To protect the forest resources of these areas, a survey of forest accumulation should be carried out on a nationwide scale and appropriate conservation measures must be established for forests, waters, and soil throughout the country. In order to maintain and expand exports of forest products, it would be effective to afforest areas with wood species of high market value. For the grasslands and deforested areas, revegetation projects would be beneficial for improving the environment in these areas. In any case, as a considerable amount of capital will be needed, Japan's cooperation with Indonesia would be very significant. Losses incurred during the process from timber cutting to processing are quite large, and measures to reduce these losses should be considered.

3.4 Fisheries

Fish catch in Indonesia's marine sector is satisfactory, and the production and export of tuna and shrimp, in particular, are being advanced at a growing pace. Indonesia has very expansive fishing waters, and there is still much room to increase its fishing production since the maximum sustainable quantity of production has not yet been attained. The development of potential fishing resources is also important.

For the fishing industry, policies to relocate poor fishing people in overpopulated areas along the coast, to stimulate aquaculture, and to foster small-scale processing industries for the fishing community by actively inviting the private sector are absolutely essential.

Technical improvements, strengthened quality control and policies based on international price trends are necessary for expanding exports of shrimp. As a valuable source of animal protein for people living inland, more assistance for and development of the freshwater fishing industry through technical improvements and dissemination are still needed, especially for pond and paddy cultivation. The development of the fishing industry must be sustainable, and it must be undertaken with due consideration for protection of the environment and various ecosystems.

4 Industry, Mining and Energy

4.1 Industry

The industrial sector (excluding petroleum and gas refining) had an average annual growth rate of 6.1% from 1984 to 1987. The value of production (in current prices) increased from 11.289 trillion rupiahs to 43.376 trillion rupiahs. In terms of employment, the industrial sector, especially the industries composed mainly of small-scale firms, absorbed 1.7 million new workers. With respect to exports, the real value recorded a doubling from US\$ 3,292,400 million (1983) to US\$ 6,728,950 million (1987). The percentage of this sector in the total amount of non-gas and non-petroleum product exports was 39.3%.

Nevertheless, various problems remain. The management side of industry remains weak and the linkages between industrial sectors are feeble as in the past. Moreover, there is a scarcity of information about foreign markets. Hence it is essential that cooperation focusing on the promotion of exports and employment be provided in support of Indonesia's economic "takeoff".

4.2 Mining

The development of resources that have been estimated to exist in large deposits, including tin, nickel, bauxite, and copper, has not been undertaken sufficiently due to the severity of the international market. In development for this field, the priority placed on this sector has shifted to the supply of raw materials for use by domestic

industry, rather than a source of foreign exchange through exports. However, at this juncture, there is a lack of both adequate domestic capital and well-trained mid-level technicians, and this problem is growing more serious. There is, therefore, a need to support the continuation of resources surveys, the building and maintenance of infrastructure for transportation, and the training of the labor force for the mines.

4.3 Energy

Indonesia is committed to a policy of developing alternate energy for petroleum, using natural gas and coal as well as hydroelectric and geothermal resources, to meet the growing demand for energy. On the basis of primary energy consumption, the share taken by petroleum has been reduced from 88% in 1975 to 64% in 1988. The reserves of petroleum, however, are decreasing each year, and further effort will be required in the future to promote the switch to sources of energy other than petroleum. Japanese assistance should continue with funding cooperation for construction of facilities for electric power supply, such as hydroelectric power stations, and the network of power transmission and distribution lines. Technical cooperation to develop new energy sources is also required.

5 Infrastructure

5.1 Transportation, communication, and tourism

For the promotion of development, in addition to the establishment of transportation systems and networks by building up and maintaining the transportation sector infrastructure, it is important to reduce transportation costs. However, the allocation of the development budget for the transportation sector, even though the development of the transportation network is very inadequate, tended to be reduced, going from 14% of the budget in the Third Five-Year Plan to 11.6% in the Fourth Five-Year Plan, and finally to only 8% in the current Fifth Five-Year Plan.

Road and highway transportation plays a very important role, accounting for 70% of all transportation of goods and commodities. Of the total length of 230,000 km of roads, approximately 60% makes up "stable" paved road. As for national and regional highways, emphasis is put on the maintenance and repair but the building of tollways has also tended to increase.

Of the total length of 6,400 km of railroads, some 160 km has been electrified, and the area where multiple lines are running totals about 170 km. The current problem that Indonesia faces is modernization of the railroads to improve their essential functions: the transportation of large loads and punctuality.

Since Indonesia is a nation of islands, the role of its ports, harbors, ferrys and marine transportation is very important. To further advance marine transportation, the modernization of port facilities

and ships as well as the training of port engineers and harbor specialists is imperative.

Transportation of international travelers grew to 1.62 million, an increase of 9.1% over the previous year, and the volume of air transportation is increasing steadily.

Airport facilities, however, are clearly showing their age, and the improvement and maintenance of runways, terminal buildings, and other air transportation facilities are very urgent priorities.

Revenues from tourism have been increasing dramatically in the past few years, and the tourism industry is an important source of vital foreign exchange. Indonesia's tourism potential is extremely high, due to its abundant natural beauty and the country's priceless historical and cultural ruins. Development of the tourism industry also acts as stimulus for regional development, as well as providing many new employment opportunities. The development of tourism in the future should be based on a tourism master plan which includes the preparation and improvement of basic infrastructure. This policy should be promoted with due consideration to the protection of the environment and the preservation of the traditional cultural heritage.

5.2 Telecommunication

The completion rate in the Fourth Five-Year Plan was low (only 410,000 telephone circuits were constructed against a target of 1.1 million circuits). In the Fifth Five-Year Plan, however, an important aim is the construction of 1.4 million circuits. If this goal of the Fifth

Five-Year Plan is achieved, it is estimated to result in a penetration rate of 1.2 telephones per 100 inhabitants. This will equal the same level that is currently installed in Thailand. However, if problems that have been pointed out in the past are not solved in a full-fledged manner, achieving this goal will probably be difficult. Raising the necessary capital, nationalizing equipment assembly, comprehending the current status of existing facilities and maintaining them, increasing the efficiency of the PERUMTEL organization, and rearing vital mid-level managers who will carry out the plan, are some of the many related problems. The solution of these problems is the key to achieving the targets set forth in the Fifth Five-Year Plan. In particular, strengthening the local organizations of the PERUMTEL and transferring the necessary rights to the organizations, along with securing the required skilled, competent staff to carry out this strengthening, are the most vital concerns.

5.3 Erosion and flood control

In the process of developing the national territory, the demand for the safety of land is rising more and more, to say nothing of the demand for water itself. The preservation of forests, soil and water resources and the protection of agricultural, residential, commercial and industrial districts from the threat of disaster are extremely important for the stability of the people's livelihood and for smooth progress in economic development. In this context, how the country maintains its activities and how these effect water resources development, flood control, and sabo (erosion control), which have been major issues so far, and how the nation meets new needs such as coast conservation and water quality control of rivers, within the

scope of a limited budget, depends on enhancing all aspects of the development and improvement of administration, laws, regulations, human abilities, and technology.

In these circumstances, taking into account the recent Indonesian tendency to depend on foreign countries for both financial and technical help, and after reviewing the method of assistance in the past, Japan is expected to be more concerned technically and administratively with the regional and river-system development planning, and to provide development assistance which results in improvement of the technical level of ordinary engineers, in expansion of their numbers, dissemination of technology and information from the central level to the regional level, an broad improvement in the capacities of local consultants and contractors.

5.4 Water supply and environmental hygiene

The diffusion rate of city water in Indonesia, 65% in urban areas and 30% in rural areas, is still at a low level. The rate of uncollected water fees (approx. 50%) is extremely high and the water supply service level is quite low. There are also many problems in terms of water quality. The country's history in regard to provision of facilities for environmental hygiene is rather short. Moreover, a system to undertake appropriate environmental hygiene works has not been fully established, and the demands for processing solid waste, human waste and so on, which have been increasing rapidly in recent years, are not fully met. These conditions are considered causes of worsening of the living environments in Indonesia's cities.

In the improvement of facilities for water supply and environmental hygiene, the regional public organs, the water supply public corporation and the private sector firms, which are charged with these tasks, need to be strengthened in terms of organizations, functions, technology and personnel skills. Recognition of the importance of clean water, improvement of hygienic conditions, and active participation in improvement works by local dwellers are also crucial. On the other hand, the Government must promote the most appropriate plans which are directly linked to development and high investment efficiency in the coordination with other projects related to human settlements.

In these circumstances, Japan is expected to strive to grasp the environmental and hygiene problems of Indonesia in their entirety and to build up an optimum cooperation system based on human resources. Taking into account Indonesia's severe financial conditions, moreover, Japan must investigate the most appropriate method of solving these problems, and then provide positive assistance for the operation, maintenance and repair of existing water distribution networks and sewage systems, for countermeasures to prevent leakage and for strengthening the capabilities of the project executing organizations.

5.5 Housing

The needs for development in the housing sector in Indonesia are vast. At present, however, the Government is short of required capital and foreign loans cannot be easily increased. Furthermore, the private sector is likely to invest only for the class of people with

the ability to make payments. Therefore, there is no way to improve the present situation unless the people themselves make some effort. The most vital matter of public policy is how to facilitate people's own efforts, even if only slightly, and guide their activities in the right direction. There are many steps which should be taken, such as provision of infrastructure based on coordination with other sectors, solution of land-related problems, and search for new financial sources. In these circumstances, Japan is expected to participate in the formulation of housing policy itself, and to extend further technical assistance for the improvement of housing and residential environments in the fields of land readjustment, urban renewal, research and development, and so on, while continuing to consider the possibilities of financial cooperation.

6 Human Resources Development, Health, and Medical Care

6.1 Human resources development

The fostering and maintaining of necessary human resources for economic and social development are urgent priorities in Indonesia.

To achieve this purpose, the elementary and middle level educational facilities, which provide the society a mass labor force equipped with the basic academic skills, namely, "reading, writing, and arithmetic", and social discipline, must be built up and strengthened. More specifically, securing and retraining qualified teaching staffs for physics, chemistry, and mathematics are urgently required, along with expansion and proper maintenance of educational facilities.

With regard to higher education, the universities must establish an organic and systematic function which stably provides society with the capable persons to take leadership positions in various fields, for balanced social and economic development of the nation. Improvement of the teaching skills of instructors at all universities and the building up and maintaining of educational equipment and facilities are essential for this purpose. For the time being, however, it is imperative that the so-called Java-Five-Universities be upgraded and maintained as the pilot schools.

Besides this in the field of vocational training and education, strengthening of the linkages with the private sector and a re-evaluation of the curriculum for education which meets the true needs of society are indispensable. Assuring the availability and retraining of educational personnel with aptitude is also vital.

6.2 Health and medical care

In the field of health and medical care, improving and developing hospitals and public health centers and ensuring adequate physicians and nurses are urgent tasks. Physicians and paramedics are insufficient in rural areas in particular. With the lack of adequate clinical facilities, equipment and chemicals for examinations, the state of medical care in Indonesia has become very serious. Moreover, to promote proper health care and family planning, a stable supply of drugs at reasonable prices is very important.

The above-mentioned measures hold the key to success in implementing an integrated approach to medical and public health care, covering family planning, maternal and child care, improved nutrition and dysentery treatment.

7 Environment

7.1 Environment

With economic development and population growth, pressure on natural resources and on the environment is increasing. Although the environmental concerns of urban areas such as Jakarta, or Surabaya are different in nature from those of rural areas, both sets of environmental problems are becoming increasingly serious.

With the rapid growth of the populations in cities, problems like water pollution of rivers, lakes, sea coasts and ground-water, as well as air pollution and noises are growing in severity. On the other hand, deforestation and soil erosion are on the increase in rural areas. To deal with these problems, the Indonesian Government has been implementing environmental administration aimed at sustainable development by such means of enactment of the Basic Environmental Management Act, enforcement of conducting Environment Impact Assessment and implementation of various other environmental conservation measures.

Japan should fully recognize these vigorous efforts by the Indonesian Government to promote environmental management in the pursuit of sustainable development. Taking into consideration the importance of building institutions and of developing human resources for environmental management and administration, as well as the significance of monitoring and analyzing basic data and research related to the environment, assistance to Indonesia in the field of the environment should be further strengthened in the future.

ANNEX 1

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