

# **Environmental Guidelines for JICA Development Study on Fishery Development Projects**

**March 1995**

**Japan International Cooperation Agency (JICA)**

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Fishery Development Projects**

**March 1995**

**Japan International Cooperation Agency (JICA)**

**Tokyo, Japan**

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**These Guidelines were prepared by the Japan Fisheries Resource Conservation Association under the supervision of the Japan International Cooperation Agency.**

# Environmental Guidelines for JICA Development Study

## on

## Fishery Development Projects

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## **Preface to the First Edition**

In context of the importance of environmental considerations in the implementation of development programs and projects to achieve sustainable development in developing countries, the Japan International Cooperation Agency (JICA) has been promoting environment-related technical cooperation and putting an emphasis on proper incorporation of environmental consideration in development projects.

In recognition of the significance of environmental issues, JICA has prepared the Environmental Guidelines for JICA Development Study on Fishery Development Projects (hereafter, the Guidelines) for use in procedures of screening and scoping of environmental impact in JICA development studies related to fishery. The Guidelines have been prepared for purposes of formulating environmentally sound development projects by identifying anticipated environmental impact and properly integrating environmental consideration into development projects.

The Guidelines are designed to assist all individuals who are involved in assessing environmental impact during the preparatory stages of JICA development studies related to fisheries. Sustainable fishery development can be achieved only where negative environmental impacts are identified and adequately addressed at the earliest possible stages of development. The Guidelines also provide information and general ideas on environmental considerations in context of fishery development projects and include reference to prior fishery operations with negative environmental impact.

The preparation of Guidelines has been assisted by a number of people, without whose help the task would be considerably more difficult. I am grateful to all those who have assisted in any way but am, in particular, indebted to the following:

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Toshiro Taguchi  
Vice President  
Japan International Cooperation Agency  
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## **Definitions and Terminology**

### **Environmental Consideration**

The process of studying and understanding potential and significant environmental impact of a proposed development project, and proposing practical measures to avoid to mitigate and minimize adverse impacts as necessary. The environmental consideration process in these Guidelines consists of Screening and Scoping, followed by implementation of Initial Environmental Examination(IEE) and Environmental Impact Assessment(EIA).

### **Screening**

To assess a proposed project and determine whether a JICA development study requires IEE or EIA. JICA defines screening based on available data and independent information collected prior to a preparatory study as Initial Screening, and screening conducted by a joint preparatory study mission with a recipient country as Joint Screening.

### **Scoping**

To identify significant environmental impacts in environmental generated by the proposed development project, and to clarify significant environmental issues to be assessed through IEE or EIA. Scoping is performed by a preparatory study mission jointly with a recipient country.

### **Initial Environmental Examination(IEE)**

This is defined as examination at the earliest planning stages of a development project regarding potential environmental impacts resulting from the proposed project, as based upon available data and information or judgment of specialists with experience and knowledge of environmental impacts of previous similar projects. This examination should be carried out comparatively over a relative short period relying on a limited budget.

Purposes of IEE are (1) to determine whether EIA is necessary for the proposed project, and to describe details of EIA if necessary; and (2) to scrutinize practical mitigative measures from the point of view of environmental consideration for any proposed project which does not require EIA but only environmental considerations.

### **Environmental Impact Assessment(EIA)**

For a proposed project that requires detailed investigation of potential environmental impact,EIA encompasses the following course of investigation: examination of environmental impact of the project, and prediction and evaluation of the same; establishment of an environmental protection goal; recommendation and proposal of measures to avoid or mitigate adverse impact.

### **Environmental Impact**

Physical, chemical, biological, cultural, social, and economic impacts affected in the natural or social environment as a result of human activities. It is necessary to avoid or mitigate these adverse impacts.

### **Environmental Protection Measures**

Measures to avoid or mitigate potential adverse environmental impacts which may result from the proposed project and to conserve a sound environment. The measures consist of environmental monitoring arrangements to detect adverse impacts at the early stages and provisions to avoid or mitigate potential adverse effects. To reinforce the above, measures may also related to, in a broad sense, implementing environmental protection, strengthening environmental administrative institutions, and developing human resources in the environmental sector.

### **Sectoral Environmental Guidelines**

The technical guidelines prepared for environmental consideration that are incorporated at the stage of planning and implementation of the development project. The guidelines shall be prepared for each of the major developmental sectors such as fisheries or agricultural development.

### **Project Description (PD)**

Description of outlines and components of a proposed project. The project description should present information on:(1) background and objectives; (2)outline of beneficiaries as regards population and area,executing agencies and the like;(3) major components and scale of development. The fishery development sector to which the Guidelines apply can be divided into six components such as capture fishery, resource enhancement, aquaculture, fishing ports, processing, and marketing. Major environmental categories and issues to be reviewed or assessed in the environmental consideration can be clearly identified rovided that aforementioned project components are defined in sufficient detail.

### **Site Description (SD)**

Description of environmental conditions with particular emphasis on the study area of a proposed fishery project. Under the Guidelines, the proposed project must take into account the natural and social environment of study areas under consideration. Natural environments of specific importance include tidal flats, mangrove forests, coral reefs, sea grass beds, and semi-enclosed water areas.Social environment factors worthy of special attention include indigenous people and ethic minorities,cultural property, historical spots, and the like. These major environmental categories and issues to be reviewed or assessed in the environmental consideration can be

clearly identified given that environmental features in study areas are defined in sufficient detail.

### **Environmental Issues**

Issues to assess serious environmental impacts generated by a development project, such as sedimentation and eutrophication, conflict among communities and peoples, adjustment of fishing rights, water utilization rights, etc. are also of importance. These are also called assessment issues.

### **Environmental Consideration in Development Studies**

Within the scope of a JICA development study the potential environmental impacts identified as insignificant through the process of screening and scoping also include minor adjustments of riparian rights, although EIA is not necessary in this case. Such issues, duly considered in the course of project planning under JICA development studies (and related concerns), are to be clearly defined.

### **Pre Environmental Impact Assessment (Pre EIA)**

Environmental assessment on a semi-full scale consists simply of descriptions of potential environmental impacts and practical measures for mitigating such impacts. This assessment is characterized between IEE and EIA. Some recipient countries impose a duty to implement this type of assessment.

### **Preliminary Environment Survey**

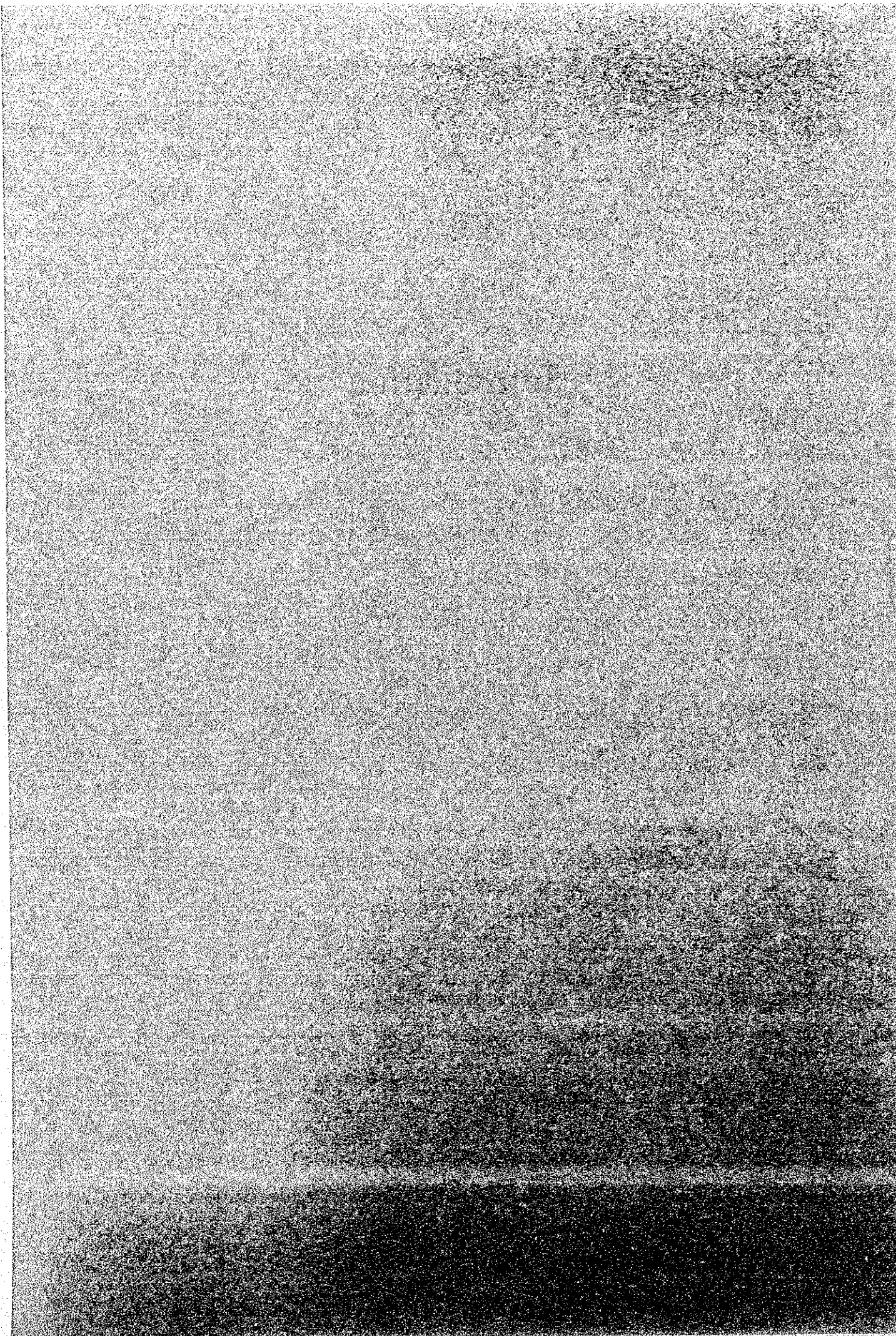
This survey is implemented at the stage of preparatory study, and includes screening and scoping of environmental impacts of the proposed project, and is categorized as a part of IEE.

## **Abbreviations**

<b>C/P</b>	<b>Counterpart</b>
<b>DF/R</b>	<b>Draft Final Report</b>
<b>EIA</b>	<b>Environmental Impact Assessment</b>
<b>F/R</b>	<b>Final Report</b>
<b>F/S</b>	<b>Feasibility Study</b>
<b>Full EIA</b>	<b>Full Environmental Impact Assessment</b>
<b>IC/R</b>	<b>Inception Report</b>
<b>IEE</b>	<b>Initial Environmental Examination</b>
<b>M/M</b>	<b>Minutes of Meeting</b>
<b>M/P</b>	<b>Master Plan</b>
<b>PD</b>	<b>Project Description</b>
<b>Pre EIA</b>	<b>Pre Environmental Impact Assessment</b>
<b>Q/N</b>	<b>Questionnaire</b>
<b>SD</b>	<b>Site Description</b>
<b>S/W</b>	<b>Scope of Works</b>
<b>TOR or T/R</b>	<b>Terms of Reference</b>



# Introduction



# **Introduction**

## **1. Background**

In recent years, the global deterioration of the natural environment has become more acute as manifested by the destruction of tropical forests, disappearance of mangrove forests, extinction of species, and increased frequency of acid rain. In order to solve such serious environmental problems of a global scale, national and international organizations responsible for developed cooperation have been increasingly focusing their efforts on environmental issues in developing countries.

The Japan International Cooperation Agency (JICA) has formed a Study Group on Environmental Issues in Development Assistance Programs (Hereafter, the Study Group) in 1988, aimed at strengthening and promoting international cooperation in the environmental sector. Issues investigated by the Study Group include: (1) The process of scoping and the discussion of minutes, and (2) formulation and discussion of environmental guidelines.

The purpose of this manuscript is to put forth environmental guidelines for JICA development studies which concern fishery projects.

## **2. Objectives of the Guidelines**

In formulating the development study plan for fishery projects, it is essential to foresee potential significant environmental changes induced by the implementation of the proposed project, and to take necessary measures for ensuring appropriate environmental considerations. Therefore, as a part of the environmental consideration process, the Guidelines have been prepared to assist screening and scoping prior to or in the course of preparation for work detailed in the studies. The Guidelines aim at eliciting the benefits of environmental concern, and expediting the appropriate considerations in subsequent development studies conducted by JICA.

## **3. Scope of the Guidelines**

### **(1) User**

The Guidelines are designed to assist mainly JICA staff and mission members involved in the preparatory study for development studies.

## **(2) Studies to be Applied**

The Guidelines are aimed at guiding preparatory work necessary for the implementation of JICA development studies, i.e., feasibility studies(F/S), pre feasibility studies (Pre F/S) or master plan study(M/P) for fishery in developing countries. The overall ideas of the Guidelines allow application by the user to small-scale studies such as basic design studies under the grant aid programs, detailed design surveys for model infrastructure, or technical assistance efforts by JICA encompassing investment and financing of development studies.

## **(3) Use of the Guidelines**

To fully utilize the Guidelines, an overview of an example development study in context of environmental consideration is shown to provide a visual grasp of the Guidelines in Figures 1 and 2 respectively, and are also explained briefly below. A development study is generally divided into the following two stages: (1) the study preparation stage, which consists of scrutiny and identification of the official request for the study, consultation and agreement with the recipient country regarding the Scope of work (S/W) as based upon the preparatory study, and selection of consulting firms and the like; and (2) the implementation stage of the F/S or M/P by JICA consultants. **Figure 1** illustrates the procedures at these stages.

The major environmental-related work during preparation of the F/S and M/P is outlined below while referring to **Figure 2**. Major work is categorized into three parts: (1) in-house preparatory work; (2) field work; and (3) in-house work.

### **In-house preparatory work**

#### **1) Scrutiny and identification of the official request**

Firstly, a request proposal, and existing relevant data and information should be scrutinized. If the proposed projects will not affect the abundance of fishery resources and does not harbour adverse environmental impact, focus on the improvement of concerned organizations and institutions, or upgrading of human resources should be focused upon. It is not necessary to give undue attention to environmental considerations. Within the exception of such projects, the following processes will be regarded.

#### **2) Initial Screening**

The project description(PD) form and site description(SD) form are prepared based upon collection and analysis of the relevant data and information in accordance with the request proposal. The initial screening is carried out on the basis PD form and SD form. In the case

of the significant environmental impact, environmental specialists are to join the preparatory study mission. Additionally, questionnaires to the recipient country and draft of Scope of Works (S/W) including the related environmental items are to be prepared.

## **Field work**

### **3) Scrutiny on EIA guidelines in the recipient country**

The following are to be examined in line with the field work plan: data and information for the project outline, environmental conditions, environmental authorities and institutions, the IEE/EIA arrangements, environmental laws and regulations, and environmental guidelines (hereafter EIA guidelines in the recipient country) in the recipient country. It is also to be confirmed whether the proposed project falls within the category of IEE and EIA. One of the following three cases is to be selected in accordance with EIA guidelines in the recipient country.

(Case 1) When EIA guidelines in the recipient country are considered satisfactory, environmental considerations are carried out using the guidelines of the recipient country.

(Case 2) When EIA guidelines in the recipient country are not satisfactory, environmental considerations are carried out using guidelines in the recipient country complemented the JICA Guidelines.

(Case 3) When there are no EIA guidelines in the recipient country, environmental considerations are carried out using the JICA Guidelines.

### **4) Screening and Scoping (carried out jointly with the recipient country)**

#### **① Screening:**

With the collected information in field work and subsequent data analysis, the PD form and SD form completed during the in-house preparatory work, and screening checklist are to be carefully re-examined. When IEE or EIA are judged necessary, scoping is then carried out.

#### **② Scoping:**

In order to specify environmental issues in IEE for M/P and EIA for F/S, it is proceeded to evaluate degree of each environmental issues for the use of to the checklist for the scoping. Full utilization of explanations of environmental issues (Chapter 2-9) in the Guidelines should help in grasping accurate and concrete understanding of potential environmental impacts. The results of such scoping should be described in S/W and M/M. However, when environmental issues can not be discerned properly at this stage, it

should be discussed in M/M that identification of these issues is conducted at the implementation stage of F/S, Pre F/S or M/P.

### **In-house Work**

#### **5) Preparation of preparatory study report**

Upon return from the mission, a preparatory study team must, aside from the usual reporting items, describe the implementation arrangements of IEE and EIA at the implementation stages of F/S, Pre F/S, or M/P, in reference to the Guidelines. Finally, they must reflect study results on the terms of reference (TOR) for the implementation stage of F/S, Pre F/S, or M/P.

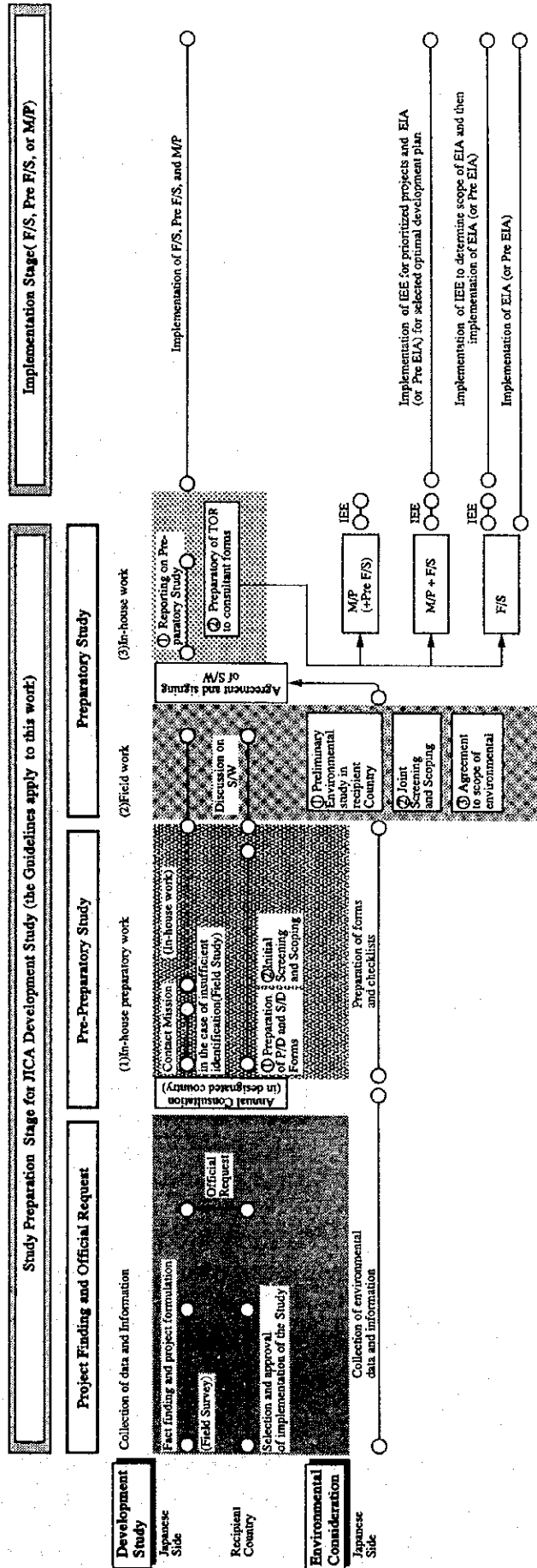
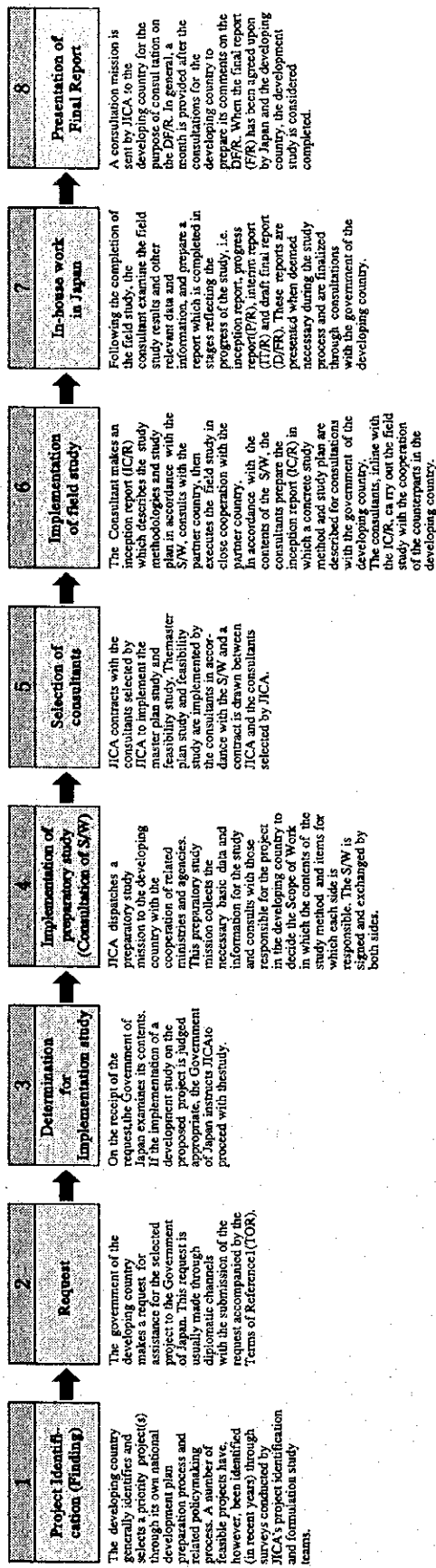


Figure -1 Implementation of JICA Development Studies and Associated Environmental Considerations.

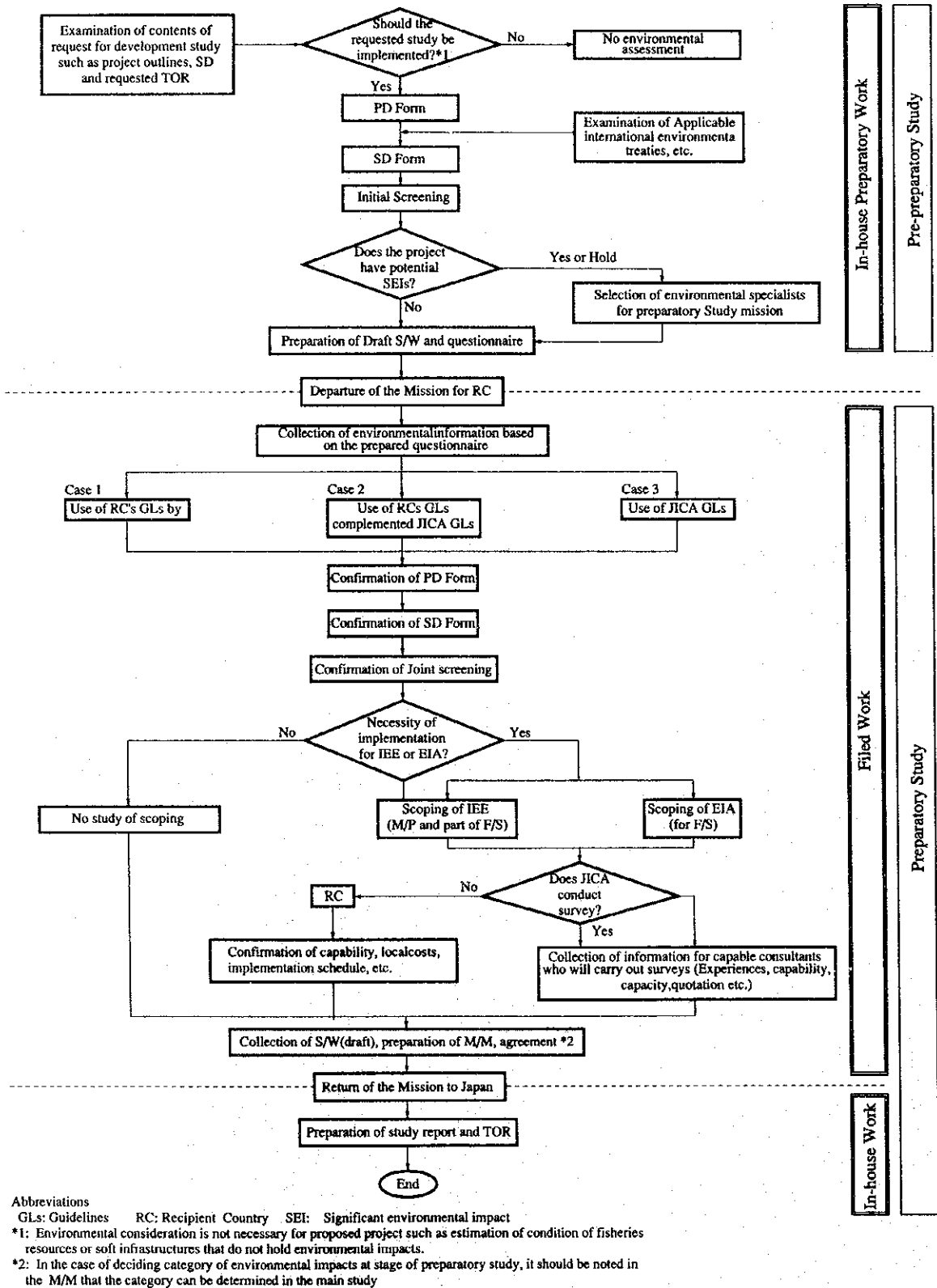
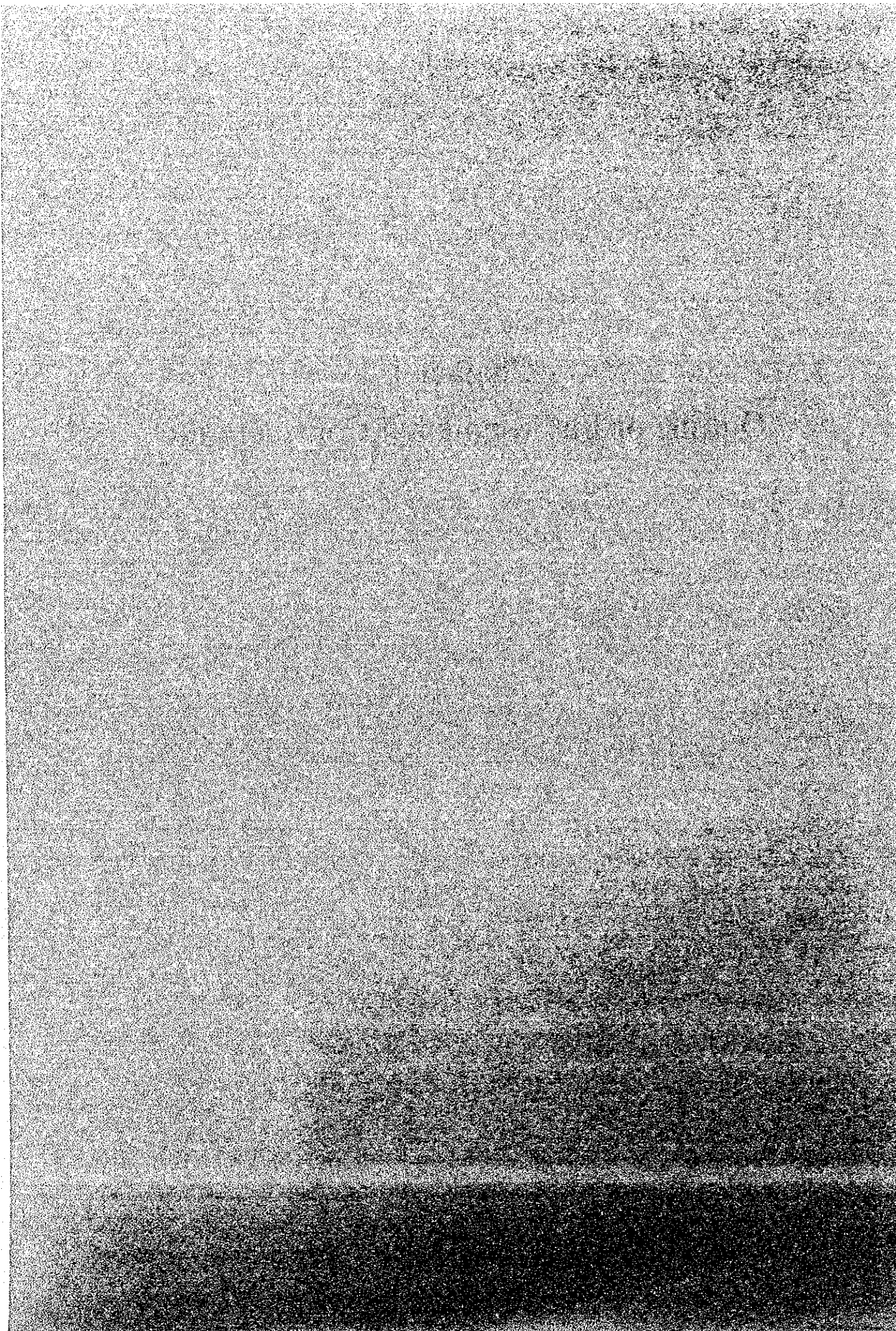


Figure 2 General Steps for Environmental Consideration during Study Preparation Stage.



# **Chapter 1**

## **Outline of Environmental Consideration**



# **Chapter 1 Outline of Environmental Consideration**

## **1.1 Basic Concept of Environmental Consideration**

The Japan International Cooperation Agency (JICA) formed a Study Group on Environmental Issues in Development Assistance Programs (hereafter, the Study Group) in 1988. In the Study Group, "environmental consideration" is defined as a process to assess the potential and significant environmental impact of a proposed development project, to evaluate the results based upon the above assessment, and to propose practical measures to avoid and/or alleviate adverse impacts as necessary.

In accordance with this definition, environmental considerations should be regarded as a process in project planning in order to guarantee sustainable development. To accomplish sustainable development projects, environmental consideration should be examined carefully at the earliest stages as possible based on long-term perspectives.

Environmental considerations, therefore, should be undertaken in accordance with the laws, regulations, guidelines and other relevant arrangements that recipient countries apply to environmental management.

However, it is often the case that laws or regulations covering environmental consideration are either non-existent or not appropriately applied as expected. Of more difficulty is that policies and systems for environmental management differ from one country to another. It is essential, therefore, that environmental consideration procedures be based on the results of intensive consultations and discussions between JICA and the involved agencies of the recipient countries regarding environmental policies and regulations, institutions, institutional arrangements on environmental management, the state of environmental quality and the socio-economic situation.

Namely, the process of environmental consideration in JICA development studies involves, in compliance with the environmental requirements of recipient countries, working to secure sustainable development for improvement of living standards of the peoples and ensuring that the relevant development projects are harmonious with environmental quality in and around the project areas.

For example, inappropriate consideration of the management of natural resources surrounding a project area may result in impediment of sustainable development due to the degradation of the

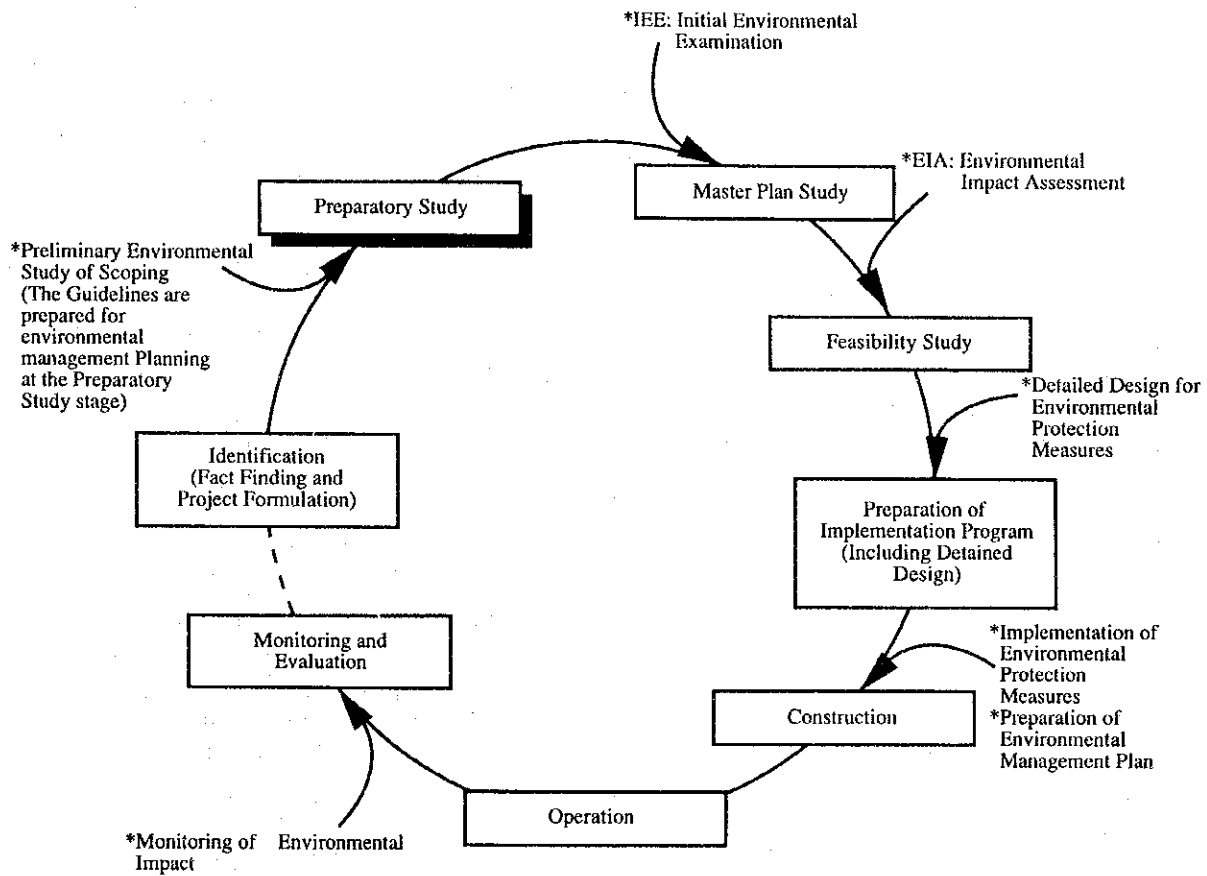
project area itself. This may in turn lead to deterioration in the living standards of the local people and have adverse effects. Accordingly, for the sustainability of a proposed development, it is necessary to consider the balance between the benefits and adverse effects of development, natural resource management in and around a project area and resources required for the social and economic activities of the affected population.

Therefore, the environmental consideration process is regarded as a procedure not only for predicting and assessing the degree of adverse impact and studying environmental protection measures, but also of assessing the benefits of a project in a certain region and or district, extent of harmony between development and environment, and the degree of environmental enhancement of affected areas; it is also a means of monitoring environmental consequence. The monitoring process includes arrangements for monitoring significant changes in the environment during construction of a project and environmental monitoring after the commencement of project operations.

**Figure 1-1** shows the environmental consideration process which the Development Assistant Committee (DAC) of the Organization for Economic Cooperation and Development (OECD) has proposed for environmental impact assessment and monitoring of activities in a project cycle.

The cycle of a development project consists of: 1) project identification and preparatory study; 2) project study, composed of master plan and/or feasibility study with EIA; 3) project implementation, consisting of preparation of implementation program and construction accompanied by execution of necessary environmental measures and preparation of an environmental management plan; 4) project operation with environmental monitoring; and 5) project monitoring and evaluation. The results and findings of monitoring and evaluation are then added to the project formulation of a future project. The environmental management plan in this cycle refers to monitoring environmental changes arising as a result of the implementation of a subject project.

**Table 1-1** shows the environmental consideration process as it corresponds to each project implementation stage and **Table 1-2** shows environmental considerations applied in development studies undertaken by JICA.



**Figure 1-1 Process of Environmental Consideration in the Project Cycle.**

**Table 1-1 Project Implementation and Environmental Consideration**

	Stage of Project Implementation		Environmental Consideration Process
Conducted by JICA	Preparatory Study		(Screening and Scoping) Preliminary Environmental Study ( P E S )
	Master Plan Study	Feasibility Study	Initial Environmental Examination ( I E E )
	Feasibility Study		Environmental Impact Assessment( E I A )
Implemented by Executing Agency	Preparation of Implementation Program (including Detailed Design)		Detailed Design for Environmental Protection Measures
	Construction		Implementation of Environmental Protection Measures and Preparation of Environmental Management Plans
	Operation		Monitoring of Environmental Impact

Notes:

1. The correspondence between the respective stages and processes indicated above may vary slightly depending on the specific requirements of a project or recipient country.
2. IEE and/or EIA are not required in some projects.
3. Preparation of the Implementation Program includes the detailed design of construction work and necessary facilities for environmental protection measures.
4.  focuses on the Guidelines.

**Table 1-2 Environmental Consideration Process in JICA Development Studies**


	Process of Development Study	Environmental Consideration Procedures	Checking Items for Environmental Consideration
Project Identification	<p>Identification (Fact finding and project formulation) Receipt of TOR for the requested Study</p> <p>↓</p> <p>Review of the TOR</p>	<p><b>(Initial Screening)</b> To judge necessity of IEE or EIA</p> <p>↓</p>	<p><b>(Preparation of S/W and M/M)</b> To examine representation of environmental study items agreed to on the basis of screening and scoping.</p> <p><b>(Reporting on Preparatory Study)</b> To clarify screening and scoping process and finding/agreed-upon items</p> <p><b>(Contents of TOR for Consulting Firms)</b> To finalize TOR of IEE/EIA and estimate man-months required for consultants</p> <p><b>(Selection of Consultants)</b> To evaluate conformity of proposals to TOR</p> <p><b>(Technical Approach to IEE/EIA)</b> To conduct consultation and to finalize EIA items and methodology in accordance with scoping results</p>
Preparatory Study	<p>Field Study</p> <p>↓</p> <p>Consultation and agreement to S/W</p> <p>↓</p> <p>Preparation of Preparatory Study Report</p>	<p><b>(Joint Screening)</b> To confirm results of Initial Screening</p> <p>↓</p> <p><b>(Joint Screening)</b> To confirm results of Initial Scoping and to conduct Joint Scoping on IEE or EIA to determine allocation of tasks to each government</p>	
Selection of Consultants	<p>Preparation of the TOR for consulting firms</p> <p>↓</p> <p>Selection of consulting firms</p>		
Implementation of F/S or M/P	<p>Preparation of and consultation on IC/R</p> <p>↓</p> <p>Preparation of and consultation on DR/R</p> <p>↓</p> <p>Preparation and submission of F/R</p>	<p>↓</p> <p>To conduct IEE/EIA</p>	

Notes:

1. This table is modified from environmental consideration processes described in OECF in the JICA study Group report on Environment Issues in Development Assistance Project in 1988.

2. Abbreviation:

TOR: Terms of Reference S/W: Scope of Work IC/R: Inception Report DF/R: Draft Final Report  
F/R: Final Report

3.  focuses on the Guidelines.

## **1.2 Basic Concept of Fishery Development Studies**

The main purpose of the Guidelines is to apply a preliminary environmental study covering the potential environmental impacts generated by a fishery development project conducted during preparatory studies of a JICA development study.

JICA previously prepared environmental guidelines applicable to a number of sectors including agricultural and forestry development projects. The Guidelines are designed, as much as possible to be similar in structure, content, and usefulness to earlier published environmental guidelines, and are intended to be compatible with other fields as well as to be useful to all readers.

Fishery development projects, differing from other fields of projects, can be characterized as aquatic media in deep relation with natural and social environments. In particular, as fishy activities utilize partially ecosystem, it is necessary to manage the use of both environment and resulting productivity for attaining "sustainable development" as well as conserve ecological systems.

## **1.3 Components of Fishery Development and Environmental Impacts**

Goals of fisheries development are to conserve fisheries resources, to increase fisheries production such as in the production of high quality and low cost protein sources through fishing or aquaculture, to improve the provision of food in developing countries, and to produce economic effects such as expanded employment in the fisheries industry and earning of foreign currency.

Each of the development activities designed to achieve development goals is called "a project component" including capture fishery, resource enhancement, aquaculture, fishing ports, processing, and marketing. For example, it is necessary to carry out "resource enhancement" development with "seed production" and "seed releasing and resource propagation (enhancement)" in order to conserve fisheries resources, and "capture fishing" development with adequate "resource management". It is also necessary both to carry out "aquaculture" development and to promote "capture fishing" development with the introduction of "fishing vessels and gears" and new "fishing ground development", in order to secure a good supply of protein from marine resources. Moreover, improvement of "fishing ports" facilities functionally linking landed fish with the market, "processing" development to enhance value, and



improvement and development of "distribution and marketing" of fish products, will produce sizable economic effects on fishery development. The relationships among these components are shown in **Figure 1-2**.

However, project components do not operate in a dependent manner, but rather connect in a functional relationship. Therefore, the combination of the components is important in the planning of a proposed development project when fishery development formulates a part of overall rural development or when limited rural development comprises a part of fishery development.

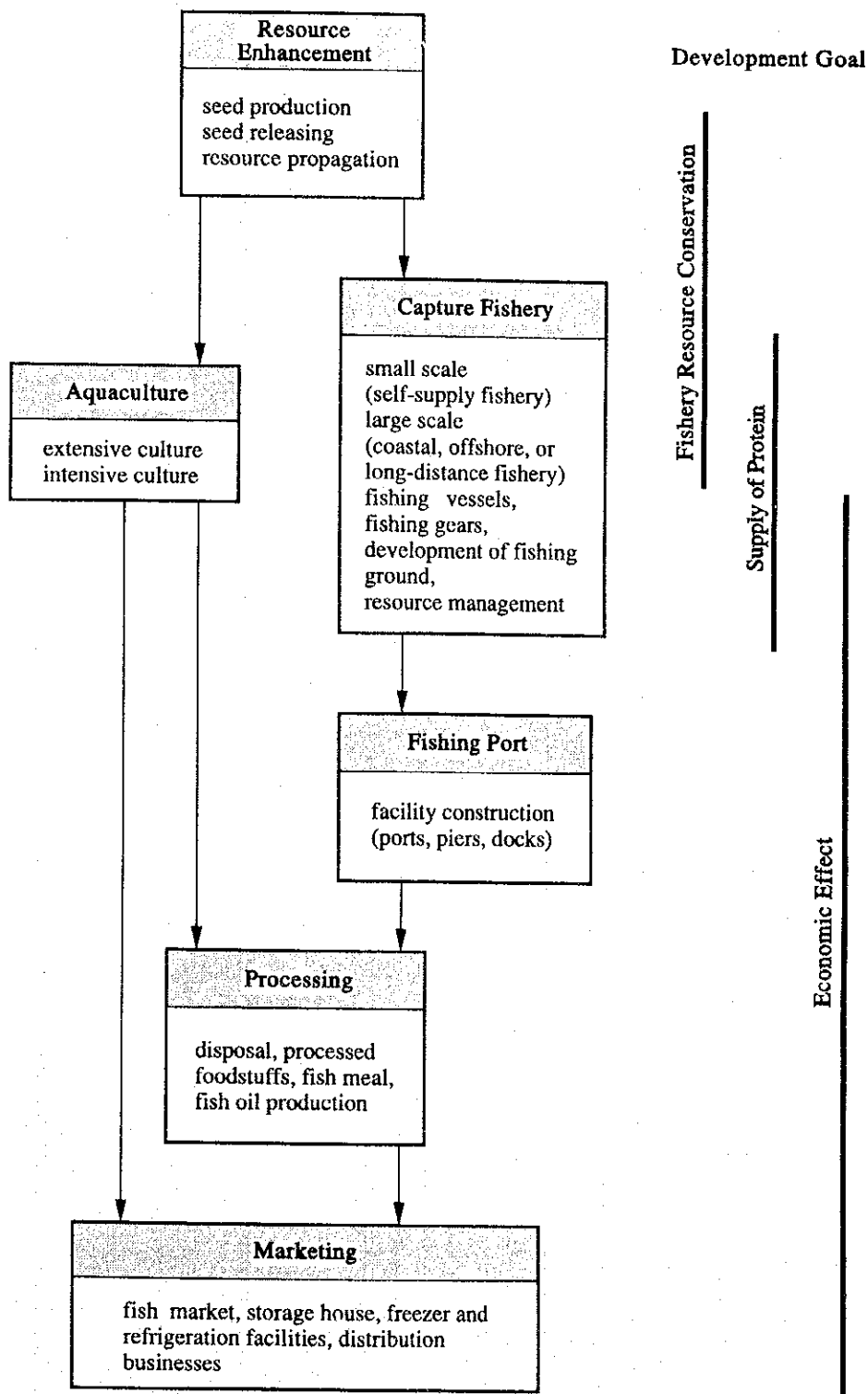
The disappearance of wetlands including the mangrove forest have been highlighted recently regarding environmental impacts of development. This serious environmental problem is a result of conversion of mangrove forest areas to culture ponds for purposes of aquacultural development in brackish water areas. Another important issue is the overexploitation of fishery resources due to excessive resource development and inadequate fishery resource management.

In Southeast Asian countries, expansion of the aquaculture industry has successfully enabled economic gains but has induced adverse environmental impacts including the deterioration of water quality. Such natural environmental impacts set off a chain reaction effecting social aspects such as everyday life of the community, and human health and sanitation. Hence thorough study and examination of potential socio-economic environmental impacts are required.

In many cases, the causal sequence of environmental impact generated by fishery development is clear to some degree; thus it is possible to predict environmental impacts and propose measures to avoid or mitigate adverse impacts. The Guidelines delineate procedures of analysis for each component of those development activities which generate adverse impacts, and what are the major potential impacts and available mitigative measures, and clarify the degree of major potential impact at the preparatory stages of the study. However, on case that project components are combined, or major environmental impacts are functionally related as shown in **Figure 1-3**, it may be difficult to fully set out mitigative measures for potential adverse environmental impacts.

Fishery activities are a fragile primary industry dependent upon the aquatic environment and easily influenced by environmental deterioration and ecological disturbance. The aquatic environment is utilized by various communities and industries and therefore susceptible to pollution. This consequently affects the capture fishing and fish culture industries. Sustainable fishery development, therefore, would be an indicator of soundness of the aquatic environment.

The Guidelines have, as has been put forth in the introduction, been prepared for the purpose of protecting the surrounding environment in implementation of proposed fishery projects. It is necessary to pay attention to environmental issues not only caused by fishery projects but also affecting fishery as a result of other development activities. The latter environmental issues are beyond the scope of the Guidelines.



**Figure 1-2 Relationships among Components and Development Goals for Fishery Development Projects.**

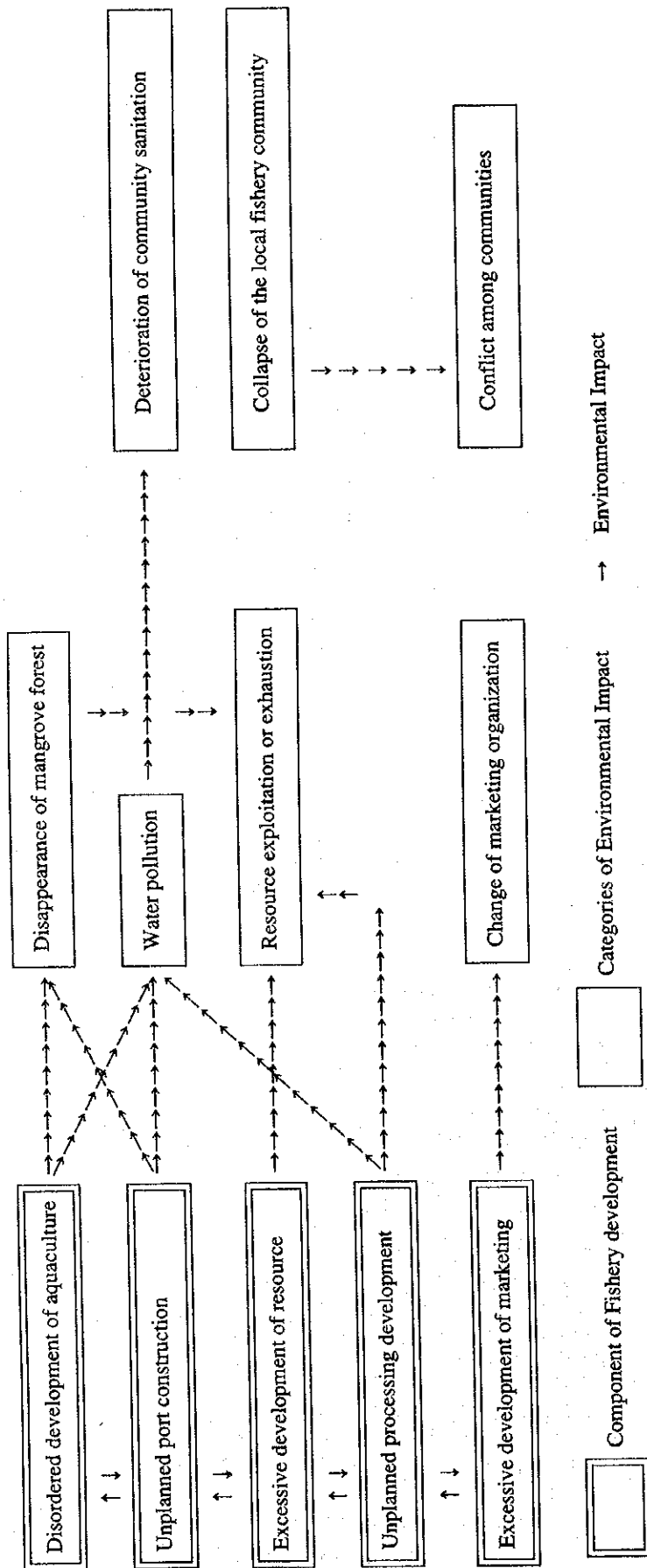
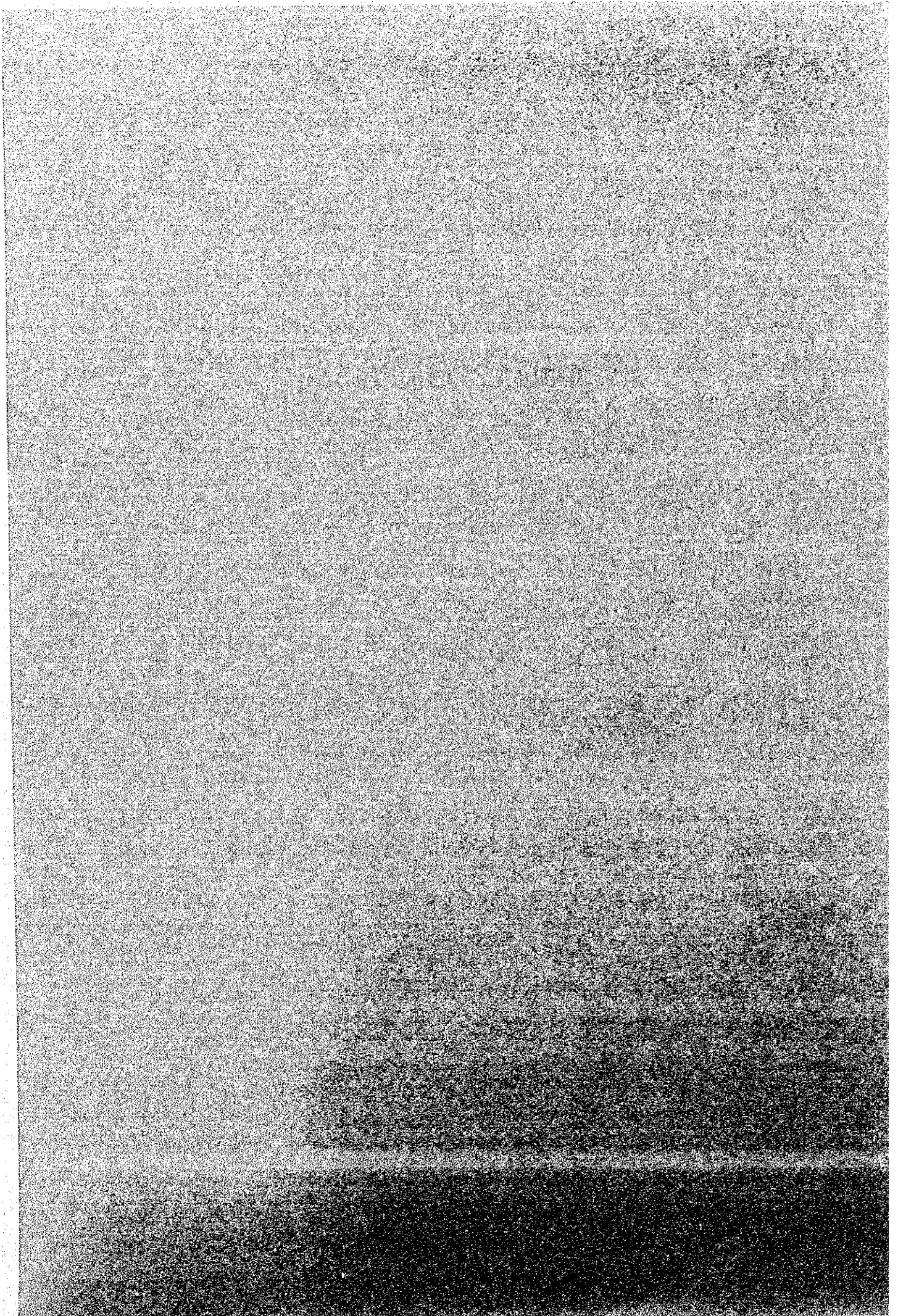


Figure 1-3 Example of Chained Environmental Impacts.

## Chapter 2 Guidelines



## **Chapter 2 Guidelines**

### **2.1 Framing of the Guidelines**

The Guidelines have been structured as follows:

- (1) Preparation of PD and SD Forms
  - 1) Gist of Preparations
  - 2) PD Form
  - 3) SD Form
  - 4) Samples for PD and SD Forms
- (2) Preparation of Initial Screening Checklist
  - 1) Gist of Preparations
  - 2) Screening Checklist
  - 3) Sample for Screening Checklist
- (3) Preparation of Joint Screening and Scoping Checklists
  - 1) Gist of Preparations
  - 2) Scoping Checklist
  - 3) Samples for Joint Checklist
- (4) Overall Evaluation
- (5) Preparation of S/W and M/M
- (6) Preparation of Preparatory Study Report

### **2.2 Notes for the Practical Use of the Guidelines**

#### **(1) Basic Points**

It is imperative that the Guidelines be used with due consideration to the environmental policy and situation in the recipient country, particularly with regard to institutions, legislations, guidelines, etc. In countries where environmental regulations and guidelines requiring IEE and EIA have been established for the fishery development, screening and scoping should be conducted in accordance with these regulations and guidelines in principle.

In countries where there are no such requirements, screening and scoping are to be conducted in accordance with the Guidelines, after fully explaining the Guidelines and gaining the understanding of the counterpart authority regarding environmental consideration.

## **(2) Avoiding Duplication of Studies**

Unnecessary duplication of specific study issues should be avoided, particularly socio-economic studies, which are already included in the scope of a development study in consideration of environmental issues and environmental consideration.

## **(3) Deepening Environmental Consideration by Stage-wise**

The process of implementing a development study comprises a sequence of stages including examination of the requested study, formulation of a project, execution of a preparatory study, selection of consultants and implementation of the M/P or F/S. Environmental considerations should be suitably applied accordingly at each stage. With reference to **Figure 1-1, Tables 1-1 and 1-2** in Chapter 1, it is therefore a prerequisite to clearly understand environmental problems that define an environmental study and their roles in each corresponding stage. Based upon this understanding, preparatory work for a development study should proceed step by step so as to identify significant environmental impacts anticipated of a development project. The Guidelines may be properly modified, when necessary, in the context of specific social, economic and environmental conditions in the recipient country.



## **2.3 Preparation of Project Description(PD) and Site Description(SD) Forms**

### **2.3.1 Gist of Preparations**

#### **(1) Purpose of PD and SD Forms**

Forms for PD and SD of the proposed project are to be prepared in order to summarize the basic data required for screening and scoping activities of the requested development study.

#### **(2) Preparation Process**

##### **1) Preparation on In-house Work**

In line with the request document for the development study of the proposed project, preparatory PD and SD forms are to be prepared on the basis of the available data and information submitted by the government of the recipient country. Information necessary for preparing the forms includes:

- Background information and objectives of the proposed project in the required development study (clear long- and short-term objectives and background information necessary for justifying the proposed project).
- Brief description of the proposed project.
- Major components and development scale of the proposed project.
- Information on the natural environment, and local environmental authorities concerned, and relevant environmental laws, regulations, and guidelines, particularly for purposes of EIA procedures.
- Information on the socio-economic and natural conditions of the proposed project area.
- Information on environmentally sensitive areas in and around the proposed project area.

Although the available information for the proposed project is usually limited at this stage, it is important to collect and fill in these forms, to the extent possible, country environmental profiles that include the following information:

- Implementation arrangements for Environmental consideration (law, institutions, the Guidelines, administrative organizations, etc.)
- Country data on fisheries development, relevant environmental considerations, and environmental information published by the United Nations and other international organizations.
- Adopted international environmental treaties for conservation of wetlands, fauna and flora, etc. that apply to the proposed project area and vicinity, if any.

## 2) Completion of PD and SD Forms in Field Work

In order to conduct appropriate and precise screening and scoping of the proposed project, it is necessary in the course of the field work to improve and supplement the forms with additional data and information available in the recipient country. Preparatory PD and SD forms prepared for in-house work are to be refined accordingly, and thus completed.

### 2.3.2 PD Form

#### (1) PD Form

Major items for the PD form (see attached **Form 1**) to be filled in are as follows:

- 1) **Study Title (or Project Name).**
- 2) **Background Information and Objectives of Project.**
- 3) **Brief Description of Project.**
- 4) **Major Components and Development Scale of Project.**

#### (2) Filling in the PD Form

In line with the items detailed below and shown on the PD form, required details should be entered clearly and briefly.

##### 1) Study Title (Project Name):

Study title (project name) of the proposed project that is proposed by the recipient country.

##### 2) Background Information and Objectives of the Project

Objectives and justification of the proposed project, as well as any related long- or short-term development plan, policy or strategy.

##### 3) Brief Description of Project

###### ① Outline of Project Area

Location (name of country, province, district, and nearby major city)

Present situation and features of the project area

###### ② Beneficiaries and Area to benefit

Benefited population and area (gross area, affected both directly and indirectly, is acceptable, however, "gross area" must be indicated as such)

###### ③ Major Project Components

Summary of project components appears below in item 4 "Major Components and

# Project Description (PD) Form

Form 1

1. Study Title (Project Name)

2. Background Information and Objectives of Project

3. Brief Description of Project  
Outlines of Project Area :

Beneficiaries and Benefited Area :

Major Project Components :

Executing Agencies :

Environmental Agencies Concerned :

4. Major Components and Development Scale of Project.

(1) Main Components (Development activities)	(2) Type of Operation	(3) Scale of Project Area	(4) Remarks
	New	Rehabilitation	Dimension of Major Facilities
a. Capture Fishery	<input type="checkbox"/>	<input type="checkbox"/>	
b. Resource Enhancement	<input type="checkbox"/>	<input type="checkbox"/>	
c. Aquaculture	<input type="checkbox"/>	<input type="checkbox"/>	
d. Fishing Ports	<input type="checkbox"/>	<input type="checkbox"/>	
e. Processing	<input type="checkbox"/>	<input type="checkbox"/>	
f. Marketing	<input type="checkbox"/>	<input type="checkbox"/>	
g. Other	<input type="checkbox"/>	<input type="checkbox"/>	

Development Scale of Project”.

④ Executing Agencies

Name of executing agencies of the proposed project and any related agencies.

⑤ Environmental Agencies Concerned

Name of the environmental-related government organizations at the national and regional levels or the environmental department of the local government. Names of NGOs which are active in the project area ( those, if any, which oppose implementation of the proposed project should also be named) .

**4) Major Components, Type of Operation and Scale of Project**

① Main Project Components (or Development Activities)

Project for fishery developments are categorized in terms of six major components hereunder, with brief descriptions.

a. Capture Fishery

This includes:(i) marine resource development and resource management plans for developing new resources or new fishing grounds (including small-scale, coastal, and off-shore fishing grounds); and (ii) technical development plans for introduction of new equipments (and fishing techniques) such as fishing vessels and fishing gears.

b. Resource Enhancement

This includes all projects designed for a purposes of resource enhancement such as: (i)seed productions of marine and freshwater species; (ii)seed release and construction of related facilities; and (iii) resource enhancement plans involving installation of artificial reefs or artificial propagation of sea grass beds.

c. Aquaculture

This includes: (i) facilities construction plans for the following culture systems: cages making partial use of marine and freshwater areas; ponds intaking water from groundwater,lakes, marshes, and rivers; systems utilizing whole natural lakes or marshes, and (ii) Rearing project plans for adult or brood stock.

d. Fishing Ports

This include: (i) development plans including land reclamation, land construction, construction of breakwaters, and dredging along navigation routes, and (ii) construction plan of dock yards for fishing vessels, oil supply facilities, piers and related facilities.

e. Processing

This include facilitative and technical developmental plans such as process of products, food processing and utilization (canned and smoked), fish meals and oil production.

f. Marketing

This includes distribution and marketing development plans involving markets having a collective place for storage of products with freezing and refrigerating facilities for preservation, transportation, and selling.

② Type of operation (or type of activity)

The component(s) applicable should be indicated and marked with "X" in each column corresponding to the type of development project (whether new project or rehabilitation of old project). Where a project consists of several components, each components is to be marked with "X" , depending on the nature of the proposed project.

③ Scale of Project describes the following items:

a. Area:

Benefited area and name of target species should be indicated in the corresponding column. Gross area, affected both directly and indirectly, is acceptable; however, "gross area" must be indicated as such. For capture fishing, the name of the fishing area or ground, and species of fish should be filled in.

b. Dimensions of Major Facilities:

In this column, type, number and scale should be filled in.

④ Remarks

This includes any issues which are to be written in detail regarding the development activities above.

### 2.3.3 SD Form

#### (1) SD Form

The present socio-economic status and natural conditions of the project area or vicinity are described on the SD form, and environmentally sensitive areas in the project site or vicinity of should be specially examined on the form (see attached **Form-2**).

#### (2) Filing in the SD Form

The description focuses, in particular, on the following environmental conditions of the project area:

- 1) Study Title.
- 2) Present Socio-Economic Status of the Project Area.
- 3) Natural Conditions of the Project.
- 4) Environmentally Sensitive Areas in Project Site or Vicinity.

# Site Description (SD) Form

Form 2-1

1. Study Title (Project Name)

2. Present Socio-Economic Status of the Project Area

(1) Land Ownership and Land Utilization

(2) Population

(3) Economic Activities in and around the Project Area

(4) Customs (Including Fishing Rights)

(5) Indigenous People and Ethnic Minorities

(6) Public Health Conditions

3. Natural Conditions of the Project

(1) Climate

(2) Topography

(3) Hydrology and Water Quality

(4) Soils

(5) Vegetation

(6) Rare Species and Flora and Fauna

(7) Others

4) Environmentally Sensitive Areas in Project Site or Vicinity. Appl. and N.A. Indicate Applicable and Not Applicable Respectively.

Environmentally Sensitive Area	In Project Area			Vicinity of Project Area		
	Appl.	N.A.	Unknown	Appl.	N.A.	Unknown
<b>[Area under Specific Designation]</b>						
S1. Habitat of flora and fauna listed in CITES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S2. Wetland designated under the Ramsar Convention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S3. Migratory bird habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S4. Heritage sites and assets listed in the World Heritage Convention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S5. National Parks and Wildlife (Flora and Fauna) Sanctuary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S6. Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>[Social Environment]</b>						
S7. Areas inhabited by indigenous peoples, ethnic minorities, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S8. Historical remains, cultural assets and aesthetic sites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S9. Area likely to suffer from significant adverse socio-economic activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S10. Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>[Natural Environment]</b>						
S11. Tidal flats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S12. Mangrove forests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S13. Coral reef	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S14. Sea grass beds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S15. Semi-closed water areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S16. Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5) Other Information

5) Other Information.

In line with the items indicated on the SD form and detailed below, required information about the project area should be completed clearly and briefly.

**1) Study Title (Project Name)**

Name of the proposed project used in the request for the development study.

**2) Present Socio-Economic Status of the Project Area**

- ① Land ownership and land utilization: Proportion of the area owned by government, townships, private bodies, local communities, etc.
- ② Population: Population, density and distribution, growth rate, etc.
- ③ Economic activities in and around the project area: Major fishery and other industrial activities in and around the project area.
- ④ Customs: Fishing rights, water rights, etc. in the project area.
- ⑤ Indigenous people and ethnic minorities: Indigenous people and ethnic minorities inhabiting the vicinity of the project area.
- ⑥ Public health conditions: Fishery related diseases such as schistosomiasis, malaria, fish and shellfishes poisoning, etc.

**3) Natural conditions of the project**

- ① Climate: Mean annual precipitation and distribution of seasonal precipitation, mean monthly temperatures and humidity with maximum and minimum, mean monthly length of daylight, monthly wind directions and frequency distributions of the wind velocity, etc.
- ② Topography: Topographical parameters such as altitude and dominant land tilt for the land area, and bottom configuration and depth for water areas including seas and lakes.
- ③ Hydrology and water quality: Main features of rivers, lakes and swamps, sea area in project area and vicinity.
- ④ Soils: Special features of rocks and soils, especially those which cause breaking, erosion, ground subsidence, etc.
- ⑤ Vegetation: Main features of vegetation in the project area and vicinity.
- ⑥ Rare species and nature: Listing endangered and valuable fauna and flora, referring to the Red Data Book, International Union of Nature and Natural Resources(IUCN).

**4) Environmentally Sensitive Areas in Project Site and Vicinity**

Each impact mentioned in the following items shall be examined. In the case where any of



the following environmentally sensitive areas are located in the project area and vicinity, the corresponding column for applicable (Appl.), not applicable (N.A.) or not readily known (Unknown) should be marked with an "X". "In the project area" indicates the area under the project. "Vicinity of project area" refers to nearby area that may be adversely affected by the implementation of the project.

**[Area under specific designation]**

- S1. Habitat of fauna and flora listed in CITES: Whether habitat of fauna and flora under the Convention on International Endangered Species of Wild Fauna and Flora (CITES) is in the project area and vicinity.
- S2. Wetland designated under the Ramsar Convention: Whether the wetlands under the Ramsar Convention are located in the project area and vicinity.
- S3. Migratory bird habitat: Whether habitat of birds designated under the International Convention on the Preservation of Migratory Birds are located in the project area and vicinity.
- S4. Heritage sites and assets listed in the World Heritage Convention: Whether heritage sites and assets listed in the World Heritage Convention are located in the project area and vicinity.
- S5. National Parks and Wildlife (Flora and Fauna) Sanctuary: Whether national parks and Wildlife (flora and fauna) sanctuaries are in the project area and vicinity.
- S6. Others: In the case where any other areas of special designation besides areas listed above are located in the project area and vicinity, the corresponding column should be marked with an "X".

**[Social Environment]**

- S7. Indigenous peoples, ethnic minorities, etc.: Whether indigenous peoples or ethnic minorities inhabit the project area and vicinity.
- S8. Historical remains, cultural assets and aesthetic sites: Whether historical remains, cultural assets, aesthetic sites, etc. are located in the project area and vicinity.
- S9. Areas likely to suffer from significant adverse socio-economic impact: Whether area likely to suffer from significant adverse socio-economic impact is located in project area and vicinity.
- S10. Others : In the case where any other issues relating to residents environmental and economic activities, institutions, customs, etc. besides items listed above, are located