

JAPAN INTERNATIONAL COOPERATION AGENCY

FOLLOW-UP STUDY
OF
DEVELOPMENT STUDIES

March 1994



INTERNATIONAL DEVELOPMENT CENTER OF JAPAN
JAPAN INTERNATIONAL COOPERATION CENTER

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CHAPTER 1. OUTLINE OF THE STUDY

1-1 The Background and Purpose of the Follow-up Study

1. The Background of the Follow-up Study

Once the development studies were completed, it had often been difficult for JICA to grasp the progress of the proposed projects and the extent of the utilization of the results of the study, due to such factors as the time passed before the implementation of the proposed projects and consequent changes in policy environment and government administration, difficulty in tracing a variety of ways to utilize the results of the study, and limited information from the side of the recipient countries.

2. Purpose of the Study

The purpose of the Follow-up Study is to ascertain the outcome, and the circumstances thereof, of each completed development study systematically, to feed back the findings toward the improved performance of future development studies in terms of project identification, study design and execution, and project analysis and evaluation, and thereby to enhance the realization of the proposed projects/programs.

The FY 1993 Follow-up Study gathered and compiled relevant information on the development studies initiated its preliminary stage after August 1 of 1974 and completed by the end of FY 1992 (the end of March 1993). The results of the analysis are presented by country and region, by year of completion as well as by type of study and by sector. This report provides a clear definition of each concept concerning the present status of the use of study results and/or proposed project(s), and compiles and analyzes the relevant data on development studies in concern based on these concepts.

1-2 Methods Used in the Follow-up Study

1. Guideline of the Follow-up Study

The FY 1993 Follow-up Study is composed of the following surveys as well as collection of information from other relevant sources such as JICA internal materials.

- 1) A questionnaire survey of the consulting firms which undertook the respective development studies
- 2) A questionnaire survey of relevant government agencies of the recipient countries through JICA overseas office.
- 3) A survey conducted by JICA's overseas follow-up missions in the selected sectors and countries.

2. Coverage

The FY 1993 Follow-up Study covers those development studies¹ financed by the development studies budget under the purview of the Social Development Study Department (separated from the Social Development Cooperation Department in July 1, 1989) and the Agriculture, Forestry and Fisheries Development Study Department of Japan International Cooperation Agency (JICA), which are initiated their preliminary stage by the two Departments after August 1 of 1974 and completed by the end of FY 1992 (the end of March 1993). A number of studies are excluded from coverage: basic design studies and special project studies² conducted as part of the grant aid program.

¹ Development Study is the general term that involves the following activities carried out for public development planning, which is necessary for the socio-economic progress of developing countries: i) organizing study teams composed of experts to contribute to the implementation of a development plan for the recipient country; ii) carrying out a field survey, as well as analysis and study in Japan of the findings of the field survey; iii) making a study report which serves as basic information on a socio-economic development strategy for the recipient country; and iv) promoting technical transfer in terms of study methods and a planning approach to local counterparts in the course of the development study.

² Special project studies and basic design studies have been incorporated in the grant aid program since FY 1985, and therefore are excluded from the coverage.

The total number of studies in concern comes to 760 (538 in social development sectors and 222 in agriculture, forestry and fisheries sectors).

3. Classification of Development Studies by FY of Completion

The FY of Completion is defined as the FY during which the final report of the respective development study was submitted to JICA. Financial statements and attached specifications and Annual Report of JICA in respective fiscal years, and replies of consulting firms to the follow-up questionnaire are referred to for determining the FY of completion.

4. Classification by Country and by Region

The country and region of development studies are shown by the name listed in the most recent issue (January 1992) of JICA Practical Handbook on Statistics. Those studies the site or area of which ranges over several countries or regions are classified into "plural countries."

5. Classification by Type of Study

Studies are classified into five types as shown below.

Type of Study	Definition
1. M/P	Studies for formulating master plans
2. M/P + F/S	Studies which comprise M/P and 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, marine charts and ground water surveys, forestry and fishery resource studies, and agricultural verification studies

The definition of each of these types of development studies is given according to the objectives as follows.

i) Master Plan Studies (M/P)

A master plan study is carried out to determine a basic development strategy by formulating a comprehensive sectoral or regional plan. The formulation of a master plan of a region or of a sector is the first stage in the development project cycle, and prerequisite for and to be carried out prior to a study on a specific individual project. It serves to coordinate and facilitates efficient implementation of various individual projects.

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

These are studies in which both the master plan and feasibility studies are undertaken.

iii) Feasibility Studies (F/S)

A feasibility study is made to study 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.

The feasibility 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.

iv) Detailed Design Studies (D/D)

Detailed design studies are used to develop the design documents needed (including data and specific draft drawings and specifications) to begin project construction work as planned. In this phase, since the study has to cover all the detailed investigations related to a project's detailed design, considerable cost and a long study period are generally required. This type of studies are followed by the selection of the constructor through competitive biddings, and the actual construction. Detailed design studies are indispensable to implement the project orderly and to facilitate the effectiveness of financial assistance.

v) Basic Studies (Long-term Studies, Topographical Studies, Ground-water Development Studies, Studies on the Amount of Forestry and Fishery Resources, etc.)

Long-term Studies

Formulation of region-wide plans such as River Conservation or irrigation plans, integrated regional resource development plans, 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 observations.

Topographical Studies

The presence of basic maps of national land and cities is a necessary condition for planning and implementation of development projects. However in many regions of developing countries, 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 standard in the method of construction and information contents. 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.

Ground-water Development Studies

These surveys prospect for ground water and investigate the feasibility of its utilization for irrigation and the supply of drinking water and water for industry. It is a urgent task to provide the residents of areas with drinking water.

Agricultural Verification Studies

These studies aim to collect basic data on meteorology, hydrology, pedology and other natural conditions, and to conduct verification studies such as experiments on introduction of new varieties, experiments on the methods of cultivation of new varieties under different conditions and experiments on the introduction of the methods of transplation.

Studies on the Amount of Forestry and Fishery Resources

In forestry and fishery, grasp of resource accumulation is premised for overall planning of development and policy making. However, the technology for grasping resources and development is insufficient in developing countries, and therefore it aims to transfer study technology as well as to provide basic

information and contribute to various development planning based on appropriate control of resource through the study.

vi) Other Studies³ (Studies for Aftercare Services, etc)

Studies for Aftercare services are carried out when a review on the same project is required several years after the completion of the former study due to the change of socio-economic or natural conditions.

Pre-feasibility studies are also classified into "Other Studies".

6. Classification by Sector

The sectors are shown by the following classification employed by IICA Practical Handbook on Statistics.

³ FY 1993 Follow-up Study does not classify large-scale review studies and studies for re-formulation of the basic plans automatically into "Other Studies". Rather it classifies those studies either into master plan studies or feasibility studies according to the details of the study contents.

Sector	Subsector	Sub-subsector
1. Planning & Administration	(1)Development Plan	1) General 2) Integrated Regional Development Plan
	(2)Administration	1) General 2) Public Finance & Banking 3) Environmental Problems 4) Statistics 5) Information & Public Relations
2. Public Works & Utilities	(1) Public Utilities	1) General 2) Water Supply 3) Sewerage 4) Urban Sanitation
	(2)Transportation	1) General 2) Road 3) Land Transportation 4) Railway 5) Marine Transportation & Ships 6) Port 7) Air Transportation & Airport 8) Urban Transportation 9) Meteorology

	(3) Social Infrastructures	1) General 2) River & Erosion Control 3) Water Resource Development 4) Urban Planning & Land Development 5) Architecture & Housing 6) Survey & Mapping
	(4) Communications & Broadcasting	1) General 2) Post 3) Telecommunication 4) Broadcasting
3. Agriculture, Forestry and Fisheries	(1) Agriculture	1) General 2) Sericulture 3) Irrigation, Drainage & Reclamation 4) Agricultural Machinery 5) Agricultural Processing 6) Increased Food Production (2KR)
	(2) Animal Husbandry	1) Animal Husbandry 2) Animal Health 3) Livestock Processing
	(3) Forestry	1) Forestry * Forest Conservation 2) Timber Processing
	(4) Fisheries	1) Fisheries 2) Fish Processing

4. Commerce & Tourism	(1) Tourism	1) General 2) Tourism Infrastructure
5. Others	(1) Others	1) Others

Note: A study on a bridge serving both road and railway is classified as "General," while the one on a road bridge is classified as "Road," and the one on a railway bridge as "Railway."

7. Criteria for Classification of Present Status of Use of Study Results

Two sets of criteria for classification of the present status of the use of the study results are defined and used according to the types of development studies.

1) Group A Studies

For master plan studies (M/P), basic studies (B/D) and other studies, collectively named Group A Studies, the information is sought on whether or not their recommendations (including overall plans and priority programs) or outputs (such as maps, bodies of basic data, and guidelines) have been adopted or utilized toward the realization of development goals. The present status is classified into three categories: 1) In progress or in use, 2) Delayed, and 3) Discontinued.

Criteria for determining the present status for Group A Studies are as follows.

<p>a. In progress or in use</p>	<p>A study is classified into this category when its results or proposals are satisfactorily utilized in the following manner.</p> <ol style="list-style-type: none"> 1) Based on the proposals, more specific and detailed studies are, or have been, undertaken. Or, the study results are utilized to undertake some development study or planning. 2) Japanese technical cooperation is started on the basis of the proposals or study results. 3) Proposals are incorporated into the development policy or plan of the recipient country. Or, study results are consulted to formulate the development policy or plan. 4) The government of the recipient country is taking some preparatory step to utilize the proposals.
<p>b. Delayed</p>	<p>A study is classified as "delay", when its results 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 results. 2) The government of the recipient country began to act on the proposals, or utilize the results, but the effort was halted for some reason.

c. Discontinued	The government of the recipient country made an explicit decision not to act on the proposals. Or, the government decided to act on, or utilize, different proposals or results from other sources.
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2) Group B Studies

For feasibility studies (F/S), master plan/feasibility studies (M/P+F/S) and detailed design studies (D/D) , collectively named Group B Studies, the information is sought on whether or not the projects or programs they appraised or proposed have been implemented, and the circumstances of their implementation or non-implementation. The present status is classified into four categories: 1) Completed or in progress, 2) promoting, 3) Delayed or suspended, and 4) Discontinued or canceled. The category of "completed or in progress" is further divided into four sub-categories: 1a) completed, 1b) partially completed, 1c) implementing, and 1d) processing.

For those development studies in which both the master plan study and the feasibility study were undertaken, the information is sought also regarding the master plan study portion of the study on whether or not their recommendations (including overall plans and priority programs) have been adopted or utilized toward the realization of development goals.

The criteria for classification of proposed project(s) are shown in the table below.

Present Status	Criteria
A. Completed or in progress	(See below)
A 1. Completed	The proposed development project has been already implemented and operated.
A 2. Partially Completed	The proposed development project is partially completed and in use.
A 3. Implementing	The implementation of the project is underway.
A 4. Processing	<p>The project 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 step 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.

<p>B. Promoting</p>	<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 lending 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 otherwise actively promoting the implementation of the project.
<p>C. Delayed or Suspended</p>	<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 Canceled	The government of the recipient country officially canceled the proposed project, or implemented the alternative which was substantially different from the proposal of the JICA study.
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*This means either that a loan agreement has been signed, or that the lending has been pledged, or the exchange of note is formally signed, as in the case of the Japan's yen credit program.

8. Collection of relevant information

Relevant information has been collected mainly from various internal materials and reports of JICA Headquarters and International Training Institute. In particular, the data on project expenditure of studies (expenditure on the preliminary study and other direct costs to JICA and contract cost with a consulting firm) have been made accurate through the examination of financial statements.

CHAPTER 2 A FULL VIEW OF COMPLETED DEVELOPMENT STUDIES

2-1 An Overview of the Number of Studies

1. Classification by year of completion

The total number of development studies completed by the end of FY 1992 (the end of March 1993) is 760, 538 in social development sectors and 222 in agriculture, forestry and fisheries sectors. The number of studies was around 20-30 per annum during the 1970s, and settled around 40-50 per annum in the 1980s.

Table 2-a Time Trend of the Number of Development Studies

Fiscal Year Completed	Social Development	Agri., Forestry & Fisheries Development	Total	Fiscal Year Completed	Social Development	Agri., Forestry & Fisheries Development	Total
1974	1	0	1	1984	39	15	54
1975	5	0	5	1985	39	12	51
1976	9	4	13	1986	28	12	40
1977	20	7	27	1987	43	10	53
1978	25	7	32	1988	30	19	49
1979	24	12	36	1989	45	23	68
1980	30	7	37	1990	36	23	59
1981	27	9	36	1991	31	14	45
1982	34	18	52	1992	40	17	57
1983	32	13	45				
				Total	538	222	760

Note: As the subject of Follow-up Study is limited to the development studies which had respective preliminary surveys commenced after August 1 of 1974, the number of studies regarded to be completed between FY 1974 and FY 1976 turned out to be smaller than the number of studies actually completed during the same period.

2. Classification By Region

The number of studies carried out in Asia accounts for more than 60% of the total. It indicates that development studies have been centered in Asia. The six countries of ASEAN account for 44% of the total, and form a region in the world where most of the development studies, especially of Japan, have been conducted.

Central and South America ranks next (17%), while Near Middle East and Africa have continued to have a share of about 10% each.

3. Classification by country

The six countries of ASEAN have 334 studies, accounting for 43.9% of the total. It is a region that have received a bulk of development studies within the Asia region. Among them Indonesia has received the largest number of studies (124 studies), followed by Thailand (85 studies), Philippines (78 studies) and Malaysia (41 studies). The next comes China with 33 studies. Apart from these countries, the following countries have had more than 10 development studies conducted: Bangladesh, Pakistan and Sri Lanka (in Asia); Kenya and Tanzania (in Africa); Bolivia, Columbia, Mexico and Paraguay (in Central and South America).

Table 2-b Classification by Region

Region	Social Development	Agriculture, Forestry & Fisheries Development	Total
Asia	336	122	458
ASEAN	(253)	(81)	(334)
Others	(83)	(41)	(124)
Middle East	49	25	74
Africa	53	25	78
Middle & South America	85	45	130
Oceania	7	5	12
Europe	2	0	2
Plural Countries	6	0	6
Total	538	222	760

Table 2-c Classification by Country

Country	Social	Agriculture, Forestry & Fishery	Total	Country	Social	Agriculture, Forestry & Fishery	Total
	Development				Development		
Bangladesh	11	6	17	Madagascar	3	0	3
Bhutan	0	1	1	Mali	1	3	4
Brunei	2	0	2	Mauritius	5	0	5
China	24	9	33	Niger	1	3	4
India	6	1	7	Nigeria	2	1	3
Indonesia	101	23	124	Rwanda	2	0	2
Korea	4	1	5	Senegal	3	2	5
Laos	3	2	5	Sierra Leone	1	1	2
Malaysia	36	5	41	Swaziland	1	0	1
Mongolia	1	0	1	Tanzania	7	4	11
Maldives	1	0	1	Zaire	4	0	4
Myanmar	5	4	9	Zambia	4	2	6
Nepal	7	1	8	Zimbabwe	4	2	6
Pakistan	11	8	19	Argentina	4	1	5
Philippines	50	28	78	Bolivia	10	3	13
Singapore	4	0	4	Brazil	9	0	9
Sri Lanka	10	8	18	Chile	3	3	6
Thailand	60	25	85	Colombia	6	7	13
Algeria	1	1	2	Costa Rica	5	2	7
Egypt	19	8	27	Dominican Republic	3	3	6
Iran	0	1	1	Ecuador	2	3	5
Iraq	2	1	3	Guatemala	6	2	8
Jordan	5	2	7	Honduras	3	6	9
Morocco	4	2	6	Jamaica	0	2	2
Oman	2	4	6	Mexico	10	0	10
Qatar	1	0	1	Panama	4	2	6
Saudi Arabia	2	0	2	Paraguay	9	6	15
Sudan	2	2	4	Peru	6	3	9
Tunisia	2	0	2	Trinidad and Tobago	1	0	1
Turkey	2	1	3	Uruguay	2	2	4
United Arab Emirates	2	1	3	Venezuela	2	0	2
Yemen	5	1	6	Fiji	0	3	3
Cameroon	0	1	1	Kiribati	0	1	1
Ethiopia	1	0	1	Papua New Guinea	3	1	4
Gabon	0	1	1	Solomon Islands	2	0	2
Ghana	0	1	1	Western Samoa	1	0	1
Guinea	2	1	3	Cook Islands	1	0	1
Ivory Coast	0	1	1	Greece	1	0	1
Kenya	11	3	14	Poland	1	0	1
Liberia	1	0	1	ZZZ	6	0	6
				Total	538	222	760

2-2 Distribution of the Number of Studies by Type of Study

F/S studies account for more than 50% of the total development studies carried out in the last 19 years. The next is M/P studies, accounting for about 20%. The number of M/P studies has been settled from 10 to 20 since FY 1989. It is notable that, while the number of Group B Studies (F/S studies, D/D studies and other studies) shows a downward tendency, that of M/P + F/S studies exhibits an

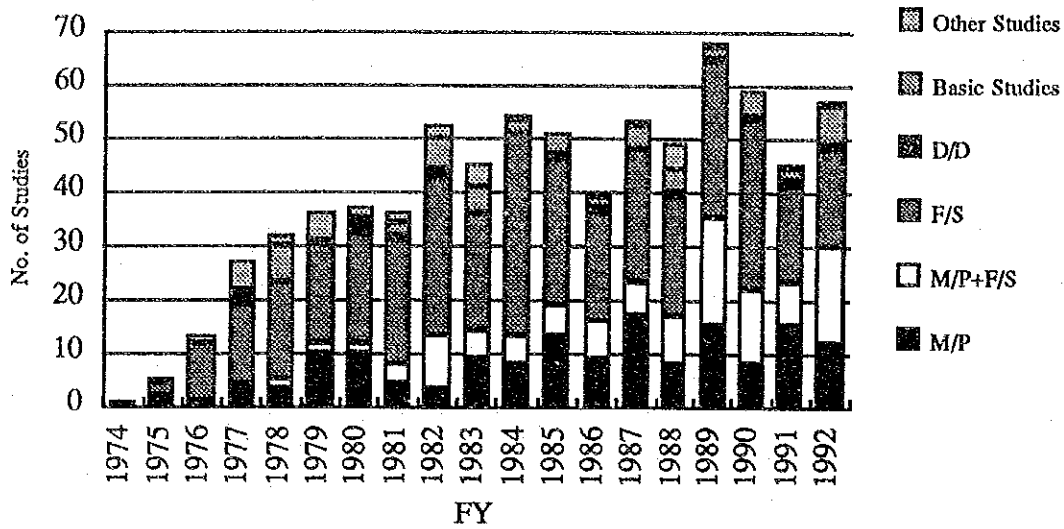
upward tendency. In the recent years, Group A Studies has become increasing important, and feasibility studies have tended to accompany a master plan study in the same development study. It is inferred that the tendency to fully make use of the results of master plan studies has become strong.

Table 2-d Distribution by Type of Study

	1st Term					2nd Term				
	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
MP		2 (40.0%)	1 (7.7%)	4 (14.8%)	3 (9.4%)	10 (27.8%)	10 (27.0%)	4 (11.1%)	3 (5.8%)	9 (20.0%)
MP+FS					2 (6.3%)	2 (5.6%)	2 (5.4%)	4 (11.1%)	10 (19.2%)	5 (11.1%)
FS		2 (40.0%)	11 (84.6%)	15 (55.6%)	18 (56.3%)	18 (50.0%)	20 (54.1%)	23 (63.9%)	29 (55.8%)	22 (48.9%)
D/D				2 (7.4%)			2 (5.4%)	1 (2.8%)	2 (3.8%)	
Basic Studies				1 (3.7%)	7 (21.9%)	1 (2.8%)	1 (2.7%)	2 (5.6%)	6 (11.5%)	5 (11.1%)
Other Studies	1 (100.0%)	1 (20.0%)	1 (7.7%)	3 (18.5%)	2 (6.3%)	5 (13.9%)	2 (5.4%)	2 (5.6%)	2 (3.8%)	4 (8.9%)
Total	1	5	13	27	32	36	37	36	52	45

	3rd Term					4th Term					Total
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	
MP	8 (14.8%)	13 (25.5%)	9 (22.5%)	17 (32.1%)	8 (16.3%)	15 (22.1%)	8 (13.6%)	15 (33.3%)	12 (21.1%)		151 (19.9%)
MP+FS	5 (9.3%)	6 (11.8%)	7 (17.5%)	6 (11.3%)	9 (18.4%)	20 (29.4%)	14 (23.7%)	8 (17.8%)	18 (31.6%)		118 (15.5%)
FS	38 (70.4%)	27 (52.9%)	20 (50.0%)	25 (47.2%)	22 (44.9%)	29 (42.6%)	31 (52.5%)	18 (40.0%)	18 (31.6%)		386 (50.8%)
D/D		1 (2.0%)	1 (2.5%)		1 (2.0%)	1 (1.5%)	1 (1.7%)	1 (2.2%)	1 (1.8%)		14 (1.8%)
Basic Studies	2 (3.7%)	4 (7.8%)	2 (5.0%)	4 (7.5%)	4 (8.2%)	2 (2.9%)	5 (8.5%)	2 (4.4%)	7 (12.3%)		55 (7.2%)
Other Studies	1 (1.9%)		1 (2.5%)	1 (1.9%)	5 (10.2%)	1 (1.5%)		1 (2.2%)	1 (1.8%)		36 (4.7%)
Total	54	51	40	53	49	68	59	45	57		760

Graph 2-d Distribution by Type of Study



2-3 Distribution of the Number of Studies by Sector

1. An Outlook

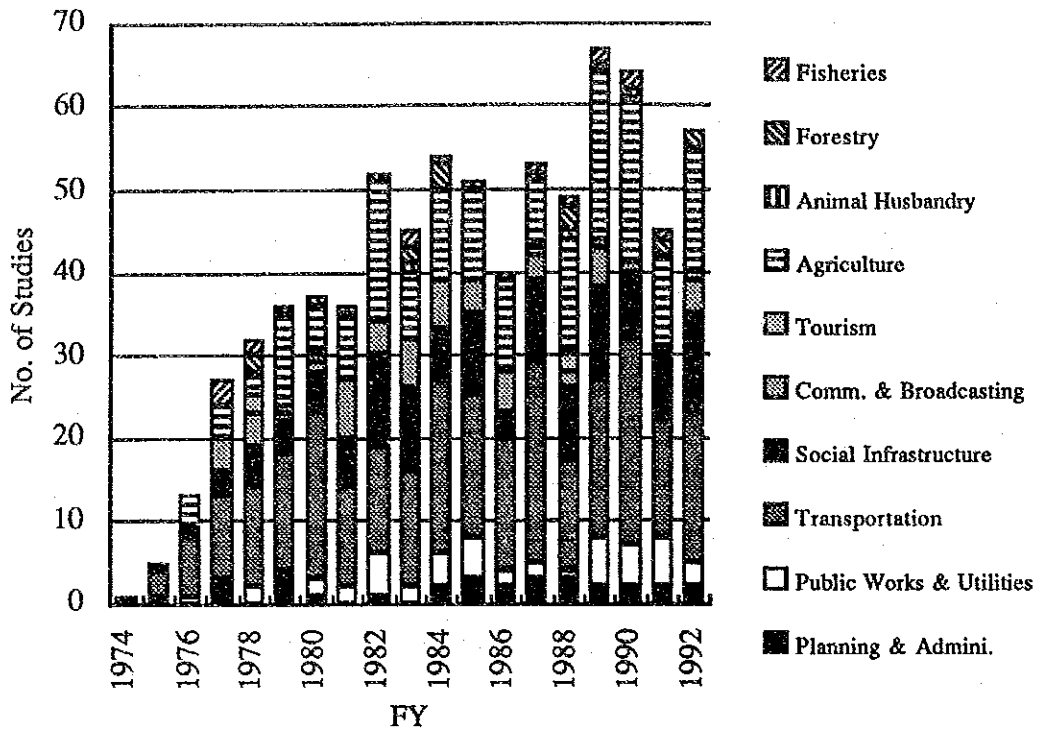
Table 2-e shows the number of completed development studies according to different subsectors (sub-subsectors). There are 268 studies in the subsector of Transportation, accounting for more than 35% of the total. 182 studies in Agriculture (24%), and 124 studies (16%) in Social Infrastructures. The number of studies in the rest of subsectors has remained in two digit figures. Transportation, Communication & Broadcasting, Agriculture and Social Infrastructures together account for more than 75% of the total development studies .

Table 2-e The Distribution of Studies by Sector (Subsectors)

	1st Term					2nd Term				
	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Planning and Administration		(20.0%) ¹		(11.1%) ³		(11.1%) ⁴	(2.7%) ¹		(1.9%) ¹	
Public Works and Utilities			(1.7%) ¹		(6.3%) ²		(5.4%) ²	(5.6%) ²	(9.6%) ⁵	(4.4%) ²
Road			(15.4%) ²	(7.4%) ²	(12.5%) ⁴	(8.3%) ³	(16.2%) ⁶	(2.8%) ¹	(13.5%) ⁷	(8.9%) ⁴
Railway		(20.0%) ¹	(15.4%) ²	(7.4%) ²	(3.1%) ¹	(8.3%) ³	(2.7%) ¹	(5.6%) ²	(5.8%) ³	(11.1%) ⁵
Port		(40.0%) ²		(7.4%) ²	(9.4%) ³	(11.1%) ⁴	(16.2%) ⁶	(13.9%) ⁵	(1.9%) ¹	(8.9%) ⁴
Air Transportation and Airport				(3.7%) ¹		(5.6%) ²	(5.4%) ²	(2.8%) ¹	(3.8%) ²	
Others			(23.1%) ³	(11.1%) ³	(12.5%) ⁴	(5.6%) ²	(13.5%) ⁵	(8.3%) ³		(2.2%) ¹
Social Infrastructure	(100.0%) ¹	(20.0%) ¹	(7.7%) ¹	(11.1%) ³	(15.6%) ⁵	(11.1%) ⁴	(13.5%) ⁵	(16.7%) ⁶	(21.2%) ¹¹	(22.2%) ¹⁰
Communications and Broadcasting				(14.8%) ⁴	(12.5%) ⁴	(2.8%) ¹	(2.7%) ¹	(19.4%) ⁷	(7.7%) ⁴	(13.3%) ⁶
Tourism					(6.3%) ²	(2.8%) ¹	(2.7%) ¹			
Agriculture			(30.8%) ⁴	(14.8%) ⁴	(9.4%) ³	(30.6%) ¹¹	(16.2%) ⁶	(22.2%) ⁸	(32.7%) ¹⁷	(17.8%) ⁸
Animal Husbandry										(2.2%) ¹
Forestry					(6.3%) ²		(2.7%) ¹		(1.9%) ¹	(4.4%) ²
Fisheries				(11.1%) ³	(6.3%) ²	(2.8%) ¹		(2.8%) ¹		(4.4%) ²
Total	1	5	13	27	32	36	37	36	52	45

	3rd Term					4th Term					Total
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	
Planning and Administration	(3.7%) ²	(5.9%) ³	(5.0%) ²	(5.7%) ³	(6.1%) ³	(3.0%) ²	(3.1%) ²	(4.4%) ²	(3.5%) ²		31
Public Works and Utilities	(7.4%) ⁴	(9.8%) ⁵	(5.0%) ²	(3.8%) ²	(2.0%) ¹	(9.0%) ⁶	(7.8%) ⁵	(13.3%) ⁶	(5.3%) ³		48
Road	(9.3%) ⁵	(7.8%) ⁴		(13.2%) ⁷	(8.2%) ⁴	(9.0%) ⁶	(14.1%) ⁹	(11.1%) ⁵	(8.8%) ⁵		74
Railway	(9.3%) ⁵	(7.8%) ⁴	(7.5%) ³	(9.4%) ⁵		(1.5%) ¹	(4.7%) ³	(2.2%) ¹	(1.8%) ¹		43
Port	(5.6%) ³	(3.9%) ²	(12.5%) ⁵	(9.4%) ⁵	(4.1%) ²	(6.0%) ⁴	(9.4%) ⁶	(4.4%) ²	(5.3%) ³		59
Air Transportation and Airport	(1.9%) ¹	(3.9%) ²	(5.0%) ²	(3.8%) ²	(2.0%) ¹	(6.0%) ⁴	(9.4%) ⁶	(4.4%) ²	(5.3%) ³		31
Others	(13.0%) ⁷	(9.8%) ⁵	(15.0%) ⁶	(9.4%) ⁵	(12.2%) ⁶	(6.0%) ⁴	(1.6%) ¹	(8.9%) ⁴	(10.5%) ⁶		65
Social Infrastructure	(11.1%) ⁶	(19.6%) ¹⁰	(7.5%) ³	(18.9%) ¹⁰	(18.4%) ⁹	(16.4%) ¹¹	(12.5%) ⁸	(17.8%) ⁸	(21.1%) ¹²		124
Communications and Broadcasting	(11.1%) ⁶	(7.8%) ⁴	(12.5%) ⁵	(5.7%) ³	(4.1%) ²	(7.5%) ⁵	(1.6%) ¹	(2.2%) ¹	(7.0%) ⁴		58
Tourism				(1.9%) ¹	(4.1%) ²	(1.5%) ¹			(1.8%) ¹		9
Agriculture	(20.4%) ¹¹	(21.6%) ¹¹	(27.5%) ¹¹	(15.1%) ⁸	(28.6%) ¹⁴	(29.9%) ²⁰	(31.3%) ²⁰	(24.4%) ¹¹	(26.3%) ¹⁵		182
Animal Husbandry					(2.0%) ¹						2
Forestry	(5.6%) ³		(2.5%) ¹	(1.9%) ¹	(6.1%) ³	(1.5%) ¹	(1.6%) ¹	(4.4%) ²	(3.5%) ²		20
Fisheries	(1.9%) ¹	(2.0%) ¹		(1.9%) ¹	(2.0%) ¹	(3.0%) ²	(3.1%) ²	(2.2%) ¹			18
Total	54	51	40	53	49	67	64	45	57		764

Graph 2-e The Distribution of Studies by Sector (Subsectors)



2. Distribution by Sector and Type of Study

As for the distribution of studies by type of study, there is not a large difference among different sectors. Transportation has the largest share in all types of studies except for basic studies. Due to the nature of the study, basic studies comprises such studies as topographical studies and underground water development, and the share of Social Infrastructures in basic studies is as high as 55%. The share of Forestry and Fisheries, which includes studies on the amount of forestry and fishery resources, is also high in basic studies. Similarly, the share of Planning & Administration is relatively high in M/P studies. More than 80% of studies in Planning & Administration are M/P studies. On the other hand in

Transportation, Communications & Broadcasting, and Agriculture, the share of F/S studies is larger.

Table 2-f Distribution by Sector and Type of Study

	M/P	M/P+F/S	F/S	D/D	Basic Studies	Others	Total	
Planning & Admin.	25 (16.6%)	3 (2.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (8.3%)	31 (4.1%)	
Public Utilities	2 (1.3%)	22 (18.6%)	23 (6.0%)	1 (7.1%)	0 (0.0%)	0 (0.0%)	48 (6.3%)	
Trans.	Road	6 (4.0%)	7 (5.9%)	53 (13.7%)	4 (28.6%)	1 (1.8%)	3 (8.3%)	74 (9.7%)
	Railway	6 (4.0%)	2 (1.7%)	28 (7.3%)	1 (7.1%)	1 (1.8%)	5 (13.9%)	43 (5.7%)
	Port	6 (4.0%)	20 (16.9%)	28 (7.3%)	0 (0.0%)	0 (0.0%)	5 (13.9%)	59 (7.8%)
	Air Trans. & Airport	2 (1.3%)	7 (5.9%)	17 (4.4%)	0 (0.0%)	0 (0.0%)	1 (2.8%)	27 (3.6%)
	Others	28 (18.5%)	5 (4.2%)	26 (6.7%)	1 (7.1%)	1 (1.8%)	4 (11.1%)	65 (8.6%)
Social Infrastructures	24 (15.9%)	25 (21.2%)	34 (8.8%)	2 (14.3%)	30 (54.5%)	9 (25.0%)	124 (16.3%)	
Comm. & Broadcasting	9 (6.0%)	7 (5.9%)	36 (9.3%)	3 (21.4%)	2 (3.6%)	1 (2.8%)	58 (7.6%)	
Tourism	3 (2.0%)	2 (1.7%)	3 (0.8%)	0 (0.0%)	0 (0.0%)	1 (2.8%)	9 (1.2%)	
Agriculture	31 (20.5%)	16 (13.6%)	130 (33.7%)	1 (7.1%)	4 (7.3%)	0 (0.0%)	182 (23.9%)	
Animal Husbandry	0 (0.0%)	1 (0.8%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (0.3%)	
Forestry	5 (3.3%)	0 (0.0%)	4 (1.0%)	0 (0.0%)	9 (16.4%)	2 (5.6%)	20 (2.6%)	
Fisheries	4 (2.6%)	1 (0.8%)	3 (0.8%)	1 (7.1%)	7 (12.7%)	2 (5.6%)	18 (2.4%)	
Total	151	118	386	14	55	36	760	

3. Distribution of studies in Major Sectors

(1) Transportation

Transportation sub-sector is classified into 9 sub-subsectors. There have been over 260 studies conducted during the last 19 years. There are particularly many studies in three sub-subsectors: 73 studies in Road (28%), 58 in Port (22%) and 43 in Railway (16%). These three sub-subsectors account for 66% of the total studies in this sub-sector. Following this is Air Transportation & Airport and Urban Transportation (9% each).

(2) Social Infrastructure

Social infrastructure sub-sector comprises 6 sub-subsectors. There have been 122 studies conducted during the last 19 years. Among these sub-sectors, the studies are concentrated in two sub-subsectors: 43 in River & Erosion Control (35%), and 46 studies in Water Resource Development (37%). These two sub-subsector account for more than 70% of the total studies in this sub-sector.

(3) Public Utilities

Public Utilities sub-sector is divided into 4 sub-subsectors. There have been 47 studies carried out during the last 19 years. 26 studies (55% of total) are in Water Supply, 13 studies (28%) in Sewerage, and 8 studies (17%) in Urban Sanitation. No study has been conducted in General (Public Utilities).

(4) Communications & Broadcasting

The Communication & Broadcasting sub-sector is classified into 4 sub-subsectors. There have been 58 studies conducted during the last 19 years and the overwhelming 43 studies (74%) are in Telecommunication.

(5) Agriculture, Forestry and Fisheries

This sector is divided into four sub-sectors, each of which further divided into several sub-subsectors. The sub-sector of Agriculture consists of General Agriculture, Sericulture, Agricultural Machinery and Agricultural Processing. The sub-sector of Forestry comprises Forest Conservation and Timber Processing. Development studies in this sector have been concentrated in a few sub-subsectors. In the agriculture subsector, the majority of development studies have been conducted in General Agriculture; in the Forestry sub-sector, studies are exclusively in Forest Conservation; and in Fisheries sub-sector, studies have been concentrated in Fisheries sub-subsector. In other sub-subsectors for example, Animal Husbandry, only a few development studies have been carried out.

2-4 Distribution of the Number of Studies by Region

1. Outlook

The Table 2-8a shows the time trend of the distribution of development studies by region. The Asia region has an overwhelming share. Especially the six

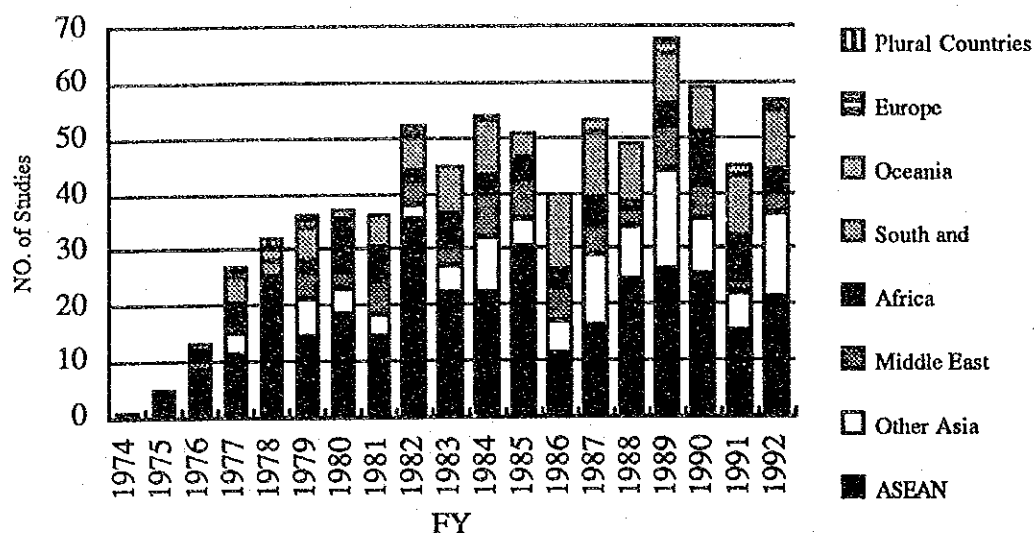
countries in ASEAN account for more than 44% of the total studies. This tendency has remained the same since the development studies were regularized in the 50s. Central and South America comes next (17%), followed by Asian countries outside ASEAN (17%). With regard to the time trend, the share of the six countries of ASEAN shows a downward tendency, while the share of other countries in Asia exhibits upward tendency.

Table 2-g Distribution of Studies by Region

	1st Term					2nd Term				
	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Asia	1	3	8	15	20	21	23	18	38	27
	(100.0%)	(60.0%)	(61.5%)	(55.6%)	(62.5%)	(58.3%)	(62.2%)	(50.0%)	(73.1%)	(60.0%)
ASEAN	1	2	8	11	19	14	18	14	35	22
	(100.0%)	(66.7%)	(100.0%)	(73.3%)	(95.0%)	(66.7%)	(78.3%)	(77.8%)	(92.1%)	(81.5%)
Other Asia		1		4	1	7	5	4	3	5
		(33.3%)		(26.7%)	(5.0%)	(33.3%)	(21.7%)	(22.2%)	(7.9%)	(18.5%)
Middle East		1	2	1		5	3	6	4	3
		(33.3%)	(25.0%)	(6.7%)		(23.8%)	(13.0%)	(33.3%)	(10.5%)	(11.1%)
Africa			2	4	5	2	9	6	2	6
			(25.0%)	(26.7%)	(25.0%)	(9.5%)	(39.1%)	(33.3%)	(5.3%)	(22.2%)
South and Middle East		1	1	5	3	6	2	6	6	9
		(20.0%)	(7.7%)	(18.5%)	(9.4%)	(16.7%)	(5.4%)	(16.7%)	(11.5%)	(20.0%)
Oceania				1	2	1			1	
				(3.7%)	(6.3%)	(2.8%)			(1.9%)	
Europe										
Plural Countries				1	2	1			1	
				(3.7%)	(6.3%)	(2.8%)			(1.9%)	
Total	1	5	13	27	32	36	37	36	52	45

Total	3rd Term					4th Term					Total
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	
Asia	32	35	17	29	34	44	35	22	36		458
	(59.3%)	(68.6%)	(42.5%)	(54.7%)	(69.4%)	(64.7%)	(59.3%)	(48.9%)	(63.2%)		(60.3%)
ASEAN	22	30	11	16	24	26	25	15	21		334
	(40.7%)	(58.8%)	(27.5%)	(30.2%)	(49.0%)	(38.2%)	(42.4%)	(33.3%)	(36.8%)		(43.9%)
Other Asia	10	5	6	13	10	18	10	7	15		124
	(18.5%)	(9.8%)	(15.0%)	(24.5%)	(20.4%)	(26.5%)	(16.9%)	(15.6%)	(26.3%)		(16.3%)
Middle East	8	7	6	5	3	8	6	2	4		74
	(14.8%)	(13.7%)	(15.0%)	(9.4%)	(6.1%)	(11.8%)	(10.2%)	(4.4%)	(7.0%)		(9.7%)
Africa	3	4	3	5	1	4	10	8	4		78
	(5.6%)	(7.8%)	(7.5%)	(9.4%)	(2.0%)	(5.9%)	(16.9%)	(17.8%)	(7.0%)		(10.3%)
South and Middle East	10	5	14	12	11	9	8	11	11		130
	(18.5%)	(9.8%)	(35.0%)	(22.6%)	(22.4%)	(13.2%)	(13.6%)	(24.4%)	(19.3%)		(17.1%)
Oceania				2		2		2	1		12
				(3.8%)		(2.9%)		(4.4%)	(1.8%)		(1.6%)
Europe						1			1		2
						(1.5%)			(1.8%)		(0.3%)
Plural Countries	1										6
	(1.9%)										(0.8%)
Total	54	51	40	53	49	68	59	45	57		760

Graph 2-g Distribution of Studies by Region



2. Distribution by type of study and region

We cannot see a marked difference in the distribution of studies by type of study across different regions. In most of the regions, cumulative number of M/P studies is about one-third as many as that of F/S studies.

Table 2-h-a Distribution of Studies by Type of Study and Region
(Social development and agriculture, forestry and fisheries sectors)

	Asia			Middle East	Africa	Middle & South America	Oceania	Europe	Plural Countries	Total
	ASEAN	Others								
M/P	91 (19.9%)	72 (21.6%)	19 (15.3%)	16 (21.6%)	12 (15.4%)	30 (23.1%)		1 (50.0%)	1 (16.7%)	151 (19.9%)
M/P+F/S	91 (19.9%)	68 (20.4%)	23 (18.5%)	8 (10.8%)	1 (1.3%)	16 (12.3%)	2 (16.7%)			118 (15.5%)
F/S	235 (51.3%)	162 (48.5%)	73 (58.9%)	38 (51.4%)	49 (62.8%)	58 (44.6%)	5 (41.7%)		1 (16.7%)	386 (50.8%)
D/D	6 (1.3%)	5 (1.5%)	1 (.8%)	3 (4.1%)	3 (3.8%)	1 (.8%)	1 (8.3%)			14 (1.8%)
Basic Studies	13 (2.8%)	10 (3.0%)	3 (2.4%)	6 (8.1%)	9 (11.5%)	19 (14.6%)	4 (33.3%)		4 (66.7%)	55 (7.2%)
Other Studies	22 (4.8%)	17 (5.1%)	5 (4.0%)	3 (4.1%)	4 (5.1%)	6 (4.6%)		1 (50.0%)		36 (4.7%)
Total	458	334	124	74	78	130	12	2	6	760

Table 2-h-b Distribution of Studies by Type of Study and Region
(Social development sectors)

	Asia			Middle East	Africa	Middle & South America	Oceania	Europe	Plural Countries	Total
	ASEAN	Others								
M/P	65 (19.3%)	55 (21.7%)	10 (12.0%)	10 (20.4%)	11 (20.8%)	23 (27.1%)		1 (50.0%)	1 (16.7%)	111 (20.6%)
M/P+F/S	76 (22.6%)	58 (22.9%)	18 (21.7%)	7 (14.3%)	1 (1.9%)	14 (16.5%)	2 (28.6%)			100 (18.6%)
F/S	159 (47.3%)	113 (44.7%)	46 (55.4%)	22 (44.9%)	29 (54.7%)	33 (38.8%)	4 (57.1%)		1 (16.7%)	248 (46.1%)
D/D	6 (1.8%)	5 (2.0%)	1 (1.2%)	1 (2.0%)	3 (5.7%)	1 (1.2%)	1 (14.3%)			12 (2.2%)
Basic Studies	10 (3.0%)	7 (2.8%)	3 (3.6%)	6 (12.2%)	7 (13.2%)	8 (9.4%)			4 (66.7%)	35 (6.5%)
Other Studies	20 (6.0%)	15 (5.9%)	5 (6.0%)	3 (6.1%)	2 (3.8%)	6 (7.1%)		1 (50.0%)		32 (5.9%)
Total	336	253	83	49	53	85	7	2	6	538

Table 2-h-c Distribution of Studies by Type of Study and Region
(Agriculture, forestry and fisheries sectors)

	Asia			Middle East	Africa	Middle & South America	Oceania	Europe	Plural Countries	Total
	ASEAN	Others								
M/P	26 (21.3%)	17 (21.0%)	9 (22.0%)	6 (24.0%)	1 (4.0%)	7 (15.6%)				40 (18.0%)
M/P+F/S	15 (12.3%)	10 (12.3%)	5 (12.2%)	1 (4.0%)		2 (4.4%)				18 (8.1%)
F/S	76 (62.3%)	49 (60.5%)	27 (65.9%)	16 (64.0%)	20 (80.0%)	25 (55.6%)	1 (20.0%)			138 (62.2%)
D/D				2 (8.0%)						2 (.9%)
Basic Studies	3 (2.5%)	3 (3.7%)			2 (8.0%)	11 (24.4%)	4 (80.0%)			20 (9.0%)
Other Studies	2 (1.6%)	2 (2.5%)			2 (8.0%)					4 (1.8%)
Total	122	81	41	25	25	45	5			222

3. Distribution of studies by sector and region

There is not much difference in the sectoral distribution of studies across different regions. Transportation has the largest share in every region. However difference can be observed at sub-subsector level. In ASEAN and Africa, the share of Road is largest within the Transportation sector, while in other regions such as Asian countries outside ASEAN, the shares of Railway and Port are larger. In Central and South America a larger portion of studies has been conducted in Port and Others. Likewise, in the six countries of ASEAN, Social Infrastructures, Communication & Broadcasting together have a high share, while the share of Agriculture is small compared with another regions.

Table 2-i Distribution of Studies by Sector and Region

	Asia		Middle East	Africa	Middle & South America	Oceania	Europe	Plural Countries	Total	
	ASEAN	Others								
Planning & Admin.	14 (3.1%)	12 (3.6%)	2 (1.6%)	6 (8.1%)	2 (2.6%)	8 (6.2%)	1 (8.3%)	0	31 (4.1%)	
Public Utilities	28 (6.1%)	23 (6.9%)	5 (4.0%)	8 (10.8%)	8 (10.3%)	4 (3.1%)	0	0	48 (6.3%)	
Road	50 (10.9%)	44 (13.2%)	6 (4.8%)	4 (5.4%)	13 (16.7%)	6 (4.6%)	1 (8.3%)	0	74 (9.7%)	
Railway	29 (6.3%)	16 (4.8%)	13 (10.5%)	2 (2.7%)	3 (3.8%)	9 (6.9%)	0	0	43 (5.7%)	
Port	39 (8.5%)	23 (6.9%)	16 (12.9%)	5 (6.8%)	1 (1.3%)	13 (10.0%)	1 (8.3%)	0	59 (7.8%)	
Air Trans. & Aviation	36 (7.9%)	6 (1.8%)	7 (5.6%)	2 (2.7%)	2 (2.6%)	8 (6.2%)	2 (16.7%)	0	27 (3.6%)	
Others	36 (7.9%)	28 (8.4%)	8 (6.5%)	6 (8.1%)	8 (10.3%)	12 (9.2%)	0	1 (50.0%)	2 (33.3%)	65 (8.6%)
Social Infra.	80 (17.5%)	63 (18.9%)	17 (13.7%)	12 (16.2%)	11 (14.1%)	19 (14.6%)	0	0	2 (33.3%)	124 (16.3%)
Comm. & Broadcast	40 (8.7%)	31 (9.3%)	9 (7.3%)	4 (5.4%)	4 (5.1%)	6 (4.6%)	2 (16.7%)	0	2 (33.3%)	58 (7.6%)
Tourism	7 (1.5%)	7 (2.1%)	0	0	1 (1.3%)	0	0	1 (50.0%)	0	9 (1.2%)
Agriculture	109 (23.8%)	70 (21.0%)	39 (31.5%)	22 (29.7%)	23 (29.5%)	28 (21.5%)	0	0	0	182 (23.9%)
Animal Husbandry	1 (0.2%)	0	1 (0.8%)	1 (1.4%)	0	0	0	0	0	2 (0.3%)
Forestry	6 (1.3%)	6 (1.8%)	0	1 (1.4%)	1 (1.3%)	10 (7.7%)	2 (16.7%)	0	0	20 (2.6%)
Fisheries	6 (1.3%)	5 (1.5%)	1 (0.8%)	1 (1.4%)	1 (1.3%)	7 (5.4%)	3 (25.0%)	0	0	18 (2.4%)
Total	458	334	124	74	78	130	12	2	6	760

CHAPTER 3 THE PRESENT STATUS OF THE UTILIZATION OF STUDY RESULTS

3-1 Introduction

The present status of the utilization of study results is classified in two sets of categories.

The present status of master plan studies, basic studies and other studies (Group A Studies) is classified into the following three groups: 1) In progress or in use, 2) Delayed, and 3) Discontinued. The criteria are shown in 1-2 of Chapter 1. Those studies for which information obtained from domestic and overseas surveys is not sufficient are tentatively classified into the category of "Delayed".

The present status of feasibility studies, master plan-cum feasibility studies (M/P+F/S), and detailed design studies (Group B Studies) is classified into the following four groups: 1) Completed or in progress, 2) Promoting, 3) Delayed or suspended, 4) Discontinued or canceled. The category of "Completed or in progress" is further divided into four sub-categories: 1a) Completed, 1b) Partially completed and in use, 1c) Implementing, 1d) Processing. The criteria are presented also in 1-2 of Chapter 1.

The classification above is based on the fact that Group A and Group B Studies are different in the use of their study results, and thereby the appraisal of and the criteria for the present status.

Firstly, the "Realization rate" is a concept relevant only to feasibility studies and other Group B studies, which are followed by the appraisal of technical, economic and financial validity of the proposed project(s), and subsequent decision on implementation. Those studies classified into "Completed or In Use" are regarded as "Realized". The idea behind is that proposed project(s) is expected to progress smoothly once the study becomes "Processing" by way of securing investment funds, invitation of tenders, implementation of detailed design studies, etc., and proceed to next stages of "Implementing", "Partially Completed", and

finally " Completed" successively. In particular, "Realization rate" is defined as the number of development studies the present status of which falls in the category of " Completed or in progress" as the percentage of the number of total Group B studies. Group A studies are excluded from the denominator.

Secondly, the use of the study results of master plan and other Group A studies is not confined to the implementation of proposed project(s). An even more important role of these studies is to contribute to the policy making of government agencies and to the formulation of development plans both at national and regional levels. Basic studies and other studies are aimed at being used for particular purposes such as facilitating national land development and development planning by collection and compilation of long-term basic data, and providing recommendations on institutional building by drawing up guidelines, and so forth. This kind of contributions cannot be rendered by such quantitative indicators as "Realization rate". In fact, the results of almost 90 per cent of Group B studies are utilized in one form or another.

This chapter attempts to analyze the present situation of the use of master plan and other Group A studies in detail, by noticing the specific nature of these development studies. It also provides analysis of feasible studies and other Group B studies by centering on the degree of realization of the proposed project(s). The data are summarized in various tables by sector and by region (in this chapter), as well as by country and sector (in Appendix).

3-2 Present Status of the Use of Study Results of Group A Studies (Master Plan Studies, Basic Studies and Other Studies)

1. Analysis by year of completion

Table 3-a-a,b and c show the number of projects and present status by year of completion.

Table 3-a-a Present status of Group A studies and completed year
(Social development & agriculture, forestry and fisheries sectors)

Present Status	1st term					2nd term				
	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
In Progress or in Use	1 (100.0%)	3 (100.0%)	1 (50.0%)	7 (70.0%)	11 (91.7%)	14 (87.5%)	9 (69.2%)	7 (87.5%)	11 (100.0%)	14 (77.8%)
Delayed	0	0	0	1 (10.0%)	0	0	1 (7.7%)	1 (12.5%)	0	1 (5.6%)
Discontinued	0	0	1 (50.0%)	2 (20.0%)	1 (8.3%)	2 (12.5%)	3 (23.1%)	0	0	3 (16.7%)
Total	1	3	2	10	12	16	13	8	11	18

Present Status	3rd term					4th term					Total
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	
In Progress or in Use	9 (81.8%)	13 (76.5%)	12 (100.0%)	18 (81.8%)	15 (88.2%)	16 (88.9%)	12 (92.3%)	14 (77.8%)	17 (85.0%)		204 (84.3%)
Delayed	1 (9.1%)	2 (11.8%)	0	3 (13.6%)	2 (11.8%)	2 (11.1%)	1 (7.7%)	3 (16.7%)	3 (15.0%)		21 (8.7%)
Discontinued	1 (9.1%)	2 (11.8%)	0	1 (4.5%)	0	0	0	1 (5.6%)	0		17 (7.0%)
Total	11	17	12	22	17	18	13	18	20		242

Table 3-a-b Present status of Group A studies and completed year
(Social development sectors)

Present Status	1st term					2nd term				
	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
In Progress or in Use	1 (100.0%)	3 (100.0%)	1 (50.0%)	7 (77.8%)	7 (87.5%)	11 (91.7%)	7 (63.6%)	6 (85.7%)	9 (100.0%)	10 (71.4%)
Delayed	0	0	0	0	0	0	1 (9.1%)	1 (14.3%)	0	1 (7.1%)
Discontinued	0	0	1 (50.0%)	2 (22.2%)	1 (12.5%)	1 (8.3%)	3 (27.3%)	0	0	3 (21.4%)
Total	1	3	2	9	8	12	11	7	9	14

Present Status	3rd term					4th term					Total
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	
In Progress or in Use	6 (75.0%)	11 (73.3%)	9 (100.0%)	14 (87.5%)	8 (80.0%)	8 (100.0%)	9 (100.0%)	12 (85.7%)	12 (92.3%)		151 (84.8%)
Delayed	1 (12.5%)	2 (13.3%)	0	2 (12.5%)	2 (20.0%)	0	0	1 (7.1%)	1 (7.7%)		12 (6.7%)
Discontinued	1 (12.5%)	2 (13.3%)	6	0	0	0	0	1 (7.1%)	0		15 (8.4%)
Total	8	15	9	16	10	8	9	14	13		178

Table 3-a-c Present status of Group A studies and year of completion
(Agriculture, forestry and fisheries sectors)

Present Status	1st term					2nd term				
	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
In Progress or in Use	0	0	0	0	4	3	2	1	2	4
					(100.0%)	(75.0%)	(0.0%)	(100.0%)	(100.0%)	(100.0%)
Delayed	0	0	0	1	0	0	0	0	0	0
				(100.0%)						
Discontinued	0	0	0	0	0	1	0	0	0	0
						(25.0%)				
Total	0	0	0	1	4	4	2	1	2	4

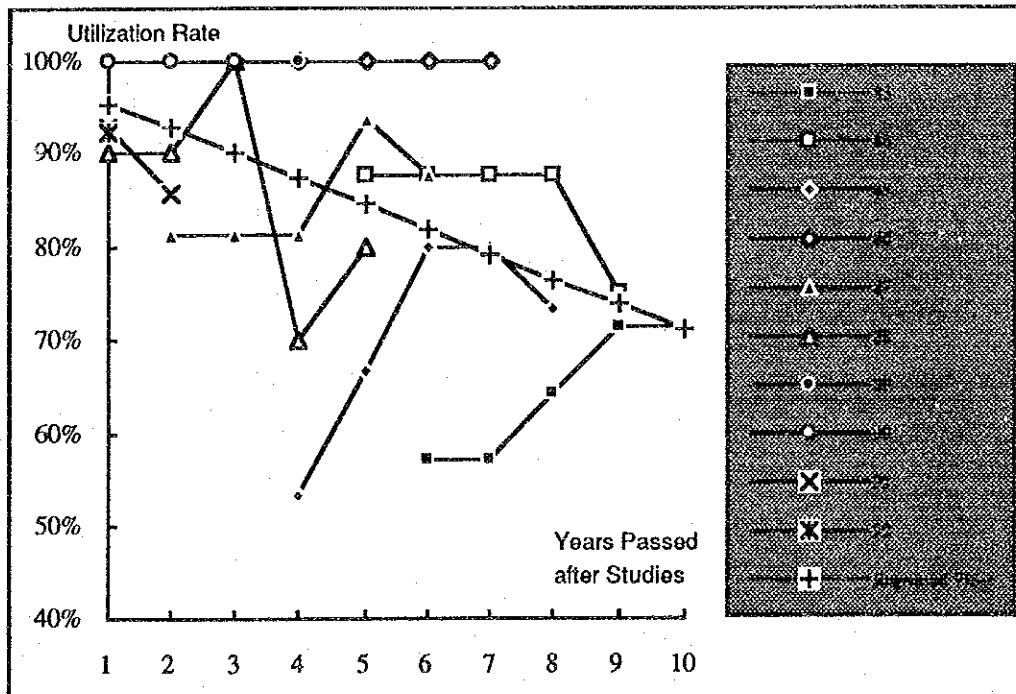
Present Status	3rd term					4th term					Total
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	
In Progress or in Use	3	2	3	4	7	8	3	2	5		53
	(100.0%)	(100.0%)	(100.0%)	(66.7%)	(100.0%)	(80.0%)	(75.0%)	(50.0%)	(71.4%)		(82.8%)
Delayed	0	0	0	1	0	2	1	2	2		9
				(16.7%)		(20.0%)	(25.0%)	(50.0%)	(28.6%)		(14.1%)
Discontinued	0	0	0	1	0	0	0	0	0		2
				(16.7%)							(3.1%)
Total	3	2	3	6	7	10	4	4	7		64

The total number of master plan studies is 242, and 84.3% of them, 204 studies, are classified into "In progress or in use." To recognize the transition of present status more dynamically, this study focused on the relation between the years passed after the completion and the rate of utilization of respective studies. Based on the data of past follow-up studies from FY 1989, table 3-b shows the result in social development sectors.

Table 3-b Years passed after the completion of study and utilization rate
(Group A Studies in social development sectors)

Years Passed after Study		1	2	3	4	5	6	7	8	9	10
Fiscal Year of Completion	No. of Studies										
	83	14					57%	57%	64%	71%	71%
	84	8				88%	88%	88%	88%	75%	
	85	15			53%	67%	80%	80%	73%		
	86	9		100%	100%	100%	100%	100%			
	87	16	81%	81%	81%	94%	88%				
	88	10	90%	90%	100%	70%	80%				
	89	8	100%	100%	100%	100%					
	90	9	100%	100%	100%						
	91	14	93%	86%							
	92	13	92%								
Regressed Value		95%	93%	90%	87%	85%	82%	79%	77%	74%	71%
Total	116										

Figure-b Years passed after the completion of studies and utilization rate
(Group A Studies in social development sectors)



Note: The fiscal year of completion is defined as "0 Year." A straight-line (linear) relation is assumed to approximate the true relation between the two variables. The regression equation was estimated by OLS (Ordinary Least Squares): no weight is attached to the number of projects.

In the social development sectors, utilization rates of Group A studies are relatively high and sometimes reach 100%. Especially in some fiscal years, the rates are 90% immediately after the completion of the studies.

A regression analysis on these figures provides a regression value and line in table 3-A. The result shows that the rate gradually decreases after the completion of the study. This tendency is closely related with the classification method of Group A studies. It means that the projects or ideas proposed by the Group A studies are alive in some form or other just after the completion of the studies. Some obstructing factor or lack of action over years, however, causes the rate to decrease gradually thereafter.

Table 3-c Years passed after the completion of study and utilization rate
(Group A studies in agriculture, forestry and fisheries sectors)

Years Passed after Study		1	2	3	4	5	6	7	8	9	10
Fiscal Year of Completion	No. of Studies										
83	4							75%	100%	100%	100%
84	3						67%	67%	100%	100%	
85	2					100%	100%	100%	100%		
86	3				100%	100%	100%	100%			
87	6			67%	83%	83%	67%				
88	7		71%	100%	100%	100%					
89	10	90%	90%	90%	80%						
90	4	75%	75%	75%							
91	4	50%	50%								
92	7	71%									
Total	50										

Figure 3-c Years passed after the completion of study and utilization rate
(Group A studies in agriculture, forestry and fisheries sectors)

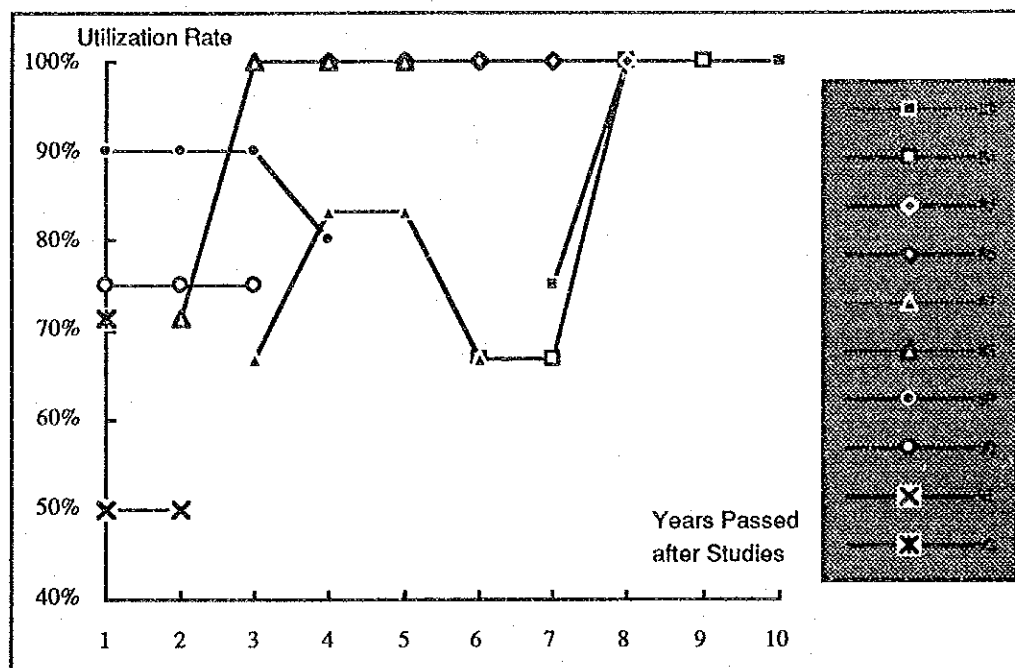


Table 3-c shows years passed after the completion of the study and utilization rate in agriculture, forestry and fisheries sectors. The utilization rates in these sectors are higher than those in social development sectors. The rates in several cases are 100%. As the number of the studies in agriculture, forestry and fisheries sectors is much smaller than one in social development sector, a regression analysis can not be conducted.

Besides master plan studies, the type of "Group A studies" also includes Basic Studies and Other Studies. Table 3-d shows utilization rate according to these three types. The utilization rate of Basic Studies is as high as 94.5%. The reason is that most Basic Studies are topographical studies, ground-water development and Forestry and Fishery Resource Studies, which are designed to be, and can be utilized just after the completion of the studies.

Table 3-d Three categories of Group A Studies and utilization rates (Social development and agriculture, forestry and fisheries sectors)

Present Status	M/P	Basic Studies	Other Studies	Total
Progress or In Use	122 (80.8%)	52 (94.5%)	30 (83.3%)	204 (84.3%)
Delayed	17 (11.3%)	3 (5.5%)	1 (2.8%)	21 (8.7%)
Discontinued or Cancelled	12 (7.9%)	0	5 (13.9%)	17 (7.0%)
Total	151	55	36	242

2. Analysis by region

Table 3-e Utilization rate by region (Social development and agriculture, forestry and fisheries sectors)

Present Status	Asia			Middle East	Africa	Middle and South America	Oceania	Europe	Plural Countries	Total
		ASEAN	Other Asia							
Progress or In Use	103 (81.7%)	78 (78.8%)	25 (92.6%)	20 (80.0%)	21 (84.0%)	49 (89.1%)	4 (100.0%)	2 (100.0%)	5 (100.0%)	204 (84.3%)
Delayed	16 (12.7%)	15 (15.2%)	1 (3.7%)	1 (4.0%)	1 (4.0%)	3 (5.5%)				21 (8.7%)
Discontinued or Cancelled	7 (5.6%)	6 (6.1%)	1 (3.7%)	4 (16.0%)	3 (12.0%)	3 (5.5%)				17 (7.0%)
Total	126	99	27	25	25	55	4	2	5	242

Table 3-e shows the utilization rate by region. Here focused are regions that have more than 10 studies. The utilization rate in "Other Asian Countries" is 94.5%, which is the highest among all regions. The utilization rates in "Oceania", "Europe", and "Plural Countries" are 100%, although there are only a few studies.

3. Analysis by sector

Table 3-f Utilization rate by sector
(Social development and agriculture, forestry and fisheries sectors)

Present Status	Planning and Administration	Public Works and Utilities							Social Infrastructure	Communications and Broadcasting	Commerce	Agriculture, Forestry and Fisheries				Total
		Public Utilities	Transportation					Tourism				Agriculture	Animal Husbandary	Forestry	Fisheries	
			Road	Railway	Port	Air Transportation and Airport	Others									
Progress or In Use	25 (89.3%)	2 (100.0%)	10 (100.0%)	10 (83.3%)	9 (81.8%)	3 (100.0%)	28 (84.8%)	30 (79.4%)	12 (100.0%)	2 (50.0%)	29 (82.9%)	13 (81.3%)	11 (84.6%)	204 (84.3%)		
Delayed					1 (9.1%)		4 (12.1%)	6 (9.5%)	1 (25.0%)	6 (17.1%)		2 (12.5%)	1 (7.7%)	21 (8.7%)		
Discontinued or Cancelled	3 (10.7%)			2 (16.7%)	1 (9.1%)		1 (3.0%)	7 (11.1%)		1 (25.0%)		1 (6.3%)	1 (7.7%)	17 (7.0%)		
Total	28	2	10	12	11	3	33	63	12	4	35	16	13	242		

Table 3-f shows the utilization rate by sector. In several sub-sectors, such as Public works, Road, Air Transport & Airport in transportation subsector and Telecommunication and broadcasting, the utilization rates are the highest, 100%. Despite the large volume of studies, the utilization rate in Road remains 100%. On the contrary, the utilization rate in Tourism is the lowest, 50%.

4. Details of "In Progress or in Use" Studies

This section analyses the present status of those studies classified as "In progress or in use" in some detail. The "In progress or in use" studies total 204 out of 242 Group A studies.

The category of "In progress or in use" actually includes the following cases:

I.) Subsequent study

More specific and detailed studies (e.g. F/S, D/D) are , or have been undertaken.

II.) Subsequent implementation

Some of the proposed projects are, or have been , financed and implemented.

III.) JICA technical cooperation

Japanese technical operation is started on the basis of the proposals or study results.

IV.) National development policy/plan

Proposals are incorporated into the development policy or plan of the recipient country. Or, study results are consulted to formulate the development policy or plan.

V.) Other

The study results in the form of maps, data base etc. are utilized or published. Or, the study results are used as a model for similar studies to imitate. Or, the government of the recipient country is taking some preparatory step to utilize the proposals.

Usually, when a proposed projects is implemented (case II), more specific and detailed studies like F/S always precede the implementation(case I). In such cases, only the final state i.e. case II is recorded for a given study. For other cases, multiple choice is possible as long as they are relevant to the course of events since a study's completion.

Details of the ways of utilization are known for 188 studies out of the 204 "In progress or in use" studies. They are tabulated by region in Table g and by sector in Table h. The top row of the three memo items in Table g and h indicates the numbers of those studies by region or by sector. It can be seen that the column totals generally exceed the corresponding total in the top row of the memo items because of the multiple entries.

Table 3-g Details of "In Progress or in Use" Studies of Group A by Region

Details	Region	Asia			Middle East	Africa	Mid.&South America	Oceania	Europe	Prural Countries	Total
		Total	ASEAN	Others							
Subsequent studies, etc		83	64	19	13	12	29	1	1	1	140
JICA technical cooperation		15	12	3	5	1	8			1	30
Project-type tech. coop.		9	7	2	1	1	3				14
Expert Dispath		6	5	1	4		5			1	16
Provision of Equipment											0
National dev. policy/plan		17	15	2	6	3	9	2	1		38
Other		7	6	1	4	8	12	1	1	1	34
Total		122	97	25	28	24	58	4	3	3	242 *2)
Total of specific discription		94	72	22	18	20	47	4	2	3	188
Total of "In progress or in use"		103	78	25	20	21	49	4	2	5	204
Total of Group A *1)		126	99	27	25	25	55	4	2	5	242

*1) "Total of Group A" includes M/P, Basic and Other studies.

*2) This "total (=242)" is larger than the total of specific discription (=188) because of the multiple entries.

Table 3-h Details of "In Progress or in Use" Studies of Group A by Sector

Details	Sector	Planning Admin.	Public Utilities	Transportation					Social infra.	Commun. & Broadcast.	Tourism	Sub-total	Agri-culture	Animal hus-bandry	Forestry	Fisheries	Sub-total	Total	
				Road	Railway	Port	Airtrans	Others											Sector total
Subsequent studies, etc		19	2	9	9	7	3	22	50	28	7	1	107	22		4	7	33	140
JICA technical cooperation		7				1		6	7	3		1	18	8		4		12	30
Project-type tech. coop.		3								1			4	7		3		10	14
Expert Dispath		4				1		6	7	2		1	14	1		1		2	16
Provision of Equipment																			
National dev. policy / plan		15	1			2		1	4	8	2		28	6		4		10	38
Other		1			1	1		3	5	17	2	1	26	1		3	4	8	34
Total		42	3	10	12	10	3	35	70	50	12	2	179	37		15	11	63	242 *2)
Total of specific discription		25	2	9	10	7	3	25	54	45	10	2	138	27		12	11	50	188
Total of "In progress or in use"		25	2	10	10	9	3	28	60	50	12	2	151	29		13	11	53	204
Total of Group A*1)		28	2	10	12	11	3	33	69	63	12	4	178	35		16	13	64	242

*1) "Total of Group A" includes M/P, Basic and Other studies.

*2) This "total (=242)" is larger than the total of specific discription (=188) because of the multiple entries.

How far details are known?

As stated above, 188 out of the 204 "In progress or in use" studies are given some specific description of the ways of their utilization. This rate (92%) is fairly uniform both over the regions and the sectors.

How much are the results used?

The 204 "In progress or in use" studies represent 84% of the total 242 Group A studies so far finished. This high rate of utilization, however, should be discounted slightly because some studies are labeled "in-use" almost automatically.

The Group A studies are broadly divided into two groups: one group of studies typically head for implementation through further studies like F/S and D/D; the other group consists of those studies whose outputs themselves are the end results of practical value (e.g. maps). This latter group, classified as "other" cases (V) of utilization is virtually guaranteed to be reported as "in-use". Included here are mainly "Basic Studies" and "Others", which number around 40. If we include those studies and recalculate the rate of utilization only for the first group, it turns out to be about 80% (164/202).

How diversely are the results used?

There can be various ways of utilizing a study's results and we can assess the diversity by calculating the average number of items chosen per study. Multiple choice is allowed among five cases: Either I. subsequent study or II. subsequent implementation; III. JICA technical cooperation; IV. national development policy/plan and V. Other. Dividing the total sum of items(242) by the total number of studies with details known(188), we get 1.29 as average. In other words, one study on average is used in 1.29 different ways. This figure is again highly uniform, irrespective of region or sector.

Ways of Utilization

When we look into the details of the ways of utilization, regional and sectoral variations, they emerged with interesting patterns.

On average, "subsequent study/implementation" (I or II) accounts for 74%, "JICA technical cooperation" (III) 16%, "national development policy plan" (IV) 20%, and "other" (V) 18%. (The figures add up to 129% due to multiple choice).

This overall pattern changes when viewed regionally. In Asia, the "subsequent study/implementation" case shoots up to 88%. By contrast the figure is generally below 70% in other regions, where the "other" category becomes much more prominent with a 28% average for Middle East, Africa and Middle & South America combined. The corresponding figure for Asia is only 7%.

One reason for this marked variation is that "Basic Studies" and "Other Studies", whose utilization is classified as "other"(V), dealing with topography, forestry and fishery resource survey, ground water development etc., were mostly carried out in the three regions. If we took this into account in the calculation, the variation would become a much subdued one. In fact, two other categories, "JICA technical cooperation" and "national development policy/ plan", show little regional difference.

Seen sectorally on the other hand, the pattern also fluctuates widely among the sectors, reflecting the difference in the sectors' characteristics and study needs among sectors. If divided into two large sectors, social development and agriculture, forestry and fisheries sectors, "subsequent study/implementation" accounts for 78% for the social development sector and 66% for the agriculture, forestry and fisheries sectors. By contrast, "JICA technical cooperation" and "national development policy/plan" together account for 33% for the former sector and 44% for the latter. These difference indicate that studies in the social development sectors are generally oriented to implementation while many agricultural studies are designed as a first step for some technical cooperation projects.