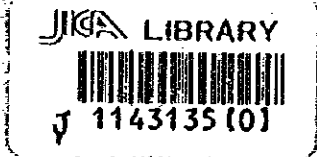


Preparation of Development Plans for Environmental Sanitation in Developing Countries

A Reference and Brief



Japan International Cooperation Agency
(JICA)

June 1997

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Preface

The Social Development Study Department of JICA has been conducting research on effective planning and methodology, to carry out efficient development studies. As part of such research, we have completed this "Preparation of Development Plans for Environmental Sanitation in Developing Countries - A Reference and Brief -."

The reference summarizes the basic principle for formulating programs and important issues in sanitation and relevant sectors, with particular emphasis on night-soil and household wastewater management.

It took three years to complete this research. In the first year, we focused mainly on the principles and the methodology of other donors: UNDP, UNICEF, WHO, PAHO, the World Bank, IDB, CIDA, BMZ, GTZ, KfW, DGIS, SIDA, SDC, ODA, USAID and the others. In the second year, the research compared and analyzed the planning methodology being taken in Japan and other donors, and summarized the points which Japan's ODA should take into account. In the third year, based on these comparison and analysis, overall discussions for appropriate planning and methodology were made. Consecutive seminars were held with the attendants from various agencies and academic concerned. In this process, valuable comments and views were incorporated.

The needs for sanitation are expanding, reflecting the deteriorating conditions in developing countries, and it certainly increases the needs to strengthen the aid to this sector. We hope that this reference will be widely used by those who are involved in the sector and have intention to contribute to the effective program formulation.

We would like to express our sincere thanks to Dr. Bernd H. Dieterich (Former Director, Division of Environmental Health, WHO) and Mr. Takaharu Ikeda, IC Net Limited, who were intensively involved in finalizing this research, to Dr. Hidetoshi Kitawaki of Tokyo University, who supervised the research and to those who cooperated and supported the research.

June, 1997



Tatsuhiko IKEDA
Managing Director
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TABLE OF CONTENTS

ABBREVIATIONS AND TERMS

1 — INTRODUCTION

1.1	General	1
1.2	Proposed Content of this Reference	3

2 — BACKGROUND

3 — JAPAN'S OVERSEAS COOPERATION IN ENVIRONMENTAL SANITATION

1.	Loans	11
2.	Grant Aid	12
3.	Technical Cooperation	14

4 — APPROACH FOR THE FUTURE

4.1	General Approach of Japanese Cooperation	17
4.1.1	Overall Goals and Types of Japanese Economic Cooperation	17
4.1.2	Priority for Self-help	18
4.1.3	Three Operational Approaches of Japanese Cooperation	18
4.2	Cooperation Principles for Environmental Sanitation	18
4.2.1	Japanese Cooperation for Environment	18
4.2.2	Goals of Environmental Sanitation	19
4.3	Development Studies and their Significance in Japanese Cooperation	20
4.3.1	Japanese Development Studies	20
4.3.2	What Follows after the Study?	21
4.3.3	Liaison with Other Donors	21
4.3.4	New Experience and Developments	22
4.4	Recommended Approach for Projects for Environmental Sanitation	22
4.4.1	Basic Considerations	23
4.4.2	Lessons and Reflections on the Experience of International Cooperation for Environmental Sanitation	25
4.4.3	Implications for Development Studies	31

5 — THE PLANNING PROCESS

5.1	Japanese Experience	33
5.1.1	Roles in the Planning Process	35
5.1.2	Compatibility with Existing Development Planning	35
5.1.3	Interagency Coordination, Participation and Liaison	35
5.1.4	Master Plans and Feasibility Studies	37
5.2	Summary of the Experience of Other Aid Organizations	38
5.2.1	The Project Cycle	38
5.2.2	The Lessons Learned	39
5.2.3	The Project Cycle Priorities	42
5.2.4	The Appraisal Stage	43
5.2.5	Prior Consultation and Coordination	44
5.3	Discussion	44
5.3.1	A Practical Approach to the Planning Process	44
5.3.2	The Focus	46
5.3.3	Time and Money	50
5.3.4	Outlook	51

6 — OBJECTIVES OF THE PROJECT

6.1	Japanese Experience	53
6.1.1	Some for All rather than More for Some	54
6.1.2	Widening Objectives	54
6.1.3	Project Design Matrix	54
6.2	Summary of the Experience of Other Aid Organizations	56
6.2.1	Sanitation Has Multiple Objectives	56
6.2.2	Sectoral Objectives Are Changing	57
6.3	Discussion	58
6.3.1	The Logical Framework	58
6.3.2	Never Only One Objective	61
6.3.3	The Problem of Measurement	62
6.3.4	Risk Assessment	67
6.3.5	A Logframe Matrix Should Be Prepared for Every Project	68

7 — WHAT MAKES A PROJECT SUCCESSFUL?

7.1	Japanese Experience	69
7.1.1	Traditional Approach	69
7.1.2	New Experience	70

7.2	Selected Experience of Other Aid Organizations	72
7.2.1	Many Factors Must Be Considered	72
7.2.2	Some Examples	73
7.3	Discussion	77
7.3.1	The Preparation of Projects for Environmental Sanitation Must Change	77
7.3.2	Software Can "Make or Break" a Project	79
7.3.3	Four Lessons	79

8 — PREPARATION OF A PROJECT FOR SUBSEQUENT FUNDING

8.1	Japanese Experience	81
8.1.1	Master Plans and Feasibility Studies	81
8.1.2	The Approval Schemes of Japanese ODA	84
8.1.3	Linking Development Studies with Project-type Technical Cooperation	86
8.1.4	Manuals for the Planning of Projects for Environmental Sanitation	87
8.2	Experience of the Donor Community	88
8.2.1	Background	88
8.2.2	Are There Any Guidelines?	89
8.2.3	Projects Must Be Appraisable	90
8.2.4	Choice of Technology and Its Funding Implications	93
8.3	Discussion	95
8.3.1	Implications of the Source of Funding	95
8.3.2	General Approach to the Preparation of a Project	98
8.3.3	Compatibility with Situation of the Country and Sector	102
8.3.4	The Basic Project Features	104
8.3.5	Project Support Measures to Ensure Performance and Sustainability	111
8.3.6	Costs, Economic and Financial Aspects, and Proposal for Funding	121
8.3.7	Implementation	124
8.3.8	Expected Impact of Projects for Environmental Sanitation	127
8.3.9	Risks	129

9 — THE MANAGEMENT OF PROJECT STUDIES

9.1	Japanese Experience	133
9.2	Experience of Other Aid Organizations	135
9.2.1	The Preparatory Process	135
9.2.2	The Selection of the Consultants	135
9.2.3	Responsibilities	135
9.2.4	Monitoring	136
9.2.5	Followup Investment	136
9.3	Discussion	137
9.3.1	Cooperation Between the Parties Involved	137

9.3.2	During the Preparatory Phase	138
9.3.3	Costing, Funding and Budgeting of the Project Study	139
9.3.4	Information for the Selection of Consultants	140
9.3.5	Monitoring, Evaluation and Appraisal	141
9.3.6	Linking the Study with Technical Cooperation and Subsequent Investment Decisions	141

ANNEXES

ANNEX 1 — ENVIRONMENTAL SANITATION AND HEALTH

1.1	Water-related Disease(s)	143
1.1.1	Scarcity of Water	144
1.1.2	Water Quality	144
1.1.3	Communicable Diseases Associated with Water	145
1.2	The Control of Infectious Diseases	147
1.3	Health Risks Requiring Special Attention	149
1.3.1	Soil and Groundwater Pollution	149
1.3.2	Location of Latrines	149
1.3.3	River and Coastal Pollution	150
1.3.4	Re-use of Effluent and Nightsoil	150
1.3.5	Open Drains	150
1.3.6	Criteria and Standards	151

ANNEX 2 — ENVIRONMENT- AND HEALTH-RELATED STANDARDS AND CRITERIA

2.1	Introduction	153
2.2	Japanese Standards and Criteria	153
2.2.1	Simple <i>Jokaso</i>	153
2.2.2	Structural Standards for On-site Systems	154
2.3	International Standards and Criteria	157
2.3.1	Water Supply	157
2.3.2	Sanitation	158
2.3.3	Wastewater reuse — Recommended microbiological quality guidelines	166
2.4	Others	167
2.4.1	Community participation	167
2.4.2	Gender issues	168

ANNEX 3 — JICA'S DEVELOPMENT STUDY

3.1	Development Study	169
3.2	Significance of the Development Study	169
3.3	Areas to be Covered by a Development Study	169
3.4	Types of Development Study	170
3.5	Process of a Development Study	170

ANNEX 4 — CHOICE OF TECHNOLOGY

4.1	Technology Options	181
4.2	Conventional Approach	182
4.3	Factors Considered Today	183
4.4	Step-wise Upgrading of Technology	185
4.4.1	Need for Step-wise Improvement	185
4.4.2	Identification of the Should-be Picture in Japanese Experience	186
4.4.3	On-the-way Picture	187

ANNEX 5 — SOCIAL STUDIES

5.1	The Planning and Implementation of Social Studies	189
5.2	Subjects for Study	190
5.2.1	Beneficiaries (Target Group)	191
5.2.2	Form of Participation	191
5.2.3	Choice of Technology	192
5.2.4	Cost Recovery	192
5.2.5	Empowerment	193
5.2.6	Integration	193
5.2.7	Risks	194
5.2.8	Research and Information Activities	194

ANNEX 6 — FINANCIAL ANALYSIS AND COST RECOVERY

6.1	General	195
6.2	Financial Analysis	196
6.3	The Creation of Revenues	197
6.4	Ensuring Effective Financial Management	198
6.5	Scaling Down the Analysis in the Case of On-site Environmental Sanitation ..	199

ANNEX 7 — SELECTED PARAMETERS FOR THE APPRAISAL AND EVALUATION OF PROJECTS FOR ENVIRONMENTAL SANITATION

ANNEX 8 — CASE STUDIES

8.1	Bangladesh: Changing Sanitary Behaviour	219
	8.1.1 An Evolving Programme	219
	8.1.2 Lessons Learned	220
	8.1.3 The Way Forward	221
8.2	Brazil: Sanitation Programme in Brazil for Poor People (PROSANEAR)	223
	8.2.1 Background	223
	8.2.2 The PROSANEAR Programme	223
	8.2.3 Demand Orientation	225
	8.2.4 Unbundling of Technologies — Diversifying Technology	226
	8.2.5 Institutional Arrangements	226
	8.2.6 Sustainability	227
	8.2.7 Expanding the Programme	228
8.3	Ethiopia: Study of Water Supply and Sanitation in Eleven Centres	228
	8.3.1 Overview	228
	8.3.2 Some Salient Project Features	229
8.4	Ghana: The Kumasi Strategic Sanitation Project	231
	8.4.1 Background	231
	8.4.2 The Kumasi Sanitation Project	232
	8.4.3 Diversifying Technology	232
	8.4.3 Demand Orientation	233
	8.4.4 Institutional Requirements	234
	8.4.5 Sustainability	235
	8.4.6 Expanding the Programme	235
8.5	India: Urban Low-cost Sanitation Component	236
	8.5.1 Overview	236
	8.5.2 The Salient Project Features	237
	Table A8.5.1 Involved Agencies and their Responsibilities	238
	Table A8.5.2 Financial Information	241
8.6	Lesotho: Rural Sanitation — from Pilot Project to National Programme	241
	8.6.1 Overview	241
	8.6.2 Some Salient Features of the Programme	242
8.7	Lesotho: Low-cost Urban Sanitation — Overview and Funding	244
	8.7.1 Summary	244
	8.7.2 Lessons Learned	246
	8.7.3 Funding	246
8.8	Pakistan: The North-East Upgrading Project	250
	8.8.1 Background	250

8.8.2	The North-East Lahore Upgrading Project	250
8.8.3	Diversifying Services and Technology	251
8.8.3	Demand Orientation	252
8.8.4	Institutional Requirements	252
8.8.5	Sustainability	252
8.8.6	Expanding the Project — Replicability	253

NOTES

Chapters 1 & 2	— no notes	255
Chapter 3	— Japan's Overseas Cooperation in Environmental Sanitation	255
Chapter 4	— Approach for the Future	255
Chapter 5	— Planning Process	255
Chapter 6	— Objectives of the Project	256
Chapter 7	— What Makes a Project Successful?	258
Chapter 8	— Preparation of a Project for Subsequent Funding	260
Chapter 9	— Management of Project Studies	264
Annex 1	— Environmental Sanitation and Health	265
Annex 2	— Criteria and Standards	265
Annex 3	— JICA's Development Studies	266
Annex 4	— Choice of Technology	267
Annex 5	— Social Studies	267
Annex 6	— Financial Analysis and Cost Recovery	269
Annexes 7 & 8	— see text	270

INDEX

Abbreviations and Terms

AID	see US/AID
APIC	Association for the Promotion of International Cooperation, Ministry of Foreign Affairs of Japan
BID	Intr-American Development Bank, Washington, D.C.
BMZ	Bundesministerium für Wirtschaftliche Zusammenarbeit, Germany
BOT	Balance of Trade
CC	Water Supply and Sanitation Collaborative Council, Geneva
CEC	Commission of the European Communities
CIDA	Canadian International Development Agency, Ottawa, Canada
DAC	Development Assistance Committee (OECD)
Decade	See International Decade
Development Study	Studies supported by JICA to prepare projects for decision (see also Annex 3)
DGIS	Directorate-General for International Development, Netherlands
EDI	Economic Development Institute, The World Bank
EIA	Environmental Impact Assessment
EU	European Union
FASID	Foundation for Advanced Studies on International Development
FIRR	Financial Internal Rate of Return
F/S	Feasibility study
FY	Fiscal Year
GTZ	Gesellschaft für Technische Zusammenarbeit, Germany
"Hard"	Refers to physical works, e.g. pipes and pumps (also "hardware")
Hardware	See "Hard", above
HEP	Health and Environment Project of US/AID
IBRD	International Bank for Reconstruction and Development (The World Bank)
IDCJ	International Development Center of Japan
IDRC	International Development Research Center, Ottawa, Canada

IDWSSD	International Drinking Water Supply and Sanitation Decade
IEE	Initial Environmental Evaluation
IFIC	Institute for International Cooperation, JICA
INTEP	International Environmental Planning Center, Tokyo, Japan
International Decade	International Drinking Water Supply and Sanitation Decade, 1981-1990
IRC	International Reference Center
IRCWSC	International Reference Center (Water and Sanitation Center), The Hague, The Netherlands
IRCWD	International Reference Center (Waste Disposal), Zürich, Switzerland
JICA	Japan International Cooperation Agency, Tokyo, Japan
JICWELS	Japan International Corporation of Welfare Services
<i>Jokaso</i>	A Japanese technology for on-site environmental sanitation
KfW	Kreditanstalt für Wiederaufbau, Frankfurt, Germany
LLDC	Least Developed of the Developing Countries
Logframe	Logical Framework
Low-cost sewerage	A waterborne sewerage system based on low-cost design standards
MOC	Ministry of Construction, Japan, Japan
MOHW	Ministry of Health and Welfare, Japan
M/P	Master plan
NGO	Nongovernmental organization
NIE	National Income Expenditure
O&M	Operation and maintenance
ODA	Overseas Development Administration, London, UK
ODA	Overseas development assistance
OECD	Organization for European Cooperation and Development, Paris
OECF	The Overseas Economic Cooperation Fund, Tokyo, Japan
On-site sanitation	A sanitation system for a lot or a plot which is not connected to an off-site system
PCM	Project Cycle Management

PDM	Project Design Matrix
Project	An investment project, normally in need of project support measures to ensure sustainability of the investment
PRA	Participatory Rural Analysis
Project Study or Studies	The study of studies undertaken to develop projects for environmental sanitation
PSM	Project Support Measures to ensure effectiveness and sustainability of the investment
SDC	Swiss Development Cooperation, Berne, Switzerland
SIDA	Swedish International Development Agency, Stockholm, Sweden
"Soft"	Refers to the sum of supporting measures to make projects effective and sustainable (also "software" and/or "project-support measures")
Software	See "Soft", above
SOW	Scope of Work
STC	Short Term Consultant
TOR	Terms of Reference
UNCED	United Nations Conference on Environment and Development, Rio de Janeiro, 1992
UNDP	United Nations Development Programme, New York, USA
UNICEF	United Nations Children's Fund, New York, USA
US/AID	Agency for International Development of the United States of America
WORLD BANK	The World Bank
WHO	World Health Organization, Geneva, Switzerland
WID	Women in Development

Introduction

1.1 General

All people in the developing countries should be able to enjoy living conditions which are conducive to their individual and community health and well-being. This is one of the basic premises of Japanese economic cooperation and is consistent with recognition that economic and social development, and the stability of the developing countries, is vital to the peace and prosperity of the entire world.

By the same token, Japanese ODA pursues the goal of sustainable development and the preservation of the environment, not only at the global level where the effects of human activities on climate, the ozone layer and bio-diversity are matters of concern, but also locally where the conditions of the environment have a direct impact on the people's health and well-being. Broadly speaking, the human environment cannot be safe as long as the surrounding air, water and soil are polluted, and people have no access to adequate amounts of safe drinking water, and are threatened by the waste originating in every home and community.

Of the problems that might be listed, the disposal of night-soil and wastewater is of particular concern because, according to information provided by the World Health Organization, 1,385 million of the people living in developing countries are still without adequate disposal facilities¹. This dilemma was attacked during the International Drinking Water Supply and Sanitation Decade but was not resolved, although the money invested to improve water supply and sanitation during these ten years (1981 to 1990) exceeded all previous levels.

While the conditions of drinking water supplies have substantially improved during and after the Decade, the disposal of wastewater and the provision of basic environmental sanitation has frequently been neglected. The people living in semi-, peri-urban and rural areas are particularly affected. Because of the difficulties encountered during the past, which seem — especially for low-income populations — to defy any rapid improvement of sanitation, their needs for better environmental sanitation are challenging both governments and the aid community, including Japan's official ODA. All concerned, both beneficiaries and aid

¹ World Health Organization, The International Drinking Water Supply and Sanitation Decade, Document WHO/CWS/92.12, 1995, WHO, Geneva

Plans for Environmental Sanitation

providers, should give higher priority to sanitation and not shy away from their responsibility.

Basic environmental sanitation, as the subject of the present publication is defined, includes the collection, purification and, ultimately, disposal of night-soil and graywater, without creating public health and environmental hazards. It is targeted principally at improving conditions in developing countries, mainly for those groups whose needs are greatest and whose resources, if any, are the scantiest and most diverse. It follows, therefore, that the methods used to provide environmental sanitation must be tailor-made to address each community's requirements, and must be innovative. If the task were easy, it would have been done long ago.

The most pertinent lesson from the International Decade is that environmental sanitation in the developing countries cannot be improved by merely adapting the high-tech solutions of the industrialized countries. In developed countries, wastewater is carried away by capital-intensive sewerage systems and discharged into the environment after an ever-increasing degree of purification. In the developing countries, this type of technology is not normally recommended, except for the central core areas of large cities and towns, where infrastructural requirements so command and the people can pay for it. Even under such conditions, however, high-tech systems often fail to perform because of neglect in operation and maintenance.

Everywhere else, three requirements must be met, i.e. (i) a less costly technology must be used, (ii) sustainable operation of the systems must be assured for after they have been built, and (iii) participation "in kind", and cost-sharing by the beneficiaries, is indispensable, including the low-income population. The choice of technology becomes a primary consideration in this context; contrary to the conditions in most of the rich countries, environmental sanitation for the high-risk, semi- and peri-urban and rural areas will depend heavily on the use of low-cost sewerage or on-site technologies for the disposal of nightsoil and graywater.

The lessons learned during the International Decade are not all new to the Japanese people. About fifty years ago, only a small fraction of Japan's communities were sewered. Most people relied on pit latrines (and the use of nightsoil as fertilizer) and on-site *Jokaso*² systems for the disposal of night-soil and graywater. Even today, some 40% of the population still use on-site systems — substantially improved, however. In consequence, the societal aspects of environmental sanitation are well known and understood in Japan. We face the challenge, then, of using the experience available from our own history. Although high-tech is desirable where infrastructure requirements so demand, and income levels and the state of the

² The Japanese *Jokaso* Law defines the *Jokaso* as follows: (i) equipment or facilities that are directly connected to toilets to treat nightsoil or graywater combined with nightsoil, and (ii) equipment or facilities designed to discharge the above-mentioned wastewater to locations other than public or basin-wide sewerage systems.

economy so allow, we must not merely apply to very different situations the same technology which we use in Japan today in our highly congested cities and towns.

1.2 Proposed Content of this Reference

The task ahead in Japanese overseas cooperation for environmental sanitation is to assist the developing countries to help themselves, especially in the planning, design and implementation of projects which meet the above-mentioned three basic requirements: (i) the use of an affordable technology, (ii) sustainable operation, and (iii) participation and cost-sharing by the beneficiaries.

As a practical approach to informing all parties involved, JICA decided to compile the present publication as a reference and for briefing. It has as objectives to (i) raise issues and questions, (ii) exhibit Japanese and other experience to date, and (iii) discuss the major actions to be taken in the planning and design of projects for environmental sanitation. The guiding principles in preparing this reference were that (i) each project will be different and, accordingly, there cannot be only one model for general application, and (ii) the Consultants engaged in the preparation of project Development Studies, and the Experts dispatched to the countries, must not be "straight-jacketed", but rather given a large degree of latitude in adapting the information contained in the reference to the circumstances of the specific project to which they are assigned. Therefore, the "Discussion" at the end of each Chapter is not a technical prescription. Rather, it intends to explain what is needed to make a project effective and sustainable but leave the actual project design to the Consultants and/or the Experts. For instance, in Chapter 8.3.4, many subjects are listed which are deemed essential Project Support Measures (PSMs) — without, however, trying to suggest their content, timing and cost, all of which the Consultants and/or the Expert will have to propose.

Projects for environmental sanitation must fit squarely into the countries' development efforts. The resources for development are limited and every project receiving a share of these resources must be "part and parcel" of that country's development programme, and comply with its priorities. This implies that projects must be people-oriented rather than be abstract engineering solutions, and this requires that projects, to the extent possible, recognize and contribute to, i.e. the alleviation of poverty, to "empowerment", to women's issues (WID), and to good governance — which are the major objectives of development policy today world-wide — in addition to furthering market mechanisms and role sharing between the public and private sectors. Accordingly, projects must aim at distributing the benefits of sanitation to all people, not just to the privileged few, even if this implies lower standards of service at affordable cost. Thus, it should become standard procedure to develop projects on the basis of studies and investigations of not only their technical but also their socio-cultural, economic, and institutional features, as well as operation and maintenance, user's participation and cost recovery.

By the same token, projects must be environment-oriented, which calls for environmental protection, re-cycling of materials and the best use of resources generally, including water

Plans for Environmental Sanitation

and waste materials. And, last but not least, a lasting developmental impact for every project is an overriding criteria. This implies effectiveness and sustainability — both of which cannot be achieved until and unless the beneficiaries accept cost-sharing and other forms of participation.

In light of the foregoing, projects consisting of “hardware” alone will not be successful by today’s standards. Hardware may include sewer pipes, tanks and ponds for the treatment of wastewater, *Jokaso*, septic tanks, and latrines — depending on the technology chosen. These hardware components must be supported, however, by additional measures that will make the project successful. Since investment projects are mainly “hardware”, it has become customary to call the supporting measures “software”. Hardware is needed to collect, transport and dispose of wastewater, whereas software addresses the “environment” of the project, e.g. policy, law and standards, institutional development, operation and maintenance, participation, capacity building, and measures to assure cost recovery. The software will “make or break” the project. However, software alone will not provide sanitation; hardware is essential to meet people’s sanitation needs, whereas the software will make the hardware effective and sustainable.

The translation of these principles into actual practice will be facilitated by “Approach for the Future”, which is presented in Chapter 4 and provides policy guidance and practical advice to all parties involved in undertaking Development Studies for projects for environmental sanitation. The Approach for the Future is based on the past experience of Japanese ODA and on the experience accumulated during the International Decade and the years which followed, including research undertaken by some of the national and international technical and scientific bodies and aid organizations. This experience is extensive. By a conservative estimate, some 5,000 volumes and perhaps the same number of articles would fill a library on the subject, and it would be futile to try to assemble all of this information in any one data-base or exhibit.

Thus, the present publication includes the following Chapters:

Chapter 1: Introduction.

Chapter 2: Background.

Chapter 3: Japan’s Overseas Cooperation in Environmental Sanitation.

A summary of the past and current cooperation in the sector as regards loans, Grant Aid and Technical Cooperation: principles, criteria and levels of cooperation.

The following Chapters 5 through 8 exhibit how projects for environmental sanitation should be planned and designed in the future — with a view to meeting and implementing the principles and approaches set out in Chapter 4.

Chapter 4: Approach for the Future.

An approach for projects in environmental sanitation is outlined against the background of the general approach of Japanese overseas cooperation, cooperation principles for environmental sanitation, and the significance of development studies in Japanese cooperation.

Chapter 5: Planning Process

The planning of projects for environmental sanitation is reviewed in the context of today's methods for the planning of development projects. Lessons learned during the International Decade, project cycle priorities, the critical importance of project appraisal and the outlook for the future are discussed.

Chapter 6: Objectives of a Project

The extension of coverage and other objectives of projects for environmental sanitation are reviewed and recent experience is discussed.

Chapter 7: What Makes a Project Successful?

The effectiveness and sustainability of a project are reviewed as the ultimate yardstick, and means are discussed to meet these basic requirements.

Chapter 8: Preparation of Projects for Subsequent Funding

This Chapter reviews the implication of the sources of funding a project, the general approach to project preparation, compatibility with the situation in the country and the sector, and the information which must be created during the project's study to make it appraisable, i.e. the basic project features, measures to ensure effectiveness and sustainability, the estimation of the project's impact and of the risks involved.

Chapter 9: Management of Project Studies

Approaches and measures are reviewed which guide the management of the studies undertaken to develop projects in the field of environmental sanitation.

Eight annexes contain details as regards the health-environment relationship, JICA's development studies, the choice of technology, social and financial studies, and some of the parameters used for the appraisal and evaluation of programmes for environmental sanitation by some of the other aid organizations. Annex 8 describes case studies in Bangladesh, Brazil, Ethiopia, Ghana, India, Lesotho and Pakistan.

The "Notes" contain selected references related to Japanese publications and to documents made available by the other aid organizations that were consulted.

Plans for Environmental Sanitation

The emphasis throughout the document is on the planning and design of projects intended for subsequent ODA funding, either through an official ODA loan, or Grant Aid, or a combination of both. However, the role of Technical Cooperation cannot be overemphasized for all types of projects for environmental sanitation, including those developed for subsequent funding; consideration of Technical Cooperation may indeed be critical before a funding proposal can be appraised by the funding agency, therefore, it is discussed in detail, especially in Chapter 8.

Thus, the present publication is intended to be of help to government officials participating in Japan's overseas development cooperation in the field of environmental sanitation, to local organizations, both governmental and non-governmental, to Consultants and experts, and to JICA's own staff and that of other Japanese aid organizations. It is also intended to inform other bi-, multi-lateral and international aid organizations, technical groups and research institutions.

The publication is a draft. It was prepared by JICA's Second Social Development Study Division and does not commit JICA or any other Japanese aid organization. Comments and suggestions will be welcome, together with material and information which can be usefully incorporated into a future version. In the course of preparation of the reference, other aid organizations were visited for discussions of their experience and approaches. Their cooperation was essential and is gratefully acknowledged.

Background

Late in 1994, JICA's Second Social Development Study Division concluded that the outlook in the field of environmental sanitation should be made the subject of discussion. Until then, the Division had undertaken a whole series of Development Studies for environmental sanitation that were complementary to other JICA activities, i.e. the dispatch of experts, project-type Technical Cooperation, and — although to a lesser degree — Grant Aid. Of course, a direct purpose of the Development Studies was, and always is, to serve as the basis for investment decisions and ODA financial support, both from Japanese and/or any other sources of funding. A summary of these activities is contained in Chapter 3, and a description of JICA's Development Study Service is in Annex 3.

The Division's initiative was prompted by several considerations, e.g.:

- The focus of overseas development cooperation in the field of environmental sanitation was increasingly shifting from center-urban to semi-, peri-urban and rural populations, as being the most critical target groups.
- Low-cost sewerage and the on-site disposal of night-soil and graywater were emerging as valid and important technological alternatives for serving lower-income population groups in many developing countries.
- As the focus shifted to semi-, peri-urban and rural areas, the need to complement the traditional hardware approach by an increasing variety of Project Support Measures was universally accepted.
- Projects for environmental sanitation were increasingly expected to make a contribution to overall development rather than to achieve their limited sectoral objectives only, e.g. to refer to the alleviation of poverty, governance and/or women in development.

Accordingly:

- The planning process would benefit from (i) a broader approach to project identification and formation and (ii) a more diversified approach to the design of each project in itself. This was in contrast to the traditional approach of focusing on master plans and feasibility studies.

Plans for Environmental Sanitation

- Every project for environmental sanitation would further benefit from (i) inter-sectoral considerations and possibly integration into other projects for social and water development and (ii) coordination and cooperation with other bi-lateral and multi-lateral and international aid organizations.
- Participatory planning would be needed, emphasizing a strong role for the recipient in the planning process — with the view of enhancing the developmental impact of the projects, and making them as effective and sustainable as possible.

In this context, a “project” is defined as an investment project funded with a component of either an ODA loan or Grant Aid, or any combination of the two. But in light of the factors listed above, it was evident that the planning of such “projects” for environmental sanitation was more and more linked, inextricably, with other forms of JICA’s overseas development cooperation, i.e. project-type Technical Cooperation, the dispatch of experts, and training and capacity building. In other words, successful projects for environmental sanitation could offer new opportunities for linking all three types of funding with the view of enhancing the project’s impact and sustainability, i.e. ODA loans, Grant Aid and Technical Cooperation Funds. This is discussed in detail in Chapter 8 (see Figure 8.2 and explanatory text).

Therefore, the matter was discussed at several levels during 1995, i.e.:

- Within JICA’s Second Development Study Division and with other Departments of JICA.
- With other Japanese organizations engaged in the overseas development cooperation of Japan, including the Japanese line-Ministries most actively involved domestically and overseas, the Ministry of Construction and the Ministry of Public Health and Welfare. These ministries already participate in JICA’s programme for environmental sanitation by seconding their technical experts, by making available programme information and directives, and by drafting technical guidance material such as a manual for the preparation of master plans for environmental sanitation.
- Concerned Japanese professional organizations and, especially, the International Environmental Planning Center of the University of Tokyo, which also took on the responsibility of advising JICA during the course of the discussions.
- Other bi-lateral, multi-lateral and international aid organizations with active programmes and experience in environmental sanitation, i.e. the World Bank, UNICEF, UNDP, the Inter-American Bank, The World Health Organization, the Water Supply and Sanitation Collaborative Council, OECD, the European Union, and the bi-lateral aid organizations of Canada, Germany, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States of America.
- International and national research institutions, i.e. IDRC, the two International Reference Centers — IRCWSC and IRCWD, the London School of Hygiene and

2 — Background

Tropical Medicine, and the Water Engineering & Development Centre, Loughborough, United Kingdom.

All those consulted in the process were sympathetic to the purpose of the discussion, and were forthcoming with information and experience, which proved invaluable.

As a result of the discussions and consultations described above, perceptions changed — and there was a shift in the expectations for the outcome of the exercise. While, at the outset, it was thought that the preparation of additional technical manuals might be most important, it was becoming convincingly clear that all parties involved in the planning and design of projects for environmental sanitation (i.e. the recipients, the implementation agency or organization, the beneficiaries, the concerned Japanese aid organizations, JICA's own staff and, most importantly, JICA's Consultants and Experts) would indeed welcome general briefing on the subject rather than a rigid technical text. Thus, the idea of the present publication emerged.

It was understood further that a noncommittal exposition of a new approach for the future was also required, and this is now included as Chapter 4.

Otherwise, this publication summarizes in brief the experience to date accumulated in Japan's own overseas cooperation and by many of the other aid organizations. On that basis, it discusses what are believed to be the essential aspects of the planning and design of a successful project for environmental sanitation today.

Japan's Overseas Cooperation in Environmental Sanitation

Japan's ODA funds for the development of environmental sanitation comprise loans, Grant Aid (including small-scale Grant Aid and subsidies for NGO projects) and Technical Cooperation. The attention given to environmental sanitation is well described in the Annual Report of the Ministry of Foreign Affairs entitled "Japan's ODA". Cooperation in environment-related matters focuses on the living environment, disaster prevention, forest conservation and afforestation, pollution control, and the conservation of the natural environment. In this context, the living environment is the first priority, and it includes the subjects of water supply and wastewater management. 129.6 Billion JY, or 54.9% of the total Japanese ODA for the environment in FY 1995, was allocated to loans, Grant Aid and Technical Cooperation for the living environment (see Tables 3.1 and 3.2). Flow charts, with explanations intended for the approval of Japanese ODA, are contained in Chapter 8.1.2.

1. Loans

Most Japanese ODA loans are made through the Overseas Economic Cooperation Fund (OECF). Bilateral lending amounted to 1,115 billion JY in FY 1995. An additional US \$ 41 million (for 16 small projects) was provided in 1995 through JICA at the very low interest rate of 0.75% as part of a programme aiming at stimulating Japanese corporations to undertake development programmes in the developing countries.

The conditions of Japanese official loans through OECF are:

- Low and fixed interest rates (at 2.8% in 1996);
- Long repayment periods may be allowed, of up to 20 to 30 years;
- Sovereign risk may substitute for the loan; and
- No risk hedge is allowed in case of changes in exchange rates of the JY.

As of today, few loans have been made for wastewater management, and those were for traditional sewerage projects; they amounted to about 3 billion JY, on average. In contrast, many projects for water supply received loans through OECF. It is expected that lending will

Plans for Environmental Sanitation

increase for several sectors, including environmental sanitation, whenever a suitable borrower can be identified, e.g. for low-cost, small-bore, off-site sewerage.

Table 3.1 Bilateral and Multilateral Aid in the Environment Sector

Bilateral and Multilateral Aid in the Environment Sector					
Year	Grants	Loans	Technical	Multi-national	Total (%)
91	24.2 (23.4)	66.7 (7.0)	13.1 (11.6)	7.8 (2.7)	112.7 (7.1)
92	31.1 (26.7)	221.3 (24.3)	17.4 (13.5)	10.6 (2.9)	280.3 (16.9)
93	37.7 (29.6)	152.7 (15.3)	21.4 (16.3)	16.2 (4.4)	228.0 (12.8)
94	41.4 (31.0)	105.6 (12.4)	21.9 (15.9)	25.3 (6.5)	194.2 (14.1)
95	42.8 (31.3)	170.8 (15.3)	22.3 (15.8)	40.0 (10.2)	276.0 (19.9)

Notes:

1. In columns other than Total, values in parentheses represent the share of total ODA for each individual type.
2. In the Total column, values in parentheses represent the share of Japan's total ODA.
3. In Billion JY.

Source: Ministry of Foreign Affairs, Japan's ODA 1996

Table 3.2 Bilateral Aid in the Environmental Sector by Sub-Sector

Bilateral Aid in the Environmental Sector by Sub-Sector						
Year	Living Environment	Forest Preservation	Pollution Control	Disaster Prevention	Others	Total
91	60.5 (53.7)	15.8 (14.0)	5.1 (4.5)	19.6 (17.4)	3.9 (3.5)	104.9
92	163.3 (58.2)	18.0 (6.4)	30.2 (10.8)	54.6 (19.5)	3.7 (1.3)	269.8
93	137.4 (60.3)	16.9 (7.4)	39.1 (17.2)	13.6 (6.0)	4.8 (2.0)	211.8
94	112.8 (66.9)	8.7 (5.2)	36.2 (21.5)	5.8 (3.4)	5.2 (3.1)	168.7
95	129.6 (54.9)	25.2 (10.7)	18.3 (7.7)	45.3 (19.2)	17.6 (7.5)	236.0

Notes:

1. Values in parentheses represent the share of total environmental ODA for that year.
2. The Others column includes items such as natural environment, environmental administration and ocean pollution.
3. In Billion JY

Source: Ministry of Foreign Affairs, Japan's ODA 1996

2. Grant Aid

The total bilateral Grant Aid allocated in FY 1995 amounted to 255.9 billion JY. Grant Aid may be provided for:

3 — Japan's Overseas Cooperation in Environmental Sanitation

- General project Grant Aid.
- Grant Aid for debt relief.
- Nonproject Grant Aid for structural adjustment support.
- Grant Aid for grassroots projects.
- Grant Aid for fisheries.
- Cultural Grant Aid.
- Grant Aid for disaster relief.
- Food aid.
- Aid for increased food production.

Among the above categories, general project Grant Aid is provided for projects for health care, improvement of the environment, improvement of living standards for the general public, education and research, village development, transportation and communications. The central characteristics of such projects would be that, on the one hand, they will not produce any direct financial benefit, but, on the other hand, are directly linked to an improvement in the environment or living standards of the general public, or contribute to human-resources development.

Among such programmes or projects, environmental sanitation is highly relevant in terms of health, environmental protection *per se*, and improvement of living conditions for the general public. The planner of projects for environmental sanitation is challenged to demonstrate just how the projects meet the requirements of the various Grant Aid principles. And of particular importance for both low-cost off-site, and on-site, environmental sanitation is the design of management systems for the handling of funds which may be allocated; this matter will be discussed in Chapters 4, 6 and 7, and 8.

Japanese Grant Aid for wastewater management includes the construction and rehabilitation of sewerage systems and some projects in combination with water supply development, in the total amount, on average, of about 1.1 billion JY.

In the case of Grant Aid, the recipient country's government provides maintenance of the facilities, equipment and materials supplied, using Grant Aid. However, if a country does not assign resources sufficient for such maintenance, or if the facilities are damaged by unforeseen events (e.g. natural disasters), JICA carries out followup field studies, and provides equipment and materials and sometimes emergency repair work should the recipient country be unable to do so.

Plans for Environmental Sanitation

Table 3.3 Number of JICA's Development Studies (1994)

Number of JICA's Development Studies (1994)							
Field in Environmental Sanitation	Asia	Middle East	Africa	Latin America	Oceania	Europe	Total
Water Supply Development	5	2 (1)				1	8
Ground Water Development	4 (2)	1	1	2 (1)	1 (1)		9 (4)
Waste Water Treatment	2		1	2			5
Solid Waste Management				3		2	5
Waste Water & Solid Waste	1						1
Water supply & Sanitation	2		1 (1)				3 (1)
Total	14 (2)	3	3 (1)	7 (1)	1 (1)	3	31 (5)

Note: The value in the parentheses represents the number of Studies centered on rural developments.

Source: JICA Annual Report 1995

3. Technical Cooperation

Technical Cooperation carried out by JICA (extended pursuant to intergovernmental commitment) includes the dispatch of experts, acceptance of trainees, development studies, and the dispatch of Japan Overseas Cooperation Volunteers (JOCV), *etc.* Other Technical Cooperation funded by ODA funds covers the acceptance of study-abroad students from developing countries and studies and research undertaken jointly by auxiliary organizations attached to ministries, agencies and aid-receiving organizations of the countries.

Japan's Technical Cooperation aims at the widest possible coverage of recipient countries. Yet, 42.4% involves countries of Asia (as with all Japanese ODA). Latin American countries receive 21.8%; in light of their per-capita GNP and large foreign debts, these countries are not normally recipients of Japanese loans or Grant Aid. On the other hand, a comparatively large number of Japanese Overseas Cooperation Volunteers have been sent to Africa — 334 (28.2%) of the total of 1,203 in FY 1995. The ASEAN countries are the largest recipients of project-type Technical Cooperation.

Project-type Technical Cooperation is a special case. It integrates all elements of Technical Cooperation and the provision of equipment in the context of a specific project. The recipient countries for their part provide buildings and land, and pay operational costs. The

3 — Japan's Overseas Cooperation in Environmental Sanitation

objectives of each case are achieved within agreed terms of cooperation (usually five years), and the number of experts sent to any one project ranges from several to about a dozen.

JICA's Development Studies are an essential part of Technical Cooperation. These studies are intended to assist the recipient to make plans for investment, often covering an extended period of time. The Social Development Studies relate to socially relevant projects, including those for environmental sanitation. Annex 3 describes the studies in full detail and should be consulted.

Before a Development Study is planned, JICA agrees with the recipient on the Scope of Work. The SOW stipulates the objective of the study and its relation to the country's overall and sector development, and identifies subject coverage, the study area, the scope and depth of the study, certain technical or socio-cultural criteria or constraints (e.g. reference to available information and data, prior investigations, environmental constraints), the schedule of work, the kind and number of reports to be produced, and important project management matters. Preliminary or project-formation surveys may be conducted with the recipient prior to agreement on the SOW, and their results summarized. JICA's prospective Consultants may receive additional information on the proposed project to enable them to make their proposal. In principle, however, the SOW is kept rather general so as to allow flexibility during the execution of the study.

In 1995, 306 Development Studies were carried out, of which 144 were in the field of social development, 60 in agriculture, forestry and fisheries, and 102 in mining and industry. In Asia, 156 studies were undertaken, 38 in the Middle and Near East, 37 in Africa, 44 in Central and South America, five in Oceania and 26 in Europe. Table 3.3 shows the number of Development Studies carried out by JICA in environmental sanitation in 1994. Wastewater management is increasingly a priority in JICA's Development Studies, whereas studies in rural environmental sanitation have just been launched.

Approach for the Future

Projects for environmental sanitation must implement the general approach of Japanese cooperation with the developing countries.

Accordingly, the overall goal of environmental sanitation is to make a contribution to the broad objectives of the socio-economic development of the country.

Development studies lay the groundwork for targeted cooperation.

The future approach to environmental sanitation aims at implementing effective and sustainable projects.

4.1 General Approach of Japanese Cooperation

4.1.1 Overall Goals and Types of Japanese Economic Cooperation

Japanese economic cooperation aims at the alleviation of poverty, hunger and other problems that threaten the basic living conditions of people in developing countries, and it recognizes that the interdependence of economic and social development and stability in all countries is vital to the peace and prosperity of the entire world. Environmental conservation and development should be emphasized in tandem. Other important benchmarks are democratization, the introduction of a market-oriented economy, and basic human rights and freedoms in the recipient countries.

Japanese economic cooperation takes various forms and can be carried out by a variety of organizations and bodies. It includes financial and Technical Cooperation with the governments of developing countries through several Japanese organizations, such as JICA and OECF. Financial cooperation may involve official loans and/or Grant Aid, and Technical Cooperation may extend to development studies, project-type Technical Cooperation, dispatch of experts, and capacity building, including training and institutional development.

Plans for Environmental Sanitation

4.1.2 Priority for Self-help

Japan's consistent principle for overseas cooperation is that the recipient countries can attain economic independence only if development policy is based on self-help. Thus, in their requests for Japanese cooperation, countries stress how the cooperation will help in support of self-help. This policy reflects Japan's experience as a recipient country in the past, and also its experience as a donor to East-Asian countries, which attained rapid economic growth in part with the support of Japanese overseas cooperation.

This policy does not imply a passive attitude on the part of the Japanese aid organizations. Rather, it aims at raising awareness and implementing development strategies which serve the best purposes of the recipient countries. Therefore, as part of this policy, Japan encourages close consultation with the recipient countries at the stage of project formation and the full participation of the recipient during the implementation of the project.

4.1.3 Three Operational Approaches of Japanese Cooperation

There are three types of operational approaches of Japanese Cooperation, i.e.:

- Differentiated Approach:** This approach emphasizes an organic and effective linkage among aid tools according to the needs associated with the stage of development of recipient countries.
- Comprehensive Approach:** This approach includes, in addition to ODA, the development of trade with, and encouragement of direct investment in, recipient countries.
- Balanced Approach:** Japan pays close attention to maintaining a balance between different aspects of its aid, i.e. between (i) conventional areas and new areas of assistance, (ii) aid of the "hardware" type and of the "software" type, and (iii) large projects and small-scale grassroots aid projects.

4.2 Cooperation Principles for Environmental Sanitation

4.2.1 Japanese Cooperation for Environment

The attainment of sustainable development compatible with preservation of the environment is one of the most important principles of Japanese cooperation, e.g. maintenance and strengthening of international peace, attainment of democracy, promotion of a market economy and improvement of human rights.

4 — Approach for the Future

Japanese ODA in the field of environment includes improvement of the residential environment, forest preservation, disaster protection, pollution control and conservation of the natural environment. Japan supports efforts to make the global and local problems of the environment compatible with the needs of the future, e.g. ecology and people, long and short-term measures of development, North-South interdependency and country programmes. Accordingly, Japanese ODA in these fields is expanding, and more consideration is given to the environment in the implementing of each cooperation and development project.

During the United Nations Conference on Environment and Development (UNCED) held in July of 1992, global environmental issues were discussed, e.g. global warming, bio-diversity and prevention of desertification. Japan pledged to implement active environmental cooperation in relation to such problems. The Conference also confirmed the great need of people in the developing countries for environmental sanitation, especially the many unserved people not having even minimal levels of sanitation, and the serious damage to human health and productivity which results from this situation. There are urgent needs in developing countries to secure safe drinking water and the sanitary disposal of nightsoil, graywater and solid waste. The alleviation of these problems is in full accord with the principles of Japan's overseas cooperation.

4.2.2 Goals of Environmental Sanitation

The ultimate goal of a project for environmental sanitation is, obviously, to contribute to more general development objectives, e.g.:

- poverty alleviation;
- empowerment;
- women in development (WID);
- good governance;
- business-like management; and
- protection of the environment.

These broad development goals cannot be attained through cooperation of a single donor alone. Thus, all donors should adopt them and agree to contribute resources for their achievement. In the past, Japanese cooperation was targeted on pragmatic sectoral objectives. Now, the specific objective of environmental sanitation is linked to health and the protection of the environment, and cooperation with other aid organization is promoted to enhance the impact of each project in this field.

4.3 Development Studies and their Significance in Japanese Cooperation

4.3.1 Japanese Development Studies

As described in Chapter 3, Japanese ODA comprises three types of bilateral cooperation, i.e. official Loans, Grant Aid and Technical Cooperation. The Development Studies, which are the main concern of the present document, are a part of JICA's Technical Cooperation, and are undertaken to prepare public development plans or assemble basic information facilitating the planning of social and economic infrastructure projects, including projects for environmental sanitation. The studies form an important guideline for implementation by the recipient government thereafter. It also serves as a basic reference when financial or Technical Cooperation is requested to implement the plan. Thus, a Development Study is an important stage during the preparation of a project and will continue to be useful up through the implementation stage.

JICA's Development Studies do not commit Japan's ODA to implement the project, even though, for the sake of carrying out effective cooperation, active liaison or coordination with Japanese financial and Technical Cooperation continuing after the Study will be very useful.

Development Studies are based on a Scope of Work (SOW) which is agreed upon by JICA and the government of the recipient country, and undertaken by Consultants chosen by JICA. Under the direction and supervision of JICA, the Consultants prepare a report in cooperation with the recipient country's Government. During the Study, there is a technology transfer with respect to planning methods and techniques for the study and analysis of the situation.

The types and fields of JICA's Development Studies are shown in Annex 3.

The future orientation of JICA's Development Studies can be described as follows:

Response to Increasingly Diverse Needs

In addition to the development of infrastructures, JICA is also engaged in studies of management-related problems — focussing on policy advice, strengthening organizational systems, and supporting transitions to market economies — as well as conducting studies on poverty alleviation, the environment, health care and medicine, and the social sector.

Balance Between the Environment and Development

The importance of alleviating poverty without damaging the environment has become an imperative which is now established internationally. JICA is also trying to lead the way through environmental preservation policies and by the assignment of experts to be in charge

of environmental assessments for development projects whenever necessary. Strategies for avoiding or mitigating adverse effects may be created when such effects are anticipated.

Wider Area for Aid

There has been an increase in the countries receiving cooperation, e.g. the former Communist countries of Eastern Europe and Central Asia, and also Mongolia and the countries of Indochina. In many of these countries, efforts are being made to introduce and establish a market economy, and there has been an increasing number of requests for "policy support" programmes. Studies are also being carried out to support the recovery of the countries of Indochina from the ravages of civil war.

Coordination with International, Regional and Bilateral Organizations

In order to respond more appropriately to requests, JICA coordinates its activities with international financial institutions such as the World Bank, regional financial institutions such as the Asian Development Bank, and bilateral aid organizations and NGOs.

4.3.2 What Follows after the Study?

The Development Studies of JICA, which are the target of the present publication, are undertaken for the establishment of a public development plan, or to compile the basic information for such a plan. The Study is an important guideline when the government implements the plan. It is also intended that the report serves as a basic reference when financial or Technical Cooperation to support the implementation of the plan is requested from any other donor, not merely from Japan, depending on the preferences of the government. To facilitate technical or financial support from ODAs other than Japan, the requirements posed for the appraisal of projects by the presumed ODA should be taken into account during the preparation of the Study. For instance, if it is assumed that the World Bank may be approached to fund the implementation of the project, the criteria of the Bank should be the basis of the plan. Thus the prospective source of finance must be considered from the earliest possible stage of the project, and, during the course of the Study, close coordination should be sought with the respective financial institution.

4.3.3 Liaison with Other Donors

It is very important to liaise and coordinate with other bilateral and international donors with the view to (i) using limited resources effectively, (ii) sharing methods and know-how, and (iii) planning cooperation for specific projects. The best mix of cooperation resources may be (i) a Study by JICA with funding of the implementation from another donor, and (ii) a joint Study with another donor. In any case, information on cooperation for environmental

Plans for Environmental Sanitation

sanitation should be shared between the donors as openly as possible for the benefit of the recipient countries.

4.3.4 New Experience and Developments

Some donors use innovative approaches in the planning and development of projects for environmental sanitation which are considered to be of interest for Japan's future overseas cooperation, e.g.:

- The (minimum) initial cost of operation and maintenance may be provided for a limited number of years.
- Motivation at central and local government levels will create political will to mobilize the community and make projects effective.
- Infrastructure development can be undertaken as part of official loans, even for a BOT scheme, with the condition of using a two-step loan.
- Cooperation may be flexible and extend over long periods of time, which enables a step-wise plan. The aim is to improve sanitation incrementally, based on local beliefs and practices, and achieving small but lasting improvements which are sustainable at each step, rather than the wholesale introduction of new systems.
- User's ownership is emphasized. Ownership is vital to sustainability.
- Empowerment is necessary to create a sense of ownership and responsibility for sanitary improvement. Privately owned facilities may be included as part of official loans by (i) combining sanitation with drinking water supply, and, taking advantage of the institutional setting, and/or (ii) creating a credit bank, union or similar mechanism which can act as the recipient.

In Japanese ODA, such new developments are carefully studied. Currently, cooperation excludes the funding of the cost of O&M, and the costs of privately owned facilities. New types of cooperation are under discussion, e.g. the donation of parts, two-step loans, mergers with project-type cooperation, *etc.*, depending on the "pros and cons" of these systems and approaches

4.4 Recommended Approach for Projects for Environmental Sanitation

In this Chapter, lessons learned in Japanese overseas cooperation and the experience of the organizations of the United Nations and other aid organizations are analyzed, especially:

4 — Approach for the Future

- Issues in urban *versus* rural environmental sanitation;
- Technology, institutions, cost and cost recovery, and
- Intersectoral and other structural problems.

A recommended approach for projects for environmental sanitation will be presented on the basis of this experience.

4.4.1 Basic Considerations

Wrong Assumptions

First of all, the problem of environmental sanitation and the ways and means of improving it are viewed in many different ways by different parties. Often, unfortunately, both donors and the implementing agencies hold views which are either outdated, uninformed or simply wrong, and many such views have been at the roots of wrong decisions in the past. The matter has been studied extensively, using experience accumulated during the International Decade. The following is a summary as contained in the report of a Working Group on Promotion of Sanitation of the Water Supply and Sanitation Collaborative Council (1995), which found that the following views are still held widely, although they are basically wrong:

- “Urban development automatically includes environmental sanitation”.
- “Improved water supply alone leads to better health. There is no need for sanitation.”
- “Safe and adequate water supply is a precondition of good sanitation”.
- “All good sanitation options are expensive and difficult to implement”.
- “There are minimal health benefits and no socio-economic benefits to sanitation improvements”.
- “Water, air and soil are free goods and therefore we should not have to pay for improving them”.
- “Design and construction of a latrine is simple and does not require any expertise”.
- “There are universally applicable standard formulas and quick fixes to achieve sanitation”.
- “Water-supply institutions will automatically be suitable for managing the development of sanitation”.
- “The private sector is not interested in sanitation”.

Plans for Environmental Sanitation

- “Facilities for sanitation do not need cultural consideration. “Sanitation improvements” simply means building latrines.”
- “Messages alone will change behaviors and automatically create demand”.
- “People are not willing to pay for sanitation improvements”.
- “Traditional cultural attitudes are a barrier to good sanitation practices”.
- “People are not able to implement programme goals”.

The beneficiaries, as well, commonly hold wrong assumptions, such as:

- “There is no immediate benefit in improved sanitation”.
- “Sanitation systems are never reliable”.
- “Responsibility for sanitation lies somewhere else”.
- “Children's faeces are harmless”.

Informed Approaches

The above-mentioned commonly held wrong assumptions have resulted in projects which failed to meet the criteria of effectiveness and sustainability in the past. For the future, an informed approach must be applied in the planning of projects for environmental sanitation. The Working Group referred to above suggests:

- All people in the target area should have at least some basic sanitation.
- Programmes and projects should be based on understanding of their social and cultural circumstances.
- Development needs are enormous and improvements will have to be incremental.
- A sound institutional approach and business-like management will help in the best use of limited resources and will motivate and stimulate participation and self-help by the people.

The informed approach should emphasize:

- A choice of technical options that can be afforded by most people without subsidy.

4 — Approach for the Future

- Schools and children are entry points for mobilizing the community.
- The programme or project builds on existing capacity for community management rather than blindly creating new management schemes.
- The programme or project includes a component for training and human-resources development at all levels.
- Take a learning approach. Demand creation should be emphasized.
- New technological options can be introduced for the wealthier and higher-status people in the community, as an incentive for change.
- Community groups are encouraged to formulate their own hygiene-education programmes, including messages and methods.
- Both male and female extension workers are used in rural areas.
- The introduction of physical facilities must be combined with behavior change.
- Social marketing and participatory approaches are to be used in combination.
- The programme will create an environment whereby private producers can thrive.
- Political support must come from the very top. Community members are more likely to want to follow programmes that are endorsed at the top level of government.
- Local specialists should be included in the planning and design of programmes and projects, helping with local knowledge and learning improved techniques from the Consultants from donor countries.

4.4.2 Lessons and Reflections on the Experience of International Cooperation for Environmental Sanitation

Based on the experiences of Japanese ODA and other aid organizations in the preparation of Development Studies for environmental sanitation, the following can be summed up, and should be the subject of continuing policy development:

Target Group

It must not be assumed that the introduction of water-borne off-site sanitation in the urban centers will automatically lead to an extension of the system to semi- and peri-urban, and,

Plans for Environmental Sanitation

eventually, the rural areas. These are the most deprived areas in most developing countries, and their low-income populations are most at risk for health problems due to environmental factors. The continuing absence of environmental sanitation will perpetuate existing inequities.

The future approach of "Some for All rather than More for Some" should be fundamental, meaning that All people should benefit from at least some improvement in environmental sanitation. But the same quality of service is not attainable for all people at one moment in time. Step-by-step improvements must be planned to cope with limited resources. And it is also essential to promote and use appropriate low-cost technology.

Further, programmes and projects should be prioritized for high-risk vulnerable groups, e.g. children and women. Whenever Grant Aid is involved, priority should always be given to under-served and low-income populations.

Cost Recovery

Financial constraints are critical in many developing countries, and most projects for environmental sanitation are actually operated by subsidy. Accordingly, the sector is weak and progress is slow. Two approaches are available to expand sanitation, i.e.: (i) subsidization on a continuing basis, and (ii) adequate cost recovery and cost sharing by beneficiaries, e.g. charges for sanitation either singly or combined with charges for drinking water supply.

There are differences in this respect between sanitation and drinking water supply which must be considered. In the case of sanitation, it is not possible to simply apply the "beneficiary-pays" principle. For one thing, the beneficiary and the borrower are not always the same. For another, the sanitation facility may be owned by an individual or family and must be paid for fully at the time of construction rather than gradually in the form of charges for water used.

The principle of cost recovery as a long-term objective is acceptable and recommended. However, in the short run and in the case of on-site sanitation, at least, this principle may be relaxed for some time with regard to construction costs, although the O&M costs should always be recovered even if Grant Aid is involved. Recovering the cost of O&M from the beneficiaries will create programme reserves for the expansion of the service in the future; in such cases, revolving funds have been proven useful.

To assume that people are not willing to pay for sanitation improvements is not recommended. It is considered commensurate with sound development policy that the beneficiaries should be prepared to "buy" enhanced environmental sanitation as a contribution to their health and well-being. Thus, programmes and projects for sanitation should also be focussed on demand creation. In practical terms, wealthier and higher-status people in the community might be provided progressive coverage on a step-by-step basis whenever they are willing to take risks, pay for the service, and want to be among the first

to try a new technology. In such cases, cost recovery may be introduced and/or increased in pace with each step.

Cost recovery for low-cost technology may involve cash or in-kind contributions for the construction of facilities and for maintenance — aiming at adding resources to government finance, and at promoting responsibility of the beneficiaries to maintain the facilities after they have been constructed.

Low-cost Technology

In the past, Japanese cooperation for environmental sanitation was centered on the provision of conventional sewerage through public organizations. The extension of “coverage” was the primary objective of projects. The need for low-cost technologies emerged when the large number of under-served people and the need for improvements in their health were recognized as new priorities. The provision of environmental sanitation to the low-income population will be a long-term and step-by-step process. Concurrently, the social factors involved in environmental sanitation call for more flexible approaches to the choice of technology and imply that in many cases, not just one technology but rather a mix of several options might be the best technological solution for a specific situation, taking socio-cultural and income levels of the population into account.

Extending sanitation to all people implies the use of on-site sanitation in very many cases. Off-site sanitation is expensive and cannot be afforded by most of the low-income populations. On the other hand, on-site sanitation involves ownership and financial participation, both of which are vital for sustainability. The best method for the funding of such systems are yet to be researched, but experience is now available from a number of projects involving Grant Aid and loans by Japanese and other aid organizations (see Chapters 7 and 8, and Annex 8).

In accordance with the above, the choice of technology must not merely be a technical matter but involve users' participation, socio-cultural and socio-economic investigation and consideration of expectations and acceptance on the part of beneficiaries.

Role of Government

Environmental sanitation should be treated as a priority issue in its own right. Sanitation requires its own resources and its own time-frame to achieve optimal results. The role of government is of paramount importance. Political will at all levels is necessary for sanitation programmes to be effective. Communities are more motivated to change when they know that a political will exists.

Plans for Environmental Sanitation

Private Sector and Local Production

Sanitation programmes should be based upon generating demand, with all of its implications for education and participation, rather than being provided free or as part of subsidized infrastructure. Governments should be responsible for protecting and enhancing partnership among the private sector, NGOs, community-based organizations and local authorities, and for removing obstacles in the path of each household in the achievement of improvements.

For instance, septic tanks and latrines are consumer products and their design and promotion should follow good marketing principles, including a range of options, designs attractive to consumers and therefore based upon consumer preferences, and affordability. They should be appropriate to the local environment and other conditions. Basic marketing research and participation in the design of latrines and septic tanks should be considered in the planning of programmes and projects. Market forces are best understood by the private sector.

Good Management

The objective of environmental sanitation is to provide satisfactory services effectively to as many people as possible and to maintain them in good operating condition. Good management is a condition *sine qua non*. Among other things, the efficiency of a project depends on incentives to reduce the cost, incentives to increase the coverage of service, linkage of benefits and cost sharing, and the participation of the beneficiaries.

During the preparation of Development Studies, close cooperation between the people, people's organization, central and local government, NGOs, and other community-based organizations must be assured so that the Study will be followed by investment and implementation, and, ultimately, sustainable operation. On the other hand, the donor and recipient jointly must take action during the preparation of the project with a view to improving management by way of capacity building for management and strengthening O&M mechanisms and institutions.

With this in mind, information should be fully accessible and as free as possible from the earliest stage of planning, especially for the people in the project area.

Capacity Building

To maintain and sustain the operation of a project as soundly as it was planned, capacity building should be an explicit part of project preparation, possibly in conjunction with the Development Study. Capacity building will include institutional development, management training, and the education and training of personnel at all levels.

Children and Women

Sanitation programmes should address the needs, preference and behaviors of everyone — children, elderly, women and men. Programmes and projects should take a gender-sensitive approach but, learning from the mistakes of other sectors, should guard against directing messages only to women or placing the burden of improved sanitation primarily upon women.

Health Education

Suitable methods are available for health education, the promotion of participation, social marketing, social mobilization, and for furthering the promotion of participation through programmes for schools and children. The need for health education should be carefully studied and programmes carried out before or during the Development Study, whenever appropriate.

Women in Development (WID)

Women can be important agents in the improvement of sanitation in many cultures. Their participation is strongly recommended. Poor sanitation makes the life of women more difficult and, accordingly, they want to play important roles in maintaining good sanitation at the level of the home and the community. They can facilitate and popularize sanitary education. Thus, during the planning of environmental sanitation it is important to explore the views of both men and women, to strengthen women's role in maintaining sanitary conditions, and to undertake measures to disseminate information concerning these roles and to popularize them.

Operation and Maintenance (O&M)

Operation and maintenance is extremely important because it makes a project sustainable. The prime body for operation and maintenance may be the central or local government, the private sector, the beneficiaries, local workers, or expatriate staff serving the community or the government. Whatever may be the case, the prime requirement is that the financial and human resources for operation and maintenance are continuously assured, with the sharing of the costs by beneficiaries.

Rehabilitation of Existing Systems

The planning of projects for environmental sanitation must not only relate to new construction. Every time a new system is proposed, the rehabilitation of existing systems must be taken into account on the basis of a study of the costs and benefits of rehabilitation, financial resources available to cover initial costs, and the beneficiaries' ability to operate and

Plans for Environmental Sanitation

maintain the facilities. Whenever rehabilitation is possible and feasible, a step-by-step programme may be proposed.

Relation to Drinking Water Supply

Many developing countries allocate their limited resources to projects considered most beneficial economically. Normally, this approach results in priority for drinking water supply and neglect of environmental sanitation. The situation was similar during the development of the now industrialized countries. These countries had to pay a heavy price to remedy the damage caused by that neglect, in terms of the costs of weakened public health, rehabilitation of the environment and costs to the general economy caused by pollution of the environment.

It is important to advise the developing countries to avoid repeating the mistakes the industrial countries made. If drinking water supply is extended to more and more people without attention to the disposal of the wastewater created, drinking water sources will be contaminated, especially groundwater, and hazards created to public health. Yet, official ODA loans for environmental sanitation are the exception rather than the rule, whereas, for drinking water supply, most lending institutions are now prepared to extend credit.

While Grant Aid is available for projects for environmental sanitation, it is nevertheless recommended to investigate and explore options for making projects or some parts of projects for sanitation suitable for funding through ODA loans. Several possibilities may need to be investigated, e.g. combining projects for sanitation with projects for water supply or housing, infrastructure and regional or water resources development, or separating suitable project components that may be funded through a loan while proposing the rest for Grant Aid, especially in the case of projects for semi- and peri-urban and rural areas, where low-cost and often on-site technologies are the only solution.

Environmental Impact

The environmental impact of projects should be evaluated, based on the screening, scoping, Initial Environmental Evaluation (IEE) and Environmental Impact Assessment (EIA), by the method determined in the recipient country, and/or JICA's guideline for the evaluation of environmental impact in close consultation with the government of the recipient country.

NGOs

Nongovernmental organizations have many roles to play in the planning, implementation, and, especially, subsequent operation and maintenance projects. During the Development Study, these roles should be studied and investigated. Among other things, NGOs may be important actors in the promotion of participation by the beneficiaries. They may organize and/or run the operation and maintenance of semi- and peri-urban and rural schemes, and may act as recipient and manager of funds. Or they may serve as a credit institution for the

funding of privately owned on-site systems or house connections to a public sewer, as has been described in other chapters.

4.4.3 Implications for Development Studies

The Development Studies are undertaken in most cases by Consultants on the basis of Terms of Reference (TOR). In the preparation of the TOR for Studies for environmental sanitation, the following aspects have normally been included and reflect the experience of Japanese overseas cooperation to date:

- The Study should rigidly meet the requirements of the potential funding organization and satisfy the prescribed level of detail.
- Assessment of the effects of the project, and how the beneficiaries will benefit from the Study.
- The study and selection of alternatives.
- Assessment of the organization and the institutions based on the actual situation.
- Costs and benefits of the project.
- Method of evaluation.
- Proposals for Technical Cooperation.
- Proposals for capacity building.

However, in the light of recommendations contained in Chapter 4.4, the scope of Development Studies in the field of environmental sanitation will expand and become more diversified. This will be further discussed in Chapters 5 to 7 and, especially, in Chapter 8.



The Planning Process

In considering the planning process, three matters deserve particular attention:

- Planning is a process and not merely the preparation of a report. The process has several stages, none of which should be ignored.
- Planning should be a participatory process, with the full involvement of the beneficiaries.
- Planning costs time and money. The type and magnitude of the project, and the likely method of funding, should be kept in mind constantly to ensure that an appropriate process is being initiated for a specific project.

5.1 Japanese Experience

The planning of projects receiving Japanese overseas cooperation proceeds in accordance with a project cycle including, *inter alia*, project formation, project preparation, implementation and evaluation. Figure 5.1 exhibits the cycle in its entirety as a continuing process, moving from one stage of the project to the next, and/or to a followup project, as appropriate. The cycle starts with a Country Study, and includes preliminary studies, if necessary, before the Scope of Work (SOW) is established.

The recipient assumes the leading role in the planning and implementation of the project.

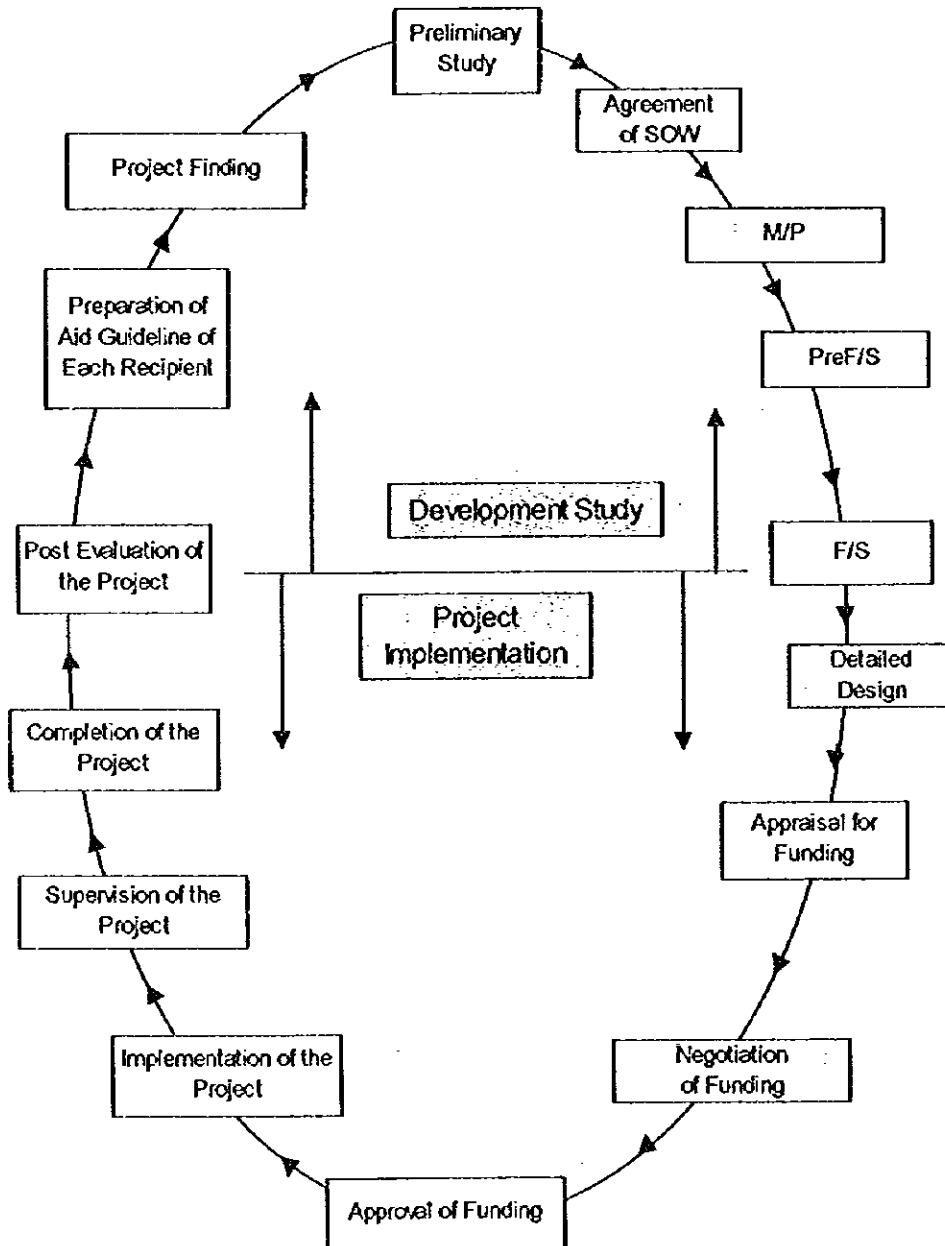
The project must be compatible with national development and consistent with the existing institutional setting.

Inter-agency coordination and participatory planning are essential.

Particular attention must be given to project formation and preliminary surveys, comprehensive SOWs, master plans and feasibility studies.

Plans for Environmental Sanitation

Figure 5.1 — Project Cycle In Japanese Cooperation



Source: IDCJ (1992) Final Report of the Project Study for the Preparation of a Guideline for Social Analysis for Development Studies, Main Volume

In accordance with the above-listed principles, Japanese cooperation always proceeds along the following lines:

5.1.1 Roles in the Planning Process

In Japanese ODA, the leading role of the recipient is emphasized throughout the planning process — in close cooperation with the involved Japanese agencies (JICA and OECF), both at the level of national and local government and with respect to the participation of the beneficiaries. Accordingly, Japanese overseas cooperation depends primarily on a request from the recipient, although often the request is a result of prior country programming. The major actors and their respective roles are exhibited in Figure 5.2.

5.1.2 Compatibility with Existing Development Planning

Care is taken in the formation of projects so that they are fully compatible with and contribute to the achievement of the National Development Plan and its priorities and policies.

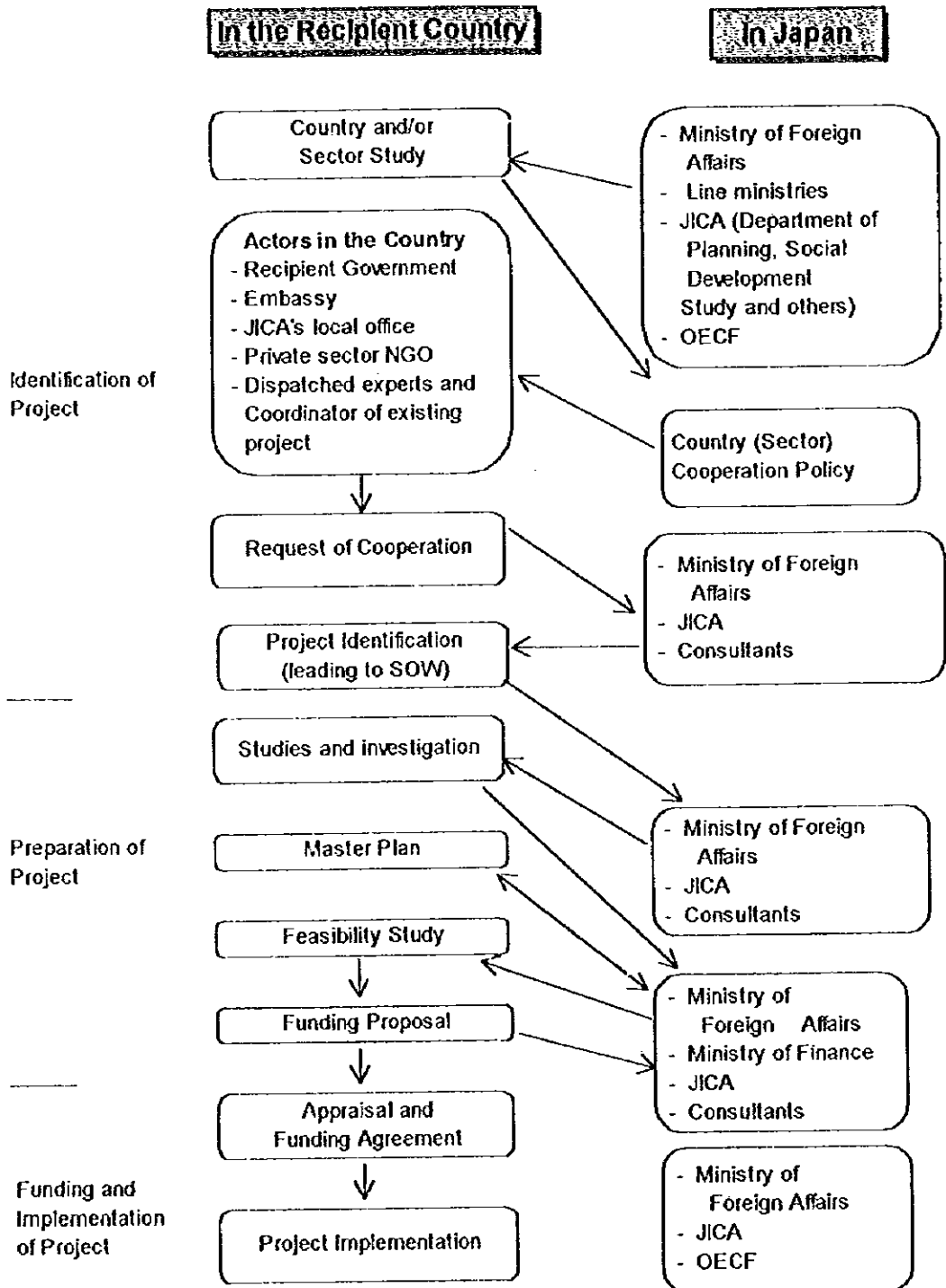
It is also stipulated that close adherence to existing institutional arrangements will enhance the quality of projects; because these institutions have access to much of the available information, they are responsible for the establishment and implementation of national sector strategies and their interaction with national development strategies, and they have qualified manpower and managerial experience. In this respect, the institutional presence at the local level is an important consideration.

5.1.3 Interagency Coordination, Participation and Liaison

To benefit from the knowledge and the programmes of other national organizations, special arrangements are sought that involve, *inter alia*, the water supply, water resources and regional development agencies. A preferred approach is to achieve this coordination through a Steering Committee established for the project. The Committee normally is comprised of ministries and other organizations, local government, community organizations and other NGOs. By the same token, participation will be assured, i.e., target groups are identified early in the planning process and their awareness determined and/or promoted, so that their participation will be assured.

Liaison and coordination with other donors includes the exchange of information and of general and project-specific experience, with the view of enhancing the database for the project. Additionally, close liaison may also indicate potential interest of other donors in supporting the project or some of its components, as well as the requirements and/or appraisal criteria which they would apply. The latter is an essential condition if co-financing the project is thought to be advantageous.

Figure 5.2 — Process and Actors in Japanese Corporation for the Development of Projects for Subsequent Funding



Source: JICA

5.1.4 Master Plans and Feasibility Studies

In Japanese overseas cooperation for environmental sanitation, the Development Studies of JICA focus on master planning and feasibility studies carried out by Consultants, with JICA being the client. Details concerning the Development Studies are exhibited in Annex 3.

Master Plans

Master plans are prepared prior to the elaboration of feasibility studies for most JICA projects for environmental sanitation. They comprise a considerable body of information on the sector, especially if no sector or regional development plan exists. On this basis, they propose a step-wise programme for reaching the objective over a period of, normally, 15 to 20 years. As well, they deal with managerial and organizational questions and, increasingly, address software aspects such as health education and other socio-economic matters. The master plans also investigate technology options, the use of suitable materials and their relation to costs, and the financing of the project. The time needed for the preparation of a master plan is kept as short as possible, bearing in mind that by the time of the appraisal of the project, the information contained in the plan must still be up-to-date. However, if the scope of plan is wide, the time needed to prepare it may be long. For details, see Chapter 8.1.

Feasibility Studies

In contrast to master plans, JICA's feasibility studies for environmental sanitation aim at laying the ground for, and/or will contain, a funding proposal. Thus, the financial resources to implement the project are examined, although at that stage the project is not tailored to the criteria of any one of the potential funding agencies except if funding is likely to come from Japanese official ODA, i.e. an official loan by OECF or Grant Aid from JICA. In the latter case, Japanese financing criteria and the process of the approval of requests for a loan or Grant Aid must be taken into account (see Annex 6 and Figures 8.1 and 8.2). The feasibility study also identifies needs for subsequent Technical Cooperation for the strengthening of managerial and institutional capacity, *etc.* Uncertainty factors must be addressed and, as required, social studies undertaken to put the project on a sound and sustainable basis. Feasibility studies may be prepared within about one year. For more details, see Chapter 8.1.

5.2 Summary of the Experience of Other Aid Organizations

Project cycle management is used by many of the other organizations, but for on-site sanitation new approaches are still being tested.

The key lesson learned during the International Decade was that the planning process for environmental sanitation should be strengthened.

Sector and feasibility studies and software development are considered priorities in planning for environmental sanitation.

The parameters used by the other organizations for the appraisal of projects are considered the best "guideline" for their planning.

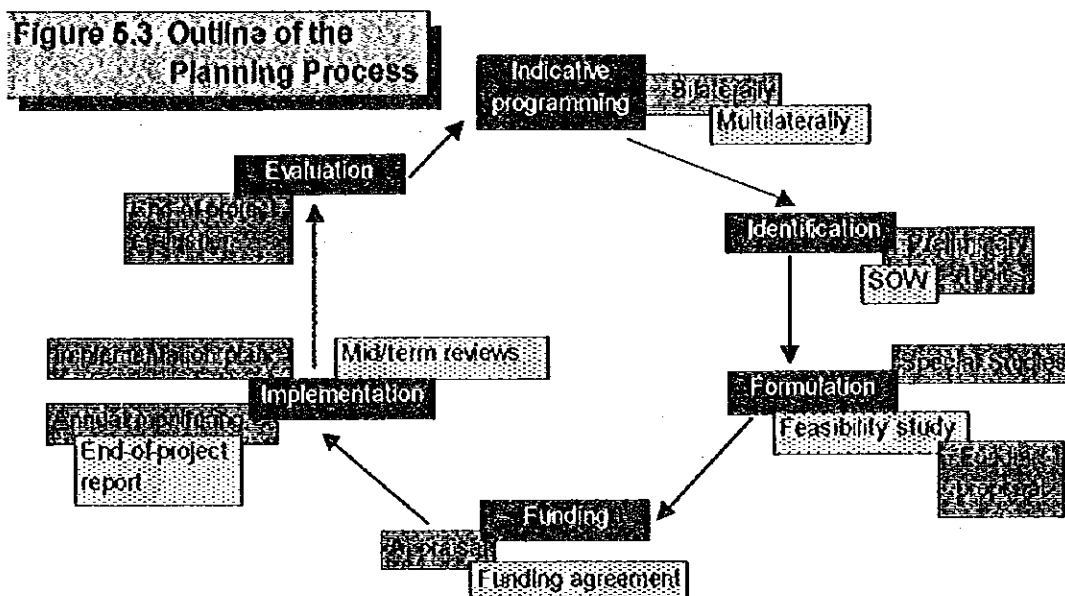
Cooperation and coordination among the donors will enhance funding opportunities.

5.2.1 The Project Cycle

Most of the other aid organizations plan their projects in line with the Project Cycle exhibited in Figure 5.3, but apply a flexible approach in accordance with the type and size of the project and its proposed funding. According to Figure 5.3, the process begins with Indicative Programming, which the bilateral or multilateral ODAs undertake with the recipient. Indicative Programming serves to identify the priorities and scope of cooperation with the recipient. In the case of Japanese ODA, Country Studies are normally undertaken as a basis for Programming. Programming is followed by the Identification of the project and culminates in the SOW³.

The subsequent Formulation (or Project Preparation) involves the actual preparation of the project, as discussed in considerable detail in Chapter 8. Its endpoint is a proposal for funding through a loan or Grant Aid. After the funding proposal has passed the test of appraisal, Funding is agreed upon between the ODA and the recipient, and is followed by Implementation and Evaluation. Of course, many subsidiary steps may be included, depending on the nature and scope or size of the project. Project cycle priorities are discussed below, and the most important features of the managerial approach to be taken in the preparation of a project for subsequent funding are exhibited in Chapter 9.

³ The term, "SOW", is used with reference to Japanese terminology, although the other organizations use different terms for essentially the same type of documents.



Source: adapted from Project Cycle Management,
Commission of the European Community,
February 1993, Brussels

The model of Figure 5.3 originated from the planning of capital-intensive projects such as projects for off-site environmental sanitation, and the other aid organizations are prepared to pay the amounts needed to prepare a good project along these lines even if they are large. But they are aware that new or modified approaches must be found for the planning of environmental sanitation for low-income populations and/or for areas where on-site sanitation must be applied, and Grant Aid may be the only feasible method of funding in the medium-term. No clear-cut planning process has yet emerged, but to a large extent the other organizations feel that the actual preparation of a project for on-site sanitation may proceed along the lines of Figure 5.4. Whenever Grant Aid is involved, they further reduce the planning process to the bare minimum so as to save time and money.

5.2.2 The Lessons Learned

During the International Decade, all aid organizations learned that the identification and formulation of projects for environmental sanitation must be improved through better planning.

Plans for Environmental Sanitation

Projects must be planned to implement broader development priorities; sound sector information is essential for good planning; special attention is given to SOW and TOR; and, the advantages of integration with other water resources developments should be explored.

All concerned organizations should be involved, not just the sector organization; planning must be a participatory process; substantial software project components must be introduced in addition to hardware; and, innovative approaches are to be explored for the planning of on-site sanitation.

In the work of the other organizations, this implies:

Relation to General and Sectoral Policy

Projects for environmental sanitation must implement general and sectoral development policy and priorities so as to achieve the expected development impact. Thus, planning must dovetail with the indicative country programming which all aid organizations undertake in cooperation with the recipients.

Careful attention is therefore given to the early stages of the project cycle, especially sectoral studies, and to the identification of priorities and principal operational approaches. Preliminary studies concerning the project may be undertaken, e.g. for the establishment of the project's objectives, and the setting of criteria and parameters for the planning of the project (see also the Project Cycle Priorities, below).

In light of the foregoing, high priority is given to reaching agreement with the recipient on the SOW and TOR for the Project Study — as early as possible. Often this requires repeated missions to the country. Ultimately, the drafting of the SOW and TOR is the responsibility of the recipient, but the other aid organizations will always assist the recipient in the task, if necessary.

Integration

Integration of environmental sanitation with water supply and/or general water resources development and with other environmental health developments is generally advocated, with the view of optimizing the effectiveness of projects and their management and funding. While there is not yet a clear policy, the SOWs and TORs for projects for environmental sanitation have become broader — enough so to consider, at least, the degree of integration, and those special studies which may be undertaken.

Therefore, the planning process involves not only the organization directly responsible for environmental sanitation. Inter-sectoral coordination is pursued with the sectors of water supply, water resources, urban and rural development, and health.

Participation of the beneficiaries and cooperation among all parties involved in the project is an additional feature that is emphasized by all of the other aid organizations. The aim is to commit both the beneficiaries and the borrower(s) to the project's objectives, to pursue capacity building for operation and maintenance comprehensively, and to adjust project design to local perceptions and capacity. An interesting model is under discussion in the World Bank for a new approach to planning. It emphasizes consultation with the borrower and beneficiaries, exploring local leadership, local technologies, and the relevant social, ecological and institutional aspects — with the aim of adapting concepts to local conditions, reducing costs and risks, and, ultimately, laying the ground for self-sustained projects and programmes at both the local and national levels.

On-site Sanitation

On-site sanitation is now accepted as a technical solution for rural and semi-urban areas. Projects will largely depend on Grant Aid in the medium-term. Participation is of paramount importance and the trend is that planning should be (i) area-wide, with a view to involving a large number of people, (ii) integrated with other measures for social development (e.g., health), or for water supply and/or water resources, and (iii) supported by special programmes for the promotion of participation, capacity-building, and community management.

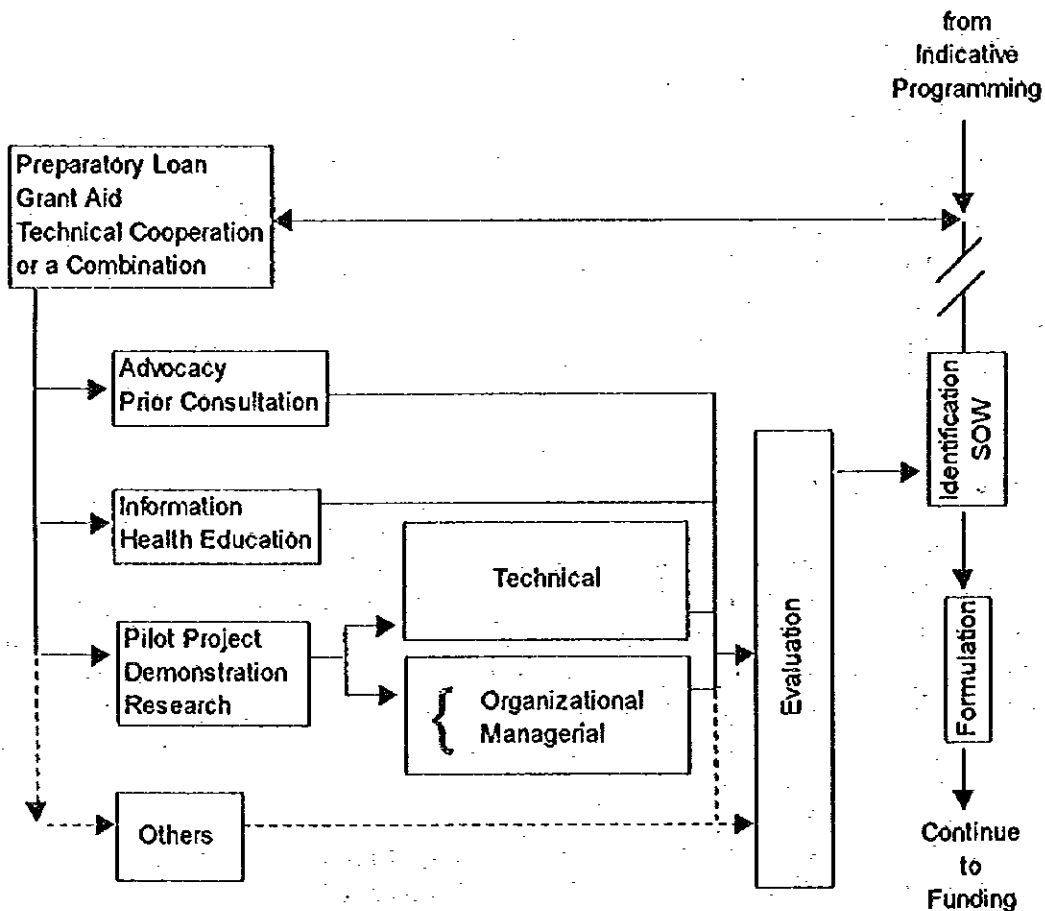
As indicated above, a new approach to the planning of projects for on-site sanitation is needed. One such possibility is exhibited in Figure 5.4, which reflects the experience of some of the other organizations.

In a nutshell, a new approach for the planning of on-site sanitation would be (i) much more flexible, and (ii) give more attention to preliminary activities (than would be the case with off-site projects) before a fully fledged project could be identified, e.g.:

- Considerable time may be allocated to advocacy and prior consultation with the beneficiaries, and to supporting measures to inform and motivate them;
- Pilot or demonstration projects may be undertaken and evaluated before a fully-fledged project is developed;
- In many ways, each project would be a research undertaking; and
- Linkages with other sectors would be a strong feature and explored during the pilot or demonstration phase.

Plans for Environmental Sanitation

Figure 5.4 — An Option for the Planning of On-site Sanitation



5.2.3 The Project Cycle Priorities

Since very few projects start "from scratch", the other aid organizations give priority to sector studies or preliminary studies, pre-feasibility and feasibility studies, and special studies and support measures.

Sector studies or preliminary studies are carried out to clarify the relation of the project to its earlier phases, or to other projects in that sector or other sectors, and to make evaluations and record lessons learned. At this stage, available data on environmental sanitation and its impact on the health and well-being of the people is assessed, new strategies elaborated, earlier sector studies updated, and overall or sectoral policies and priorities and operational approaches reviewed and revised. These considerations might include health priorities in

5 — The Planning Process

relation to environmental sanitation at the national or sub-national level, matters of urban *versus* semi-urban and rural sanitation in the national or sub-national context, institutional, fiscal or participatory matters, and aspects of privatization.

Prefeasibility and feasibility studies are always required, especially in the planning of investment projects funded from loans or Grant Aid. The outcome of the studies is direct input for the preparation of the appraisal reports, on the basis of which the lending or grant institutions take the decision to support or not to support the project. The other organizations have not issued guidelines for the preparation of feasibility studies; rather, they depend on the expertise of their technical staff to develop detailed TOR and on the qualifications of the Consultants who will undertake the feasibility study.

Master planning is no longer carried out before every feasibility study, since most recipient countries have assessed the sector during the International Decade and identified their major priorities. When it is undertaken in spite of this consideration, it normally is because of a need to update earlier information or to promote a cross-sectoral or multi-purpose approach.

Special studies cover subjects for which research or policy input is needed, or any subject requiring clarification and/or additional information, with a view (i) to facilitating the establishment of SOW, and (ii) to identifying Project Support Measures (PSMs) at an early stage (see also Chapter 8.3.4). The identification of a need for special studies is a continuing process prior to and during the Project Study itself, and is incumbent to all parties involved. On-site sanitation projects are considered special cases and due allowances are made during the planning process to deal with their specific requirements (see also Figure 5.4).

5.2.4 The Appraisal Stage

The ability to pass its appraisal by the funding agency is widely considered the ultimate test for the quality of a project. There are many sets of appraisal criteria used by the funding agencies.

Annex 7 contains selected parameters used by seven funding agencies for the appraisal and evaluation of projects. Of the seven agencies, four are bilateral, two multilateral, and one — the World Bank — is international in character.

Each of the seven agencies has its own mandates and orientations and, therefore, the parameters used by the seven agencies vary in content and depth. It will be noted further that most of the parameters are generic. Notable exceptions are the parameters used specifically for the appraisal of projects for environmental sanitation by the European Community (EU) and the KfW of Germany.

Plans for Environmental Sanitation

It would be presumptuous to insist that any one of the sets of parameters is the most useful. However, in actual practice, the method and the parameters used by the World Bank are always considered a reference point, especially when projects are either financed jointly by the Bank and a bilateral agency, or cofunded by several bilateral ODAs.

5.2.5 Prior Consultation and Coordination

Considerable attention should be given — prior to and during the feasibility study — to the closest possible consultation and coordination between the aid organization sponsoring the study and the potential funding organization(s), as well as with regard to other Technical Cooperation agencies.

Several mechanisms are used by the other aid organizations to achieve this type of coordination in the field of water supply and sanitation, e.g. the Water Supply and Sanitation Collaborative Council (WSSCC), the World Bank/UNDP Water Supply and Sanitation Programme, and, of course, bilateral consultations and the Development Assistance Committee of the OECD (DAC). In Chapter 9, a number of suggestions are made as to how consultation and coordination can be promoted during the various stages of the planning process.

5.3 Discussion

From the reviews in sub-Chapters 5.1 and 5.2, it would appear that the methods used by the ODA organizations, including those of Japan, are fairly uniform. In practice, this is not so, especially as regards the consideration of software aspects, special studies and investigations, and of Project Support Measures.

5.3.1 A Practical Approach to the Planning Process

All Japanese and other aid organizations endeavour to rationalize the planning of projects for environmental sanitation. The following discussion is intended to crystallize past experience and offer a number of suggestions.

Before rushing into a sophisticated planning process, in-depth consultations with all concerned should be conducted to assemble and appraise all information and data available.

The appraisal is a critical stage of the planning process. Appraisal criteria are needed and should be published since they are the best guideline for the planning of a project by the Consultants.

Participation is a "must".

During the planning process, close consultation and coordination with the potential funding agency or agencies will enhance the project's chances of success.

Projects for environmental sanitation are very practical propositions and their planning should not be overburdened with a sophisticated methodology. This is the message derived from the experience of the other aid organizations. On the other hand, shortcuts in the planning process often lead to wrong decisions and are therefore not recommended. We are challenged to take a middle road:

- It should be accepted that very few projects "start from scratch". This implies that before designing the planning process for a specific project, a careful analysis should be made of the information and data available from programmes and other projects in the sector, previous studies concerning the project, and, always, actual experience in the project area. Consultations with the recipient, beneficiaries, and other ODAs should be held, with the aim of identifying any gaps in information which must be closed during the planning of the project. Thereafter, the appropriate planning process should be designed on this basis.
- It is clearly evident from the experience of the other aid organizations that the appraisal is one of the most critical stages of the project cycle. Thus, in the design of the planning process for a specific project it is important to explore, as early as possible, which agency or agencies may later be approached for the funding of the project. The best time to do so is during the negotiation of the SOW.
- Moreover, the criteria and procedures used in the appraisal should be made known to the Consultants so that they will be able to anticipate how and on which basis their recommendations will be appraised. More ODAs should establish specific appraisal criteria for projects for environmental sanitation.
- We must not merely pay lip service to the principle that planning must be a participatory process. This has been happening too often. Naturally, participatory planning may be difficult and more time-consuming. Nevertheless, it really should be a "must". Accordingly, in designing the planning process, due allowance in time (and money!) should be made for genuine participation in all stages of the process,

Plans for Environmental Sanitation

i.e.: the SOW, sector and project studies — especially in the choice of technology and the planning for operation and maintenance — and in the study of the potential for cost-recovery.

- By the same token, consultation and coordination with other ODAs and the potential funding agency or agencies may cost time and money. But again, this aspect should be a “must”, and a number of proposals to this effect are contained in Chapter 9. The aim of consultation and coordination would be to ensure (i) that the project dovetails with the programmes and projects of the other lending agency or agencies; and (ii) that the project meets as many appraisal criteria as possible, so that it can benefit from the experience of the other aid organizations, and so that its funding and co-funding potentials are enhanced.

5.3.2 The Focus

Sector information is of paramount importance.

The SOW needs more details.

Master plans may be the exception for the sake of expediency.

Feasibility studies are always required.

Special studies and investigations will be on the increase.

On-site sanitation projects will pose additional requirements.

Where should the focus be — from the beginning of the planning process up to the appraisal of the project proposal? The experience of the other aid organizations gives important clues for answering the question:

Information

Most countries have accumulated a wealth of sector information on environmental sanitation during the last few decades, among other things from previous sector studies, actual programmes and projects, during the International Decade, from the preparation of the countries' economic development plans and annual budgets, and from sector plans and project proposals.

In some cases, this information may need updating so as to better respond to changes in overall priorities within the country's development policy. Should this be the case, an

updated sector study or project formation survey may be needed. The focus may be on the following, e.g:

- The current status of environmental sanitation in the country and its regions (this, indeed, is rudimentary information);
- Priority needs to be filled in the national or regional context, i.e.: public and individual health, convenience and well-being, housing, protection of the environment, urban and rural development, water resources;
- The interrelation of environmental sanitation and other sectors, e.g. water supply, water resources, protection of the environment, other sectors, and the country's overall development;
- Resources for the sector in the national development plan, and the annual budgets at the levels of government and the community;
- Factors constraining programmes and projects for environmental sanitation in the country, e.g. technology, resources, institutions and their capacity, management, participation, operation and maintenance, and other socio-economic and socio-cultural factors.
- Support structure such as law, governance, financial policy, community management, other sectors' participation and the role of the private sector.

Scope of Work

The SOW should be as specific as possible. Adequate sector information and a clear definition of the objectives and results to be achieved by the project are essential (see Chapter 6). But more specific information on the proposed project is also needed although often not available, and must therefore be created before the SOW is negotiated, e.g.:

- The scope and gamut of the studies to be undertaken to achieve the project's objectives (see Chapter 8);
- Databases which should be created during the Project Study, e.g. indicators for measuring results and the achievement of objectives, and for project monitoring and evaluation. Health and environmental indicators are of special importance in the case of environmental sanitation (see Chapter 8); and
- Methods, and the distribution of responsibilities for, the management and implementation of the study (see Chapter 9).

Plans for Environmental Sanitation

Master Plans

Master plans are basic documents which set the stage for the subsequent development of a project, and are intended to facilitate the preparation of a feasibility study. Master plans are needed if the information required to develop a specific project proposal is not yet available. In actual practice, however, this type of information is usually available from previous planning by government (with or without the participation of external support agencies), or from earlier project phases, or other sector programmes. Therefore, the position taken by the other aid organizations — not to undertake master planning unless specifically needed — is sound, and should always be considered. In other words, master planning will not be the top priority in many cases. However, whenever master planning is needed, the following priority items may be addressed:

- The proposed project in relation to the country's and region's changing overall development priorities and programmes;
- Demographic, socio-economic and socio-cultural developments in the project area;
- Experience from other programmes and projects, e.g. water supply, water resources, and environment; and
- The long-term needs in the project area and a phased approach to meeting them, including the implications arising from technology, management needs, participation, cost and cost recovery and, in general, making projects sustainable.

Master planning for environmental sanitation may take two years or more. By the time the feasibility study is ready for appraisal, the information contained in the master plan may no longer be up-to-date. A practical approach to solving this problem is to telescope master planning and limit it to the few critical subjects rather than make it comprehensive. In this manner, much time can be saved and the information base brought up to date within one year or less.

Feasibility Studies

In contrast to master plans, a feasibility study is required for every project for which funding is sought. The study will be the crux of the preparation of the project, and is particularly important for projects proposed for funding through loans.

Projects proposed for Grant Aid also need a feasibility study, although shortcuts may be used for the sake of expediency. Implementation design may be carried out rather than preliminary engineering alone, since Grant Aid for projects in environmental sanitation is often approved on an annual basis and the time for implementation is limited (see below).

The feasibility study should in all cases:

5 — The Planning Process

- Tailor the project to the overall situation of the country, and make it compatible with sector policy and development, and with local conditions;
- Include a preliminary engineering design and lay the groundwork for subsequent implementation design; and
- Also include the following:
 - ▶ An estimation of the capital and recurrent costs;
 - ▶ Plan and implementation schedules for project-support measures;
 - ▶ An analysis of the management institution;
 - ▶ An estimation of the project's benefits;
 - ▶ An implementation schedule for the project;
 - ▶ Funding and cost-recovery proposals; and
 - ▶ An assessment of the risks involved.

Special Studies

Depending on the type of project and its funding, different kinds of special studies may be needed before the project can be proposed and its supporting measures designed and implemented. Details are discussed in Chapters 7 and 8, and the special case of social studies is reviewed in Annex 5.

On-site Sanitation

The need for special studies for projects for on-site sanitation cannot be overemphasized. Much is yet to be learned. The experience of the other aid organizations can provide valuable clues, especially that of UNICEF, the UNDP-World Bank Water Supply and Sanitation Programme, IDRC, and the two IRCs (see also Figure 5.4). The basic tasks to be performed are:

- More time is needed during the early stages of the planning process than in the case of off-site sanitation, so that the full understanding of the beneficiaries, and their participation, is assured before the formation of the project starts.
- The funding and technical assistance organizations should work together closely — if possible, before the SOW is agreed upon.
- Project support measures will be a dominant feature of the process.
- Pilot or demonstration projects may be inserted.
- The dominant role of local organizations should be recognized.

Plans for Environmental Sanitation

More details are reviewed in Chapters 7 and 8.

5.3.3 Time and Money

Careful consideration should be given to the costs of the planning process in terms of time and money.

Whenever a loan for environmental sanitation is sought, cutting down on time and money will be the wrong approach.

Several special features of projects for environmental sanitation may prolong the planning process and make it more expensive than in other fields.

For Grant Aid, shortcuts may be necessary even though this is basically undesirable. But, in any case, Grant Aid projects too must be planned without sacrificing the quality of the proposal.

All too often, the cost of planning in terms of time and money is not given enough attention — among other things, because planners insist that planning must not be compromised. But it is our responsibility to make planning practical and to adjust its costs to the type and size of the project and to the likely method of its funding.

The time and money which can reasonably be allocated to the planning of a project for environmental sanitation is an important question. The recipient will always be more interested in a loan or Grant Aid than in a time-consuming study. Yet, for the planning of large-scale projects funded through loans, considerable time and money must be allocated — more, normally, than when Grant Aid is involved. Often, this may take two years or more, and the study may cost anywhere between one and two million US Dollars. In the case of Grant Aid, planning and implementation may need to be telescoped into one year; and, obviously, this will severely limit the time and the amount of money which can be spent for the planning of a project.

Even when the funding of the project includes an ODA loan, the amount of money allocated to planning should be flexible — compatible with the size of the project. It would make little sense under conditions found in developing countries to insist on a standard fixed percentage of the total investment to be made.

For projects for environmental sanitation, consideration should be given to the following:

5 — The Planning Process

- Additional time and money is needed to address a number of aspects, e.g. the choice of technology, the promotion and planning for participation, and the identification and planning of project-support measures; and
- Special allowances may also be required for environmental impact studies, risk assessments and prospective research.

The planning for Grant Aid projects for environmental sanitation is difficult, considering the limited amount of money involved in any one year, and that a time limit of one year is often imposed for all planning and implementation. Shortcuts may be considered, although they are not basically desirable. An alternative would be the separation of planning from implementation, i.e., carry out long-term planning for a whole series of annual components in advance, with actual implementation divided appropriately between each of the following years. This type of planning would focus on:

- Reaching agreement on the essential features of a long-term and area-wide programme, and the development of an adequate support structure;
- Long-term constraints to be overcome through continuing technical assistance; and
- A forecast of annual budgets needed to implement the programme.
- Where shortcuts in the planning for Grant Aid are indeed necessary, they may involve:
 - Relaxing the requirements for financial analysis as discussed in Annex 6;
 - Limiting investigations to the bare minimum — however, not those concerning the beneficiaries and participation, demand forecasts, choice of technology, management and O&M, and other essential social studies.
 - Focusing Project Support Measures (PSMs) on participation, institutions, O&M, cost recovery, and awareness of the beneficiaries.

5.3.4 Outlook

The outlook for Japan's overseas cooperation in environmental sanitation appears to be:

- (1) A trend to: more detailed SOWs and TORs, greater emphasis on special studies and investigation, and planning for Project Support Measures (PSMs);
- (2) Grant Aid will be called upon increasingly;
- (3) An integrated approach will be pursued; and
- (4) The special challenges posed by projects for on-site sanitation must be met.

The planning process is likely to involve:

- More detailed SOWs and TORs;
- More special studies and investigations rather than long-term planning; emphasis will be on the beneficiaries and participation, the choice of technology and service levels and design standards, cost recovery, management and O&M, social studies, and risk assessment; and
- Participation.

Planning for Grant Aid is likely to increase in the medium-term in accordance with the "Approach for the Future" presented in Chapter 4.

By the same token, the integration of environmental sanitation with drinking water supply and other projects for water resources development is likely to become a regular planning feature.

On-site sanitation will be applied increasingly, in keeping with the Approach for the Future of Chapter 4. Different planning approaches will emphasize substantially increased pre-project activities, including advocacy, and information and motivation of the beneficiaries, pilot projects and research.