

5-3 メンテン他

ジャカルタにおいては前節のクレンダール団地のほかに、以下のような地区の観察を行った。

- ① MENTENG …………… K.I.P.の完了地区 事例
- ② KEBONG MELATI …… KTA40 による市街地再開発調査地点
- ③ MANGA RAI …………… “ ”
- ④ KEBONG KACANG …… インドネシアの住宅再開発事業第一号
- ⑤ タナアバン …………… インドネシアの中層集合住宅の第一号
- ⑥ 民間新興高級住宅団地

このうち②③については、すでに「インドネシア共和国ジャカルタ住宅市街地再開発計画事前調査報告書」（昭和57年3月）ならびに「インドネシア共和国ジャカルタ市街地再開発事業」（昭和58年12月）として詳しく報告がなされている。そこで以下では現地の写真をもとに、いくつかの地区において特に印象に残った点について順に紹介してゆくことにする。

① MENG TENG

メンテンは図5-5において示されているように、再開発の調査地点のひとつであるマンガレイのすぐ北側にあるK.I.P.施工済の地区である。図5-6のように、地区周辺の比較的広幅員の道路整備と地区中心の水路改修・細街路網の整備が基本的なインフラ整備の目標とされている。この地区の写真は写真5-16～5-20に示した。なおこれらの地区内の住宅において人々がどのような生活をしているのかは住宅の平面計画を考えるうえで興味深い点である。この点についてはすでにKTA.40のエキスパートの手により、いくつかの住みかた事例の調査がなされている。図5-7はその一部を引用したものである。

② タナアバン

タナアバンは現在ジャカルタの住宅再開発事業の第一号として建設が進んでいるクボンカチャンの西側に位置している。ジャカルタ市内における中層住宅プロジェクトの第一号地区である。この団地はメキシコ他の技術援助をえて建設されたものであるが、写真5-21～5-23のように現在ではかなり良好な水準で住みこなされている。植物の成育の早さはこの団地においてもみられ、日本においてはかなりの年月を経た団地といった景観を呈している。中央に大きな広場がとられ、またメインの通路が広くとられているが、住棟間隔は我が国と比較すればかなり狭く、日照はともかくとして、通風上の問題などに検討の余地があるように思われた。

③ 住宅建設現場

前の章でみたごとく、K.I.P.などにおいては住宅の建設は基本的には住民の自助努力に期待されている。今回の住宅関連の研究協力においては、これら住民による住宅更新のポテンシャルをどう評価しうるのか、その改善方向にはどのようなものが考えられるのか、という点もひとつの重要な検討課題になるものと思われる。写真5-24～5-26はいれもカンボン

| | | | | |
|-----------------|-------------------|-----------|-------------|--------------|
| JL. KENOARAAN | = | 1.518,50m | = Rp | 42.327.000,- |
| JL. ORANG | = | 4.107,-m | = Rp | 30.952.000,- |
| JEMB. KENOARAAN | = | 2,-bh | = Rp | 6.638.000,- |
| JEMB. ORANG | = | 3,-bh | = Rp | 2.524.000,- |
| M.C.K | = | 2,-bh | = Rp | 4.602.000,- |
| BAK SAMPAN | = | 1,-bh | = Rp | 57.000,- |
| PIPA PENGHUBUNG | $\phi A'' = 744m$ | = Rp | 4.704.000,- | |
| HYDRANT | = | 1,-bh | = Rp | 4.693.000,- |

NILAI KONTRAK = RP96.497.000,-

LUAS AREAL = 10 hA
 PENOUOUK = 9000 JIWA
 KEPAOAPAN = 900 JIWA/hA

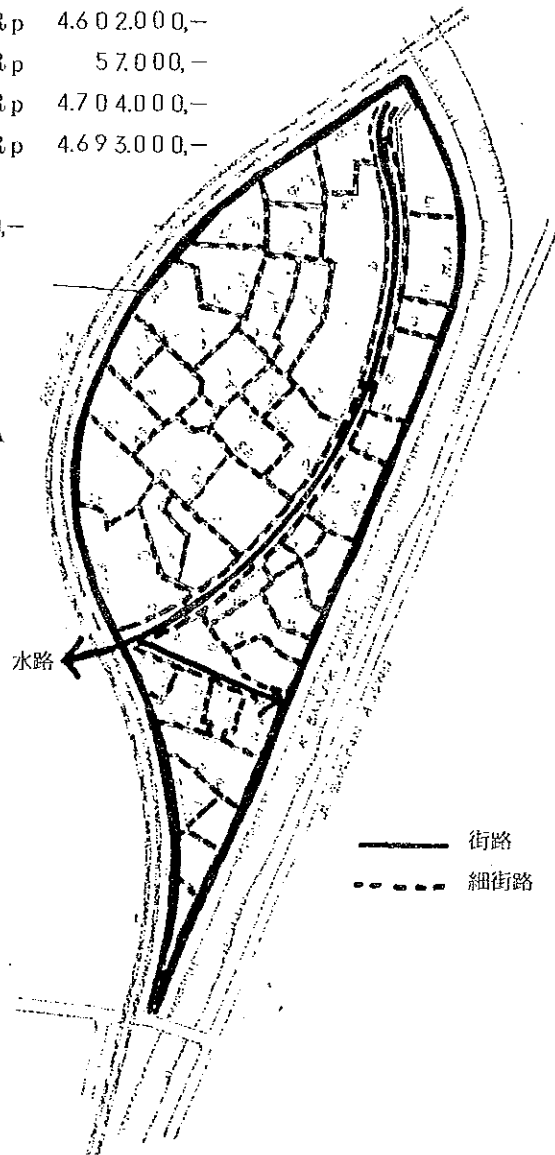


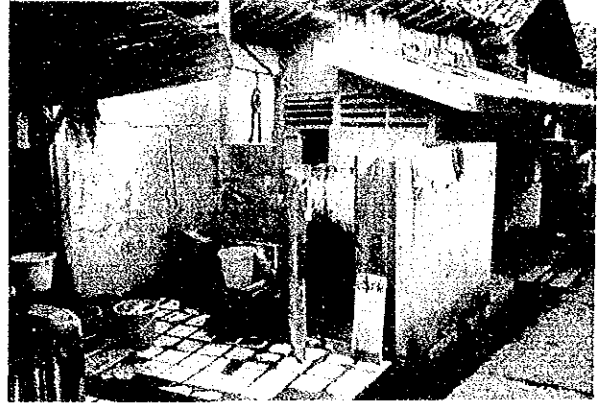
図 5 - 5 MENTENG TENGGULUN (ジャカルタ)

(写真 5-16)



比較的広くとられた排水路をもつK.I.P. 完了後の細街路。各住宅の前には植物がみられ、また道路に洗濯物がはみだしている。両サイドの住宅は二階建である。

(写真 5-18)



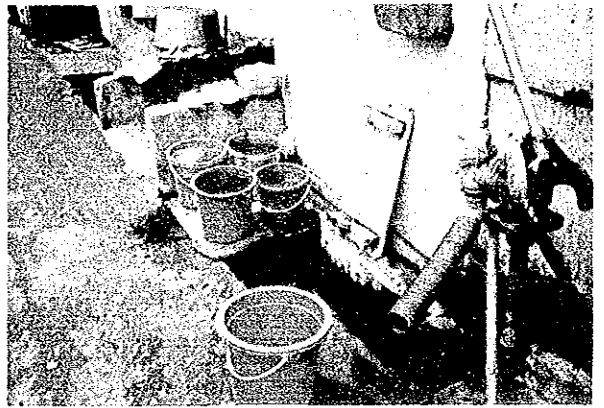
K.I.P. で作られた共同の水場。ここではツルべ式の井戸になっている。戸や床のタイルをみてもわかるように、維持の状態はあまり良くない。

(写真 5-17)



K.I.P. において重要な整備施設のひとつである水路の改修事業が完了したところ。遠くに子供たちが水浴びをしているのが見える。この水路はまたトイレ替わりにも使われている。

(写真 5-19)



共同の水ポンプ。写真のようにポリバケツによって各家庭に運んだり、また体の浄化などの用水として使用している。

(写真 5-18)



モスクはイスラム教徒が多いインドネシアにおいては重要なコミュニティ施設である。この写真では中央の突出部分に銀色のシンボルがつけられている。

(写真 5-20)



共同の水道。写真 5-18、5-20 はいずれも K.I.P. において整備される施設であるが、その維持管理状況は一様ではないことが、これら数少ない写真からも伺れる。

- LEGEND:
- HOUSING CONDITIONS:
- (1) STRUCTURE: TEMPORARY
 - (2) WATER SUPPLY: MANUAL PUMP WELL
 - (3) LIGHTING: OIL LAMP
 - (4) COOKING: FUEL OIL
 - (5) TOILET: COMMUNAL (RIVER)
- LIVING CONDITIONS:
- (1) 7 FAMILIES (28 PEOPLE) ARE LIVING TOGETHER. THEY ARE ALL RELATIVES
 - (2) FAMILIES 1-3 USE KITCHEN(1) AND WELL (1), MAINLY
 - (3) FAMILY 6 USES KITCHEN (2) AND WELL (2), MAINLY
 - (4) FAMILY 7 USES KITCHEN(3) AND WELL (3), MAINLY

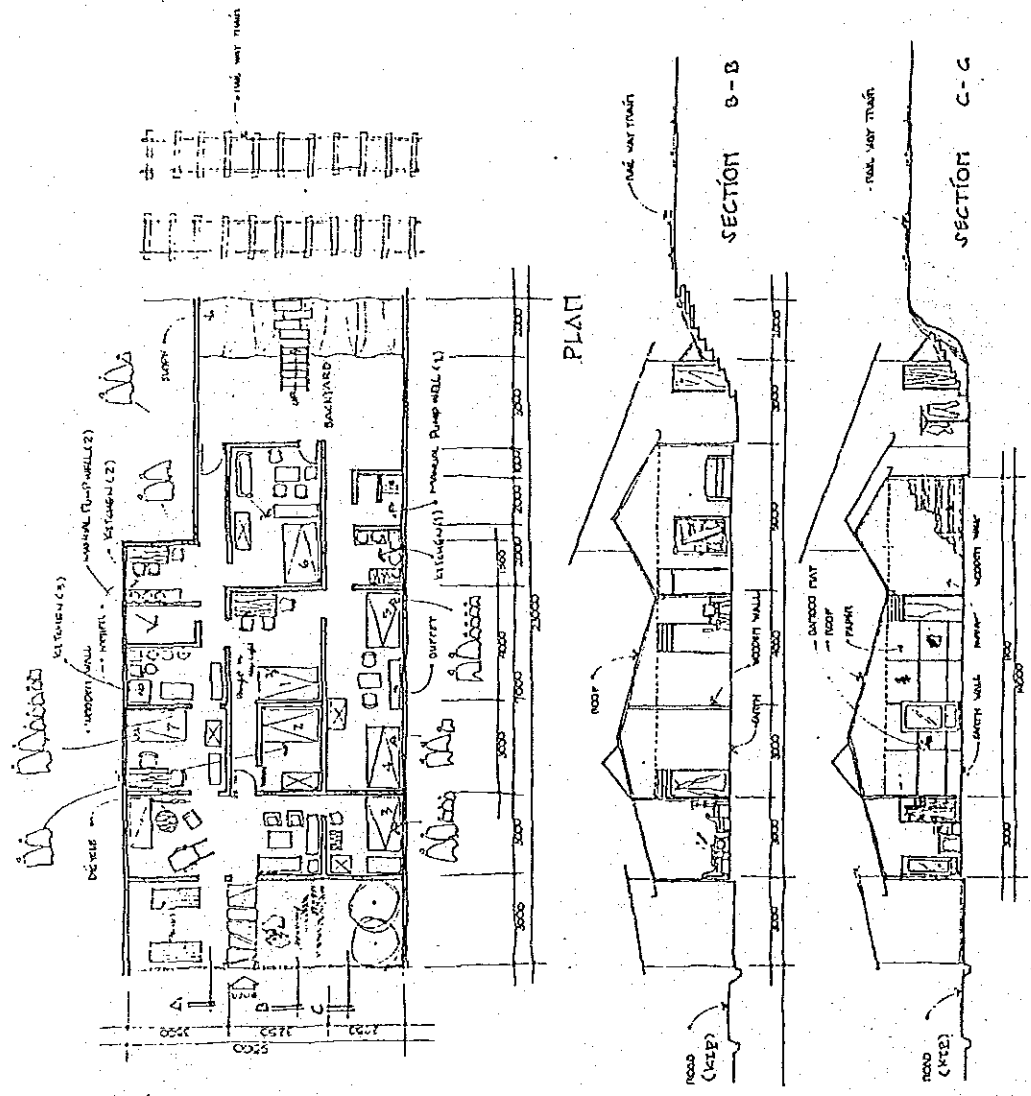


FIG. 5-5 EXAMPLE OF KANTUNG LIFE

図 6-7 カンボンの住宅における住み方事例 (参考文献 4 より)

の中で目にした住宅の建設現場を撮影したものである。これらの写真からもわかるように、住宅の主要な材料は木製の型枠やバタコ・バタメラなどである。これらのレンガやブロックを積む技能や、屋根を葺く技能がどのような専門家によって担われており、また住民自身がどのような参加の形態をとっているのかなどについては今後の調査研究に待つことが多い。

③ 建材の流通

住宅の自動的な更新を考えるうえで、建材の流通のルートがどのような実態になっているのかは重要な点であろう。この点に関してはこれまであまり報告がなされていない。そのためジャカルタでのクレンダー団地の見学の帰途、道路の両側に建具を中心とする小規模製造・販売店のかなりの集積地域が存在するのを見た時はかなり驚いた。カンボン内部での更新活動も予想以上に活発であるように見受けられ、これらの建材の製造・流通市場との関連がどのようなものであるのかは検討に値するものであると思われる。

(写真5-21)



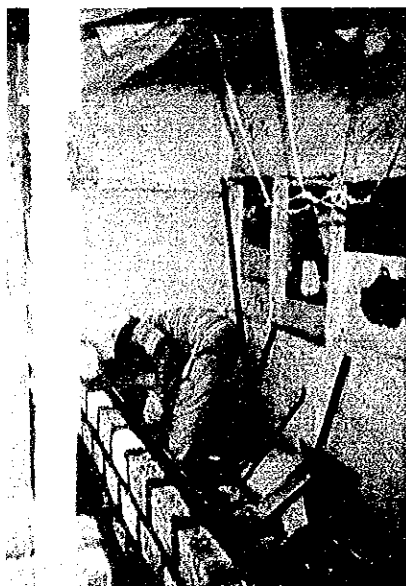
メキシコの援助を得て建てられた中層住宅団地。レンガとコンクリートの対比が美しい。窓から出ているビニールのフードは、入居後住民が共同してとりつけたものであるとの説明があった。

(写真5-22)



バルコニーから向いの棟を見る。中庭的に見えるメインの通路空間の緑の管理もよくいきとどいているように思われた。

(写真5-26)



パタコを使っての外壁の施工現場。ここでは水糸を使い、パタコの目地材料の仕上もよく、専門家の関与を伺わせる。飾格的にはこのパタコのほうが単位面積当りでは安くなると言われる。これらパタコ・バタメラ・かわら等の生産現場については、今回の調査では訪ずれることはできなかった。

(写真5-24)



バタメラを使った住宅の更新現場。木製の型枠の間にバタメラを積んでいっている様子がよくわかる。また階部にはたよりなげな鉄筋が打ちあげられているが、それをどの段階で固めるのであろうか。白い部分はバタメラに漆喰様のものが塗られたのである。

(写真5-25)



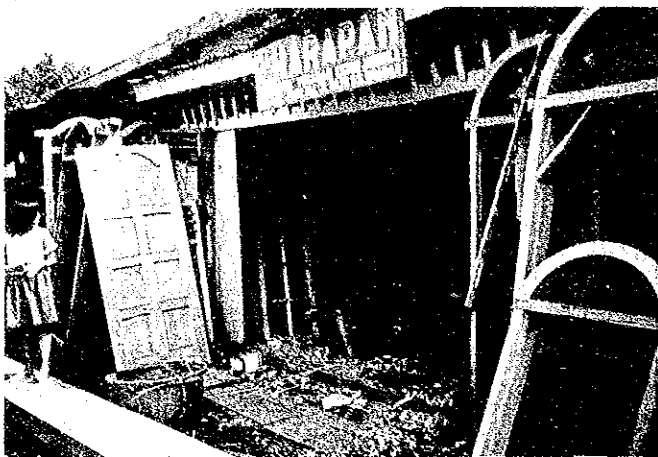
バタメラは施工現場にこのような形で積み上げられている。これは新品であるが、写真でもその品質のバラつきが大きいことが分る。さらに写真5-24の右側に積み上げられているのを見てもわかるように、廃材の二次利用も行なわれているとみられる。

(写真5-23)



中央広場から別のタイプの住棟タイプを見る。このように窓は概して小さい。

(写真5-27)



ジャカルタ グレンダー団地からの帰途
このような建具の製造・販売店のかなり大規模を集積地区があった。この店では玄関
ドアや窓枠の製造・販売を行なっているが、
この外様々な家具等の木製品の店が立地し
ている。

(写真5-28)



ギリシャ神殿風の柱などが街路わきの敷
地でこのようなかたちで販売されている。
これらの部材はどのような階層の住宅で使
われるのか、またこれは中古市場とどのよ
うな繋がりをもっているのかなど、興味深
いものがある。

(写真5-29)



鉄パイプによるフェンス・物干などの生
活用品やコンクリートブロック等を扱っ
ている建材店。

5-4 入手資料(一覽)

1. PROGRAM PERBAIKAN KAMPUNG
(KAMPUNG IMPROVEMENT PROGRAM) 1982.2
2. REKAPITULASI PELITA I, II, III DKI JAKARTA
年次別カンボン改良事業実績
3. MENTENG TENGGULUN 1979/80 KIP事業後の見学地点説明図
4. PERUM PERUMNAS PROJECTED REVENUES AND EXENDITURES FOR REPELITA
IV PERUM PERUMNAS
5. THE NATIONAL URBAN DEVELOPMENT CORPORATION PERUMNAS 1983.5
(past experience and future oppotunities for low cost housing in Indonesia)
6. BANDUNG URBAN DEVELOPMENT PROJECT 1985.5
(a general review)
7. BANDUNG (MAP) プルムナスのバンドンに於ける開発団地位置図
8. 住宅関係資料 ジャイカ派遣専門家 住宅チーム 1983.5.31改
9. Population of Indonesia by Province
Result of the complete Enumeration 1980 Population Census
10. DEVELOPMENT OF THE BUILDING MATERIALS INDUSTRY IN INDONESIA
ALBERT KARTAHARDJA Director of DBR 1978.3
11. DEVELOPMENT OF LOCALY PRODUCED BUILING MATERIALS IN DEVELOPING
COUNTRIES ALBERT KARTAHARIJA Director of DBR 1980.6
12. ROLE OF BUILDING MATERIALS, BUILDING RESEARCH, THE CONSTRUCTION
INDUSTRY AND MANPOWER TRAINING ON THE DEVELOPMENT OF HUMAN
SETTLEMENT
ALBERT KARTAHARDJA Director of DBR 1978.7

参 考 文 献 (一 覧)

1. インドネシアの住宅 JAPAN HOUSING EXPERT TEAM 1981.11
2. インドネシア共和国ジャカルタ住宅市街地再開発計画事業事前調査報告書 昭和57年3月
国際協力事業団
3. インドネシア共和国ジャカルタ市街地再開発事業 昭和58年12月
4. STUDY ON URBAN RENEWAL HOUSING PROJECT IN JAKARTA
DRAFT FINAL REPORT I GENERAL DESCRIPTION J.I.C.A. 1983.11
5. インドネシア共和国における住宅及び居住環境について「住宅」 戸谷 英世 1983.1
6. インドネシア共和国第四期五カ年計画における住宅開発計画の紹介 「住宅」
戸谷 英世 1982.10
7. INDONESIA'S KAMPUNG IMPROVEMENT PROGRAM "EKISTICS" NICK DEVAS
1981.1
8. インドネシアにおける住宅地開発計画の問題点 「住宅」 石黒 俊夫 1976.1

6. インドネシア側からのプロポザール

JOINT RESEARCH PROJECT

Project title : Joint research project : Investigation on production, supply, and management of low cost housing in urban areas.

Location : Bandung - West Java

Executing agency : Indonesia - Directorate General of Human Settlement (Cipta Karya).

Implementation: Directorate of Building Research in cooperation with Directorate of Housing, Perum Perumnas, and Planning & Programming Division of Cipta Karya.

Japan - Ministry of Construction.

Implementation: Building Research Institute.

Objective :

- a. To recommend a better understanding of means for improving housing conditions and living standards of the low income group.
- b. To develop a model (system) of post construction management of Site & Services/Core Housing and Kampung Improvement Project.
- c. To promote research and technological interchange between Japan and Indonesia.

Scope of Work : Background

Indonesia has launched massive urban housing projects under such programmes as Kampung Improvement, Site & Services/Core Housing and other low cost housing pro-

grammes, in order to meet the needs of different income groups.

The realization of such substantial housing programme is not without constraints and problems. To overcome these constraints and problems, this joint research will investigate past and present experiences, and, based upon it, formulate effective strategy inputs for improving the housing conditions and living standards of the low income groups.

Study Framework

- a. To investigate and analyse the planning, implementation, and management of mass housing development with emphasis on Site & Services/Core Housing and Kampung Improvement projects in the urban areas.
- b. To investigate and analyse the impact of the Site & Services/Core Housing and Kampung Improvement Projects to the improvement of housing conditions and living standards.

Duration

The Joint Research is planned for three years.

Year 1: Adoption of research approach, specific research site selection, finalization of research design.

Steps:

- a. Reconnaissance survey:
 - observation of KIP and SS/CH
 - collection of existing studies and research materials and documents.
- b. Working hypothesis:
 - site inspection of potential research areas
 - research issues identification
 - investigation design

- c. Test survey
- d. Work out research design, schedule, methodology and approaches.
- e. Joint meeting to adopt the research design
- f. Interim report

Year 2: Investigation and analysis of the case study areas in the allocated cities.

Steps:

- a. Fact finding and analysis of the formative process over time of the project/area.
 - socio-economic surveys
 - space use survey
 - building procedures
 - urban infrastructure and facilities
 - land acquisition, tenure and ownership
 - structure of rental system
 - building techniques
 - mechanism of building material supply
 - financial aspect of operation and maintenance
 - housing management
 - urban administration
- b. Identification of Key Concept objective
 - a. and b.
- c. Interim report

Year 3: Finalization of Joint Research

Steps:

- a. Verification survey
- b. Development of Key Concept
 - Means for improving housing condition and living standards within the Site & Service/Core Housing and Kampung Improve-

ment Programmes.

- Post construction management (strategy on institutional, administrative, and financial arrangements) of Site & Services/Core Housing and Kampung Improvement.

c. Final report

Scope of assistance : requested

- a. Qualified experts in theoretical and practical knowledge and possess many years of practical experience in the field of housing and human settlement, and have sufficient command of English are preferable.
- b. Training of Indonesian research staff members to up-to-date their theoretical and practical knowledge in Japan.
- c. Equipment
To facilitate an active operation of the joint research necessary equipment will be requested.
- d. Scope of Budget:

Government inputs : The Government of the Republic of Indonesia will be responsible for the provision of the local counterparts, working office required for the project.

Indonesian Steering Committee:

- Director General of Human Settlement (Cipta Karya)
- Director General of Urban Affairs (Ministry of Interior).
- Assistant Minister for Public Housing
- Director of Building Research
- Director of Housing
- Director of Urban and Regional Planning
- Director of National Urban Development Corporation
- Chief, Planning and Programming of Cipta Karya (Secretariate).

- Director of Sanitary Engineering.

Indonesian Working Group:

- Chief, Subdirectorates of Human Settlements
(Directorate of Building Research)
- Chief, Planning and Programming of Cipta Karya
- Director of Planning, National Urban Development Corporation.
- Directorate of Housing
- Bank Tabungan Negara
DKI (Jakarta Local Government)
- Directorate of Building Research
- Directorate of Building Research
- Directorate of Building Research

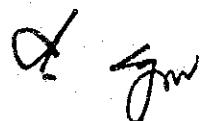
- List of equipments :
from Japan
1. Copying machine
 2. Word processor
 3. Printing machine
 4. Computer
 5. Video system
 6. Cameras
 7. Vehicle
 8. Others

7. Minutes

MINUTES OF MEETING BETWEEN
THE JAPANESE PRELIMINARY SURVEY TEAM
AND
THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF
THE REPUBLIC OF INDONESIA
ON
THE JOINT RESEARCH PROJECT
ON
FUNDAMENTAL INVESTIGATION FOR HOUSING STRATEGY
FOR
URBAN LOW INCOME GROUPS

DECEMBER 19, 1983

JAKARTA, THE REPUBLIC OF INDONESIA



MINUTES OF MEETING BETWEEN THE JAPANESE
PRELIMINARY SURVEY TEAM AND THE AUTHORITIES CONCERNED OF
THE GOVERNMENT OF THE REPUBLIC OF INDONESIA ON THE JAPANESE
TECHNICAL COOPERATION FOR THE JOINT RESEARCH PROJECT ON FUNDAMENTAL
INVESTIGATION FOR HOUSING STRATEGY FOR URBAN LOW INCOME GROUPS

The Japanese Preliminary Survey Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Dr. Shunichi Watanabe, Associate Director of Environment, Design and Fire Department, Building Research Institute, Ministry of Construction visited the Republic of Indonesia from December 8, 1983 to December 20, 1983 for the purpose of the following items:

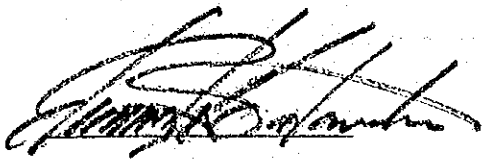
1. Confirmation of the request from the Indonesian authorities concerned;
2. Explanation of the Joint Research Project;
3. Discussion on the possibility that the project will be realized;
4. Consultation on making an implementation plan of the Project; and
5. Others,

concerning the Joint Research Project on Fundamental Investigation for Housing Strategy for Urgan Low Income Groups.

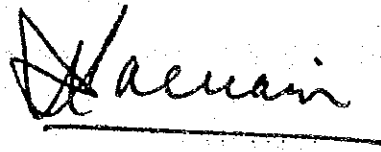
During its stay in the Republic of Indonesia the Team exchanged views and had a series of discussions with the Indonesian authorities concerned. Both the Team and the Indonesian authorities concerned agreed to propose that the desirable measures be taken by both Governments for the successful implementation of the above-mentioned Joint Research Project. As a result of the discussions, the Team and the Indonesian authorities concerned basically agreed matters of the Record of Discussion (Draft) which is given in Appendix 1, and the Memorandum of the discussions is attached as Appendix II.

Jakarta, December 19, 1983

[Handwritten signatures]



Dr. Shunichi Watanabe
Head of the Japanese
Preliminary Survey Team
for the Joint Research Project



Ir. Soenarjono Danoedjo
Director General of Cipta Karya
Ministry of Public Works



(D r a f t)

THE RECORD OF DISCUSSIONS BETWEEN THE JAPANESE
IMPLEMENTATION SURVEY TEAM AND THE AUTHORITIES
CONCERNED OF THE GOVERNMENT OF THE REPUBLIC OF INDONESIA
ON THE JAPANESE TECHNICAL COOPERATION FOR THE
JOINT RESEARCH PROJECT ON FUNDAMENTAL INVESTIGATION FOR HOUSING
STRATEGY FOR URBAN LOW INCOME GROUPS

The Japanese implementation Survey Team (hereinafter referred to as "the Team" organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by (name), Director General of Building Research Institute visited the Republic of Indonesia from (Date) to (Date) for the purpose of working out the details of the technical cooperation program concerning the Joint Research Project on Fundamental Investigation for Housing Strategy for Urban Low Income Groups.

During its stay in the Republic of Indonesia, the Team exchanged views and had a series of discussions with the Indonesian authorities concerned in respect of the desirable measures to be taken by both Governments for the successful implementation of the above-mentioned Joint Research Project.

As a results of the discussions, the Team and the Indonesian authorities concerned agreed to recommend to their respective Governments the matters referred to in the Document attached hereto.

(Date) _____

(Name) _____

Director General of Building
Research Institute
Ministry of Construction.

(Name) _____

Director General of Cipta Karya
Ministry of Public Works



THE ATTACHED DOCUMENT

I. COOPERATION BETWEEN BOTH GOVERNMENTS

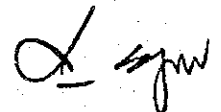
1. The Government of Japan and the Government of the republic of Indonesia will cooperate with each other in implementing the Joint Research Project on Fundamental Investigation for Housing Strategy for Urban Low Income Groups (hereinafter referred to as "the Project"), for the purpose of mainly developing key concepts concerning the strategy to improve housing programs for urban low income groups.
2. The Project will be implemented in accordance with the Master Plan which is given in Annex I.

II. DISPATCH OF JAPANESE EXPERTS

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense services of the Japanese experts as listed in Annex II through the normal procedures under the Technical Cooperation Scheme of the Government of Japan.
2. The Japanese experts referred to in 1. above will be granted in the Republic of Indonesia exemptions and benefits no less favourable than those granted to the experts of third countries or international organizations performing similar missions.

III. PROVISION OF MACHINERY AND EQUIPMENT

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense such machinery, equipment and other materials necessary for the implementation of the Project as listed in Annex IV, through the normal procedures under the Technical Cooperation Scheme of the Government of Japan.



2. The articles referred to in 1. above will become the property of the Government of the Republic of Indonesia upon being delivered to the Indonesian Authorities concerned at the ports and airports of disembarkation, and will be utilized exclusively for the implementation of the Project in consultation with Japanese experts referred to in Annex II.

IV. TRAINING OF INDONESIAN PERSONNEL IN JAPAN

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to receive at its own expense the Indonesian personnel connected with the project for technical training in Japan through the normal procedures under the Technical Cooperation Scheme of the Government of Japan.
2. The Government of the Republic of Indonesia will take necessary measures to ensure that the knowledge and experience acquired by the personnel from technical training in Japan will be utilized effectively for the implementation of the Project.

V. LOCAL EXPENSES

The budget to meet the local expenses necessary for the implementation of the Joint Research Project will be provided to the Japanese expert by JICA in accordance with the laws and regulations in force in Japan. The budget which is to be exclusively for the implementation of the Project will be managed by a Japanese expert designed by JICA.

VI. DATA OWNERSHIP AND PUBLICATIONS


The data accumulated through joint research will be jointly owned by the participating organizations (JICA and Directorate General of Cipta Karya - Ministry of Public Works). When reports of documentations concerning this project are compiled, it is to be mentioned that the Project has been implemented by JICA and Directorate General of CIPTA KARYA - Ministry of

Public Works ; as Technical Cooperation Project between the Government of Japan and the Government of the Republic of Indonesia.

VII. MEASURES TO BE TAKEN BY THE GOVERNMENT OF THE REPUBLIC OF INDONESIA

1. In accordance with the laws and regulations in force in the Republic of Indonesia, The Government of the Republic of Indonesia will take necessary measures to provide at its own expense:
 - (1) Service of the Indonesian counterpart personnel and administrative personnel,
 - (2) Supply or replacement of machinery, equipment, instrument, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than those provided through JICA under III above;
 - (3) Urban transportation facilities for Japanese experts;
 - (4) Facilities necessary for the maintenance and protection of machinery, equipment and other materials listed in ANNEX IV.

2. In accordance with the laws and regulations in force in the Republic of Indonesia, The Government of The Republic of Indonesia will take necessary measures to meet:
 - (1) Expenses necessary for the transportation within the Republic of Indonesia of the articles referred to in III above as well as for the installation, operation and maintenance thereof;
 - (2) Customs duties, internal taxes and any other charges, imposed in the Republic of Indonesia on the articles referred to in III above;

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- (3) All local expenses necessary for the implementation of the Project other than those provided through JICA under V above.

VIII. ADMINISTRATION OF THE PROJECT

The leader of the Japanese Research Team and the leader of the Indonesian Research Team will collaboratively assume the overall responsibility for the implementation of the Project.

(The Resident Representative of JICA in the Republic of Indonesia will undertake the role of advice and coordination for the successful implementation of the Project).

IX. CLAIMS AGAINST JAPANESE EXPERTS

The Government of the Republic of Indonesia will undertake to bear claims, if any arises, against the Japanese experts engaged in the Project resulting from, occurring in the course of, or otherwise concerned with the discharge of their official functions in the Republic of Indonesia except for those arising from the willful misconduct or gross negligence of the Japanese experts.

X. MUTUAL CONSULTATION

There will be mutual consultation between the two Governments on any major issues arising from, or in connection with this Attached Document.

XI. TERM OF COOPERATION

The duration of the technical cooperation for the Project under this Attached Document will be from April, 1984 to March, 1987.

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| | |
|-----------|--|
| ANNEX I | MASTER PLAN |
| ANNEX II | PROJECT TEAM AND PARTICIPATING ORGANIZATIONS |
| ANNEX III | PRIVILEGES, EXEMPTIONS AND BENEFITS |
| ANNEX IV | LIST OF ARTICLES (TENTATIVE) |
| ANNEX V | IMPLEMENTATION SCHEDULE (TENTATIVE) |

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I. BACKGROUND

Indonesia has launched massive urban housing projects under such programs as Kampung Improvement, Sites and Services, and Low Cost Housing Programs in order to meet the needs of different income groups in the urban area. These urban housing programs, however, have been met by various constraints and problems.

In order to overcome these constraints and problems, it is necessary to carry out fundamental investigation into the past and present experiences so that the Government, based upon it, could formulate an effective strategy for improving housing conditions and living standards of urban low income groups.

II. OBJECTIVES

1. To develop key concepts concerning strategy to improve housing programs for urban low income groups such as Kampung Improvement Program and Sites and Services Program in their planing, implementation and management process with emphasis on post-construction management strategy.
2. To relate these key concepts to various social conditions presently surrounding urban housing and to the urban development in Indonesia.
3. To promote research and technological interchange between Japan and Indonesia.

III. STUDY FRAMEWORK

The Project is planned for three years, devided into three phases, and will cover the following items:

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1. PHASE 1 (April, 1984 - March 1985)

- a/. Research Methodology and Approach
- b/. Reconnaissance of KIP, S & S and other Urban Development Projects
- c/. Data Collection
- d/. Working Hypothesis
- e/. Survey Design
- f/. Test Survey
- g/. Reconnaissance Report

2. PHASE 2 (April, 1985 - March, 1986)

a/. Case Study:

The following surveys will be conducted and their results analysed each in the case study areas located in Jakarta and Bandung:

- Project and Area Survey
- Inhabitant Survey
- Space Use Survey
- Building Activity Survey
- Building Material Survey

b/. Identification of Key Concepts

c/. Intermin Report

3. PHASE 3 (April, 1986 - March, 1987)

- a/. Verification Survey
- b/. Development of Key Concepts
- c/. Final Report

[Handwritten initials]

ANNEX II PROJECT TEAMS AND PARTICIPATING ORGANIZATIONS

The Project will be implemented jointly by the Japanese Research Team and the Indonesian Research Team.

The Team Leader of the Japanese Research Team is Director, Housing & Building Economy Department, Building Research Institute, Ministry of Construction.

The Team Leader of the Indonesian Research Team is Director, Directorate of Building Research, Directorate General of Cipta Karya, Ministry of Public Works.

Each Team will consist of the following experts:

(1) The Japanese Research Team:

Researcher(s)/Expert(s) in the field of Housing
Researcher(s)/Expert(s) in the field of Urban Planning
Researcher(s)/Expert(s) in the field of Building Economy

(2) The Indonesian Research Team:

Researcher(s)/Expert(s) in the field of Housing
Researcher(s)/Expert(s) in the field of Urban Development
Researcher(s)/Expert(s) in the field of Building Economy

Project Phases:

- (1) Phase 1 (from April, 1984 to March, 1985)
- (2) Phase 2 (from April, 1985 to March, 1986)
- (3) Phase 3 (from April, 1986 to March, 1987)

ANNEX III PRIVILEGES, EXEMPTIONS AND BENEFITS

1. The Government of the Republic of Indonesia will grant exemptions from income tax and charge of any kind imposed on or in connections with the living allowance remitted from abroad.
2. The Government of the Republic of Indonesia will grant exemptions from customs duties in respect of the importation of personal effects by the Japanese experts and their families as well as the importation of machinery and equipments relating to their activities.

ANNEX IV LIST OF ARTICLES (TENTATIVE)

1. On-Site Survey equipment
 - a/. Land Cruiser Vehicle
 - b/. Memo Motion Camera System
 - c/. Video Movie System
2. Survey Analysis System
 - a/. Personal Computer
 - b/. Floppy Hard Disk
 - c/. Translation System (Japanese - English - Indonesian)
 - d/. Line Printer
 - e/. Wire - Dot Printer
 - f/. Monitor T.V.
 - g/. Basic Software

ANNEX V. IMPLEMENTATION SCHEDULE (TENTATIVE)

| ITEMS | YEAR | PHASE 1 (Apr. '84-Mar. '85) | PHASE 2 (Apr. '85-Mar. '86) | PHASE 3 (Apr. '86-May '87) |
|--|------|--------------------------------|--------------------------------|-------------------------------|
| <u>Assignment of Japanese Experts in Indonesia</u> | | | | |
| (1). Team Leader | | Reconnaissance, etc. | Case Study 1 & 2 | Verification Surv. |
| (2). Short Term Expert | | ↓ | _____ | _____ ↓ |
| (3). Short Term Expert | | _____ | _____ ↑ | _____ Final Adj: |
| (4). Long Term Expert | | ----- | Test Surv. | ----- |
| <u>Study of Indonesian Personnel in Japan</u> | | | | |
| (1). Counterpart | | _____ | _____ | _____ |
| Compilation of Reports | | Reconnaissance Report | Interim Report | Final Report |

[Handwritten initials]

Mr. Alibasah Samhudi (Perum Perumnas)
Mr. Budi Sugiarto (Perum Perumnas)
Mr. Darrundono (Dki Jakarta)

V. Summary

1. Perumnas and DKI explained about their housing projects and the Kampung Improvement Program and pointed out several problems.

- 1) Perumnas

It is going to start REPELITA IV which includes new urban housing programs from 1984/85 to 1988/89. Some problems such as land acquisition and fund were explained.

- 2) DKI Jakarta

It has almost finished the KIP in Jakarta, and intends to start the Urban Betterment Project and the Guided Land Development Project from next year.

Main problems are as follows:

- a. improvement of urban infrastructure on a district-wide scale;
 - b. improvement of housing and environment in Kampung; and
 - c. promotion of inhabitants' participation.
2. Perumnas reported the outline of Klender area Project, which is an interesting mixed development involving Sites and Services/Core house, Low cost housing, etc.,
 3. Japanese side explained about the outline of Joint Research Project and R/D (Draft).



4. Dr. Watanabe questioned Indonesian manpower and local costs for the implementation of the Joint Research Project.

In response to his question Mr. Djuwanda replied that Directorate of Building Research (DBR) will be responsible for the provision of manpower and local costs, but if necessary, Directorate of Housing, Perumnas and DKI will assist them.

5. Mr. Djuwanda said that further discussion concerning the R/D (Draft) should be made with DBR in Bandung and Based upon the discussion, the amended R/D (Draft) should be discussed again at the Joint Meeting in Jakarta in order to make a final agreement of this time with Indonesian authorities concerned.



1) Project Title

The contents of Japanese and Indonesian titles were found to be same and both parties came to agree to entitle "Fundamental Investigation for Housing Strategy for Urban Low Income Groups".

2) Executing Agency

Indonesian Side Suggested that the Director General of Cipta Karya will have a strong leadership for the Project and the executing agency will be Directorate of Building Research in cooperation with Directorate of Housing, Perumnas and Planning and Programming Division of Cipta Karya.

3) Objectives

Dr. Watanabe explained "Fundamental Investigation" means mainly carrying out of survey and analysis and developing of key concepts. It is an activity separate from policy-making through closely interrelated to it.

4) Scope of assistance requested

Mr. Hariman reported the scope of assistance requested and Mr. Furuya said that JICA will assist this Project as much as possible according to the R/D (Draft).

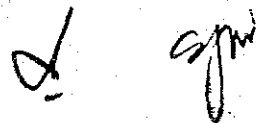
5) Government Input

It was confirmed that DBR is responsible for the provision of local counterparts and working office etc. required for the Project.

2. Dr. Watanabe explained the Japanese Proposal Based upon the R/D (Draft).

The main points were Background, Objectives and Organization.

3. As a result of the discussions, finally both parties came to agree to improve the R/D (Draft).



V. Summary

1. Dr. Watanabe explained the R/D (Draft) Based upon the discussions in Bandung.
2. Both sides discussed and clarified the meaning of some special words which are used in the R/D (Draft).
3. Both sides agreed to recommend desirable measures to be taken by respective Governments for starting the Project based upon this discussion.
4. Indonesian side proposed that a long-term Japanese expert will be needed for the entire period of the Project for the successful and effective implementation of the Project.
5. Both sides agreed that parts of the R/D (Draft) should be changed as follows (underlined):

1) ANNEX I MASTER PLAN (TENTATIVE)

II. OBJECTIVES

- " 1. To develop key concepts concerning strategy to improve housing programs for urban low income groups such as Kampung improvement Program and Sites and Services Program in their planning, implementation and management process with emphasis on post-construction management strategy.
 2. To relate these key concepts to various social conditions presently surrounding and to the urban development in Indonesia. "
6. Japanese side took note of the following Indonesian requests (underlined):

d *sgm*

1) I. COOPERATION BETWEEN BOTH GOVERNMENT

" 2. The Project will be implemented repectively in accordance with laws and regulations in force in Japan and the Republic of Indonesia.

3. The Project will be implemented in accordance with the Master Plan which is given in Annex I.

(N.B. : All the other amendments should be made necessitated by this amendment). "

2) V. LOCAL EXPENSES

" V LOCAL EXPENSES FOR JAPANESE EXPERTS


The budget to meet the local expenses for Japanese experts--- "

3) VI. DATA OWNERSHIP AND PUBLICATIONS

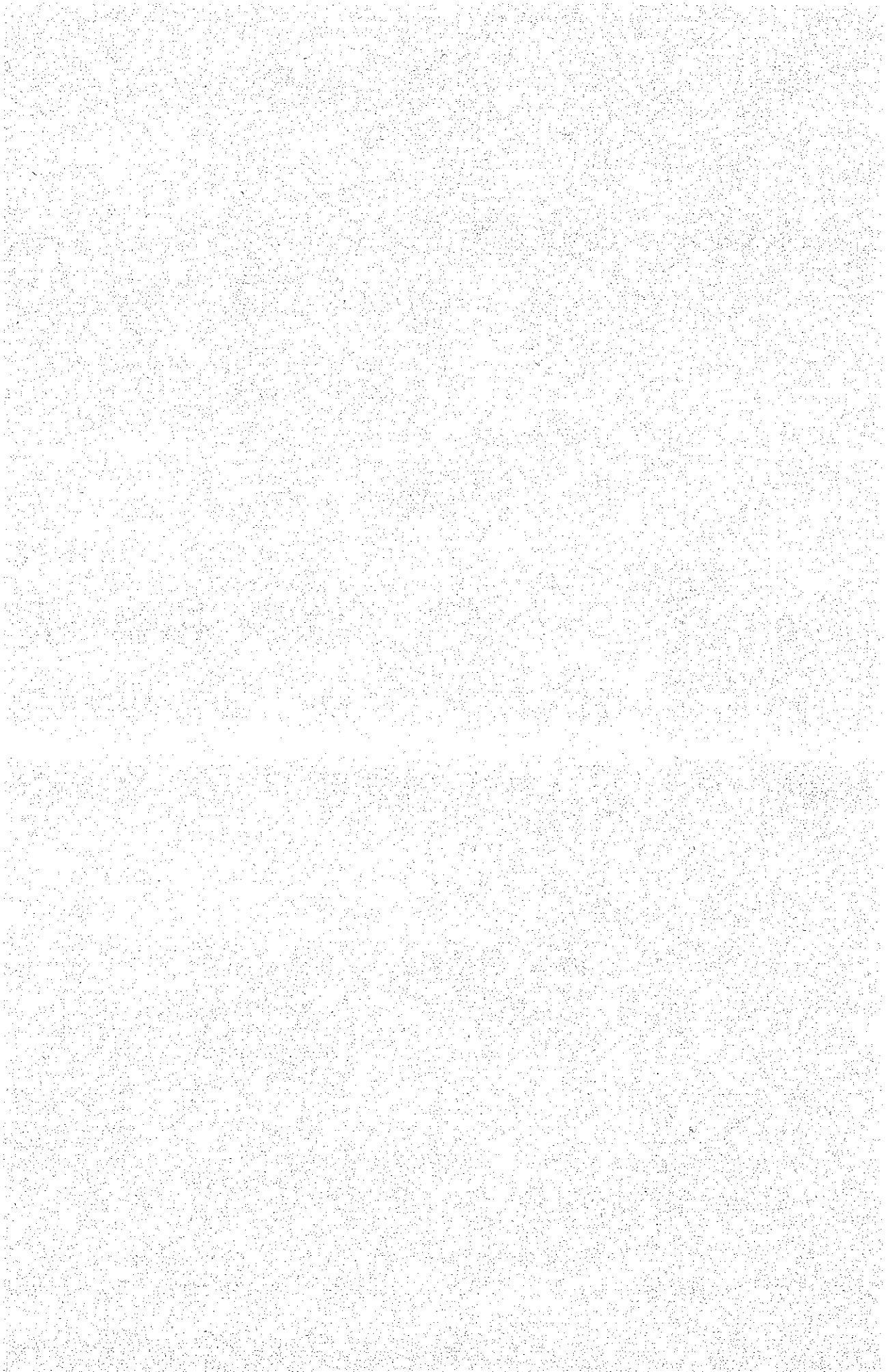
" The data accumulated through joint research, except those which are categorized as classified data/restricted use will be jointly owned by the participating organizations (JICA and Directorate General of Cipta Karya - Ministry of Public Works).

4) ANNEX III

" 2. The Government of the Republic of Indonesia will grant exemptions from customs duties in respect of the importation of machinery and equipment in ANNEX IV and personal effects by the Japanese experts and their families as well as the importation of machinery and equipments relating to their activities which will be re-exported after termination of the Project. "



Ⅱ 実施協議チームの派遣



1 実施協議チームの構成

団 長 松 本 光 平 建設省建築研究所第1研究部長
 団 員 石 坂 公 一 建設省建築研究所建設生産研究室研究員

2 実施協議チームの日程

昭和59年4月9日から昭和59年4月15日まで

| 日 程 | | 内 容 |
|-------|----|---|
| 月 日 | 曜日 | |
| 4月9日 | 月 | 10:30 JAL721便にて成田発。現地時間19:00ごろジャカルタ着。 平野専門家出迎え。 午前1:00(午前3:00日本時間)まで、ホテルにて日程、実施計画について打合せ。 |
| 4月10日 | 火 | 午前中(8:00~12:00) <ul style="list-style-type: none"> ◦ JICA事務所訪問。榎本次長と打合せ。所長表敬。 ◦ 日本大使館訪問。藤芳一等書記官と打合せ。 ◦ JICA事務所にて中田専門家と合流。 午後(13:00~17:00) <ul style="list-style-type: none"> ◦ 公共事業省都市住宅総局住宅局内平野専門家オフィスで協議事項について打合せ。 夜 <ul style="list-style-type: none"> ◦ JICAの山村所長邸で開催されたレセプションに出席。 ◦ 平野、中田両専門家と日程等について打合せ。 |
| 4月11日 | 水 | 午前中(8:00~12:00) <ul style="list-style-type: none"> ◦ 公共事業省都市住宅総局会議室にて研究協力R/D案についてインドネシア側と協議。 ◦ 修正要望事項のとりまとめ。 午後(13:00~17:00) <ul style="list-style-type: none"> ◦ JICA事務所において、上記修正事項に関する日本外務省の同意を確認。 ◦ ホテルにおいてR/Dの修正作業。調印用文書の作成。 夜 <ul style="list-style-type: none"> ◦ インドネシア側カウンターパートとの打合せ。 |
| 4月12日 | 木 | 午前中 <ul style="list-style-type: none"> ◦ 8:30 公共事業省都市住宅総局にて研究協力R/D調印。 |

| | | |
|-------|---|--|
| | | <ul style="list-style-type: none"> ○ バンドンへ移動開始。 午後 ○ バンドンへ移動。 夜 ○ インドネシア建築研究局の歓迎レセプション出席。 |
| 4月13日 | 金 | <p>午前中(8:00~12:00)</p> <ul style="list-style-type: none"> ○ 建築研究局会議室にて研究協力の詳細な日程等について協議。 <p>午後</p> <ul style="list-style-type: none"> ○ バンドンからジャカルタへ移動。 |
| 4月14日 | 土 | <p>午前中(8:00~12:00)</p> <ul style="list-style-type: none"> ○ JICA事務所にて打合せ。 ○ ジャカルタ市内カンボン視察。 ○ 大統領府ASEAN局長フセイン氏他2名に対し、今回の研究協力事業は日本ASEAN科学技術協力に関する候補プロジェクトである旨、説明し、これに対しイ側は丁重に謝意を表した。 <p>午後</p> <ul style="list-style-type: none"> ○ S & S, Low Cost Hosing等の現況の視察。 |
| 4月15日 | 日 | 8:00 CX710便にてジャカルタ発。21:00成田着。 |

3 派遣の背景

住宅分野におけるインドネシア共和国公共事業省建築研究局とわが国建設省建築研究所との間の研究協力業務の実施に関しては、以前から双方の協議が重ねられてきたが、本年度より本格的に実施されるはこびになり、両名が研究協力の合意議事録(Record of Discussion)調印のため派遣されることとなった。また、インドネシア側に対し、今回のプロジェクトが日本ASEAN科学技術協力に関する中曽根首相の指示のもとに採択されたものであることを説明する任務もあった。

4 業務内容

両名は合意議事録の案文を携行し、インドネシア側との協議、合意議事録案の修正に関するわが国外務省の同意の確認を経て、研究協力合意議事録(R/D)の調印を行い、大統領府ASEAN局長に前記の説明を行った。

5. 合意議事録 (R/D)、暫定実施計画

THE RECORD OF DISCUSSIONS
BETWEEN THE JAPANESE IMPLEMENTATION SURVEY TEAM
AND THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF THE REPUBLIC OF INDONESIA
ON THE JAPANESE TECHNICAL COOPERATION
FOR THE JOINT RESEARCH PROJECT ON FUNDAMENTAL INVESTIGATION
FOR HOUSING STRATEGY FOR URBAN LOW INCOME GROUPS

The Japanese implementation Survey Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Kohei Matsumoto, Director of Housing & Building Economy Department, Building Research Institute, visited the Republic of Indonesia from April 9, 1984 to April 15, 1984 for the purpose of working out the details of the technical cooperation program concerning the Joint Research Project in Fundamental Investigation for Housing Strategy for Urban Low Income Groups.

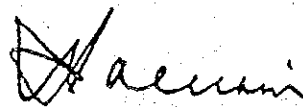
During its stay in the Republic of Indonesia, the Team exchanged views and had a series of discussions with the Indonesian authorities concerned in respect of the desirable measures to be taken by both Governments for the successful implementation of the above-mentioned Joint Research Project, which aims at promoting research and technological cooperation between Japan and Indonesia.

As a results of the discussions, the Team and the Indonesian authorities concerned agreed to recommend to their respective Governments the matters referred to in the Document attached hereto.

Jakarta, April 12, 1984

松本 浩平 氏

Mr. Kohei Matsumoto
Head of Japanese Implementation
Survey Team



Ir. Soenarjono Danoedjo
Director General of Cipta Karya
Ministry of Public Works

THE ATTACHED DOCUMENT

I. COOPERATION BETWEEN BOTH GOVERNMENT

1. The Government of Japan and the Government of the Republic of Indonesia will cooperate with each other in implementing the Joint Research Project on Fundamental Investigation for Housing Strategy for Urban Low Income Groups (hereinafter referred to as "the Project"), for the purpose of mainly developing key concepts concerning the strategy to improve housing programs for urban low income groups.
2. The project will be implemented respectively in accordance with laws and regulations in force in Japan and the Republic of Indonesia.
3. The Project will be implemented in accordance with the Master Plan which is given in Annex I.

II. MEASURES TO BE TAKEN BY THE GOVERNMENT OF JAPAN

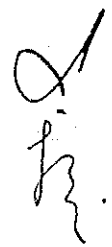
In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures to provide at its own expenses:

1. Services of Japanese experts as listed in Annex II through the normal procedures under the Technical Cooperation Scheme of the Government of Japan.
2. Machineries, equipments and other materials necessary for the implementation of the Project as listed in Annex IV. The articles referred to in above will become the property of the Government of the Republic of Indonesia upon being delivered C.I.F. to the authorities concerned at the ports and airports of disembarkation, and will be utilized exclusively for the implementation of the Project in consultation with Japanese experts referred to in Annex II.
3. Technical training in Japan of Indonesian personnel connected with the Project through the normal procedures under the Technical Cooperation Scheme of the Government of Japan.

4. Funds to meet local expenses for Japanese experts necessary for the implementation of the Project. The said funds will be managed by the Japanese experts designated by Japan.

III. MEASURE TO BE TAKEN BY THE GOVERNMENT OF INDONESIA

1. In accordance with the laws and regulations in force in the Republic of the Government of Indonesia will take necessary measures to provide at its own expenses:
 - (1) Service of the Indonesian counterpart personnel and administrative personnel;
 - (2) Supply or replacement of machinery, equipment, instrument, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than those provided through JICA under II-2 above;
 - (3) Urban transportation facilities for Japanese experts;
 - (4) Facilities necessary for the maintenance and protection of machinery, equipment and other materials listed in ANNEX IV.
2. In accordance with the laws and regulations in force in the Republic of Indonesia, the Government of the Republic of Indonesia will take necessary measures to meet:
 - (1) Expenses necessary for the transportation within the Republic of Indonesia of the articles referred to in II-2 above as well as for the placement operation and maintenance thereof;
 - (2) Customs duties, internal taxes and any other charges, imposed in the Republic of Indonesia on the articles referred to in II-2 above;
 - (3) All local expenses necessary for the implementation of the Project other than those provided through JICA under II above.
3. The Government of the Republic of Indonesia will grant the Japanese experts exemptions and benefits as listed in ANNEX III.



4. The Government of the Republic of Indonesia will take necessary measures to ensure that the knowledge and experience acquired by the personnel from technical training in Japan will be utilized effectively for the implementation of the Project.

IV. DATA OWNERSHIP AND PUBLICATION

The data accumulated through joint research, except those which are categorized as classified data/restricted use, will be jointly owned by the participating organizations (JICA and Directorate General of Cipta Karya-Ministry of Public Works).

When reports or documentations concerning this Project are compiled, it is to be mentioned that the Project has been implemented by JICA and Directorate General of CIPTA KARYA-Ministry of Public Works; as Technical Cooperation Project between the Government of Japan and the Government of Republic of Indonesia.

V. ADMINISTRATION OF THE PROJECT

The leader of the Japanese Research Team and the leader of the Indonesia Research Team will collaboratively assume the overall responsibility for the implementation of the Project.

(The Resident Representative of JICA in the Republic of Indonesia will undertake the role of advice and coordination for the successful implementation of the Project.)

VI. CLAIMS AGAINST JAPANESE EXPERTS

The Government of the Republic of Indonesia will undertake to bear claims, if any arises, against the Japanese engaged in the Project resulting from, occurring in the course of, or otherwise concerned with the discharge of their official functions in the Republic of Indonesia except for those arising from the willful misconduct or gross negligence of the Japanese experts.

VII. MUTUAL CONSULTATION

There will be mutual consultation between the two Governments on any major issues arising from, or in connection with this Attached Document.

VIII. TERM OF COOPERATION

The duration of the technical cooperation for the Project under this Attached Document will be from April, 1984 to March, 1987.

- ANNEX I MASTER PLAN
- ANNEX II PROJECT TEAM AND PARTICIPATING ORGANIZATIONS
- ANNEX III PRIVILEGES, EXEMPTIONS AND BENEFITS
- ANNEX IV LIST OF ARTICLES
- ANNEX V IMPLEMENTATION SCHEDULE

ANNEX I MASTER PLAN

I. BACKGROUND

Indonesia has launched massive urban housing projects under such programs as Kampung Improvement, Sites & Services, and Low Cost Housing Programs in order to meet the needs of different income groups in the urban area. These urban housing programs, however, have been met by various constraints and problems.

In order to overcome these constraints and problems, it is necessary to carry out fundamental investigation into the past and present experiences so that the Government, based upon it, could formulate an effective strategy for improving housing conditions and living standards of urban low income groups.

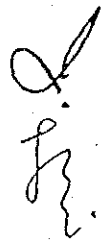
II. OBJECTIVES

1. To develop key concepts concerning strategy to improve housing and urban development programs for urban low income groups such as Kampung Improvement Program, Sites & Services and Low Cost Housing Programs with emphasis on post-construction management.
2. To examine those key concepts in the light of various social conditions relating to the present housing and urban development programs in Indonesia.

III. STUDY FRAMEWORK

The Project is planned for three years, divided into three phases, and will cover the following items:

1. PHASE 1 (April, 1984 - March, 1985)
 - a/. Research, Methodology and Approach
 - b/. Reconnaissance of KIP, S & S, Low Cost Housing Programs and other Urban Development Projects.
 - c/. Data Collection
 - d/. Working Hypothesis
 - e/. Survey Design
 - f/. Test Survey
 - g/. Reconnaissance Report



2. PHASE 2 (April, 1985 - March, 1986)

a/. Case Study:

The following surveys will be conducted in the case study areas in Jakarta and Bandung:

- Project and Area Survey
- Inhabitant Survey
- Space Use Survey
- Building Activity Survey
- Building Material Survey
- Building Finance Survey

b/. Identification of key Concepts

c/. Interim Report

3. PHASE 3 (April, 1986 - March, 1987)

a/. Verification Survey

b/. Development of Key Concepts concerning strategies

c/. Final Report



ANNEX II PROJECT TEAMS AND PARTICIPATING ORGANIZATIONS

The Project will be implemented jointly by the Japanese Research Team and the Indonesian Research Team.

The Team Leader of the Japanese Research Team is Director, Housing & Building Economy Department, Building Research Institute, Ministry of Construction.

The Team Leader of the Indonesian Research Team is Head, Center for Research & Development on Human Settlement, Agency for Research & Development, Ministry of Public Works.

Each Team will consist of the following experts:

(1) The Japanese Research Team:

Researcher (s)/Expert(s) in the field of Housing

Researcher(s)/Expert (s) in the field of Urban Planning

Researcher(s)/Expert(s) in the field of Building Economy

(2) The Indonesian Research Team:

Researcher(s)/Expert(s) in the field of Housing

Researcher(s)/Expert(s) in the field of Urban Development

Researchers(s)/Expert(s) in the field of Building Economy

ANNEX III PRIVILEGES, EXEMPTIONS AND BENEFITS

1. The Government of the Republic of Indonesia will grant exemptions from income tax and charge of any kind imposed on or in connections with the living allowance remitted from abroad.
2. The Government of the Republic of Indonesia will grant exemptions from customs duties in respect of the importation of personal effects by the Japanese experts and their families which will be re-exported after termination of the Project as well as the importation of machineries and equipments relating to their activities.

ANNEX IV LIST OF ARTICLES (TENTATIVE)

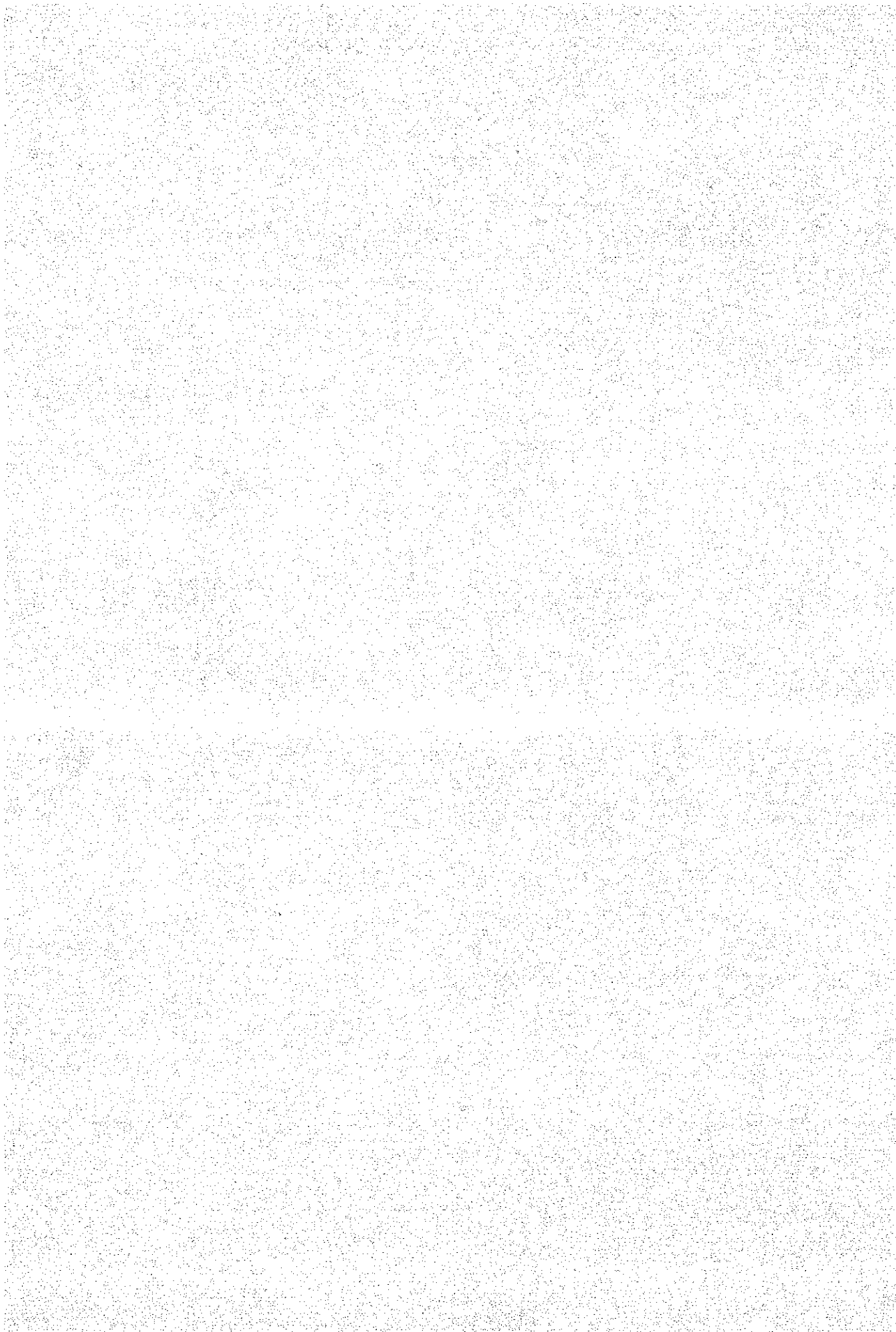
1. On-Site Survey equipment
 - a/. Land Cruiser Vehicle
 - b/. Memo Motion Camera System
 - c/. Video Movie System
2. Survey Analysis System
 - a/. Personal Computer
 - b/. Floppy, Hard Disk
 - c/. Translation System (Japanese - English-Indonesian)
 - d/. Line Printer
 - e/. Wire - Dot Printer
 - f/. Monitor T.V.
 - b/. Basic Software

Efforts should be made that all the articles mentioned above will be available in Indonesia when the Japanese experts commence their work as scheduled in Annex V.

ANNEX V IMPLEMENTATION SCHEDULE

| ITEMS | YEAR | PHASE 1 | PHASE 2 | PHASE 3 | |
|--|------|-----------------------|---------------------|---------------------|--------------|
| | | (Apr. '84-Mar. '85) | (Apr. '85-Mar. '86) | (Apr. '86-May '87) | |
| <u>Assignment of Japanese Experts in Indonesia</u> | | Reconnaissance, etc. | Case Study 1 & 2 | Verification Survey | Final Adj. |
| (1) Team Leader | | | | | |
| (2) Short Term Expert (s) | | | | | |
| (3) Long Term Expert | | | | | |
| <u>Study of Indonesian Personnel in Japan</u> | | | | | |
| (i) Counterpart (s) | | | | | |
| Compilation of Reports | | Reconnaissance Report | Interim Report | | Final Report |

参 考 资 料



1 今までの住宅関係技術協力の概要

1-1 住宅・建築・都市開発

管轄機関名 公共事業省・住宅都市総局（チプタカリヤ）

バベニスコード番号 KTA-7/8, KTA-38

① 協力要請の背景

1973年度、インドネシア政府（住宅都市総局）は、「ジャカルタ及び他の都市における住宅開発事業の計画準備」に対しての協力要請を行なった。（KTA-7及び8）

この要請に応じて日本政府は、1974年度から住宅都市総局（Dit Jendral CIPTA KARYA）及び都市開発公団（Perum Perumnas）に住宅都市専門家を派遣し、これにより住宅・都市分野における日一イ協力が開始された。

その後、1975、1977、1980年度に、見直し調査団が派遣され、逐次協力内容が改訂され、政策レベルから準備、事業への協力とその範囲も拡大してきている。1981年度からは、「建築耐震実験室の設立」についての要請を受け、バンドンの建築研究局への派遣が開始された。（KTA-38）

近年、住宅・建築・都市開発関連の JICA による開発調査、セミナー等のプロジェクトも始まり、事前の準備、事後のフォローアップについても、日常の技術協力の一環として協力を求められている。住宅・建築・都市開発の分野は、ソフトな面も多くそれぞれ有機的につながっているため、個別のアサイメントの範囲で、これらのプロジェクトにも最大協力するようにしている。

② 協力対象分野

住宅・都市総局は、「住宅政策」「都市計画」「上下水道」「管轄」及び「建築に関する研究」のように極めて多岐にわたる分野での政策立案及びその実施と推進を行っている。

切迫する住宅・都市問題に対処するため、既成市街地では、カンボン改善事業、農村については農民住宅改善事業を総局の指導の下に、都市開発公団、国民貯蓄銀行を通じて都市部における新規の住宅需要に対処している。

最近では、特に都市部において、中層住宅の導入をし始めており、計画上（再開発手法）、設計上（建築基準）、構造上（耐震性能）未経験の分野であり、住宅・建築・都市専門家は、これらの国家施策を有効かつ円滑に推進させるために必要な技術上の指導、助言を行なってきている。

③ 事業協力目標

インドネシア国における住宅・建築・都市開発の分野での問題解決に必要な技術の移転を行なうことにより、当国の民生の安定の増進に寄与することが目標である。

④ 主要協力事項の具体的実施内容

- (1) 住宅・建築・都市政策全般に関する助言を行なっている。
- (2) 具体的な「開発調査」等とからませながら、再開発事業、区画整理事業等の住宅・都市事業手法について、日本の紹介及び必要な助言を行なっている。
- (3) 特に、ビジュアルなビデオ・スライド等を使って、日本での住宅・都市事業手法、建築諸技術の紹介をしている。
- (4) 実大耐震実験、耐震工学第3国研修及び定期的な講義を行ないながら、建築耐震技術の向上を図っている。
- (5) 関連プロジェクトの円滑かつ有効な推進のため、現地専門家による日常的な「イ」側とのコンタクトが重要であり、次のプロジェクトのためのリエゾンの協力を行なっている。

- 開発調査
- 「チエンカレン低価格住宅団地」
 - 「スラバヤ都市計画」
 - 「ジャカルタ住宅再開発」
 - 「建築耐震工学第3国研修」
 - 「住宅実大耐震実験」
 - 「建築防火技術開発（準備中）」

⑤ 専門家派遣分野、人数、期間

| | | | |
|---------|-------------------|-------------------|-------------------|
| 住宅都市総局 | 長谷川 義 明 | 1974. 6 ~ 1975. 1 | |
| | 後 藤 典 夫 | 1977.12 ~ 1978.12 | |
| | 金 滝 振 作 | 1974. 4 ~ 1981. 4 | |
| | 住宅局、都市開発公団 | 石 黒 俊 夫 | 1974. 6 ~ 1977. 6 |
| | | 戸 谷 英 世 | 1974. 7 ~ 1977. 5 |
| | | 野 沢 昌 生 | 1976. 1 ~ 1978. 1 |
| | | 桂 進 | 1976. ~ 1977.10 |
| | | 田 中 直 徑 | 1977.10 ~ 1979. 4 |
| | | 笹 川 敏 昌 | 1977.12 ~ 1978.12 |
| | | 小 畑 元 | 1979. 4 ~ 1981. 4 |
| 上 玉 俊 夫 | 1979. 7 ~ 1981. 1 | | |
| 横 堀 肇 | 1979.11 ~ 1982.11 | | |
| 棕 周二 | 1981. 4 ~ 1983. 4 | | |
| 田 中 弘 道 | 1982.10 ~ 1984.10 | | |
| 平 野 吉 信 | 1983. 4 ~ 1985. 4 | | |
| 建築研究局 | 窪 田 敏 行 | 1981. 6 ~ 1983. 6 | |
| | 中 田 慎 介 | 1983. 5 ~ 1985. 5 | |

⑥ 機材供与内容、金額

1981年度 T.V. ビデオ機器他 約 350万円

⑦ カウンターパート研修受入

毎年1人～3人のカウンターパート研修受入れが行なわれており、これまでに約10人前後を受入れている。

又、関連する開発調査、集団研修（住宅研修、耐震研修、建築工学研修）でも1～2名づつ受入れているが、関係する機関、関係者も多く、要請にこたえ切れていないのが実状である。最近の実績は次表の通りである。

| 年度 | カウンターパート研修 | 開発調査関係研修 | 集団研修 | | | 合計 |
|------|---------------------------------|---------------|------|-----|-----|----|
| | | | 耐震 | 住宅 | 建築 | |
| 1979 | KTA-7, 8, KTA-38 住宅・建築情報(3人) | チエンカレン住宅計画(2) | (0) | (1) | | 6 |
| 1980 | 住宅・建築構造(3人) | チエンカレン住宅計画(3) | (1) | (1) | | 8 |
| 1981 | 耐震実験(1人) | (1) | (1) | (1) | (1) | 4 |
| 1982 | 住宅政策(1人) | ジャカルタ再開発 (2) | (1) | | | |

1-2 建材開発プロジェクト

Development of Building Materials by Effective Use of Locally Available Raw Materials (KTA-18)

管 轄 機 関 名 公共事業省 都市住宅総局 建築研究所
工業省 工業研究開発庁 セルローズ研究所
協 定 機 関 1978. 7.18 ~ 1983.11.30.

① プロジェクトの背景

- (1) インドネシア国、特にジャワ島における住宅建設は、長年重要な施策となっており、国家総合開発のひとつの柱である。しかし大衆の所得水準はなお低く、これまでの法規、金融等の面における促進措置にもかかわらず、購買層は限られている。一方、当国における住宅建設費はその多くが材料費であり、建材の地元調達並びに安価な供給が住宅産業開発の要となっている。

日本で発達しているパルプセメント板は、特殊石綿ストレートとして、特に中小規模の工場生産に適しており、また人工軽量骨材は、天然骨材が乏しく軟弱な土地が多い当国の建設環境にとって有効であり、更に、今後各地で進められるべき工場地域開発にとって、期待が持たれる特殊骨材である。

- (2) このような事情によるインドネシア国政府の協力要請をうけて、1977年に事前調査団を派遣し、さらに長期調査(6名)を行ない、建材開発協力の必要性と発展性を確認した。これに基き、翌78年7月に実施協議調査団を派遣して、援助計画の具体的内容を相互検討しR/Dを締結した。
- (3) 1982年5月に派遣されたエバリュエーションチームは、所期の目的を達成するには期間延長が必要なることを認め、双方合意の上、期間を1年4ヶ月延長し、1983年11月までとなった。

② プロジェクトの対象地域

インドネシア国全土

③ 主要協力目標

パルプセメント板(PCB)を製造するためのパイロットプラントを、国立建築研究所(DBR)の施設内に建設し、その据付及び運転指導、さらに開発試験を通じて、製造技術の移転をはかる。この種のセメント板には、原料として10数%のパルプを使用することに特徴があり、日本国内ではおもに新聞故紙を当てている。しかしインドネシア国では新聞故紙が少量しか得られず、集荷価格も高いため、木材その他の天然資源廃棄物からパルプを製造して故紙のかわりとする、あるいはその一部に代える必要がある。このため、工業省セルローズ研究所(IRDCI)内に、パルプ製造のためのパイロットプラントを建設し、その運転を中心に

開発指導を行なう。

人工軽量骨材 (ALA) の開発試験を進めるため、国立建築研究所内に、一貫運転が出来るテストプラントを建設する。更に、骨材試作品によるコンクリートブロックの製造技術指導を行なうための、実用規模のブロックメーカーマシン、また骨材及びコンクリート製品の性能試験器を配備する。

④ 主要協力事項、具体的実施計画内容

(1) パルプセメント板製造技術

パイロットプラント 生産規模：200枚/時
工程要素：原料処理工程、抄造工程、養生工程、仕上げ工程
設置場所：公共事業省建築研究所 (DBR)

Jl, Turangga 5-7, Bandung, west Java

(付属設備) 一貫運転のために移動型発電機2基(各250KVA)を供与し、抄造用に多量の水を用いるための揚水施設、製品性能試験器等を配置

(2) パルプ製造技術

パイロットプラント 生産規模：3トン/8時間
工程要素：原料処理工程、蒸解工程、抄造工程
設置場所：工業省セルローズ研究所 (IRDCI)

Jl, Raya Dayeukholot 158, Bandung. West Java

(3) 人工軽量骨材製造技術

テストプラント 生産規模：10立方メートル/日
工程要素：原料処理工程、焼成工程、製品処理工程
設置場所：公共事業省建築研究所実験施設 (DBR-Cilacap)

Jl. Raya Mertasinga Km- 10, Cilacap, Cantral Java

(付属設備) 1) ブロックメーカーマシン (最大 450個/時)
2) 強度試験プレス (100トン)
3) コンクリート養生水そう (5立方メートル)
4) 試験機器類

⑤ 専門家の派遣分野、人数、期間

1979年度：短期専門家 7名(調査段階)

1980～1982年度：

| | | |
|--------|-----------|-----------------|
| 黒岩 忠春 | チーフアドバイザー | 1980. 7～1983.11 |
| 奥田やすまさ | パルプセメント | 1980. 7～1982. 6 |

| | | |
|-------|-----------|---------------------------------|
| 平島 深 | 同プラント据付 | 1980.11～1981. 2 |
| 近見 政彦 | ” | ” |
| 桃崎 恭司 | ” | ” |
| 早田 義則 | ” | 1981. 2～1981. 3 |
| 西 常男 | ” | 1981. 3～1981. 3 |
| 横溝 健 | 運転指導 | 1981. 3～1981. 5 |
| 田島 政美 | ” | 1981. 5～1981. 8 1982. 9～1982.11 |
| 青木 哲郎 | 同プラント追加据付 | 1982. 3～1982. 6 1982. 8～1982.12 |
| 川口己之作 | パルプ | 1981. 9～1983.11 |
| 鳥取 春男 | 同プラント据付 | 1982.12～1983. 3 |
| 津曲 明 | 人口軽量骨材 | 1981.12～1982. 4 1982.10～1983. 4 |
| 上田 純孝 | ” | 1982. 5～1982. 8 |
| 村岡 誠 | 同プラント据付 | 1982. 8～1982.10 |
| 陶山 洋 | ” | 1982. 9～1982.11 |
| 藤井 毅慈 | ブロック | 1982.10～1983. 4 |

⑥ 供与機材内容、金額

1980～1982年度

| | | | |
|-------------------------|-----------|-----|-------------|
| (1) パルプセメント板 | パイロットプラント | Rp. | 224,800,000 |
| (2) プロジェクトカー | | | 5,492,000 |
| (3) パルプパイロットプラント | | | 211,000,000 |
| (4) 人工軽量骨材テストプラント及び関連設備 | | | 248,900,000 |
| (5) 発信機 | 2基 | | 55,100,000 |

計 Rp. 745,292,000

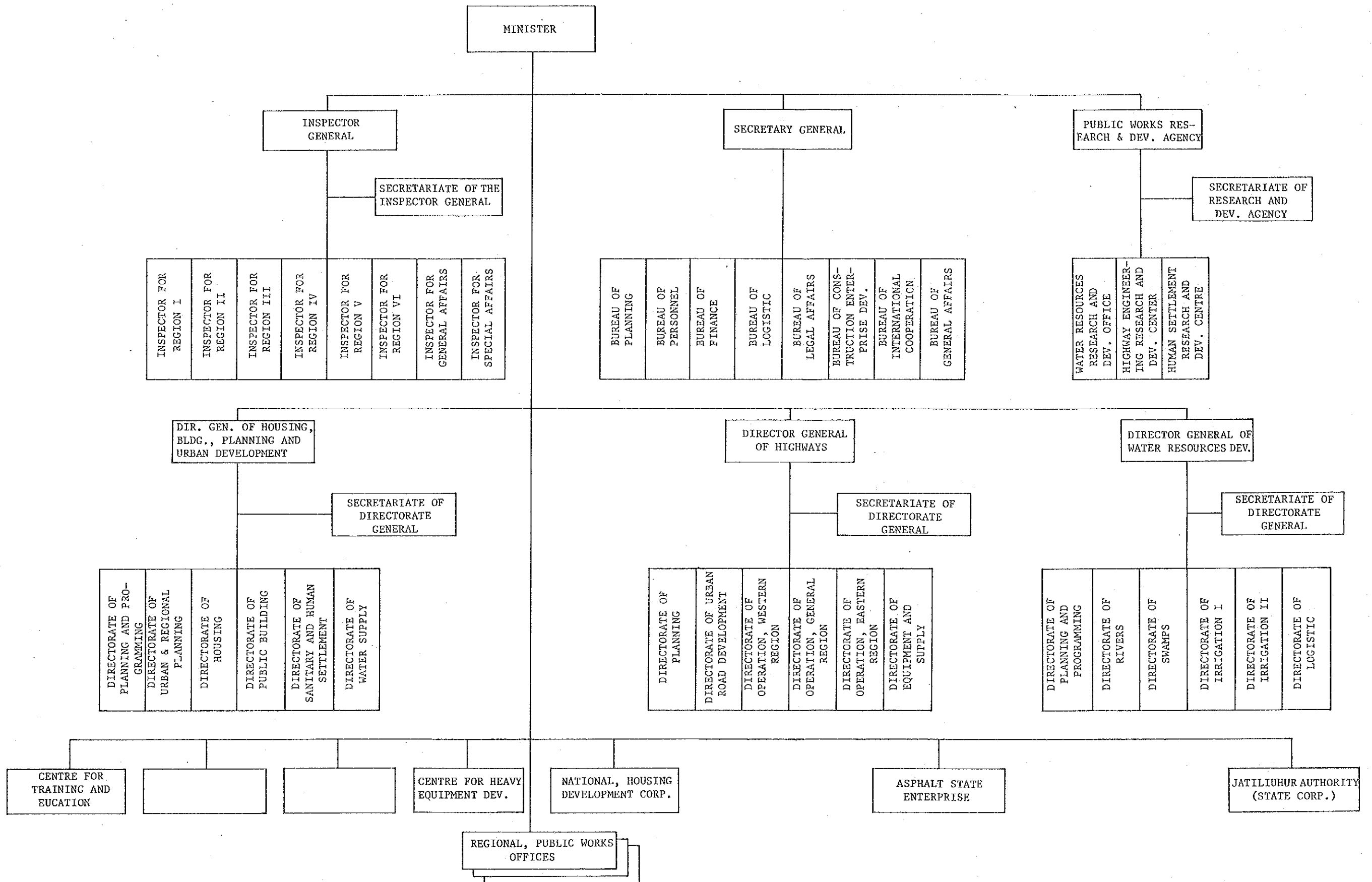
(270,000千円)

⑦ カウンターパート研修受入

| | |
|------|-----|
| 1979 | 5名 |
| 1980 | 3名 |
| 1981 | 5名 |
| 1982 | 4名 |
| 計 | 17名 |

2. 公共事業省新組織圖

THE MINISTRY OF PUBLIC WORKS ORGANIZATION CHART
(Based on the Presidential decree no. 15, 1984)



JICA

