

No.

FOLLOW-UP STUDY
OF
DEVELOPMENT STUDIES

MARCH 2001

JAPAN INTERNATIONAL COOPERATION AGENCY

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PREFACE

The Japan International Cooperation Agency (JICA) has conducted a large number of Development Studies as part of its technical cooperation program designed to assist in the nation-building of developing countries.

A Development Study is basically completed when a final report is submitted to the recipient government. However, since the Development Study is conducted at the preparatory stage of a project, it can greatly contribute to development of the developing country when the findings of the study are utilized in the project, this enables effective technology transfer.

The findings and recommendations of the Development Studies are utilized according to the initiatives of the recipient governments, and they are employed in a wide variety of ways. In view of the importance of securing traceability on the impact of completed Studies, JICA has been conducting follow-up studies annually since fiscal 1984 to gather and compile relevant information regarding the Development Studies.

As in previous years, we prepared this year's report by collecting information from implementing agencies of recipient governments and from consultants in charge of specific projects.

The procedures for conducting follow-up studies as well as their findings leave room for improvement due to difficulties in understanding and analyzing the progress of projects. We welcome your comments and suggestions for improving future follow-up studies.

This study was contracted to the Japan International Cooperation Center and the International Development Center of Japan.

March 2001

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SUMMARY

SUMMARY

1. Background and Purpose of the Follow-up Study

1-1. Background of the Follow-up Study

Once completed, it has been difficult to follow the progress made on Development Studies and to apply the findings. Three issues can be addressed as the contributing factors. First, considerable amount of time is often spent before the proposed projects are implemented. Secondly, the ways of utilizing the findings are diverse. Thirdly, recipient countries often have limited access to information.

In order to understand the on-going situation of the completed Development Studies, Follow-up Studies of Development Studies started in 1984(Fiscal Year). Since then, a lot of effort has been made which can be summarized as follows.

(1) On-site Follow-up Studies (since 1987 FY)

Diversifying the studies as well as collecting a wider range of information from the project sites.

(2) Domestic Follow-up Studies (since 1988 FY)

Conducting surveys through questionnaires to domestic consultants in charge of the projects.

(3) Overseas' Office Studies(since 1991 FY)

Conducting surveys to up-date the recent situations of the project through JICA's Overseas Office towards local counterparts of the recipient countries.

(4) Overseas Follow-up Studies through foreign consultants (since 1994 FY)

(5) Overseas Follow-up Studies through local in-country consultants (since 1995 FY)

In addition, the growing interest in evaluation has led to the implementation of on-site impact evaluation studies of development studies that began in 1998 FY.

1-2. Purpose of the Follow-up Study

The Follow-up Study has two goals as follows:

- (1) To ascertain the current state of and its utilization and implementation of the completed Development Study; and
- (2) To verify the problems and the areas for improvement which can be implemented for future Development Studies by systematically analyzing the findings.

1-3. Methods Used in Follow-up Study

Studies are conducted through the following methods described below.

(1) Domestic Follow-up Studies

- Questionnaires are sent out to domestic consultants in charge of the project
- Research analysis through gathered information from relevant agencies

(2) Overseas' Office Studies

- Questionnaires are sent out to relevant agencies of the recipient country
- Surveys are conducted through overseas diplomatic missions and JICA overseas office

Experiences from prior Follow-up Studies show that five to ten years are likely to require before any action can be taken for projects under the jurisdiction of the Social Development area, or the Agriculture, Forestry and Fisheries area. For this reason, Follow-up studies for the projects under the jurisdiction of these two areas are conducted focusing on the current state of the projects, of which the studies were completed within the last decade, i.e. from 1989 to 1999 (FY). On the other hand, all projects conducted under the jurisdiction of the Mining and Industrial Development area have been analyzed, in total of 544 projects since the beginning of the Development Studies in 1974.

1-4. Methods Used for Compiling the Results

The following are the methods used for compiling the results of the studies.

- (1) Comparison and examination of the difference in the utilization of survey findings due to various types of studies (seven types including M/P, Basic Study, Chinese Factories Study, Others*, M/P + F/S, F/S, and D/D), different target region, and target sector (Social Development area, Agriculture, Forestry and Fisheries Development area, and Mining and Industrial Development area).
- (2) Application of two indicators to determine the state of the utilization and implementation of the various studies shown below.

1) Utilization Rate (%)

This evaluation metric for determining the state of utilization is used for Master Plan Studies (M/P), Basic Studies, Studies on the Factory Modernization Program in China (Chinese Factory Studies), Other studies, and Other studies (M/P) which were categorized as M/P Studies Group.

2) Realization Rate (%)

This evaluation metric for determining the realization of proposed projects and their implementation rate is used for another categorized group, F/S Studies Group. This group includes, Master Plan/Feasibility Studies (M/P + F/S), Feasibility Studies (F/S), Detailed Design Studies (D/D), and Other studies (F/S) which are evaluated from the rate of realization of the project. This can be determined by the equation below.

Equation

Number of proposed projects that have been or are being implemented / total proposals × 100

* The Others category is a combination of Other Studies from Social Development and Agriculture, Forestry and Fisheries Development studies, and Other (M/P-type) and Other (F/S-type) studies from Mining and Industrial Development studies.

2. Summary of Survey Findings

2-1. M/P Studies Group

(1) State of Utilization

585 studies (87.2%) out of the total completed studies have shown a positive state of utilization, i.e. effectively utilized through the implementation of a project or the formulation of a national development plan. Findings also show that M/P studies are the most well-utilized type of studies (see Table 2-1).

Table 2-1

Type of Studies	Number of Studies		Rate of Utilization
	M/P	407 (60.7%)	362 (88.9%)
Basic Studies	96 (14.3%)	85 (88.5%)	
Chinese Factories	113 (16.8%)	94 (83.2%)	
Others *	55 (8.2%)	44 (80.0%)	
Total	671 (38.8%)	585 (87.2%)	

* The Others category is a combination of Other Studies from Social Development and Agriculture, Forestry and Fisheries Development studies, and Other (M/P-type) and Other (F/S-type) studies from Mining and Industrial Development studies.

(2) State of Regional Utilization

Findings showed only minor difference among the regions compared (see Table 2-2). The marked variation of the rate of utilization in some Oceanic and European countries is due to the small number of studies conducted.

Table 2-2

Regions	Rate of Utilization
Asia	354 (88.9%)
Middle East	51 (85.0%)
Africa	51 (77.3%)
Central and South America	101 (86.3%)
Oceania	6 (85.7%)
Europe	16 (94.1%)
Plural Countries	6 (100.0%)
Total	585 (87.2%)

(3) State of Utilization by Sectors

The utilization rate of Mining and Industrial Development was relatively low as indicated in Table 2-3.

Table 2-3

Sectors	Rate of Utilization
Social Development	261 (90.9%)
Agriculture, Forestry and Fisheries Development	99 (92.5%)
Mining and Industrial Development	225 (81.2%)
Total	585 (87.2%)

(4) State of Studies “in Progress” or “in Use”

The ways in which the studies are classified as “in progress” or “in use” can be summarized as follows.

- 1) Studies that are incorporated in national development plans or national policies;
- 2) Studies of the following stage are conducted and are geared towards implementation;
- 3) Funding is secured and implementation is planned.

Moreover, findings show that among the many of the proposed projects that have been realized are the ones which its subsequent study conducted and funding secured within five years after the completion of the main study.

In addition, effective utilization of study findings is likely to depend on the consistency with national development plans or the prioritization of the project itself of the recipient country.

(5) State of “Delayed or Suspended” or “Discontinued or Cancelled” Studies

Factors leading to the delay, discontinuance or cancellation of studies can be listed as shown below (see also Table 2-4).

- 1) Political factors such as lower priority put by the recipient government as well as changes in development policy
- 2) Mismatch of proposed project in terms of scale and details
- 3) Difficulty in obtaining enough foreign funding
- 4) Natural disasters
- 5) Social and political unrest

Table 2-4

Elapsed Time after Completion of Development Study	Delayed	Discontinued or Cancelled
Less than 5 years	26 (54.2%)	1 (2.7%)
Between 5 years to 9 years	10 (20.8%)	2 (5.3%)
10 years or more	12 (25.0%)	35 (92.0%)
Total	48 (100.0%)	38 (100.0%)

(6) Possibility of Improving Utilization Rate

Projects proposed through Development Studies must be consistent with national plans of the recipient government and have high priority in order to improve the utilization rate of study findings. However, attempts to review and revive Development Studies which have yet to be implemented or of studies delayed, through implementation of supplementary studies and other more specific and detailed studies can be ways of improving the utilization rate.

2-2. F/S Studies Group

(1) State of Realization

605 studies of the F/S studies group are “in progress” or “completed” and have a realization rate of 57.1% (Table 2-5). The rate of realization for D/D study scored the highest among the other types. D/D study is conducted at the final stage before the actual implementation of the project. Hence, projects which still are “in the process to be realized” also hold a 50% share. “Delayed or suspended” and “discontinued or cancelled” categories have one case respectively. An alternative was planned out for the “discontinued or cancelled” study in order to realize the project.

Table 2-5

Type of Studies	Number of Studies		Rate of Realization	
	F/S	752	(70.9%)	410
M/P+F/S	279	(26.3%)	172	(61.7%)
D/D	24	(2.3%)	20	(83.3%)
Others (F/S)	5	(0.5%)	3	(60.0%)
Total	1,060	(61.2%)	605	(57.1%)

(2) State of Regional Realization

The result shows that Asia has the highest rate of realization (see Table 2-6).

Table 2-6

Regions	Rate of Realization
Asia	393 (62.7%)
Middle East	69 (58.0%)
Africa	48 (42.9%)
Central and South America	79 (49.1%)
Oceania	7 (38.9%)
Europe	8 (38.1%)
Plural Countries	1 (50.0%)
Total	605 (57.1%)

(3) State of Realization by Study Types

There are some variants between the rate of realization of the different sectors. The longer time frame required for projects under Mining and Industrial Development is considered as the causing factor for its relatively low rate of realization (see Table 2-7).

Table 2-7

Sectors	Rate of Realization
Social Development	376 (67.0%)
Agriculture, Forestry and Fisheries Development	132 (56.9%)
Mining and Industrial Development	97 (36.3%)
Total	605 (57.1%)

(4) State of Realizing “in Progress” or “Completed” Studies

Most of the studies identified as “Completed”, “Partially Completed” or “in Progress” had already secured enough funding and had their proposed project implemented (see Table 2-8). Focusing on the process towards the realization of the projects, results show that most of those had already completed subsequent studies such as D/D and E/S, and funding secured within five years after the completion of the main study.

The major source of funding was from Japan, in such forms as yen loans and grant aid. Others include funds from international agencies, private sectors, other aid countries and domestic funding. Studies under process are those which have secured or materialized funding. It is similar to the state of subsequent study or the state of securing funds after the completion of the main study.

Contributing factors for the realization of proposed projects are the priority level, the revenue effect, consistency with national plans, and the implementation system.

Table 2-8

Present Status of Studies	Rate of Realization
Completed	273 (45.1%)
Partially Completed	154 (25.5%)
Implementing	129 (21.3%)
Processing	49 (8.0%)
Total	605 (100.0%)

(5) State of Studies in Preparatory Stage

Studies in “Preparatory” stage can be classified into those of which concrete plans are identified, those which requests have been made yet under process or in preparation, and those of which concrete plans are unidentified or unknown (see Table 2-9). However, some are studies in which subsequent studies have already been conducted or funding secured.

There are also studies in which five to ten years have elapsed after requests were made, but are still on hold. Such cases could be categorized as “delayed” unless some measures are taken in near future.

Table 2-9

Elapsed Time after Completion of Development Study	Rate of Preparatory Stage
Less than 5 years	108 (52.7%)
Between 5 years to 9 years	57 (27.8%)
10 years or more	40 (19.5%)
Total	205 (100.0%)

(6) State of “Delayed or Suspended” and “Discontinued or Cancelled” Studies

More than ten years have passed after the main studies of 61.1 % of the studies categorized as “Delayed or Suspended” have been completed. Findings reveal that the rate of “Discontinued or Cancelled” studies of which their main study finished more than ten years ago was higher compared to that of “Delayed or Suspended” studies (see Table 2-10).

Table 2-10

Elapsed Time after Completion of Development Study	Delayed or Suspended	Discontinued or Cancelled
Less than 5 years	18 (14.9%)	1 (0.8%)
Between 5 years to 9 years	29 (24.0%)	6 (4.6%)
10 years or more	74 (61.1%)	122 (94.6%)
Total	121 (100.0%)	129 (100.0%)

Some of the underlying factors for the “non-realization” of the proposed projects can be summarized as follows:

- 1) Political factors, such as lower priority put or changes in development policy
- 2) Economic factors, such as problems of funding due to tighter financial situation of the recipient country and overall stagnated economy
- 3) Natural disasters
- 4) Civil war, insurgency, social and political unrest

(7) Possibility of Improving Realization Rate

One of the ways of improving the realization rate of study findings from F/S Study Group is to revitalize studies that have been delayed or suspended along with effective planning. Among the preparatory studies are those of which their main studies have been completed more than five to ten years ago and which many could become “Delayed or Suspended” unless effective action is taken place.

Hence, in order to promote the realization of study findings (at the implementation level), there are some ways that needs to be considered. Such method includes steps such as focusing on the studies of which the main study was completed ate least five years ago but have not been realized, then identifying the inhibiting factors for implementation, and finding alleviating measures as well as promoting study implementation.

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CHAPTER 1

OUTLINE OF THE STUDY

CHAPTER 1. OUTLINE OF THE STUDY

1. Background and Purpose of Follow-up Study

1-1. Background of Follow-up Study

The Social Development Study Department of JICA conducts follow-up studies on Social Development and Agriculture, Forestry and Fisheries Development area, and also Mining and Industrial Development Study Department of JICA conducts Mining and Industry Project follow-up studies on Mining and Industrial Development area.

After the completion of development study, it had been difficult to follow the progress of the proposed project and the utilization of the Study findings. The reasons of the difficulty are as follows; a considerable amount of time is often needed to realize projects after the completion of studies, there are a large number of ways in which study findings are used, and there have been limitations on the amount of information available from recipient countries.

In order to overcome the above-mentioned difficulties, follow-up studies on development studies were started in FY 1984. On-site Follow-up Studies were added in FY 1987 to collect a wide range of information from the project implementation sites. Domestic Follow-up Studies, questionnaire surveys for domestic consultants in charge of projects, were also started in FY 1988. The scope of follow-up studies has been extended to Agriculture, Forestry and Fisheries area since FY 1989. In addition, studies of counterpart agencies (JICA Overseas Office Studies) have been conducted through the study teams of JICA overseas offices and cooperation volunteer coordinators since FY 1991. Studies by local consultants from developed countries since FY 1994 and studies by local in-country consultants since FY 1995 (Overseas Follow-up Studies) have been conducted. Since there has been increased interest in evaluating development studies recently, on-site trial studies have been implemented to evaluate the impact of development studies since FY 1998.

1-2. Purpose of Follow-up Study

The follow-up study has two goals as follows:

- (1) To grasp the current status, utilization and implementation situation of completed development studies; and
- (2) To analyze systematically these findings to improve future development studies.

Methodology of Follow-up Study

2-1. Coverage

The follow-up study covers studies implemented by the development study budget under the jurisdiction of the Social Development Study and Agriculture, Forestry and Fisheries Development Study Departments, and those implemented under the overseas development plan study budget, under the jurisdiction of the Mining and Industrial Development Study Department (excluding follow-up studies of special project studies conducted as part of the Grant Aid Program). The follow-up study covers main studies completed between August 1, 1974 (the date on which JICA was established) to the end of FY 1999 (March 31, 2000). The total number of studies conforming to these standards is 1,731 (848 in Social Development area, 339 in Agricultural Development area, and 544 the Mining and Industrial Development area).

As the results of previous follow-up studies, it is expected that some actions on development study implemented under the jurisdiction of the Social Development Study Department or the Agriculture, Forestry and Fisheries Development Study Department would be taken in 5 – 10 years after its completion. Hence, this follow-up study focuses on development studies completed for the last 11 years (from FY 1989 to FY 1999) to grasp the status of studies under the jurisdiction of these two Departments. On the other hand, all the development studies under the jurisdiction of the Mining and Industrial Development Study Department since their inception was subjects to analysis. Questionnaire surveys in the Follow-up Study have been implemented in cooperation with JICA overseas offices, overseas diplomatic missions, and domestic consultants.

2-2. Classification by Year of Completion

The fiscal year of completion is defined as the fiscal year in which the final report of the development study was submitted to JICA. In order to determine the fiscal year of completion, financial statements, their attached specifications, the annual report of JICA, and the replies by consulting firms in charge of studies and JICA overseas offices to questionnaire surveys are referred.

2-3. Classification of Development Studies by Country and Region

The country and region classifications in development studies are defined by JICA. Studies that cover several countries or regions are classified “plural countries.”

- (1) ASEAN (Brunei, Indonesia, Cambodia, Laos, Myanmar, Malaysia, Philippines, Singapore, Thailand, and Viet Nam)
- (2) East Asia (China, Korea, and Mongolia)
- (3) South West Asia (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka)
- (4) Central Asia (Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyz, Tajikistan, Turkmenistan, and Uzbekistan)
- (5) Middle East (Including Northern Africa: Algeria, Egypt, Libya, Morocco, Sudan, and Tunisia)
- (6) Africa (Excluding Northern Africa)
- (7) Central and South America
- (8) Oceania (countries classified as “Pacific” for Mining and Industry sector)
- (9) Europe
- (10) Plural Countries

Note: “Central Asia” had been regarded as a part of “Europe” until FY 2000

2-4. Classification of Development Study by Study Type

Development Studies are classified by study type as shown in Table 1-1.

Table 1-1 Type of Development Study

1. M/P (Studies for formulating master plans)
2. M/P+F/S (Studies which include both M/P and Feasibility Studies (F/S))
3. F/S (Feasibility studies)
4. D/D (Studies for detailed designs)
5. Basic Studies (Studies to provide basic data, such as maps of various types, nautical charts and groundwater surveys, forestry and fishery resources studies, and agricultural verification studies)
6. Chinese Factories (Studies on the Factories Modernization Program in China)
7. ASEAN Plant Renovation Studies (Studied on the Plant Renovation in ASEAN Countries)
8. Others (Studies for Aftercare Services, etc.)

Note: Resource Studies in the Mining and Industry sector are classified as Basic Studies.

The categories of follow-up studies of Social Development area and Agriculture, Forestry and Fisheries Development area do not match those of Mining and Industrial Development area, due to a difference of the characteristics. In order to conduct an overall analysis in Chapter 2, types of development study are classified as shown in Table 1-2. Detailed analyses in Chapters 3 and 4 are conducted based on respective study categories.

Table 1-2 Category of Development Studies

M/P Studies Group	Social Development, Agriculture, forestry and fisheries Development	M/P, Basic Studies, Others
	Mining and Industrial Development	M/P, Chinese Factories, Resources Studies, Other (M/P)
F/S Studies Group	Social Development, Agriculture, forestry and fisheries Development	M/P+F/S, F/S, D/D
	Mining and Industrial Development	F/S, ASEAN Plant Renovation Studies, Other (F/S)

2-5. Definition of Development Studies by Type of Study

Each type of Development Study is defined as follows:

1) Master Plan Studies (M/P)

A master plan study is carried out to determine a basic development strategy by formulating a comprehensive sectional or regional plan. The formulation of a master plan is the first stage in the development project cycle. It serves to coordinate and facilitate efficient implementation of various individual projects. The project proposed by a master plan study may be implemented in line with the recommendation of the study immediately after the completion of the study or may be carried out within several years after its implementation. For a project prioritized by a master plan, feasibility studies are sometimes implemented.

2) Master Plan/Feasibility Studies (M/P + F/S)

These are studies in which both the master plan and feasibility studies (described below) are undertaken in one step.

3) Feasibility Studies (F/S)

A feasibility study is the one to examine the rationale, appropriateness, investment effects, etc. of a particular development project. In general, it is to determine systematically and objectively whether the proposed project is viable and feasible socially, technically, economically and financially as well as from other important consideration, e.g. operation and maintenance, organization and institution, and preservation of social and natural environment. A feasibility study report serves as important reference for the concerning government agencies and officials to make a policy decision whether the country should proceed to the implementation of the given proposed project(s). It also provides the bilateral and multilateral aid agencies to which a request for financial assistance is addressed with necessary information to examine whether the proposed project is appropriate to be given such assistance.

4) Detailed Design Studies (D/D)

A detailed design study is used to develop the design documents (including draft drawings, work specifications, and bidding documentation) needed to begin project construction work as planned. Considerable cost and time is generally required for the study during this phase, since all detailed investigations related to a project's detailed design must be covered. This type of studies is followed by the selection of the contractor through competitive bidding, then the actual construction. Detailed design studies are indispensable to implement the project orderly and to facilitate the effectiveness of financial assistance.

5) Basic Studies (Long-term Studies, Topographical Studies, Groundwater Development Studies, Forestry and Fishery Resources Studies, Agricultural Verification Studies, etc.)

a) Long-term Studies

Formulation of region-wide plans such as river water management or irrigation plan and of integrated regional resources development plan and examination of alternative policy measures for environmental protection often require long-term and continuous accumulation of relevant basic data. The lack of such data or of abilities to collect and compile such data may become a major impeding factor against the implementation of development plans. In this type of studies, a team of experts are sent to stay in the recipient country for a long period, and collect,

record, compile and analyze relevant basic data through long-term observation.

b) Topographical Studies

The presence of basic maps of national land and its cities is often a necessary condition for planning and implementation of development projects. In many regions of developing countries, however, topographical drawings of national territories and cities have been virtually non-existent, or not appropriate for practical use if ever exist, due to the lack of standardized method to draw and information to fill in. present. This situation leads to difficulty in formulating and implementing development projects as well as in coping with urban problems that are becoming increasingly serious. The results of these studies greatly serve to overcome such difficulties in developing countries by providing basic data and information.

c) Groundwater Development Studies

These studies survey prospect for ground water and investigate the feasibility of its utilization for irrigation, the supply of drinking water and the supply of water for industry. It is an urgent task to secure the drinking water in such places as the dry land where severe drought hits frequently or as the regions where the quality of water is not suitable for drinking. Also, some regions face such problems that drinking water is being deteriorated or dried up due to over-consumption. Thus, the groundwater development is urgently needed in order to improve the lives of the residents in those regions.

d) Forestry and Fishery Resources Studies

These studies aim to collect the basic data on the distribution of forestry and fishery resources, and contribute to various development planning based on appropriate control of resources through the studies.

e) Pilot Studies

Since FY 2000, the participatory verification studies by local residents and counterpart officials, and pilot studies of agricultural verification have carried out in the process of development studies.

f) Resource Studies

This is a type of Pre-Feasibility Studies that are usually conducted to assess mineral and other natural resource deposits in the expected project areas to review the development probability.

6) Studies on the Plant Renovation in ASEAN Countries

This is a series of studies concerning the plant renovation begun as a result of Prime Minister Nakasone's announcement of cooperation during his tour to the ASEAN countries in May 1983.

7) Studies on the Factories Modernization Program in China

These studies have been conducted since May 1981 with the aim at researches on modernization procedures in the existing Chinese factories. The studies resulted from the proposal addressed by the Chinese National Economic Commission (currently the Chinese National Economic and Trade Commission) to the Ministry of International Trade and Industry during the Japan-China High Level Administrative Meeting.

8) Other Studies

One type of other studies is the review study requested by the recipient country due to changes in social or natural conditions after the completion of the Development Study. Another is the one to investigate independently institutional matters and to encourage project implementation

2-6. Classification by Sector

Completed studies are classified into sectors, subsectors, and sub-subsectors according to the JICA System Code Table (May 1999), as shown in Table 1-3 on the following page.

Table 1-3 Sector of Studies

Sector	Subsector	Sub-subsector
1. Planning & Administration	(1) Development Plan	1) (Development Plan in) General 2) Integrated Regional Development Plan
	(2) Administration	1) (Administration in) General 2) Public Finance & Banking 3) Environmental Problems 4) Statistics 5) Information & Public Relations
2. Public Works & Utilities	(1) Public Utilities	1) (Public Utilities in) General 2) Water Supply 3) Sewerage 4) Urban Sanitation
	(2) Transportation	1) (Transportation in) General 2) Road 3) Land Transportation 4) Railway 5) Marine Transportation & Ships 6) Port 7) Air Transportation & Airport 8) Urban Transportation 9) Meteorology & Seismology
	(3) Social Infrastructure	1) (Social Infrastructure in) General 2) River & Erosion Control 3) Water Resources Development 4) Urban Planning & Land Development 5) Architecture & Housing 6) Survey & Mapping
	(4) Communications & Broadcasting	1) (Comms. & Broad. in) General 2) Post 3) Telecommunication 4) Broadcasting
3. Agriculture, Forestry & Fishery	(1) Agriculture	1) (Agriculture in) General 2) Sericulture 3) Irrigation, Drainage & Reclamation 4) Agricultural Machinery 5) Agricultural Processing 6) Increase of Food Production
	(2) Animal Husbandry	1) Animal Husbandry 2) Animal Health 3) Livestock Processing
	(3) Forestry	1) Forestry & Forest Conservation 2) Timber Processing
	(4) Fishery	1) Fishery 2) Fish Processing

Sector	Subsector	Sub-subsector
4. Mining & Industry	(1) Mining	1) Mining
	(2) Industry	1) (Industry in) General 2) Chemicals 3) Steel & Nonferrous Metals 4) Machine Industry 5) Textile Industry 6) Pulpwood Products 7) Food Industry 8) Other Industries
5. Energy	(1) Energy	1) (Energy in) General 2) Electric Power 3) Gas & Oil 4) New & Recycled Energy 5) Other Energies
6. Commerce & Tourism	(1) Commerce & Trade	1) Business Management 2) Trade
	(2) Tourism	1) (Tourism in) General 2) Tourism Infrastructure
7. Human Resources Development	(1) Human Resources Development	1) (Human Resources in) General 2) Physical Education 3) Education 4) Vocational Training
	(2) Science & Culture	1) Science 2) Culture
8. Public Health and Medicine	(1) Public Health and Medicine	1) Public Health and Medicine 2) Population & Family Planning
9. Social Welfare	(1) Social Welfare	1) Social Welfare 2) Labor 3) Disaster Relief 4) Food Assistance 5) Other Welfare
10. Others	(1) Others	1) Others

3. Criteria to Classify Utilization Status of Development Study

Studies are classified into 2 groups by their own clearly defined evaluation criteria in order to ascertain the progress of projects and utilization of study findings accurately.

3-1. M/P Studies Group

Master plan studies (M/P), basic studies (B/S), studies on factory modernization program in China and other studies (other M/P-type studies) are classified into M/P Studies Group. Information is sought on whether or not study findings have been adopted or utilized. The present status is classified into 3 categories: 1) In Progress or In Use, 2) Delayed, and 3) Discontinued or Cancelled.

The criteria for determining the present status of studies in the M/P Studies Group are as shown in Table 1-4.

Table 1-4 Status for M/P Studies Group

Present Status	Criteria
a. In Progress or In Use	<p>A Study is classified into this category when its findings or proposals are sufficiently utilized in the following manner.</p> <ol style="list-style-type: none"> 1) Based on the proposals, subsequent studies are, or have been, undertaken. Alternatively, the Study findings are utilized to undertake some development study or planning. 2) Further Japanese technical cooperation is started on the basis of the proposals or Study findings. 3) Proposals are incorporated into the development policy or plan of the recipient country. Alternatively, Study findings are utilized to formulate the development policy or plan. 4) The government of the recipient country is taking some preparatory step to utilize the proposals.
b. Delayed	<p>A Study is classified as “delayed”, when its findings or proposals are in one of the following conditions.</p> <ol style="list-style-type: none"> 1) No significant action has been taken by the government of the recipient country to utilize the proposals or findings. 2) The government of the recipient country began to act on the proposals, or utilize the findings, but the effort was halted for some reasons.

c. Discontinued or Cancelled	<p>A Study is classified into this category when its findings or proposals are in one of the following conditions.</p> <ol style="list-style-type: none"> 1) The government of the recipient country made an explicit decision not to act on the proposals. 2) The government decided to act on, or utilize, different proposals or findings from other sources. 3) No actions have been or will be taken “for the considerable period of time”.
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* As there is no category in the Social and Agricultural Sector that corresponds to the classification “unknown” in the Mining and Industry sector, the sector collapsing social, agricultural, and mining and industry categorizes these as “discontinued or cancelled.”

3-2. F/S Studies Group

F/S Studies Group consists of feasibility studies (F/S), master plan/feasibility studies (M/P + F/S), detailed design studies (D/D) and other studies (other F/S-type studies). Information is sought on whether or not the projects or programs they appraised or proposed have been implemented. The present status is classified into four categories: a) Completed or in Progress, b) Promoting, c) Delayed or Suspended, and d) Discontinued or Cancelled. The category of “Completed or in Progress” is further divided into four sub-categories: a1) Completed, a2) Partially Completed, a3) Implementing, and a4) Processing.

The criteria for classification of the F/S Studies Group are shown in Table 1-5.

Table 1-5 Status for F/S Studies Group

Present Status	Criteria
a. Completed or In Progress a1. Completed a2. Partially Completed a3. Implementing a4. Processing	<p>The proposed development project has been already completed and is in use.</p> <p>The proposed development project is partially completed and is in use.</p> <p>The implementation of the project is underway.</p> <p>The project concerned is at one of the following stages.</p> <ol style="list-style-type: none"> 1) Tenders have been invited. 2) Financing of the project has been secured*. 3) Following the completion of the JICA feasibility study, the basic design study or some other specific stop is being undertaken with bilateral or multilateral financial assistance. 4) For some other reasons the project concerned is considered highly likely to be implemented in the future.
b. Promoting	<p>The project concerned is at one of the following stages.</p> <ol style="list-style-type: none"> 1) The government of the recipient country is requesting financial support from international organizations and/or foreign governments including Japan. 2) The government of the recipient country has been undertaking the detailed design study or other additional studies subsequent to the JICA feasibility study. 3) The recipient country is actively promoting the implementation of the project in some other way.

c. Delayed or Suspended	<p>The project concerned is at one of the following stages.</p> <ol style="list-style-type: none"> 1) The government of the recipient country has not taken any specific action after the completion of the JICA Study. 2) The government of the recipient country has at one point promoted the proposed project but suspended the effort for some reason.
d. Discontinued or Cancelled	<p>The project concerned is at one of the following stages.</p> <ol style="list-style-type: none"> 1) The government of the recipient country officially cancelled the proposed project. 2) The government of the recipient country implemented an alternative which was substantially different from the proposal of the JICA Study. 3) No actions have been or will be taken “for the considerable period of time”.

* Here the term “secured” is used to mean that either a loan agreement is signed, or a government commitment is confirmed in the form of an official pledge or exchange of notes has been executed.

4. Collection of Related Information

Related basic information is collected from the documents and the reports from JICA headquarters and Institute for International Cooperation.

In JICA Overseas Office Survey, related information is collected through JICA overseas offices conducting questionnaire to the counterparts in recipient countries.

In Domestic Questionnaire Survey, related information is collected conducting questionnaire to the consulting firms in charge of development studies.

Information concerning the studies completed recently and information that is unclear in the above-mentioned surveys are complemented by referring to documents from JICA headquarters and the Institute for International Cooperation, and interviewing relevant JICA officers.

5. Consolidation of Study Findings

The study findings are reported in the report 'Follow-up Study of Development Studies' in both Japanese and English.

The report is compiled based on information of JICA Overseas Office Studies, Domestic Questionnaire Studies and interviews. In this report, completed information is consolidated and analyzed based on survey type, survey sector, survey region and country, ascertaining trends by study type, sector, and region, in order to grasp the current utilization of completed development studies. In addition, it is grasped whether M/P studies were used in subsequent feasibility studies, as well as technical cooperation, and national plans.

Studies covered by the present Follow-up Study (studies completed between FY 1989 – 1999) and approved by counterparts in the recipient countries list in an attached CD-ROM to this report.

CHAPTER 2

AN OVERVIEW OF COMPLETED DEVELOPMENT STUDIES (Studies Completed in FY1974–FY1999)

CHAPTER 2. An Overview of Completed Development Studies
(Studies Completed in FY 1974 – FY 1999)

1. Trends in Numbers of Completed Studies

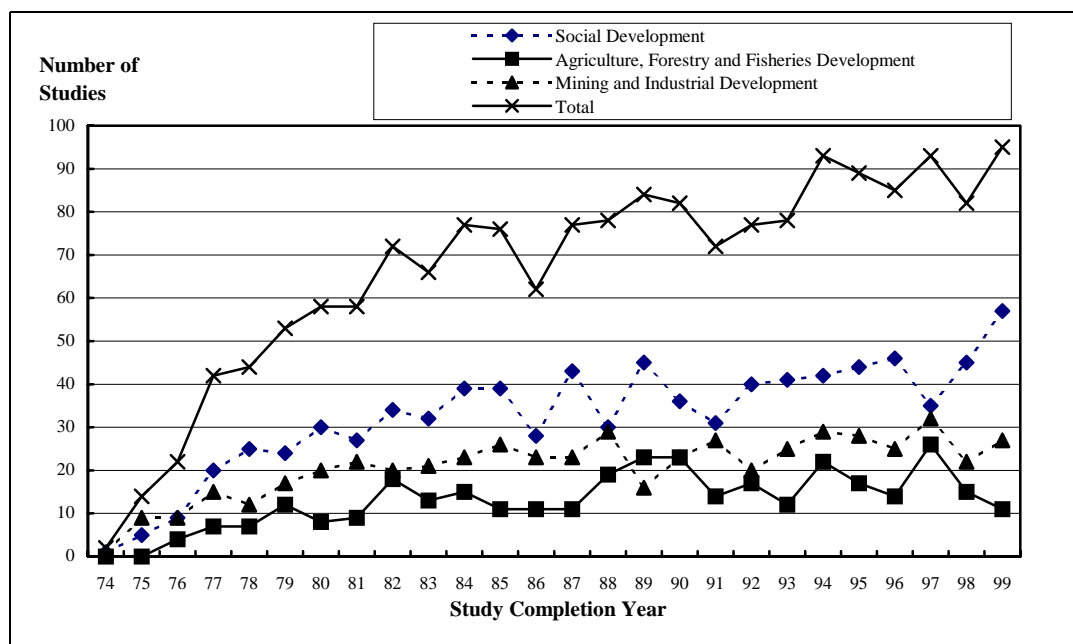
As shown in Table 2-1, the number of completed studies had been risen until 1990 and has been settled around 80 to 90 for the last 5 years.

Table 2-1 Time Trend of Numbers of Development Study

Study Completion Year	Social Development	Agriculture, Forestry and Fisheries Development	Mining and Industrial Development	Total	Study Completion Year	Social Development	Agriculture, Forestry and Fisheries Development	Mining and Industrial Development	Total
1974	1	0	1	2	1987	43	11	23	77
1975	5	0	9	14	1988	30	19	29	78
1976	9	4	9	22	1989	45	23	16	84
1977	20	7	15	42	1990	36	23	23	82
1978	25	7	12	44	1991	31	14	27	72
1979	24	12	17	53	1992	40	17	20	77
1980	30	8	20	58	1993	41	12	25	78
1981	27	9	22	58	1994	42	22	29	93
1982	34	18	20	72	1995	44	17	28	89
1983	32	13	21	66	1996	46	14	25	85
1984	39	15	23	77	1997	35	26	32	93
1985	39	11	26	76	1998	45	15	22	82
1986	28	11	23	62	1999	57	11	27	95
					Total	848 (49.0%)	339 (19.6%)	544 (31.4%)	1,731 (100.0%)

* Due to the fact that studies subject to the current follow-up study began on August 1, 1974, few studies were completed between FY 1974 and 1976.

Figure 2-1 Time Trend of Numbers of Development Study



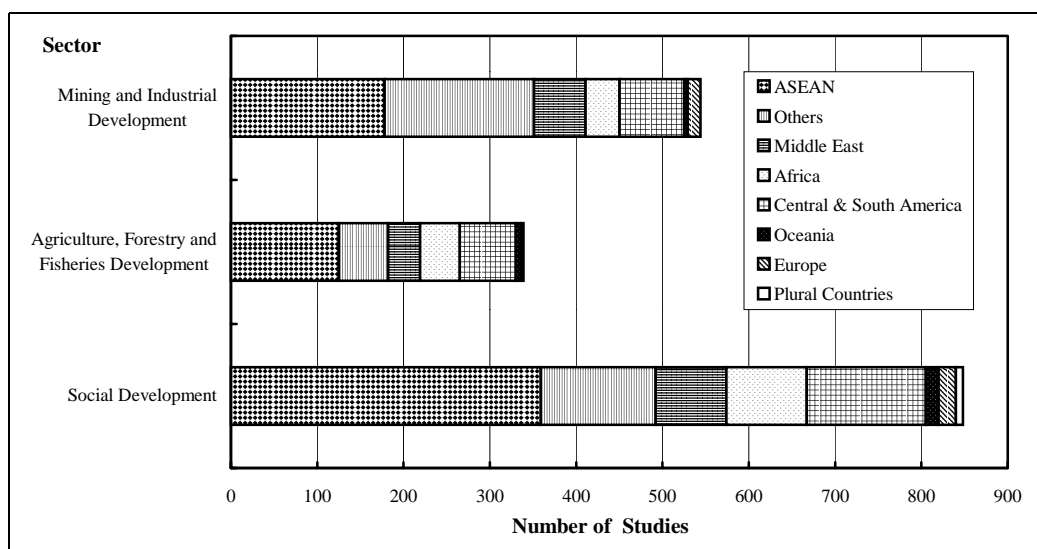
1-1. Numbers of Development Study by Region

1025 Development Studies (59.2% of the total) were conducted in Asia. This shows Japanese government has put emphasis on conducting studies in Asia. Particularly in the ASEAN countries, 622 studies (38.2% of the total) are conducted. This follows 278 studies (16.1%) in Central and South America, 179 studies (10.3%) in Middle East, and 178 studies (10.3%) in Africa.

Table 2-2 Classification by Region

Region	Social Development	Agriculture, Forestry and Fisheries Development	Mining and Industrial Development	Total
Asia	492 (58.0%)	182 (53.7%)	351 (64.5%)	1,025 (59.2%)
ASEAN	359 (42.3%)	125 (36.9%)	178 (32.7%)	662 (38.2%)
Others	133 (15.7%)	57 (16.8%)	173 (31.8%)	363 (21.0%)
Middle East	82 (9.7%)	37 (10.9%)	60 (11.0%)	179 (10.3%)
Africa	93 (11.0%)	46 (13.6%)	39 (7.2%)	178 (10.3%)
Central & South America	138 (16.3%)	65 (19.2%)	75 (13.8%)	278 (16.1%)
Oceania	15 (1.8%)	6 (1.8%)	4 (0.7%)	25 (1.4%)
Europe	20 (2.4%)	3 (0.9%)	15 (2.8%)	38 (2.2%)
Plural Countries	8 (0.9%)	0 (0.0%)	0 (0.0%)	8 (0.5%)
Total	848 (100.0%)	339 (100.0%)	544 (100.0%)	1,731 (100.0%)

Figure 2-2 Classification by Region



Nearly the same proportions of study types are conducted in each region except for Oceania and Europe, where few studies were conducted. The most common type of study is Feasibility Study (F/S), followed by Master Plan (M/P) Study, and M/P + F/S Study.

Table 2-3 Classification by Region and Study Type

Region	M/P	M/P+F/S	F/S	D/D	Basic Studies	Chinese Factories	Other * Studies	Total
Asia	226 (22.0%)	174 (17.0%)	437 (42.6%)	12 (1.2%)	27 (2.6%)	113 (11.0%)	36 (3.5%)	1,025 (100.0%)
ASEAN	166 (25.1%)	124 (18.7%)	319 (48.2%)	10 (1.5%)	19 (2.9%)	0 (0.0%)	24 (3.6%)	662 (100.0%)
Others	60 (16.5%)	50 (13.8%)	118 (32.5%)	2 (0.6%)	8 (2.2%)	113 (31.1%)	12 (3.3%)	363 (100.0%)
Middle East	46 (25.7%)	29 (16.2%)	84 (46.9%)	6 (3.4%)	9 (5.0%)	0 (0.0%)	5 (2.8%)	179 (100.0%)
Africa	38 (21.3%)	19 (10.7%)	90 (50.6%)	3 (1.7%)	20 (11.2%)	0 (0.0%)	8 (4.5%)	178 (100.0%)
Central & South America	80 (28.8%)	41 (14.7%)	117 (42.1%)	2 (0.7%)	30 (10.8%)	0 (0.0%)	8 (2.9%)	278 (100.0%)
Oceania	1 (4.0%)	10 (40.0%)	7 (28.0%)	1 (4.0%)	5 (20.0%)	0 (0.0%)	1 (4.0%)	25 (100.0%)
Europe	15 (39.5%)	6 (15.8%)	15 (39.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (5.3%)	38 (100.0%)
Plural Countries	1 (12.5%)	0 (0.0%)	2 (25.0%)	0 (0.0%)	5 (62.5%)	0 (0.0%)	0 (0.0%)	8 (100.0%)
Total	407 (23.5%)	279 (16.1%)	752 (43.4%)	24 (1.4%)	96 (5.5%)	113 (6.5%)	60 (3.5%)	1,731 (100.0%)

* The "Others" category is a combination of "Other Studies" from Social Development and Agriculture, Forestry and Fisheries Development studies, and "Other (M/P-type)" and "Other (F/S-type)" studies from Mining and Industrial Development studies.

Transportation subsector shares the largest number of studies in all regions, except other Asia, where Chinese Factory Studies (Industrial Sector) is the largest, and Africa, where Agricultural sector shares the largest.

In Transportation subsector, Road sub-subsector is the largest in ASEAN and Africa, and Port sub-subsector is the largest in other Asian countries and Central and South America. Furthermore, Social Infrastructure and Communications and Broadcasting sectors are relatively larger in ASEAN than in other regions.

Table 2-4 Classification by Region and Sector

Region	Planning & Administration	Public Works & Utilities	Transportation				Sub-Total	Social Infrastructure	Communications & Broadcasting	Tourism	Public Health and Medicine	Agriculture	Animal Husbandry	Forestry	Fishery	Mining	Industry	Energy	Others *	Total
			Road	Railway	Port	Others														
Asia	39	47	80	33	50	69	232	118	46	9		154	1	17	10	8	203	122	19	1,025
ASEAN	25	36	63	19	32	50	164	91	34	8		101		15	9	4	65	95	15	662
Others	14	11	17	14	18	19	68	27	12	1		53	1	2	1	4	138	27	4	363
Middle East	9	14	11	3	11	10	35	17	5	2		31	1	2	3		30	25	5	179
Africa	3	14	18	3	4	10	35	31	6	2	2	38		6	2	3	13	23		178
Central & South America	14	11	17	10	19	24	70	33	7	2		42		14	9	6	26	39	5	278
Oceania	1	2	1		4	2	7	3	2					2	4	1		2	1	25
Europe	6	8		2		2	4	1		1		2		1			7	5	3	38
Plural Countries			1			2	3	3	2											8
Total	72	96	128	51	88	119	386	206	68	16	2	267	2	42	28	18	279	216	33	1,731

* The Others category consists of Social Development (1 in Indonesia and 1 in Honduras) and Mining and Industrial Development (31) studies.

1-2. Numbers of Studies by Country

The largest number of studies is carried out in Asia. 224 studies are conducted in Indonesia, followed by 185 in China (113 of which are Chinese Factory Studies), 146 in Thailand, 143 in the Philippines, and 72 in Malaysia. More than 15 development studies are conducted in 20 other countries: Bangladesh, India, Nepal, Pakistan, Sri Lanka, Viet Nam (Asia), Egypt, Oman, Turkey (Middle East), Kenya, Tanzania (Africa), Argentina, Bolivia, Brazil, Chile, Colombia, Honduras, Mexico, Peru, Paraguay (Central and South American countries).

Table 2-5 Classification by Country

(*) ASEAN ten countries

	Planning and Administration	Public Works and Utilities	Transportation				Social Infrastructure	Communications and Broadcasting	Tourism	Public Health and Medicine	Agriculture	Animal Husbandry	Forestry	Fishery	Mining	Industry	Energy	Others **	Total
			Road	Railway	Port	Others													
Brunei *						1	1					1			1			4	
Cambodia *		2	1		1		1	1		2						1		9	
Indonesia *	8	11	14	7	12	13	36	19	3	26		6	1	1	24	37	6	224	
Laos *		1	2				3			4		1				3		14	
Malaysia *	2	4	9	3	4	5	13	4	1	5		3	2		7	9	1	72	
Myanmar *			2			3				4					3	2		14	
Philippines *	5	5	17	1	7	11	22	3	1	29		3	4	1	9	23	2	143	
Singapore *			1		1	1		1									2	6	
Thailand *	7	11	16	5	5	12	12	5	3	29		1	1	2	17	17	3	146	
Viet Nam *	3	2	3	1	2	4	3	1		2			1		4	3	1	30	
China	11	1	5	5	5	5	8	2		14	1			2	115	7	4	185	
Korea		1	1				2			1					1	1		7	
Mongolia	1	1	1	2		1	1	1		2		1		1	1	1		14	
Bangladesh		1	2	1	2	2	5	1		6					5	2		27	
Bhutan			1			1				1								3	
India			2	3	3	1				2					4	2		17	
Maldives		1				1												2	
Nepal			2			3	7	2		5		1			3	6		29	
Pakistan		1		1	3	5	1	1		12					2	5		31	
Sri Lanka		3	3		5	1		4		9			1		4	3		33	
Armenia															1	1		1	
Kyrgyz	1							1					1	1				4	
Kazakhstan		1	1			1	1			1					1			6	
Uzbekistan	1	1		1		1												4	
United Arab Emirates						2				1			1		1	1		6	
Algeria						1				1					2			4	
Egypt	3	5	2	2	4	5	1	3		10	1				7	1		44	
Iran	1				1					2					2	2	1	9	
Iraq						1	1			1					1			4	
Jordan	2	1	1		1		3		1	2					2	1		14	
Morocco		1		1		1	3			2		1	1			1		11	
Oman			2		1		1			5					5	3	1	18	
Palestine		1																1	
Qatar		1																1	
Saudi Arabia	2						2								3		1	8	
Sudan			2							2					1			5	
Syria		1			1	1	1	1	1						2	2		10	
Tunisia			1				3			1	1				2	3	2	13	
Turkey	1	2	3		2					3			1		1	11		24	
Yemen		2			1	1		1		1					1			7	
Burkina Faso										1								1	
Central African Republic							1											1	
Democratic Republic of the Congo			1	1		2												4	
Cote d'Ivoire		1								3		1						5	
Cameroon										1						2		3	
Cape Verde						1												1	
Djibouti					1													1	
Eritrea						1												1	
Ethiopia						3				1		1				1		6	
Gabon													1					1	
Ghana						1				2		1						4	
Guinea						1	1			1								3	
Kenya	1	6	6			1	4		1	1	4				3	3		30	
Liberia			1													1		2	
Madagascar		1	1		1		2	1								1		7	
Mali						1				4							1	6	
Mozambique					1													1	
Mauritania						1				1								2	

	Planning and Administration	Public Works and Utilities	Transportation				Social Infrastructure	Communications and Broadcasting	Tourism	Public Health and Medicine	Agriculture	Animal Husbandry	Forestry	Fishery	Mining	Industry	Energy	** Others	Total
			Road	Railway	Port	Others													
Mauritius		2	2			1										1		6	
Malawi			1						1	1		1				2		6	
Namibia																1		1	
Niger						1	1			4					1			7	
Nigeria					1		2			1					1			5	
Rwanda		1				1	1											2	
Senegal				1		1	2			2			1				1	8	
Sierra Leone			1							1								2	
Saotome and Principe																		1	
Swaziland						1										2		3	
Tanzania	1	2	3			2	4	1		5		1		1	2	5		27	
Uganda			1			2	1			1				1				6	
Zambia			1			1	2			2		1		1	3			13	
Zimbabwe	1	1		1			2			3					3	1		12	
Argentina	2			1	1		1	1		1		1			3	4	1	16	
Bolivia	1	1	4	3		2	5	1		5		1		2	1	1		27	
Brazil	3			1	2		1	6		1			1		1	3	1	20	
Chile		1	3	1	1		1			3		1			2	2		15	
Colombia	1		3			2	2			5		1	1		3	5		23	
Costa Rica	1				2	1	1			1			1			4		11	
Dominican Republic					1		1	1		5						2		10	
Ecuador				1	1	1	2			2		1	1		2	3		13	
Grenada			1															1	
Guatemala		2			1	3	3			2		1			1	1		14	
Guyana																		1	
Honduras					1	2	2	1		5		2	2			1	1	17	
Jamaica										2								2	
Mexico	3	2		4	3	1		1		2		1		3	3	2	2	27	
Nicaragua		2	2				1											5	
Panama			1		2	3	1	1	1			1	1			1		12	
Peru	1	1			1	1	3			1			2	1	1	5		17	
Paraguay	1	1	3			6	1	2		6		2			3	1		26	
El Salvador					1		1			1					1			4	
Trinidad and Tobago		1															1	2	
Uruguay					1	1						2			4			8	
Bolivarian Republic of Venezuela	1				1		2								1	2		7	
Cook Islands	1				1													2	
Republic of the Fiji Islands							3					2	1					6	
Kiribati					1								1				1	3	
Papua New Guinea		2	1			1		1					1			1		7	
Solomon Islands						1		1					1	1				4	
Samoa					2													2	
Tonga																	1	1	
Albania		1																1	
Bulgaria	1	1		1						1					1	2		7	
Bosnia-Herzegovina		1													1			2	
Czechoslovakia																	1	1	
Greece									1									1	
Hungary	1	1													1	1	1	5	
Macedonia	1					1												2	
Poland	1	1		1		1									2		1	7	
Portugal															1			1	
Romania	1	2				1				1		1			1			7	
Slovakia	1																1	2	
Lithuania		1																1	
Slovenia																	1	1	
Plural Countries			1			2	3	2										8	
Total	72	96	128	51	88	119	206	68	16	2	267	2	42	28	18	279	216	33	1,731

** The Others category consists of Social Development (1 in Indonesia and 1 in Honduras) and Mining and Industrial Development (31) studies.

1-3. Numbers of Studies by Type

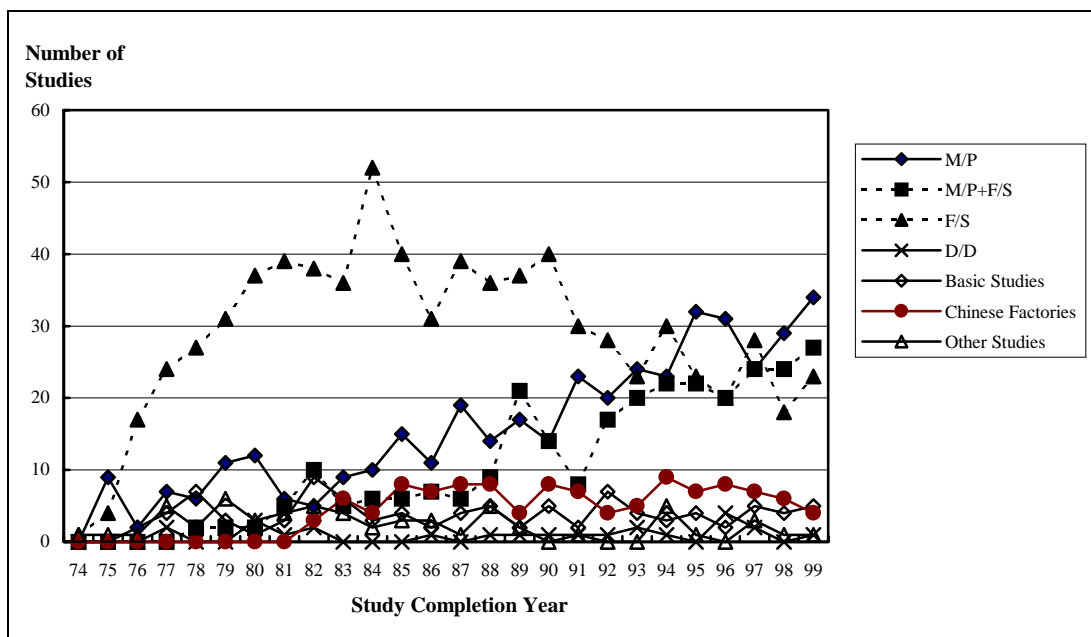
Total 1,731 studies are classified into 752 F/S studies (43.4%), 407 M/P (23.5%), 279 M/P + F/S (16.1%), and 113 Studies on the Factories Modernization Program in China (Chinese Factories Studies) (6.5%). As for the number of studies, the numbers of M/P have stayed around 30 since FY 1995, though it was decreased to 24 in FY 1997 temporarily. Although F/S showed a temporary increase in FY 1997, it has been decreasing in recent years. A distinguishing feature for the last few years is a growth of number of M/P + F/S. This is due to the trend to utilize master-plan study findings for the subsequent feasibility studies. The number of Chinese Factories Studies has been decreasing since FY 1994.

Table 2-6 Time Trend of the Number of Development Studies by Type of Study

Study Completion Year	M/P	M/P+F/S	F/S	D/D	Basic Studies	Chinese Factories	Other * Studies	Total
1974	0	0	1	0	0	0	1	2
1975	9	0	4	0	0	0	1	14
1976	2	0	17	0	2	0	1	22
1977	7	0	24	2	4	0	5	42
1978	6	2	27	0	7	0	2	44
1979	11	2	31	0	3	0	6	53
1980	12	2	37	3	1	0	3	58
1981	6	5	39	1	3	0	4	58
1982	5	10	38	2	9	3	5	72
1983	9	5	36	0	6	6	4	66
1984	10	6	52	0	3	4	2	77
1985	15	6	40	0	4	8	3	76
1986	11	7	31	1	2	7	3	62
1987	19	6	39	0	4	8	1	77
1988	14	9	36	1	5	8	5	78
1989	17	21	37	1	2	4	2	84
1990	14	14	40	1	5	8	0	82
1991	23	8	30	1	2	7	1	72
1992	20	17	28	1	7	4	0	77
1993	24	20	23	2	4	5	0	78
1994	23	22	30	1	3	9	5	93
1995	32	22	23	0	4	7	1	89
1996	31	20	20	4	2	8	0	85
1997	24	24	28	2	5	7	3	93
1998	29	24	18	0	4	6	1	82
1999	34	27	23	1	5	4	1	95
Total	407 (23.5%)	279 (16.1%)	752 (43.4%)	24 (1.4%)	96 (5.5%)	113 (6.5%)	60 (3.5%)	1,731 (100.0%)

* The "Others" category is a combination of "Other Studies" from Social Development and Agriculture, Forestry and Fisheries Development studies, and "Other (M/P-type and F/S-type) studies" from Mining and Industrial Development studies.

Figure 2-3 Time Trend of the Number of Development Studies by Type of Study



1-4. Numbers of Studies by Sector

There are 72 studies in Planning and Administration sector, accounting for 4.2% of the total, 756 in Public Works and Utilities sector (43.7%), 339 in Agriculture, Forestry and Fishery sector (19.6%), 16 in Commerce & Tourism sector (0.9%), 2 in Health and Medical Care sector (0.1%), 297 in Mining and Industry sector (17.2%), and 216 in Energy sector (12.5%). The most common subsector in Public Works and Utilities sector is Transportation, which has 386 studies accounting for 22.3% of the total. This is followed by Social Infrastructure (206 studies, 11.9%). The most common subsector in Agriculture, Forestry and Fishery sector is Agriculture subsector, which has 267 studies (15.9% of the total). In Mining and Industry sector, there are 279 studies (16.1% of the total) in Industry subsector and 15 studies (0.9% of the total) in Mining subsector.

1-4-1. Numbers of Studies by Main Sectors

In M/P studies, there are 199 Social Development studies, which account for 48.9% of the total, 72 Agriculture, Forestry and Fishery Development studies (19.0%), and 121 Mining and Industrial Development studies (29.7%). In F/S studies, there are 311 Social Development studies, accounting for 41.4% of the total, 179 Agriculture, Forestry and Fishery Development studies (23.8%), and 256 Mining and Industrial Development studies (34.0%). In Mining and Industrial Development studies, there are 113 studies on the Factories Modernization Program in China, which do not exist in Social Development or Agriculture, Forestry and Fisheries Development.

Transportation is the largest subsector in all types of study except Basic Studies and Studies on the Factories Modernization Program in China. These types of studies concentrate on the hardware such as infrastructures. Due to the characteristic, Basic Studies focuses on Social Infrastructure and Studies on the Factories Modernization Program in China on Industry.

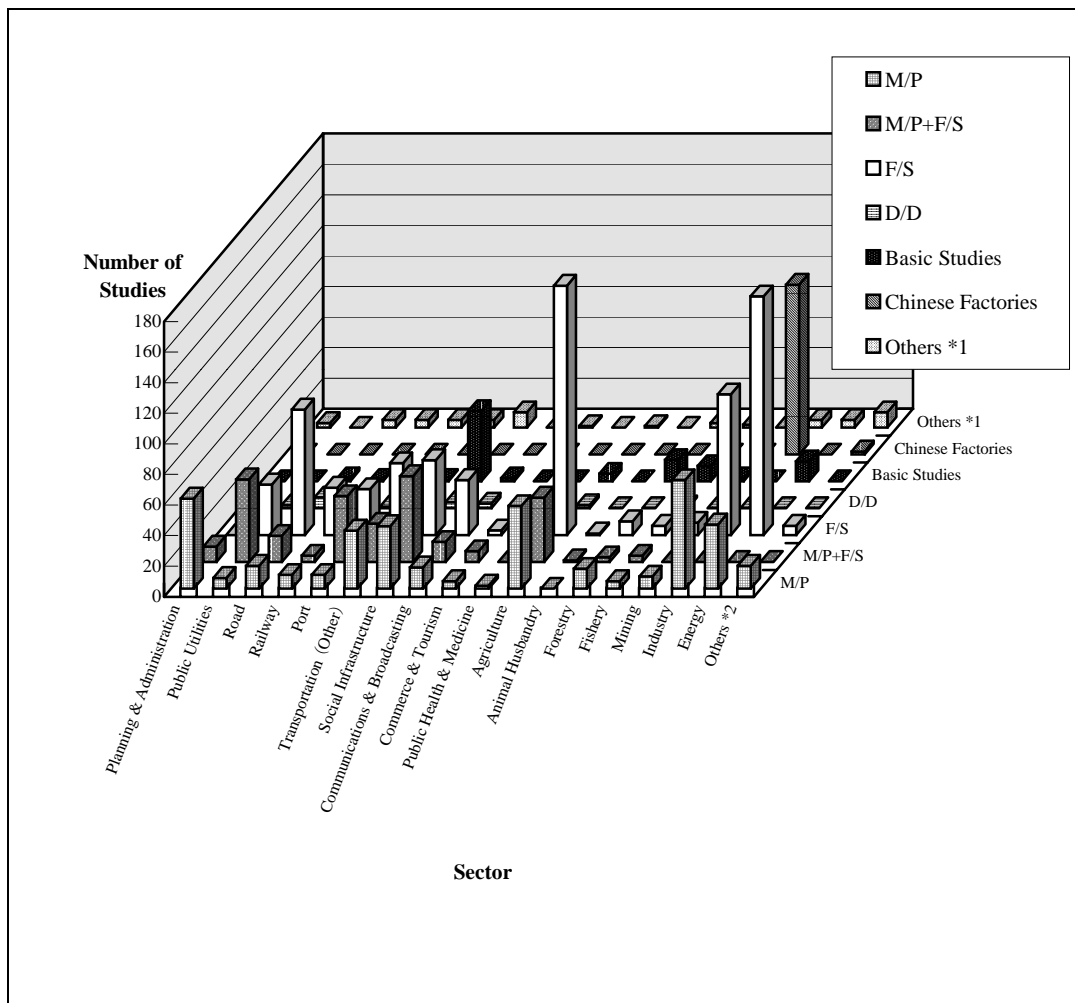
Table 2-7 Classification by Sector and Type of Study

Sector		M/P	M/P+F/S	F/S	D/D	Basic Studies	Chinese Factories	Others *1	Total		
Social Development	Planning & Administration	59 (14.5%)	10 (3.6%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (5.0%)	72 (4.2%)		
	Public Works & Utilities	Public Utilities	7 (1.7%)	54 (19.4%)	33 (4.4%)	2 (8.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	96 (5.5%)	
		Transportation	Road	15 (3.7%)	17 (6.1%)	82 (10.9%)	7 (29.2%)	2 (2.1%)	0 (0.0%)	5 (8.3%)	128 (7.4%)
			Railway	9 (2.2%)	4 (1.4%)	31 (4.1%)	1 (4.2%)	1 (1.0%)	0 (0.0%)	5 (8.3%)	51 (2.9%)
			Port	9 (2.2%)	43 (15.4%)	30 (4.0%)	1 (4.2%)	0 (0.0%)	0 (0.0%)	5 (8.3%)	88 (5.1%)
			Others	38 (9.3%)	25 (9.0%)	47 (6.3%)	3 (12.5%)	1 (1.0%)	0 (0.0%)	5 (8.3%)	119 (6.9%)
			Sub-Total	71 (17.4%)	89 (31.9%)	190 (25.3%)	12 (50.0%)	4 (4.2%)	0 (0.0%)	20 (33.3%)	386 (22.3%)
	Social Infrastructure	41 (10.1%)	56 (20.1%)	49 (6.5%)	4 (16.7%)	46 (47.9%)	0 (0.0%)	10 (16.7%)	206 (11.9%)		
	Communications & Broadcasting	14 (3.4%)	13 (4.7%)	36 (4.8%)	3 (12.5%)	2 (2.1%)	0 (0.0%)	0 (0.0%)	68 (3.9%)		
	Sub-Total	133 (32.7%)	212 (76.0%)	308 (41.0%)	21 (87.5%)	52 (54.2%)	0 (0.0%)	30 (50.0%)	756 (43.7%)		
	Commerce & Tourism	5 (1.2%)	7 (2.5%)	3 (0.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.7%)	16 (0.9%)		
Public Health & Medicine	2 (0.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (0.1%)			
Agriculture, Forestry and Fisheries Development	Agriculture, forestry & Fishery	Agriculture	54 (13.3%)	42 (15.1%)	163 (21.7%)	2 (8.3%)	5 (5.2%)	0 (0.0%)	1 (1.7%)	267 (15.4%)	
		Animal Husbandry	0 (0.0%)	1 (0.4%)	1 (0.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (0.1%)	
		Forestry	13 (3.2%)	3 (1.1%)	9 (1.2%)	0 (0.0%)	14 (14.6%)	0 (0.0%)	3 (5.0%)	42 (2.4%)	
		Fishery	5 (1.2%)	4 (1.4%)	6 (0.8%)	1 (4.2%)	10 (10.4%)	0 (0.0%)	2 (3.3%)	28 (1.6%)	
		Sub-Total	72 (17.7%)	50 (17.9%)	179 (23.8%)	3 (12.5%)	29 (30.2%)	0 (0.0%)	6 (10.0%)	339 (19.6%)	
Mining and Industrial Development	Mining & Industry	Mining	8 (2.0%)	0 (0.0%)	8 (1.1%)	0 (0.0%)	2 (2.1%)	0 (0.0%)	0 (0.0%)	18 (1.0%)	
		Industry	71 (17.4%)	0 (0.0%)	92 (12.2%)	0 (0.0%)	0 (0.0%)	111 (98.2%)	5 (8.3%)	279 (16.1%)	
		Sub-Total	79 (19.4%)	0 (0.0%)	100 (13.3%)	0 (0.0%)	2 (2.1%)	111 (98.2%)	5 (8.3%)	297 (17.2%)	
Energy	42 (10.3%)	0 (0.0%)	156 (20.7%)	0 (0.0%)	13 (13.5%)	0 (0.0%)	5 (8.3%)	216 (12.5%)			
Others *2	15 (3.7%)	0 (0.0%)	6 (0.8%)	0 (0.0%)	0 (0.0%)	2 (1.8%)	10 (16.7%)	33 (1.9%)			
Total		407 (100.0%)	279 (100.0%)	752 (100.0%)	24 (100.0%)	96 (100.0%)	113 (100.0%)	60 (100.0%)	1,731 (100.0%)		

*1 The "Others" category is a combination of "Other Studies" from Social Development and Agriculture, Forestry and Fisheries Development studies, and "Other (M/P-type and F/S-type) studies" from Mining and Industrial Development studies.

*2 The Others category consists of 2 Social Development (M/P) and 31 Mining and Industrial Development studies.

Figure 2-4 Classification by Sector and Type of Study



*1 The “Others” category is a combination of “Other Studies” from Social Development and Agriculture, Forestry and Fisheries Development studies, and “Other (M/P-type and F/S-type) studies” from Mining and Industrial Development studies.

*2 The Others category consists of 2 Social Development (M/P) and 31 Mining and Industrial Development studies.

1-4-2. Trends in Major Subsectors

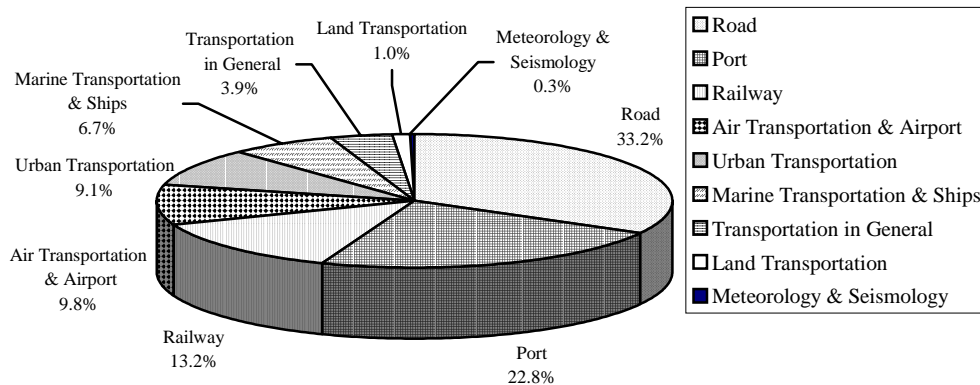
(1) Transportation

Transportation subsector is further classified into 9 sub-subsectors. There have been 386 studies conducted for the last 26 years. There are particularly many studies in 3 sub-sectors: 128 studies in Road (33.2%); 88 in Port (22.8%); and 51 in Railway (13.2%). These 3 sub-subsectors account for nearly 70% of the total studies in this subsector. Air Transportation & Airport and Urban Transportation sub-subsectors come next.

Table 2-8 Transportation

	Number of Studies	
Road	128	(33.2%)
Port	88	(22.8%)
Railway	51	(13.2%)
Air Transportation & Airport	38	(9.8%)
Urban Transportation	35	(9.1%)
Marine Transportation & Ships	26	(6.7%)
Transportation in General	15	(3.9%)
Land Transportation	4	(1.0%)
Meteorology & Seismology	1	(0.3%)
Total	386	(100.0%)

Figure 2-5 Transportation(%)



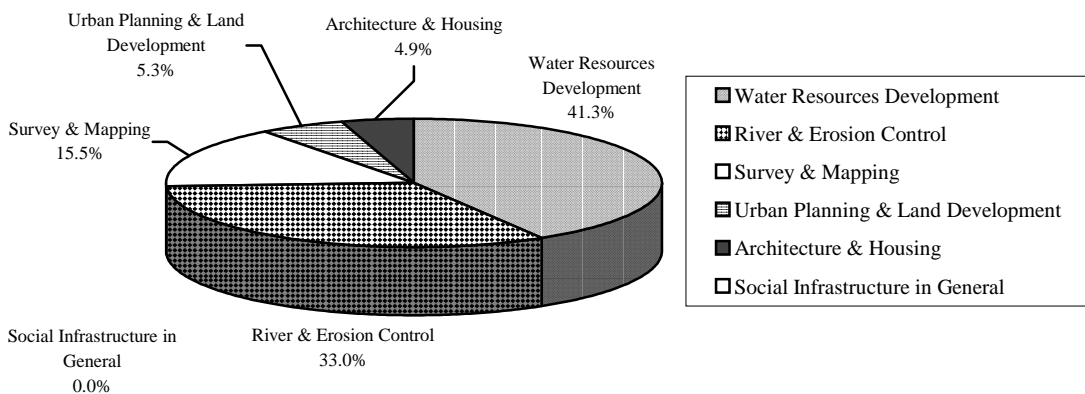
(2) Social Infrastructure

Social Infrastructure subsector comprises 6 sub-subsectors. There have been 206 studies conducted for the last 26 years. Among these subsectors, the studies are concentrated in 2 sub-subsectors: 85 in Water Resources Development (41.3%) and 68 in River & Erosion Control (33.0%). These two sub-subsectors account for more than 75% of the total studies in this subsector.

Table 2-9 Social Infrastructure

	Number of Studies	
Water Resources Development	85	(41.3%)
River & Erosion Control	68	(33.0%)
Survey & Mapping	32	(15.5%)
Urban Planning & Land Development	11	(5.3%)
Architecture & Housing	10	(4.9%)
Social Infrastructure in General	0	(0.0%)
Total	206	(100.0%)

Figure 2-6 Social Infrastructure(%)



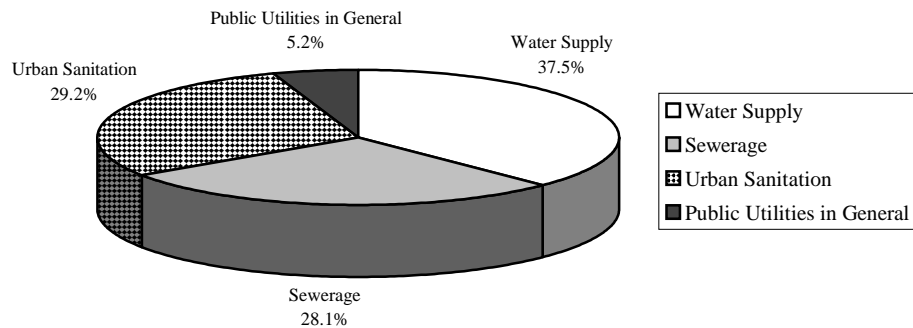
(3) Public Utilities

Public Utilities subsector is divided into 4 sub-subsectors. There have been 96 studies carried out for the last 26 years. There are 36 studies (37.5%) in Water Supply, 28 (29.2%) studies in Urban Sanitation, and 27 studies (28.1%) in Sewerage.

Table 2-10 Public Utilities

	Number of Studies	
Water Supply	36	(37.5%)
Sewerage	27	(28.1%)
Urban Sanitation	28	(29.2%)
Public Utilities in General	5	(5.2%)
Total	96	(100.0%)

Figure 2-7 Public Utilities(%)



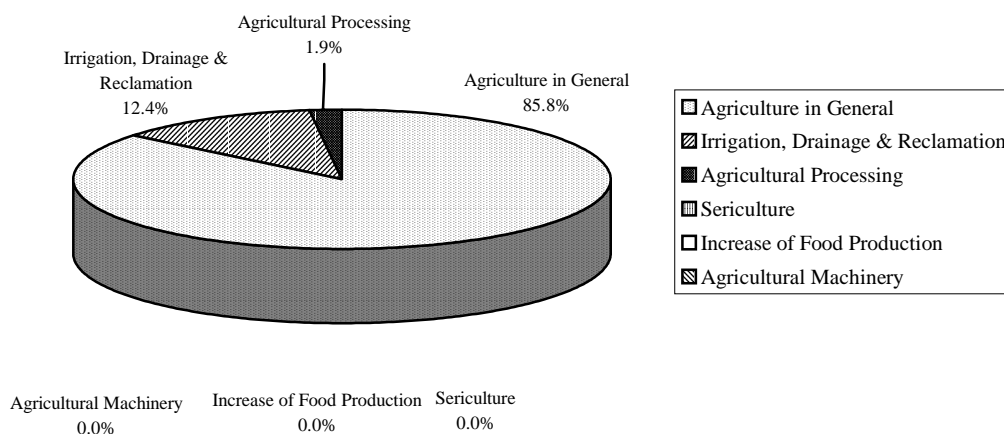
(4) Agriculture

Agriculture subsector classified into 6 sub-subsectors. For the last 26 years, 267 studies have been conducted, of which 229 (85.8% of the total) are in Agriculture in General. There are no studies carried out in Sericulture, Increase of Food Production, and Agricultural Machinery sub-subsectors.

Table 2-11 Agriculture

	Number of Studies	
Agriculture in General	229	(85.8%)
Irrigation, Drainage & Reclamation	33	(12.4%)
Agricultural Processing	5	(1.9%)
Sericulture	0	(0.0%)
Increase of Food Production	0	(0.0%)
Agricultural Machinery	0	(0.0%)
Total	267	(100.0%)

Figure 2-8 Agriculture(%)



(5) Animal Husbandry

Animal Husbandry subsector classified into 3 sub-subsectors. For the last 26 years, only 2 studies (1 in Animal Husbandry and 1 Livestock Processing) have been conducted.

Table 2-12 Animal Husbandry

	Number of Studies	
Animal Husbandry	1	(50.0%)
Livestock Processing	1	(50.0%)
Animal Health	0	(0.0%)
Total	2	(100.0%)

(6) Forestry

Forestry subsector is divided into 2 sub-subsectors. All of 42 studies conducted in Forestry subsector for the last 26 years are in Forestry & Forestry Conservation.

Table 2-13 Forestry

	Number of Studies	
Forestry & Forest Conservation	42	(100.0%)
Timber Processing	0	(0.0%)
Total	42	(100.0%)

(7) Fishery

Fishery subsector is also composed of two sub-subsectors. All of 28 studies carried out in Fishery and no study has been conducted in Fish Processing.

Table 2-14 Fishery

	Number of Studies	
Fishery	28	(100.0%)
Fish Processing	0	(0.0%)
Total	28	(100.0%)

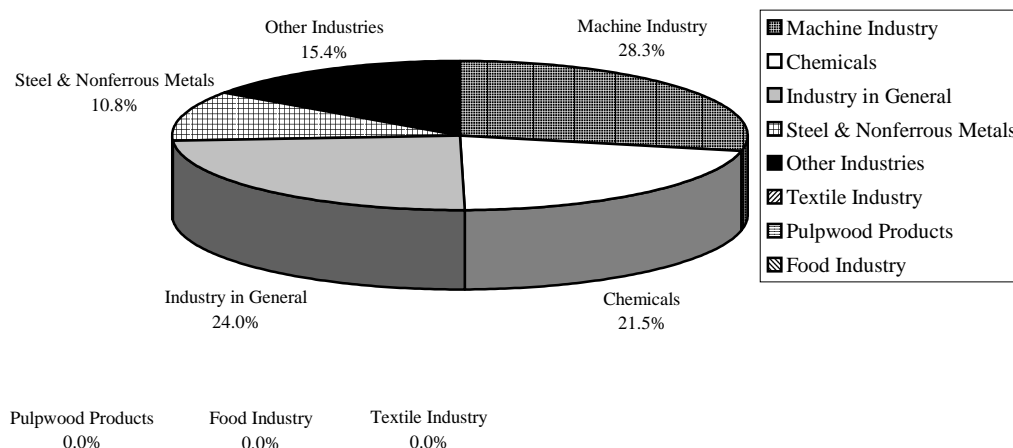
(8) Industry

For the last 26 years, 263 studies have been carried out in the Industry subsector. There are a large number of studies in 3 sub-subsectors: 79 studies in Machine Industry, 60 in Chemicals and 67 in Industry in General. These 3 sub-subsectors account for 73.8% of the total studies in this subsector.

Table 2-15 Industry

	Number of Studies	
Machine Industry	79	(28.3%)
Chemicals	60	(21.5%)
Industry in General	67	(24.0%)
Steel & Nonferrous Metals	30	(10.8%)
Other Industries	43	(15.4%)
Textile Industry	0	(0.0%)
Pulpwood Products	0	(0.0%)
Food Industry	0	(0.0%)
Total	279	(100.0%)

Figure 2-9 Industry(%)



(9) Mining

18 studies have been carried out for the last 26 years in Mining subsector, which consists of only Mining sub-subsector.

Table 2-16 Mining

	Number of Studies	
Mining	18	(100.0%)
Total	18	(100.0%)

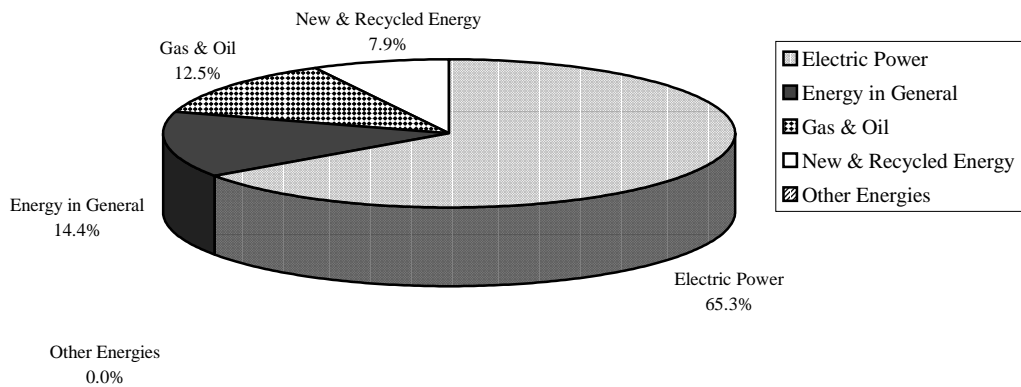
(10) Energy

The Energy subsector comprises 5 sub-subsectors. For the last 26 years, 216 studies have been conducted. Electric power sub-subsector accounts for 65.6% of the total studies in this subsector.

Table 2-17 Energy

	Number of Studies	
Electric Power	141	(65.3%)
Energy in General	31	(14.4%)
Gas & Oil	27	(12.5%)
New & Renewable Energy	17	(7.9%)
Other Energies	0	(0.0%)
Total	216	(100.0%)

Figure 2-10 Energy(%)



1-4-3. Trends in Study Expense

Table 2-18 shows the average expense per one study by regions and subsectors. There is no big difference in the average expense by regions, since the expense in each region is around 250 Million Yen. By subsectors, the most costly one is Social Infrastructure (437 Million Yen), followed by Public Health & Medicine (373 Million Yen), Planning & Administration (373 Million Yen), and Forestry (306 Million Yen).

Table 2-18 Average Study Expense by Regions and Subsectors

(Unit : 1,000 Yen)

Sector		Asia	Middle East	Africa	Central & South America	Oceania	Europe	Plural Countries	Average		
Social Development	Planning & Administration	408,386	298,815	261,160	358,176	86,351	390,258	-	372,809		
	Public Works & Utilities	Public Utilities	262,800	272,290	334,001	270,793	271,952	237,506	-	273,566	
		Transportation	Road	243,781	306,126	203,280	276,613	792,126	-	210,196	251,825
			Railway	253,787	287,621	135,619	172,982	-	452,927	-	240,791
			Port	225,672	325,319	339,399	198,047	95,878	-	-	231,433
			Others	228,538	264,152	117,514	294,966	158,857	445,357	68,808	235,387
		Average	236,768	298,579	188,532	246,776	213,336	449,142	115,937	240,651	
	Social Infrastructure	380,449	440,393	618,247	462,246	601,134	393,645	309,620	436,531		
	Communications & Broadcasting	158,668	146,518	120,160	157,196	102,490	-	244,227	155,090		
	Average	269,692	316,642	362,340	302,542	288,974	314,635	220,641	290,509		
	Commerce & Tourism	250,874	367,038	210,931	324,458	-	168,856	-	264,474		
	Public Health & Medicine	-	-	373,409	-	-	-	-	-	373,409	
	Agriculture, Forestry and Fisheries Development	Agriculture, forestry & Fishery	Agriculture	238,270	270,400	294,519	267,482	-	271,819	-	254,853
Animal Husbandry			158,367	97,200	-	-	-	-	-	-	127,784
Forestry			297,580	368,107	293,881	332,567	121,882	412,717	-	306,447	
Fishery			200,696	307,371	118,863	286,164	202,909	-	-	234,068	
Average			241,307	273,998	286,799	284,087	175,900	318,785	-	258,779	
Mining and Industrial Development	Mining & Industry	Mining	186,426	-	69,763	139,092	54,196	-	-	143,858	
		Industry	97,361	113,697	83,417	111,133	-	200,215	-	102,332	
		Average	100,738	113,697	80,857	116,375	54,196	200,215	-	104,849	
	Energy	190,310	181,733	220,402	186,767	457,106	175,011	-	193,998		
Others *	136,789	505,294	-	404,996	37,663	170,016	-	233,277			
Average	223,072	259,909	295,894	265,358	247,738	272,201	220,641	242,584			

* The Others category consists of 2 Social Development (M/P) and 31 Mining and Industrial Development studies.

2. Overview of M/P Studies Group

Based on Table 1-4, the present status on utilization of development studies in M/P Studies Group is classified into 3 categories; “In Progress or In Use”, “Delayed”, and “Discontinued or Cancelled”. The study whose status is unclear in this follow-up study is temporarily classified into “Delayed.”

The studies in M/P Studies Group are evaluated by “utilization rate”, which is calculated as (the number of studies in progress or in use) / (the total number of studies) × 100. The study is classified into “In Progress or In Use” if (1) a proposed project has been either implemented or completed after the fund(s) procurement, or (2) the study findings are incorporated into the development policy or plan of the recipient country.

Out of 1,731 completed development studies, 671 studies are in M/P Studies Group. 261 out of 287 studies in M/P Studies Group of Social Development area are classified into “In Progress or In Use” and the utilization rate is 90.9%. In Agriculture, Forestry and Fishery Development area, 99 out of 107 completed studies are “In Progress or In Use” and the utilization rate is 92.5%. In Mining and Industry Development area, 225 out of 277 studies are “In Progress or In Use” and the rate is 81.2%. It can be judged that the results of the development studies have been well-utilized by recipient countries.

Table 2-19 Utilization Rate by Category of Development Study

Present Status	Social Development	Agriculture, Forestry and Fisheries Development	Mining and Industrial Development	Total
In Progress or In Use	261	99	225	585
Utilization Rate	(90.9%)	(92.5%)	(81.2%)	(87.2%)
Delayed	10	5	33	48
Discontinued or Cancelled	16	3	19	38
Total	287	107	277	671

2-1. Utilization Rates by Region

The utilization rate is analyzed by region except for Oceania, Europe, and Plural Countries, where few development studies have been conducted. The utilization rate in the ASEAN region is 90.9%, which is the highest of all the regions. This is followed by Other Asia (86.8%), Central & South America (86.3%), Middle East (85.0%), and Africa (77.3%).

Table 2-20 Utilization Rate by Region

Present Status	Asia			Middle East	Africa	Central & South America	Oceania	Europe	Plural Countries	Total
	ASEAN	Other Asia	Sub-Total							
In Progress or In Use	189	165	354	51	51	101	6	16	6	585
Utilization Rate	(90.9%)	(86.8%)	(88.9%)	(85.0%)	(77.3%)	(86.3%)	(85.7%)	(94.1%)	(100.0%)	(87.2%)
Delayed	9	19	28	3	8	8	0	1	0	48
Discontinued or Cancelled	10	6	16	6	7	8	1	0	0	38
Total	208	190	398	60	66	117	7	17	6	671

2-2. Utilization Rates by Country

As mentioned above, ASEAN has the highest utilization rate. In the ASEAN region, the countries, where more than 10 studies were conducted, are Indonesia, Malaysia, Philippines, Thailand and Viet Nam, and their utilization rates are 94.4%, 95.2%, 87.0%, 86.7% and 100.0% respectively. There are other 9 countries where more than 10 studies were carried out. They are China whose utilization rate is 85.2%, Sri Lanka (91.7%), Oman (90.0%), Kenya (83.3%), Argentina (100.0%), Bolivia (80.0%), Brazil (100.0%), Colombia (75.0%), Mexico (73.3%), and Paraguay (91.7%).

Table 2-21 Utilization Rate by Country

(*) ASEAN ten countries

	In Progress or In Use	Utilization Rate	Delayed	Discontinued or Cancelled	Total
Brunei *	1	33.3%	0	2	3
Cambodia *	2	100.0%	0	0	2
Indonesia *	67	94.4%	2	2	71
Laos *	3	100.0%	0	0	3
Malaysia *	20	95.2%	0	1	21
Myanmar *	1	100.0%	0	0	1
Philippines *	40	87.0%	4	2	46
Singapore *	3	100.0%	0	0	3
Thailand *	39	86.7%	3	3	45
Viet Nam *	13	100.0%	0	0	13
China	115	85.2%	16	4	135
Korea	3	100.0%	0	0	3
Mongolia	7	87.5%	1	0	8
Bangladesh	4	80.0%	0	1	5
India	1	50.0%	0	1	2
Nepal	8	100.0%	0	0	8
Pakistan	7	87.5%	1	0	8
Sri Lanka	11	91.7%	1	0	12
Armenia	1	100.0%	0	0	1
Kyrgyz	4	100.0%	0	0	4
Kazakhstan	2	100.0%	0	0	2
Uzbekistan	2	100.0%	0	0	2
United Arab Emirates	1	50.0%	1	0	2
Egypt	8	100.0%	0	0	8
Iran	5	100.0%	0	0	5
Iraq	0	0.0%	0	3	3
Jordan	7	100.0%	0	0	7
Morocco	5	100.0%	0	0	5
Oman	9	90.0%	1	0	10
Saudi Arabia	3	50.0%	1	2	6
Syria	1	100.0%	0	0	1
Tunisia	7	100.0%	0	0	7
Turkey	3	75.0%	0	1	4
Yemen	2	100.0%	0	0	2
Democratic Republic of the Congo	1	100.0%	0	0	1
Cote d'Ivoire	0	0.0%	1	0	1
Cape Verde	1	100.0%	0	0	1
Ethiopia	2	100.0%	0	0	2
Gabon	0	0.0%	0	1	1
Ghana	1	100.0%	0	0	1
Guinea	1	100.0%	0	0	1
Kenya	10	83.3%	1	1	12
Liberia	0	0.0%	0	1	1
Madagascar	1	50.0%	0	1	2
Mali	2	66.7%	1	0	3
Mozambique	1	100.0%	0	0	1
Mauritius	1	100.0%	0	0	1
Malawi	2	66.7%	1	0	3
Namibia	1	100.0%	0	0	1
Niger	4	100.0%	0	0	4
Nigeria	0	0.0%	1	2	3
Rwanda	1	100.0%	0	0	1
Senegal	3	100.0%	0	0	3
Swaziland	1	100.0%	0	0	1

	In Progress or In Use	Utilization Rate	Delayed	Discontinued or Cancelled	Total
Tanzania	7	77.8%	1	1	9
Uganda	3	100.0%	0	0	3
Zambia	5	100.0%	0	0	5
Zimbabwe	3	60.0%	2	0	5
Argentina	11	100.0%	0	0	11
Bolivia	8	80.0%	2	0	10
Brazil	11	100.0%	0	0	11
Chile	8	100.0%	0	0	8
Colombia	9	75.0%	2	1	12
Costa Rica	3	75.0%	0	1	4
Dominican Republic	1	100.0%	0	0	1
Ecuador	3	100.0%	0	0	3
Guatemala	5	100.0%	0	0	5
Guyana	1	100.0%	0	0	1
Honduras	7	87.5%	0	1	8
Mexico	11	73.3%	2	2	15
Nicaragua	1	100.0%	0	0	1
Panama	3	100.0%	0	0	3
Peru	3	75.0%	1	0	4
Paraguay	11	91.7%	0	1	12
El Salvador	1	50.0%	0	1	2
Uruguay	3	75.0%	1	0	4
Bolivarian Republic of Venezuela	1	50.0%	0	1	2
Republic of the Fiji Islands	4	100.0%	0	0	4
Kiribati	2	100.0%	0	0	2
Tonga	0	0.0%	0	1	1
Bulgaria	3	100.0%	0	0	3
Greece	1	100.0%	0	0	1
Hungary	2	100.0%	0	0	2
Macedonia	2	100.0%	0	0	2
Poland	4	100.0%	0	0	4
Portugal	1	100.0%	0	0	1
Romania	0	0.0%	1	0	1
Slovakia	2	100.0%	0	0	2
Slovenia	1	100.0%	0	0	1
Plural countries	6	100.0%	0	0	6
Total	585	87.2%	48	38	671

2-3. Utilization Rates by Study Type

362 out of 407 studies in M/P Studies are “In Progress or In Use” and the utilization rate is 88.9%, which is the highest of all types of study. In Basic Studies, 85 out of 96 studies are “In Progress or In Use” and the utilization rate is 88.5%. In Studies on the Factories Modernization Program in China and Other Studies, the utilization rates are 83.2% and 80.0% respectively. Although these 2 rates are below the average of M/P Studies Group, they are still over 80.0%. It can be judged that the results of the development studies have been well utilized in all types of study.

Table 2-22 Utilization Rate by Study Type

	M/P	Basic Studies	Chinese Factories	Others	Total
In Progress or In Use	362	85	94	44	585
Utilization Rate	(88.9%)	(88.5%)	(83.2%)	(80.0%)	(87.2%)
Delayed	24	5	16	3	48
Discontinued or Cancelled	21	6	3	8	38
Total	407	96	113	55	671

* Others consists of “Other Studies” from Social Development, Agriculture, Forestry and Fishery Development, and Mining and Industrial Development studies; and “Other (M/P-type) Studies” from Mining and Industrial Development studies.

2-4. Utilization Rates by Sector

The number of Social Development area is 287 and its utilization rate is 90.9%. The number of Agriculture, Forestry and Fishery Development area is 107 and its utilization rate is 92.5%. The number of Mining and Industrial Development area is 277 and its utilization rate is 81.2%.

In Transportation subsector, which is the largest of Social Development area, 87 of 97 studies are “In Progress or In Use” and the utilization rate is 89.7%. 86 of 95 studies in Social Infrastructure subsector are “In Progress or In Use” and the utilization rate is 90.5%. In Agriculture, Forestry and Fishery Development area, Agriculture subsector accounts for more than half of all studies. In Agriculture subsector, 58 of 60 studies are “In Progress or In Use” and the utilization rate is

96.7%. The largest subsector in Mining and Industrial Development area is Industry subsector. 150 of 184 studies in Industry subsector are “In Progress or In Use” and the utilization rate is 81.5%.

Table 2-23 Utilization Rate by Sector

Present Status	Social Development									
	Planning & Administration	Public Utilities	Transportation				Social Infrastructure	Communications & Broadcasting	Tourism	Public Health and Medicine
			Road	Railway	Port	Others				
In Progress or In Use	57	6	20	14	12	40	87	15	6	2
Utilization Rate	(91.9%)	(85.7%)	(90.9%)	(93.3%)	(85.7%)	(90.9%)	(89.7%)	(93.8%)	(100.0%)	(100.0%)
Delayed	4	1	1	0	0	1	3	0	0	0
Discontinued or Cancelled	1	0	1	1	2	3	7	1	0	0
Total	62	7	22	15	14	44	97	16	6	2
Present Status	Agriculture, Forestry and Fisheries Development				Mining and Industrial Development			Others *	Total	
	Agri-culture	Animal Husbandry	Forestry	Fishery	Mining	Industry	Energy			
In Progress or In Use	58	0	26	15	7	150	45	25	585	
Utilization Rate	(96.7%)	(0.0%)	(86.7%)	(88.2%)	(70.0%)	(81.5%)	(77.6%)	(92.6%)	(87.2%)	
Delayed	2	0	3	0	2	25	6	0	48	
Discontinued or Cancelled	0	0	1	2	1	9	7	2	38	
Total	60	0	30	17	10	184	58	27	671	

* The Other sector consists of 2 Social Development studies, and 25 Mining and Industrial Development studies.

3. Overview of F/S Studies Group

Based on Table 1-5, the status of development studies in F/S Studies Group is classified into 4 categories; “Completed or in Progress”, “Promoting”, “Delayed or Suspended”, and “Discontinued or Cancelled”.

The studies in F/S Studies Group are evaluated by “realization rate”. The realization rate is calculated as a rate of projects either completed or being implemented against all the proposed projects.

Out of 1,731 completed development studies, 1,060 belong to F/S Studies Group. 376 of 561 studies in F/S Studies Group of Social Development area, are “Completed or In Progress” and the realization rate is 67.0%. In Agriculture, Forestry and Fishery Development area, 132 out of 232 studies are “Completed or In Progress” and the rate is 56.9%. In Mining and Industry development area, 97 out of 267 studies are “Completed or In Progress” and the rate is 36.3%.

There are many studies classified into “Promoting”, since it takes about 5 to 10 years until the projects are realized after the completion of studies. Therefore, it is expected that realization rates would rise in accordance with realization of promoting project.

Table 2-24 Realization Rate by Sector

Present Status		Social Development	Agriculture, Forestry and Fisheries Development	Mining and Industrial Development	Total
Completed or In Progress	Completed	151	57	65	273
	Partially completed	108	38	8	154
	Implementing	88	30	11	129
	Processing	29	7	13	49
	Sub-Total	376	132	97	605
Rate of Realization		(67.0%)	(56.9%)	(36.3%)	(57.1%)
Promoting		100	55	50	205
Delayed or Suspended		32	16	73	121
Discontinued or Cancelled		53	29	47	129
Total		561	232	267	1,060

3-1. Realization Rates by Region

The realization rate is analyzed by region except for Oceania, Europe, and Plural Countries where few development studies have been carried out. The realization rate in Asia is 62.7%, which is higher than the average utilization rate of all studies in F/S Studies Group. In ASEAN, the realization rate is 64.1%, which is the highest of all the regions. This is followed by Middle East (61.1%), Central and South America (50.7%) and Africa (44.9%).

Table 2-25 Realization Rate by Region

Present Status	Asia			Middle East	Africa	Central & South America	Oceania	Europe	Plural Countries	Total
	ASEAN	Others	Sub-Total							
Completed	148	47	195	27	25	23	3	0	0	273
Partially Completed	62	24	86	18	14	28	3	5	0	154
Implementing	61	22	83	17	7	19	1	2	0	129
Processing	20	9	29	7	2	9	0	1	1	49
Sub-Total	291	102	393	69	48	79	7	8	1	605
Rate of Realization	(64.1%)	(59.0%)	(62.7%)	(58.0%)	(42.9%)	(49.1%)	(38.9%)	(38.1%)	(50.0%)	(57.1%)
Promoting	61	38	99	24	30	39	5	8	0	205
Delayed or Suspended	37	22	59	17	19	19	2	5	0	121
Discontinued or Cancelled	65	11	76	9	15	24	4	0	1	129
Total	454	173	627	119	112	161	18	21	2	1,060

3-2. Realization Rates by Country

As stated above, ASEAN has the highest realization rate of all the regions. The ASEAN countries, where more than 10 development studies were completed and the realization rate is more than 60%, are Indonesia, Laos, Malaysia, Thailand and Viet Nam. Their realization rates are 63.4%, 63.6%, 62.7%, 69.3% and 70.6% respectively. There are other 7 countries that have more than 10 completed studies and also whose realization rate is more than 60%. They are Bangladesh (the realization rate: 63.6%), China (72.0%), Nepal (61.9%), Egypt (83.3%), Tanzania (61.1%), Colombia (63.6%), and Paraguay (71.4%).

Table 2-26 Realization Rate by Country

(*) ASEAN ten countries

	Completed or In Progress				Sub-Total	Realization Rate	Promoting	Delayed or Suspended	Discontinued or Suspended	Total
	Completed	Partially Completed	Implementing	Processing						
Brunei *	0	0	0	0	0	0.0%	0	1	0	1
Cambodia *	0	3	2	1	6	85.7%	1	0	0	7
Indonesia *	59	13	19	6	97	63.4%	24	15	17	153
Laos *	4	2	1	0	7	63.6%	2	2	0	11
Malaysia *	15	9	8	0	32	62.7%	5	4	10	51
Myanmar *	6	0	1	0	7	53.8%	2	1	3	13
Philippines *	23	16	14	5	58	59.8%	15	6	18	97
Singapore *	0	1	1	0	2	66.7%	0	0	1	3
Thailand *	41	17	9	3	70	69.3%	7	8	16	101
Viet Nam *	0	1	6	5	12	70.6%	5	0	0	17
China	17	9	6	4	36	72.0%	8	5	1	50
Korea	3	0	0	0	3	75.0%	1	0	0	4
Mongolia	2	0	1	1	4	66.7%	2	0	0	6
Bangladesh	8	2	2	2	14	63.6%	4	3	1	22
Bhutan	0	0	0	0	0	0.0%	2	1	0	3
India	1	1	3	0	5	33.3%	4	3	3	15
Maldives	0	1	0	0	1	50.0%	1	0	0	2
Nepal	4	6	3	0	13	61.9%	3	3	2	21
Pakistan	5	4	2	0	11	47.8%	4	6	2	23
Sri Lanka	7	1	3	1	12	57.1%	6	1	2	21
Kazakhstan	0	0	1	1	2	50.0%	2	0	0	4
Uzbekistan	0	0	1	0	1	50.0%	1	0	0	2
United Arab Emirates	1	0	0	0	1	25.0%	0	3	0	4
Algeria	0	0	0	0	0	0.0%	0	3	1	4
Egypt	14	10	4	2	30	83.3%	1	1	4	36
Iran	0	1	0	0	1	25.0%	2	1	0	4
Iraq	0	0	0	0	0	0.0%	0	0	1	1
Jordan	2	1	2	1	6	85.7%	1	0	0	7
Morocco	0	1	2	0	3	50.0%	2	1	0	6
Oman	2	1	2	0	5	62.5%	1	2	0	8
Palestine	0	0	1	0	1	100.0%	0	0	0	1
Qatar	1	0	0	0	1	100.0%	0	0	0	1
Saudi Arabia	1	0	0	0	1	50.0%	0	0	1	2
Sudan	2	0	1	0	3	60.0%	0	1	1	5
Syria	0	1	2	0	3	33.3%	6	0	0	9
Tunisia	1	2	2	0	5	83.3%	0	1	0	6
Turkey	0	1	1	4	6	30.0%	10	3	1	20
Yemen	3	0	0	0	3	60.0%	1	1	0	5
Burkina Faso	0	0	0	0	0	0.0%	1	0	0	1
Central African Republic	0	0	0	0	0	0.0%	1	0	0	1
Democratic Republic of the Congo	1	0	0	0	1	33.3%	0	2	0	3
Cote d'Ivoire	0	0	1	0	1	25.0%	1	1	1	4
Cameroon	0	0	0	0	0	0.0%	1	1	1	3
Djibouti	1	0	0	0	1	100.0%	0	0	0	1
Eritrea	0	0	0	0	0	0.0%	0	1	0	1
Ethiopia	0	1	0	0	1	25.0%	2	1	0	4
Ghana	0	0	1	0	1	33.3%	1	0	1	3
Guinea	0	0	0	0	0	0.0%	1	0	1	2
Kenya	4	1	1	0	6	33.3%	9	1	2	18
Liberia	1	0	0	0	1	100.0%	0	0	0	1
Madagascar	3	0	0	0	3	60.0%	2	0	0	5
Mali	1	1	0	0	2	66.7%	0	0	1	3
Mauritania	0	0	0	0	0	0.0%	2	0	0	2
Mauritius	1	0	0	0	1	20.0%	2	0	2	5
Malawi	0	1	1	1	3	100.0%	0	0	0	3
Niger	1	0	0	0	1	33.3%	1	1	0	3

	Completed or In Progress				Sub-Total	Realization Rate	Promoting	Delayed or Suspended	Discontinued or Suspended	Total
	Completed	Partially Completed	Implementing	Processing						
Nigeria	0	1	0	0	1	50.0%	0	0	1	2
Rwanda	0	0	0	0	0	0.0%	0	1	0	1
Senegal	1	0	0	0	1	20.0%	2	1	1	5
Sierra Leone	0	1	0	0	1	50.0%	0	1	0	2
Sao tome and Principe	0	0	0	0	0	0.0%	1	0	0	1
Swaziland	0	0	0	0	0	0.0%	0	1	1	2
Tanzania	6	3	1	1	11	61.1%	3	2	2	18
Uganda	0	2	0	0	2	66.7%	0	1	0	3
Zambia	3	1	1	0	5	62.5%	0	3	0	8
Zimbabwe	2	2	1	0	5	71.4%	0	1	1	7
Argentina	0	0	0	0	0	0.0%	2	0	3	5
Bolivia	3	5	0	2	10	58.8%	3	3	1	17
Brazil	1	1	2	2	6	66.7%	2	0	1	9
Chile	2	1	2	0	5	71.4%	2	0	0	7
Colombia	1	3	2	1	7	63.6%	0	3	1	11
Costa Rica	0	2	0	0	2	28.6%	2	2	1	7
Dominican Republic	4	0	1	0	5	55.6%	2	1	1	9
Ecuador	0	0	3	0	3	30.0%	2	2	3	10
Grenada	0	0	0	0	0	0.0%	1	0	0	1
Guatemala	0	4	1	0	5	55.6%	3	1	0	9
Honduras	1	2	0	0	3	33.3%	3	1	2	9
Jamaica	0	0	1	0	1	50.0%	0	0	1	2
Mexico	4	0	0	1	5	41.7%	3	0	4	12
Nicaragua	0	2	1	0	3	75.0%	1	0	0	4
Panama	0	3	3	0	6	66.7%	1	1	1	9
Peru	0	2	2	2	6	46.2%	3	2	2	13
Paraguay	5	3	1	1	10	71.4%	2	1	1	14
El Salvador	0	0	0	0	0	0.0%	2	0	0	2
Trinidad and Tobago	0	0	0	0	0	0.0%	1	1	0	2
Uruguay	1	0	0	0	1	25.0%	1	1	1	4
Bolivarian Republic of Venezuela	1	0	0	0	1	20.0%	3	0	1	5
Cook Islands	0	0	0	0	0	0.0%	2	0	0	2
Republic of the Fiji Islands	0	0	0	0	0	0.0%	1	1	0	2
Kiribati	0	0	1	0	1	100.0%	0	0	0	1
Papua New Guinea	2	1	0	0	3	42.9%	1	1	2	7
Solomon Islands	0	2	0	0	2	50.0%	0	0	2	4
Samoa	1	0	0	0	1	50.0%	1	0	0	2
Albania	0	0	0	0	0	0.0%	1	0	0	1
Bulgaria	0	1	1	1	3	75.0%	1	0	0	4
Bosnia-Herzegovina	0	0	0	0	0	0.0%	1	1	0	2
Czechoslovakia	0	1	0	0	1	100.0%	0	0	0	1
Hungary	0	1	0	0	1	33.3%	1	1	0	3
Poland	0	2	0	0	2	66.7%	0	1	0	3
Romania	0	0	1	0	1	16.7%	3	2	0	6
Lithuania	0	0	0	0	0	0.0%	1	0	0	1
Plural Countries	0	0	0	1	1	50.0%	0	0	1	2
Total	273	154	129	49	605	57.1%	205	121	129	1,060

3-3. Realization Rates by Study Type

20 out of 24 D/D studies are “Completed or In Progress” and the realization rate is 83.3%, which is the highest among the different type of study. Due to the nature of study, realization rate of D/D studies is high. 172 out of 279 M/P + F/S studies are “Completed or In Progress” and the realization rate is 61.6%. 413 out of 757 F/S studies are “Completed or In Progress” and the realization rate is 54.6%.

There are many F/S and M/P + F/S studies classified into “Promoting”. In F/S studies, the rate of “promoting” studies against the total studies is 15.6%. In M/P + F/S studies, it is 30.5%.

Table 2-27 Realization Rate by Type of Study

Present Status	M/P+F/S	F/S *	D/D	Total
Completed	38	225	10	273
Partially Completed	71	80	3	154
Implementing	47	76	6	129
Processing	16	32	1	49
Sub-Total	172	413	20	605
Rate of Realization	(61.6%)	(54.6%)	(83.3%)	(57.1%)
Promoting	85	118	2	205
Delayed or Suspended	16	104	1	121
Discontinued or Cancelled	6	122	1	129
Total	279	757	24	1,060

* The category F/S includes “Other (F/S-type)” Mining and Industrial Development studies.

3-4. Realization Rates by Sector

As stated above, out of 1,060 completed studies in F/S Studies group, 561 are in Social Development area, 232 are in Agriculture, Forestry and Fishery Development area, and 267 are in Mining and Industrial Development area. The realization rates are 67.0%, 56.9%, and 36.3%, respectively.

Out of all the subsectors that have more than 50 studies, Communications and Broadcasting subsector has the highest realization rate, 86.5%. This is followed by Transportation subsector (68.0%), Public Works and Utilities (61.8%), Social Infrastructure (59.6%), Agriculture (58.5%), Industry (40.0%) and Energy (34.2%).

The average realization rate in Social Development area is 67.0%, which is the highest of all areas of development study. On the other hand, the average realization rates in Agriculture, Forestry and Fishery Development (56.9%) and Mining and Industrial Development areas (36.3%) are relatively low. There are, however, many studies classified into “Promoting” or “Delayed or Suspended” in these 2 areas of development study. Therefore, it is expected that these realization rates would rise, once these studies move into the implementation stage.

Table 2-28 Realization Rate by Sector

Present Status	Social Development									
	Planning & Administration	Public Utilities	Transportation				Social Infrastructure	Communications & Broadcasting	Tourism	Public Health and Medicine
			Road	Railway	Port	Others				
Completed	1	22	27	10	18	19	17	36	1	0
Partially Completed	1	17	21	5	13	19	25	5	2	0
Implementing	1	12	22	2	14	10	20	4	3	0
Processing	3	4	9	1	4	4	3	0	1	0
Sub-Total	6	55	79	18	49	52	65	45	7	0
Rate of Realization	(60.0%)	(61.8%)	(74.5%)	(50.0%)	(66.2%)	(69.3%)	(59.6%)	(86.5%)	(70.0%)	(0.0%)
Promoting	3	25	15	6	15	6	27	1	2	0
Delayed or Suspended	1	7	5	1	2	6	10	0	0	0
Discontinued or Cancelled	0	2	7	11	8	11	7	6	1	0
Total	10	89	106	36	74	75	109	52	10	0
Present Status	Agriculture, Forestry and Fisheries Development				Mining and Industrial Development			Others *	Total	
	Agri-culture	Animal Husbandry	Forestry	Fishery	Mining	Industry	Energy			
Completed	53	0	3	1	2	31	32	0	273	
Partially Completed	36	0	0	2	0	4	2	2	154	
Implementing	25	0	3	2	0	2	8	1	129	
Processing	7	0	0	0	0	1	12	0	49	
Sub-Total	121	0	6	5	2	38	54	3	605	
Rate of Realization	(58.5%)	(0.0%)	(50.0%)	(45.5%)	(25.0%)	(40.0%)	(34.2%)	(50.0%)	(57.1%)	
Promoting	45	1	4	5	0	12	37	1	205	
Delayed or Suspended	15	0	1	0	3	22	47	1	121	
Discontinued or Cancelled	26	1	1	1	3	23	20	1	129	
Total	207	2	12	11	8	95	158	6	1,060	

* The six studies classified as "Other" are all Mining and Industrial Development studies.