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**TECHNICAL COOPERATION  
OF  
THE JAPANESE GOVERNMENT**

国際協力事業団	
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# PREFACE

The rapprochement in the bilateral relations between the United States and the Republic of China, together with the admission of the latter to the United Nations that took place towards the end of 1971, has brought about a new phase of multi-polarization in the world community.

The necessity to settle the "North and South Problem," once stressed by Sir Oliver Franks, can be said to be a common goal shared by all the peoples of the world, although the question of race, religion, and differences in social structure are also in need of solution.

Moreover, a greater importance has been attached to these questions and solutions by an increasing number of the people all over the world.

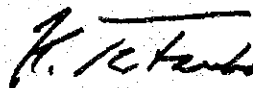
Meanwhile, it is noteworthy that Japan's economy has continued to make steady progress in the past few years, overcoming the difficulties arising from successive re-valuations of the Yen. In addition, the demands and expectations of both the developed and developing nations for Japan to increase the volume of its technical cooperation have been constantly on the increase during the recent years. In view of these circumstances, the Japanese Government declaration at the third meeting of the United Nations Committee for Trade and Development, convened at Santiago in April, 1971, that the total amount of its official development assistance will be increased to the level of 0.7 per cent of her gross national product, is attracting worldwide attention.

In order to achieve this goal, it is necessary for Japan not only to take a positive stand in coping with the emergence of multi-polarization, but also to improve the modalities of its external assistance, while accelerating the support and understanding of the general public regarding the importance of its external aid program.

The present publication is an annual report entitled "Technical Cooperation of the Japanese Government 1972," covering the outlook, present state, data and statistics of technical cooperation, which constitutes an important part of official development assistance by the Japanese Government.

It is my sincere hope that this annual report will prove to be of some help to those engaged in the related activities and will deepen their understanding of the serious nature of technical cooperation, which constitutes one of the most important programs of official development assistance extended by the Japanese Government.

December, 1972



Keiichi Tatsuke  
Director General  
Overseas Technical Cooperation Agency





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**PART I**  
**INTRODUCTION**



## CHAPTER 1

# TRENDS IN DEVELOPMENT ASSISTANCE AND EXPECTATIONS OF JAPANESE TECHNICAL COOPERATION

### *Section 1. Trends in Development Assistance and Economic Cooperation*

The 1960's were hailed as the "development decade," a decade in which all nations grappled with the problem of the disparities between the North and the South, the so-called North-South problem, under the auspices of international cooperation. The results, however, were not altogether satisfactory; instead, they gave rise to numerous developmental dilemmas.

The economic growth of the developing nations during this decade reached the annual rate of 5.5 per cent. This exceeded the goal set at the beginning of the period and even surpassed the 5.1 per cent average attained by the developed countries. This accomplishment was offset, however, by the large 2.5 per cent annual rate of population increase prevailing in the developing nations. As a result, per capita GNP grew at only 2.8 per cent per year, far below the 3.9 per cent of the developed countries, and the net result was a widening, not a narrowing, of the economic gap.

Even among the developing nations, the differences in their respective rates of development gave rise to an enlargement of the economic differentials. The problem of lagging development among the developing countries came to the fore as a problem within the North-South problem.

The development assistance of the 1960's tended to transfer the capital intensive technology of the more developed countries, without alteration, to the developing countries. Hence, weight came to be placed on industrial development. But the employment effect by which the population increases in the developing countries could be absorbed was hardly seen at all. The much-publicized green revolution served to increase production but, in terms of employment, only caused excess farm labor power to accumulate in vain. Therefore, the effects of this development assistance did not necessarily permeate the lives of the majority of the people. On the contrary, it often acted to magnify the disparity between the rich and the poor.

The development assistance from the developed nations in the 1960's was greatly affected by the declining position of the United States, the United Kingdom and France, which had previously played the leading roles, and ended at the figure of 1.0 per cent of GNP. In addition, the official development assistance, which should comprise the main current of the aid, for the same reasons actually dropped from 5.50 per cent of

GNP at the beginning of the decade to 0.34 per cent. The gap left by the decline of official development assistance came to be filled by an increase in privately-based, especially commercially-based, financial assistance. But with the so-called hard terms of the aid coupled with the easygoing posture with respect to the induction of capital on the part of the recipient nations, the debts of the developing countries have been increasing year by year. This has produced a serious problem of accumulated debts.

As a result of this development of the 1960's, disillusionment with and distrust of aid have arisen in both the developed and developing countries, and this has led to much reflection of the aid problem. The point that is particularly important in this reflection is that greater importance should be attached to the human element in the developing nations, especially to the aspects of the social and economic systems which are related to it. Furthermore, with respect to economic cooperation centering on finance capital and to technical cooperation in order to effectively utilize such capital, there has arisen a recognition of the importance of cooperation relating to the technology needed to effectively utilize the capital.

With this self-reflection in the background, "the Second United Nations Development Decade" was inaugurated with the common intention to undertake anew more effective international cooperation during the 1970's for the prosperity of all mankind and in order to diminish the existing differences in the world. The goal is to raise the economic growth rate of all the developing nations to at least 6.0 per cent and thereby to raise the per capita GNP growth rate to more than 3.5 per cent. In order to accomplish this, the goal was set for the developed countries to strive to bring their level of aid to more than 1.0 per cent of their GNP of which the Official Development Assistance (ODA) would be 0.7 per cent.

The first year of the decade, 1971, however, showed only a slight improvement in the economic assistance by the developed countries. Although the economic growth rate of the developing nations reached the goal of 6.0 per cent, it fell below the 6.4 per cent of the previous year.

The slump in agricultural production was especially striking. Its rate of growth fell sharply from 3.2 per cent in 1970 to 1.9 per cent. The growth rate of mining and manufacturing also did not reach its goal, and moreover, was less than that in 1970. In inter-

national trade, the growth rate came to 10.5 per cent, but this resulted mainly from the increases in exports from the oil producing countries. If this factor is excluded, the figure becomes 7.0 per cent which is only about half the previous year's growth rate. In particular the share in world trade held by the developing countries is following a path of yearly decline from the 31.0 per cent registered in 1950. In 1960 the trade share had dropped to 25.0 per cent, in 1970 to 19.8 per cent, and in 1971 this declining trend showed no signs of levelling off.

Thus, the growth in the economic indices in 1971 calculated for the developing nations as a whole fell far below that for the previous year. Only their external debts increased 10.8 per cent in comparison with the previous year, resulting in their being accumulated.

As a result of this stagnation in development, the developing nations have deepened their dissatisfaction toward the attitudes of the developed countries and also have gradually come to show impatience and irritation toward them.

Meanwhile, in August, 1971, the United States announced its new economic policies which included the suspension of the convertibility of the dollar and the imposing of the import surcharge, as well as reduction of foreign aid. Furthermore, later in December of that year, adjustments in the international monetary system, including an upward revaluation of the Yen, were made in order to solve the international monetary crisis. This series of measures have gravely influenced developing nations.

Especially those nations whose dependence on the United States was high and who were struggling under large accumulated debts received a severe shock. Moreover, these developing nations were made to look on passively from beginning to end in the midst of the large improvement in the world economy. As a result, their dissatisfaction with the developed countries grew further.

At the Third United Nations Conference on Trade and Development held in April, 1972, in reflection of these conditions, a mood of confrontation between the North and the South was clearly seen, stemming from the unilateral demands by the South. Secretary General Manuel Perez-Guerrero speaking for the developing countries stated that the economic powers wield great power of influence in the world economy, and that hence their responsibility should also be great. Despite this, most of the great economic powers disregard the welfare of the third world. He further stated that it is just as urgent to find a solution for the poverty stricken countries as it is to improve the underdeveloped areas inside the advanced countries and asked for the recognition of and responsibility for economic aid on the part of the developed countries.

Within these trends, Japanese economic cooperation as a whole, as will be detailed later, climbed to 0.96

per cent of GNP which nearly reached the international goal of 1.0 per cent. This, however, was chiefly supported by private-based aid. ODA was only 0.23 per cent of GNP which was far below the DAC average for 1970, and the percentage of technical assistance included in this ODA should be improvement over the previous year. Moreover, the percentage of ODA which was given as grants, which is regarded as another measure of the quality of the assistance, also came to only 33 per cent, far below the DAC average of 63 per cent.

With respect to this assistance, especially the lack of improvement in its quality, Japan, as the second largest economic power in the Free World, is being urged to direct her efforts toward giving more improved aid. In the previously mentioned United Nations Conference on Trade and Development, Japan made clear her posture of taking positive action toward economic cooperation by expressing a more forward-looking attitude concerning development assistance and with regard to the long-pending question of official development assistance pledged to strive to increase it to 0.7 per cent of GNP.

In October, 1971, the People's Republic of China was admitted to the United Nations. In succession, in February, 1972 the U.S.-China talks were held and in September of that year the restoration of diplomatic relations between Japan and China was realized. In this manner, world conditions, centering on China, are changing greatly. And in this world situation, the international position of Japan is being strengthened. In this context, it is hoped that Japan will make positive efforts in voluntary cooperation, with a full understanding of the position of the developing countries.

## *Section 2. Anticipated Technical Cooperation*

As stated in the development strategy for the Second United Nations Development Decade, the ultimate goal of development must be to bring about a sustained improvement in the welfare of the individual and to bestow its benefits on all mankind. Hence, development assistance, including technical cooperation, naturally must be tied to the interests of the people, especially the common people. It is difficult to say, however, that the present situation has demonstrated that this position has necessarily been carried through to a sufficient degree.

Despite the extreme seriousness and weight of the employment problem for the developing countries with their explosive population increases and large unemployed population, much of the development aid rendered so far, as previously mentioned, has placed importance on the development of industries which are capital-intensive and labor-saving. Hence, this aid has not tied into general increases in employment and at times

has actually resulted in closing the doors to employment opportunities. As a result, there were not a few cases which resulted in development that was not tied into the interests of the majority of the people and which ended in development isolated from the welfare of the people.

Accordingly, the direction of future cooperation must place importance on cooperation directed toward social development and the economic development aspects on promoting local industries which are labor-intensive and tied to indigenous natural resources.

The recent demands for resource development to shift from exploitative development to development which is based on local processing and includes related industries reflect this background.

In the process of development, the basic problem naturally lies in the selection of the needs to be given first priority which are the most desirable for the development of the country as a whole, and also in the drafting of effective development plans in accordance with those needs. In principle this is a problem which the developing countries should tackle themselves, but in general it is difficult for these nations to accurately assess their needs and to formulate the requisite long-term plans. In order to help correct this deficiency, cooperation based on specialized knowledge is necessary. It is particularly important to train specialists with the ability to formulate and develop those plans needed for the developing nations in order to attain self-sufficient development. The most important role of technical cooperation exists in the development of the human resources of the developing countries including the training of these and other general technical experts.

The Pearson Report also touches on this point. It states that development and progress aimed at a self-sufficient economy depends greatly on acquiring new knowledge and techniques. Consequently, foreign specialists, teachers, technicians, as well as overseas educational training programs, constitute an important component of development. The report goes on to point out, however, that if the transfer of knowledge and know-how stops at the mere mechanical transplanting, as is, of the thinking of the wealthy nations on technology and education, in most cases it will not be

useful in the original, independent solutions which the low-income countries are seeking for their respective special problems.

There is nothing as important as the social, economic, and cultural peculiarities in the cycle of development. This cycle includes the formulation of policies for development programs after studying the needs of the country, examination of the degree of priority, feasibility, and effectiveness of the development projects which form the nucleus of the program, the execution of the project, follow up after-care work, and finally the diffusion activities into the surrounding area.

The so-called problem of technology transfer, that is, the problem of how to obtain and apply the technology and knowledge of the developed countries in order to promote the development of the developing countries themselves, is an extremely important theme of development aid. In this context, it appears that the experiences and achievements of Japan during the period of modernization after the Meiji Restoration and again during the period of recovery after World War II in accomplishing economic development while skillfully absorbing foreign technology provide great hope and can serve as a model for developing countries.

At the Second United Nations Conference on Trade and Development in 1968, the contrast was truly striking between the magnitude of dissatisfaction shown by the developing countries toward the passivity of Japan's aid as one of the economic powers and the interest and enthusiasm shown in the Japanese report on the transfer of technology from the advanced to the developing countries which was one of the topics discussed at the conference.

The economic, social, and cultural requisites among the developing nations differ by country. Yet, although these differences may exist, the technical cooperation which is desired is the accurate assessment of a country's needs premised on the welfare of the people, the establishment of basic principles for cooperation, the formulation of effective programs for cooperation consistent with the country's respective stage of development, and the execution of those programs. It is essential that henceforth planning for new development of technical cooperation be done from this point of view.

## CHAPTER 2

# INTERNATIONAL COMPARISONS OF JAPAN'S TECHNICAL COOPERATION

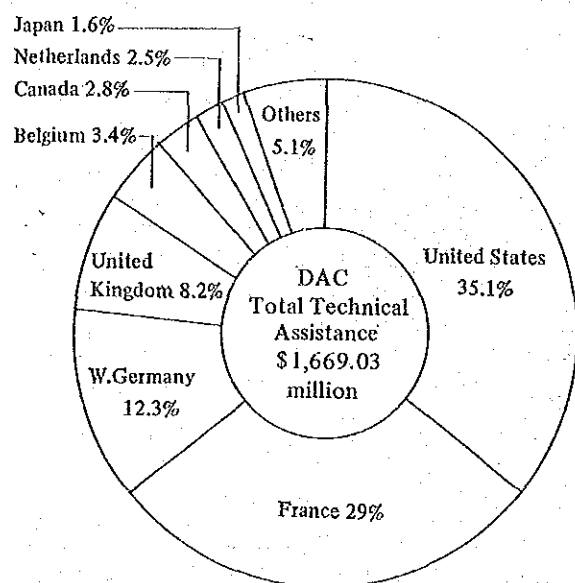
### *Section 1. Scale of Technical Assistance*

The total technical assistance by Japan in fiscal 1971

on a bilateral government-to-government basis reached \$27.7 million on the basis of total disbursements. This amounted to 28 per cent more than that recorded for

the previous year. The average rate of increase in the amount of technical aid by the DAC member countries for the same year was 9 per cent. Hence Japan's rate of increase actually tripled that figure. The amount of technical assistance in 1968 came to \$13.7 million, hence the total has doubled in just three years. Judging by the growth rate, it can be said that expansion and development are proceeding satisfactorily.

Fig. 1. Percentage Shares of Total 1971 DAC Official Bilateral Technical Assistance



In terms of the total amount of technical assistance, however, the \$27.7 million total for Japan is far below the average of \$106.0 million for the DAC countries. And in comparison to the United States and France, which occupy the top positions among the DAC countries, the total for Japan is only 1/22 and 1/18, respectively. In terms of the increase in absolute amounts also, the \$6.0 million increase over the previous year for Japan is, of course, below the \$50.0 million in-

crease by France and far below the \$30.0 million increase by the United States, West Germany, and the United Kingdom.

In this manner, in fiscal year 1971 the economic cooperation by Japan as a whole came to \$2,140.0 million and came to occupy a position in absolute amount second to the United States. The percentage of GNP also, at 0.96 per cent (see Table 1), nearly reached the international goal of 1 per cent. The Official Development Assistance, however, at \$511.0 million, amounted to only 0.23 per cent of the GNP (see Table 1). This was considerably lower than the DAC average of 0.35 per cent and placed Japan in thirteenth position among the DAC countries. Particularly in the realm of technical cooperation, its ratio to ODA of only 5.4 per cent (see Table 1) was not only considerably lower than the DAC average of 21.9 per cent, but, as was the case in the previous year, placed Japan in an ignoble position at the very bottom of the ladder among the DAC countries.

This imbalance between the total amount of economic assistance and ODA, especially technical cooperation implies that the growth in the assistance has been supported primarily by private-based aid. In fact the portion of Japan's total assistance accounted for by privately-based aid increased sharply from the 37 per cent of the previous year to 45 per cent. This increase amounted to \$300.0 million. This aid, with its pattern of reliance on the private sector, is pointed to as a pattern of profit-oriented assistance by Japan. Hence, it is urgent that Japan improve the substance of her assistance, and technical assistance in particular must be expanded.

### 1. Trainees Acceptance Program

In fiscal 1971 Japan's program for the acceptance of trainees, including students, showed total disbursements of \$7.2 million and 3,884 participants. These showed a slight increases of 2.4 per cent and 5.7 per cent, respectively, over the figures for 1970. In

Table 1. Aid-Giving Performance by Major DAC Member Nations

Country \ Year	Total Economic Assistance		Percentage of Total Assistance to GNP		B. Official Development Assistance		C. Official Bilateral Technical Assistance		Percentage of Official Bilateral Technical Assistance			
	(Million U.S. \$)		(%)		(Million U.S. \$)		(Million U.S. \$)		Total Assistance C/A (%)		ODA C/B (%)	
	'70	'71	'70	'71	'70	'71	'70	'71	'70	'71	'70	'71
United States	6,254.0	7,045.0	0.64	0.67	3,050.0	3,324.0	562.0	593.3	8.99	8.40	18.43	17.81
Japan	1,823.9	2,140.5	0.93	0.93	458.0	510.7	21.6	27.7	1.18	1.29	4.71	5.42
West Germany	1,487.1	1,915.2	0.79	0.88	599.0	734.2	190.1	206.6	12.78	10.79	31.74	28.14
France	1,834.6	1,636.1	1.39	—	971.0	1,087.9	438.2	488.9	23.89	23.89	45.13	44.94
United Kingdom	1,278.6	1,596.8	1.06	1.17	446.9	560.7	139.3	139.3	8.56	8.78	24.48	24.84
Italy	681.9	870.8	0.67	0.86	147.2	182.7	14.6	15.7	2.14	1.80	9.92	8.59
Canada	626.4	758.3	0.80	0.83	346.3	340.1	40.7	48.8	6.50	6.44	11.75	14.35
Netherlands	456.6	590.2	1.45	—	196.4	261.1	38.5	44.1	8.43	7.13	19.60	16.12
Australia	420.3	493.2	1.27	1.34	202.4	202.2	12.9	11.7	3.07	2.37	6.37	5.79
Belgium	308.6	317.4	1.20	—	119.7	146.1	51.3	57.4	16.62	18.08	42.86	39.29

Source: *Development Assistance Review*, 1970, 1972.



terms of the DAC averages of \$12.1 million and 5,800 persons, however, Japan's levels were at only about half those of the DAC countries.

The percentage shares held by each country in the total DAC assistance for students and trainees changed little from the previous year. West Germany, the United States, France, and the United Kingdom, the top four countries, accounted for 80 per cent of the whole. Japan accounted for only a paltry 4 per cent.

The DAC average for the amount of assistance for students and trainees in total technical assistance came to 11 per cent. Among the major countries, West Germany had 25 per cent, the United Kingdom 10 per cent, the United States 6 per cent, and France 5 per cent. With the exception of West Germany, all fell below the average. In contrast to this, however, Japan registered an extremely high rate of 27 per cent. This seems to be an area where one of the characteristics of Japan's technical cooperation is manifested.

The trainees acceptance program includes both trainees and students. In the case of Japan, the ratio of the two is 5:1, which shows the overwhelming majority of trainees. The scale of assistance for trainees only amounted to \$6.0 million and 3,236 recipients. This was slightly above the DAC average of \$6.0 million and 2,706 trainees.

Though not adopted for use by Japan's program of technical cooperation, there is an important Third Countries Training Program which includes training in local areas. For the DAC countries as a whole the scale of this program is showing an upward trend. The participants number about 10,000 persons and account for about 12 per cent of the total amount disbursed for trainees and students. In addition to Japan, only two other countries, the United Kingdom and Australia, have not adopted this program. This program has an important significance, because it results in curricula and training environments suited to the actual conditions in the developing countries. It has become a principal topic for discussion in the international organizations, such as DAC, UNCTAD, and the Colombo Plan Conference, and will probably henceforth become an important problem for consideration in Japan's technical cooperation.

## 2. Dispatch of Experts and Volunteers

In fiscal 1971 the scale of Japan's activities in sending experts to developing countries came to \$12.6 million and involved 2,978 technical personnel. In comparison to the previous year, the increases of 24 per cent and 13 per cent, respectively, were fairly large, but the absolute totals were far below the DAC averages of \$53.0 million and 6,854 persons. Japan accounted for 2.8 per cent of the total number of technical assistance personnel for the DAC countries as a whole, ranking seventh position among the DAC countries, the same as the previous year.

Since 1968, for the DAC countries as a whole, the growth of overseas technical personnel programs, especially in terms of the number of persons dispatched, has been stagnant, and it is feared that the program has reached a standstill. In contrast, however, Japan has increased both the dollar amount and the number of personnel dispatched in her aid program by about 25 per cent per year since 1968, showing a satisfactory growth rate.

The percentage share for experts and volunteers in the total amount disbursed for technical assistance by country comes to 54 per cent for the United States, 57 per cent for the United Kingdom, 38 per cent for France, and 34 per cent for West Germany. The percentage for Japan at 45 per cent was about the same as that of the other developed countries. If, however, one examines the details of Japan's program, the lag in the field of education in particular is striking. For the DAC countries, an average of 42 per cent of the total technical assistance personnel are educational experts. In contrast to this, Japan's figure of 2 per cent is insignificant. Of course there are some problems in the method of compiling these statistics, but at this juncture, with greater importance placed on the need for educational cooperation in recent years, Japan must give greater consideration to the methods of carrying out educational assistance in the future.

## 3. Scale of Equipment Provided

The program for equipment supply by Japan in fiscal 1971 totaled \$5.6 million, an increase of 7 per cent and \$400,000 over the previous year. Only a comparatively few countries include the supply of equipment in their technical cooperation programs, and there is a considerably wide gap among them in the high and low percentage of equipment provision to total technical assistance. For example, the percentage for West Germany was 26 per cent, the United States 18 per cent, the United Kingdom 3 per cent, and France 2 per cent. For Japan the percentage was 20 per cent which was comparatively high, placing Japan in the fourth place among the DAC countries. In terms of total technical assistance disbursements for supplying equipment, however, Japan's figure amounted to only 1/20 that of the United States and 1/10 that of West Germany. Moreover, in terms of the total incremental increase over the previous year, Japan's was 1/15 of that of the United States and 1/12 that of West Germany.

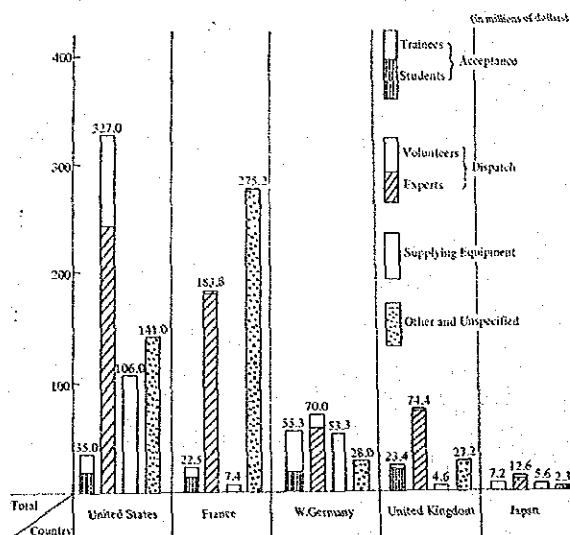
Japan's percentage share of the total amount of DAC equipment provision assistance also was a trifling 3 per cent, the same as the previous year.

## Section 2. Technical Cooperation by Major Countries

The following is an factual introduction to the present

status of technical cooperation by the major countries. No judgments are made as to the propriety of individual country programs.

Fig. 2. Distribution by Categories of 1971 Technical Assistance Funds for Major Countries



Source: *Development Assistance Review*, 1970, 1972.

### 1. United States

In 1971 the amount of bilateral technical assistance by the United States amounted to \$593.0 million. This represented a 5.7 per cent increase over the previous year, but did not reach the record high of the United States of \$657.0 million in 1968. The percentage of bilateral official development assistance to total assistance has remained at around 20 per cent for the past several years. In comparison to the DAC average of 26.1 per cent, this rate has continued at a fairly low level.

The breakdown of total technical assistance disbursements by category shows \$35.0 million for students and trainees, \$327.0 million for experts and volunteers, \$140.0 million for supplying equipment, and \$140.0 million for other unspecified assistance. Emphasis has been placed on the dispatch of experts and volunteers.

The figures for assistance by selected recipient countries, based on the statistics for 1970, show that Vietnam received \$120.0 million, Thailand \$33.0 million, and Laos \$32.0 million. Hence, the top three recipient countries were Vietnam and her neighboring countries. By regions, Asia received \$247.0 million, Latin America \$100.0 million, and Africa \$72.0 million. The weight on Asia is high as has been the trend over the past several years.

The fields which have especially received emphasis are agriculture, nutrition, education, population, employment, foodstuffs, and urban development. The characteristics of the United States method of providing technical assistance are the application of aid centered around research activities dealing with the above

fields of emphasis, the practice of close joint operations with international organizations, and the skillful linking of financial and technical assistance.

As for cooperation in research activities, there are the International Rice Research Institute (IRRI) in the Philippines, the International Tropical Agriculture Institute (ITA) at Ibadan in Nigeria, the International Maize and Wheat Improvement Centre (CIMMYT) in Mexico, and the International Tropical Agriculture Center in Colombia. At these institutes, research on technical development is conducted and the general policy is to immediately transmit the results to the developing countries.

As for joint operations with international organization, in the area of population research, the United States supplies 50 per cent of the total budget for the population problem project of the United Nations. The United States also performs close joint activities with the International Statistics Research Center.

In the linking of financial and technical assistance, the United States provides technical assistance for the basic studies by AID for the Financial Assistance Project. Moreover, the New Project Approving Committee has been inaugurated for the purpose of studying and formulating overall assistance programs for financial, technical, and food aid.

### 2. France

In 1971, total bilateral technical assistance by France came to \$488.9 million for an increase of 12 per cent over the preceeding year. This favorable rate of increase has been continuing every year. The percentage share that technical aid occupies in the total bilateral official development assistance is 44.9 per cent which is the highest among the DAC member countries.

In terms of categories of technical assistance, \$22.5 million was disbursed for students and trainees, \$183.8 million for experts and volunteers, \$7.4 million for supplying equipment, and \$275.2 million for other unspecified disbursements. While the percentage shares of the total technical assistance for trainees and students at 5 per cent (DAC average is 11 per cent) and for supplying equipment at 1.5 per cent (26 per cent for West Germany, 18 per cent for the U.S.) are extremely low, the percentage share of the other categories of technical assistance, including the financial aid given which is linked with technical cooperation, at 56 per cent is extremely high. This distribution of funds forms France's unique pattern of technical assistance.

The regional breakdown of France's total \$274.6 million in bilateral technical assistance received by independent nations in 1970 shows that the African region received \$236.2 million (86% of the total), the Asian region \$20.5 million (7%), the Latin American region \$13.1 million (4%), and Europe \$4.8 million (3%). The overwhelming emphasis has been on Africa which is a traditional stationary trend.

Other characteristics which can be cited of France's bilateral technical assistance are the heavy emphasis placed on areas related to education, beginning with the program for sponsoring foreign students, the adoption of methods of granting fellowships for education for use within the recipient country, and the establishment and effective utilization of joint committees with the major recipient nations. Among the 14,715 persons receiving counterpart foreign study grants and technical trainee fellowships, 60 per cent were students studying abroad. Also among the 41,186 experts dispatched, about 65 per cent were connected with education. The weight placed on fields related to education is high which is, incidentally, similar to the pattern also shown by the United Kingdom.

In 1971 2,908 fellowships were given for education and training in the recipient countries. These accounted for 20 per cent of the total number of trainees including foreign students. This characteristic of France's technical assistance is unique among the DAC countries.

Lastly, joint committees were formed to adjust and to promote the effective execution of the medium and short-term aid programs and projects in progress between France and the respective recipient countries. They, therefore, operate in a wide range of activities including conducting studies on the future pattern of human resources in the recipient country, selecting qualified people for fellowships, and performing surveys on the future employment of fellowship holders.

### 3. West Germany

In 1971 West Germany's bilateral technical assistance totaled \$206.6 million. This represented an increase of 8.9 per cent over the previous year. West Germany's technical aid has continued to increase at a favorable rate each year. The percentage share of bilateral official development assistance came to 39 per cent which was extremely high in comparison to the DAC average of 26.1 per cent.

The breakdown by type of technical assistance shows that \$55.3 million was disbursed for trainees and foreign students, \$70.0 million for experts and volunteers, \$53.3 million for supplying equipment, and \$28.0 million for other unspecified technical assistance. The balanced allotments for each category is a characteristic of this breakdown. In comparison with other DAC countries, the outstanding features of Germany's technical assistance are the large number of students and trainees, especially the latter, who account for 60 per cent of the total, and the considerable amount disbursed for supplying equipment.

In 1970 the chief recipients of Germany's assistance were India with \$13.7 million, Chile with \$9.7 million, Brazil with \$8.5 million, and Afghanistan with \$7.4 million. The percentages by region show that Africa

received 31.3 per cent of the total, Asia also 31.3 per cent, Latin America 27.9 per cent, Europe 6.7 per cent, and others 2.9 per cent. Although there is a slight tendency toward placing emphasis on certain specific countries, in comparison with the other DAC nations, Germany divides her aid quite equally.

The major fields of assistance are agriculture, education, various types of vocational training, health and family planning, and in the improvement of the social structure.

In recent years, emphasis has especially been placed on agriculture. Expenditures in this area for 1971 amounted to D.M. 538.0 million which accounted for 21 per cent of Germany's official development assistance.

The characteristics of the substance of West Germany's technical assistance include the linking of the experts and volunteers program with that for students and trainees, the establishment of re-integration services which includes care for foreign students after returning to their home countries, the utilization of local German enterprises, joint operations with the churches, and the linking of financial and technical assistance.

The linking of the experts, the students and trainees programs entails placing emphasis on dispatching experts and accepting the project-related trainees. It also includes employing the foreign students who have studied in West Germany in German-sponsored projects in the recipient country after their return.

The re-integration services include holding seminars for foreign students and trainees, who have remained in Germany for extended periods of time, dealing with the state of affairs in their home countries in order to facilitate their smooth return to their native lands. This program also provides counselling on employment problems and in methods of starting small and medium-sized businesses as well as on planning facilities.

As for the utilization of German enterprises located in the recipient countries, trainees are placed and trained in local West German-based manufacturing concerns. In 1971 the majority of the third countries trainings were accomplished by this method.

Joint operations with the churches entail cooperating in high priority projects among the projects for health and social welfare, and education which the churches are undertaking in the developing countries. In 1971 the expenditures in this field amounted to DM. 71.6 million.

West Germany has customarily practiced linking financial and technical assistance. This includes performing surveys of the financial assistance project prior to the investment, dispatching supervisors and advisers to oversee the construction, and sending experts for management and administration after the investment is completed. As the trend toward programs by individual countries has become stronger, the links between them

have become much closer.

#### 4. United Kingdom

In 1971 the bilateral technical assistance by the United Kingdom amounted to \$129.6 million. This was a 27 per cent increase over the preceding year, an increase three times as high as the DAC average.

The percentage share of technical assistance in the bilateral official development assistance by the United Kingdom came to 26.6 per cent. This was slightly less than that in the preceding year, but it was approximately on the same level as the DAC average.

The breakdown of the technical assistance by category shows \$23.4 million disbursed for students and trainees, \$74.4 million for experts and volunteers, \$4.6 million for supplying equipment, and \$27.2 million for other unspecified technical assistance. In comparing the allotment of technical assistance funds by the United Kingdom with that of the other major donor countries, one can point out the trend of emphasizing dispatching experts and volunteers and completely de-emphasizing supplying equipment. This trend has been maintained for several years.

In 1970 the chief recipient countries of technical assistance by the United Kingdom were Kenya with \$7.9 million, Zambia with \$6.1 million, Uganda with \$4.9 million, Tanzania with \$4.3 million, and Nigeria with \$3.6 million. The chief recipients in Asia were India with \$2.1 million and Thailand with \$1.2 million.

The breakdown by region shows that Africa received \$49.0 million, Asia \$14.0 million, Latin America \$9.0 million, Oceania \$7.0 million, Europe and the Middle East \$5.0 million, and others \$25.0 million. The tendency by the United Kingdom to place emphasis on Africa due to former suzerain relationships is still maintained.

The major areas of technical assistance were education, medicine, and engineering. The overwhelming majority of experts dispatched and students or trainees received were in these fields.

A recent characteristic of the technical assistance by the United Kingdom has been the reduction by about 10 per cent per year shown in the number of experts dispatched. In 1971 the number of operational personnel, advisers, and educators were reduced by about 10 per cent below their respective totals for 1970. This decrease stems mainly from the increased difficulty in obtaining qualified experts as the needs in the recipient countries have become complicated, while the substance of the assistance required has become more and more technical.

Other characteristics of technical assistance by the United Kingdom include an expansion in research operations, an increase in the practical use of consultants, a strengthening of the scientific technology and fields of research, as well as the establishment of an office of human resource planning for the purpose

of clarifying the standards for selecting trainees to be sponsored and experts or volunteers to be dispatched.

As for the first characteristic above, the trend toward strengthening pre-investment surveys has continued over the past few years. The 1970 budget of \$35.18 million was increased 2.5 times in one stroke to \$85.8 million. The package assignment of consultants is being widely utilized.

As for the characteristic of strengthening the scientific technology and research, emphasis will be placed on organizations such facilities as the Tropical Products Research Center, the Overseas Pest Research Center, the Office of Land Resources, and the National Agricultural Research Center with the purpose of developing technology and materials relating to the developing countries as a whole. The areas to receive emphasis include tropical agriculture, medicine, cattle hygiene, pest control, fishing, forestry, population control, roads, and building materials.

The third characteristic of establishing an office of human resource planning is aimed at isolating the supply and demand trends for technical experts by field in the developing countries as well as in the United Kingdom. This has arisen because of the growing unemployment of technical experts in the developing nations. The information generated will be reflected in the programs for accepting students and dispatching experts.

#### 5. Netherlands

The total amount of bilateral technical assistance for the Netherlands in 1971 came to \$42.1 million. This represented a 9.3 per cent increase over the preceding year. Its percentage share of the total bilateral official development assistance amounted to 24 per cent. The increase in 1971 was much less striking than the 17 per cent yearly increases since 1968. In consideration of the fact that until 1970 the percentage share occupied by technical assistance in the total bilateral official development assistance was around 19 per cent, however, the current 24 per cent shows a trend toward emphasizing technical cooperation.

The distribution of the technical assistance by category shows 9 per cent for students and trainees, 27 per cent for experts and volunteers, and 64 per cent for other unspecified technical assistance, the greater part of which was linked with financial assistance. No equipment was supplied. This pattern has remained unchanged over the previous years.

This technical assistance is characterized by an unusual pattern highlighted by the high percentage in the other unspecified category and the overwhelming number of students in comparison to trainees. Students comprised over 90 per cent of the students and trainees category.

The major recipient countries include India, Pakistan,

Indonesia, Kenya, Uganda, Tanzania, Nigeria, and Colombia. The major fields of assistance are agriculture, education, and health with more concentrated assistance being practiced than in previous years.

The other characteristics of the technical cooperation by The Netherlands that can be cited are the emphasis on development research activities, the emphasis on the linking of financial and technical cooperation, the strengthening of links with research organizations through international organizations, the expansion of inter-university projects between the Netherlands and recipient countries, the sending of assistants and experts to international organizations, and the formulation of long-term assistance programs.

Although the Netherlands has traditionally tended to place emphasis on development research programs. In 1971 there was an expansion particularly in the research performed by hired consulting firms.

As for the linking of technical and financial assistance, in 1971 from 50 to 60 per cent of the projects for technical cooperation were linked with financial assistance through conducting pre-investment surveys as well as dispatching experts to follow-up on investments after they were completed.

In the area of cooperation with research organizations, the Netherlands constantly maintains close ties with the international agricultural research projects sponsored by the International Bank for Reconstruction and Development (IBRD), the United Nations Development Program (UNDP), and the Food and Agriculture Organization (FAO) of the United Nations. In accordance with the requests by these international organizations, the Netherlands provides funds to the countries where the research is being conducted. In 1971 the Netherlands provided assistance to the International Agricultural Research Centers in Colombia and Nigeria, the International Rice Research Center in Manila, and the FAO's Three Year Project for Rice Mechanization Research, and cooperated with important research organizations in the developing areas. This type of cooperation in research is clearly moving in the direction of expansion in the future.

The inter-university cooperation projects began only in 1970, but already during the two years since their inception, 53 projects have been undertaken.

The dispatch of assistants and experts to international organizations include training. In 1971, 130 university graduates were sent.

As for the policy formulation of long-term assistance programs, among the developed countries, The Netherlands has adopted a positive attitude by taking the initiative. In 1971 missions to formulate technical cooperation programs were sent to the major aid recipients, Colombia and the East Africa countries. They drew up long-range plans for the period 1972 to 1975 and announced them publicly. In the future The Netherlands plans to take similar measures for all of

her aid-recipient countries.

## 6. Sweden

In 1971 the total bilateral technical assistance by Sweden amounted to \$21.2 million which was an increase of only 3 per cent over the previous year. This was an extremely low rate of increase, since the average annual rate in the period 1967 through 1971 was approximately 20 per cent.

The percentage share of technical assistance in the total bilateral assistance was 31 per cent, namely, Tanzania \$1.9 million, showing the emphasis placed on East African countries. In the Asian region Pakistan second only to France and Denmark. This shows the great weight placed on technical assistance.

The breakdown by category of technical assistance shows that 12.2 per cent went for students and trainees, 43.7 per cent for experts and volunteers, 2.3 per cent for supplying equipment, and 41.8 per cent for other unspecified assistance, including financial assistance linked with technical cooperation. Sweden shows a unique pattern in its emphasis on dispatching experts and volunteers along with other unspecified categories.

The distribution of the assistance by region and country, according to the 1970 statistics, shows Africa with the greatest share, accounting for more than 70 per cent of the total. The major recipient countries were Ethiopia with \$3.2 million, Kenya \$2.2 million, and Tanzania \$1.5 million. Indonesia and Vietnam received some assistance.

The fields of assistance receiving emphasis in Sweden's program are agriculture, education, family planning, and nutrition.

Other characteristics are the promotion of research cooperation while maintaining close links with international organizations. Emphasis has been on the expansion of the third countries training program, the linking of the students and trainees program with that of dispatching experts, and expansion of the direct employment of experts.

Placing emphasis on close ties with international organizations is a point common with Canada and Norway also. It is manifested by the large share occupied by grants to international organizations. Because of the small absolute amount of Swedish aid, it is not possible for her to promote research cooperation important to development by herself. Hence, she places emphasis on cooperation with international research organizations. In this research cooperation, there are the International Agricultural Research Centers of the FAO, UNDP, and IBRD to begin with, the research on international employment problems by the International Labor Organization (ILO), studies on family planning by the World Health Organization (WHO), and research on social cross-sections by the UNRISD.

The granting of fellowships for training in third countries was practiced positively in 1971 also. Among

1,526 students and trainees sponsored, 74 per cent or 1,133 were trained by this method. The program for training in the country of origin, on the other hand, dropped 15 per cent below that for the preceding year.

As for linking the students and trainees program with that of dispatching experts, has been over the past several years, and was strengthened in 1971. All individual trainings, the dispatch of experts which were

not related to a local project, were terminated.

In accordance with the plan to double by 1975 the program of dispatching experts in 1971, the direct employment of experts is being in order to secure the requisite number. Already 200, which amounts to one-third of all the experts dispatched in 1971, are directly employed at the Swedish International Development Organization (SIDA).

## CHAPTER 3

# JAPAN'S TECHNICAL COOPERATION AND ITS PRESENT STATUS AND PROBLEMS

In recent years, the importance of technical cooperation in particular has been strengthened as a result of a re-examination of the development assistance programs practiced heretofore. A brief explanation of the present status and problems of Japan's technical assistance is given in the following by focusing on the programs in 1971 by the Overseas Technical Cooperation Agency (OTCA).

### 1. Performance

#### (1) Scale of Program

In 1971 the budget of OTCA for technical cooperation projects entrusted to it by the government totaled ¥8,576.0 million. This was an increase of 27.8 per cent over that of the previous year. The cumulative amount for technical cooperation by Japan since OTCA's inauguration in 1954 reached ¥41,278.0 million. In spite of this sharp increase in Japan's technical cooperation, however, its level is still extremely low in comparison with the technical cooperation by other developed countries. As stated in the previous chapter, the percentage share of Japan's technical assistance in her official development assistance is extremely low. In fact, Japan occupies the lowest position among the DAC nations in this respect.

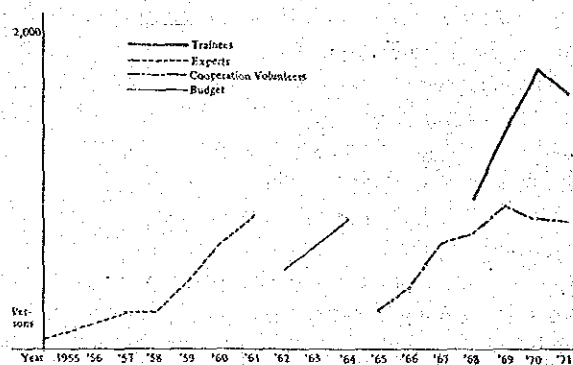
The achievements of the technical assistance projects in 1971 show that a total of 1,724 trainees were accepted, of whom 1,096 came under the group training program and 678 under individual programs.

As for the dispatch of experts, 294 were sent, 185 under the Medical Cooperation Program, 35 under the Overseas Technical Cooperation Center Program, 283 under the Development Surveys Program, 114 under the Agricultural Cooperation Projects, and 26 under the Primary Products Development Cooperation Program, for a total of 937. This was a 15 per cent increase over the total for the preceding year. The cumulative total reached 6,255.

The total number of volunteers sent abroad under the Japan Overseas Cooperation Volunteers program five number of trainees accepted to date reached 16,016 was about the same as the preceding year. The cumulative came to 217. This was almost the same figure as that recorded for the previous year. Since this program was initiated in 1965, the cumulative total has reached 1,160.

As figure 3 indicates, the expenditures for trainees, experts, and volunteers grow parallel with increases in the government budget. There were, however, some fluctuations in the acceptance of trainees due to the cancellation of the Joint U.S.-Japan Third Countries Training Program and increases in the group training courses. Likewise, there were variations in the dispatch of experts due to the regular implementation of the technical cooperation programs in medicine, agriculture, and development.

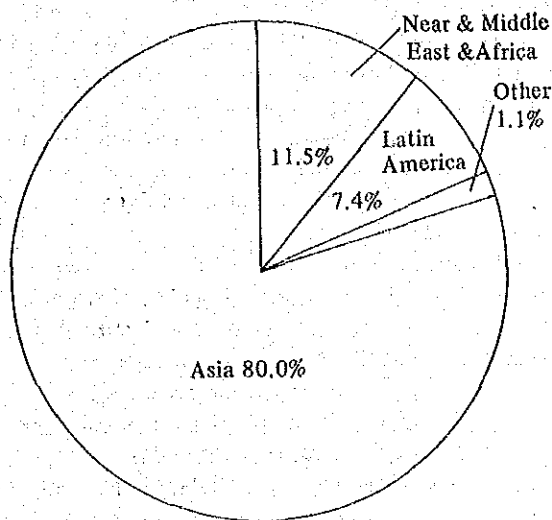
Fig. 3. Number of Trainees, Experts, and Co-operation Volunteers and the National Budget (1955-Mar. 31, 1972)



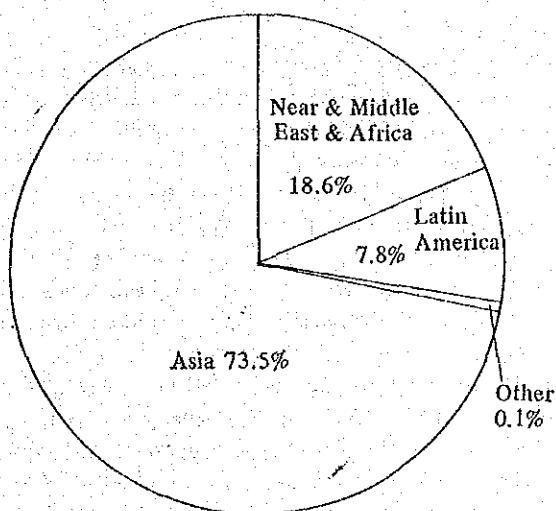
#### (2) Regional Distribution

The regional distribution of the trainees, experts, and volunteers (see Figure 3) shows that both the acceptance of trainees and the dispatch of experts and

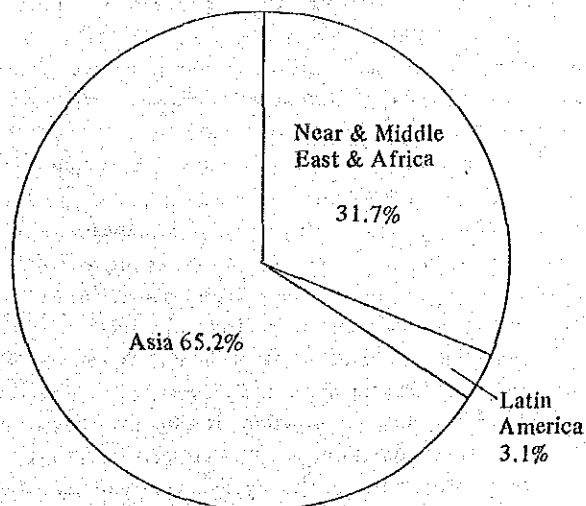
Fig. 4.  
Trainees Accepted by Region



Experts Dispatched by Region



Cooperation Volunteers Dispatched by Region



(April 1, 1955-March 31, 1971)

volunteers are concentrated in Asia. Other regions of significance are the Near and Middle East and Africa with about 15 per cent and Latin America with less than 10 per cent. These regional shares have remained roughly the same during each fiscal year.

The concentration of Japan's cooperation in Asia was also pointed out in the 1972 DAC survey. Henceforth, Japan will be requested to strive to expand its technical cooperation in other regions. However, in the case of Africa, for example, the links with European countries, which were Africa's former suzerain states, still strongly persist as in the past. In addition, with the recent expansion in the European Economic Community, there is a movement toward strengthening the Euro-African sphere. In Latin America also, although interest in Japan has been on the rise in recent years, one cannot deny the strong inclination toward the Euro-American nations centering around the United States as in the past.

On the other hand, it is fact that economically, geographically, and also historically, Asia's ties with Japan are deep. Hence, in view of these conditions, to seek a mere superficial regional expansion of Japan's technical cooperation would only mean that assistance would be speed out thinly and would not be effective as a result. Consequently, Japan should proceed with care with regional expansion, keeping aware of the characteristics of various cooperation programs and persistently placing emphasis on the effectiveness of the assistance.

In the case of assistance for development, as a general rule, the greater the progress in the level of development of a country, the greater becomes the weight of financial over technical cooperation, and the greater becomes the scale of projects. Therefore, it is natural that the method of technical cooperation should differ according to the degree of progress of the country or region. Some of the manifestations of this are the high weight placed on Africa by the Japan Overseas Cooperation Volunteers Program (more than 36 per cent in 1971) and the gradual focusing on Asia heretofore in the agricultural cooperation programs.

### (3) Distribution by Fields

The breakdown by fields of Japan's technical cooperation (see Table 3) shows that about one-third of the total is accounted for by agriculture, forestry, and fisheries. In the trainees acceptance programs, some of the more predominant fields following agriculture, forestry and fisheries are transportation and communications, public administration, and mining and manufacturing. In the dispatching programs, the major fields after agriculture, forestry, and fisheries are mining and manufacturing; transportation and communications; medicine, health and welfare; and construction. Generally, public utilities, such as electricity, gas and water works, are given lowest priority.



Table 3. Technical Cooperation by Fields  
(in percentages)

Project\Field	Agriculture, Forestry and Fisheries	Construction	Mining and Manufacturing	Public Utilities
Trainees	27.8	6.0	12.7	
Experts, etc.	28.4	13.4	15.7	
Cooperation				
Volunteers	47.8	10.0	6.8	
Average	34.7	9.8	11.7	

The reason that the weight placed on the field of agriculture is so high is that, in general, development in the developing countries is carried out with emphasis on agriculture. In agricultural cooperation, rice production technology has become the focus of attention, but at present, with the passing of the era when increased food production was the supreme problem, this trend should be corrected. In fact, Japan's agricultural cooperation in recent years has been gradually diversified from rice alone to corn, soy beans, and sericulture. Consequently, it is desirable that henceforth, corresponding to such changes in the needs of agricultural cooperation, Japan conduct research and develop various tropical products suited to the natural environment in the developing countries and train experts in these fields.

The most recent trend that can be seen is the increase in cooperation directed toward fields related to the infrastructure. This is a manifestation of the shifting of emphasis from piece meal development to comprehensive development, and the consolidation of the basis for it. Furthermore, the relative weight of the cooperation in these fields in the future should become greater as development progresses.

However, the consultants from Japan, in conformity to this new trend, are noticeably weak as an enterprise when compared with those of other developed countries. For example, in the UNDP's requests for consulting services, the share of requests received by Japan amounts to a mere 2.9 per cent. Accordingly, together with the progress in untying assistance, there is urgent need in the future to train and promote consulting services in order to cope with the expansion of technical cooperation in the area of the infrastructure.

With respect to the cooperation in the area of social development, the importance of which has been widely recognized in recent years, the low level of cooperation in the field of education is particularly striking. There is no doubt that the problem of education is a barrier to the self-sufficient progress of developing countries, and hence there is need for educational cooperation.

In many cases, however, the developing countries have inherited the education system of their former suzerain states unchanged from the colonial era. In fact, this has become a great obstacle to the furthering of educational cooperation by Japan.

In particular, education is a problem most basic to a country itself. Moreover, rendering assistance in this field is difficult because there are many aspects of it which take root in the country's individual cultural tradition. It is pointed out in the Pearson Report that there were entirely too many cases of failure by educational cooperation to adapt to the requirements of the actual conditions in the developing countries because of a lack of consideration of such generally understood fact.

In this context, it is necessary in future educational cooperation to take a long-range point of view and search out new educational methods and curricula for the developing countries. As for Japan, it cannot be denied that, with respect to these circumstances, she has not in the past adequately studied the actual conditions in the recipient areas or the ideal method of educational cooperation required. The positive attitude shown by Japan recently in this regard is certainly welcomed.

## 2. Program Implementation

### (1) Program System

It is often pointed out that technical cooperation is too passive with respect to the requests from the developing countries and too thinly spread out to have much effect. Concerning these criticisms, it certainly is a fact that as long as technical cooperation is extended on the basis of requests by the recipient country, it will be passive assistance. Moreover it cannot be denied that in the past there has been a tendency to attempt to please everybody to some extent when allocating assistance.

Each request for assistance, however, is not accepted unconditionally as it is. In the review stages of each request, as far as possible, surveys are made of the background of the request through overseas OTCA offices and diplomatic missions, and efforts are made to understand the actual conditions and needs. Recently, especially in the case of project cooperation, various pre-investment surveys are being conducted. If necessary, project finding surveys are positively carried out from the Japanese side. Also the recent substance of cooperation is aimed at putting the assistance on a long-term basis and expanding the scale of the projects. Hence, it is difficult to say that the above criticisms are necessarily correct.

In addition, efforts are being made to coordinate the various cooperation programs. In accepting trainees, for example, in the case of individual recipients, priority is placed on requests from projects. In fact, even in the dispatching activities, of which a considerable portion is for project personnel, care is being taken to insure that the cooperation is effective by such measures as coordination between projects and supplying equipment. In recent years, particularly the emphasis on the dispatch of experts concerned with



policy-making is based on the recognition of development cooperation as a cycle, especially a recognition of the importance of cooperation in the aspects of development planning within that cycle.

Efforts at relating financial and private cooperation are also gradually being made. Furthermore, in development surveys also, efforts are being made to strengthen the coordination between the surveys and the related financial cooperation institutions in order to tie them into the financial assistance. These, however, are confined mostly to local studies and efforts within the realm of passive cooperation centering around individually requested projects. It is a fact that as yet no system has been consolidated for the overall regulation of programs from the point of view of development assistance as a whole, including the relationships with financial and other cooperation. Neither is there a system directed toward an overall attempt to handle cooperation from its initial planning stages. Hence, it is greatly hoped that improvement will be made in the future in this area.

The system to formulate programs by country proposed to the UNDP in the Jackson Report in 1970 has already been adopted by many developed countries as the basic system for development assistance. This is an area that requires special effort in its future development by Japan which is conspicuously lagging behind in this respect.

## (2) System Implementation

With the recognition and the heightening of evaluation of Japan's technical cooperation, in recent years, there has been a remarkable increase in the number of requests and in the diversification of their substance. In order to respond to this, Japan has attached great importance to recruiting men of ability as experts by establishing higher salaries, language allowances, remote area allowances, a special technical remuneration system, a livelihood security system for returned experts, and a special part-time system. In addition, improvements have been made in the treatment of experts primarily by the establishment of a system supplementing salaries during their assignments and the enactment of a law for the dispatch of national civil servants in order to guarantee their status.

This problem of securing talented personnel is common to all donor countries, but particularly for Japan it is a problem which is impossible to solve within the present system of technical assistance, because it is related to external problems and system such as the lack of technical experts, the lack of persons with language ability, and the system of permanent employment. In order to deal with this problem, it is necessary to gain the support and understanding of

the society as a whole and to promote improvements in various areas.

In the acceptance of trainees also, in order to respond to the growing requests, the problems of how to develop trainees acceptance institutions and how to secure the directors for the trainees have become extremely serious.

At present, the trainings are held, for the most part, in experimental stations and research centers, including central and local government agencies, all of which are external to this Agency. There are also many problems from the standpoint of implementation because of the scarcity of professional training institutions. For this reason, efforts have been made in consolidating the preparations for accepting the trainees by increasing the number of training institutions, recruiting directors for the trainees, and increasing the amount of the training subsidy expenditures. Much more effort, however, is still required.

As for project cooperation, such as in agricultural assistance or technical development assistance, it is clearly desirable to adopt a policy of being able to operate flexibly in response to changes in the process of operation and implementation and in the long-term nature of the cooperation. From this context, the necessity of a multiple-year budget system has come to be recognized, but this has not yet been realized. Efforts are being gradually made, however, to improve the efficiency in the implementation of programs in such areas as in the costs of various surveys, the costs of traveling experts, and the costs of local operations.

This apparent lack of flexibility in Japan's budget system, in comparison with those of other developed countries, is a fact that cannot be denied. The success or failure of a project is said to depend upon the securing of financial resources to cover the construction and operating costs and recruiting personnel of superior quality. In order to realize this, together with the necessity of coordination with both financial and non-financial cooperation, there needs to be an improvement in the aspects of budget execution so that expenditures for costs may be adapted to circumstances.

In comparison to this domestic system, the overseas system is gradually being strengthened. There are now ten overseas OTCA offices, but their size ranges from only one to three people per office. Even in the Japanese diplomatic establishments abroad, it is difficult to sufficiently obtain persons who can professionally handle technical cooperation. Hence in order to cope with the future expansion of technical cooperation, particularly with its qualitative improvement, much will be expected from these activities in the recipient countries. This is the reason for urging the strengthening of the overseas system.

## CHAPTER 4

# OUTLOOK OF JAPAN'S TECHNICAL COOPERATION

For the developing nations, the development of human resources and improvement in the level of technology are urgent requisites to smoothly promote sound development. It is here that the importance of technical cooperation lies.

Looking back over Japan's technical cooperation, it can be seen that the scale of the program has been too small. Hence, the need for rapid expansion has become the prevailing in international public opinion.

As previously stated, Japan has already pledged to raise the ratio of official development assistance to GNP to 0.7 per cent. At the present, however, Japan's ODA ratio is only 0.23 per cent which amounts to only one-third of the goal. Moreover, the share of technical cooperation in the ODA is 5.4 per cent, only a fourth of the DAC average.

Hence, by the time Japan's ODA reaches its goal, Japan's technical cooperation will amount to a staggering twelve times that of the present level, assuming for the present that the ratio to ODA will be set at the DAC average. Although there is no definite time limit set for reaching the ODA goal, if economic growth rate during the period of time taken to reach the goal is taken into consideration, the multiplicative increase will be even greater.

In view of the fact that the total growth in the OTCA budget in the ten years since its inauguration amounts to slightly over six times that of the initial year, it can easily be understood how extremely difficult it is to realize that goal in its budgetary as well as structural aspects.

In addition, from the self-reflection on the past performance of technical cooperation, the focus has come to be placed on the question of quality. The difficulty, therefore, lies in the need to make efforts to solve problems of quality, and at the same time to manage the problem of quantity. Hence, a drastic policy based on a new concept is now being sought.

### 1. Toward Coordinating Technical Cooperation

#### (1) Establishment of a Technical Cooperation Planning System

As previously stated, the major obstacles to growth find their roots in the fact that the social, economic, cultural, and natural conditions and systems of the developing countries are all variously intertwined, creating difficulties for development assistance. Developing countries face a fundamental development bottleneck in the lack of the ability to solve these problems and to promote effective utilization of finances and equip-

ment, in short, in the scarcity of qualified development personnel. In the midst of these exceedingly numerous problems, technical cooperation contributes to development by the developing countries by adopting flexible forms of cooperation while linking up with elements other than technology, such as financial assistance and equipment provision.

It should also be noted that an important key in promoting effective development lies in the way technical cooperation is incorporated into and the way it functions in a nation's total development plan. It is here that the necessity and basis for adapting technical cooperation as a part of a comprehensive plan exists.

In order to execute technical cooperation efficiently, it is difficult to expect great progress by continuing the traditional passive position stemming from the nature of request-based assistance. Rather, it is essential to assume a positive posture in which Japan will make a concrete draft program of cooperation for proposal to the developing nation.

In order to accomplish this, it is first necessary for Japan to formulate basic long-term concepts as guide lines for technical cooperation. An attempt must be made to set up a system for formulating technical cooperation plans by first establishing the goals and concepts of cooperation by region or by country, and then, using this as a base, to plan a focal point of cooperation for each country and draw up programs to carry out the cooperation.

Henceforth, great expansion in the scale of technical cooperation projects is expected, but for this also, more accurate and more long-term plans are necessary. Moreover, in those plans, efforts must naturally be made to establish closer relationships with financial cooperation.

#### (2) Establishment of a Comprehensive Information System

Although developing countries are often referred to in one sweeping generalization, each country has its own distinct differences. It is, therefore, not an easy task to discern the actual conditions and determine the precise needs of the countries which are all politically, economically, socially, culturally, historically, and geographically different.

At present, the collection and analysis of information concerning each developing country is in progress by various organizations. The problem is, however, that these programs are not necessarily sufficient and are not necessarily unified. As long as the collection and analysis of information is undertaken by each

organization to meet its own purposes, however, it is difficult to require them to move in a certain direction. Consequently, the problem is rather to create an information network which utilizes these organizations and, moreover, to analyze and utilize the information collected.

The experts dispatched and the survey teams in the technical cooperation programs are a unique and precious source of information, but the problem is that in the past a system has not been sufficiently provided which can handle and utilize this information. In this context, the establishment of the system for formulating development plans, as previously stated, and the provision of a system for utilizing information become the important and basic conditions for a comprehensive information system.

## 2. Unification of Executive Organizations

In coordinating technical cooperation, it is, of course, first essential to tie-up the various technical cooperation programs, but it is also important to link financial cooperation with non-financial cooperation. Concurrently, however, it is necessary to give consideration to mutual coordination among the fields and types of programs.

In the case of examples taken from special regional development, most of them contained elements for comprehensive industrial development, but did not have ties which led to social development. Therefore, it is extremely difficult to expect results in the present vertical administrative structure separated by fields. For the sake of regional development, it is not only important to coordinate the various cooperation programs, but it is necessary to examine extremely wide areas such as electricity, communications, agriculture, mining and manufacturing, urbanization, medicine, sanitation, education, and finances. Also in the case of small-scale projects, such as village development, mere specialized knowledge in a single area, such as processing, distribution, or medicine and sanitation, is not sufficient to handle the problems. How to adjust and cope with these problems is the focus of the problem of coordination. The significance of the problem of coordination is in connecting the links between the so-called vertical and horizontal relationships and unifying them.

While overseas cooperation is different from general domestic administration, a unified assistance mechanism is needed to cope with the coming age of large scale cooperation, based on the point of view of the new development in international cooperation as stated above.

## 3. Consolidation of Administration System

### (1) Measures for Recruiting Qualified Personnel

The number of requests for technical cooperation

by the developing countries increases year by year, but in response to this the faculty to execute this technical cooperation has already reached its limits. The actual situation is that Japan cannot handle all of the requests and therefore is postponing many of them into the following year.

Moreover, the contents of the requests are becoming more and more diversified, but the system needed to respond to them is still not sufficiently consolidated.

The first is the problem of people to promote technical cooperation. The difficulty of recruiting experts has already been pointed out repeatedly, and Japan has attempted to make various improvements. Now, however, the limit has been reached where piecemeal improvements cannot solve the problem. At this juncture, powerful policies directed at recruiting the experts sought by the developing countries, both in quantity and quality, have become an urgent need.

As countermeasures, there is first the formulation of long-term plans for dispatching experts. In short, this entails integrating the plans for dispatching experts into the technical cooperation plans by country, as previously mentioned, and recruiting the personnel beforehand.

Secondly, there is a new development in the registration system that has been practiced up to now. At present, nearly all of the experts have come through recommendations from government ministries. Because of this, the securing of experts was left to the ministries and the agencies. Consequently, at this time, it is necessary to establish a system in which there is a wide collective registration of people who are qualified to be dispatched as experts. This should be done in coordination not only with each ministry but with the entire body of human resources including local public and private organizations.

The important element in recruiting these persons is that the persons recruited should be trained before they are dispatched. In reviewing the results in technical cooperation, it is particularly important that before the expert is dispatched he be thoroughly acquainted with the various situations, customs and culture in the country of destination, and be trained to a certain degree in the language.

### (2) Expansion and Improvement of Trainees Accepting Facilities

As previously stated, many of the receiving facilities for trainees are operated by the government and other experimental stations or research institutes. This causes many problems in operation, since they are not necessarily the proper places for training experts. Hence, it is necessary to establish more specialized training facilities. The type of training for the trainees, however, is becoming more and more diversified, and there

is a limit to coping with the problem in this manner. Hence, especially in fields in which demand is not too great, and in case where the training is relatively advanced, the programs are forced to rely on existing facilities. Consequently, these, together with strengthening the now existing institutions, are the important problems.

In order to accomplish this, it would be desirable to set up subsidiary training institutions for trainees at the previously mentioned experimental stations and research institutes and also to provide the necessary personnel and equipment.

On the other hand, it is also necessary to promote private training institutions. Experience shows, however, that in the case of private institutions, it is necessary to give ample consideration to both paying the training expenses and supplying the necessary equipment and machinery so that it is profitable.

### 3. Problem of Flexibility in Operations

Technical cooperation places considerable financial burdens on both the donor and recipient countries. Particularly, as the details of cooperation take the form of projects, the burden on the part of the recipient nation increases. At times, this burden grows to match the amount of the assistance and in cases surpasses it.

Relative to this situation, Japan has maintained the policy of having the recipient country shoulder the local expenses, such as construction and operation

costs, as a self-help measure. Contrary to expectations, however, this policy has become an obstacle to the promotion of the plans and has resulted, in many cases, in reducing the effectiveness of the assistance.

Consequently, in coping also with the future expansion in the scale of cooperation, it is necessary to take flexible measures in order to effectively execute technical cooperation. This will entail assuming, as much as possible, a portion of the burden of the expenses in the recipient area, such as operating expenses, corresponding to each country's ability to pay as long as this does not hinder the self-help efforts by the recipient nations. It will also entail bearing construction costs by tying them into non-financial assistance.

There is also a tendency for the method and scope of Japan's technical cooperation to be too rigid and fixed. The recipient nations especially regard it as such, and there are many cases in which this has caused a negative impression of Japan's technical cooperation as a whole. In fact, there have been many instances in which the cooperation achieved with great pains has brought negative results because of too close adherence to Japan's system and methods.

In dealing with the future implementation of technical cooperation, it is necessary, therefore, for Japan, irrespective of past performance, to operate flexibly and on a case by case basis, especially considering from an overall point of view the aspects of the necessity and effectiveness of the cooperation.

Table 2. Flow of Technical Assistance Contribution by Category

	U.S.A.	France	West Germany	U.K.	Belgium	Canada	Netherland	Japan	Sweden
<b>I. Technical Assistance Disbursements</b> (Million U.S. Dollars)	609.0	488.9	206.6	129.6	57.4	48.8	42.1	27.7	21.2
Students and trainees	35.0	22.5	55.3	23.4	6.7	9.2	3.6	7.2	2.6
—Students	19.0	13.0	19.5	...	4.4	5.5	2.8	6.0	...
—Trainees	16.0	9.5	35.8	...	2.3	3.7	0.8	1.2	...
Experts and volunteers	327.0	183.8	70.0	74.4	46.8	32.2	11.5	12.6	9.2
—Experts	243.0	181.4	57.6	72.5	45.9	27.9	7.2	10.2	7.7
—Volunteers	84.0	2.4	12.4	1.9	0.9	4.3	4.3	2.4	1.5
Equipment	106.0	7.4	53.3	4.6	...	0.0	0.0	5.6	0.5
Other unspecified	141.0	275.2	28.0	27.2	3.9	7.4	27.0	2.3	8.9
<b>II. Total Number of Students and Trainees</b>	(17,639)	14,715	21,517	13,514	3,631	2,707	1,335	3,884	1,526
Students	(10,753)	8,634	7,644	9,652	2,143	1,666	1,141	648	246
—in the donor country	...	6,778	7,512	9,652	2,140	1,524	962	648	151
—in the country of origin	...	1,906	392	...	3	0	37	0	6
—in third countries	...	...	40	...	0	142	142	6	89
Trainees	(6,836)	6,031	13,573	3,862	1,488	1,041	194	3,236	1,280
—in the donor country	...	5,029	12,394	3,862	920	1,022	194	3,236	242
—in the country of origin	...	1,002	...	...	568	0	0	0	472
—in third countries	...	...	1,179	...	0	19	0	0	566
<b>III. Total Number of Technical Assistance Personnel</b>	22,417	41,186	6,363	16,233	3,355	3,297	1,984	2,978	626
Educational experts	1,511	27,309	2,825	6,426	1,579	1,116	145	70	123
Operational personnel	0	10,967	975	7,477	681	0	70	0	154
Advisers	7,853	2,451	1,039	478	484	388	987	2,228	103
Volunteers	13,053	459	1,524	1,852	611	1,793	782	680	256
—teachers	...	...	...	1,259	316	1,262	76	97	63
—others	...	459	1,304	593	295	531	706	583	193

Source: *Development Assistance Review*, 1970, 1972.

**PART II**

**DETAILED CHAPTERS**



## CHAPTER 1

# ACCEPTANCE OF TRAINEES

### *Section 1. Outline of Program*

The development of human resources and the improvement of technological standards are of clearly fundamental importance to the economic and social development of developing countries. The purpose of accepting trainees is to invite engineers, administrative officers, and research workers of medium standing to Japan and to give them opportunities for technical training, or retraining, or for acquiring new knowledge. The program is intended to train important man power, and through these measures to contribute to the economic and social development of developing countries. Developing countries are expected to acquire deeper knowledge on the technological standards, and cultural and industrial situations in Japan. This is expected to help promote friendly relations between the two countries.

Acceptance of trainees is one of the very typical types of technical assistance Japan has undertaken. Since Japan joined the Colombo Plan as a donor country in 1954, she has made efforts to enlarge and improve the trainees program as one of the important measures of technological cooperation. Japan has accepted 15,976 trainees during the period from the beginning of this undertaking to the end of March, 1972. This figure is far smaller, however, than those of the developed countries in Europe and America. The results of these cooperative efforts, however, must be highly evaluated when the activities of the South East Asian trainees, after their return to their own countries, are considered.

During this period, OTCA established training centers for receiving trainees. For example, OTCA established the Uchihara International Agricultural Training Centre and the Misaki International Fisheries Training Centre as lodging as well as training facilities. Special training is also offered at laboratories and research centers of the concerned ministries and agencies as well as in cooperation with local, autonomous organizations, universities, private enterprises, and various associations. OTCA is making active efforts to expand training facilities.

The trainees acceptance program is conducted under two systems, namely, the group training system and the individual training system. Under the group system, participants are invited from various countries to participate in a pre-arranged program. Under the individual system, training in special subjects is given on an individual basis.

In recent years, an increasing emphasis has been laid on the acceptance of so-called "counterpart" trainees.

These trainees are personally engaged in various development projects which Japan is undertaking abroad in order to promote the effectiveness of such projects.

The budget for accepting trainees during fiscal year 1971 was ¥1,413,186,000. With this, 1,718 new trainees were accepted. Including the 345 trainees who stayed on from the preceding year, a total of 2,063 trainees benefited from the project.

In 1971, 1,096 trainees were accepted for the 106 group training courses, while 622 trainees were accepted for individual training.

The above course total were 17 courses that were newly opened on topics such as plastic surgery, public hygiene, artificial insemination, training of teachers of Japanese, etc. The individual training courses included the following so-called "counterpart" acceptance activities. Four "counterpart" trainees were accepted under the Colombo Plan from Thailand's King Mongkut Institute of Technology. Three trainees were also accepted from the Technical Cooperation Center for Textiles in Ghana, and 13 in connection with the survey for the Zaire Transport Capacity Consolidation Plan.

The geographical classification, of the trainees in 1971 is shown in Fig. 1. Namely, 1,325 trainees were from Asia, 210 trainees from the Near and Middle East and Africa, 182 trainees from Latin America, and 1 trainee from North America and Europe. The trainees from Asia accounted for 77 per cent of the total.

The breakdown by fields are shown in Fig. 2. Namely, 267 trainees were accepted in agriculture, 61 trainees in fisheries, 87 in construction, 30 in heavy industry, 59 in light industry, 23 in the chemical industry, 48 in public utilities, 173 in transportation, 199 in postal services and telecommunications, 217 in health and welfare, 27 in atomic energy, 51 in business management, 15 in education, 245 in administration, and 131 trainees in other fields.

Improvement of the living conditions of trainees as well as guidance in their lives are also a part of the training management work in its wider sense. These form a part of the important tasks imposed on OTCA. The importance of aftercare for returned trainees is also increasing more and more. As a part of this undertaking, two members of an electric power party and five members of a medium and small industry party were dispatched to South East Asian countries, and three members of an electric communication party were sent to Latin American countries. They traveled through the countries and provided guidance. Machinery and equipment for studying electric plating as

well as for other purposes were supplied to the returned trainees of the Philippines.

The newly established alumni associations are the Taiwan-Japanese Joint Technological Research Association and the Sri Lanka OTCA trainee Alumni Association. Alumni associations are currently in operation in the Philippines and seven other countries. OTCA furnishes the alumni associations with part of their operating expenses.

## Section 2. Trainees Acceptance Program in Fiscal Year 1971

During fiscal year 1971, 1,096 trainees were accepted for the 106 courses of group training, and 622 trainees were accepted for individual training for a total of 1,718.

The following 17 courses were newly opened this fiscal year: plastic surgery, public hygiene, artificial insemination, training of teachers of Japanese, marine transport management, geothermal energy, hydrographic engineering, experimental animals, ship crew education, zymology, lumber industry machines, family planning, a broadcasting management seminar, a mass media seminar, a family planning instructors seminar, and a family planning seminar.

The program for the current fiscal year is characterized by new courses in the fields of public welfare (plastic surgery and public hygiene etc.) and marine activities (marine transport management, naval architectural technology etc.). Furthermore, specialized courses were newly offered in the fields of family planning and fisheries. This indicates the steady growth of such courses.

The individual training courses were characterized by the acceptance of project-based trainees (such as agricultural cooperation and medical cooperation) and of counterpart trainees related to the programs for dispatched experts and survey teams.

The trainees accepted include the 13 trainees related to the Railway Project of Zaire (old Congo), the 3 counter-part trainees of the Ghana Textile Center, the 6 counter-part trainees of Vietnamese hospital related projects, the 17 counter-part trainees of the Taiwan Vocational Training Center, 4 trainees of Thailand's King Mongkut Institute of Technology Project, and 4 counterpart trainees of the Thai National Cancer Institute.

Requests for project based individual training are expected to increase sharply in the future with the unification of technical and financial cooperation.

The trainees accepted can be classified by plans as shown below.

Source	Number of Trainees	
	Accepted	Percentage (%)
South East Asia etc.	1,028	60
Near and Middle East,		
Africa	206	12
Latin America	174	10
Taiwan (North East		
Asia Project)	122	7
U.N. and governments		
in general	188	11
Total	1,718	100

The following is an outline of the various training courses.

### 1. Group Training Course

Group Training Courses held in Tokyo, Osaka and Nagoya

(\* Indicates new courses)

Name of Course	Duration	Main Institution and Facilities	Number of Participants by Country			
Tourism	Apr. 5, 1971 through Aug. 4, 1971	Tourism Dept., Ministry of Transport	Sudan	1	Laos	1
			Iran	1	Burma	1
			Bangladesh	1	Indonesia	1
			Afghanistan	1	Sri Lanka	1
			Korea	1	Argentina	2
			Vietnam	1	Bolivia	1
			China (Taiwan)	1	Chile	1
			Khmer Rep.	1	Peru	1
			Thailand	1	Total	18
			Customs Technique*	Aug. 1, 1971 through Oct. 10, 1971	Customs Bureau, Ministry of Finance	China (Taiwan)
Thailand	2	Philippines				1
Korea	2	Iran				1
Total	10					
Asian Highway Construction Seminar	Nov. 1, 1971 through Nov. 30, 1971	Road Bureau, Ministry of Construction	Bangladesh	1	Indonesia	2
			Vietnam	1	India	1
			Singapore	2	Thailand	1
			Iran	1	Afghanistan	1
			Malaysia	1	Nepal	1
			Total	12		



Name of Course	Duration	Main Institution and Facilities	Number of Participants by Country	
Fire Service Administration	Sept. 15, 1971 through Oct. 14, 1971	Fire Defense Agency	Singapore 1 Laos 1 Nepal 1 Malaysia 1 Indonesia 1	Thailand 1 Afghanistan 1 Vietnam 1 Philippines 1 China (Taiwan) 1 Total 10
Agriculture Extension Work	June 10, 1971 through Sept. 9, 1971	Agricultural Administration Bureau, Ministry of Agriculture and Forestry	Thailand 1 India 1 Indonesia 2 Vietnam 2 Philippines 1 Brazil 1	A.R.E. 2 Laos 1 Afghanistan 1 Khmer Rep. 1 Iran 1 Singapore 1 Total 15
City Planning and Housing	Mar. 12, 1972 through Apr. 11, 1972	Ministry of Construction	Thailand 1 Korea 2 China (Taiwan) 1 Iran 1	Vietnam 1 Khmer Rep. 1 Turkey 1 A.R.E. 1 Total 9
Crime Prevention (Senior Course)	Aug. 1, 1970 through Aug. 31, 1970	Asia and Far East Institute for the Prevention of Crime and Treatment of Offenders	Malaysia 1 India 1 Indonesia 1 Korea 1 China (Taiwan) 1 Philippines 1	Vietnam 1 Thailand 1 Sri Lanka 1 Nepal 1 Singapore 1 Total 11
Public Health	Apr. 20, 1971 through Mar. 19, 1972	Institute of Public Health	Korea 5	China (Taiwan) 5 Total 10
Marine Fisheries Research (including Fishing Gear and Methods)	<sup>(1)</sup> June 1, 1971 through Nov. 30, 1971	<sup>(2)</sup> Sept. 15, 1971 through Mar. 1, 1972 Tokai Regional Fisheries Laboratory, Fisheries Agency	Indonesia 1	China (Taiwan) 1 Total 2
Asian Statistics	June 1, 1971 through Mar. 31, 1972	Asian Statistical Institute	Afghanistan 1 Laos 1 Philippines 1 Vietnam 1 Sri Lanka 1 China (Taiwan) 1	India 1 Korea 1 Bangladesh 1 Thailand 1 Indonesia 1 Iran 1 Total 12
Carrier Telephony Engineering	Mar. 3, 1971 through Aug. 2, 1971	Nippon Telegraph and Telephone Public Corporation	Afghanistan 1 Brazil 1 Colombia 1 Honduras 1 Peru 1	Malaysia 1 Thailand 1 Ethiopia 1 Argentina 1 Costa Rica 1 Total 10
Cancer Control	Dec. 1, 1971 through May 30, 1972	National Cancer Center	Colombia 1 Uruguay 1 Chile 2 Thailand 1	Vietnam 1 A.R.E. 1 Pure 1 Total 7
Agriculture and Fisheries Statistics	Sept. 1, 1971 through Nov. 15, 1971	Statistics and Survey Department, Ministry of Agriculture and Forestry	Indonesia 1 Thailand 1 Philippines 2 Sri Lanka 1 Tanzania 1	Laos 1 Singapore 1 Sudan 1 Ethiopia 1 Total 10
Criminal Judicial Administration	Sept. 30, 1970 through Dec. 14, 1970	Asia and Far East Institute for the Prevention of Crime and Treatment of Offenders	Korea 1 Sri Lanka 1 Laos 1 Afghanistan 1 Philippines 1	Thailand 1 Vietnam 1 China (Taiwan) 1 Singapore 1 Malaysia 1 Total 10
Forestry and Forest Products Research	June 1, 1971 through Nov. 14, 1971	Forestry Experimental Station, Forestry Agency	Indonesia 2 Ethiopia 1 Thailand 1 Colombia 1	Philippines 1 Korea 1 China (Taiwan) 1 Total 8
Bamboo Processing	July 1, 1971 through Dec. 28, 1971	Kyushu Branch, Manufacturing Science Research Institute, Ministry of International Bureau, Ministry of Transport	Thailand 1 Uganda 1 Tanzania 1	Philippines 1 Iran 1 Vietnam 1 Total 6

Name of Course	Duration	Main Institution and Facilities	Number of Participants by Country	
Ports and Harbors Engineering (Seminar)	Jan. 24, 1972 through Mar. 25, 1972	Ports and Harbors Technical Research Institute, Ports and Harbors Bureau, Ministry of Transport	Thailand 1 Indonesia 1 Colombia 1 Singapore 1 Argentina 1 Sri Lanka 1 Iraq 1 China (Taiwan) 1 Syria 1	Philippines 1 Ethiopia 1 Somalia 1 Costa Rica 1 El Salvador 1 Jamaica 1 Peru 1 Uruguay 1 Total 17
Ports and Harbors Engineering	Aug. 1, 1971 through Nov. 28, 1971	Ports and Harbors Technical Research Institute, Ports and Harbors Bureau, Ministry of Transport	Philippines 1 A.R.E. 1 Indonesia 1 Venezuela 1 Thailand 1 Peru 1 Sudan 1	South Yemen 1 Costa Rica 1 El Salvador 1 Guatemala 1 Mexico 1 Nicaragua 1 Total 13
Seismology and Earthquake Engineering	Sept. 16, 1971 through Aug. 31, 1972	Architectural Research Institute, Ministry of Construction	Bolivia 1 China (Taiwan) 1 Iran 1 Peru 1 Chile 1 Colombia 1 Mexico 1 Turkey 1	Burma 1 Philippines 1 Thailand 1 Iraq 1 A.R.E. 1 Costa Rica 1 Total 14
Surveying and Mapping	Mar. 10, 1971 through Nov. 9, 1971	Geographical Survey Institute, Ministry of Construction	Thailand 1 Iran 2	Philippines 1 Iraq 1 Total 5
Automobile Service Engineering	May 1, 1971 through Feb. 17, 1971	Nissan Motor Co., Ltd. Toyota Motor Co., Ltd.	Laos 1 Thailand 1 Philippines 1 Sudan 1 Dominican Rep. 1 China (Taiwan) 1 Colombia 1 Ivory Coast 1	Ghana 1 Malaysia 1 Iraq 1 Somalia 1 South Yemen 1 Ecuador 1 Nigeria 1 Total 15
Railway Signal and Communication Engineering	Mar. 1, 1972 through June 30, 1972	Japanese National Railways	Iraq 1 Burma 1 Thailand 1 Sri Lanka 1 A.R.E. 1	Syria 1 Bolivia 1 China (Taiwan) 1 Korea 1 Total 9
Railway Rolling Stock Engineering	July 1, 1971 through Oct. 31, 1971	Japanese National Railways	Thailand 1 Indonesia 2 Iran 1 Iraq 1	Philippines 1 A.R.E. 1 Sudan 1 Chile 1 Total 9
Bridge Engineering	Jan. 15, 1972 through Mar. 15, 1972	Ministry of Construction	Indonesia 1 Thailand 1 Vietnam 1 Philippines 1	Iraq 1 Singapore 1 Nepal 1 A.R.E. 1 Total 8
Asia Taxation (Seminar)	Aug. 20, 1971 through Oct. 5, 1971	Tax Bureau, Ministry of Finance	Indonesia 2 China (Taiwan) 2 Korea 2 Thailand 2	India 1 Philippines 2 Singapore 1 Laos 1 Total 13
Women's Administration (Seminar)	Mar. 1, 1972 through Apr. 10, 1972	Women and Youth Division Ministry of Labor	India 1 Thailand 1 Iran 1 Laos 1	Nepal 1 Vietnam 1 Philippines 1 China (Taiwan) 1 Total 8
Supervisory Training Instructors (Seminar)	Apr. 10, 1971 through June 68, 1971	Institute of Vocational Training	Korea 1 Sri Lanka 1 Ethiopia 1 Singapore 1 India 1 A.R.E. 1	Malaysia 1 China (Taiwan) 1 Iran 1 Bhutan 1 Philippines 1 Uganda 1 Total 12
Vocational Training Instructors (Seminar)	Apr. 10, 1971 through Mar. 31, 1972	Institute of Vocational Training	Burma 1 Sri Lanka 3 Indonesia 1	Iraq 2 Korea 2 Thailand 1

Name of Course	Duration	Main Institution and Facilities	Number of Participants by Country	
			A.R.E. 1 Uganda 1 India 3 Malaysia 3 Philippines 4 Singapore 2 China (Taiwan) 2	Ethiopia 1 Vietnam 1 Sudan 1 Nepal 2 Somalia 1 Nicaragua 1 Total 33
Vocational Training (Seminar)	Oct. 1, 1971 through Nov. 15, 1971	Institute of Vocational Training	Sudan 1 Ethiopia 1 Korea 1 China (Taiwan) 1 Malaysia 1 Afghanistan 1 Nepal 1	Peru 1 Philippines 1 Indonesia 1 A.R.E. 1 Vietnam 1 Bhutan 1 Chile 1 Total 14
Prevention of Narcotic Offenses (Seminar)	Sept. 15, 1971 through Oct. 14, 1971	Safety Division, Criminal Investigation Bureau, National Police Agency	Singapore 1 Vietnam 2 Iran 1 India 1 China (Taiwan) 1	Costa Rica 1 Philippines 1 Korea 2 Thailand 2 Malaysia 1 Total 13
Telephone Exchange Engineering	Feb. 10, 1972 through May 10, 1972	Nippon Telegraph and Telephone Public Corporation	Sri Lanka 1 Thailand 1 Bolivia 1 Brazil 1 Colombia 1	Mexico 1 Philippines 1 Honduras 1 Peru 1 Costa Rica 1 Total 10
Telex Communications Engineering	Sept. 1, 1971 through Nov. 30, 1971	Kokusai Denshin Denwa Co., Ltd.	Iraq 1 Korea 1 Thailand 1 Syria 1 Sudan 1 Panama 1	Kenya 1 China (Taiwan) 1 Costa Rica 1 Khmer Rep. 1 Jordan 1 A.R.E. 1 Total 12
Flood Forecasting and Warning (Seminar)	Sept. 16, 1971 through Mar. 23, 1972	Ministry of Construction	China (Taiwan) 2 Korea 2 Laos 1	Thailand 1 Philippines 2 Total 8
Microwave Engineering	Sept. 15, 1971 through Dec. 23, 1971	Nippon Telegraph and Telephone Public Corporation	Ethiopia 1 Indonesia 1 Costa Rica 1 Malaysia 1 Guatemala 1 Khmer Rep. 1 Bolivia 1	Sri Lanka 1 Brazil 2 Honduras 1 Nicaragua 1 Peru 1 Venezuela 1 Total 14
Southeast Asia Telecommunications Development Seminar	Mar. 25, 1972 through Mar. 18, 1972	Ministry of Posts and Telecommunications	Afghanistan 1 Cyprus 1 Iraq 1 Jordan 1 Saudi Arabia 1	Turkey 1 Morocco 1 Iran 1 A.R.E. 1 Sudan 1 Total 10
Postal Executives Seminar	Feb. 15, 1972 through Feb. 20, 1972	Bureau of Posts, Ministry of Posts and Telecommunications	Malaysia 1 Nepal 1 Philippines 2 China (Taiwan) 2	Bhutan 1 Indonesia 2 Iran 1 Korea 2 Total 12
Short-Wave Radio Engineering	June 1, 1971 through June 31, 1971	Kokusai Denshin Denwa Co., Ltd.	A.R.E. 2 Ghana 1 Iraq 1 Ethiopia 2	Paraguay 1 Thailand 1 Khmer Rep. 1 Malaysia 1 Total 10
Satellite Communications Engineering	Sept. 27, 1971 through Dec. 26, 1971	Kokusai Denshin Denwa Co., Ltd.	Paraguay 1 Kuwait 1 Indonesia 1 Iraq 1 Mexico 1 China (Taiwan) 1 Korea 1 Philippines 1	Syria 1 Argentina 1 Peru 1 Sri Lanka 1 India 1 Thailand 1 Jordan 1 Panama 1 Total 16

Name of Course	Duration	Main Institution and Facilities	Number of Participants by Country	
Television Engineering	June 15, 1971 through Oct. 15, 1971	Japan Broadcasting Corporation	Thailand 2 Nigeria 1 Indonesia 1 Iran 1 Malaysia 1 Bangladesh 1	Philippines 1 China (Taiwan) 2 Vietnam 1 Turkey 1 A.R.E. 1 Kenya 1 Total 14
Educational Television Broadcasting Program	June 15, 1971 through Sept. 30, 1971	Japan Broadcasting Corporation	Korea 1 Vietnam 2 China (Taiwan) 2 Indonesia 1 Singapore 1	Thailand 2 Bangladesh 1 Turkey 1 Mexico 5 Nigeria 1 Total 17
Surgical Treatment of Pulmonary Tuberculosis	Oct. 1, 1971 through Mar. 31, 1972	Tuberculosis Research Institute, Japan Anti-Tuberculosis Association	Vietnam 1 Indonesia 1 Thailand 1	Korea 1 A.R.E. 1 Total 5
Mining Engineering	Oct. 1, 1971 through May 31, 1972	Japan Mining Association	Thailand 1 Ecuador 1 Peru 1	Bolivia 2 Zaire 2 Burma 1 Total 8
Tuberculosis Control	May 31, 1971 through Oct. 1, 1971	Tuberculosis Research Institute, Japan Anti-Tuberculosis Association	Philippines 2 Indonesia 3 Afghanistan 1 Thailand 2 Turkey 1 A.R.E. 1 India 1	Korea 2 China (Taiwan) 1 Bangladesh 1 Ethiopia 1 Vietnam 1 Sudan 1 Total 18
Family Planning (Seminar)	Mar. 1, 1972 through Mar. 25, 1972	Japanese Organization for International Cooperation in Family Planning	Indonesia 5 Philippines 2 Vietnam 2 Singapore 1	Thailand 2 Malaysia 1 Afghanistan 1 A.R.E. 1 Total 15
Water-Works Engineering	May 20, 1971 through Aug. 19, 1971	Environmental Sanitation Bureau, Ministry of Health and Welfare	Afghanistan 1 Thailand 2 Iran 2 Singapore 1 Indonesia 2	Malaysia 1 Vietnam 2 Korea 1 Iraq 1 Total 13
Livestock Hygiene Research	May 1, 1971 through Oct. 31, 1971	National Institute of Animal Health, Ministry of Agriculture and Forestry	Indonesia 1 Sri Lanka 1 Laos 1 India 1 Malaysia 1 Khmer Rep. 1	Philippines 1 Thailand 2 Mexico 2 Peru 1 Brazil 1 Total 13
International Telegraph and Telephone Services	Jan. 15, 1972 through Mar. 31, 1972	Kokusai Denshin Denwa Co., Ltd.	Thailand 1 Iran 1 Argentina 1 Ethiopia 1 A.R.E. 1	China (Taiwan) 1 Khmer Rep. 1 Malaysia 1 Colombia 1 Total 9
Rice Cultivation Research	May 5, 1971 through Nov. 30, 1971	Tropical Agriculture Research Center, Ministry of Agriculture and Forestry	Burma 1 Thailand 2 Sri Lanka 1 Philippines 1	Somalia 1 Bhutan 1 Khmer Rep. 1 Total 8
Fresh-Water Fish Culture Propagation Research	May 15, 1971 through Jan. 31, 1972	Fresh-Water Fisheries Research Laboratory, Fisheries Agency	Mexico 1 Indonesia 1 Thailand 1	Iraq 1 Philippines 1 Total 5
Offshore Mineral Resources Prospecting	May 10, 1971 through Dec. 20, 1971	Geological Survey Station, Ministry of International Trade and Industry	A.R.E. 1 India 1 Burma 1 Korea 1 Vietnam 1 Philippines 1 Indonesia 1	Thailand 1 China (Taiwan) 1 Ecuador 2 Peru 1 Brazil 1 Colombia 1 Total 14
Industrial Standardization and Quality Control	Jan. 5, 1972 through Mar. 31, 1972	Agency of Industrial Science and Technology of Japanese Standards Association	India 1 Indonesia 1 Korea 1 Philippines 1 Thailand 1 Peru 2	A.R.E. 1 Iran 2 Singapore 1 Sudan 1 Burma 1 Chile 2 Total 15

Name of Course	Duration	Main Institution and Facilities	Number of Participants by Country	
Computer Technology	Oct. 18, 1971 through Dec. 11, 1971	UNESCO Japanese National Commission, Ministry of Education	Singapore 1 Korea 1 China (Taiwan) 1 Indonesia 1 Iran 1 Burma 1	Malaysia 1 Thailand 1 Turkey 1 Philippines 1 Bangladesh 1 Total 11
Telephone Outside Plant Engineering	July 1, 1971 through Sept. 30, 1971	Nippon Telegraph and Telephone Public Corporation	Thailand 1 Brazil 1 Kuwait 1 Nigeria 1 Philippines 1 Colombia 1 Costa Rica 1	Venezuela 1 Iran 1 Uganda 1 Ecuador 1 A.R.E. 1 Kenya 1 Nicaragua 1 Total 14
Southeast Asia Telecommunications Development Seminar	Mar. 5, 1972 through Dec. 20, 1972	Ministry of Posts and Telecommunications	China (Taiwan) 1 Khmer Rep. 1 Korea 1 Indonesia 1	Singapore 1 Sri Lanka 1 India 1 Philippines 1 Total 8
Trade Promotion	Nov. 1, 1971 through Dec. 20, 1971	World Trade Center of Japan	Korea 1 Philippines 1 China (Taiwan) 1 Peru 1 A.R.E. 1 Syria 1 Iraq 1 Thailand 1 Khmer Rep. 1	Ivory Coast 1 Dominica 1 South Yemen 1 Afghanistan 1 Trinidad Tobago 1 Kuwait 1 Others 1 Ghana 1 Haiti 1 Total 18
National Government Administration	Jan. 10, 1972 through Apr. 18, 1972	Institute of Public Administration, National Personnel Authority	Korea 1 Indonesia 1 Thailand 1 Nepal 1 Philippines 1 Malaysia 1	Bhutan 1 Tanzania 1 Sudan 1 Vietnam 1 Laos 1 A.R.E. 1 Total 12
Thermal-Electric Power Engineering	Aug. 1, 1971 through Nov. 25, 1971	Overseas Electric-Power Research Association	Argentina 1 Brazil 4	Colombia 3 Venezuela 1 Total 9
Hydro-Electric Power Engineering	Aug. 1, 1971 through Nov. 25, 1971	Overseas Electric-Power Research Association	Burma 1 Indonesia 3 Iran 2	Malaysia 1 Thailand 1 Ghana 1 Total 9
Ground Water Resources Development	July 1, 1971 through Nov. 15, 1971	Geological Survey Station, Ministry of International Trade and Industry	Afghanistan 1 Iran 1 Philippines 1 Vietnam 1 Argentina 1 Thailand 1	Sri Lanka 1 A.R.E. 1 Ethiopia 1 China (Taiwan) 1 Malaysia 1 Nepal 1 Total 12
Television Broadcasting Management	May 4, 1971 through June 26, 1971	Radio Regulatory Bureau, Ministry of Posts and Telecommunications	Bangladesh 1 China (Taiwan) 1 Thailand 1	Indonesia 1 Malaysia 1 Korea 1 Total 6
Agricultural Cooperatives	Sept. 10, 1971 through Dec. 27, 1971	Institute for the Development of Agricultural Cooperation in Asia	Philippines 2 Laos 1 Ethiopia 1 Afghanistan 1 Nepal 1 Indonesia 1 Iran 1	Malaysia 2 Thailand 1 A.R.E. 2 Vietnam 1 Bangladesh 1 Khmer Rep. 1 Ghana 1 Total 17
Local Government Administration	Jan. 10, 1972 through Mar. 31, 1972	Local Autonomy College, Ministry of Home Affairs	Bhutan 1 Malaysia 1 Indonesia 1 Nepal 1 Korea 1 Vietnam 1	A.R.E. 1 Afghanistan 1 Khmer Rep. 1 Iran 1 Vietnam 1 Total 11

Name of Course	Duration	Main Institution and Facilities	Number of Participants by Country	
Prevention and Treatment of Crime and Delinquency	Apr. 19, 1971 through June 14, 1971	Asia and Far East Institute for the Prevention of Crime and Treatment of Offenders	India 1 Korea 1 Singapore 1 China (Taiwan) 1 Malaysia 1 Indonesia 1	Nepal 1 Thailand 1 Sri Lanka 1 Indonesia 1 Philippines 1 Vietnam 1 Total 12
Hydrographic Service	Sept. 20, 1971 through Oct. 27, 1971	Maritime Safety Agency	China (Taiwan) 1 Thailand 1 Philippines 1 Singapore 1	Vietnam 1 Indonesia 1 Korea 1 Total 7
Teacher's Training of Japanese Conversation	Sept. 20, 1971 through Oct. 27, 1971	Overseas Technical Cooperation Agency	Indonesia 2 Laos 1	Singapore 4 Total 7
Artificial Insemination for Cattle (Liquid and Frozen Semen)	May 1, 1971 through Oct. 31, 1971	Fukushima National Livestock Breeding Station, MAF	China (Taiwan) 1 Malaysia 1	Indonesia 1 Thailand 1 Total 4
Shipping Business	Aug. 1, 1971 through Aug. 31, 1971	Ministry of Transport	Sri Lanka 1 Indonesia 1 Philippines 1 Thailand 1	China (Taiwan) 1 Korea 1 Singapore 1 Total 7
Railways Electrification and High Speed Operation	Aug. 1, 1971 through Sept. 30, 1971	Japanese National Railways	Chile 1 Iran 1 Syria 1	A.R.E. 1 Korea 1 Khmer Rep. 1 Total 6
Administration for Seamen's Education	Nov. 1, 1971 through Nov. 30, 1971	Ministry of Transport	Indonesia 1 Philippines 1	Korea 1 Total 3
Shipbuilding and Repair	Sept. 27, 1971 through Mar. 14, 1972	Ministry of Transport, Shimizu Shipyard of Ishikawajima-Harima Heavy Industries Co., Ltd.	Burma 1 India 1 Indonesia 1 Korea 1	Philippines 1 Singapore 1 Thailand 1 Total 7
Agricultural Cooperatives	Jan. 15, 1972 through Mar. 14, 1972	Institute of Development of Agricultural Cooperation in Asia	China (Taiwan) 4	Korea 4 Total 8
Waste Disposal Facilities	Mar. 1, 1972 through Apr. 30, 1972	Ministry of Health and Welfare	Malaysia 1 Indonesia 1 Philippines 1 Thailand 1 Khmer Rep. 1	Indonesia 1 Iran 1 Korea 1 Singapore 1 Total 9
Geothermal Energy	Sept. 6, 1971 through Nov. 29, 1971	Kyushu University	Ethiopia 1 Iran 1 China (Taiwan) 1 Indonesia 1 A.R.E. 1 Chile 1 Guatemala 1	Nicaragua 1 Turkey 1 Korea 1 Mexico 1 Philippines 1 Thailand 1 Total 13
Experimental Animals Seminar	Sept. 18, 1971 through Oct. 17, 1971	Central Institute for Experimental Animals	Thailand 1 China (Taiwan) 1 Singapore 1 Laos 1	India 1 Sri Lanka 1 Philippines 1 Total 7
Programmes of Family Planning (Seminar)	Oct. 17, 1971 through Oct. 27, 1971	Japanese Organization for International Cooperation in Family Planning	Vietnam 1 A.R.E. 1 Iran 1 Sri Lanka 1 China (Taiwan) 1	Korea 1 Indonesia 2 Afghanistan 1 Thailand 2 Philippines 2 Total 13
Family Planning Leaders in Asia (Seminar)	Nov. 17, 1971 through Nov. 27, 1971	Japanese Organization for International Cooperation in Family Planning, Inc. (JOICEP)	Vietnam 1 Nepal 1 Iran 1 Malaysia 1 China (Taiwan) 1 Sri Lanka 1 Afghanistan 1	Philippines 2 Korea 2 Singapore 1 India 1 Thailand 2 Indonesia 2 Total 17

Name of Course	Duration	Main Institution and Facilities	Number of Participants by Country	
Use of Mass Media for Family Planning	Aug. 1, 1971 through Aug. 17, 1971	JOICEP	A.R.E. 1 Singapore 1 Thailand 1 China (Taiwan) 2 Indonesia 2 Iran 1	Philippines 2 Korea 2 Vietnam 1 Sri Lanka 1 Malaysia 1 Afghanistan 1 Total 16
Broadcasting Management (Seminar)	Aug. 16, 1971 through Nov. 30, 1971	Radio Regulatory Bureau, Ministry of Posts and Telecommunications	Thailand 1 Malaysia 1 China (Taiwan) 1	Uganda 1 Bangladesh 1 Khmer Rep. 1 Total 6
Automobile Service Engineering	Mar. 1, 1971 through Nov. 17, 1971	Nissan Motor Co. Toyota Motor Co.	Ecuador 1 Philippines 1 Sudan 1 Nigeria 1 Dominica Rep. 1 Thailand 1 Somalia 1 Colombia 1	Ghana 1 Ivory Coast 1 Laos 1 Malaysia 1 China (Taiwan) 1 Iraq 1 South Yemen 1 Total 15
Wood Industry Machinery Engineering	Feb. 14, 1972 through May 18, 1972	Nagoya University	A.R.E. 1 Sri Lanka 1 Indonesia 1 Iran 1	Malaysia 1 Philippines 1 Singapore 1 Thailand 1 Total 8
Poultry Farming	June 1971 through Nov. 15, 1971	Okazaki National Livestock Breeding Station, Ministry of Agriculture and Forestry, etc.	Indonesia 1 Laos 1 Thailand 1 Bhutan 1 Khmer Rep. 1	Korea 1 Philippines 1 Singapore 1 Sudan 1 A.R.E. 2 Total 11
Ceramic Engineering	Sept. 1971 through July 23, 1972	Industrial Technological Board, Ministry of International Trade and Industry	Thailand 1 Uganda 1 India 1 Mexico 1	Philippines 2 Singapore 2 A.R.E. 1 Total 9
Foundry	Jan. 10, 1972 through Dec. 1972	Industrial Technological Board, National Industrial Research Institute, Nagoya, Ministry of International Trade and Industry, and other Institution and Facilities	Indonesia 1 Thailand 2 Burma 1	China (Taiwan) 1 Philippines 2 Turkey 1 Total 8
Textile Engineering	Jan. 10, 1972 through Aug. 16, 1972	Nagoya International Training Center, OTCA	Indonesia 1 Philippines 2 Thailand 2	Sri Lanka 1 Mexico 2 Singapore 1 Total 9
Smaller Enterprises Development (Seminar)	Oct. 10, 1971 through Dec. 18, 1971	Nagoya International Training Centre, OTCA	Indonesia 1 Paraguay 1 Peru 1 Thailand 1 Sri Lanka 1	A.R.E. 1 Ghana 1 Iran 1 Nepal 1 Vietnam 1 Total 10
Electric Plating Techniques	June 14, 1971 through Dec. 20, 1971	Industrial Technological Board, Ministry of International Trade and Industry, National Industrial Research Institute Nagoya, MITI	China (Taiwan) 1 Turkey 1 Vietnam 1 Korea 1 Philippines 1	Thailand 1 Indonesia 1 A.R.E. 1 Brazil 1 Total 9
Regional Development	Jan. 15, 1972 through June 14, 1972	U.N. Program of Regional Development and Training, Central Center	Brazil 1 Sri Lanka 1 Indonesia 1 Iran 1 Korea 1 Laos 1 Malaysia 1 Nepal 1 Singapore 1 Thailand 1 Vietnam 1 Saudi Arabia 1	A.R.E. 2 Algeria 1 Sudan 1 Haiti 1 Afghanistan 1 Bhutan 1 Burma 1 Khmer Rep. 1 India 1 Maldives 1 Bangladesh 1 Philippines 1 Total 25

Name of Course	Duration	Main Institution and Facilities	Number of Participants by Country	
Training of High Skilled Workers	Apr. 20, 1971 through Mar. 17, 1972	Higashi Yodogawa Vocational Training Center	Sri Lanka 1 Thailand 1 China (Taiwan) 1 Bhutan 1 Iran 1 Korea 1	Malaysia 1 Vietnam 1 Ethiopia 1 Kenya 1 A.R.E. 1 Uganda 1 Total 12
Microbial Diseases Research*	Oct. 1, 1970 through Sept. 21, 1971	Research Institute of Microbial Diseases, Osaka University	India 1 Philippines 1 China (Taiwan) 1	Indonesia 1 Burma 1 Thailand 1 Total 6
Dentistry	Apr. 12, 1971 through Mar. 18, 1972	Osaka Dental College	Indonesia 1 Korea 1 Thailand 1 India 1 China (Taiwan) 1	Peru 1 Mexico 1 Bangladesh 1 Philippines 1 Total 9
Offset Printing	Apr. 6, 1970 through Sept. 8, 1970	Japan Printing Association	Korea 1 Laos 1 Philippines 1 Ethiopia 1 Turkey 1	A.R.E. 1 China (Taiwan) 1 Afghanistan 1 Sri Lanka 1 Total 9
Plastics	Oct. 15, 1971 through Mar. 16, 1972	Osaka Municipal Industrial Research Institute	Korea 1 Philippines 1 Thailand 1 Turkey 1	China (Taiwan) 1 A.R.E. 1 Singapore 1 Total 7
Electronics	July 15, 1971 through Oct. 14, 1971	Osaka Prefectural Industrial Promotion Center, Engineering Department of Osaka University	China (Taiwan) 1 Chile 1 Ecuador 1	Mexico 1 Peru 1 Argentina 1 Total 6
Orthopedic Surgery and Rehabilitation	Apr. 7, 1971 through Mar. 7, 1972	Affiliated Hospital of Medical Department of Osaka University	Thailand 1 Iran 1	Afghanistan 2 Philippines 2 Total 6
Zymotechnics	Feb. 7, 1971 through Mar. 30, 1972	Zymotechnics Department of Osaka University	Iran 1 China (Taiwan) 1 Thailand 1 Vietnam 1 Philippines 1 Singapore 1	Korea 1 Indonesia 1 Nepal 1 Burma 1 Iran 1 Total 11
Glass Technology	Oct. 1, 1971 through Mar. 16, 1972	National Industrial Research Institute, Osaka, Ministry of International Trade and Industry	Korea 1 Thailand 1 China (Taiwan) 1 Iran 1	Singapore 1 Burma 1 Mexico 1 India 1 Total 8
Agricultural Machinery Repair and Maintenance	June 14, 1971 through Dec. 18, 1971	Agricultural Machinery Industry Association	Iran 1 Thailand 1 Indonesia 2 Philippines 2	Afghanistan 1 Bhutan 1 Sri Lanka 1 Laos 1 Total 10
Smaller Enterprises Management	Jan. 10, 1972 through Mar. 27, 1972	Industrial Efficiency Research Institute of Osaka Prefecture	India 1 Iran 1 Philippines 2 Indonesia 1 Nepal 1	Thailand 1 China (Taiwan) 1 Singapore 1 Vietnam 1 Korea 1 Total 11
Maintenance and Improvement of Permanent Ways	July 7, 1971 through Oct. 7, 1971	Osaka Railway Management Bureau, Japanese National Railways	Indonesia 2 Philippines 1 A.R.E. 2 Syria 1	Khmer Rep. 1 Iran 1 Chile 1 Total 9
<b>Group Training Courses held in Misaki International Fisheries Training Centre</b>				
Coastal Fisheries	Apr. 5, 1971 through Mar. 4, 1972	Misaki International Fisheries Training Centre, OTCA	Burma 1 Sri Lanka 1 Indonesia 2 Iran 1 Malaysia 1 Singapore 1 Thailand 2 Colombia 1 Ecuador 1	Mexico 5 Panama 1 Peru 1 Philippines 1 Ivory Coast 2 Somalia 1 Sudan 1 Tanzania 1 Turkey 1 Total 25



Group Training Courses held in Uchihara International Agricultural Training Centre

Name of Course	Duration	Main Institution and Facilities	Number of Participants by Country			
Rice Cultivation and its Extension Work	From early Apr. 1970 through late Feb. 1971	Uchihara International Agricultural Training Centre, OTCA	Sri Lanka	1	Philippines	1
			Indonesia	3	Khmer Rep.	1
			Laos	1	India	1
			Nepal	1	Bhutan	1
			Thailand	1	Total	11
Agricultural Machinery Utilization	ditto	ditto	Sri Lanka	1	Afghanistan	1
			Indonesia	2	Bhutan	1
			Laos	1	Khmer Rep.	1
			Thailand	1	Nepal	1
			Tanzania	1	Philippines	1
					Total	11
Land Improvement	ditto	ditto	Sri Lanka	2	Indonesia	2
			Laos	1	Iraq	1
			Thailand	1	Bangladesh	1
			Iran	1	Philippines	1
					Total	10
Truck Farming	ditto	ditto	Sri Lanka	1	Tanzania	1
			Philippines	1	Kenya	2
			Thailand	1	Indonesia	2
			A.R.E.	2	Total	10

## 2. Individual Training Course

The followings are a few examples of individual training programs.

### (1) Japan-Mexico Trainee and Student Exchange Plan

This plan consists of exchanging trainees and stu-

dents between Japan and Mexico to promote close and friendly relationships between the two countries. In 1971, Japan accepted 100 trainees and students under this plan. Among them, 30 trainees were accepted by OTCA. The details are given in the following table.

No.	Subject of Training	Number	Institution and Facilities
1	Coastal Fisheries	5	Misaki International Fisheries Training Centre
2	Food Processing	4	Overseas Agricultural Development Foundation
3	Educational Television Broadcasting Program	5	Japan Broadcasting Corporation
4	Ports and Harbors Engineering	6	Ports and Harbors Technical Research Institute, Ministry of Transport
5	Yellowtail Culture	2	Prawn and Yellowtail Culture Co., Ltd.
6	Earthquake Engineering	1	Architectural Research Institute, Ministry of Construction
7	Textiles	2	Research Institutes, Aichi Prefecture
8	Ceramic Engineering	1	National Industrial Research Institute, Nagoya, MITI
9	Glass Production	1	Soogo Kikagaku Glass Co., Ltd.
10	Motion Picture Production	1	Iwanami Productions Inc.
11	Telephone Exchange Engineering	1	Nippon Telegraph and Telephone Public Corporation
12	Dentistry	1	Osaka Dental College

### (2) Fisheries and Fish Hatching Electronics

Two Turkish trainees received training in basic techniques and knowledge in their fields for one year from November, 1971 at the Yaizu Fishery High School. Another Turkish trainee received similar training for eleven months from December, 1970 at the Nagasaki Fisheries High School. These three trainees received not only theoretical training but also practical operational training on the East China Sea and with makers. They also made visits to various fishery facilities such as the Fresh Water Fisheries Research Laboratory of the Fisheries Agency and the Inland Sea Culturing Center.

### (3) Applied Entomology

One Thai trainee came to Japan in May, 1970 and received a 3 month training at Pathological Entomology Department of the National Institute of Agricultural Sciences and at the Kyoto Research Laboratory of Takeda Chemical Industries (Co., Ltd.) to study techniques for preventing and exterminating vermin of rice plants.

### (4) Construction of Zaire Railroad

The improvement of the means of domestic and international transportation are an important problem for the economic development and modernization of Zaire. The Transport Expansion plan is one of the

programs taken for improving the means of transportation. Japan accepted trainees related to this plan and taught various techniques of railroad construction through lectures, practical training, and visits. The training began in June, 1971 and lasted for six months.

### 3. Acceptance of Trainees under Reparations, etc.

#### (1) Acceptance of Trainees under the Philippines Reparation

The acceptance of trainees under the Philippines Reparations is undertaken in accordance with the annexes of the reparations agreement that was concluded between Japan and the Philippines in May, 1956. OTCA concluded a training co-assignment contract at a request made by the Philippines Reparations Mission in Japan. Accordingly, OTCA accepted 43 trainees between 1963 and 1970. In 1971, it accepted 9 trainees in the following fields:

Freezing and air-conditioning	1
Administrative management	4
Hotel management, Sightseeing management	1
Office management	1
Financial management, auditing	1
Chemical fertilizer	1
Total	9

#### (2) Acceptance of Trainees under the Japan-Korea Agreement

The acceptance of trainees under the Korean claim-

ant nation rights, etc. is undertaken in accordance with the stipulations in the Japan-Korea Agreement that was concluded between the two Governments in June, 1965. OTCA concluded a training commission contracts under the First and Second Year Plans between 1966 and 1968 at a request made by the Korean Mission in Japan. Accordingly, OTCA accepted 30 fishery trainees each year. (A total of 60 trainees) No training has been carried out since 1969.

### 4. Activities Related to Trainees Acceptance

#### (1) Orientation

Most of the trainees who arrive in Japan come for the first time. Hence, it is necessary for them to obtain some general knowledge on life in this country. Through learning about the history, culture, and economic conditions of Japanese society, the trainees can deepen their understanding of the training. Therefore, the trainees' first week in Japan is spent being oriented under an OTCA schedule.

A total of 60 orientation sessions were given during this fiscal year for 1,136 trainees at Tokyo and local training centers. In Tokyo, the major lectures consisted of "Japanese History," "Japanese Geography," "Japanese Economy," "Japanese Society," "Japanese Cultural History," and "Hints on Life in Japan." They were intended to provide knowledge on social customs and background for the training topics.

Similar orientation sessions were conducted at the various regional centers as well. In addition, Mexican trainees are to be accepted at Tokyo from this year in accordance with the Japan-Mexico Exchange Train-

#### Japanese Language Courses held in Fiscal 1971

(Figure in Parenthesis Shows the Number of Attendant)

	General Training Course				Special Training Course				
	Elementary	Junior	Senior	Total	Group	Individual	Total	Special Training Course (Group)	Special Training Course (Individual)
Tokyo	23 (188)	5 (36)	2 (12)	30 (236)	6 (73)	5 (15)	11 (88)	(1) Vocational Training (Wood-working, Machinery) (2) Vocational Training (Electric and electronics engineering) (3) TV Engineering (4) Educational Television Program (5) Bamboo-works (6) Mining Engineering	(1) Judo (2) Telecommunications, Thailand (3) (4) Maldives (5) Mexico
Osaka	7 (76)	4 (53)	3 (28)	14 (157)	1 (10)		1 (10)	(1) Dentistry	
Nagoya								(1) Textile Engineering (2) Poultry Farming (3) Electric Plating Techniques (4) Ceramic Engineering (5) Foundry (6) Welding	(1) Shipping
11(85)	4 (31)			4 (31)	6 (50)	1 (4)	7 (54)		
Misaki	1 (25)	1 (6)		2 (31)					
Uchihara	1 (43)	1 (15)		2 (58)					
(Total)	36 (363)	11 (110)	5 (40)	52 (513)	13	6	19		

71(665)

ing Plan. A special five-week orientation session (Japanese language and conditions in Japan) was given for five trainees (port and harbour engineering) under this plan.

The general orientation program is outlined below.

(2) Japanese Language Courses

a. General Courses

Three levels of general courses, namely, an introductory course, an intermediate course, and an advanced course, are given under the basic policy of "facilitating the trainees' daily life and understanding of Japan." Each course usually lasts for two months and lays emphasis on daily conversation. Two hundred and thirty six trainees took the 30 courses given in Tokyo, and 313 trainees took the 52 courses given at regional centers.

b. Special Courses

The special courses are given to trainees from those courses selected from among the training courses for which knowledge of the Japanese is highly important.

Intensive courses lasting from one to two and a half months are given as a part of the training programs. In addition to the material covered in the general course, some technical vocabulary and writing (hiragana and katakana) are taught. In 1970, eleven special courses were given in Tokyo (six group courses and five individual courses). One hundred and fifty-two trainees received 19 courses given in Nagoya, Osaka etc.

(3) Health and Welfare

In order to protect trainees from illnesses and accidents and to enable them to experience a full and enjoyable period of training in Japan, OTCA provides medical care, including inoculations, household medicines, the appointment of non-regular doctors, and regular physical examinations. Each center also provided recreational activities, such as bus trips, parties, visits to Japanese homes, movies, sport events, lectures on flower arrangement, theatre visits, records, and sports equipment. OTCA promoted exchange and friendship between trainees and local people through

Country	Field	Equipment	Destination	Remarks
China (Taiwan)	Under-water resources	Underground-water level identification instrument; 20 sets	Department of Economic Affairs	
Maldives	Coastal fisheries	Bonito hooks; 500,0000 pieces	Government of Maldives	
Philippines	Metal finishing	Philippine College of Arts and Trade	Philippine College of Arts and Trade	
Iran	Machinery (measurement)	Air-micrometer, Universal measuring machine, Universal Projector	Technical College of Arts and Trade	
Iran	Metal finishing	Grinder, Plating bath Rectifier, Sand-jeting Equipment	Normal School of Industry	
Brazil	Forestry	Microfome-blade grinder, Microscope, Cryostat	Pernumbco University	
Thailand	Surgical Operation of chest diseases	Respirometer, Bronchoscope, Operative exsector	Nakornratchathima Hospital	
Nepal	Dentistry	Unit & Chair, 4 sets respectively X-ray apparatus, etc.	Bill General Hospital	
Uruguay	Cancer	Biophia-gastrofiberscope, Duodenum-, Large, intestine-, Gastrofiberscope	National Marshal General Hospital	
Brazil	ditto	ditto	Clinica Hospital, São Paulo U.	
Chile	ditto	Biophia-gastrofiberscope	Sanbogia Hospital, Santiago	
Mexico	Horticulture and truck farming	Concussion culture instrument, Automatic area-integrator	Santiago University	
Arab Republic of Egypt	Earthquake Measurement	High sensitivity earthquake Measurement instrument, Quarz-crystal clock	Hellewan Earthquake Observatory	
Dominican Republic	Cancer	Duodenum-, Gullet-, Gastro-fiberscope	Ugater Hospital, Salvador	
India	Biochemical research of rice	Fluid scintillation counter, Pyrheliometer, Heliograph	Central Rice experimental Station, Orrissa State	
Philippines	Highway	Traffic volume recorder (Air-pressure type); 10 units	Manila Municipal Highway Construction Bureau	
Singapore	Broadcasting	Video-AMP, Stabilizer-AMP, Airconditioner, etc.	Broadcasting Division, Ministry of Cultural Affairs	
Philippines	Broadcasting (Educational program)	VTR, FSS, TV camera; 2 units each	Philippines Broadcasting Service	
Indonesia	Cancer	Bophia-, Gullet-, Duodenum-fiberscope	Airlangga University, Surabaya	
Burma	Surgical Operation of Chest Diseases	Respirometer, Bronchoscope, Instruments for anesthesia	Lagoon General Hospital	
Brazil	Coastal Fisheries	3 reels of film "Reconstruction of Biological Nature of Sea"	Fisheries Division, Department of Agriculture, São Paulo Provincial Office	
Turkey	Agricultural Cooperatives	1 reel of film "Daily Life of Agricultural Extension Workers"	Argentine Association for Sugar-Cane Industry	
Vietnam	Family Planning	1 reel of Film "Beginning of Life"	Ministry of Health	

home visits, sports event, participation in festivals, and parties held by local organizations.

**(4) Alumni Associations for Returned Trainees**

Fiscal year 1971 was characterized by strong desires to organize alumni associations as well as busy activities by the existing alumni associations. In December, the Ministry of Foreign Affairs asked the Japanese Embassies in Malaysia, the Philippines, Argentina, Egypt, India, Nigeria, Pakistan, Taiwan, Singapore, Indonesia, Sri Lanka, Iran, and Iraq to survey the following items:

- a. Size of the local alumni association (number of members, number of regular participants)
- b. Major meetings and events (annual general meeting, etc.)
- c. Organization of the alumni association (officers and central figures etc.)
- d. Activities
- e. Major events of the year (including events being planned)
- f. Budget situation related to establishment and management of the alumni association.

As a result, many answers that had proved helpful in grasping the situation in a more concrete way were obtained.

**(5) Traveling Teams to Contact Returned Trainees**

This program was reinforced this year on the basis of the experience of the preceding year. The following visits were made.

Numerous returned trainees were interviewed during the visits to obtain valuable information for improving training programs in the future. Advices were given as to the technical problems facing them and their activities, and other informations were obtained.

The survey made by the Small and Medium sized Industry Party, especially, paved the way to undertake the supplying of electric plating machinery to the Philippines. Touring parties are expected to play a significant role in making advanced surveys related to supplying machinery and equipment.

**(6) Supplying Machinery and Equipment**

During the current fiscal year, machinery and equip-

Group	Instructor	Destination
Telecommunications	Training Instructor 1	Thailand
	Employee of 1 OTCA	Malaysia Philippines
Smaller Enterprises	Training 4	Philippines Indonesia
	Employee of 1 OTCA	Singapore Malaysia Thailand
Electric Power Engineering	Training Instructor 2	Mexico Peru
	Employee of 1 OTCA	Argentina Brazil Colombia Bolivia Paraguay

ment were supplied to the following organizations to which returned trainees belong. Nineteen countries benefited from the undertakings. (25 cases)

**7. Supplying of the "Kenshu-In" Quarterly and Other References**

Seven years have passed since the "Kenshu-in", OTCA's English-language quarterly journal, was first published for the purpose of promoting relations between OTCA and return trainees as well as among returned trainees. During the current fiscal year, three issues (from No. 24 through No. 26) were published, and six thousand copies of each issue were sent. Returned trainees have been showing more and more enthusiasm.

Literature Provided	Destination
Periodicals	
FARMING JAPAN (quarterly)	Returned trainees engaged in agriculture and livestock breeding fields
LOOK JAPAN (monthly)	Returned trainees engaged in management and administration of heavy industry, chemical industry, posts, administration, banking, statistical public relations and other fields
TECHNOCRAT (monthly)	Returned trainees engaged in research of technology of heavy industry, light industry, chemical industry, public works, transportation, health and welfare, administration, art of management, banking, statistical public relations

**CHAPTER 2**

**DISPATCH OF EXPERTS**

*Section 1. Outline of Activities*

**1. Course of Development of Activities**

The program to dispatch experts is one of the factors essential to Japan's technical cooperation program. The aim of this program is to send technical engineers and

experts from Japan to the developing countries and to have these engineers and experts participated in technological guidance and training programs for the industrial workers there for the purpose of offering to the developing countries such technology as is indispensable for the utilization of their available capital.

and resources and also rendering contributions to the promotion of their economic development through training engineers and technical experts.

With a view to achieving the above-mentioned aim, Japan has been gradually expanding the scale of its expert-dispatching programs, starting with the dispatch program of 28 technical experts in the 1955 fiscal year. Ever since Japan became affiliated with the Colombo Plan in October, 1954. However, as the areas selected for the Colombo Plan were limited to the member countries in South East Asia and the Middle East—at first to Pakistan and the other member countries to its east, Japan initiated unique technical cooperation plans in 1958—i.e. the Near and Middle East and Africa Plan and the Latin America Plan, thereby starting its technical cooperation projects for developing countries in West Asia, Africa, and Latin American regions. Moreover, another technical cooperation plan—the Other Asian Plan—was started in 1960 with a view to extending technical cooperation to the immediately neighboring countries which could not be covered with the three existing plans—i.e. Taiwan, and the Republic of Korea (which later became a member of the Colombo Plan). Thus, the four technical cooperation plans of Japan were set up altogether at this stage to cover almost all the developing countries.

In 1963, Japan started its Junior Expert Dispatch Plan with the aim to extend cooperation in response to requests for dispatching experts for the specific form of guidance in which they would “extend guidance to the industrial workers of a developing country while working together with them”—a task which could not be performed satisfactorily by the “Senior Experts” who, with the qualification of five to ten years of vocational experience in their respective areas of technology, were dispatched under the existing technical cooperation plans, and this project was distached from the technical cooperation projects as an independent project under the Japanese Overseas Cooperation Volunteers Program in 1969.

In the same way, the Medical Cooperation Office was initiated in the fiscal 1969 year to take over all responsibilities for extending cooperation in the areas of medical treatment, public health and hygiene to the developing countries having insufficient medical-treatment facilities and public health facilities. In 1966, the Office grew into an independent entity, the Medical Cooperation Department to take charge of technical cooperation activities on project bases including equipment-supply plans.

The technical cooperation plans mentioned above are all of a bilateral nature based on governmental agreements between individual developing countries and Japan, with experts being dispatched to individual developing countries upon their direct request. There is another type of expert-dispatching plans, generally

known as “multilateral based” plans, in which experts are dispatched to the developing countries upon request of such international organs as the United Nations and its special organs. Since it was admitted to the membership in the United Nations in 1956, Japan has been actively taking part in offering technical cooperation to the developing countries and in dispatching experts to the United Nations, the special organs of the United Nations, and other international organizations, such as ECAFE. On the basis of the resolutions adopted at the Ministerial Conference for the Economic Development of Southeast Asia, Japan has been dispatching experts to such organs as the Asian Development Bank, and the Southeast Asia Fisheries Development Centre, SEAFDEC as part of Japan’s Asian economic cooperation projects. Furthermore, Japan initiated technical cooperation plans for international organs as from the fiscal 1965 year, for unification and consolidated performance of the existing multilateral projects for dispatching experts, so that Japan may successfully cope with the increase in the number of its expert-dispatching projects.

In addition to the above-mentioned various technical cooperation plans, Japan has been sending expert under the Science Education Cooperation Plan. This Plan is intended to dispatching experts on science education to the developing countries on the basis of the resolutions adopted at the Second Education Minister’s Conference of UNESCO, held in Bangkok in 1965, by member countries in the Asian Region for the purpose of cooperating with these countries in promoting more substantial and consolidated science education which is the foundation of their technology education, thereby training individuals having basic scientific and technological knowledge and providing for the repletion of technicians and engineers for the future of these developing countries. Since in 1966, the Japanese Government dispatched each year several experts to the developing countries for a period of six months. The role of these experts has been to give lectures and demonstrations on scientific education and guidance methods for secondary school teachers of physics, chemistry, and mathematics, with necessary equipment purchased and sent by the Japanese Government.

## 2. Various Plans for Dispatching Experts

The various plans for dispatching experts mentioned so far may be classified into the following categories:

- (1) Bilateral-Based Expert-Dispatching Plans
  - a. Colombo Plan

This plan takes its origin in the technical cooperation plans for the member countries of the British Commonwealth and has grown into what it is through the affiliation of the other countries either as assisting country or as assisted country. In effect, the regions that can enjoy the benefit of this plan are

limited. Japan became affiliated with the Colombo Plan as a donor country in 1954 and has remained in membership until today. The present member countries are primarily located in South and South East-Asian regions with the Republic of Korea at the eastern end and with Iran at the western end.

b. Middle and Near East and Africa Plan

This is a technical cooperation plan which the Government of Japan started, together with the Latin America Plan and the Other Asia Plan, in 1958 for the purpose of extending technical cooperation activities to the regions not covered by the Colombo Plan. The Plan now covers all the regions in Africa as well as the countries in West Asia to the west of Iraq and Iran.

c. Latin America Plan

The Latin America Plan was initiated in 1958, in the same year as the Middle and Near East and Africa Plan was started, for extending technical cooperation to the Latin America countries to the south of Mexico.

d. The Other Asian Plan

This is a plan which Japan initiated in 1960 for the benefit of Taiwan and the Republic of Korea, which was not a member of the Colombo Plan at that time. However, with the affiliation of the Republic of Korea with the Colombo Plan, the regions to be covered by this plan has been virtually narrowed down to Taiwan alone. There is a possibility that the Plan may be extended in the future for its application to the regions of Western Samoa and Fizzi Islands, etc. which cannot be covered by the three plans, the Colombo Plan, the Near and Middle East and Africa Plan, and the Latin America Plan.

e. Science Education Cooperation Plan

This Science Education Cooperation Plan was initiated in 1966 on the basis of the resolutions adopted at the Second Education Minister's of UNESCO member countries in the Asian region for extending technical cooperation to the UNESCO member countries in the Asian region by way of guidance activities by experts on matters related to science education in the developing countries.

f. Technical Cooperation Plan based on the request of the Government of the Recipient Countries

In addition to the technical cooperation plans described above, Japan extends technical cooperation to another country as required when it is requested to dispatch experts on the expense of the receiving country. In such cases, Japan complies with such requests as part of its technical cooperation activities on the government to government basis. The experts dispatched on this basis are also referred to as "experts dispatched by private contract."

(2) Multilateral-Basis Plans

a. The Technical Cooperation Plan for International Organs

This Plan, initiated in 1968, is intended for dispatching experts at the expense of the Japanese Government in response to the requests of such international organs as the United Nations, its specialized agencies, and other international organizations.

b. Mediation of Experts to be Dispatched upon the Request of International Organizations

In addition to the technical cooperation activities mentioned above, the Japanese Government will take charge of mediating in the dispatch of experts as part of its technical cooperation activities on the government to government basis.

3. Course of Development of Japan's Expert Dispatching Plans

The Expert Dispatching Program was started in the fiscal 1955 year with an achievement of dispatching 28 experts with the dispatching expenses of ¥11,495,000. In the fiscal year 1971, the newly dispatched experts numbered 309 to a total of 539 experts including those staying over in the countries to which they were dispatched in the previous year with the dispatching expenses amounting to approximately ¥1,200,000,000. Thus, the expert-dispatching activities of Japan have grown into an enterprise approximately 19 times the scale of the activities in 1955 in terms of the number of the experts dispatched and approximately 100 times over 1955 in terms of the expenses appropriated for the activities. The transitions in the dispatching expenses and the number of experts dispatched for individual Plans since the year 1955 are as shown in Tables 1 and 2 as well as in Charts 1 and 2.

As for the trends as viewed from the standpoint of the individual countries to which experts have been dispatched from Japan, the technical cooperation projects related to the Colombo Plan and intended for the countries in the Southeast Asia and South Asian regions have been occupying a major part in the total technical cooperation projects. However, with the increase in the number of experts to the other regions, there has been a large-scale reduction in the relative share of the expert-dispatching projects under the Colombo Plan both in terms of the dispatching expenses, which were at first 100 per cent but diminished to 45.5 per cent in the fiscal 1970 year and then to 44.9 per cent in the fiscal 1971 year, and in terms of the number of newly dispatched experts, which decreased to 48.6 per cent for the fiscal 1970 year and subsequently to 64.0 per cent for the fiscal year 1971.

It may be assumed that the transition in the number of experts dispatched reflects the actual records including the experts staying over for continued duties taken up in the previous year, and the overall trend for the projects performed under the Colombo Plan for the last two or three years are such that the actual showings of the Colombo Plan projects are slightly less than

fifty per cent of the total, though the ratio of the newly dispatched experts for the Colombo Plan regions showed a slight recovery to 64.0 per cent for the fiscal 1971 year. In consequence, there has been an increase in the number of experts dispatched by way of technical cooperation extended to the countries in the Near and Middle East and Africa regions as well, as to the international organizations. In this connection, a Plan was started, as viewed in relation to individual projects, are as shown in Table 3.

A survey of the yearly changes in the industrial-wise proportions of the experts dispatched has revealed a reduction in the ratio of the experts representing such primary industrial sectors as agriculture and forestry, fisheries, etc. However, in view of the yearly increase in the number of the experts dispatched each year, this does not mean that there has been a decrease in the actual number of the dispatched experts representing these industrial sectors. However, the recent growth in the increase rate for the number of experts dispatched in connection with projects related to transport, postal service and telecommunications, construction, and traffic works, and traffic networks, the expansion of communication means and broadcasting network, river works and afore-stated programs combined with the utilization of water resources, and the development of electric power, etc., has been of such magnitude as exceeding that of the experts dispatched for tasks connected with agriculture and fisheries, and it is clearly seen from this that the emphasis in the development plans of the developing countries in the recent years has been turned to the consolidation of the above-mentioned infrastructure.

While the ratio of the experts dispatched for works related to medical treatment and welfare to the total number of dispatched experts is small, the sectors of administration, business management, and education are gradually increasing. Roughly speaking, it may be considered that there is a tendency towards the diversification of the industrial sectors now requiring guidance in technology, while the relative weight of the primary industrial sectors including agriculture, forestry, and fisheries, which occupied a high proportion at the time when the expert-dispatching plans were started, has been lowered.

Furthermore, one may gain the impression that the ratio of the experts dispatched in connection with heavy industry and chemical industry is not so much high as one may expect from the implication of the expression, "technical cooperation for economic development and industrial growth". Probably the reason is that emphases have been placed on the heavy and chemical industrial sectors to be carried out as part of the economic activities, including the formation of joint-ventures by private enterprises, and that technical cooperation in these industrial sectors is by its very nature less likely to lend itself to technical cooperation

projects on a government basis presumably because of problems involving technical know-how and other similar factors. In fact, many of the actual records on the expert-dispatching projects are isolated from the heavy industry proper, taking the form of vocational training programs in such areas as automobile repair and equipment, casting technique, and plating technique, etc. in many instances.

#### 4. Relation of Duties of Dispatched Experts to Other Technical Cooperation Projects

Along with the diversification of the types of the industrial sectors requiring the guidance of experts, a similar tendency towards diversification is observed in the forms of the technical guidance.

The forms of guidance by experts may be roughly classified into the following categories:

- (1) Technical training guidance in which technological guidance is given while the experts work together with the trainees,
- (2) Guidance through educational and research activities at various types of laboratories, research organizations, universities, and so forth,
- (3) Guidance for developing plans for individual development projects,
- (4) Guidance for improvement of the management and/or the techniques of business organizations and research organs, and
- (5) Guidance to the receiving countries in developing policies in the areas concerned.

In addition to the technique training and guidance and education and research guidance, both of which have occupied a major weight in technical cooperation programs since the beginning, the scope and extent of the forms of guidance expected of the experts dispatched to developing countries have been extended and diversified in the recent years to include the dispatch of experts not only for guidance activities on project-planning, business management improvement but also advisory activities for policy-making.

The recent feature of Japan's expert-dispatching projects is such that the projects are more often carried out dependently but in combination with other technical cooperation programs such as the acceptance of trainees and for development survey projects or with such economic cooperation projects as a grant of the yen credit. The relations of technical cooperation projects with the other cooperation projects may be outlined as follows:

In the field of development survey projects, experts on project-planning may be dispatched in some cases at the point where a detailed design is to start as the result of preliminary surveys or, to the contrary, an investigation mission may in other cases be dispatched

to review the project developed under the guidance and planning of the experts dispatched or the project adopted with the guidance and advice of such experts. However, the border-line between the two different functions of "investigation" and "guidance," which were originally to be performed separately by development survey projects and expert-dispatching projects, respectively, has become more or less obscure and indefinite, as there have been more and more instances of technical cooperation in which the dispatched experts carry out investigations on related projects side by side with the performance of their duties in giving technical guidance.

While the projects connected with the establishment and management of hospitals and clinics under medical cooperation projects, farms and testing laboratories under agricultural cooperation projects, the establishment of the model districts for primary products development under technical cooperation projects, and various kinds of educational and training facilities under the Overseas Technical Cooperation center projects, i.e. the so-called project-aids, originally include the dispatch of experts for guidance as part of such projects, the expert-dispatching projects furnish any required additional help in providing the activities of experts in cases where such projects as center projects require personnel in excess of the fixed number of personnel or in such cases where the guidance by Japanese experts are necessary even after the expiration of the period agreed upon under the projects concerned.

Also with the members of the Japan Overseas Cooperation Volunteers who are dispatched under the Japan Overseas Cooperation Volunteers Project, there are many cases of mutual cooperation for technical cooperation in which experts take charge of providing theoretical guidance having the Volunteers undertaking on-the-spot trainings and other related features.

As for the relations between the expert-dispatching programs and the projects for accepting foreign trainees, the two projects have close mutual relations as have been observed in many cases. In some cases, the individuals whom the dispatched experts had trained in their countries to which they have been dispatched or with whom the experts have been working may be invited to Japan for further study or training. In other cases, foreign trainees, who studied in Japan and have returned to their own countries, may request Japan to dispatch Japanese experts in connection with their performance of duties in their own countries. In still other cases, Japan may offer an opportunity, on the assumption that experts are to be dispatched, to a developing country to have some of the nationals, who are to act as counterpart to the dispatched experts, trained beforehand as trainees in Japan.

The existing technical cooperation projects include

the projects for offering equipment either to be taken along by the dispatched experts or under the separate equipment-supply projects to be discussed later. Such grants or offer for loans of material and funds in the broad sense of the terms are matters also related to the area of economic cooperation projects.

## *Section 2. Achievements in Fiscal 1971*

### **1. Achievements of Expert-Dispatching Projects for Fiscal 1971**

During the fiscal year 1971, 309 experts were newly dispatched in addition to the 230 experts who were continuing their services started in the previous year. Their distribution by country and by industrial sector stand as shown.

While the most of the experts who continued their services were dispatched on a long-term basis for a period of more than one year, the number of the experts who continued to serve on a short-term basis totaled 31 individuals, occupying approximately 13.5 per cent of the total number of the experts who continued their services.

An analysis of the distribution of these experts in terms of the duration of their continued services revealed that there was a greater proportion of experts continuing their services on a long-term basis in the Near and Middle East and Africa regions and the Latin American regions, while the long-term experts and the short-term experts sent are equal in proportion in the Colombo Plan regions. It is noted that the experts who continue their service on a short-term basis occupy a major proportion at 84.9 per cent or 45 out of a total of 53 experts including both newly dispatched and those continuing their services in Taiwan and Korea, though the latter is included in the Colombo Plan region.

In a majority of cases, the duties of the experts dispatched on a short-term basis are restricted to the following items, and this appears to mark a very notable characteristic feature of such experts. The main fields of their duties are discussions and consultations concerning the steps and measures for the forthcoming technical cooperation and/or economic cooperation projects, various surveys examining the economic feasibility, technical possibility, and resources development projects, and the installation of equipments supplied under the existing cooperation plans, etc.

The countries to which more than ten experts have been dispatched in all including newly dispatched experts and those continuing their services and excluding those dispatched to international organizations, for science education, or under private contracts, are represented by country as follows:



Number and Percentage of Experts Dispatched by Field in Fiscal 1971

	Carried Over from Previous Year		Newly Dispatched		Total	
	Number	%	Number	%	Number	%
Agriculture	39	16.95	36	11.65	75	13.92
Fisheries	43	18.69	28	9.06	71	13.17
Construction	17	7.39	44	14.24	61	11.32
Heavy Industry	14	6.08	13	4.21	27	5.01
Mining	14	6.08	31	10.03	45	8.35
Light Industry	14	6.08	3	0.97	17	3.15
Chemical Industry	0	0.00	0	0.00	0	0.00
Public Utilitiis	12	5.22	25	8.09	37	6.86
Transport	13	5.65	40	12.94	53	9.83
Postal Services & Telecommunications	30	13.04	29	9.39	59	10.95
Health & Welfare	0	0.00	2	0.65	2	0.37
Business Management	0	0.00	0	0.00	0	0.00
Education	25	10.90	33	10.68	58	10.76
Adiministration	8	3.84	20	6.47	28	5.20
Others, Unspecified	1	0.43	5	1.62	6	1.11
Total	230	100.00	309	100.00	530	100.00

Indonesia	64	Uganda	14
Thailand	49	Khmer Republic	14
Taiwan	29	Burma	13
Brazil	21	Singapore	13
Philippines	19	Vietnam	12
Tanzania	18	Kenya	11
Turkey	14	Iran	10

It is noted that Indonesia and Thailand occupy the largest shares in the total number of the experts 13.8 per cent and 10.5 per cent, respectively, and, as for the experts dispatched under the international organization plan, these two countries, and Thailand in particular have received an overwhelmingly large numbers.

A listing of the countries in the order of the actual number of long-term service experts received into respective countries would be as follows:

Thailand	37	Brazil	11
Indonesia	30	Pakistan	8
Turkey	14	Afghanistan	7
Uganda	14	Laos	7
Kenya	11	Peru	7

It comes to our attention that the experts serving on a long-term basis are more thickly distributed in the countries in the Near and Middle East and African regions and in the Latin American regions. While Indonesia and Thailand still occupy the top two ranks in this listing, the orders are now reversed with Thailand at the top of the list and Indonesia at the second, showing that there are comparatively a greater number of long-term experts in Thailand. In contrast to this, 22 experts out of 30 are the newly dispatched in Indonesia. There is a rapidly growing tendency in the number of experts dispatched to Indonesia in the recent years.

The actual number of experts dispatched to the developing countries by industrial sector are as shown

in Table 5. In terms of the combined number of the experts continuing their services and the newly dispatched experts, agriculture and fisheries both reach more than 13 per cent, and construction, transport, postal services and telecommunications, and education are respectively at the 10 per cent level, these six industrial sectors occupying 69.95 per cent.

As mentioned in the foregoing section, it is to be noted that the experts engaged in projects connected with the so-called infrastructure of construction, public utilities, transport, and postal services and telecommunications, among the items representing industrial sectors i.e. such projects related to afforestation and river works, water resources utilization, irrigation, electric power development, gas enterprise, the equipment of transportation and transport networks, the expansion of broadcasting and communications systems and facilities, account for 38.96 per cent or approximately 40 per cent of the total. Besides, that the ratio of the experts engaged in projects connected with the infrastructures to the total number of the newly dispatched experts is increased to 44.66 per cent while the ratio of the same type of experts to the total number of the experts continuing their service is 31.30 per cent.

The experts engaged in activities related to mining industries totaling 45 and occupying 8.35 per cent are mostly experts dispatched on a comparatively short-term basis for tasks relating to investigations of such mineral resources as petroleum and copper, etc. The experts dispatched for activities in the education sector include not only experts on the Japanese language and Japanology who are dispatched to various districts but also those experts dispatched under the science education cooperation program and the instructors dispatched to the Asian Institute of Technology under the international organizations cooperation plan.

The number of experts dispatched to individual in-

dustrial sectors include notably many experts in the areas of transport, construction, and the mining industries dispatched on a short-term basis under the Colombo Plan. However, these experts include those who are dispatched virtually as members of investigation missions. In more specific terms, the experts who are included in such investigation missions are the five experts on the transfer of business from the construction public corporation to a private business organization and the eight experts on the inspection of coast-wise vessels both of whom were dispatched to Indonesia for an investigation project for which an investigation mission consisting of a total of twelve experts was dispatched in collaboration with the development investigation project, the three experts dispatched for a coal resources investigation, the five experts dispatched for conducting mineral resources investigations in Burma, and the five experts dispatched to the Republic of Korea to develop urban traffic plans.

The experts dispatched for projects undertaken for international organizations and those dispatched for projects in the fishery sector on a long-term basis are

those dispatched to the Southeast Asia Fisheries Development Centre (SEAFDEC) established in Bangkok and Singapore.

## 2. Business Subsidiary to Dispatch of Expert

In conjunction with the dispatch of experts, the following supplementaries are performed.

- (1) The purchase and shipment of the equipment and materials required in guidance in their assigned countries.
- (2) The compilation, production, and distribution of textbooks of local languages for use in guidance activities in each developing country as requested by the experts assigned.
- (3) The preparation of reports based on the surveys of experts for use in supplying information on the activities of the experts and on the actual status of a particular project under review to the concerned parties in Japan as well as for utilizing as material for developing recommendations of Japan to the other country.

## CHAPTER 3

# EQUIPMENT SUPPLY PROGRAM

### Section 1. Outline—Purpose and Methods

The equipment supply program is designed to provide equipment necessary to the developing countries when difficulties in procuring materials required for personnel training become bottlenecks impeding the promotion of socio-economic development plans in these countries.

Unlike other types of economic cooperation or commercial aid, this program is carried out as an organic part of other technical cooperation programs, aiming thus at a more efficient realization of technical cooperation in general.

Since the start of this program in 1964, equipment supply projects have been selected and executed corresponding to the men involved in the promotion of technical cooperation works. At present the relation between equipment supplies and other cooperation efforts can be summarized under the three following headings:

- (1) Supply of equipment to institutions in recipient countries where Japanese experts are sent, in order to improve the effect of the experts works during their stay or after their return to Japan.
- (2) Supply of equipment to institutions sending trainees, so that these trainees, after returning to their home country, can make efficient use of knowledge

and skills learned in Japan.

- (3) Supply of equipment to institutions where JOCV volunteers are or have been stationed, in order to further promote effects of technical guidance by these volunteers.

Actual equipment supplies from 1964 to 1970 have amounted to 510 million yen of which equipment totaling more than 30 million yen has been supplied to Burma, Khmer Republic, Pakistan (including former East Pakistan) and the Philippines respectively while equipment worth more than 20 million yen has been supplied to Laos, Malaysia and Ethiopia.

### Section 2. Achievements in Fiscal 1971

#### 1. Achievements in Fiscal 1971

In fiscal year 1971, 26 cases of equipment supply amounting to 122 million yen have been executed. Out of these, 16 cases amounting to approximately 83 million yen were realized with a balance brought forward from the fiscal 1970's budget.

Achievements classified by brought-forward account or current year budget, and by the related projects. As out of the total, as compared to 17 cases, i.e. 67.85 per cent for the Colombo Plan Region and 6 cases, i.e. 24.16 per cent for Latin America Region, supplies