

- to implement its submitted and duly approved SWIM scale projects with soil erosion and small scale irrigation as the main feature,
- to coordinate, assist and participate with other cooperating agencies in the implementation of SWIM projects particularly those with irrigation component,
- to construct the necessary facilities for soil erosion control and small scale irrigation,
- to assist the establishment of beneficiaries' associations, and
- to assist the operation and management of beneficiaries' associations.

BSWM has implemented 10 SWIM projects so far; six (6) projects are completed and four (4) are still under construction.

(4) National Electrification Administration (NEA)

NEA was created under the Department of Energy in August 1969 by virtue of Republic Act No. 6038. At present, NEA is a government corporation under the Department of Environment and Natural Resources. It is directed and empowered to undertake the rural electrification programs on an area coverage basis with the electric cooperatives as primary media to achieve the objectives of making electric services available throughout the nation.

NEA is tasked to implement small scale power facilities which includes among others, mini-hydroelectric projects. In addition, NEA makes long-term, low interest loans to electric cooperatives for area-wide services. It also provides technical assistance in engineering, construction, organization, accounting, legal matters, and operations. Responsibilities of the in the implementation of SWIM Program:

- to conduct the required engineering studies for proposed SWIM scale projects with mini-Hydro power potential (the installed capacity should not exceed 5,000 kilowatts),
- to implement its submitted and duly approved SWIM scale projects with power generation as the main feature,
- to coordinate, assist and participate with other cooperating agencies in the implementation of SWIM projects particularly those with mini-hydro component,
- to assist the operation and management of beneficiaries' cooperatives, and
- to collect amortization fee from beneficiaries' cooperatives.

NEA has implemented three (3) SWIM projects so far; two (2) have been completed and one (1) is still under construction.

(5) Forest Management Bureau (FMB)

FMB was created by Presidential Decree No.705 dated May 19, 1975. FMB has jurisdiction and authority over all forest land, grazing land and all forest reservations including watershed reservations. FMB has been entrusted the responsibility to conserve, develop, and manage all forest and wild life. Responsibilities of FMB in the implementation of SWIM Program:

- to conduct the required engineering studies for proposed watershed management and reforestation/rehabilitation projects (the watershed area shall not exceed 100 square kilometers),
- to implement its submitted and duly approved SWIM scale projects with watershed management and reforestation as the main feature, and

to coordinate, assist and participate with other cooperating agencies in the implementation of SWIM projects, particularly those with watershed management of reforestation/rehabilitation.

FMB has implemented eight (8) SWIM projects so far; three (3) were completed and five (5) are still under construction.

(6) Farm Systems Development Corporation (FSDC)

FSDC was created on April 4, 1975 under Presidential Degree NO.681 and was abolished on January 1988. FSDC implemented 14 SWIM projects, out of which, 11 projects were completed and three (3) projects are still under construction. The completed projects were turned-over to farmers' associations called "Integrated Services Associations (ISA)". The on-going three (3) projects were transferred to the Project Management Office under the Department of Agriculture for completion. All other studies and designs of the projects conducted and being conducted were transferred to PMO-MFC/SWIM of DPWH for further consideration.

2.1.4 Cooperating Agencies

NWRB and BFAR are cooperating agencies in the implementation of the SWIM program. These agencies are not directly involved in the implementation of the SWIM projects. However, these agencies have assisted the implementing agencies in the preparation of plans and designs of projects as well as operation and maintenance. The organizational structures of these cooperating agencies are outlined in Fig.F.2.8 and Fig.F.2.9.

(1) National Water Resources Board (NWRB)

The National Water Resources Council (NWRC) was created on March 28, 1974 under Presidential Degree No.424. NWRC, now the National Water Resources Board (NWRB), pursuant to Executive Order No.124-A, is a body

responsible for coordinating and integrating all activities related to water resource development and management. Its principal objective is to achieve a scientific and orderly development and management of all the water resources of the nation consistent with the principles of optimum use, conservation, and protection to meet present and future needs. The Executive Director of NWRB was designated co-chairman of the Technical Working Group for SWIM. Responsibilities of NWRB in the implementation of SWIM Program:

- to coordinate and assist in the implementation with emphasis on conformance with the Philippine Water Code.
- to participate in reconnaissance, project identification, feasibility studies, and detailed design.

(2) Bureau of Fisheries and Aquatic Resources (BFAR)

BFAR started in 1907 as a Division in the Bureau of Science. At present, BFAR is one of the staff offices under the Department of Agriculture (DA) by virtue of the Executive order No.116 dated January 30, 1987. BFAR was created to undertake functions related to development, proper management and utilization of the country's fishery and aquatic resources

Under the SWIM program, the BFAR is charged with the responsibility of propagating fish culture in areas where SWIM projects exist. Likewise, it shall submit reports to the DPWH regarding its activities in said areas for monitoring purposes.

2.2 Organizations in Charge of SWIM Projects in Each Implementing/Cooperating Agency

The organizations in charge of the SWIM Projects in each agency are shown in Figs.F.2.3 to F.2.7 and are listed below:

DPWH	PMO-MFC/SWIM
NIA	1979-1989 : Project Development Department
	After 1989: Project Management Office-Small Reservoir Irrigation Project
BSWM	Water Resources and Management Division
NEA	Alternative Engineering Department
FMB	Reforestation Division

With exception of the DPWH and NIA, there is no definite unit of organization that implements the SWIM projects in other implementing agencies. The organizational chart of PMO-SRIP is shown in Fig.F.2.10.

2.3 Implementing Procedures of SWIM Projects

The present procedure for the implementation of the projects is divided broadly into three stages; (1) pre-construction stage, (2) construction stage, and (3) operation and maintenance stage. These are outlined in Fig. F.2.11, and are described hereinafter.

2.3.1 Pre-Construction Stage

According to operational policies and targets which were formulated by the Steering Committee, each implementing agency identifies prospective projects through field reconnaissance survey. Following project identification, each agency conducts the feasibility studies and detailed designs by its own fund.

After the conduct of detailed design, each agency informs the PMO-MFC/SWIM its total cost by submitting a report. Then PMO-MFC/SWIM prepare the initial list of proposed projects for implementation which is finalized by the TWG. Selection of priority projects is undertaken by the TWG. The priority projects are drawn out from the list of proposed projects. At this stage, the Committee designates implementing and coordinating agencies. After that, the infrastructure program of SWIM is prepared by the PMO-MFC/SWIM. The program is submitted to the Planning Service of DPWH after review and adoption by the SWIM Committee.

2.3.2 Construction Stage

The implementing agencies undertake construction of the SWIM projects, under the coordination of TWG and PMO-MFC/SWIM. The construction procedures differ in each agency as outlined herein after:

At present, there are three (3) ways of undertaking construction; 1) by contract, 2) by force account, and 3) by both contract and force account, as shown in the following table.

DPWH	Contract
NIA*	There are three ways as follows: <ul style="list-style-type: none">- Contract- Force Account (includes Pacquiao Contract)- Contract + Force Account (including Pacquiao)
BSWM	Major structures such as dam and intake weir are constructed by contract. Irrigation and drainage canals are financed and constructed by farmers themselves. The size of irrigation systems undertaken by BSWM are relatively small (about 20 hectare-area) and does not pose financial constraint to the associations.
NEA	Contract
FMB	Force Account/Pacquiao**

*Communal irrigation development program

**Pacquiao = Small package contract

Construction is undertaken by the Implementing agencies in two different cases:

Case-A

Construction is directly executed by the central office through contract. The central office itself enters into contract with a private contracting firm and dispatch inspectors to the project site. The regional/district office supplements the central office force by providing the daily inspector of construction accomplishment. Billing and payment are both done at the central office.

Case-B

The central office of the implementing agency coordinates the construction of the project. In cases where construction is undertaken by contract, the central office, the regional, or the district office may enter into contract with a private construction firm depending on the level of authority established by the agency. The level of authority is usually determined by the amount of the item of works to be contracted. For example, at NIA, work items with estimated costs exceeding one million pesos are under the authority of the central office. In case the central office enters into contract for the construction of a certain SWIM project, all documents are prepared thereat. At the same level, screening and pre-qualification of prospective bidders are performed. After the execution of contract, the regional/district office is notified of the commencement of construction. The latter provides for the inspection of accomplishment under the designated project engineer. Progress billing is prepared at the regional/district office and is forwarded to the central office for payment. It is a much simpler process if the regional/district office enters into contract with the private construction firm. The same office that enters into contract with the private construction firm performs inspection of accomplishments, prepares the progress billing and makes the payment.

In cases where construction of the project is to be undertaken by administration or force account, the regional/district office directly implements the project through the designated project engineer. It starts the construction upon receipt of the approved program of works and the corresponding funding.

Case-A is adopted by DPWH, BSWM and NEA, and the Case-B by NIA and FMB. For both cases, the progress of construction is monitored by the central office, and is reported monthly to PMO-MFC/SWIM.

In the case of irrigation projects, the associations participate in the construction of irrigation facilities, under the following conditions:

NIA Projects : Ten (10) % of total direct cost is provided by the association as equity in the form of labor and materials.

BSWM Projects: Irrigation facilities in the service area are put up by the associations.

After completion of the construction, the central or regional offices carry out final inspection, and prepare the completion report. Then this report is submitted to PMO-MFC/SWIM.

2.3.3 Operation and Maintenance Stage

The SWIM program consists of various projects: (1) irrigation, (2) mini-hydropower generation, (3) flood control, (4) watershed development (including reforestation and soil erosion control), (5) rural water supply and (6) fish culture. The operation and maintenance procedures for each are summarized below:

(1) Irrigation

Prior to the implementation of the project, a beneficiaries' cooperative/association is established in the project area under the articles of incorporation (see Reference-1). The typical organizational structure is presented in Fig.F.2.12. The cooperative/association shall undertake the operation and maintenance of the irrigation facilities. After the establishment of the cooperative/association, the memorandum of agreement and the certificate for project construction (see Reference IV to VI) are signed between the implementing agency and the association/cooperative. The Certificate of Construction contains, among others conditionalities before construction can be started, such as; organizational structure and staffing of the cooperative/association, right of way and land acquisition, and approved water right. In the Memorandum of Agreement, the rate and schedule of amortization is established.

After the final inspection, the agency turns over the project facilities to the cooperative/association. Operation and maintenance is undertaken immediately by the recipient. The cost required to finance the operation and maintenance of the irrigation facilities as well as amortization obligations are covered by irrigation service fees collected from the members/beneficiaries. The regional/district offices monitor and evaluate the performance and problems of the association and provides technical assistance for the proper operation of the facilities.

(2) Mini-hydropower Generation

The mini-hydropower generation projects come into being as requested by the electric cooperatives (Electric Cooperative Inc.). NEA bears all the initial investment costs of a project from feasibility study to the installation of the power plant. The total cost of the project is to be repaid by the cooperative to the NEA which is contained in the loan agreement prior to the start of construction. After construction, all facilities are turned over to the cooperative for operation and maintenance. NEA provides technical assistance to the cooperatives. The cooperative bears all the cost of the operation and maintenance and administration. It generates income by collecting fees from electric power users.

In the case of SWIM funded projects, the cost of construction of the infrastructure component which includes the powerhouse is a government dole out. NEA provides the hydropower plant and other electrical installations. Only these facilities are paid by the cooperatives which are stipulated in the loan agreement.

(3) Flood Control

Flood control is always an incidental purpose to all projects implemented under the SWIM program. There has never been a project implemented whose purpose is only flood control. In most cases, big dams having flood control function are operated and maintained by the

implementing agencies and the mini dams by the association/cooperative of beneficiaries.

(4) Watershed Development

The watershed development component of the projects implemented by BSWM and FMB consists mainly of reforestation (FMB) and the soil erosion control (BSWM). The regional/provincial offices of the Department of Environment and Natural Resources (DENR) and the Department of Agriculture (DA) are directly responsible for the maintenance of the rehabilitated area. The cost of maintenance is covered by the agencies' budget.

(5) Rural Water Supplies

Since the inception of the SWIM program, it has not yet implemented a project with water supply component. The SWIM program having assimilated water supply as one of its component needed to identify its beneficiaries.

(6) Fish Culture

The fish culture component of the SWIM program does not pose additional constraint. It comes easy in implementation. As water is impounded, the Bureau of Fisheries and Aquatic Resources (BFAR) introduce fingerlings. Fish is propagated by the farmers' association in the area which is also the beneficiary of the produce. Fish culture component of the program has been realized with the BSWM and DPWH implemented projects. BFAR extends technical assistance to the association on matters pertaining fish culture.

Monitoring and post-evaluation of the SWIM projects are done by the implementing agencies only. The agencies have no responsibility to report to the Steering Committee regarding the operation and maintenance of the completed project.

2.4 Financial Aspects of the SWIM Projects

2.4.1 SWIM Fund

The SWIM funds are disbursed from the regular budget of the national government through DPWH. The SWIM funds, however, do not support all of the project components. The following cost allocation/cost sharing arrangement is adopted:

- 1) The construction and development costs of the dam and appurtenant structures shall be financed out of the SWIM project funds.
- 2) The specific costs or the costs of works that clearly serve a single purpose, i.e. for power, water supply and irrigation, shall be funded by the respective agencies, to be determined by the SWIM Committee.
- 3) Funds for the operation of the SWIM Committee and the TWG shall come from and not to exceed one half (1/2) percent of the capital outlay of the SWIM projects.

The actual items funded during the period from 1982 to 1988 are shown in Table F.2.1.

2.4.2 SWIM Project Fund and Its Allocation

The total budget allocated for the SWIM projects for the period 1982-1988 is about P344.5 million or an average of P 49.2 million per annum as shown in Table F.2.1. Actual expenditures for construction of the SWIM projects for the period 1982-1988 is P227.7 million which is 66.1% of the total budget allocation as shown in Table F.2.2 and Table F.2.3. The distribution of SWIM project fund to each agency are as follows:

Implementing Agencies	Allocated Fund (P1,000)	Percentage (%)
DPWH	103,387	45.4
NIA	24,765	10.9
BSWM	14,957	6.6
NEA	4,408	1.9
FMB	20,809	9.1
FSDC	59,418	26.1
Total	227,744	100.0

2.4.3 Financial Procedures

(1) Programming and Budgeting

The funding for SWIM projects is derived from the regular budget of the national government. Its annual budget depends upon the approved program for the year. The budgeting process from preparation to the release of funds takes a total of fifteen (15) months. Fig.F.2.13 is a process flow chart showing the budget preparation and budget authorization phase of the Philippine Budget Cycle. It also shows how the SWIM program is rolled into the infrastructure program and the infrastructure program into the Presidents budget proposal which becomes the General Appropriations Bill of the Congress.

The PMO-MFC/SWIM, upon the receipt of the programming guidelines and the budgetary ceiling, prepares the guidelines and allocations based on the budget ceiling for each implementing agency. The allocation is one of the implementing agency's biggest constraints in prioritizing projects for implementation. It is important to note that the carry-overs of multi-year-implemented projects are also to be programmed for the ensuing year and is covered in the allocation. The allocations for each agency is more often than not, scarce.

The PMO-MFC/SWIM coordinates the preparation of all the programs from

the different agencies. It consolidates the programs from each implementing agency to consist the whole SWIM program. This is submitted to the DPWH central office which incorporates it to the infrastructure program. The infrastructure program is incorporated to the DPWH budget and is forwarded to the President. Together with all other agencies' budgets, this is submitted to the congress for authorization. The final stage of budget authorization is the approval of the national budget which is called the General Appropriations Act. This approval also brings the infrastructure program into the final validation. It is then submitted for approval of the President of the Philippines. Upon approval, release of funding starts.

(2) Scheme of Fund Release

Upon approval of the infrastructure program, the Department of Budget and Management releases the Advice of Allotment to DPWH. The advice of allotment is a government document containing a message that the agency can draw money from the bank (Philippine National Bank). The issuance of this note to DPWH is simultaneous with the issuance of the corresponding Funding Warrant to PNB (DBM's notice to the bank to allow an agency to draw cash). The PMO-MFC/SWIM coordinates the release of funding to the implementing agencies and the DPWH regional offices that implements SWIM projects.

In the previous implementation of SWIM projects, delays in fund release had been a common problem. While some projects experience delays in the release of funds, others do not receive funding at all. The comparison of program and actual fund released in the projects for the period 1982-1988 are shown in Table F.2.4. One reason that was pointed out was the problem of liquidation on the part of the implementing agency. This is however, a minimal problem and can be taken under the control of the implementing agencies. Other problems related to difficulties of funding should be found out as they cause bottlenecks in the implementation of projects as previously experienced.

2.5 Beneficiaries' Associations/Cooperatives

There are two kinds of beneficiaries' associations/cooperatives; 1) farmers' associations, 2) electric supply cooperatives. The first one is established for the projects implemented by NIA and BSWM. The second is for the hydropower projects implemented by NEA. The SWIM projects implemented by NIA, BSWM and NEA are operated and maintained by the associations and cooperatives. SWIM projects implemented by FMB are operated and maintained by the local government. On the other hand, SWIM projects implemented by DPWH has no beneficiaries' organization, hence the responsibility of operating and maintaining the output of the project rests on nobody. The present institutional conditions, activities and current problems of the associations/cooperatives are described hereinafter.

2.5.1 Farmers' Associations

Irrigation is the major purpose of SWIM projects implemented by the NIA and BSWM. There are two types of farmers association; one is the association established in the NIA projects and another is for the BSWM projects. Having similar goals and objectives, the farmers' associations of NIA and BSWM have similar organizations, functions and establishing procedures. In most cases, the associations established in the NIA projects are bigger than the BSWM associations because of the relatively bigger irrigation area that the former develops.

The SWIM project is intended to generate a maximum irrigated area of 500 hectares. This categorizes the SWIM project as communal irrigation project (CIP) at NIA. The communal irrigation projects generate irrigation systems of less than 1,000 hectares which is turned over to a group of farmer beneficiaries for full ownership.

The group of farmer-beneficiaries is called Farmers-Irrigators' Association (FIA) or Irrigators' Association (IA). Its organization is initiated by NIA before project construction begins. The organizational structure of IA is presented in Fig.F.2.12. In the organization of IA,

there are two kinds of committees; ad hoc committees and regular committees. The ad hoc committees are established before the commencement of construction. After completion of the construction, the ad hoc committees are dissolved. At the same time, the regular committees are installed in the IA.

The association maintains and manages the operation of the system. It is duly registered as a non-profit and non-stock organization at the securities and Exchange Commission. Its membership is composed of the farmer beneficiaries operating within the service area of the system. The members elect their board of directors and officers. NIA and BSWM assists the association in terms of technical assistance through the provincial irrigation office and through training programs.

The organization of the farmer's association before or during construction is recognized by NIA as a significant factor of attaining communal irrigation development goals, because it facilitates the implementation of the project, it is an effective means to solving right-of-way problems, an aid to planning, and source of labor for construction. It is crucial to the implementation of a project because the members of the association are the direct beneficiaries, and their consensus regarding the project is better gathered through the association. Considering that the association will amortize the cost of the irrigation component of the project, the acceptance of the project after completion has to be guaranteed, and this is better achieved if the opinion of the beneficiaries is sought prior to the implementation of the project.

The training program for the IA is conducted by the NIA Provincial Core-Group which comprises the head of IDS, PIE, APIE, ICO, IOW and IT. There are three training courses; 1) leadership training, 2) financial management training and 3) operation and maintenance training. The first is conducted before construction, the second during the construction period, and the third during the operation and maintenance stage.

2.5.2 Electric Supply Cooperatives

Electric supply cooperatives are organizations that operate and maintain the mini-hydropower facilities constructed under the SWIM program. As of the end of 1989, there are 115 electric supply cooperatives. Under the assistance of NEA, the electric supply cooperatives provide electric power to the rural areas excluded from the NPC supply area.

The cooperatives are established under the articles of incorporation and by-laws (see SEC. 19 and 20 of PD # 269 in Reference-VII), and is registered as a non-profit and non-stock organization at the Securities and Exchange Commission.

The number of the associations/cooperatives established in the SWIM projects as of 1988 is summarized in Table F.2.5. Out of 34 projects (excluding on-going projects), sixteen (16) projects have associations/cooperatives. The remainder has no established beneficiaries' organizations.

2.6 Current Problems

Taking from the analysis of project implementation data, the present constraints and problems in implementing SWIM Projects are summarized below:

- 1) No systematic and definitive procedures for implementation from Planning to O&M stages, and Ineffective procedures of preparation and control of budget,
- 2) Unclear and indefinite responsibility areas of each participating agency to the implementation of SWIM Projects and insufficient coordination within and between the agencies,
- 3) No monitoring and evaluation systems for O&M of the beneficiaries cooperatives in PMO-MFC/SWIM and TWG, and no definitive

institutional procedures for the operation and maintenance of beneficiaries' cooperatives, and

- 4) No definitive procedures for getting the beneficiaries' confirmation to implement projects.

Among the above listed, the first two are considered to have strong impact on the implementation of projects. Prior to the implementation of a project, problems such as these must be resolved to provide proper direction to the implementors if successful implementation of the projects' objectives are to be fully realized.

3. INSTITUTIONAL DEVELOPMENT PLAN

3.1 Basic Concepts for Development Plan

The proposed institutional development plan is formulated taking the following basic concepts into consideration.

- 1) Complicated institutional procedures brings ineffective implementation of the Project. The procedures from project identification to maintenance stages must be simplified as far as possible.
- 2) In the agency, the SWIM projects are implemented by different divisions/departments/sections, and no consideration is paid to establish new specific organization which is solely responsible for its implementation.
- 3) The participating agencies have a long and ripe experience and a fixed procedure for the implementation of project components such as irrigation, reforestation and mini hydro-power projects. Their experience and procedures should be utilized fully to implement the Projects. Basic procedures should not be modified in the study of the development plan.
- 4) Enactment of laws and regulations may be necessary for implementation and management of SWIM projects. It is, however, excluded from this study because enactment of laws is purely a matter which involves entirely Philippine internal affair. The institutional studies in this report are conducted with due consideration to the laws and regulations enacted by the government.
- 5) The institutional development plan is conceived for the implementation of the SWIM projects whose category is defined and limited by previous issuances of the government and the "Basic

Planning Criteria" given in the SWIM Master Plan Study.

- 6) The establishment of the beneficiaries organization is deemed a salient factor of infrastructure maintenance that will be generated by the SWIM Program.
- 7) Well-defined responsibility area of each organization and implementing agency promotes regularity and clarity of function delineation.
- 8) A well-conceived monitoring system provides a suitable feedback mechanism from the direct implementors of the project to the planners and the management.

3.2 Implementation and Management of the Projects

The proposed procedure of project implementation shall consist of three stages; (1) planning stage which include project identification, feasibility study, and detailed design, (2) implementation stage which include preparatory works and construction, and (3) operation and maintenance stage. The overall work flow of these three stages and the timeframe for the procedure are presented in Fig.F.3.1 and Fig.F.3.2. The details are described hereinafter.

3.2.1 Planning Stage

(1) Project Identification

In the present operational policies and targets formulated and adopted by the Steering Committee, the implementing agencies identify the prospective projects through their field reconnaissance. The agencies shall prepare the reconnaissance reports for the projects identified, and shall submit the same to the PMO-MFC/SWIM. In these reports, the following items shall be included:

- 1) Purpose and Objectives
- 2) Outline of the present condition and current problems in the project area
- 3) Project features (location, area to be benefited, number of beneficiaries, outline of structures, etc.)
- 4) Construction cost (approximate figures)
 - a) Total cost
 - b) Share of SWIM fund
- 5) Prospective EIRR and social impacts
- 6) S/W and I/P
- 7) Specific items
 - a) Necessity of cooperating agencies
 - b) If the implementing agency requests the SWIM Fund for P/S, the following items are mentioned.
 - Work schedule and M/M
 - Total cost
 - Share of own budget and SWIM fund
 - c) If the project is requested by beneficiaries, the following items are mentioned.
 - Summary of requests
 - Total number of requested people/farmers

(2) Preparatory Work for Preliminary Selection

The PMO-MFC/SWIM shall prepare a project summary table based on the submitted proposals (reconnaissance reports). This summary shall be the basis of preliminary selection by the TWG.

(3) Preliminary Selection

The preliminary selection shall be done on the basis of the summary table prepared by PMO-MFC/SWIM. The proposed project must be conformable to the definitions, purposes and objectives of the SWIM projects, which are mentioned in Sub-section 1.1.1 in the "Basic Planning Criteria for SWIM Projects". In this guidelines shall the TWG select the candidate projects to constitute the SWIM program. The projects selected are reported to the SWIM Committee through the PMO-MFC/SWIM. The Committee shall have the full power to approve or reject the candidate projects.

SWIM funding for F/S and D/D shall be decided upon by the Committee based on the recommendation of the TWG. The PMO-MFC/SWIM shall make arrangements for budgetary requests to the Central Office of DPWH. In case an agency decides to fund the F/S and the D/D out of its own budget, the agency shall commence immediately after the preliminary selection.

(4) Designation and Coordination of Implementing and Cooperating Agencies

After the preliminary selection, the TWG shall recommend the lead implementing, and the cooperating agencies of the project to the SWIM Committee through the PMO-MFC/SWIM, then the Committee shall designate the agencies as to lead implementing or cooperating.

With the multipurpose scheme of the SWIM projects consisting of a dam and specific structures for irrigation systems, water supply and mini-hydropower plant, it shall be necessary that the lead implementing agency and the coordinating agencies join their efforts in planning and even in construction. In order to implement the project successfully, close coordination between them shall be necessary. In addition, full cooperation of NWRB and BFAR shall be specifically essential for project implementation.

The responsibilities of the lead implementing and coordinating agencies are listed in Section 3.3 of this Annex.

(5) Feasibility Study

The feasibility study (F/S) shall be prepared on the basis of the Basic Planning Criteria. The study shall include the following items:

- 1) Purpose and necessity of the project
- 2) Present condition and current problems in the project area
- 3) Development plan
- 4) Preliminary design of project facilities
- 5) Watershed management plan
- 6) Operation and maintenance plan
- 7) Implementation schedule
- 8) Cost estimate (including disbursement schedule of SWIM and non-SWIM funds)
- 9) Economic and financial evaluation
- 10) Environmental study
- 11) Specific Items
 - Beneficiaries' consent and their intentions for the implementation.
 - Right of way.

In this F/S, the agencies shall propose the executing body of O&M. Should the O&M be undertaken by the beneficiaries' association, the agencies shall clear the possibility of its establishment, and its technical and financial capabilities for O&M. The agencies shall provide for the easement of right of way problems especially land acquisition for project use. Furthermore, environmental study shall be in accordance with Section 3.6 of the "Basic Planning Criteria". In this aspect, the agencies shall obtain approval of the DENR to the project proposal, before the report is submitted to PMO-MFC/SWIM.

(6) Project Screening/Qualification

After the feasibility study, the implementing agencies shall submit the F/S reports to the PMO-MFC/SWIM. The PMO-MFC/SWIM shall screen and qualify the submitted F/S reports according to the general guidelines found in Sub-Section 1.1.2 of the "Basic Planning Criteria".

(7) Technical Evaluation

Following the screening and qualification of proposed projects, the PMO-MFC/SWIM shall technically evaluate the F/S reports of projects which are qualified under SWIM category. The technical evaluation shall be conducted in accordance with the following guidelines mentioned in the "Basic Planning Criteria".

Chapter I	General Guidelines
Chapter II	Guideline for Survey and Investigation
Chapter III	Guideline for Project Planning
Chapter IV	Guideline for Design of Major Structures
Chapter V	Guideline for Operation and Maintenance (O&M) of major Structures (Dam and Its Appurtenant Structures)

For the environmental aspect, the PMO-MFC/SWIM shall confirm the DENR's approval obtained by the implementing agency. The reports short of technical requirements shall be sent back to the originating agency where the studies shall be revised and re-submitted again to the PMO-MFC/SWIM for second-time technical evaluation.

The TWG shall evaluate the possibility of establishing an association and its capability (refer Sub-Section 3.2.1 (5) of this Annex). This shall be one of the requirements for giving a go-signal for the commencement of project implementation. This shall be fixed and authorized by the SWIM Committee.

(8) Priority Ranking

After the technical evaluation, preparatory works for priority ranking and listing of the projects shall be carried out by the PMO-MFC/SWIM. The guidelines for priority ranking are given in Fig.F.3.3. The same guidelines can be applied for the future projects.

The PMO-MFC/SWIM shall prepare a list of priority projects for implementation and the summary of analyses.

(9) Project Listing Proposed for Implementation and Selection of Priority Project

The PMO-MFC/SWIM shall set the conference of TWG, where the project prioritization shall be reviewed and fixed by the TWG based on the documents which shall be prepared by the PMO-MFC/SWIM.

The TWG shall select the priority projects for implementation from the list, and shall submit the results to the SWIM Committee. The Committee shall review the priority projects, and shall name the projects that shall be implemented (i.e. D/D and construction) and the corresponding implementing agencies. Funding shall be released for D/D of approved projects.

(10) Detailed Design

After the release of the funds, the detailed design work shall be immediately started by the lead implementing agency. In the D/D work, the agencies shall prepare the following reports and documents:

- 1) Design Report
- 2) Design Drawings
- 3) Calculation Book
- 4) Tender Documents
(If construction is to be undertaken by contract.)

The D/D of other project component undertaken by the cooperating agencies shall also be started at the same time. All together, the D/D works of both cooperating and lead implementing agencies shall be incorporated to constitute a single report. Consolidation shall be done by the lead implementing agency.

(11) Agreement for Land Acquisition

By the end of D/D stage, right of way negotiations shall be started. Land acquisition for the construction of facilities shall be settled with the land-owners. If the facilities constructed are meant to be

turned over to an association/cooperative, the association shall arrange the agreements, otherwise, the implementing agency shall negotiate for land acquisition with the land-owner.

(12) Evaluation for D/D

After the detailed design, the PMO-MFC/SWIM shall review and evaluate the D/D report. The development plan and design of project facilities are often revised through the D/D work. The items subject for review and evaluation are listed in Sub-Section 1.1.2 of the "Basic Planning Criteria".

The D/D of a proposed project must meet the minimum requirement stated in the "Basic Planning Criteria". Should there be drastic changes in plans and designs after evaluation, the D/D shall be returned to the originating agency for revision. After that, the agency shall again obtain the approval of DENR for the implementation of the project, before D/D reports shall be submitted to the PMO-MFC/SWIM.

(13) Infrastructure Program of SWIM

The draft of the Infrastructure Program of SWIM shall be prepared by the PMO-MFC/SWIM, based on the D/D reports and the results of priority ranking mentioned earlier.

In this program, the following items shall be included:

- 1) Implementation schedule of priority projects
- 2) Project cost
- 3) Funding schedule

The TWG shall review and evaluate this draft, and shall submit the same to the SWIM Committee. The final program shall be reviewed and approved by the Committee.

3.2.2 Implementing (Construction) Stage

(1) Budgetary Requests

The PMO-MFC/SWIM shall submit the Infrastructure Program of SWIM to the Planning Service of DPWH. This program shall be incorporated in the infrastructure program of DPWH. The process of budgetary requests for SWIM (infrastructure programming process of SWIM) which shall be carried out by the PMO-MFC/SWIM is summarized as follows. Details are presented in Fig.F.2.13.

- 1) Preparation of budgetary ceiling per implementing agency,
- 2) Coordination of program formulation with guidelines and budgetary ceiling,
- 3) Setting of projects in accordance with RDC plan and endorsement of the projects, and
- 4) Coordination and adjustments of 2nd and 3rd draft validation.

Along with the budgetary requests for SWIM funds, the implementing agencies shall make allotments for the component of the project which will not be funded under the SWIM program such as facilities for power generation, water supply, and irrigation.

(2) Program of Works

The designated project engineer of a certain project shall prepare the program of works (construction schedule). This program of works shall be submitted to the PMO-MFC/SWIM through the central office of the lead implementing agency.

(3) Assistance to Establishment of Beneficiaries' Association

The project facilities like irrigation and water supply shall be operated and maintained by the beneficiaries' associations. The agency shall initiate and assist the establishment of these associations.

The preparatory works for establishment shall be started at least six (6) months prior to the commencement of construction of irrigation and water supply facilities. This shall include the following items:

- 1) Survey of potential members and enlistment
- 2) Election of Directors and Treasurer
- 3) Preparation of Articles of Incorporation and By-Laws
- 4) Registration to the Securities and Exchange Commission
- 5) Acquisition of water permit
- 6) Acquisition of right of way
- 7) Preparation of Memorandum of Agreement and Certificate for Construction

For the mini-hydropower projects, there shall be no preparatory works for establishment of cooperatives because they are already existing considering that this project component of the SWIM is only supplemental to the existing hydropower plant.

(4) Evaluation and Conditions for Commencement of Construction

The SWIM funds for preparatory works and construction shall be released to the DPWH by the Department of Budget and Management, after 14-15 months from the time budgetary requests were prepared.

Prior to the release of SWIM fund to the lead and co-operating agencies, the conditions required for the start of construction shall be evaluated and confirmed by the PMO-MFC/SWIM. The SWIM fund shall be released for projects which shall meet all the conditions, after which, preparatory works and construction shall be commenced by the agencies. The conditions are listed below:

- 1) Project components whose funding is to be provided by the implementing agencies should be assured and made available to insure continuity of project implementation.
- 2) Problems on right of way and land acquisition should have been settled.
- 3) Beneficiaries' associations should have been organized with duly executed Articles of Incorporation and By-Laws, and duly registered with the Securities and Exchange Commission. Necessary training such as "leadership" should have been started.
- 4) For projects which will be turned over to beneficiaries' associations, Memorandum of Agreement and Certificate for Project Construction should have been accomplished, signed and concluded between the association and the implementing agency.
- 5) In case of the mini-hydropower, loan contract between the cooperative and NEA should have been executed.
- 6) For the operation and maintenance of dam, the following should have been established:
 - (a) The organization that shall undertake the operation and maintenance of dam,
 - (b) The source of O&M cost, in case it is carried out by the implementing agency.
 - (c) In case O&M is carried out by beneficiaries' association;
 - association's technical capability
 - association's financial capability
 - schedule and training program of the implementing agency for the associations

(5) Preparatory Works for Construction

Before the commencement of construction, preparatory works including land acquisition, construction of access roads, set-up of construction office, etc. shall be undertaken by the lead and cooperating agencies.

In case of small projects which are usually completed within a year, construction shall be started immediately after preparatory works.

(6) Screening of Contractor and Construction

As in the present, there shall be three means of undertaking construction; 1) by contract, 2) by force account, and 3) by both contract and force account. The implementing agencies shall have the full authority to decide which means the construction shall be undertaken.

In case construction is undertaken by contract, the implementing agency shall prepare for the bidding after the release of fund. The preparation for bidding shall consist of (1) advertisement of the bidding for the items of work to be contracted, (2) evaluation of tender documents, (3) screening of contractors. All pre-qualified contractors shall have the opportunity to participate in the bidding. As the usual case, the lowest bidder shall win and the agency shall enter into contract with the winning bidder.

(7) Monitoring and Evaluation System for Construction

In order to ensure efficient implementation and management of the Project, improved monitoring and evaluation systems shall be introduced. The general concepts of the system shall be as follows: The regional/district offices of implementing agencies shall submit to their central offices periodic reports which shall include various administrative and technical information such as financial status, construction progress, and the status of beneficiaries' institutionalization.

In the same manner, the cooperating agencies who are implementing the non-infrastructure components of the project shall prepare its progress report. These shall be applicable to components which are concurrently implemented with the infra-structure. These reports shall be submitted to the lead implementing agency.

The lead implementing agency shall consolidate the various reports and come up with a single status progress report for a project being implemented. Should the agency be implementing more than one project at a time, the agency shall prepare progress reports for each project separately. This shall be submitted periodically to the PMO-MFC/SWIM. Progress evaluation of the project at this level shall be conducted. Evaluation of the progress of project implementation shall be undertaken by assessing performance and determining the impediments.

These reports shall be discussed at the TWG meetings. The TWG meetings being attended by the different lead implementing and coordinating agencies shall be a forum for crystallizing ideas for the improvement of SWIM project implementation. Better techniques and approaches shall be shared by the different agencies through this forum. Countermeasures to the impending problems shall be formulated at this meeting and shall be proposed to the steering committee for consideration in policy formulation.

(8) Final Inspection and Preparation of Completion Report

After completion of the construction, the central/regional offices of agencies shall carry out final inspection, and shall prepare the completion report. Final inspection of the dam shall be done after the initial pounding. The reports shall be submitted to the PMO-MFC/SWIM. The TWG and Steering Committee shall review this report.

(9) Preparation of O&M Manual

The operation and maintenance manual shall be prepared by each implementing agency. This shall be handed over to the associations/cooperatives during the turn-over of the facilities. At this point, the agreement for turn over shall be contracted between the implementing agency and associations/cooperatives. The key items that shall be included in the manual are presented in the "Basic Planning Criteria".

(10) Turn Over of the Project Facilities

The central/regional office shall turn over the project facilities to the executing body of O&M. Should the O&M executing body be the beneficiaries' association, it shall be necessary to contract a turn over agreement between the association and the agency. A sample agreement is presented in Reference IV.

3.2.3 Operation and Maintenance Stage

(1) Operation and Maintenance

The executing body of O&M shall be as follows:

- Dam : Beneficiaries' Association (Farmers' Associations, IA or BWSA)/Implementing Agency
* The implementing agency shall decide on the O&M body of the dam.
- Irrigation System : Beneficiaries' Associations (Farmers' Association or IA)
- Water Supply System : Beneficiaries' Association (BWSA)
- Mini-hydropower : All the facilities including dam and power plant shall be operated and maintained by the Electric Supply Cooperatives.
- Watershed : The Forest Management Bureau shall undertake the maintenance of the watershed component of the projects.

The organization of the Farmers' Association, IA, BWSA and Electric Supply Cooperatives are mentioned in Section 3.6 of this Annex.

In case of the fish culture component, the BFAR shall provide the investment on production by introducing fingerlings themselves to the impounded water. The care and propagation of these fingerlings shall be undertaken by the association/cooperative (usually the irrigator's association) with the necessary assistance from the BFAR.

The beneficiaries' associations/cooperatives shall be generally responsible for the following:

- 1) to properly operate and maintain the project facilities,
- 2) to attend training which will be conducted by the agencies,
- 3) to collect service fees from its members,
- 4) to pay amortization fees to the agencies,
- 5) to prepare and file the data relating to O&M work, and
- 6) to submit the required financial and physical progress accomplishment reports for monitoring purposes to the agencies.

(2) O&M Cost

Sharing of O&M cost shall be as follows:

Irrigation and Water Supply Facilities

- Dam : Beneficiaries' Association/Implementing Agency
- Irrigation System : Beneficiaries' Association
- Water Supply System : Beneficiaries' Association

Mini-hydropower Facilities

All O&M costs including dam, power plant, etc. shall be borne by the Electric Supply Cooperatives.

Watershed

The Forest Management Bureau shall bear the maintenance cost of the watershed area developed by SWIM project.

The basic costs of operation and maintenance shall be covered by the organization/agency responsible. The collection procedure is mentioned in Section 5.6 in the "Basic Planning Criteria".

(3) Amortization Fees

While SWIM-funded components of the project are dole outs, the cost funded by the implementing agency are not. This portion of the project cost shall be amortized by the beneficiaries. This idea calls for the approval of the beneficiaries to the implementation of the project and for the same reason, a contract/agreement of amortization shall be executed between the implementing agency and the beneficiaries' associations/cooperatives before the commencement of construction.

(4) Assistance to Associations

The implementing/coordinating agencies shall assist the O&M of associations/cooperatives. Assistance shall be supplied by the agencies to the associations/cooperatives in their activities especially operation and maintenance. Assistance shall be in the form of the following:

- 1) Dispatch of technician
- 2) Training for O&M
- 3) Technical assistance for repair of structures
- 4) Assistance for financial management.

As in the case of NIA implemented projects, a community organizer (employed by the agency) shall supervise the activities of the associations pertaining to O&M for the first two cropping. During this period, the staff of the associations shall undergo an on-the-job training.

(5) Monitoring and Evaluation for O&M

The operation and maintenance of the projects shall be monitored and evaluated by the central offices of the implementing agencies, through their regional/district offices. The reports and evaluations shall be submitted to the Steering Committee through PMO-MFC/SWIM and TWG. The Committee and TWG shall study the O&M reports of SWIM projects from

which they shall formulate or revise operational policies, targets, and decisions especially on matters concerning designation of implementing agencies, and O&M executing body.

Through monitoring and evaluation, various information can be accumulated by the management of the responsible agency for improvement of operation and maintenance of the system. Innovations in policies of implementation can be developed out of the present conditions and situations and fed to the on-going and future projects, or even to operation and maintenance itself.

3.3 Authorities and Responsibilities

The authorities and responsibilities of each organization involved in implementing the SWIM Program shall be as follows:

(1) SWIM Steering Committee

- 1) to formulate operational policies and targets,
- 2) to designate the implementing and cooperating agencies,
- 3) to decide on the implementation of projects,
- 4) to review and adopt annual programs and budget, and
- 5) to review and evaluate the completion and O&M reports.

(2) TWG

- 1) to evaluate the reconnaissance, F/S and D/D reports under the category of SWIM submitted by the different implementing agencies,
- 2) to recommend implementing/coordinating agencies,
- 3) to conduct the prioritization of projects according to budgetary ceiling set by DPWH,
- 4) to make project listing proposed for implementation,
- 5) to select priority projects,
- 6) to prepare the annual SWIM integrated programs, and
- 7) to review and evaluate the completion and O&M reports.

(3) PMO-MFC/SWIM

- 1) to conduct preparatory works for the preliminary selection of proposed projects (reconnaissance level) submitted from the lead implementing agencies,
- 2) to conduct the screening/qualification and technical evaluation of proposed projects (F/S level),
- 3) to conduct preparatory works for the selection of priority projects (F/S level) and the annual SWIM integrated programs,
- 4) to evaluate the D/D and the conditions for commencement of construction,
- 5) to coordinate the implementation of SWIM projects,
- 6) to make arrangement for the budgetary requests of SWIM fund,
- 7) to evaluate the progress, completion and O&M reports, and
- 8) to develop standards, criteria and guidelines for all technical activities involved in planning, design, construction, utilization, and operation and maintenance of the facilities.

(4) Lead Implementing Agencies

- 1) to make a reconnaissance and identify proposed projects,
- 2) to submit project proposals to PMO-MFC/SWIM for possible funding under the SWIM Program,
- 3) to obtain beneficiaries' consent for project implementation and acquisition of land required for the construction of facilities,
- 4) to prepare feasibility studies and detailed designs,
- 5) to provide the funds for the project component which is not funded by SWIM,
- 6) to acquire lands for the construction of facilities,
- 7) to implement projects duly programmed and funded by SWIM either by contract or force account,
- 8) to prepare and submit periodic financial and physical progress reports to PMO-MFC/SWIM, and
- 9) to liquidate funds released and to submit reports and pertinent financial documents.

(5) Cooperating Agencies

- 1) to participate in reconnaissance, project identification, feasibility studies and detailed designs,
- 2) to assist the O&M of beneficiaries' associations,

- 3) to implement the non-infrastructure component of the project, and
- 4) to prepare and submit periodic progress reports to the lead implementing agency.

3.4 Release of SWIM Fund

The SWIM fund shall be released in the following cost items.

	Dam	Irrigation	Mini-Hydropower	Water Supply	Watershed Management
I. Direct Cost & Contractor's Tax	SWIM	Non	Non	Non	SWIM
II. Indirect Cost					
1. Land Acq. & Compen.	SWIM	Non	Non	Non	Non
2. Gen. Administration	SWIM	Non	Non	Non	SWIM
3. Engineering Services					
(1) F/S	SWIM	SWIM	SWIM	SWIM	SWIM
(2) D/D	SWIM	SWIM	SWIM	SWIM	SWIM
(3) C/s ^{/1}	SWIM	Non	Non	Non	SWIM
4. Physical Contingency	SWIM	Non	Non	Non	SWIM
5. Price Contingency	SWIM	Non	Non	Non	SWIM

^{/1} Supervision

3.5 Beneficiaries' Associations

The beneficiaries' association is responsible for operation and maintenance of irrigation, water supply, and mini-hydropower generation projects. There are three kinds of the associations to be established in SWIM projects, as shown below:

	<u>Agencies Concerned</u>
Farmers' Association (Irrigators' Association)	NIA, BSWM
Water Supply Association	DPWH
Electric Supply Cooperatives	NEA

The fish culture component of the SWIM project has no operation and maintenance works because there are no specific facilities related to fish culture alone. Fish culture component shall be assumed by BFAR and the farmers' associations established by the implementing agencies shall be the beneficiary. Fish culture shall be propagated by the association under the assistance of BFAR.

At present, the implementing agencies have developed a system for institutionalizing beneficiaries' associations of irrigation and hydro-power. This present system shall be adopted in implementing projects in the future.

3.5.1 Farmers' Association

At present, the establishment of farmers' associations are initiated by two agencies, the BSWM and the NIA. The organizational structure of irrigators' associations described hereinafter are based on the structure each adopted by the BSWM and NIA. This developed organizational structure shall apply to institutional development of irrigation beneficiaries' association of all SWIM projects with irrigation component.

(1) Organization

The present organization chart of Irrigators' Association is presented in Fig.F.2.12 and description of the structure in Reference VII. The organization structure varies from the pre-construction phase (initial stage of establishment) to the O&M stage.

3.5.2 Barangay Waterworks and Sanitation Association (BWSA)

The O&M of water supply project in the SWIM program shall be the same institutional procedure adopted by the water supply program under RA 6716.

Under RA 6716, the water supply program has been undertaken by the DPWH from 1987. This program aims to give the benefits of safe and adequate water supply directly to the people mainly in the rural areas. The Project Management Office for Rural Water Supply (PMO-RWS) in DPWH has direct responsibility for the project implementation. Barangay Waterworks and Sanitation Association (BWSA) undertake O&M of facilities, which is established parallel to the project implementation.

As stated in RA 6716 Implementing Guideline (DPWH, 1989), the BWSA has the following responsibilities:

- 1) to attend the training to be conducted by the DPWH or the designated non-government organization,
- 2) to properly operate and maintain the constructed water facilities,
- 3) to collect fees from its members, and
- 4) to observe sanitary practices.

The BWSA is registered with its municipal or city council, and is formed by the following three phases:

- 1) Pre-formation Process - which is basically info dissemination and consultation, enables the potential BWSA members to understand the facility's benefits, features and the responsibilities attached to its acquisition.
- 2) Formation Process - awakens community interest and commitment. In this process, community members will be organized in coordination with the barangay captain, through a membership organizational meeting. The Board of Directors and Officers will be elected from among the potential BWSA members. After this, a manifesto resolution will be submitted to the municipal/city council for the BWSA to be officially registered there.
- 3) Post-formation Process - the BWSA is equipped with the technical management skills to competently operate, maintain and sustain the system. Since the officials of the BWSA are assumed not to

possess the appropriate experience to run the association, training will be conducted.

A series of training activities will be conducted at the barangay levels synchronized with the different stages of project implementation. These training activities are as follows:

- 1) Orientation Conference
- 2) Information Dissemination Meetings
- 3) Membership Organization Meeting
- 4) BWSA Basic Skills Training

3.5.3 Electric Supply Cooperatives

The mini-hydropower generation projects shall be operated and maintained by the existing electric supply cooperatives which has numbered to 115 all over the country, as mentioned earlier. Institutional development scheme is already established as guided by Presidential Decree No. 269. The articles of Incorporation and the By-Laws of the cooperatives are presented in Reference VI.

4. INSTITUTIONAL PROCEDURES FOR THE TEN-YEAR ACTION PROGRAM

4.1 General

For the next ten years of the SWIM program, a number of projects prioritized through the Master Plan Study shall be implemented through the Ten-Year Action Program. There are tentatively 230 projects being considered for this program. The table below shows the listing of the 230 projects according to the stage of implementation and the agency that proposed the project.

Proponent Agency	Status of Proposed Projects			Total
	Pre-F/S	F/S	D/D	
DPWH	10	5	8	23
NIA	59	-	8	67
BSWM	10	-	140	140
Total	69	5	156	230

4.2 The Ten-Year Action Program

The general concepts for preparation of the implementing procedures for the Ten-Year Action Program are as follows.

- 1) The implementing procedure shall be formulated with the assumption that the SWIM fund comes from the national budget under foreign-assisted program.
- 2) There shall be a SWIM fund release for F/S, D/D, and construction.
- 3) The implementation procedure shall basically follow the general procedure presented in Fig.F.3.1, although the starting point of implementation differs from one project to another according to the stage of implementation (i.e. Pre-F/S, F/S, or D/D stage).

- 4) The annual programming of projects under the master plan study shall be the responsibility of the PMO-MFC/SWIM.
- 5) All project costs shall be up-dated and reviewed before the start of implementation.
- 6) Prioritization of projects shall be confirmed by the TWG basing on the updated cost. The annual integrated programs shall be prepared on the bases of the said priority ranking.
- 7) The watershed management component of the project under D/D stage starts from feasibility study.

The proposed implementation procedure for the Ten-Year Development Plan is presented in Figs.F.4.1 to F.4.3.

The timeframe of implementation is presented in Fig.F.4.4. The implementing period between the starting point (initiation of project) to the commencement of preparatory works is summarized as follows:

<u>Present Status</u>	<u>Period</u>	<u>Starting Year of Construction</u>
D/D	1 year	2nd year
F/S	2 years	3rd year
Pre-F/S	2 years	3rd year

If construction period of a project takes one year, the total length of time from detailed design stage to completion of the construction stage will be two (2) years or less. In the implementation of SWIM projects, there are two kinds of budgetary requests, i.e., 1) F/S and D/D, and 2) preparatory works and construction. For each request, it takes 14 to 15 months before the fund is released (see Fig.F.2.13). There is such a prolonged period of budgeting process, hence, to allow continuity of project implementation, budgetary requests for construction shall be made even before detail design of the project is started.

5. RECOMMENDATIONS

5.1 Information Drive for SWIM Projects

The SWIM program has a lofty goal of making the Philippine economy grow-up by way of improving the standard of living in the rural area. From its initial goal of flood control, it has embarked into supporting the national goal of self-sufficiency in food via development of irrigation, fish culture, and power generation, all of these to the betterment of the rural folks. It is however unfortunate that this noble purpose of the program is not quite realized by the people. More than rising as a community, self-reservation still prevailed in the rural individuals. This is one of the reasons why right-of-way problems remains to be a pressing problem in more projects. Taking of lands for construction of facilities has created hostilities between the project implementors and the beneficiaries. Cases of expropriation have always left a bitter taste in the implementation of projects. All of these happen because of the people's lack of information. In due consideration of this realities, it is proposed that promotion of the SWIM program be more extensive and intensive. All sorts of media may be employed such as radio, local newspaper, television, handbills and posters. With the understanding of the program, cooperation would be easier to achieve. Particularly, making the goals and objectives of the project known to the people would be facilitative in obtaining the beneficiaries' consent for implementation, thereby eliminating problems such as those of right-of-way and land acquisition.

5.2 Strengthening of the SWIM-Project Management Office (SWIM-PMO)

The proposed institutional development plan rests a wider scope of responsibilities to the Project Management Office of the SWIM. The PMO shall have the following additional responsibilities:

- (1) To conduct preparatory works for the preliminary selection of proposed projects submitted by the agencies.

- (2) To conduct the screening/qualification and technical evaluation of proposed projects
- (3) To conduct preparatory works for the selection of priority projects and the annual SWIM integrated programs
- (4) To evaluate the D/D and the conditions for commencement of construction

In effect, the expansion of the PMO-SWIM functions shall require an additional employment of technical and administrative staff and also, entail a change in the organizational structure of the office. In line with this, it is recommended that the office be divided into smaller units by grouping related works. This way, more quality output can be expected brought about by specialization which is inherent in the Principle of Division of Labor. It is further recommended that organization analysis be conducted for the purpose of determining the adequacy of the personnel complement of the PMO-SWIM.

Strengthening the PMO-SWIM shall involve training for personnel development especially in the technical and managerial aspects. It is recommended that an effective training program for technical personnel be developed and implemented. Among others, the training program should be focused towards attaining efficiency and higher standard of quality of work.

At present, the office has only one computer facility. With the increased quantity of work on monitoring and evaluation, the office would find the job more exacting and unattainable. In turn, this could lead to inefficiency and ineffectiveness. In due consideration, it is recommended that the PMO be provided with adequate computer facilities.

Subsequently, today's predicament of the PMO-SWIM lies in its lack of congenial office space, equipments, and vehicles. The same should be provided for the office if optimum efficiency is to be expected.

5.3 Development of Training Program for SWIM Staff

The success of project implementation largely lies on the quality of people that compose the management and implementation staff. Every person possesses a potential and this can only be tapped through proper motivation and a good training program which would enhance knowledge and develop skills. A well-improved institutional procedure and a well-motivated and activated staff makes a perfect combination in the achievement of the program goals. In this connection, it is recommended that a periodic training program for the staff involved in the project implementation be designed to maintain a high quality of PMO-MFC staff, as well as the technical staff of the implementing agencies.

5.4 Improved System of Monitoring and Evaluation

The monitoring system of the SWIM shall be comprehensive and encompassing. (The flow of the system is described on Fig.F.3.1 and explained in Chapter 3. Part 3.2.2.(7) of this Annex.) For each project, the consolidated report which shall be submitted by the implementing agency shall include the following:

(1) General Information

- (a) project title (name of the project)
- (b) project profile (This should include the components of the project, the facilities to be constructed such as dam and canals for irrigation, power house for hydropower plant, etc.)
- (c) Lead implementing agency and the cooperating agencies
- (d) municipality/ies served by the project
- (e) project cost (This should include breakdown of cost per component)
- (f) source of funding
- (g) implementation schedule (date started and target date of completion, revisions if there are)

(2) Physical Accomplishment of the Project

Among others, this shall be the most important part of the report. This part shall show the progress of work in the project and shall be better shown in tables (see Fig.F.5.1 for suggested format) and charts (See Fig.F.5.2 and Fig.F.5.4 for suggested formats). The physical accomplishment of the project shall be expressed as weighted percentages of the value of work accomplished against the programmed quantities of work. Equally important data that shall be shown here is the actual cost of accomplishment. The charts shall be important tools of showing the accomplishment and financial status of the project.

(3) Financial Status of the Project

- (a) the total project cost
- (b) the project program cost of the current year
- (c) funding received for the project
- (d) funding received for the current year program of the project
- (e) funding received for the reporting period
- (f) expenditures incurred within the reporting period
- (g) expenditures incurred for the current year
- (h) total fund balance

The above data shall be presented in a table. Suggested format for this subject is found in Fig.F.5.3. Relationship between programmed and actual expenditures schedule shall be presented in a chart of expenditures mentioned above.

(4) Contract Works Status

This portion shall contain two parts, one is the contract summary status which shall be composed of the following information:

- (a) the type of contract
- (b) the name of the contract firm undertaking the work
- (c) the contract amount

- (d) change orders and extra work orders
- (e) supplemental agreements
- (f) contract duration (extension, if there is)
- (g) effectiveness of contract and expiry date (revisions, if there are)
- (h) percentage of accomplishment

The other portion of the report shall contain the details of the contract works accomplishment. It shall be presented in a table that shall show the progress of accomplishment vis-a-vis the contracted items. The sample format is shown in Fig.F.5.5.

(5) Summary of the Report

This portion of the report shall be in the narrative form. The contents shall be the summary of the report. It shall consist of the following information:

- (a) overall project status (all components)
- (b) overall project financial status
- (c) summary of activities in each project component
- (d) overall status of contract works
- (e) problems encountered in the implementation of the project

For projects with an implementation schedule of more than one year, charts for overall implementation schedule and status and overall scheduled expenditures and status shall be prepared. These monitoring formats shall contain the cumulative accomplishment and expenditures per quarter, respectively (Sample formats are shown in Fig.F.5.6 and Fig.F.5.7). Explanation of suggested formats are found in Reference VIII.

5.5 Beneficiaries' Organizations

Beneficiaries should be organized. Since there is no single-purpose project, all SWIM projects should have at least one beneficiaries'

organization to take charge of the operation and maintenance whether fully or partially.

For the establishment of the Farmer Irrigators' Associations, the National Irrigation Administration through its Institutional Development Department has an extensive knowledge and strategies in the job. The agency has attained a significant mark of success in its irrigation development program via farmer's institutional development or the so-called participatory approach. The strategies of NIA is recommended to be adopted to other agencies that may implement irrigation component of SWIM.

As in the Institutional Development Plan of this report, the water supply beneficiaries will be organized into Barangay Water Supply Association by the PMO-Rural Water Supply of the DPWH. The activities of the PMO-SWIM and PMO-RWS should interface somewhere. Like the other beneficiaries' organization, the establishment of the BWSA should be initiated before the start of construction. It is therefore necessary that SWIM projects with water supply component be in coordination with the Rural Water Supply Program.

TABLES

Table F.2.1 Annual Budget of SWIM Projects (1982 - 1988)

(UNIT: Pesos 1,000)

Year	SWIM Fund			Total
	Construction	F/S & D/D	Mini-Dam	
1982	49,000	8,000	0	57,000
1983	35,435	0	0	35,435
1984	21,539	865	0	22,404
1985	18,000	0	7,000	25,000
1986	41,350	0	7,000	48,350
1987	61,100	0	0	61,100
1988	74,403	0	20,876	95,279
Grand Total	300,827	8,865	34,876	344,568

Source: Finance and Management Office of PMO-SWIM

Table F.2.2 Actual Expenditures for Construction of SWIM Projects (1982-1988)

(UNIT: Pesos 1,000)

Implementing Agency	Total Expenditures for SWIM			Share in SWIM Fund (%)
	SWIM Fund	Own Budget	Total	
PMO-SWIM	103,387	0	103,387	45
NIA	24,765	2,116	26,881	11
BSWM	14,957	132	15,089	7
NEA	4,408	19,997	24,405	2
FMB	20,809	0	20,809	9
FSDC	59,418	8,374	67,792	26
TOTAL	227,744	30,619	258,363	100

Table F.2.3 Actual Budgets and Expenditures of SWIM Projects by Implementing Agency (1982-1988) (1/2)

(UNIT: Pesos)

Implementing Agency Name of Projects	1982		1983		1984		1985		1986		1987		1988		Total	
	Budget	Expenses	Budget	Expenses	Budget	Expenses	Budget	Expenses	Budget	Expenses	Budget	Expenses	Budget	Expenses	Budget	Expenses
Banabao	378,280	0	378,280	378,280	0	0	0	0	0	0	0	0	0	0	378,280	378,280
Perac	15,022,510	7,042,094	5,087,616	5,087,616	965,000	965,000	970,000	965,000	0	0	0	0	0	0	15,022,510	14,052,510
Caulanan	756,560	0	756,560	756,560	0	0	0	0	0	0	0	0	0	0	756,560	756,560
Kirog	1,232,990	0	754,560	754,560	0	0	478,430	0	0	0	0	0	0	0	1,232,990	754,560
Despising	1,898,700	0	0	0	0	0	1,898,700	1,898,700	0	0	0	0	0	0	1,898,700	1,898,700
San Ramon	1,812,340	0	0	0	0	0	0	0	1,812,340	2,661,680	0	0	0	0	1,812,340	2,661,680
Changnagan	1,843,000	0	0	0	0	0	0	0	0	0	0	0	1,843,000	1,843,000	1,843,000	
Kaniparan	460,750	0	0	0	0	0	0	0	0	0	0	0	460,750	460,750	460,750	
Pinal Fall	24,228,300	0	965,000	965,000	3,309,950	3,309,950	9,525,850	9,506,000	9,506,000	9,506,000	9,506,000	9,506,000	9,506,000	24,228,300	23,321,040	
Jero	60,350,483	0	7,337,860	7,337,860	8,038,450	8,038,450	16,974,273	16,974,273	34,008,200	34,008,200	34,008,200	34,008,200	34,008,200	411,562	60,350,483	57,260,345
Sub-total	107,983,913	7,042,094	5,087,616	5,087,616	12,313,400	12,313,400	31,859,593	31,040,653	34,008,200	34,008,200	6,726,950	2,749,402	107,983,913	103,387,425	103,387,425	

(2) NIA

Name of Projects	1982		1983		1984		1985		1986		1987		1988		Total	
	Budget	Expenses	Budget	Expenses	Budget	Expenses	Budget	Expenses	Budget	Expenses	Budget	Expenses	Budget	Expenses	Budget	Expenses
Ibaba	10,771,000	0	6,000,000	2,116,000	0	0	2,653,000	0	0	0	0	0	0	0	8,655,000	2,116,000
Calatog	36,000,000	0	0	0	0	0	0	0	0	0	0	0	0	0	10,250,000	0
Miral	37,000,000	0	0	0	0	0	0	0	0	0	0	0	0	0	5,860,000	0
Sub-total	83,771,000	0	6,000,000	2,116,000	0	0	2,653,000	0	0	0	0	0	0	0	24,765,000	2,116,000

(3) BSWM

Name of Projects	1982		1983		1984		1985		1986		1987		1988		Total	
	Budget	Expenses	Budget	Expenses	Budget	Expenses	Budget	Expenses	Budget	Expenses	Budget	Expenses	Budget	Expenses	Budget	Expenses
Panaycan	336,527	11,543	0	0	0	0	0	0	0	0	0	0	0	0	324,894	11,543
Calapan	157,002	5,771	0	0	0	0	0	0	0	0	0	0	0	0	151,231	5,771
Nagabuan	2,065,673	0	2,060,428	5,245	0	0	0	0	0	0	0	0	0	0	2,060,428	5,245
Durugap	1,895,167	0	1,890,742	4,425	0	0	0	0	0	0	0	0	0	0	1,890,742	4,425
Masirao	2,258,221	0	335,665	10,712	1,902,105	9,739	0	0	0	0	0	0	0	0	2,237,770	20,451
Ambay	2,132,617	0	0	0	623,211	13,440	1,394,159	12,223	0	0	0	0	0	0	2,017,370	25,663
Bacay	1,219,304	7,968	0	0	0	0	0	0	0	0	0	0	0	0	2,012,971	15,995
Cagdaro	909,107	0	153,800	3,056	63,605	3,033	583,600	3,033	0	0	0	0	0	0	801,005	9,107
Cabanatuan	5,209,204	0	0	0	0	0	1,900,582	4,602	0	0	0	0	0	0	1,900,582	4,602
Kadimilian	1,331,772	0	279,138	8,108	604,045	8,107	677,078	8,107	0	0	0	0	0	0	1,560,261	24,322
Subtotal	15,464,594	13,18,483	25,282	4,719,773	31,526	3,192,966	4,555,419	27,987	0	0	0	0	0	0	14,957,254	13,082,920

Table F.2.3 Actual Budgets and Expenditures of SWIM Projects by Implementing Agency (1982-1988) (2/2)

(UNIT: P=000)

Name of Projects	Total Budget	1982		1983		1984		1985		1986		1987		1988		Total Expenditure		
		PMO-SWIM	NEA	PMO-SWIM	NEA	PMO-SWIM	NEA	PMO-SWIM	NEA	PMO-SWIM	NEA	PMO-SWIM	NEA	PMO-SWIM	NEA	PMO-SWIM	NEA	
Besak	11,790,776	0	1,087,959	0	1,799,378	0	5,003,146	0	0	0	0	0	0	0	0	0	7,890,483	7,890,483
Manusupat	7,523,577	0	2,599,267	657,436	320,342	657,436	1,624,658	0	0	0	0	0	0	0	0	1,314,872	5,830,652	7,145,524
Kurambang	11,969,002	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,093,018	6,275,486	9,368,504
Subtotal	31,293,353	0	3,687,226	657,436	320,342	657,436	3,424,036	0	0	0	0	0	0	0	0	3,093,018	6,275,486	24,404,511

Name of Projects	Total Budget	1981/82		1983		1984		1985		1986		1987		1988		Total Expenditure		
		PMO-SWIM	FMB	PMO-SWIM	FMB	PMO-SWIM	FMB	PMO-SWIM	FMB	PMO-SWIM	FMB	PMO-SWIM	FMB	PMO-SWIM	FMB	PMO-SWIM	FMB	
Ambaklae-Binga	4,320,000	2,443,695	0	946,907	0	144,750	0	0	0	0	0	0	0	0	0	3,535,552	0	3,535,552
Sua Fe	3,500,000	1,066,034	0	711,740	0	313,625	0	0	0	0	0	0	0	0	0	2,091,399	0	2,091,399
Pasig-Tiribu	1,500,000	969,130	0	284,885	0	193,000	0	0	0	0	0	0	0	0	0	1,447,015	0	1,447,015
Buangao	3,776,000	0	0	864,154	0	241,250	0	176,468	0	432,617	0	776,000	0	960,300	0	3,450,789	0	3,450,789
Burawan	3,000,000	0	0	0	0	453,936	0	234,240	0	431,640	0	776,000	0	1,047,600	0	2,943,416	0	2,943,416
Lawaan	2,744,250	0	0	0	0	386,000	0	226,734	0	289,620	0	950,600	0	846,810	0	2,699,764	0	2,699,764
Panacan	2,603,500	0	0	0	0	337,750	0	172,101	0	284,000	0	950,600	0	826,350	0	2,570,801	0	2,570,801
EPZA	2,970,000	0	0	712,216	0	356,857	0	230,727	0	0	0	247,156	0	523,800	0	2,070,756	0	2,070,756
Subtotal	24,513,750	4,478,839	0	3,519,902	0	2,427,168	0	1,040,270	0	1,637,877	0	3,700,356	0	4,204,860	0	20,809,292	0	20,809,292

Name of Projects	Total Budget	1981/82		1983		1984		1985		1986		1987		1988		Total Expenditure		
		PMO-SWIM	FSDC	PMO-SWIM	FSDC	PMO-SWIM	FSDC	PMO-SWIM	FSDC	PMO-SWIM	FSDC	PMO-SWIM	FSDC	PMO-SWIM	FSDC	PMO-SWIM	FSDC	
Miwak	500,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	500,000	0	500,000
Sua Cruz	4,216,903	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,416,903	0	5,416,903
San Roque	6,486,518	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,316,518	0	6,316,518
F. Magaysay	15,530,816	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15,220,201	0	15,220,201
Manayon	3,201,775	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,555,023	0	2,555,023
Sua Barbara	4,595,136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,818,136	0	2,818,136
Si-Utot	7,820,725	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,820,725	0	6,820,725
Bacusan	8,284,900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,368,650	0	9,368,650
Sua Maria	6,204,159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,393,923	0	4,393,923
Lupao	12,728,687	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,627,522	0	1,627,522
San Julian	9,306,473	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,258,033	0	5,258,033
Subtotal	78,876,090	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,007,810	0	6,007,810
																98,417,889	0	98,417,889

SOURCE: PMO-SWIM and each of implementing agencies

Table F.2.4 Comparison of Annual Program & Fund Released per Project (1/8)
 - Year 1982 -

Name of Project	Implementing Agency	Project Cost	Program for 1982	Fund Released	
				DPWH	IA
1. Porac	PMO-SWIM	15,022,510	7,042,094	8,541,895	-
Sub-Total		15,022,510	7,042,094		
2. Mantayupan	NEA	7,533,577	4,274,000		1,286,385
3. Udiawan	-do-		10,375,000		
Sub-Total		37,578,597	28,733,188	8,541,895	1,286,385
4. Ambulao-Binga	FMB	4,320,000	1,454,000	1,453,695	
5. Sta. Fe	-do-	3,300,000	1,693,000	1,066,034	
6. EPZA	-do-	2,942,973	2,427,000	872,217	
7. Pasig-Timbu	-do-	1,500,000	1,224,000	969,130	
Sub-Total		12,062,973	6,798,000	4,361,076	0
8. Pamuctan	BSWM	336,527		324,894	11,543
9. Calapan	-do-	157,002		151,231	5,771
10. Bacsay	-do-	1,219,304		824,358	7,968
Sub-Total		1,712,833	0	1,300,483	25,282
11. Bacnotan	FSDC	8,284,900	6,655,000		
12. Sta. Barbara	-do-	4,595,136	3,294,000		
13. Manayon	-do-	3,201,773	2,219,000		
14. Dam 4, Fort Magsaysay	-do-	15,530,816	3,381,000		
Sub-Total		31,612,625	15,549,000	0	0
Grand Total		97,989,538	58,122,282	14,203,454	1,311,667

Note: IA - Implementing Agency

Table U.2.4 Comparison of Annual Program & Fund Released per Project (2/8)
- Year 1983 -

Name of Project	Implementing Agency	Project Cost	Program for 1983	Fund Released	
				DPWH	IA
1. Porac	PMO-SWIM	15,022,510		4,549,375	-
2. Pinal Fall	-do-	24,228,300	* 1,600,000	682,783	
3. Saytan	-do-		1,600,000	332,755	
4. Kirong	-do-	1,232,990	800,000		
5. Bolo	-do-	21,445,000	800,000	290,700	
6. Aulo	-do-	46,422,000	* 1,600,000	3,304,498	
7. Caulaman	-do-	756,560	800,000		
8. Gumain	-do-		800,000		
9. Baras	-do-	4,432,000	1,200,000	387,600	
10. San Jose	-do-	21,184,000	* 800,000	1,898,136	
11. Tulariquin	-do-	378,280	* 400,000	2,372,412	
12. Banadero	-do-	28,860,000	400,000	444,191	
13. Nabua	-do-	60,350,483	1,050,000	207,972	
14. Jaro	-do-	6,748,000	* 5,000,000	2,373,474	
15. Guimba	-do-		1,320,000		
Sub-Total		231,060,123	18,170,000	16,843,896	0
16. Ilihan	NIA	10,771,000		6,000,000	2,116,000
17. Cabacanan	-do-	19,022,000	* 1,200,000		
18. Calango	-do-	36,000,000	* 800,000		
Sub-Total		65,793,000	2,000,000	6,000,000	2,116,000
19. Nagsabaran	BSWM	2,065,673		2,060,428	5,245
20. Darapidap	-do-	1,895,167		1,890,742	4,425
21. Malinao	-do-	2,258,221		335,665	10,712
22. Cagdarao	-do-	909,107		153,800	3,036
23. Kadingilan	-do-	1,281,772		279,138	8,108
24. Sayab	-do-		700,000		
25. Calanggaman	-do-	2,000,000	720,000		
26. Tabawan	-do-	1,646,000	* 800,000		
27. Malinao	BSWM	2,258,221	* 400,000		
28. Cabanglasan	-do-	3,209,204	* 750,000		
29. Kadingilan	-do-	1,281,772	* 360,000		
Sub-Total		18,805,137	3,730,000	4,719,773	31,526
30. Basak	NEA	11,790,776			1,087,959
31. Mantayupan	-do-	7,533,577			2,599,267
Sub-Total		19,324,353	0	0	3,687,226
32. Ambuklao-Binga	FMB	4,320,000	* 560,000	946,907	
33. Sta. Fe	-do-	3,300,000	400,000	711,740	
34. Pasig-Timbu	-do-	1,500,000	* 250,000	284,885	
35. Bangao	-do-	3,776,000	* 400,000	864,154	
36. EPZA	-do-	2,970,000	480,000	712,216	
37. Binaratan	-do-		480,000		
38. Marangas	-do-		360,000		
39. Batutu	-do-		* 400,000		
Sub-Total		15,866,000	3,330,000	3,519,902	0
40. Sta. Maria	FSDC	4,576,000	* 800,000		
41. Maunan	-do-		650,000		
42. Sibariwan	-do-		1,120,000		
Sub-Total		4,576,000	2,570,000	0	0
Grand Total		355,424,613	29,800,000	31,083,571	5,834,752

Note: IA - Implementing Agency * On-going projects

Table F.2.4 Comparison of Annual Program & Fund Released per Project (3/8)
- Year 1984 -

Name of Project	Implementing Agency	Project Cost	Program for 1984	Fund Released	
				DPWH	IA
1. Banadero	PMO-SWIM	378,280	392,000	378,280	
2. Porac	-do-	15,022,510	500,000	957,800	
3. Caulaman	-do-	756,560	784,000	756,560	
4. Kirong	-do-	1,232,990	784,000	754,560	
5. Pinsal Falls	-do-	24,228,300	1,000,000	965,000	
6. Jaro	-do-	60,350,483	7,604,000	7,337,860	
7. Gumain	-do-		784,000	756,560	
8. Burdeos	-do-	21,623,000	** 428,800		
9. Guimba	-do-	6,748,000	** 436,000	420,240	
10. Magpet	-do-	22,372,000	428,800	413,792	
11. Tanay	-do-			413,792	
12. Bayog	-do-			239,508	
13. Banayal	-do-			202,450	
14. Sacrifice Valley	-do-			213,400	
Sub-Total		152,712,123	13,141,600	13,809,802	0
11. Malinao	BSWM	2,258,221	* 392,000	1,902,105	
12. Aumbay	-do-	2,132,617		623,211	
13. Cagdarao	-do-	909,107		63,605	3,036
14. Kadingilan	-do-	1,281,772	* 352,800	604,045	8,107
15. Calanggaman	-do-	2,000,000	705,600		
16. Tabawan	-do-		343,000		
17. Cabanglasan	-do-	3,209,204	* 735,000		
Sub-Total		11,790,921	2,528,400	3,192,966	11,143
18. Cabacanan	NIA	19,022,000	* 1,176,000		
19. Calango	-do-	36,000,000	* 784,000		
Sub-Total		55,022,000	1,960,000	0	0
20. Mantayupan	NEA	7,533,577		657,436	320,342
Sub-Total		7,533,577	0	657,436	320,342
21. Ambuklao-Binga	FMB	4,320,000	* 150,000	144,750	
22. Sta. Fe	-do-	3,300,000	* 325,000	313,625	
23. Pasig-Timbu	-do-	1,500,000	* 200,000	193,000	
24. Bangao	-do-	3,776,000	* 250,000	241,250	
25. Binaratan	-do-	3,300,000	470,400	453,936	
26. Lawaan	-do-	2,744,250	400,000	386,000	
27. Panacan	-do-	2,603,500	350,000	337,750	
28. EPZA	-do-	2,970,000	369,800	356,857	
Sub-Total		24,513,750	2,515,200	2,427,168	0
29. Sta. Maria	FSDC	6,204,159	* 862,400		
30. Maunan	-do-		632,000		
31. Sibariwan	-do-		824,800		
Sub-Total		6,204,159	2,319,200	0	0
Grand Total		257,776,530	22,464,400	20,087,372	331,485

Note: * Feasibility Study & Detail Design only.
** On-going Projects

IA - Implementing Agency

Table F.2.4 Comparison of Annual Program & Fund Released per Project (4/8)
- Year 1985 -

Name of Project	Implementing Agency	Project Cost	Program for 1985	Fund Released	
				DPWH	IA
1. Porac	PMO-SWIM	15,022,510	965,000		
2. Pinsal Falls	-do-	24,228,300	3,500,000	3,309,950	
3. Jaro	-do-	60,360,483	8,500,000	8,038,450	
4. Const. of Mini-dams	-do-		7,000,000		
a. Sapang-Uwak	-do-			965,000	
b. Debesmac	-do-			289,500	
c. Bulu	-do-			472,850	
Sub-Total		99,611,293	19,965,000	13,075,750	0
5. Cabanglasan	BSWM	3,209,204	-	1,900,582	4,602
6. Cagdarao	-do-	909,107		583,600	3,035
7. Kadingilan	-do-	1,281,772		677,078	8,107
8. Aumbay	-do-	2,132,617		1,394,159	12,223
9. Sayab	-do-		550,000		
10. Calanggaman	-do-	2,000,000	550,000		
Sub-Total		9,532,700	1,100,000	4,555,419	27,967
11. Basak	NEA	11,790,776			1,799,378
12. Mantayupan		7,533,577		657,436	1,624,658
13. Panicuan Falls			400,000		
14. Tubod-Duguan			400,000		
15. Dulungan			800,000		
Sub-Total		19,324,353	1,600,000	657,436	3,424,036
16. Cabacanan	NIA	19,022,000	550,000		
17. Calango		36,000,000	550,000		
18. Ilihan		10,771,000		2,655,000	
Sub-Total		65,793,000	1,100,000	2,655,000	0
19. Bangao	FMB	3,776,000	220,000	432,617	176,468
20. Binaratan	-do-	3,300,000	220,000	234,240	
21. Lawaan	-do-	2,744,250	220,000	226,734	
22. Panacan	-do-	2,603,500	220,000	172,101	
23. EPZA	-do-	2,970,000	220,000	230,727	
Sub-Total		15,393,750	1,100,000	1,296,419	176,468
24. Maunan	FSDC		550,000		
25. Sibariwan	-do-		550,000		
Sub-Total		0	1,100,000	0	0
Grand Total		209,655,096	25,965,000	22,240,024	3,628,471

Note: * Supplemental Program

IA - Implementing Agency

Table F.2.4 Comparison of Annual Program & Fund Released per Project (5/8)
- Year 1986 -

Name of Project	Implementing Agency	Project Cost	Program for 1986	Fund Released	
				DPWH	IA
1. Porac	PMO-SWIM	15,022,510	* 1,000,000	970,000	
2. Kirong	-do-	1,232,990	300,000	478,430	
			* 200,000		
			* 1,000,000		
3. Dacquoag	-do-	1,898,700	2,000,000	1,898,700	
4. San Ramon	-do-	1,812,340	1,400,000	2,812,340	
			* 500,000		
5. Pinsal Falls	-do-	24,228,300	* 8,500,000	9,525,850	
			* 1,500,000		
6. Jaro	-do-	60,360,483	* 1,250,000	8,310,295	
			** 10,000,000		
7. Const. of Mini-dams	-do-		* 7,000,000		
a. Yulo Estate			3,850,000	970,000	
b. Marilao				970,000	
8. Sicayab				578,120	
Sub-Total		104,555,323	38,500,000	26,513,735	
8. Cabanglasan	BSWM	3,209,204			4,602
9. Sual	-do-		250,000		
			* 500,000		
10. Laboon	-do-	1,040,000	250,000		
11. Tabawan	-do-	1,646,000	300,000		
Sub-Total		5,895,204	1,300,000	0	4,602
12. Basak	NEA	11,790,776	800,000		5,003,146
Sub-Total		11,790,776	800,000	0	5,003,146
13. Cabacanan	NIA	19,022,000	1,200,000		
14. Calango	-do-	36,000,000	400,000		
Sub-Total		55,022,000	1,600,000	0	0
15. Bangao	FMB	3,776,000	200,000	432,617	
16. Binaratan	-do-	3,300,000	200,000	431,640	
			* 500,000		
17. Lawaan	-do-	2,744,250	200,000	289,620	
			* 250,000		
18. Panacan	-do-	2,603,500	200,000	284,000	
			* 200,000		
Sub-Total		12,423,750	1,550,000	1,437,877	0
19. Mauanan	FSDC		400,000		
20. Sicayab	-do-		200,000		
			* 500,000		
21. Consolacion	-do-		20,000		
Sub-Total		0	1,120,000	0	0
Grand Total		189,687,053	44,870,000	27,951,612	5,007,748

Note: * Supplemental Program ** On-going Project
IA - Implementing Agency

Table F.2.4 Comparison of Annual Program & Fund Released per Project (6/8)
- Year 1987 -

Name of Project	Implementing Agency	Project Cost	Program for 1987	Fund Released	
				DPWH	IA
1. Pinsal Falls	PMO-SWIM	24,228,300	10,000,000	9,506,000	
2. San Ramon	-do-		800,000	2,661,680	
3. Nabua	-do-		9,600,000	5,121,600	
4. Katipunan	-do-		600,000		
5. Jaro	-do-	60,350,489	10,000,000	24,498,200	
6. Nampicuan	-do-			7,802,400	
7. San Clemente	-do-			1,901,200	
Sub-Total		84,578,789	31,000,000	51,491,080	0
8. Calango	NIA	36,000,000	4,000,000	3,800,000	
9. Miral	-do-	37,000,000	4,000,000	3,100,000	
Sub-Total		73,000,000	8,000,000	6,900,000	0
10. Bangao	FMB	3,776,000	1,000,000	776,000	
11. Binaratan	-do-	3,300,000	1,000,000	776,000	
12. Lawaan	-do-	2,744,250	1,000,000	950,600	
13. Panacan	-do-	2,603,500	1,000,000	950,600	
14. EPZA	-do-	2,970,000	-	247,156	
Sub-Total		15,393,750	4,000,000	3,700,356	
15. Sual	BSWM		1,200,000		
16. Bulu	-do-		5,000,000		
17. Tabawan	-do-	1,646,000	1,500,000		
18. Sayab	-do-		1,800,000		
19. Calanggaman	-do-	2,000,000	1,200,000		
20. Surok	-do-		600,000		
21. Laboon	-do-	1,040,000	1,000,000		
22. Cabanglasan	-do-	3,209,204	1,200,000		
Sub-Total		7,895,204	13,500,000		
23. Lupao	FSDC		4,000,000		
24. Nampicuan	-do-		4,000,000		
25. Capan	-do-		4,000,000		
26. Sicayab	-do-		1,000,000		
Sub-Total		0	12,000,000		
27. Dulungan	NEA		4,000,000		
28. Tubod	NEA		650,000		
29. Kumalarang	NEA	11,969,000	3,850,000		
Sub-Total		11,969,000	8,500,000		
Grand Total		192,836,743	77,000,000	62,091,436	0

Note: IA - Implementing Agency

Table F.2.4 Comparison of Annual Program & Fund Released per Project (7/8)
- Year 1988 -

Name of Project	Implementing Agency	Project Cost	Program for 1988	Fund Released	
				DPWH	IA
1. Calanggaman	PMO-SWIM	2,000,000	2,000,000	1,843,000	
2. Katipunan	-do-	500,000	500,000	460,750	
3. Pinsal Falls	-do-	24,228,300	1,000,000	921,500	
			800,000		
4. Jaro	-do-	60,350,483	1,130,000	3,501,700	
5. Cabuluan	-do-		4,120,000	3,796,580	
6. Mauanan				12,670,625	
7. Nabua				6,693,000	
8. Looy				1,091,250	
9. Sual	-do-		150,000	130,950	
10. Libudon	-do-	701,000	750,000	654,750	
11. Tabawan	-do-	1,646,000	3,500,000	3,055,500	
12. Laboon	-do-	1,040,000	550,000	480,150	
13. Bukay-Pait	-do-	2,189,000	2,200,000	1,920,600	
15. Bansud	-do-		5,400,000	4,714,200	
16. Cabinbin	-do-		3,000,000	2,619,000	
17. Panicuan	-do-		2,600,000	2,269,800	
Sub-Total		92,654,783	27,700,000	46,823,355	0
6. Calango	NIA	36,000,000	7,000,000	6,450,000	
7. Miral	-do-	37,000,000	3,000,000	2,760,000	
Sub-Total		73,000,000	10,000,000	9,210,000	0
8. Bacsay	BSWM	1,219,303	-	1,170,613	7,967
Sub-Total		1,219,303	0	1,170,613	7,967
14. Kumalarang	NEA	11,969,000		3,093,018	6,275,486
Sub-Total		11,969,000	0	3,093,018	6,275,486
17. Bangao	FMB	3,776,000	1,100,000	960,300	
18. Binaratan	-do-	3,300,000	1,200,000	1,047,600	
19. Lawaan	-do-	2,744,250	970,000	846,810	
20. Panacan	-do-	2,603,500	950,000	826,350	
21. EPZA	-do-	2,970,000	600,000	523,800	
22. Naguilian	-do-		720,000		
23. Cordon	-do-		920,000		
24. Manga	-do-		860,000		
25. Sinapaoan	-do-		980,000		
26. Tangbao	-do-		900,000		
Sub-Total		15,393,750	9,200,000	4,204,860	0
Grand Total		194,236,836	46,900,000	64,501,846	6,283,453

Note: IA - Implementing Agency

Table F.2.4 Comparison of Annual Program & Fund Released per Project (8/8)
- Year 1989 -

Name of Project	Implementing Agency	Project Cost	Program for 1989	Fund Released	
				DPWH	IA
1. Pinal Falls	PMO-SWIM	24,228,300	5,000,000	5,858,800	
2. Balibayon	-do-		3,000,000		
3. Burdeos	-do-	21,623,000	7,000,000	5,820,000	
4. Gabawan	-do-		6,000,000		
5. Nabua	-do-	23,860,000	6,000,000		
6. Pinonoy	-do-		3,500,000		
7. Cabulao	-do-		3,500,000		
8. Cabatang	-do-		2,500,000		
9. Calanggaman	-do-		2,000,000	1,940,000	
10. Jaro	-do-	60,350,489	3,500,000		
11. Lanchita	-do-		2,500,000		
12. Bangao	-do-			153,350	
13. Binaratan	-do-			58,200	
14. Manga	-do-			41,710	
15. Sinapaoan	-do-			47,530	
16. EPZA	-do-			29,100	
17. Lawaan	-do-			47,045	
18. Panacan	-do-			46,075	
19. Sual	-do-			7,275	
20. Tabawan	-do-			169,750	
21. Libudon	-do-			36,375	
22. Bukay-Pait	-do-			106,750	
23. Bansud	-do-			261,900	
24. Cabinbin	-do-			145,500	
25. Panicuan	-do-			126,100	
26. F/S and/or D/D				5,000,000	
Sub-Total		130,061,789	44,500,000	19,895,460	0
27. Bulu	FMB		* 1,000,000	6,790,000	
28. Naguilian	-do-		1,000,000	1,004,920	
29. Olo-olo	-do-		3,600,000		
30. Cordon	-do-		* 1,000,000	1,014,620	
31. Yangiran-Sinapaoan	-do-		* 1,000,000	970,000	
32. Vista Hills	-do-		* 1,000,000	970,000	
33. Bued	-do-		* 1,000,000	970,000	
34. Bosol	-do-		* 1,000,000	970,000	
35. Kalabnao	-do-		1,200,000	1,164,000	
36. Tangbao	-do-		* 970,000	1,013,650	
Sub-Total		0	12,770,000	14,867,190	
37. Miral	NIA	36,000,000	7,000,000	6,790,000	
38. Calango	-do-	37,000,000	7,000,000	6,790,000	
39. Alapasco	-do-	48,486,000	6,000,000	5,820,000	
Sub-Total		121,486,000	20,000,000	19,400,000	
40. Kagbawatan	NEA		3,500,000	3,395,000	
Sub-Total		0	3,500,000	3,395,000	
41. Boyuin	BSWM	1,113,000	1,800,000	1,746,000	
42. Mabini	-do-	1,278,000	1,700,000	1,649,000	
43. Pata	-do-	1,188,000	1,500,000	1,455,000	
44. Laboon	-do-	1,040,000	1,000,000	996,675	
45. Goling	-do-	1,186,000	1,500,000	1,455,000	
46. Mangandingay	-do-	1,678,000	2,500,000	1,940,000	
47. Dita I	-do-	1,922,000	2,500,000	2,425,000	
Sub-Total		9,405,000	12,500,000	11,666,675	
48. Capas	FSDC		5,700,000		
Grand Total		260,952,789	98,970,000	69,224,325	

Note: * Watershed Rehabilitation IA - Implementing Agency

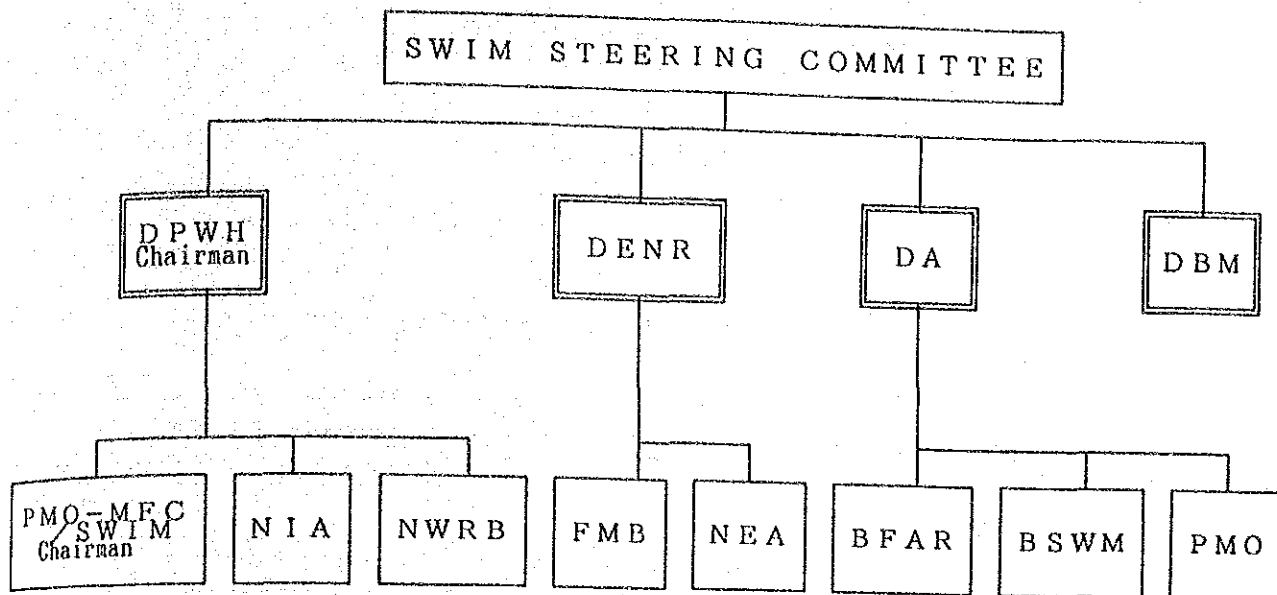
Table F.2.5 List of Completed SWIM Projects and Corresponding Beneficiaries' Organizations (1/2)

NAME OF PROJECT	IMPLEMENTING AGENCY	PURPOSE OF THE PROJECT	OPERATION & MAINTENANCE (DAM & OTHER FAC.)	NAME OF BENEFICIARIES' ASSOCIATION	DATE OF TURN-OVER TO BENEFICIARIES	REMARKS
1. Kakerong	FSDC	1. irrigation 2. fish culture 3. flood control	Farmers' Association	Kakarong Integrated Service Ass.	Data not available	No office monitoring this completed project after FSDC was abolished
2. Pagudpud	FSDC	1. irrigation 2. fish culture 3. flood control	Farmers' Association	Pagudpud Integrated Service Ass.	-do-	-do-
3. Matinik	FSDC	1. irrigation 2. fish culture 3. flood control	Farmers' Association	Matinik Integrated Service Ass.	-do-	-do-
4. Sta. Cruz	FSDC	1. irrigation 2. fish culture 3. flood control	Farmers' Association	Sta. Cruz Integrated Service Ass	-do-	-do-
5. San Roque	FSDC	1. irrigation 2. fish culture 3. flood control	Farmers' Association	San Roque Integrated Service Ass	-do-	-do-
6. Fort Magsaysay #3	FSDC	supplementary to Dam # 5	Farmers' Association	F. Magsaysay #3 Integ. Serv. Ass.	-do-	-do-
7. Fort Magsaysay #4	FSDC	1. irrigation	Farmers' Association	F. Magsaysay #4 Integ. Serv. Ass.	-do-	-do-
8. Fort Magsaysay #5	FSDC	2. fish culture 3. flood control	Farmers' Association	F. Magsaysay #5 Integ. Serv. Ass.	-do-	-do-
9. Sta. Barbara	FSDC	1. irrigation 2. flood control	Farmers' Association	Sta. Barbara Integrated Serv. Ass	-do-	-do-
10. Manayon	FSDC	1. irrigation 2. fish culture 3. flood control	Farmers' Association	Manayon Integrated Service Ass.	-do-	-do-
11. Si-uton	FSDC	1. irrigation 2. fish culture 3. flood control	Farmers' Association	Si-uton Integrated Service Ass.	-do-	-do-
12. Bacrotan	FSDC	1. flood control	Farmers' Association	Bannuar Integrated Service Ass.	-do-	-do-
13. Nabintangan	DPWH	1. irrigation	none	none	-do-	No monitoring of operation & maintenance
14. Palaco	DPWH	2. flood control	none	none	-do-	-do-
15. Banadero	DPWH	1. water supply	none	none	-do-	-do-

Table F.2.5 List of Completed SWIM Projects and Corresponding Beneficiaries' Organizations (2/2)

NAME OF PROJECT	IMPLEMENTING AGENCY	PURPOSE OF THE PROJECT	OPERATION & MAINTENANCE	NAME OF BENEFICIARIES' ASSOCIATION	DATE OF TURN-OVER TO BENEFICIARIES	REMARKS
16. Porac	DPWH	1. flood control	none	none		-do-
17. Caulaman	DPWH	1. flood control	none	none		-do-
18. Kirong	DPWH	1. irrigation	none	none		-do-
19. Dacquiao	DPWH	1. flood control	none	none		BSWM monitors the operation & maintenance
20. San Ramon	DPWH	1. flood control	none	none		-do-
21. Calangaman	DPWH	2. irrigation	none	none		No monitoring of operation and maintenance
22. Katipunan	DPWH	1. irrigation	none	none		-do-
23. Pamacutan	BSWM	1. flood control	Farmers' Association	none	Data not available	O&M monitored by BSWM
24. Calapan	BSWM	2. flood control	Farmers' Association		-do-	-do-
25. Magsabaran	BSWM	1. irrigation	Farmers' Association		-do-	-do-
26. Darapidap	BSWM	2. flood control	Farmers' Association	Darapidap Water Impounding Service Association	-do-	-do-
27. Malinao	BSWM	3. fish culture	Farmers' Association			-do-
28. Aumbay	BSWM	1. irrigation	Farmers' Association	Aumbay Irrigation Service Association, Inc.	September 15, 1985	-do-
29. Ilihan	NIA	2. flood control	Farmers' Association	Southeastern Tubigon Irrigators' Association	Data not available	O&M monitored by NIA
30. Mantayupan	NEA	1. irrigation	Cooperative	Cebu Electric Cooperative I	1985	O&M monitored by NEA
31. Basak	NEA	2. electrification	Cooperative	Cebu Electric Cooperative I	1986	-do-
32. Ambuk Iao-Binga	FMB	1. flood control	none	none		No monitoring of O&M
33. Sta. Fe	FMB	1. flood control	none	none		-do-
34. Pasig-Timbu	FMB	1. flood control	FMB	none		-do-

FIGURES



NOTE :

Members of SWIM Steering Committee

Members of Technical Working Group (TWG)

Implementing/Cooperating Agencies : PMO-MFC/SWIM, NIA, FMB, NEA, BSWM
 Cooperating Agencies : NWRB, BFAR

D P W H :	Department of Public Works and Highways
D E N R :	Department of Environment and Natural Resources
D A :	Department of Agriculture
D B M :	Department of Budget and Management
PMO-MFC/SWIM :	Project Management Office for SWIM in DPWH
N I A :	National Irrigation Administration
N W R B :	National Water Resources Board
F M B :	Forest Management Bureau
N E A :	National Electrification Administration
B F A R :	Bureau of Fisheries and Aquatic Resources
B S W M :	Bureau of Soils and Water Management
P M O :	Project Management Office in DA (formerly FSDC)

Fig. F.2.1 ORGANIZATIONAL SET-UP FOR SWIM PROJECTS

**ORGANIZATIONAL CHART
SMALL WATER IMPOUNDING MANAGEMENT
PROJECT MANAGEMENT OFFICE**

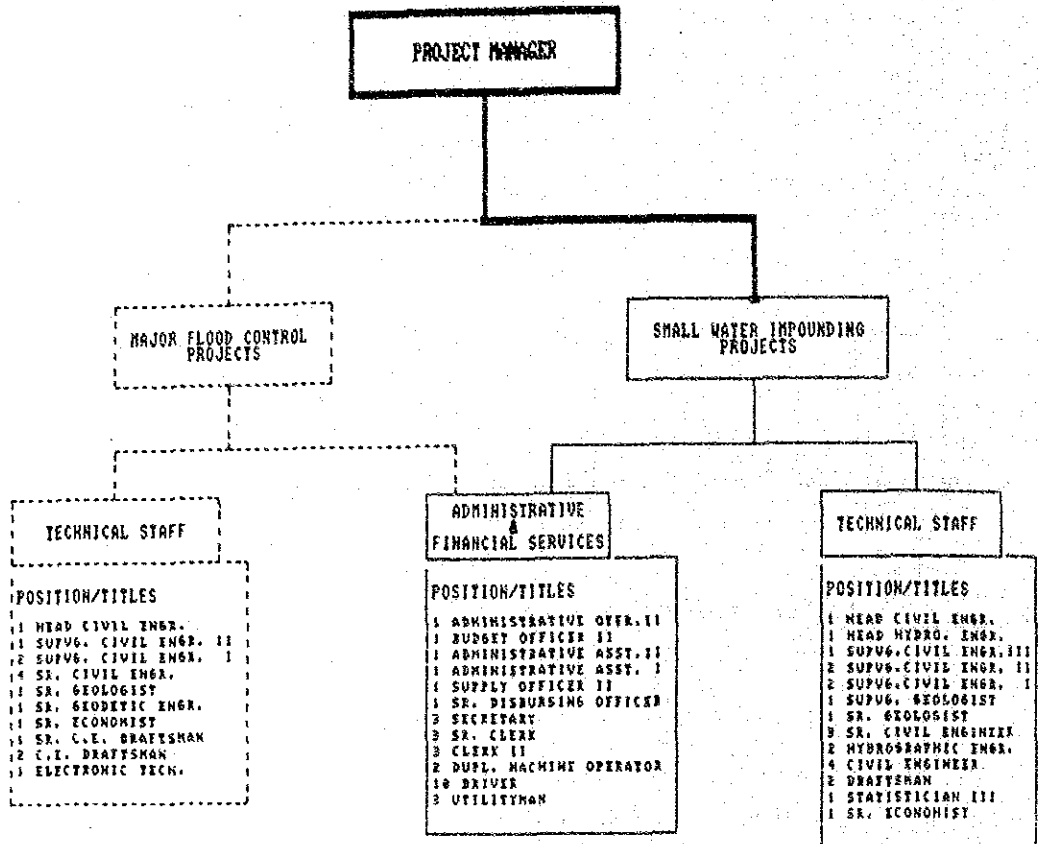
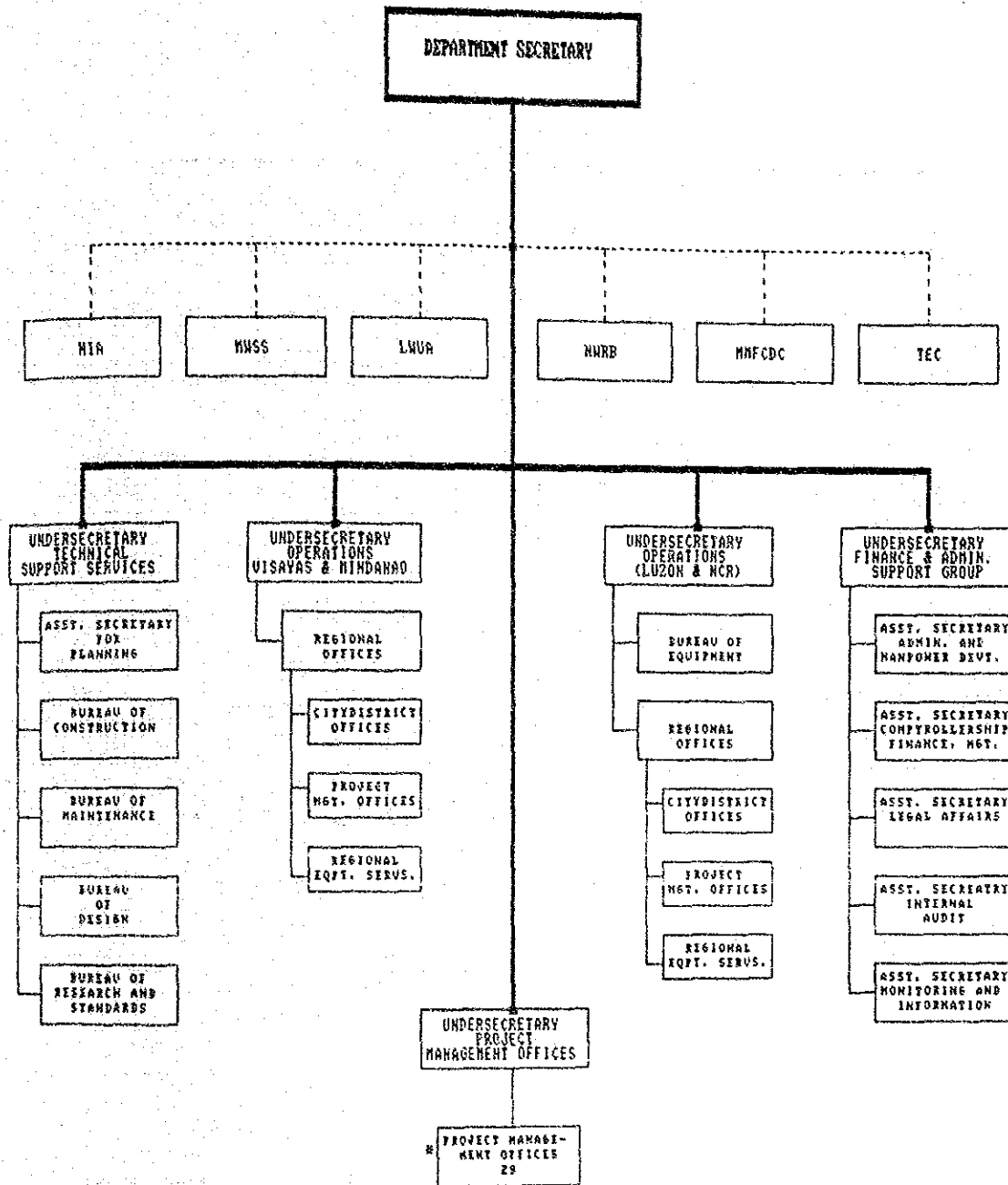


Fig. F.2.2 ORGANIZATIONAL CHART OF PROJECT MANAGEMENT OFFICE OF SWIM

**ORGANIZATIONAL CHART
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS**



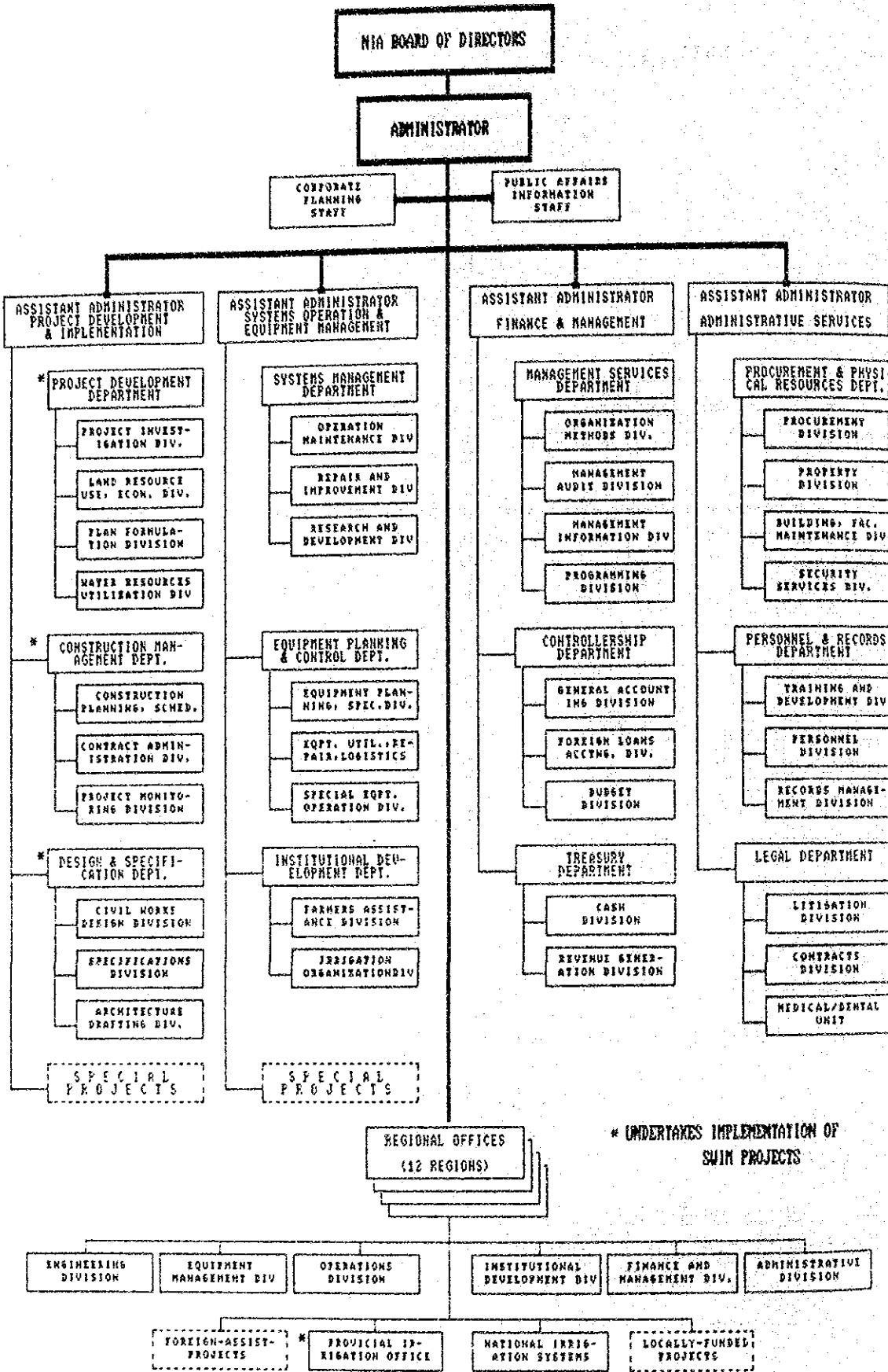
ATTACHED AGENCIES

- TEC - TRAFFIC ENGINEERING CENTER
- NIA - NATIONAL IRRIGATION ADMINISTRATION
- NWRB - NATIONAL WATER RESOURCE BOARD
- LWUA - LOCAL WATER UTILIZATION ADMINISTRATION
- MWSS - METROPOLITAN WATERWORKS & SEWERAGE SYSTEM
- NDCC - NATIONAL DISASTER COORDINATING COUNCIL
- MAFCC - METRO MANILA FLOOD CONTROL AND DRAINAGE COUNCIL

* INCLUDES PMO-MFC/SHIN

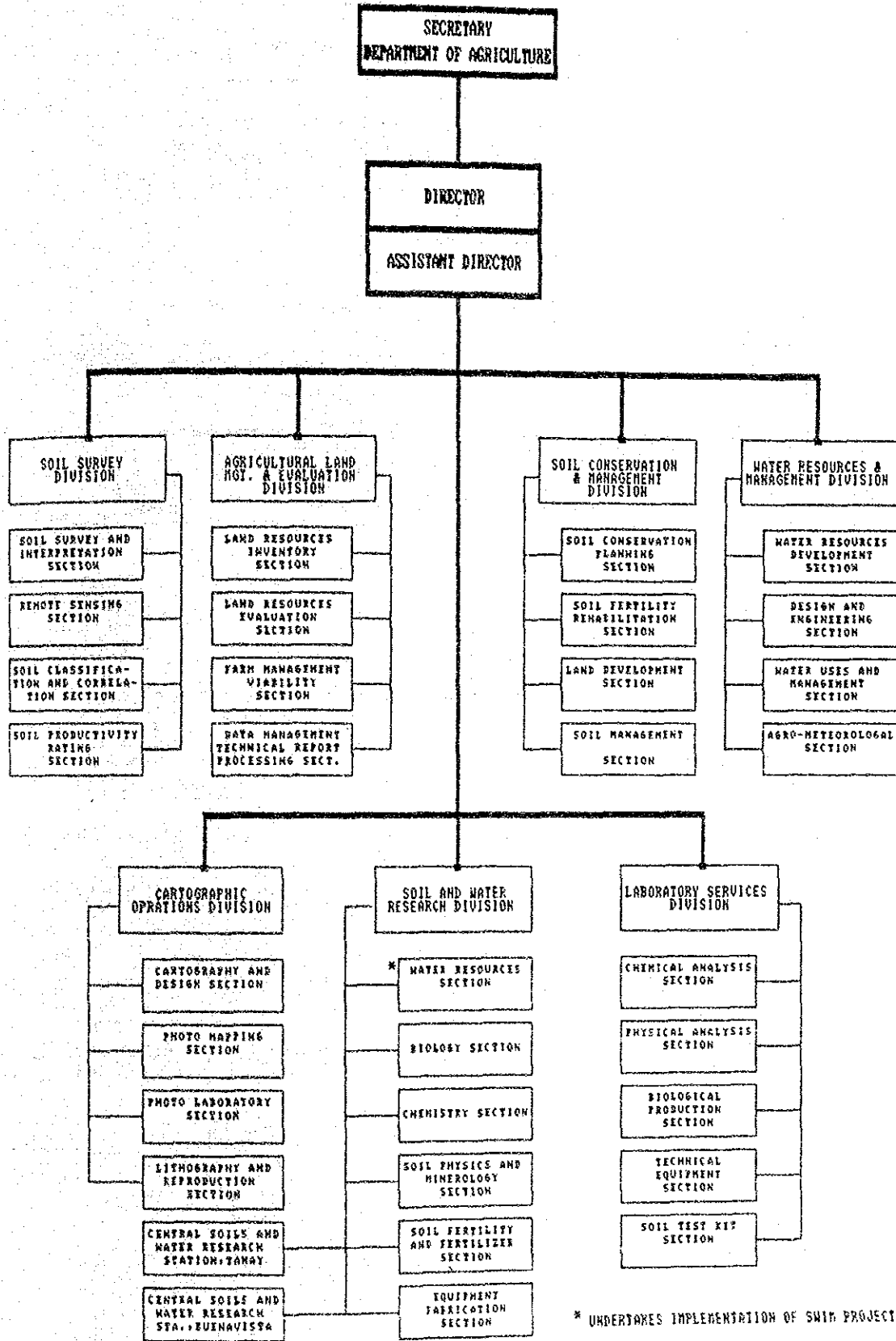
**Fig. F.2.3 ORGANIZATIONAL CHART OF
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS**

**ORGANIZATIONAL CHART
NATIONAL IRRIGATION ADMINISTRATION**



**Fig. F.2.4 ORGANIZATIONAL CHART OF
NATIONAL IRRIGATION ADMINISTRATION**

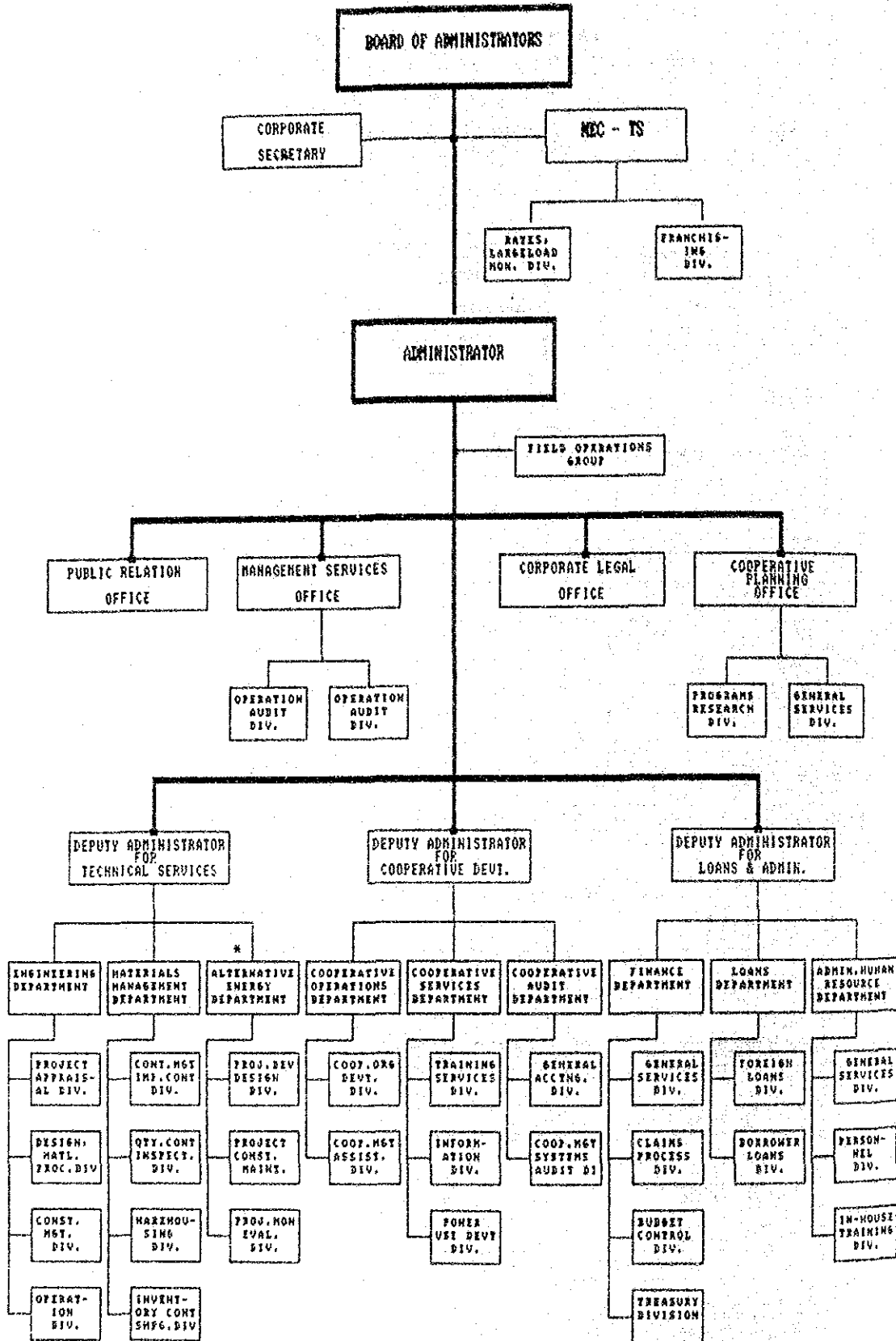
**ORGANIZATIONAL CHART
BUREAU OF SOILS AND WATER MANAGEMENT**



* UNDERTAKES IMPLEMENTATION OF SWIM PROJECTS

**Fig. F.2.5 ORGANIZATIONAL CHART OF
BUREAU OF SOILS AND WATER MANAGEMENT**

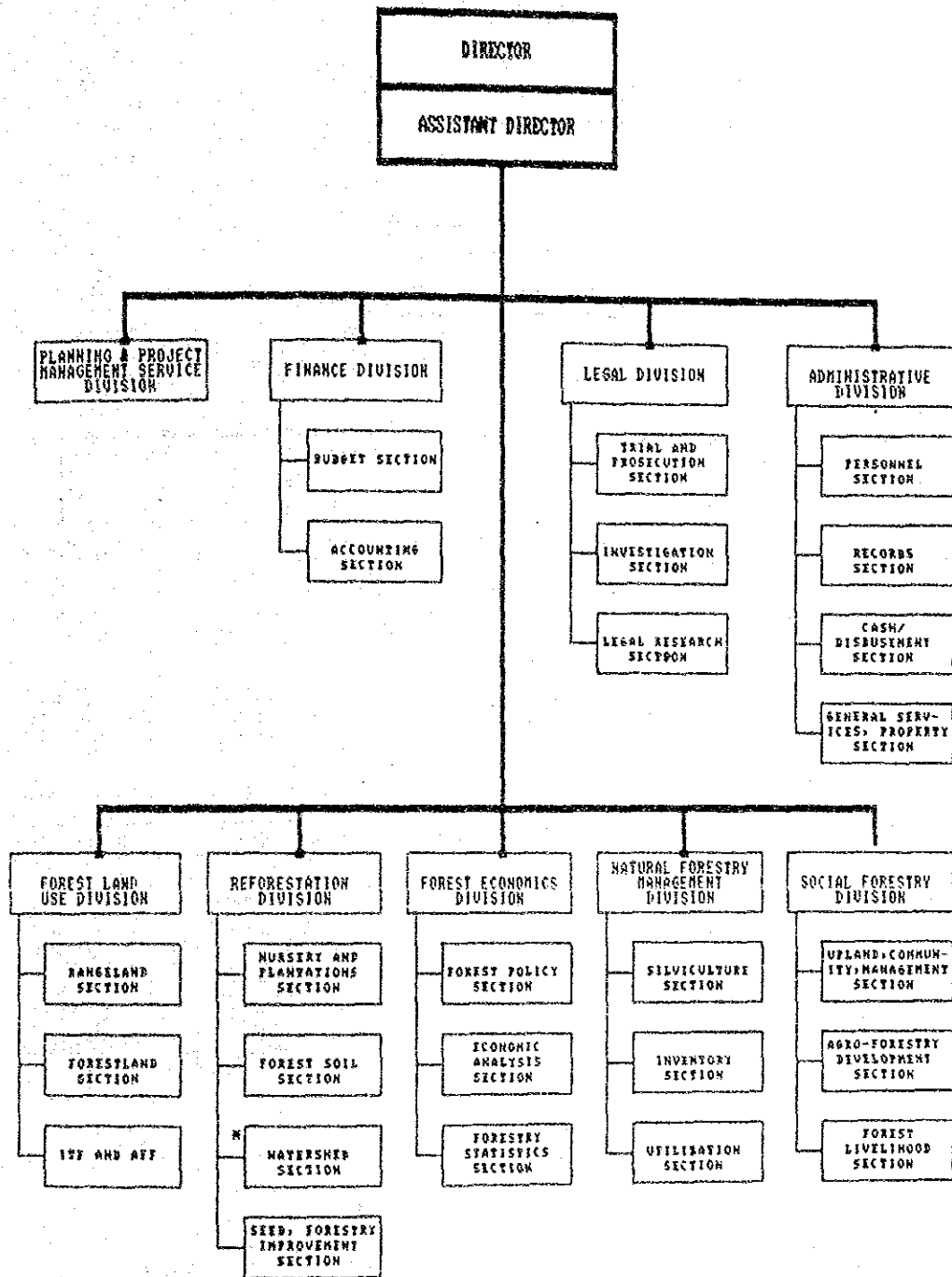
**ORGANIZATIONAL CHART
NATIONAL ELECTRIFICATION ADMINISTRATION**



* UNDERTAKES THE IMPLEMENTATION OF SMH PROJECTS

Fig. F.2.6 ORGANIZATIONAL CHART OF NATIONAL ELECTRIFICATION ADMINISTRATION

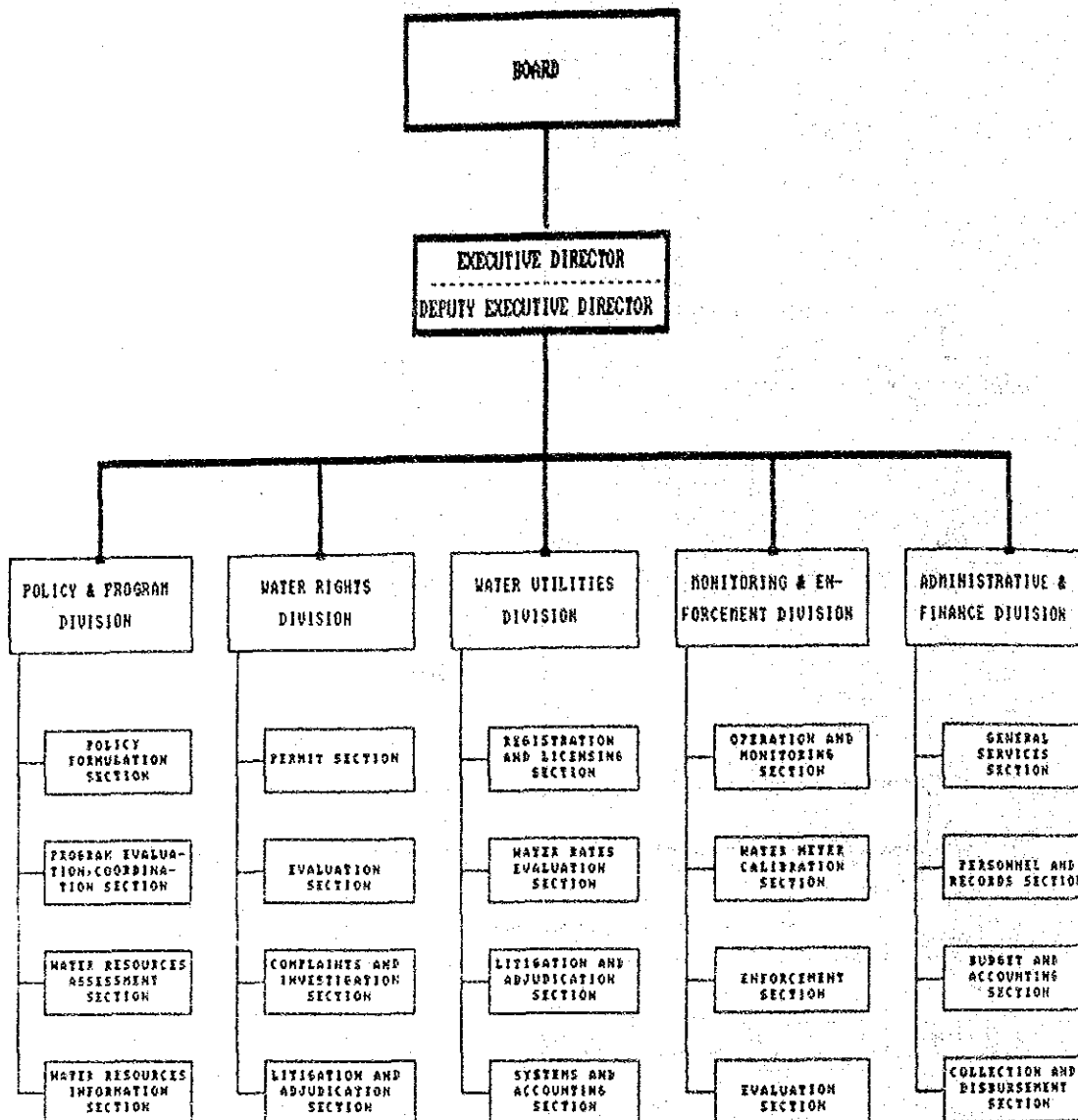
**ORGANIZATIONAL CHART
FOREST MANAGEMENT BUREAU**



* UNDERTAKES IMPLEMENTATION OF SWIM PROJECTS

**Fig. F.2.7 ORGANIZATIONAL CHART OF
FOREST MANAGEMENT BUREAU**

**ORGANIZATION CHART
NATIONAL WATER RESOURCE BOARD**



Composition of the Board

Chairman - Secretary of Public Works and Highways

Members - Secretary of Agriculture

Secretary of Environment & Natural Resources

Secretary of Health

Secretary of Trade and Industry

Director-General, National Economic Development Authority

Administrator of National Irrigation Administration

Administrator of Metropolitan Waterworks and Sewerage System

Administrator of Local Water Utilities Administration

President of National Power Corporation

**Fig. F.2.8 ORGANIZATIONAL CHART OF
NATIONAL WATER RESOURCE BOARD**

**ORGANIZATION CHART
BUREAU OF FISHERIES AND AQUATIC RESOURCES**

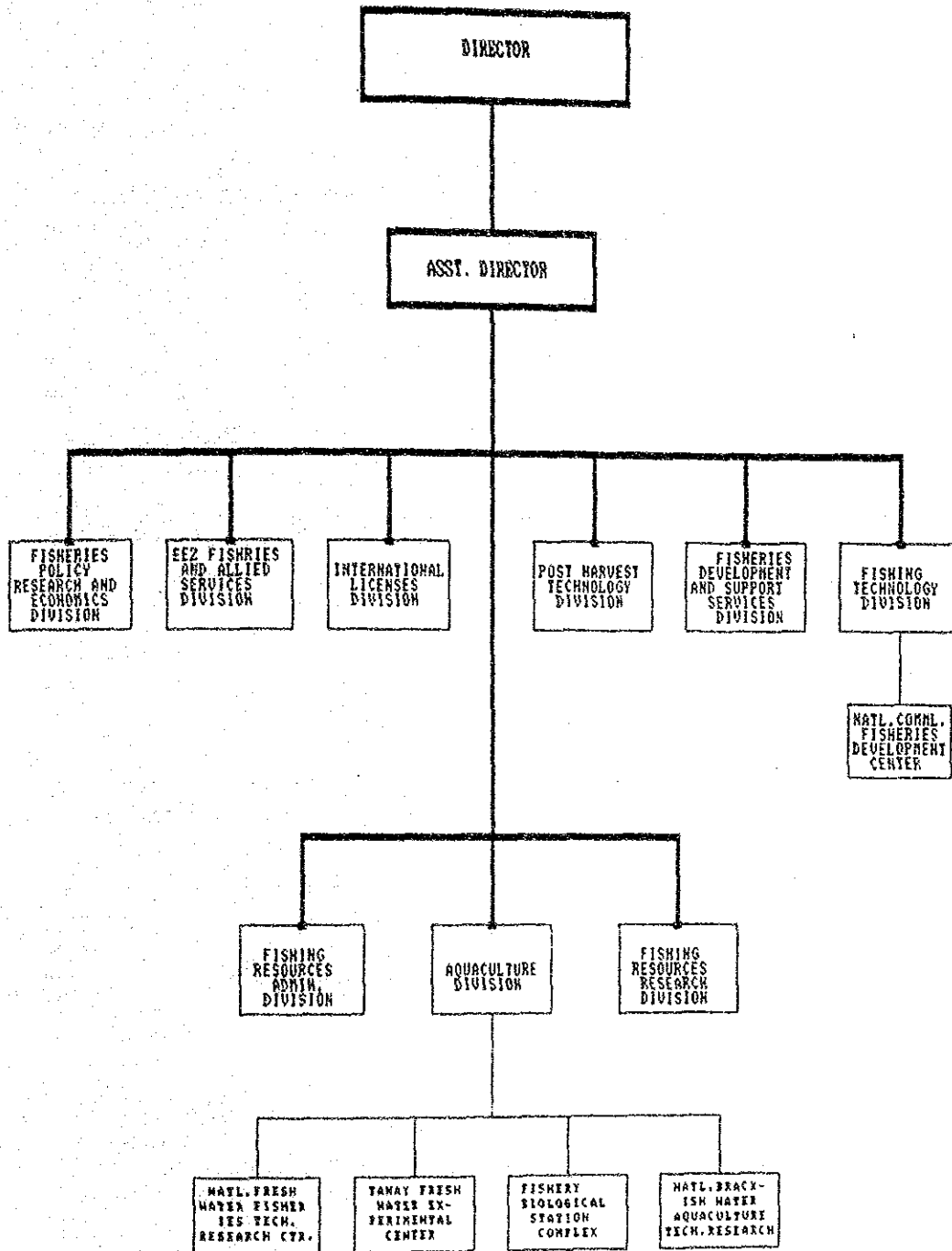
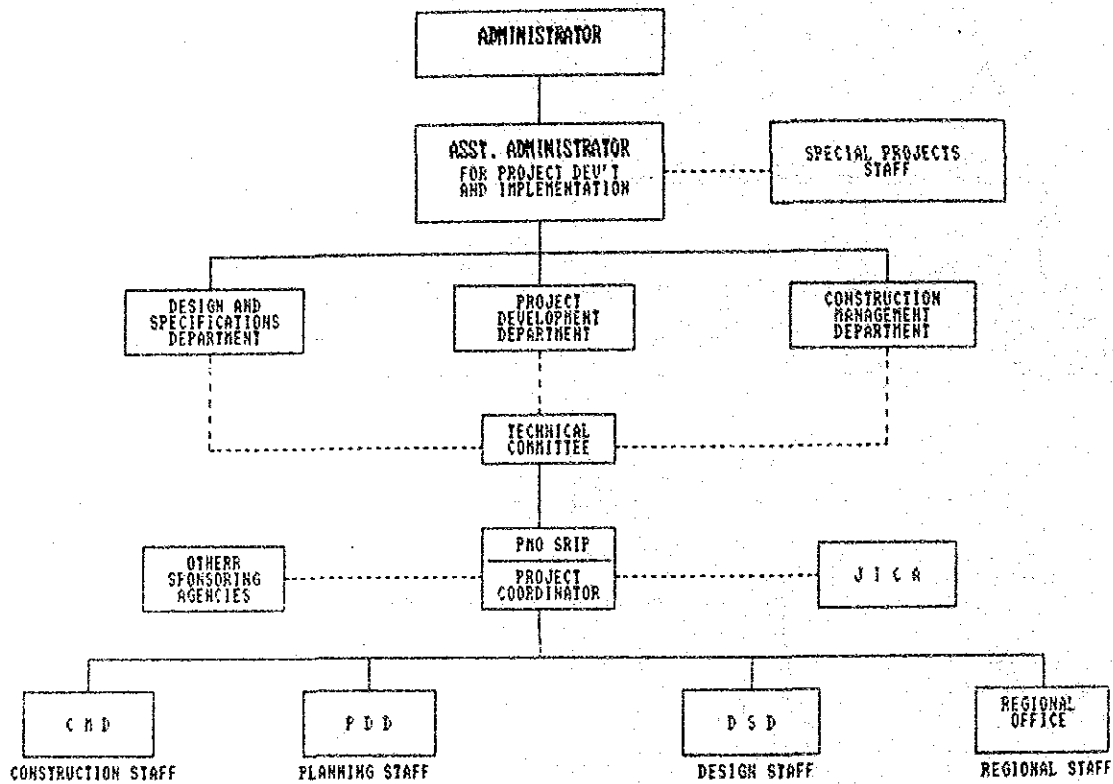
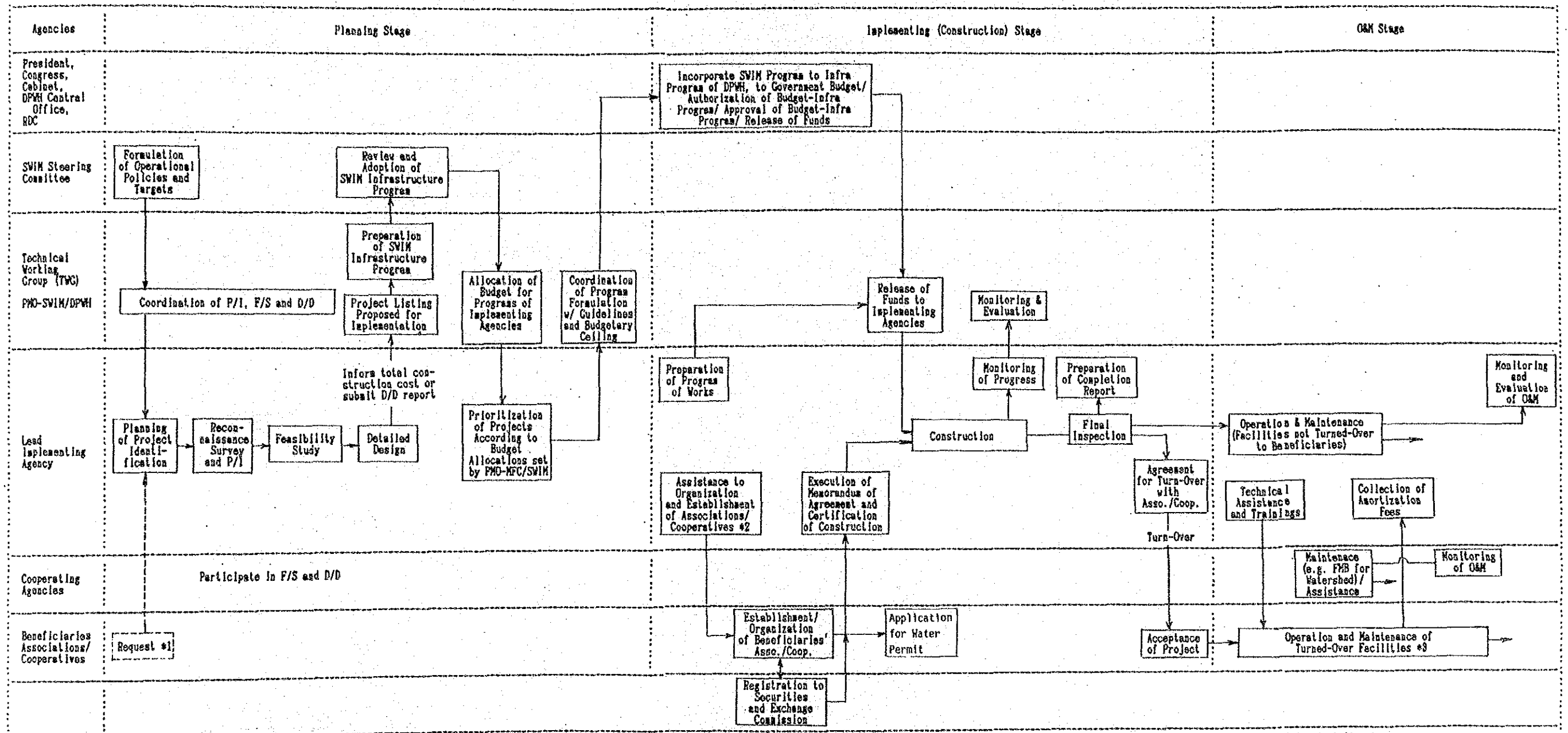


Fig. F.2.9 ORGANIZATIONAL CHART OF BUREAU OF FISHERIES AND AQUATIC RESOURCES

**ORGANIZATIONAL SET-UP
NIA-SMALL RESERVOIR IRRIGATION PROJECT
PROJECT MANAGEMENT OFFICE**



**Fig. F.2.10 ORGANIZATIONAL CHART OF PMO-SRIP,
NATIONAL IRRIGATION ADMINISTRATION**



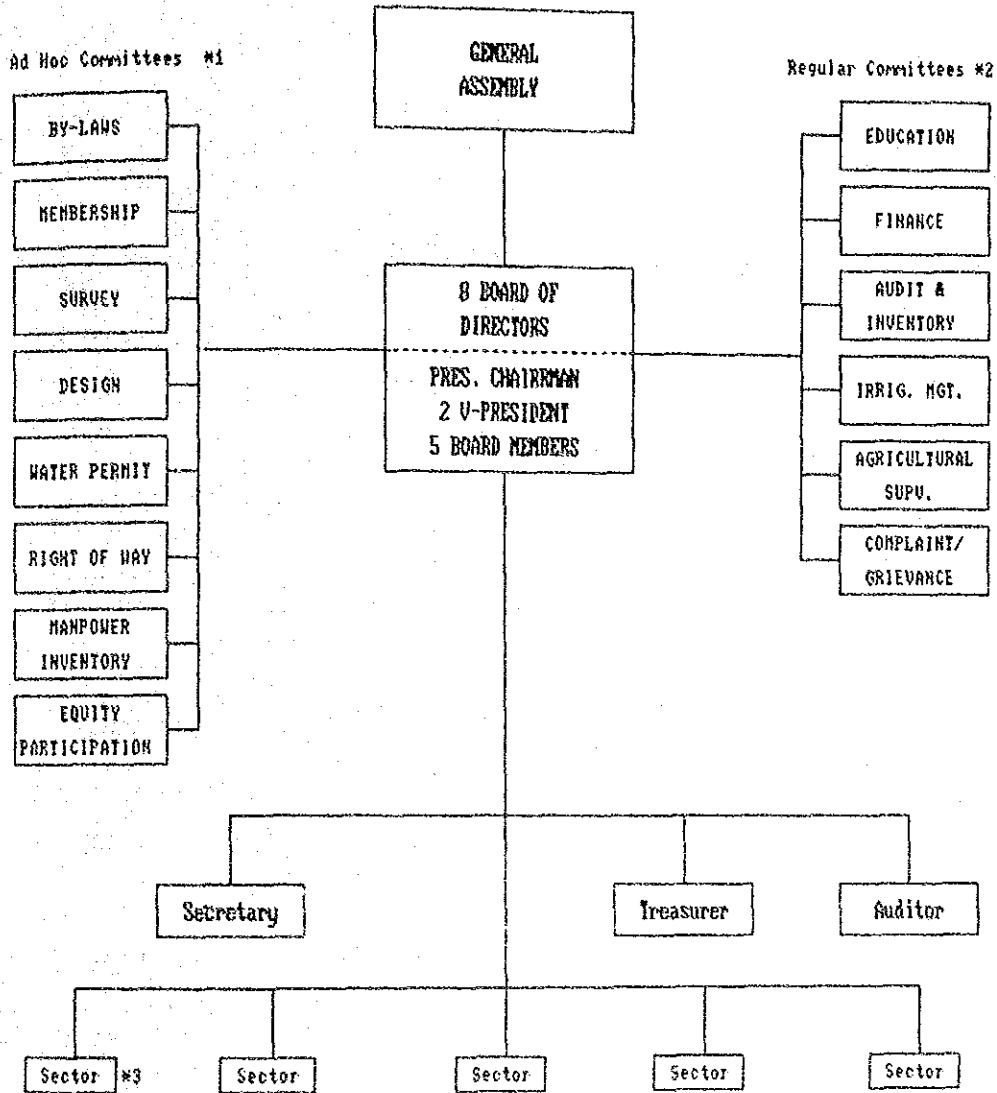
Remarks: P/I = Project Identification F/S = Feasibility Study
 D/D = Detailed Design RDC = Regional Development Council
 #1 The irrigation projects of BSWM and mini-hydro power projects of NEA are conducted in accordance with the requests of beneficiaries and electric cooperatives.

#2 The Irrigators Association (IA) is established within 6-9 months before the construction of irrigation system.

#3 In case of mini-hydro power projects, all of the facilities including dam are operated and maintained by the cooperatives.

Fig. F.2.11 PRESENT WORK SCHEDULE FOR IMPLEMENTATION OF SWIM PROJECTS

**TYPICAL ORGANIZATIONAL STRUCTURE FOR
IRRIGATORS' ASSOCIATION (IA)**



- *1. The ad hoc committees are established before construction.
- *2. After the construction, the ad hoc committees are disorganized, and the standing committees are established.
- *3. Sector has an area covered by one lateral.

Fig. F.2.12 TYPICAL ORGANIZATIONAL CHART OF IRRIGATORS' ASSOCIATIONS

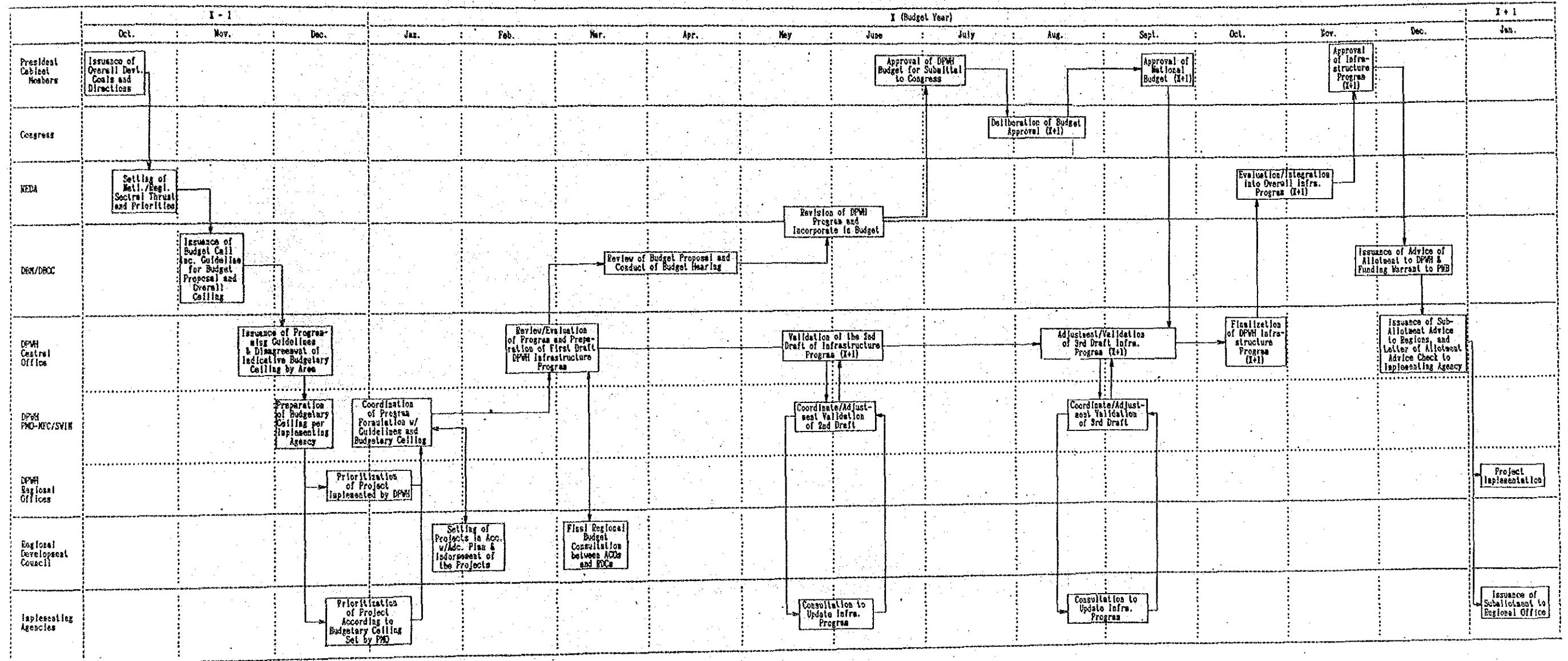


Fig. F.2.13 SWIM-INFRASTRUCTURE PROGRAMMING PROCESS

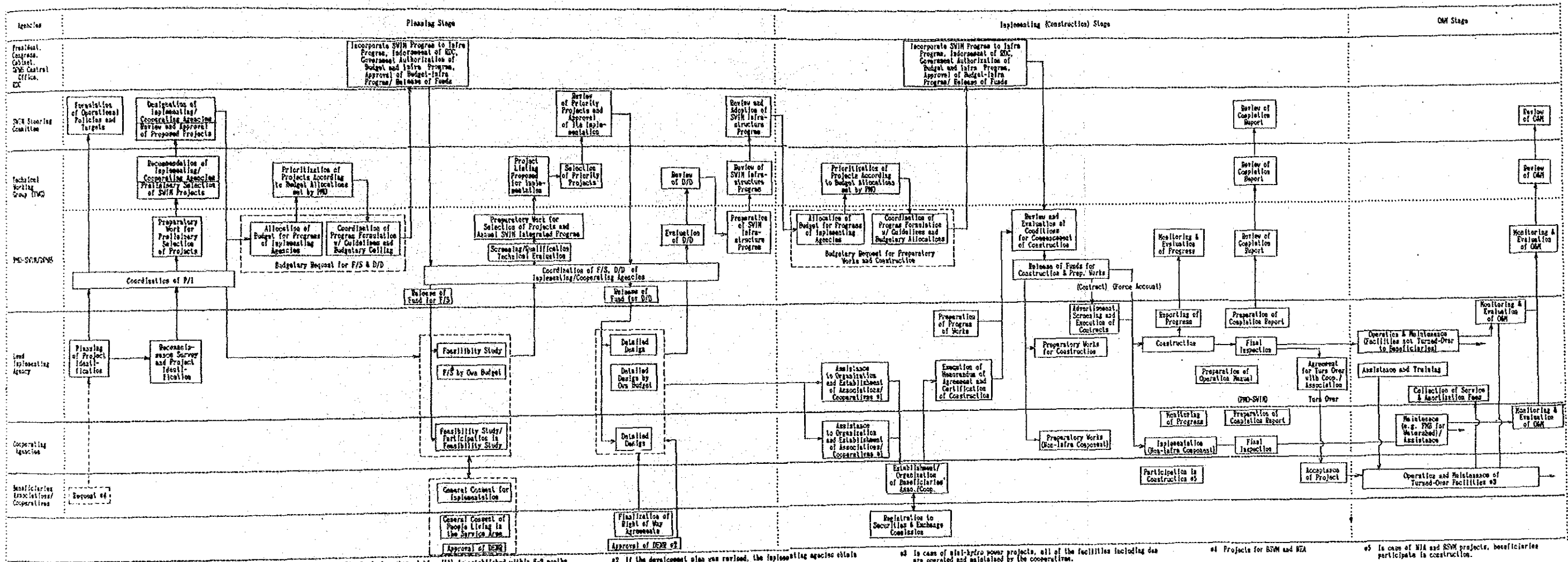


Fig. F.3.1 PROPOSED WORK SCHEDULE FOR IMPLEMENTATION OF SWIM PROJECTS

	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	8th Year	9th Year	10th Year	
1st Year	Preliminary Selection of Projects Budgetary Requests for F/S & D/D #4		Funding of F/S T/E & S/Q Funding of D/D Evalu. of D/D	Budgetary Requests for P/W & Const. Cost #1#4	Budgetary Requests for Const. Cost #2#4 Evalu. of C/C Funding of P/W & Const. Cost	Budgetary Requests for Const. Cost #3#4 Funding of Const. Cost P/W and Construction #1 Completion#1	Budgetary Requests for Const. Cost #2#4 Funding of Const. Cost Construction #2 Completion#2	Budgetary Requests for Const. Cost #2#4 Funding of Const. Cost Construction #3 Completion#3			
2nd Year		Preliminary Selection of Projects Budgetary Requests for F/S & D/D #4		Funding of F/S T/E & S/Q Funding of D/D Evalu. of D/D	Budgetary Requests for P/W & Const. Cost #1#4	Budgetary Requests for Const. Cost #2#4 Evalu. of C/C Funding of P/W & Const. Cost	Budgetary Requests for Const. Cost #2#4 Funding of Const. Cost P/W and Construction #1 Completion#1	Budgetary Requests for Const. Cost #2#4 Funding of Const. Cost Construction #2 Completion#2	Budgetary Requests for Const. Cost #2#4 Funding of Const. Cost Construction #3 Completion#3		
3rd Year			Preliminary Selection of Projects Budgetary Requests for F/S & D/D #4		Funding of F/S T/E & S/Q Funding of D/D Evalu. of D/D	Budgetary Requests for P/W & Const. Cost #1#4	Budgetary Requests for Const. Cost #2#4 Evalu. of C/C Funding of P/W & Const. Cost	Budgetary Requests for Const. Cost #2#4 Funding of Const. Cost P/W and Construction #1 Completion#1	Budgetary Requests for Const. Cost #2#4 Funding of Const. Cost Construction #2 Completion#2	Budgetary Requests for Const. Cost #2#4 Funding of Const. Cost Construction #3 Completion#3	
4th Year				Preliminary Selection of Projects Budgetary Requests for F/S & D/D #4		Funding of F/S T/E & S/Q Funding of D/D Evalu. of D/D	Budgetary Requests for P/W & Const. Cost #1#4	Budgetary Requests for Const. Cost #2#4 Evalu. of C/C Funding of P/W & Const. Cost	Budgetary Requests for Const. Cost #2#4 Funding of Const. Cost P/W and Construction #1 Completion#1	Budgetary Requests for Const. Cost #2#4 Funding of Const. Cost Construction #2 Completion#2	Budgetary Requests for Const. Cost #2#4 Funding of Const. Cost Construction #3 Completion#3
5th Year					Preliminary Selection of Projects Budgetary Requests for F/S & D/D #4		Funding of F/S T/E & S/Q Funding of D/D Evalu. of D/D	Budgetary Requests for P/W & Const. Cost #1#4	Budgetary Requests for Const. Cost #2#4 Evalu. of C/C Funding of P/W & Const. Cost	Budgetary Requests for Const. Cost #2#4 Funding of Const. Cost P/W and Construction #1 Completion#1	Budgetary Requests for Const. Cost #2#4 Funding of Const. Cost Construction #2 Completion#2
6th Year						Preliminary Selection of Projects Budgetary Requests for F/S & D/D #4		Funding of F/S T/E & S/Q Funding of D/D Evalu. of D/D	Budgetary Requests for P/W & Const. Cost #1#4	Budgetary Requests for Const. Cost #2#4 Evalu. of C/C Funding of P/W & Const. Cost	Budgetary Requests for Const. Cost #2#4 Funding of Const. Cost P/W and Construction #1 Completion#1
7th Year							Preliminary Selection of Projects Budgetary Requests for F/S & D/D #4		(Same as 6th year)		

#1 Construction period: Less than 1 year
 #2 Construction period: 2 years
 #3 Construction period: 3 years
 #4 Up-date of construction cost is done every year, before the budgetary requests.

D/D = Detailed Design
 F/S = Feasibility Study
 P/W = Preparatory Works for Construction
 C/C = Conditions for Commencement of Construction
 T/E = Technical Evaluation
 S/Q = Screening/Qualification

Fig. F.3.2 TIMEFRAME FOR PROPOSED GENERAL WORK SCHEDULE

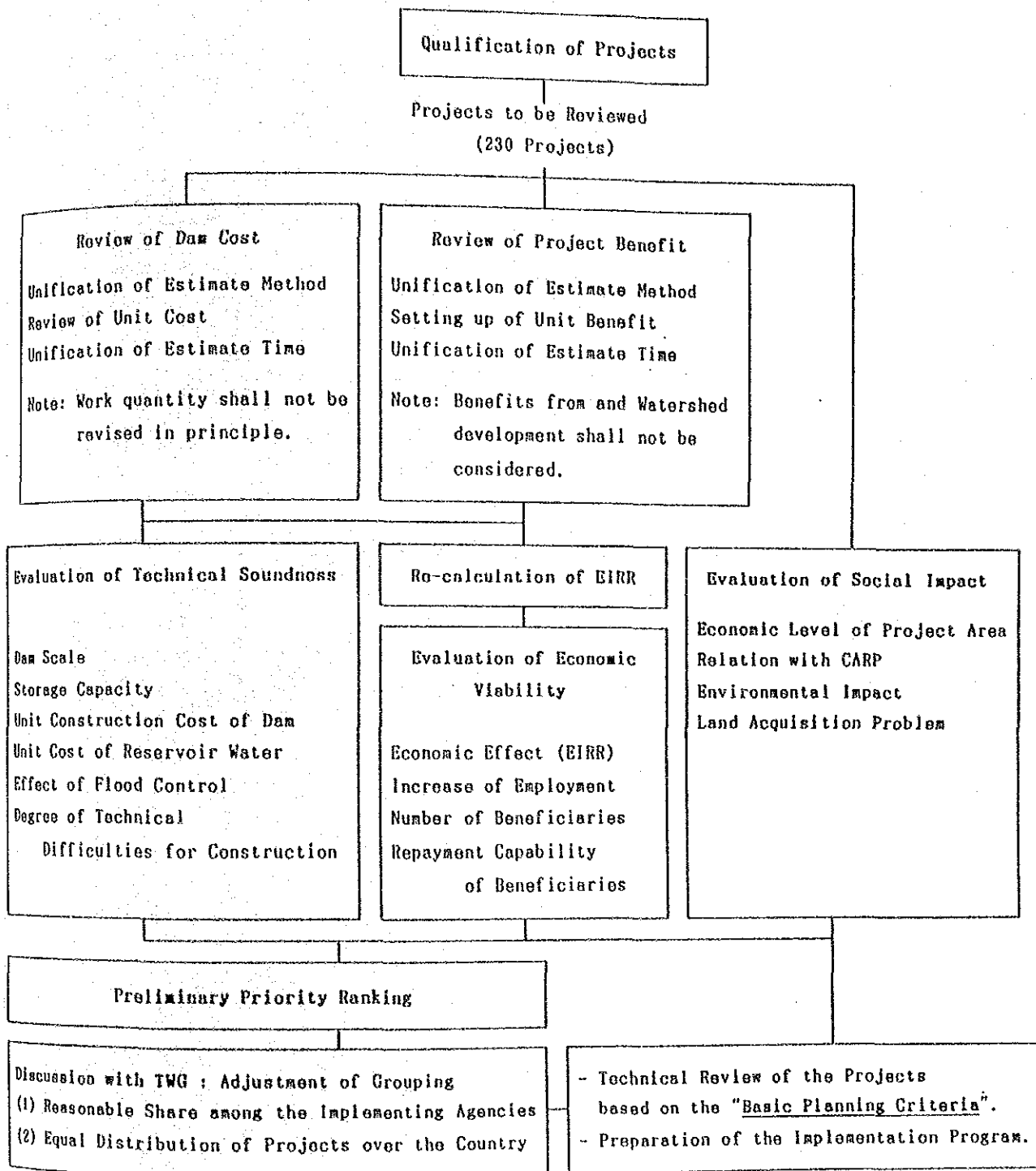
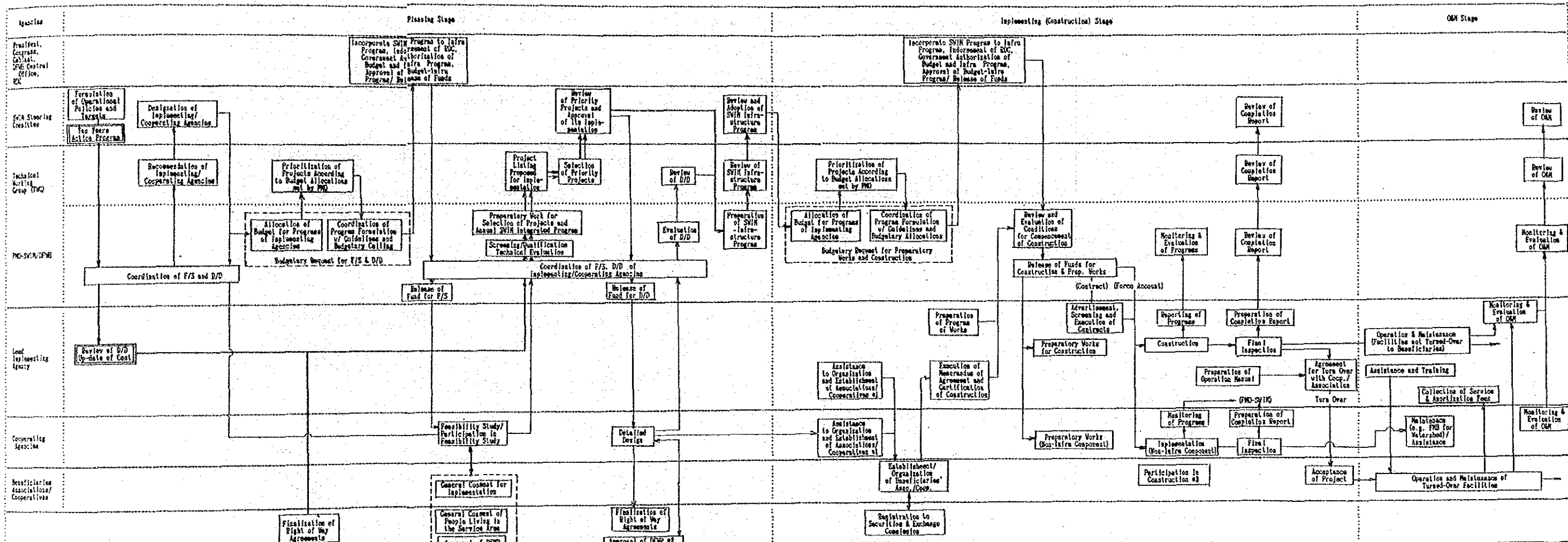


Fig. F.3.3 PROCEDURE OF PRIORITY RANKING



#1 The Irrigators Association (IA) is established within 6-8 months before the construction of irrigation system.
 #2 If the development plan was revised, the implementing agency obtains the approval for environmental aspects.
 #3 In case of IIA and RSM projects, beneficiaries participate in construction.
 #4 If the project under D/D stage has no study on non-infrastructure component, its F/S and D/D is carried out by cooperating agency under coordination of PMD/SW/SPM.

Fig. F.4.1 PROPOSED WORK SCHEDULE FOR TEN-YEAR ACTION PROGRAM
 - PROJECTS UNDER DETAILED DESIGN STAGE -