

5-2 計画実施の妥当性

(1) 実践的な測量技術者の養成

本プロジェクトが実施され「ケニア測量地図学院」が設立されると、年間103名の新規採用候補者と30名のケニア測量局中堅技術職員を対象とした測量技術訓練が実施される。

ケニア測量局はこれまで新規採用者の教育を、主としてケニア・ポリテクニクに定員枠を確保して実施しているが、ポリテクニクでの教育は測量局の事業内容を反映したものとなっておらず、しかもポリテクニクは現状以上に測量局の定員枠を広げることは困難なため、測量局の新規採用者の増員要請に応ずることができない。しかし、本学院が設立されると、新規採用候補者に対し測量局の技術職員による実践的な技術訓練を実施することが可能となる上に、測量局の増員計画に合致する型で職員を採用することができる。

一方、測量局は現在、ポリテクニクに新規採用候補者用に毎年約60名の定員枠を確保し、この内約45名を採用しているが、本学院の設立により当初は103名を対象に教育を行い、60名を採用できると計画している。すなわち、採用者人数の上では15人の増員に留まっている。これは本プロジェクトの実施により、一気に過大な増員を行うのではなく、測量局の運営可能な範囲内で、堅実に増員しようとするものであり、適正な増員規模であると評価できる。

(2) 運営体制

「ケニア測量地図学院」は、ケニア測量局の一部署である「訓練部」を母体に運営される。施設の運営に必要な人員は講師約67名を含み合計197人と計画されている。これらの職員は全員が測量局の現有職員から充当される予定で、新たな人員を増加することなく運営される。測量局の現有職員数は3,446名で、その内946名が測量技術者であるが、本施設の運営には、全体で測量局職員の5.7%、技術職員比較においても7.1%の職員を充当すればよく、施設の運営体制に問題はないものと考えられる。

(3) 予算措置

本プロジェクトの実施にあたり、ケニア測量局は総額556,637K£(約24.5百万円)の経常予算を予算化する予定である。しかし、本プロジェクトが両国政府間で正式に承認されていないこと

もあり、同予算額は大蔵省から確約されたものとはなっていない。しかし、本学院の職員は測量局の現有職員の中から任命されるため、同予算額の中の人件費にあたる374,339K£は、測量局全体としては増額とはならないと考えられ、本学院の運営に伴う増額分は総額から人件費を差し引いた182,298K£となる。これは測量局の1994/95年度予算11,741,238K£の1.6%程度であり、本プロジェクト実施後の施設運営費に対する予算措置は可能であると判断される。

なお、本プロジェクトを実行するための予算については、計画の内容が確定した段階で、計画の実行工程に合わせ、1995年7月に執行される測量局の1995/96年度予算から順次予算化される予定となっている。

(4) 維持管理

本施設は、施設完成後の維持管理が容易に行えるよう計画されている。建設工事においては耐久性の高い資材を使用するとともに、現地で調達可能な資材を優先して使用している。また、機材工事においてはメーカーの現地でのメンテナンス・サービス体制を重視して計画している。さらに、自然採光、自然通風によりエネルギー・コストの低減が図れるよう計画しており、施設、機材の維持管理は容易であると判断される。さらに、本プロジェクトの実施により設立されるケニア測量地図学院には施設・機材の維持管理のため営繕及び管財の人員が23人配置される予定となっており、一応の維持管理体制は整備される。

以上により、本プロジェクトはその目的・効果及び運営、予算、維持管理の面で計画を実施する妥当性が高いと判断できる。

5-3 提言

本プロジェクトが実施されることにより、ケニア測量局の管轄下に「ケニア測量地図学院」が設立され測量技術訓練のための施設・機材が整備される。これにより、ケニア測量局は新規採用候補者及び中堅技術者の技術訓練が可能となり、測量・地図作成の業務に即した実践的な技術者の増員、及び技術水準の向上が図れる。ひいては、ケニア測量局の地図整備業務の円滑な実施が期待され、国家開発事業に不可欠な地図が整備されることに繋がるものと考えられる。

また、ケニアの測量・地図作成事業は東アフリカ諸国の中では中心的役割を果たしており、本プロジェクトの実施によりケニアで測量技術訓練施設が整備されると、東アフリカ諸国からの第3国研修が期待できる。

このように、本プロジェクトは人材の育成や国家の開発面で多大な効果が期待できると同時に、広く、ケニアの社会経済の健全な発展に寄与するものであることから、本プロジェクトを無償資金協力で実施することは妥当であると判断される。

さらに、本施設の運営、管理についてもケニア国側の実施体制は人員配置、予算措置ともに特に問題はないものと考えられる。本計画が速やかに実施され、施設が円滑かつ効果的に運用されることにより、所期の目的が達成されるよう、以下の事項につき提言する。

(1) プロジェクト方式技術協力「ケニア測量訓練計画」との関連

本プロジェクトは、現在、ケニア測量局で実施されているプロジェクト方式技術協力「測量地図学院計画」の事業計画に沿った内容となっている。すなわち、プロジェクト方式技術協力による測量訓練計画で設定された訓練分野、カリキュラム、訓練生の数等を基に、本プロジェクトの施設内容や規模が決められており、本プロジェクトはプロジェクト方式技術協力の事業を支援するものとなっている。このため、本プロジェクトはプロジェクト方式技術協力の成果と相まって、双方でケニア国の測量技術者の養成、及び測量・地図作成事業の推進に大きく貢献することが期待され、既に実施されている技術協力の成果を確実なものとする意味からも、本プロジェクトの早期の実施が望まれる。

(2) 実施段階での契約・承認手続の迅速な対応

本プロジェクトは日本国の無償資金協力の枠組みに従って実施されるため、交換公文に記載された期限内、あるいは日本国政府の会計年度内に工事を完了せねばならないなどの時間的制約がある。このため、ケニア国側は特に交換公文の締結、コンサルタント契約、本基本設計調査報告書に基づいた詳細設計図書の承認、必要申請手続きと許可の取得、工事に係る契約、輸入機材の関税免除等に係る手続を迅速に行う必要がある。

(3) 計画実施予算

本プロジェクトの実施が両国政府間で正式となった場合、ケニア国側は速やかに本プロジェクトの実施に対する予算措置をとることが重要である。ケニア国政府は1994/95年度予算の中に本プロジェクトの実施予算をもっていないため、特に本プロジェクトが日本国政府の1995年度予算で実施される場合は、ケニア国政府は1995/96年度予算において予算措置を至急とる必要がある。

(4) 施設・機材の維持管理

維持管理費の不足は施設・機材の耐久性を損なうとともに業務の効率を落とす。本プロジェクトの目的を達成させるため、維持管理に対する計画的な予算措置が必要である。

資料編

1. 調査団員名

(1) 現地調査(期間: 平成6年10月10日から同年11月8日まで)

- | | | | |
|---|--------|--------------|----------------------------------|
| ① | 中堀 義郎 | 総括 | 建設省国土地理院企画部 研究企画官 |
| ② | 矢部 優慈郎 | 無償資金協力 | 外務省経済協力局無償資金協力課 |
| ③ | 田中 孝典 | 業務主任者・訓練施設計画 | 株式会社 山下設計 |
| ④ | 玉木 司 | 設備計画 | 株式会社 山下設計 |
| ⑤ | 大拙 哲也 | 測量訓練機材計画 | 株式会社 山下設計
(株式会社パスコ・インターナショナル) |

(2) ドラフト・レポート現地説明(期間: 平成7年2月19日から同年3月2日まで)

- | | | | |
|---|-------|--------------|----------------------------------|
| ① | 秋山 実 | 総括 | 建設省国土地理院企画部
環境地理情報企画官 |
| ② | 戸塚 真治 | 業務調整 | 国際協力事業団無償資金協力調査部
基本設計調査第二課 |
| ③ | 田中 孝典 | 業務主任者・訓練施設計画 | 株式会社 山下設計 |
| ④ | 大拙 哲也 | 測量訓練機材計画 | 株式会社 山下設計
(株式会社パスコ・インターナショナル) |

2. 調査日程

(1) 現地調査(平成6年10月10日から同年11月8日まで)

日順	月日(曜日)	内 容	
1	10月 10日 (月)	調査団(中堀団長、田中、玉木、大脇)出国 JL 407 成田→フランクフルト	
2	10月 11日 (火)	LH 580 フランクフルト→ナイロビ	
3	10月 12日 (水)	矢部団員 エンテベよりナイロビ着 JICAナイロビ事務所表敬・協議	
4	10月 13日 (木)	日本国大使館表敬 土地定住者、大蔵省、測量局表敬	
5	10月 14日 (金)	建設予定地調査 無償資金協力システム等説明	
6	10月 15日 (土)	乾燥地土地利用状況視察	
7	10月 16日 (日)	資料整理、ミニッツ素案作成	
8	10月 17日 (月)	測量局とミニッツ案協議	
9	10月 18日 (火)	測量局とミニッツ案協議	
10	10月 19日 (水)	ミニッツ署名、大使館、JICA事務所へ報告	
11	10月 20日 (木)	ナクル地区測量局地方事務所視察	
12	10月 21日 (金)	官団員(中堀団長、矢部)帰国	KQ106 ナイロビ→ロンドン
13	10月 22日 (土)		BA007 ロンドン発
14	10月 23日 (日)		成田着
15	10月 24日 (月)	コンサルタント団員現地調査 ・ 計画案に対する協議 ・ 建設事情調査(物価・施工法・建築法規・調達計画等) ・ 同類施設の調査(ナイロビ大学、ケニア・ポリテクニク、 NYS職業訓練所) ・ 調査結果報告書の作成、確認	
26	11月 4日 (火)		
27	11月 5日 (水)	コンサルタント団員現地調査完了、JICA事務所へ報告	
28	11月 6日 (木)	コンサルタント団員(田中、玉木、大脇)帰国 LH581 ナイロビ→フランクフルト	
29	11月 7日 (金)	JL408 フランクフルト発	
30	11月 8日 (土)	成田着	

(2) ドラフト・レポート現地説明(平成7年2月19日から同年3月2日まで)

日順	月日(曜日)	内 容
1	2月 19日 (日)	調査団(秋山団長、戸塚、田中、大船)出国 JL 405 成田→パリ
2	2月 20日 (月)	AF476 パリ発 ナイロビ着
3	2月 21日 (火)	日本国大使館、JICAナイロビ事務所表敬 大蔵省表敬・協議 プロジェクト方式技術協力専門家との協議
4	2月 22日 (水)	土地定住省、ケニア測量局にドラフト・レポート説明、協議
5	2月 23日 (木)	ケニア測量局とドラフト・レポートの内容につき協議 ミニッツ素案協議
6	2月 24日 (金)	ケニア測量局、大蔵省とミニッツ案協議 ケニア測量局現業本部視察
7	2月 25日 (土)	ミニッツ作成、資料整理
8	2月 26日 (日)	団内協議
9	2月 27日 (月)	ミニッツ署名 日本国大使館、JICAナイロビ事務所へ報告 調査団(秋山団長、戸塚、田中、大船)帰国 BA066 ナイロビ発
10	2月 28日 (火)	ロンドン着
11	3月 1日 (水)	JL 402 ロンドン発
12	3月 2日 (木)	成田着

3. ケニア国側面談者リスト

土地定住者 (Ministry of Lands and Settlement)

Mr. J. K. Sang	Permanent Secretary
Mr. J. J. R. Onchiri	Deputy Secretary (Development)
Mr. G. Kamuto	Senior Assistant Secretary (Finance)

測量局 (Survey of Kenya)

Mr. W. J. Absaloms	Director of Surveys
Mr. A. K. Njuki	Deputy Director of Surveys
Mr. O. M. Wainaina	Assistant Director of Surveys (Administration)
Mr. J. D. Obel	Assistant Director of Surveys (Mapping)
Mr. E. M. Gikinya	Assistant Director of Surveys (Cadastral)
Mr. J. R. R. Aganyo	Assistant Director of Surveys (Adjudication)
Mr. H. Nyapola	Acting Principal Kenya Institute of Surveying and Mapping
Mr. J. O. Sogoh	Assistant Director of Surveys (Technical)
Mr. J. W. Kililo	Assistant Secretary (Finance)

大蔵省 (Ministry of Finance)

Mr. J. L. Lavuna	Undersecretary
Mr. J. M. Nyanumba	Assistant Secretary

建設省 (Ministry of Public Works and Housing)

Mr. Philip O. Sika	Chief Superintendent, Architect
Mr. Moses A. Nyakiongora	Senior Superintendent, Quantity Surveyor
Mr. Daniel N. Osewa	Electrical Engineer
Mr. Peter K. Ngugi	Superintendent, Mechanical Engineer
Mr. John D. Obel	Assistant Director of Surveys
Mr. John A. Linturiri	Drainage Engineer

ケニア郵便電信公社 (Kenya Post & Telecommunication Co.)

Mr. Mangeni Benson	Planning & Construction
Mr. Kutto Fred	Planning & Construction

労働・労働力開発省 (Ministry of Labour & Manpower Development)

Mr. E. W. Ngare	Deputy Labour Commissioner
-----------------	----------------------------

国立気象センター (National Meteorological Centre)

Mr. James W. Kivuva Climatological Section

ケニア電力会社 (Kenya Power & Lightng Co.)

Ms. R. K. Gitonga Senior Commercial Engineer
Mr. Keneth Chege Assistant Commercial Engineer

ナイロビ市役所 (Nairobi City Council)

Mr. Macharia Deputy General Manager,
Water & Sewerage Department.
Mr. David K. Nderitu Chief Assistant Engineer, Sewer Sectors
Mr. Francis Karugu Assistant General Manager, Commercial Section
Mr. J. Omuombo Ngazi fire Prevent Officer

ケニア中央銀行 (Central Bank of Kenya)

Ms. I. B. Miabu Foreign Department
Mr. M. Gituma Foreign Department

在ケニア日本国大使館

堀江 正彦 公使参事官
坂井 清志 一等書記官

JICAケニア事務所

長島 俊一 所長
青木 澄夫 次長
杉田 映理 所員

日本人専門家

細野 武庸 チーフアドバイザー
斉藤 保 専門家(地図作成)
原 正一 専門家(地図複製)
宮崎 清博 専門家(測地測量)
村山 英樹 専門家(訓練計画)
磯元 賢志 調整員

4. 討議議事録

(1) 現地調査時

MINUTES OF DISCUSSIONS
ON
THE BASIC DESIGN STUDY ON THE PROJECT FOR THE ESTABLISHMENT
OF
THE KENYA INSTITUTE OF SURVEYING AND MAPPING
IN
THE REPUBLIC OF KENYA

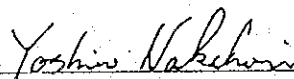
In response to a request from the Government of the Republic of Kenya, the Government of Japan has decided to conduct a Basic Design Study on the Project for the Establishment of the Kenya Institute of Surveying and Mapping in the Republic of Kenya (hereinafter referred to as "the Project"), and entrusted the study to the Japan International Cooperation Agency(JICA).

JICA sent to Kenya the Basic Design Team headed by Mr. Yoshiro NAKAHORI, Director for Research Coordination, Planning Department, Geographical Survey Institute, Ministry of Construction, and is scheduled to stay in the country from the 11th October to the 6th November, 1994.

The Team held discussions with the officials concerned of the Government of Kenya and conducted a field survey at the study area.

As a result of discussions and field survey, both parties confirmed the main items described on the attachment.

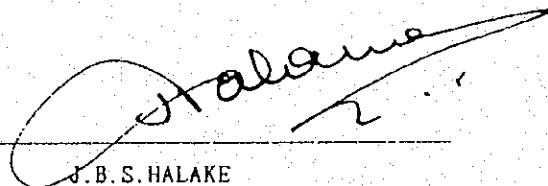
Nairobi, the 19th October, 1994



Yoshiro NAKAHORI
Leader,
Basic Design Study Team, JICA



J.K. SANG
Permanent Secretary,
Ministry of Lands and Settlement,
The Republic of Kenya



J.B.S. HALAKE
Financial Secretary,
Ministry of Finance,
The Republic of Kenya

ATTACHMENT

1. OBJECTIVE OF THE PROJECT

The objective of the Project is to establish the Kenya Institute of Surveying and Mapping along the agreement on the Technical Cooperation for the Kenya Institute of Surveying and Mapping Project.

2. PROJECT IMPLEMENTING AGENCY

The Ministry of Lands and Settlement is responsible for implementation of the Project.

3. PROJECT SITE

The project site location is shown in Annex-1.

4. CONTENTS OF THE REQUEST BY THE KENYAN SIDE

After a series of discussions, the Kenyan side finally requested the Project contents as shown in Annex-2 for Japan's Grant Aid. However, the contents of the Project, which are to be recommended in the Basic Design Report, will be finalized after further study by the Team.

5. CHARACTERISTICS OF THE JAPAN'S GRANT AID PROGRAMME

The Kenyan side has understood the system and characteristics of Japan's Grant Aid Programme explained by the Team as shown in Annex-3.

6. NECESSARY MEASURES TO BE TAKEN BY THE KENYAN SIDE

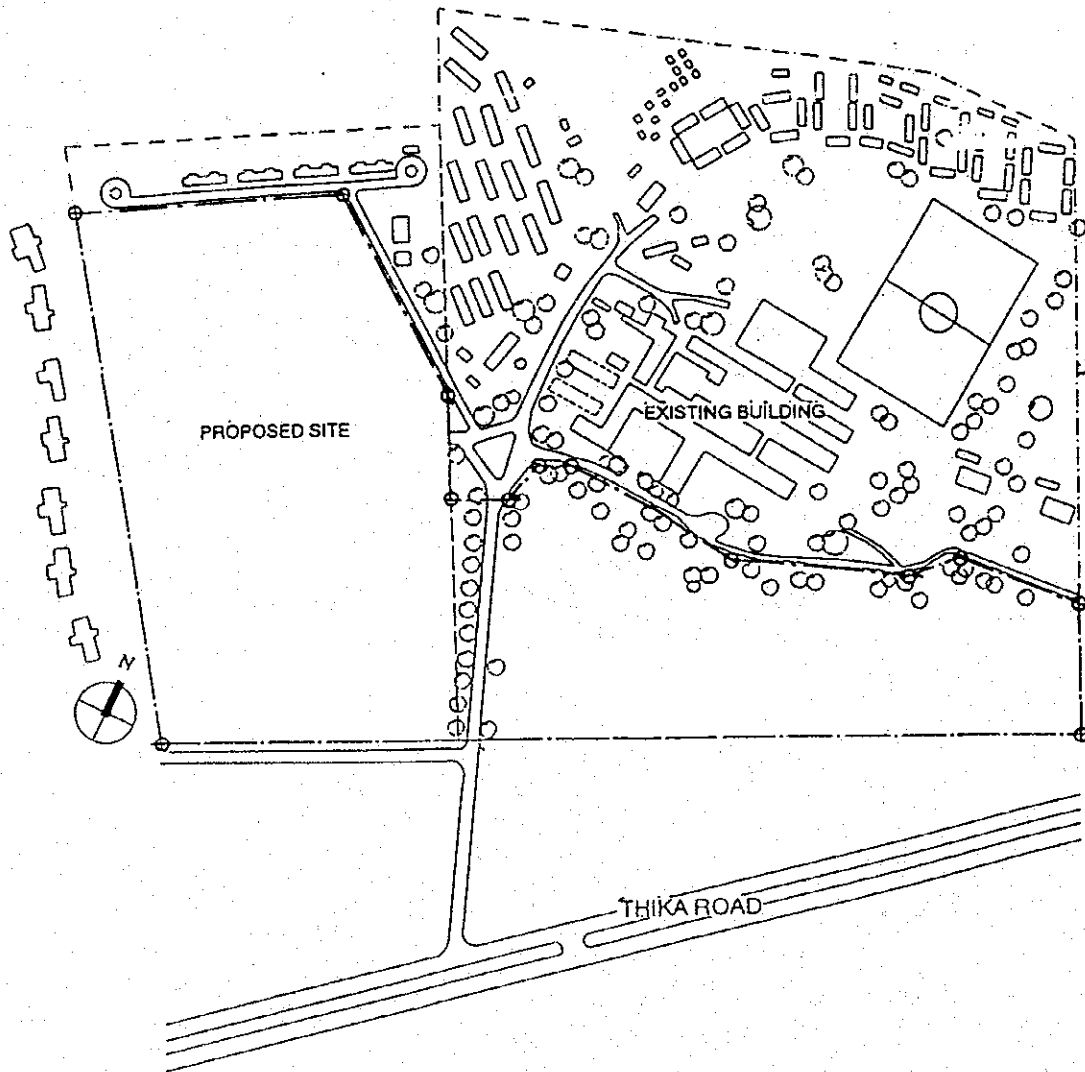
The Government of the Republic of Kenya will take necessary measures described in Annex-4 for smooth implementation of the Project on the condition that the Grant Aid by the Government of Japan is extended to the Project.

7. FURTHER SCHEDULE OF THE STUDY

- (1) The Consultant will proceed to further studies in Kenya until the 6th of November, 1994.
- (2) JICA will prepare a Draft Study Report and dispatch a Draft Report Explanation Team in February, 1995 in order to explain and to confirm the contents of the Draft Study Report.
- (3) In case that the Draft Study Report is accepted by the Kenyan side, JICA will complete the Study Report and send it to the Kenyan side by May, 1995.

ANNEX-1. LOCATION OF THE PROJECT SITE

The Project site is located in the premise of Survey of Kenya Field Headquarters, P.O.Box 30046, Nairobi.



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ANNEX-2. CONTENTS OF THE REQUEST FOR JAPAN'S GRANT AID

The contents of the Project covered under the Japan's Grant Aid finally requested by the Kenyan side are as follows.


1. Facility

- (1) Administration Building
- (2) Training Building
- (3) Laboratory Building
- (4) Trainees' Hostel
- (5) Other Incidental Buildings
- (6) Calibration Site

2. Equipment

- (1) General Use Equipment
- (2) Land Survey Equipment
- (3) Cartographic Equipment
- (4) Photogrammetric and Remote Sensing Equipment
- (5) Map Reproduction Equipment

3. Vehicle for Field Training



ANNEX-3. JAPAN'S GRANT AID PROGRAMME

1. Japan's Grant Aid Procedures

The Japan's Grant Aid Programme is extended in the following procedures.

- Application : A request made by the recipient country
- Study : Basic Design Study conducted by JICA
- Appraisal & Approval: Appraisal by the Government of Japan and approval by the Cabinet of Japan
- Determination of Implementation :
Exchange of Notes between both Governments
- Implementation : Implementation of the Project

At the first step (Application), a request made by the recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs), whether or not it is suitable for Grant Aid. If the request is confirmed that it has a high priority as the project for Grant Aid, the Government of Japan instructs JICA to conduct the Study.

At the second step (Study), the Basic Design Study is conducted by JICA - basically under contracts with a Japanese consulting firm to carry out.

At the third step (Appraisal & Approval), the Government of Japan appraises whether or not the Project is suitable for Japan's Grant Aid Programme based on the Basic Design Study Report prepared by JICA and then submitted for approval by the Cabinet.

At the fourth step (Determination of Implementation), the Project approved by the Cabinet is officially determined to implement by signing the Exchange of Notes between both Governments.

In the course of implementation of the Project, JICA will take charge of expediting the execution by assisting the recipient country in terms of the procedures of tender, contract and others.

2. Contents of the Study

(1) Contents of the Study

The purpose of the Study conducted by JICA is to provide basic documents necessary for the appraisal by the Government of Japan whether or not the Project is viable for Japan's Grant Aid Programme. The contents of the Study are as follows:

- a) to confirm the background of the request, objectives and effects of the Project and maintenance ability of the recipient country necessary for the implementation,
- b) to evaluate the appropriateness of the Grant Aid from the technological, social and economical points of views,
- c) to confirm the basic concept of the plan mutually agreed upon through discussion between both sides,
- d) to prepare a basic design of the Project,
- e) to estimate the rough cost of the Project.

The contents of the original request are not necessarily approved as the contents of the Grant Aid as it is. The Basic Design of the Project is confirmed considering the Japan's Grant Aid Scheme.

In the implementation of the Project, the Government of Japan requests the recipient country to take necessary measures in order to promote its self-reliance. Those undertakings shall be guaranteed even if the recipient implementing entity does not have jurisdiction. Therefore, the implementation of the Project is confirmed by all relevant organizations in the recipient country in the Minutes of Discussions.

(2) Selection of Consultants

For the smooth implementation of the Study, JICA selects a consultant among those consultants who registered to JICA by evaluating proposals submitted by those consultants. The selected consultant carries out the Basic Design Study and prepares a report based upon the terms of reference made by JICA.

At the stage of implementation after the Exchange of Notes, for concluding the contract regarding the Detail Design and Construction Supervision of the Project between a consultant and the recipient country, JICA recommends the same consultant which participated in the Basic Design Study to the recipient country in order to maintain the technical consistency between the Basic Design Study and the Detail Design as well as to avoid undue delay caused by the selection of a new consultant.

3. Japan's Grant Aid Scheme

(1) What is Grant Aid?

The Grant Aid Programme provides the recipient country with nonreimbursable funds needed to procure facilities, equipment and services (labour, transportation, etc.) for economic and social development in the country under the following principles in accordance with the relevant laws and regulations of Japan. The Grant Aid is not a form of donation in kind of the recipient country.

(2) Exchange of Notes (E/N)

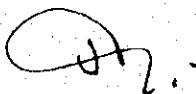
The Japan's Grant Aid is extended in accordance with the Exchange of Notes between both Governments, in which the objectives of the Project, period, conditions, amount of the grant, etc. are confirmed.

(3) Period

The period of the Grant Aid is within the Japanese fiscal year in which the Cabinet approved the Project. Within the fiscal year, all procedure such as Exchange of Notes, concluding contracts by the recipient country with the consultant and contractors, and the final payment to them shall be completed.

In case of a big project which requires net construction period more than 12 months, the period of the Grant Aid is designated covering more than one fiscal year depending on the Basic Design Study Report.

However, in case of the delay of delivery, installation or construction due to events such as weather, the period of the Grant Aid can be further extended for one fiscal year at most by mutual agreement between both Governments.



(4) Purchase of the Products and/or Services

The Grant Aid is used properly and exclusively for the purchase of the products, in principle, of Japan or the recipient country and of the services of the Japanese or the recipient country's nationals. The term "Japanese nationals" means Japanese physical persons or Japanese juridical persons controlled by Japanese physical persons.

When both Governments deem it necessary, the Grant Aid may be used for the purchase of the products and/or services of the third country (other than Japan or the recipient country).

However, in terms of the principle of the Grant Aid, the prime contractors, that is the consultant, contractor and procurement firm necessary for the implementation of the Grant Aid, are limited to "Japanese nationals".

(5) Verification

The Government of the recipient country or its designated authority will conclude the contracts in Japanese Yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. The "Verification" is necessary because the source of the Grant Aid is the taxes of Japanese nationals.

(6) Undertakings required to the The Recipient Country

(As described in Annex-4).

(7) Proper Use

The recipient country is required to maintain and use the facilities constructed and the equipment purchased under the Grant Aid properly and effectively and to assign the necessary staff for operation and maintenance of them as well as to bear all the expenses other than those to be borne by the Grant Aid.

(8) Re-export

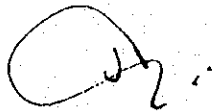
The products purchased under the Grant Aid shall not be re-exported from the recipient country.



(9) Banking Arrangement (B/A)

- a) The Government of the recipient country or its designated authority shall open an account in the name of the Government of the recipient country in an authorized foreign exchange bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese Yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the contracts verified.
- b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

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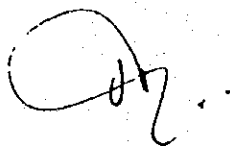


ANNEX-4. NECESSARY MEASURES TO BE TAKEN BY THE KENYAN SIDE

Following necessary measures shall be taken by the Government of the Republic of Kenya on the condition that the Grant Aid by the Government of Japan is extended to the Project.

1. To provide data and information necessary for the Project;
2. To secure a land for the Project;
3. To clear, level and reclaim the site for the Project prior to the Project implementation;
4. To provide proper access road to the Project area;
5. To construct a temporary training building not later than December, 1995;
6. To undertake gardening, fencing, exterior lighting, and other incidental outdoor works in and around the Project site;
7. To provide the following incidental facilities to the Project;
 - (1) Electricity distributing line to the site
 - (2) City water distribution main to the site
 - (3) Drainage main to the site
 - (4) Telephone trunk line to the site
 - (5) General furniture such as carpet, curtain and others,
 - (6) Other incidental facilities necessary for the Project realization;
8. To bear commissions to the Japanese foreign exchange bank for its banking services based upon the Banking Arrangement, namely the advising commission of the "Authorization to Pay" and payment commission;
9. To ensure prompt unloading, tax exemption, customs clearance at the port of disembarkation in Kenya and prompt internal transportation therein of the materials and equipment for the Project purchased under the Grant Aid;
10. To exempt Japanese juridical and physical nationals involved in the Project from customs duties, internal taxes and other fiscal levies which may be imposed in Kenya with respect to the supply of the products and services under the verified contracts. The customs duties, internal taxes and other fiscal levies mentioned in this clause include but not limited to the following;

- (1) Import Duties (on goods imported solely for the project use)
 - (2) V.A.T.
 - (3) Training Levy
 - (4) Corporation Tax
 - (5) Income Tax
-
11. To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the verified contract such facilities as may be necessary for their entry into Kenya and stay therein for the performance of their work;
 12. To provide necessary permissions, licenses and other authorizations for the Project, if necessary;
 13. To maintain and use properly and effectively the facilities constructed and the equipment provided under the Project; and
 14. To bear all the expenses other than those to be borne by the Japan's Grant Aid within the scope of the Project.



(2) ドラフト・レポート現地説明時

MINUTES OF DISCUSSIONS
ON
BASIC DESIGN STUDY ON THE PROJECT FOR THE ESTABLISHMENT
OF
THE KENYA INSTITUTE OF SURVEYING AND MAPPING
IN
THE REPUBLIC OF KENYA
(CONSULTATION ON DRAFT REPORT)

In October 1994, Japan International Cooperation Agency (JICA) dispatched the Basic Design Study Team on "The Project for the Establishment of the Kenya Institute of Surveying and Mapping in the Republic of Kenya" (hereinafter referred to as "the Project") to Kenya, and through discussions, field survey, and technical examination of the results in Japan, JICA has prepared the Draft Report of the study.

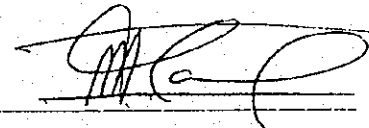
In order to explain about and to consult the Kenyan side on the components of the Draft Report, JICA dispatched to Kenya a study team (hereinafter referred to as "the Team"), headed by Mr. Minoru AKIYAMA, Director for Environmental Geographic Information, Planning Department, Geographical Survey Institute, Ministry of Construction, and is scheduled to stay in the country from February 21 to 27, 1995.

As a result of discussions, both parties confirmed the main items described on the attached sheets.

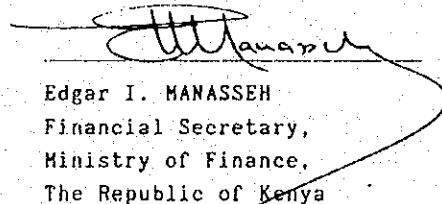
Nairobi, February 27, 1995



Minoru AKIYAMA
Leader
Study Team for Explanation
of Draft Report, JICA



J.K. SANG
Permanent Secretary
Ministry of Lands and Settlement,
The Republic of Kenya



Edgar I. MANASSEH
Financial Secretary,
Ministry of Finance,
The Republic of Kenya

ATTACHMENT

1. Components of Draft Report

The Government of Kenya has agreed and accepted in principle the components of the Draft Report explained by the Team as follows:

(1) Construction of Facilities

- Training Block : classroom building, laboratory building, lecture hall, library
- Administration Block : administration building, garage, outdoor facilities
- Hostel Block : male trainees' hostel, female trainees' hostel, canteen building
- Others : calibration site

(2) Procurement of Equipment and Vehicles

General Use equipment, Land Survey equipment, Cartographic equipment, Photogrammetric and Remote Sensing equipment, Map Reproduction equipment, Vehicles for field training
(Equipment and Vehicles List is shown in ANNEX-2.)

2. Project Site

Location of the Project Site is shown in ANNEX-1.

3. Characteristics of the Japan's Grant Aid Programme

The Kenyan side has understood the system and characteristics of Japan's Grant Aid Programme explained by the Team as shown in ANNEX-3.

4. Necessary Measures to be taken by the Kenyan Side

The Study Team explained the necessary measures to be taken by the Government of Kenya described in ANNEX-4 for smooth implementation of the Project on condition that the Grant Aid by the Government of Japan is extended to the Project.

As for the tax exemptions shown in clause 10 of ANNEX-4, the Kenyan side strongly requested to frame the contents as described below so as to comply with Kenyan Law governing tax exemptions, and the Team agreed to convey the request to the Government of Japan.

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Contents of Clause 10 (Tax Exemption) proposed by Kenyan Side

10. (a) To exempt products imported or purchased solely for project use under the Grant Aid, from customs duties, value added tax and any other fiscal charges provided the products are imported or purchased prior to clearance through customs;
- (b) To exempt the non-resident contractors and subcontractors and their non-resident personnel solely in Kenya for the purpose of the project, from income tax and value added tax in respect of their earnings and services respectively, rendered under the project;
- (c) To exempt the non-resident Japanese nationals solely in Kenya for the purpose of working under the project, from income tax and value added tax in respect of their earnings and services respectively, rendered under the project;
- (d) To exempt personal and household effects of the non-resident Japanese nationals solely in Kenya for the purpose of working under the project, from customs duties and value added tax, provided the said effects are imported or purchased within the first three months of first arrival in the country;

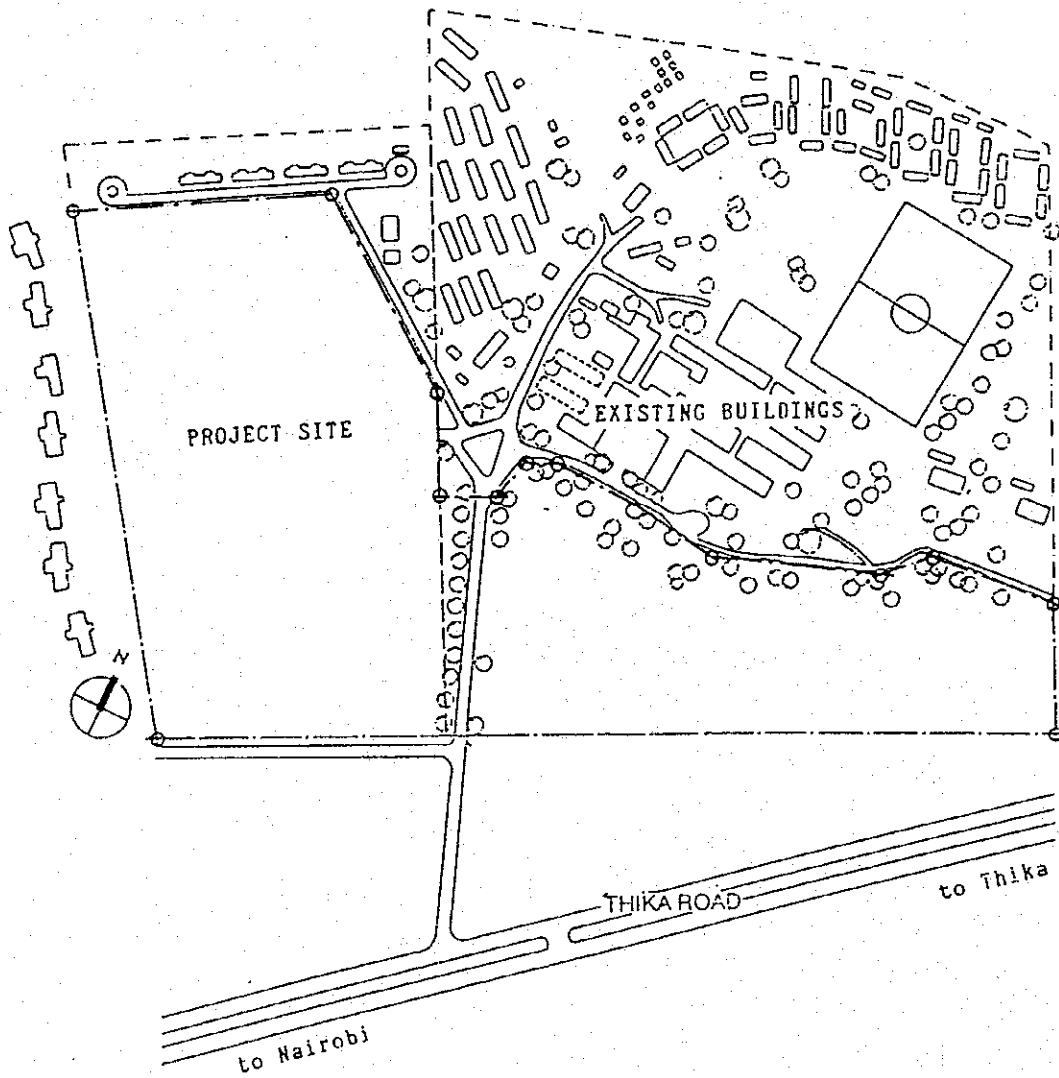
5. Further Schedule of the Study

The Team will compile the final report in accordance with the confirmed items and send it to the Government of Kenya through JICA Kenya Office by the end of May 1995.

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ANNEX-1 Location of the Project Site

The Project Site is located in the premises of Survey of Kenya Field Headquarters, Ruaraka, Nairobi.



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ANNEX-2 List of Equipment and Vehicles

No.	Equipment	Quantity
	1. General use equipment	
A-1	Conference table	2 units
A-2	Lecture table (A)	133 units
A-3	Lecture table (B)	215 units
A-4	Conference chair	160 units
A-5	Lecture chair (A)	180 units
A-6	Lecture chair (B)	215 units
A-7	Dining table (W900xD900xH700mm)	38 units
A-8	Dining chair	150 units
A-9	Bunk bed (W2,000xD900xH1,500mm, for 2 persons)	150 units
A-10	Dormitory desks (W900xD700xH750mm)	300 units
A-11	Dormitory chair (without arm rest)	300 units
A-12	Locker (W450xD450xH1,800mm)	300 units
	2. Land Survey equipment	
B-1	GPS equipment	1 set
	. Receiver (for two waves)	(3)
	. Personal computer (laptop type)	(3)
	. Software	(1)
B-2	Theodolite (T2 equivalent, compatible to EDM)	4 units
B-3	EDM equipment	1 set
	. Middle range	(6)
	. Long range	(1)
B-4	Level	1 set
	. Automatic level	(12)
	. Precise tilting level	(2)
	. Precise automatic level	(2)
B-5	Calibration system (optical)	1 set
B-6	Equipment for physics laboratory (optical, electrical, electronic)	1 set
B-7	Software for survey calculation	1 set
B-8	Maintenance parts for existing equipment	1 set
	3. Cartographic equipment	
C-1	Planimeter	1 set
	. Digital planimeter	(10)
	. Mechanical planimeter	(5)
C-2	CAD equipment (for training purpose, with software, UPS, etc.)	1 set
C-3	Stereo zoom transferrscope	2 units
C-4	Light table	15 units
	Light table with scales	10 units
	4. Photogrammetric and Remote Sensing equipment	
D-1	Analytical plotter (for training purpose)	2 units
D-2	Digital image scanner	1 unit
D-3	Aerial camera simulator	1 set
D-4	Point pricking machine	1 unit
D-5	Mirror stereoscope	4 units
D-6	Software for image analysis	1 set
D-7	Software for aerial triangulation	1 set
D-8	Maintenance parts for existing equipment	1 set

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No.	Equipment	Quantity
5. Map Reproduction equipment		
E-1	Guillotine and trimmers (programmable, maintenance parts)	1 set
E-2	Proofing press	1 unit
E-3	Proofing equipment (cromaline)	1 set
E-4	Contact printing frame (for cromaline and presensitized plate)	2 sets
E-5	Rectifier (maintenance parts)	1 set
E-6	Printing ink testing machine	1 set
E-7	Printing press (for A2 size)	1 unit
E-8	Colour scanner	1 unit
E-9	Folding machine (maintenance parts)	1 set
E-10	Desktop publishing system (with accessories)	1 set
E-11	Process camera (small size, with controller)	1 unit
E-12	Contact printing machine (for photography)	1 unit
E-13	Film processor (A2 size)	1 unit
E-14	Plate processor (for presensitized plate)	1 unit
E-15	Rapid access and diffusion transfer system	1 unit
E-16	Equipment for applying light sensitive coating	1 unit
E-17	Light table (large size)	8 units
E-18	Process camera (large size, maintenance parts)	1 set
6. Library equipment		
F-1	Magazine storage rack (24 sections)	10 units
F-2	Reading table (for 6 persons)	14 units
F-3	Reading chair	84 units
F-4	Map filing cabinet	2 units
F-5	Monograph card catalogue duplicating machine	1 unit
F-6	Unit shelves	60 units
F-7	Book binding equipment (binding machine, guillotine, table, etc.)	1 set
7. Computer Laboratory equipment		
G-1	Personal computer (desktop type with printer, software, UPS, table, etc.)	25 sets
8. Vehicle for field training		
H-1	Minibus (for 30 passengers)	2 units
H-2	Minibus (for 20 passengers)	1 unit
H-3	4WD wagon (for 9 passengers, tropical standard)	5 units
H-4	Pickup truck (capacity: 1 ton)	1 unit
H-5	Pickup truck (capacity: 3 ton)	1 unit

(Note) The number in () shows breakdown quantity of each item.

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ANNEX-3 Japan's Grant Aid Programme

1. Japan's Grant Aid Procedures:

The Japan's Grant Aid Programme is extended in the following procedures:

- 1). - Application (A request made by the recipient country)
- Study (Basic Design Study conducted by JICA)
- Appraisal & Approval
(Appraisal by the Government of Japan and Approval by the Cabinet of Japan)
- Determination of Implementation
(Exchange of Notes between both Governments)
- Implementation (Implementation of the Project)

- 2) At the first step (Application), a request made by the recipient country is examined by the Government of Japan (Ministry of Foreign Affairs), whether or not it is suitable for Grant Aid. If the request is confirmed that it has a high priority as the project for Grant Aid, the Government of Japan instructs JICA to conduct the Study.

At the second step (the Study), the Basic Design Study is conducted by JICA basically under contracts with a Japanese consulting firm to carry out.

At the third step (Appraisal & Approval), the Government of Japan appraises whether or not the project is suitable for Japan's Grant Aid Programme based on the Basic Design Study Report prepared by JICA and then submitted for approval by Cabinet.

At the fourth step (Determination of Implementation), the project approved by the Cabinet is officially determined to implement by signing the Exchange of Notes between both Governments.

In the course of implementation of the project, JICA will take charge of expediting the execution by assisting the recipient country in terms of the procedures of tender, contract and others.

2. Contents of the Study

1) Contents of the Study

The purpose of the study (the Basic Design Study conducted by JICA) is to provide basic documents necessary for the appraisal by the Government of Japan whether or not the project is viable for Japan's Grant Aid Programme. The contents of the Study are as follows:

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- a) to confirm the background of the request, objectives and effects of the project and maintenance ability of the recipient country necessary for the implementation.
- b) to evaluate the appropriateness of the Grant Aid from the technological, social and economical points of views.
- c) to confirm the basic concept of the plan mutually agreed upon through discussion between both sides.
- d) to prepare a basic design of the project.
- e) to estimate the rough cost of the project.

The Contents of the original request are not necessarily approved as the contents of the Grant Aid as it is. The Basic Design of the project is confirmed considering the Japan's Grant Aid Scheme.

In the implementation of the project, the Government of Japan requests the recipient country to take necessary measures in order to promote it's self-reliance. Those undertakings shall be guaranteed even if the recipient implementing entity does not have jurisdiction. Therefore the implementation of the project is confirmed by all relevant organizations in the recipient country in the Minutes of Discussions.

2) Selection of Consultants

For the smooth implementation of the Study, JICA selects a consultant among those consultants who registered to JICA by evaluating proposals submitted by those consultants. The selected consultant carries out the Basic Design Study and prepares a report based upon the terms of reference made by JICA.

At the stage of implementation after the Exchange of Notes, for concluding the contract regarding the Detail Design and Construction Supervision of the project between a consultant and the recipient country, JICA recommends the same consultant which participated in the Basic Design Study to the recipient country in order to maintain the technical consistency between the Basic Design Study and the Detail Design as well as to avoid undue delay caused by the selection of a new consultant.

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1) What is Grant Aid?

The Grant Aid Programme provides the recipient country with nonreimbursable funds needed to procure facilities, equipment and services (labor, transportation, etc.) for economic and social development in the country under the following principles in accordance with the relevant laws and regulations of Japan. The Grant Aid is not a form of donation in kind to the country.

2) Exchange of Notes (E/N)

The Japan's Grant Aid is extended in accordance with the Exchange of Notes between both Governments, in which the objectives of the project, period, conditions, amount of the grant, etc. are confirmed.

3) Period

The period of the Grant Aid is within the Japanese fiscal year in which the Cabinet approved the project. Within the fiscal year, all procedure such as Exchange of Notes, concluding contracts by the recipient country with the consultant and contractors, and the fiscal payment to them shall be completed.

In the case of a big project which requires net construction period more than 12 months, the period of the Grant Aid is designated covering more than one fiscal year depending on Basic Design Study Report.

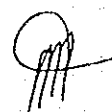
However, in case of the delay of delivery, installation or construction due to events such as weather, the period of the Grant Aid can be further extended for one fiscal year at most by mutual agreement between both Governments.

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The Grant Aid is used properly and exclusively for the purchase of the products, in principle, or Japan or the recipient country and of the services of the Japanese or the recipient country's nationals. The term Japanese juridical persons controlled by Japanese physical persons.

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However, in terms of the principle of the Grant Aid, the prime contractors, that is the consultant, contractor and procurement firm, necessary for the implementation of the Grant Aid are limited to "Japanese nationals".

5) Verification

The government of recipient country or its designated authority will conclude the contracts in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. The "Verification" is necessary because the source of the Grant Aid is the taxes of Japanese nationals.

6) Undertakings required to the Government of Recipient Country
(As described in ANNEX-4)

7) Proper Use

The recipient country is required to maintain and use the facilities constructed and the equipment purchased under the Grant Aid properly and effectively and to assign the necessary staff for operation and maintenance of them as well as to bear all the expenses other than those to borne by the Grant Aid.

8) Re-export

The products purchased under the Grant Aid shall not be re-exported from the recipient country.

9) Banking Arrangement (B/A)

a) The government of the recipient country or its designated authority shall open an account in the name of the government of the recipient country in an authorized foreign exchange bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by government of the recipient country or its designated authority under the contracts verified.

b) The payment will be made when the payment request is presented by the Bank to the Government of Japan under the Authorization to Pay (A/P) issued by the government of the recipient country or its designated authority.

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ANNEX-4 Necessary Measures to be taken by the Kenyan Side

The following necessary measures shall be taken by the Government of the Republic of Kenya on condition that the Grant Aid by the Government of Japan is extended to the Project.

1. To provide data and information necessary for the Project;
2. To secure land for the Project;
3. To clear, level and reclaim the site for the Project prior to the Project implementation;
4. To provide proper access road to the Project area;
5. To construct a temporary training building not later than December, 1995;
6. To undertake gardening, fencing, exterior lighting, and other incidental outdoor works in and around the Project site;
7. To provide the following incidental facilities to the Project;
 - (1) Electricity distributing line to the site,
 - (2) City water distribution main to the site,
 - (3) Sewerage main to the site,
 - (4) Telephone trunk line to the site,
 - (5) General furniture such as carpet, curtain and others, and
 - (6) other incidental facilities necessary for the Project realization;
8. To bear commissions to the Japanese foreign exchange bank for its banking services based upon the Banking Arrangement, namely the advising commission of the "Authorization to Pay" and payment commission;
9. To ensure prompt unloading, tax exemption, customs clearance at the port of disembarkation in Kenya and prompt internal transportation therein of the materials and equipment for the Project purchased under the Grant Aid;
10. To exempt Japanese juridical and physical nationals involved in the Project from customs duties, internal taxes and other fiscal levies which may be imposed in Kenya with respect to the supply of the products and services under the verified contracts. The customs duties, internal taxes and other fiscal levies mentioned in this clause include but not limited to the following;

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- (1) Import Duties (on goods imported solely for the Project use)
- (2) Value Added Tax
- (3) Training Levy
- (4) Corporation Tax
- (5) Income Tax

11. To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into Kenya and stay therein for the performance of their work;
12. To provide necessary permission, licenses and other authorizations for implementing the Project, if necessary;
13. To maintain and use properly and effectively the facilities constructed and the equipment provided under the Project; and
14. To bear all expenses, other than those to be borne by the Japan's Grant Aid within the scope of the Project.

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ATTENDANTS LIST OF THE MEETING

KENYAN SIDE

MINISTRY OF LANDS AND SETTLEMENT

1. Mr. J.J.R. ONCHIRI Chairman
 Deputy Secretary (Development)
2. Mr. W.J. ABSALOHS Director of Surveys
3. Mr. A.K. NJUKI Deputy Director of Surveys
4. Mr. G. KAMUTO Senior Assistant Secretary(Finance)
5. Mr. O.M. WAINAINA Assistant Director of Surveys(Administration)
6. Mr. J.D. OBEL Assistant Director of Surveys(Mapping)
7. Mr. E.M. GIKINYA Assistant Director of Surveys(Cadastral)
8. Mr. J.R.R. AGANYO Assistant Director of Surveys(Adjudication)
9. Mr. H. NYAPOLA Acting Principal
 Kenya Institute of Surveying and Mapping
10. Mr. J.O. SOGOH Assistant Director of Surveys(Technical)
11. Ms. J.W. KILILO Assistant Secretary(Finance)

MINISTRY OF FINANCE

12. Mr. J.M. NYANUMBA Assistant Secretary
 Department of External Resources

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JAPANESE SIDE

Study Team

1. Mr. M. AKIYAMA Leader,
Study Team for Explanation of Draft Report
Geographical Survey Institute,
Ministry of Construction
2. Mr. S. TOTSUKA JICA
Grant Aid Study and Design Department
3. Mr. T. TANAKA Yamashita Sekkei Inc.
4. Mr. T. OTSUKI Yamashita Sekkei Inc. (Pasco International Ltd.)

JICA Expert

5. Mr. T. HOSONO JICA Expert (Chief Advisor)
6. Mr. T. SAITO JICA Expert (Cartography)
7. Mr. S. HARA JICA Expert (Map Reproduction)
8. Mr. K. MIYAZAKI JICA Expert (Geodesy)
9. Mr. H. MURAYAMA JICA Expert (Training Planner)
10. Mr. K. ISOMOTO JICA Expert (Coordinator)

JICA Kenya Office

11. Ms. E. SUGITA Assistant Resident Representative,
JICA Kenya Office

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5. 訓練計劃

ANNEX II. FRAMEWORK OF THE TRAINING COURSES

Land Surveying

Training Courses	Number of Experts	Number of C / Ps	Annual Intake of Trainees	Contents of Training	Duration of Training
I. Land Surveying Department	Long Term Expert : 2	Head of Department : 1			
1. Pre-service Diploma Course		Lecturers : 10	: 24 x 2	7 terms of Tuition 2 terms of Industrial Attachment	3.0 yrs. 2,970 hrs.
(1) Common Supportive Zone		Senior Lecturer : 2		a. Social Studies b. Entrepreneurship Education c. Communication d. Computers e. Mathematics f. Physics g. Geography	924 hrs. 88 hrs. 154 hrs. 88 hrs. 88 hrs. 198 hrs. 154 hrs. 154 hrs.
(2) Trade Support Zone	Geodesy : 1	Lecturer : 5		h. Computer Assisted Mapping i. Management j. Photogrammetry and Remote Sensing k. Cartography	418 hrs. 66 hrs. 88 hrs. 132 hrs. 132 hrs.
(3) Trade / Core Zone	Cadastral Surveying : 1	Assistant Lecturer : 3		l. Land Law m. Surveying Instruments n. Topographical Surveying o. Cadastral Surveying p. Engineering Surveying q. Survey Control r. Project	968 hrs. 88 hrs. 110 hrs. 132 hrs. 110 hrs. 154 hrs. 308 hrs. 66 hrs.
(4) Industrial Attachment					660 hrs.
2. In-service Higher Diploma Course		Lecturers : 7	: 10	6 terms of Tuition 2 terms of Industrial Attachment	2.5 yrs.
		Senior Lecturer : 1 Lecturer : 2 Assistant Lecturer : 4		a. Mathematics b. Physics c. Cartography d. Computer Programming e. Plane Surveying f. Photogrammetry g. Field Astronomy h. Land Law i. Related Studies	

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Cartography

Training Courses	Number of Experts	Number of C / Ps	Annual Intake of Trainees	Contents of Training	Duration of Training
II. <u>Cartography Department</u>	Long Term Expert : 1	Head of Department : 1			
I. <u>Pre-service Diploma Course</u>		Lecturers : 7	: 25	7 terms of Tuition 2 terms of Industrial Attachment	<u>3.0 yrs.</u> 2,970 hrs.
(1) <u>Common Supportive Zone</u>		Senior Lecturer : 1		a. Social Studies b. Entrepreneurship Education c. Communication d. Computers e. Mathematics f. Physics g. Geography	924 hrs. 88 hrs. 154 hrs. 88 hrs. 88 hrs. 198 hrs. 154 hrs. 154 hrs.
(2) <u>Trade Support Zone</u>	Cartography : 1	Lecturer : 2		h. Computer Assisted Mapping i. Land Surveying j. Photogrammetry and Remote Sensing k. Management	418 hrs. 66 hrs. 132 hrs. 132 hrs. 88 hrs.
(3) <u>Trade / Core Zone</u>		Assistant Lecturer : 4		l. Applied Cartography m. Cartographic Reproduction n. Topographic and Cadastral Cartography o. Project	968 hrs. 308 hrs. 132 hrs. 462 hrs. 66 hrs.
(4) <u>Industrial Attachment</u>					660 hrs.
2. <u>In-service Higher Diploma Course</u>		Lecturers : 7	: 15	6 terms of Tuition 2 terms of Industrial Attachment	<u>2.5 yrs.</u>
		Senior Lecturer : 1 Lecturer : 2 Assistant Lecturer : 4		Not Available	

Photogrammetry & Remote Sensing

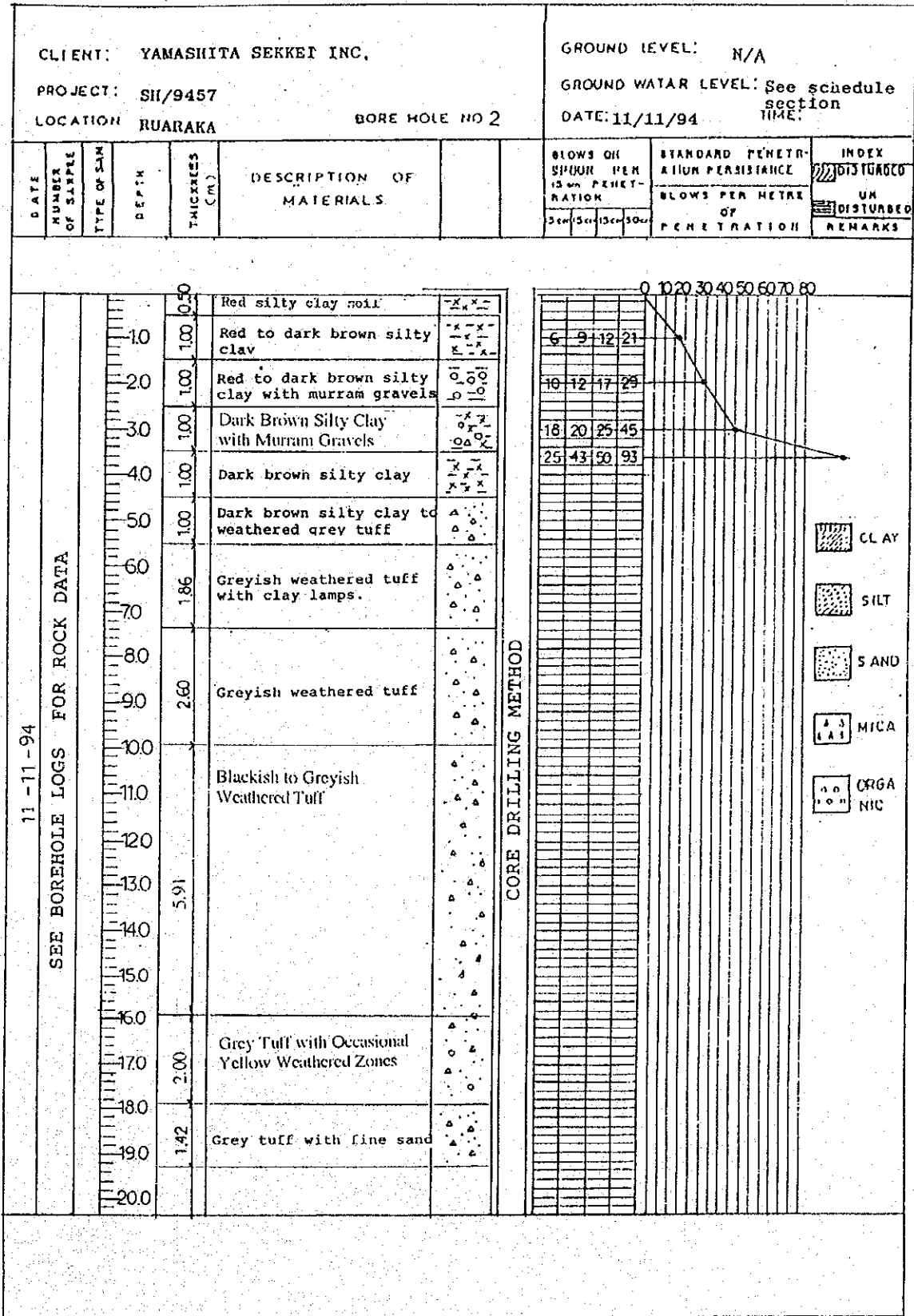
Training Courses	Number of Experts	Number of C/Ps	Annual Intake of Trainees	Contents of Training	Duration of Training
III. <u>Photogrammetry & Remote Sensing Department</u>	Long Term Expert : 1	Head of Department : 1			
I. <u>Pre-service Diploma Course</u>		Lecturers : 7	: 15	7 terms of Tuition 2 terms of Industrial Attachment	<u>3.0 yrs.</u> 2,970 hrs.
(1) <u>Common Supportive Zone</u>		Senior Lecturer : 1		a. Social Studies b. Entrepreneurship Education c. Communication d. Computers e. Mathematics f. Physics g. Geography	924 hrs. 88 hrs. 154 hrs. 88 hrs. 88 hrs. 198 hrs. 154 hrs. 154 hrs.
(2) <u>Trade Support Zone</u>	Photo-grammetry & Remote Sensing : 1	Lecturer : 2		h. Computer Assisted Mapping i. Land Surveying j. Cartography k. Management	418 hrs. 66 hrs. 132 hrs. 132 hrs. 88 hrs.
(3) <u>Trade / Core Zone</u>		Assistant Lecturer : 4		l. Remote Sensing m. Photogrammetry	968 hrs. 330 hrs. 638 hrs.
(4) <u>Industrial Attachment</u>					660 hrs.
2. <u>In-service Higher Diploma Course</u>		Lecturers : 7	: 5	6 terms of Tuition 2 terms of Industrial Attachment	<u>2.5 yrs.</u>
		Senior Lecturer : 1 Lecturer : 2 Assistant Lecturer : 4		Not Available	

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Map Reproduction

Training Courses	Number of Experts	Number of C / Ps	Annual Intake of Trainees	Contents of Training	Duration of Training
IV. <u>Map Reproduction Department</u>	Long Term Expert : 1	Head of Department : 1			
1. <u>Pre-service Diploma Course</u>		Lecturers : 7	: 15	7 terms of Tuition 2 terms of Industrial Attachment	<u>3.0 yrs.</u> 2,970 hrs.
(1) <u>Common Supportive Zone</u>		Senior Lecturer : 1		a. Social Studies b. Entrepreneurship Education c. Communication d. Computers e. Mathematics f. Physics g. Geography	924 hrs. 88 hrs. 154 hrs. 88 hrs. 88 hrs. 198 hrs. 154 hrs. 154 hrs.
(2) <u>Trade Support Zone</u>	Map Reproduction : 1	Lecturer : 2		h. Computer Assisted Mapping i. Not Available j. Not Available k. Management	418 hrs. 66 hrs. 132 hrs. 132 hrs. 88 hrs.
(3) <u>Trade / Core Zone</u>		Assistant Lecturer : 4		l. Not Available m. Not Available n. Not Available o. Not Available	968 hrs. hrs. hrs. hrs.
(4) <u>Industrial Attachment</u>					660 hrs.

6. ボーリング調査報告書



LOCATION		ATTERBERG PARAMETERS							GRADING				COMPACTION		C.B.R.			REMARKS	
Sample No.	Sample Depth (m)	PLASTIC LIMIT	LIQUID LIMIT	PLASTICITY INDEX	LINEAR SHRINKAGE	PASSING 420 μm	PLASTICITY MODULUS	PASSING 10mm	PASSING 5mm	PASSING 2mm	PASSING 75μm	OPTIMUM MOISTURE CONTENT	MAXIMUM DRY DENSITY	DRY	4 DAYS SOAK	SWELL	ORGANIC MATTER CONTENT		SPECIFIC GRAVITY
B/H.1	0.00-																		
S/No.1	0.50	19.7	24	49	25	12	85	100	96	90	78	-	-					2.68	
B/H.1	0.50-																		
S/No.2	1.50	15.5	22	42	20	10	58	100	100	80	47	21	1.819					2.60	
B/H.1	1.50-																		
S/No.3	2.50	30.1	20	45	25	13	67	100	100	90	55	19	1.748					2.43	
B/H.2	0.00-																		
S/No.1	0.50	27.7	32	61	29	15	98	100	100	100	93	-	-					2.64	
B/H.2	0.50-																		
S/No.2	1.50	27.0	34	63	29	15	99	100	100	100	97	-	-					2.59	
B/H.2	1.50-																		
S/No.3	2.50	27.7	36	68	32	16	98	100	100	99	95	27	1.337					2.72	
B/H.2	2.50-																		
S/No.4	3.50	28.6	31	68	37	18	94	100	100	97	91	-	-					2.51	
B/H.2	3.50-																		
S/No.5	4.50	19.4	26	59	33	16	82	100	100	96	69	-	-					2.42	
B/H.2	4.50-																		
S/No.6	5.50	20.3	24	43	19	10	88	100	100	98	73	19	1.608					2.52	
B/H.3	0.00-																		
S/No.1	0.50	17.0	28	60	32	16	74	100	100	88	68	-	-					2.72	
B/H.3	0.50-																		
S/No.2	1.50	13.1	22	56	34	16	67	100	100	91	50	22	1.668					2.40	
B/H.3	1.50-																		
S/No.3	2.50	35.8	28	75	47	23	90	100	100	97	83	25	1.499					2.36	

SURTECH

Surtech Ltd.,
P.O. Box 52514, Nairobi, Kenya
Telephones 721910/16, 40391
Cables ENKCON/NAIROBI
Telex 22992 Nairobi

SUMMARY OF SOIL TEST RESULTS

PROJECT NO. SH/9457 OPERATOR SHIKOLI

LOCATION RUARAKA CHECKED J.S.S.

SURVEY OF PROJECT: KENYA DATE 30/11/94

APPENDIX SHEET
9094

7. ケニア国の社会・経済事情の概要表

国名	ケニア共和国 Republic of Kenya
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1995.02 1/2

一般指標				
政体	共和制	*1	面積	582,650.0 千Km ² *1
元首	President Daniel T. arap MOI	*1	人口	27,372 千人 (1993年) *1
独立年月日	1963年12月12日	*1	首都	ナイロビ *1
人種(部族)構成	キクユ21%、ルハ14%、ルハ13%、カレンジン11%	*1	主要都市名	モンバサ、キスム、ナクル *1
		*1	経済活動可人口	9,200 千人 (1989年) *1
言語・公用語	英語、スワヒリ語	*1	義務教育年数	2 年間 (1990年) *2
宗教	ローマカトリック28%、プロテスタント26%	*1	初等教育就学率	- % (0000年) *2
国連加盟	1963年12月	*1	識字率	69.0 % (1990年) *1
世界・IMF加盟	1964年02月	*1	人口密度	44.0 人/Km ² (1992年) *2
			人口増加率	3.18 % (1993年) *2
			平均寿命	平均 54.07 男 52.3 女 55.9 *1
			5歳児未満死亡率	74.7 /1000 (1993年) *1
			カリ-供給量	2,060.0 cal/日/人 (1990年) *2

経済指標				
通貨単位	ケニア・シリング	*1	貿易量	(1992年) *3
為替レート(IUS\$)	IUS\$= 45.948 (11月)	*3	輸出	1,339.0 百万ドル *2
会計年度	7月～ 6月	*1	輸入	1,713.0 百万ドル *2
国家予算	(1991年)	*2	輸入か-率	0.3 % (1992年) *4
歳入	1,984.6 百万ドル	*2	主要輸出品目	茶、コーヒー、石油製品 *1
歳出	2,323.5 百万ドル	*2	主要輸入品目	機械、輸送機器、鉄鋼、天然資源 *1
国際収支	-256.9 百万ドル (1992年)	*2	日本への輸出	22.0 百万ドル (1992年) *5
ODA受取額	780.00 百万ドル (1992年)	*2	日本からの輸入	175.0 百万ドル (1992年) *5
国内総生産(GDP)	8,011.00 百万ドル (1992年)	*4		
一人当たりGNP	340.0 ドル (1991年)	*4	外貨準備総額	538.9 百万ドル (1994年) *1
GDP産業別構成	農業 27.0 % (1991年)	*2	対外債務残高	6,367.0 百万ドル (1992年) *4
	鉱工業 22.0 % (1991年)		対外債務返済率	24.5 % (1992年) *4
	サービス業 51.0 % (1991年)		インフレ率	23.1 % (1992年) *2
産業別雇用	農業 81.0 % (1992年)	*2		
	鉱工業 7.0 % (1992年)			
	サービス業 12.0 % (1992年)		国家開発計画	長期的構造調整検討計画 (1986年) *5
経済成長率	0.4 % (1992年)	*4		

気象(1968年～1983年平均) 場所: Nairobi (標高 1820m)													
月	1	2	3	4	5	6	7	8	9	10	11	12	平均/計
最高気温	25.0	26.0	25.0	24.0	22.0	21.0	21.0	21.0	24.0	24.0	23.0	23.0	23.2 ℃
最低気温	12.0	13.0	14.0	14.0	13.0	12.0	11.0	11.0	11.0	13.0	13.0	13.0	12.5 ℃
平均気温	18.5	19.5	19.5	19.0	17.5	16.5	16.0	16.0	17.5	18.5	18.0	18.0	17.8 ℃
降水量	38.0	64.0	125.0	211.0	158.0	46.0	15.0	23.0	31.0	53.0	109.0	86.0	79.9 mm
雨期/乾期	雨 雨 雨												

- *1 The World Factbook(C.I.A)
- *2 Human Development Report(UNDP)
- *3 International Financial Statistics(IMF)
- *4 World Debt Tables(WORLD)
- *5 最新世界各国要覧(東京書籍)
- *6 World Weather Guide

国名	ケニア共和国
	Republic of Kenya

1995.02 2/2

*7

項目	年度	1989	1990	1991	1992
無償資金協力		2,043.46	2,382.47	2,515.30	2,699.97
技術協力		2,146.74	1,989.63	2,050.70	2,194.95
有償資金協力		5,161.42	5,676.39	7,364.47	5,852.05
総 額		9,351.62	10,048.49	11,930.47	10,746.97

*7

項目	歴年	1989	1990	1991	1992
無償資金協力		22.76	25.93	28.96	30.13
技術協力		42.95	49.59	19.05	27.56
有償資金協力		82.10	17.67	149.84	70.98
総 額		147.81	93.19	197.85	128.67

*8

	贈 与 (1)		有償資金協力 (2)	政府開発援助 (ODA) (1) + (2) = (3)	その他政府資 金及び民間資 金 (4)	経済協力総額 (3) + (4)
		技術協力				
二国間援助 (主要供与国)	399.10	185.10	117.70	701.90	27.20	729.10
1. 日本	57.70	29.50	71.00	158.20	0.00	158.20
2. イギリス	54.30	24.90	-7.00	72.20	0.10	72.30
3. オランダ	54.20	38.80	0.00	93.00	-0.10	92.90
4. アメリカ	51.00	29.00	5.00	85.00	18.00	103.00
多国間援助 (主要援助機関)	257.10	96.20	113.80	467.10	-49.20	417.90
	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00
そ の 他	0.50	0.00	0.00	0.50	4.10	4.60
合 計	656.70	281.30	231.50	1,169.50	-17.90	1,151.60

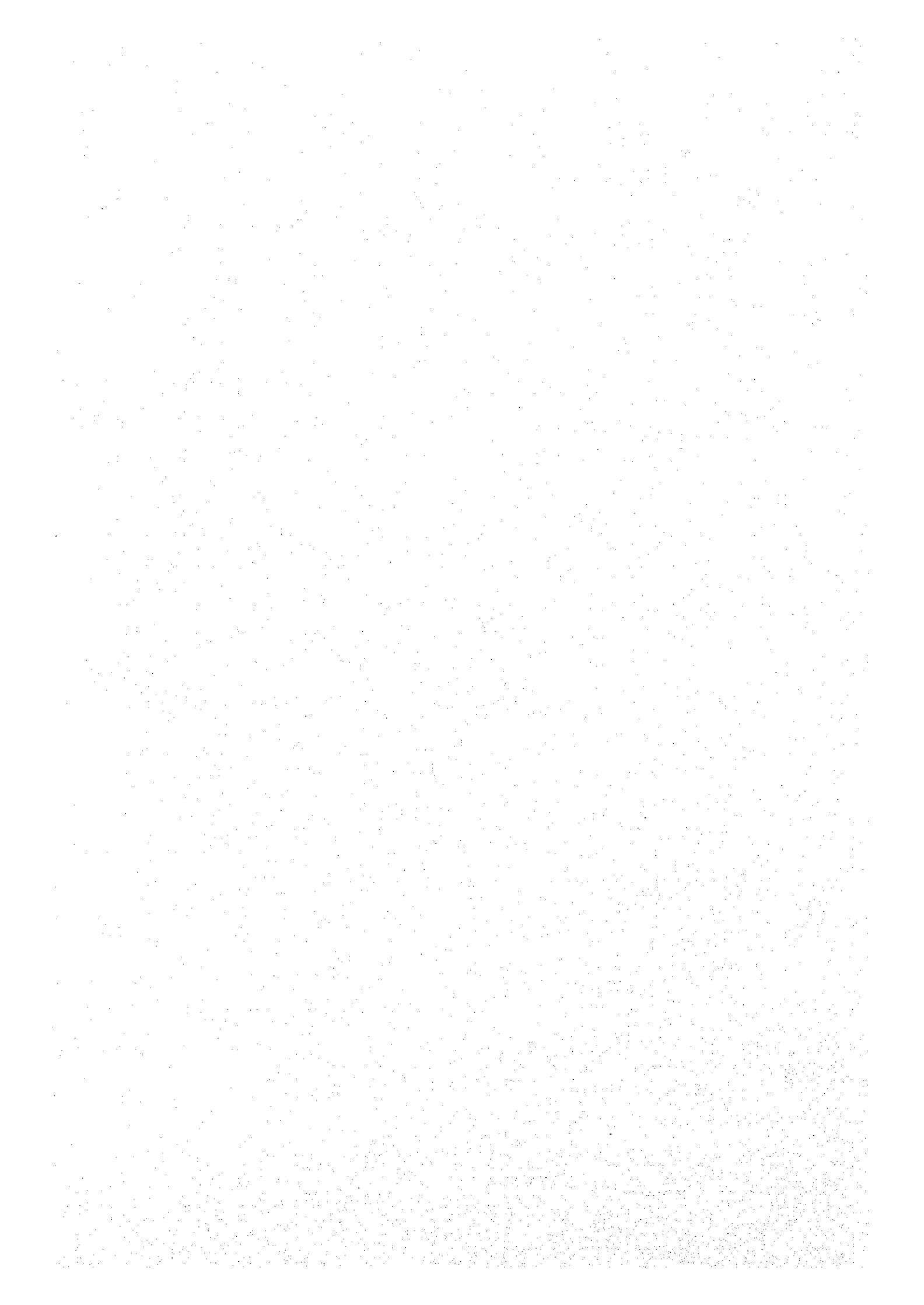
*9

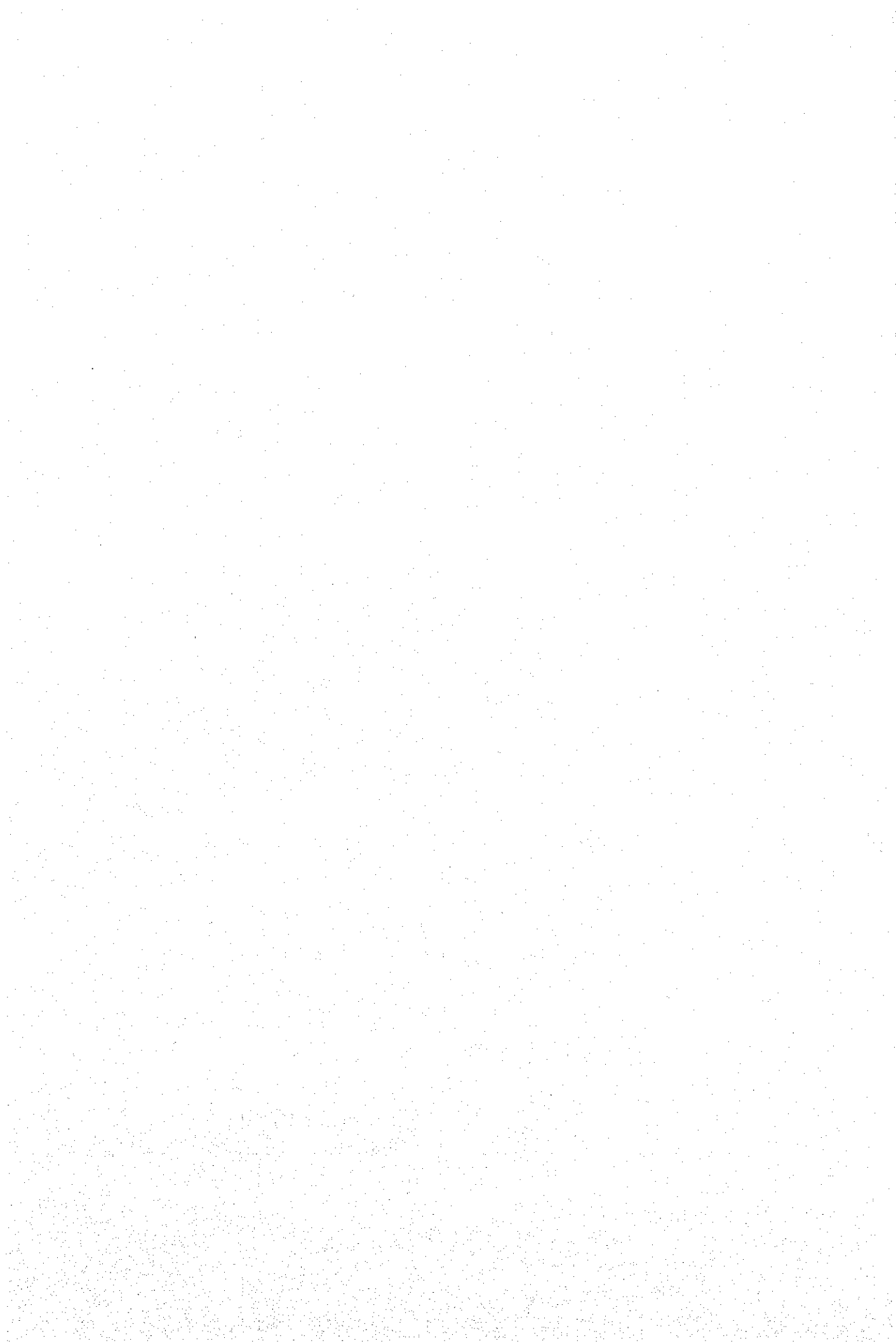
技術	関係各省庁→経済企画省→大蔵省
無償	関係各省庁→経済企画省→大蔵省
協力隊	関係各省庁→経済企画省→大蔵省

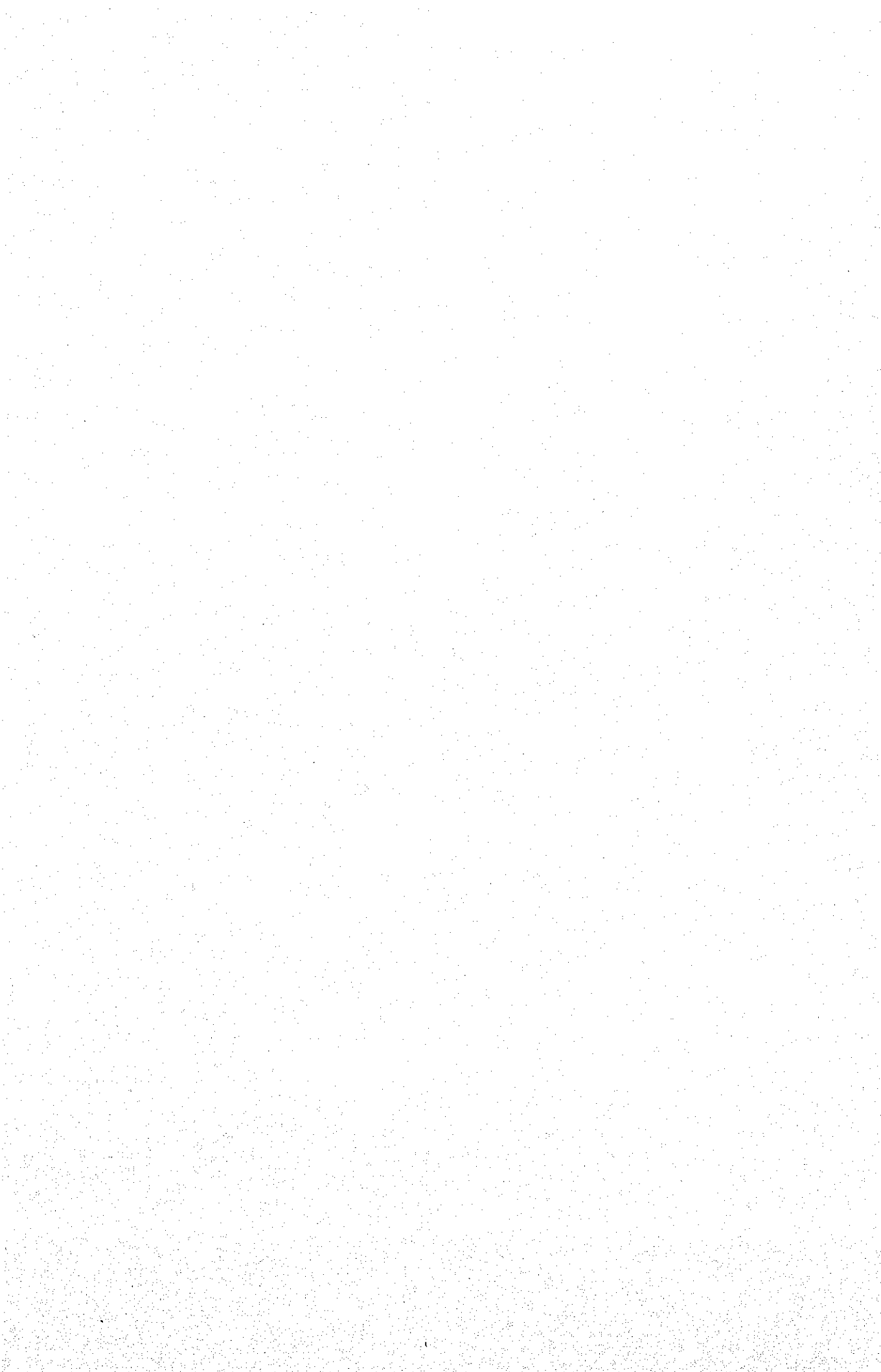
*7 Japan's ODA(Annual Report)

*8 Geographical Distribution of Financial Flows of Developing Countries(OECD/OCDE)

*9 国別協力情報(JICA)







JICA