

ケニア国測量地図学院プロジェクト 計画打合せ調査団報告書

平成 8 年 3 月

国際協力事業団

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ケニア国測量地図学院プロジェクト
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序 文

ケニア国では国内の乾燥・半乾燥地域を中心に開発需要が増大しているが、測量技術者の不足から、開発に不可欠な地図・航空写真などの地理情報の整備が遅れている。このためケニア国土定住省は、測量局及び関連機関の職員を対象に技術訓練を実施する訓練所の設立計画を立て、1992年8月、我が国に無償資金協力とプロジェクト方式技術協力を求めてきた。

これを受けて国際協力事業団は各種調査を重ねたうえで、1994年(平成6年)8月に実施協議調査団を派遣し、討議議事録(Record of Discussions: R/D)の署名を取り交わして、同年10月から5年間にわたる技術協力を実施している。

この協力開始から1年数か月を経、プロジェクトの実施状況と問題点を把握し、今後の実施計画を策定するため、1996年(平成8年)2月18日から3月2日まで、国土地理院測地部測地技術調整官 海津優氏を団長とする計画打合せ調査団を現地に派遣した。

本報告書は同調査団の調査・協議結果を取りまとめたもので、今後のプロジェクト進展のために広く活用されることを願うものである。ここに調査団の各位をはじめ、外務省、建設省、国土庁、在ケニア国日本大使館など、関係方面の方々に厚く御礼申し上げ、今後の更なるご支援をお願いする次第である。

平成8年3月

国際協力事業団
社会開発協力部

部長 後 藤 洋

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第1章 計画打合せ調査団の派遣

1-1 調査団派遣の経緯と目的

ケニア国においては、国内、特に貧困地域でもある乾燥・半乾燥地域において、農業開発、社会・経済インフラ整備、エネルギー・水資源開発の需要が増大しているが、これらの開発に不可欠である地図・航空写真などの地理情報は整備されていない。この原因は、機材の老朽化、施設の不足、人材養成の体制が整備されていないことからくる、測量技術者の質・量の不足である。

この状況下、ケニア国土地定住省は測量局及び関連機関の職員を対象に、測量各分野における技術訓練を実施する訓練所の設立計画を策定し、1992年8月、同計画に対する日本のプロジェクト方式技術協力と無償資金協力を要請してきた。

この要請を受けて国際協力事業団は、1993年11月に事前調査、1994年8月に実施協議調査を行い、同年10月から5年間のプロジェクト方式技術協力の実施に係る討議議事録(R/D)の署名を取り交わした。本プロジェクトの目的は、組織の確立、適切な訓練施設・資機材の整備、ケニア人教官の育成、教材などの整備、的確な訓練の実施であり、実施される訓練コースは①土地測量、地図作成、写真測量・リモートセンシング、地図複製の4分野における新入職員向けディプロマコース②上記のうち地図複製分野を除く3分野における中堅職員向けハイヤーディプロマコース③短期訓練コースである。

本調査団は、R/D締結後のプロジェクトの進捗状況と問題点の把握、並びに問題解決のための対応策につき先方と協議するとともに、協力期間の協力内容に係る詳細な年次計画の策定を行い、もってプロジェクトの適正な実施に資することを目的として派遣された。

1-2 調査団の構成

- | | | |
|-----------|-------|-------------------------|
| (1) 団長／総括 | 海津 俊 | 国土地理院測地部測地技術調整官 |
| (2) 地図 | 常住 春夫 | 国土地理院地図部地図編集課課長補佐 |
| (3) 測地測量 | 山田 明 | 国土地理院企画部国際交流室専門職 |
| (4) 地籍調査 | 渡部 元 | 国土庁計画・調整局計画課専門調査官 |
| (5) 協力企画 | 天野真由美 | JICA 社会開発協力部社会開発協力第二課職員 |

1-3 調査日程

日順	月 日	曜日	午 前	午 後
1	2月18日	日	11:50 成田発 (NH205)	16:30 パリ着
2	19日	月		22:55 パリ発 (AF476)
3	20日	火	09:00 ナイロビ着 12:30 JICA事務所との打合せ	14:30 土地定住省表敬 15:30 日本大使館表敬
4	21日	水	祝日	祝日
5	22日	木	09:30 プロジェクト訪問 日本人専門家チームとの打合せ	12:30 大使主催昼食会 14:30 合同協議1 (計画の進捗状況報告)
6	23日	金	09:00 合同協議2 (暫定実施計画の見直し)	13:00 ケニア側主催昼食会 15:30 合同協議3 (実施運営上の問題)
7	24日	土	国内打合せ	資料整理
8	25日	日	資料整理	資料整理
9	26日	月	09:00 学科別協議	14:00 学科別協議
10	27日	火	09:00 ミニッツ協議	14:00 学科別協議 18:30 調査団主催夕食会
11	28日	水	ミニッツ作成	14:00 ミニッツ署名 15:30 運営管理部門協議
12	29日	木	報告書作成	16:00 JICA事務所報告 22:55 ナイロビ発 (BA068)
13	3月1日	金	05:00 ロンドン着	16:55 ロンドン発 (NH202)
14	2日	土		13:35 成田着

1-4 主要面談者

[ケニア側]

Mr. J. J. R. ONCHIRI	土地定住省開発担当次官補
Mr. W. J. ABSALOMS	土地定住省測量局局長
Mr. A. K. NJUKI	土地定住省測量局次長
Mr. P. B. M. NGUGI	土地定住省測量担当次官補
Mr. H. NYAPOLA	土地定住省ケニア国測量地図学院院長代理
Mr. K. MWERO	土地定住省ケニア国測量地図学院副院長代理
Mr. C. M. KAMAMIA	土地定住省ケニア国測量地図学院土地測量学科長代理
Mr. E. ONDIEK	土地定住省ケニア国測量地図学院地図作成学科長代理
Mr. D. NJUBI	土地定住省ケニア国測量地図学院 写真測量・リモートセンシング学科長代理
Mr. S. MUGADI	土地定住省ケニア国測量地図学院地図複製学科長代理
Mr. I. OUMA	土地定住省ケニア国測量地図学院 写真測量・リモートセンシング学科講師代理

[日本側]

堀内 伸介	在ケニア国日本大使
田上 実	JICAケニア事務所長
杉田 映理	JICAケニア事務所所員
秋山 実	プロジェクトチーフアドバイザー
儀元 賢志	プロジェクトコーディネーター
村山 秀樹	プロジェクト訓練計画専門家
宮崎 清博	プロジェクト測地測量専門家
中島 正人	プロジェクト地籍調査専門家
斉藤 保	プロジェクト地図作成専門家
浦部 ぼくろう	プロジェクト写真測量・リモートセンシング専門家
原 正一	プロジェクト地図複製専門家

第2章 要 約

2-1 調査概要

調査目的に従い、プロジェクトの進捗状況、実施上の問題点を把握するため、合同協議並びに専門家、カウンターパートからの聞き取り調査を行った。これらに基づいて、暫定実施計画並びに詳細年次計画の見直し協議を行い、変更計画について合意するとともに、実施計画上の諸問題に関して協議し、今後の対応策について合意した点をミニッツに取りまとめ、署名確認した。

ミニッツの写しを付属資料1として添付する。

これと並行して、専門家及びカウンターパートと面接し、暫定実施計画の進捗状況とプロジェクト実施運営上の諸問題について調査を行った。

その結果、教程、教材の開発、見直し、第1期生の募集などは順調に進んでいること、専門家チームについては基本的に相手側の評価が高いこと、また、カウンターパートについても過度に依存的ではなく、主体的取り組みがうかがえることが判明した。特に専門家側からは、昨年末にカウンターパートの増員があり、運営上きわめて有効であった旨の発言があった。

しかしながら、主として部屋のスペース不足のため、専門家チームとカウンターパートが別の部屋にいて、若干コミュニケーションに問題を生じているケースもあり、毎週の会議や必要に応じた打合せのほかにもコミュニケーションの更なる向上に努めるべきことが、チームリーダー、学院長の双方からそれぞれ提示されている。物理的に分かれている不利はあるものの問題意識を共有していることでもあり、速やかに対応策が講じられることを期待したい。スペースの問題に関しては、ケニア側から、授業場所の割り当て上12教室が必要であり、詳細設計上可能ならば間取りの設計で考慮してほしい旨、強い要請があった。

また、調査の過程で、測量局長のアブサラムス氏が6月いっぱいまで定年退官する可能性があるとの情報を得たが、後任人事の状況によっては、プロジェクトの円滑な遂行のためにも日本での研修を考慮する必要があるものと考えられる。

面接調査中の2月26日朝、測量局に赴いたところ、測量局周囲の金網の一部が破られているのが発見されて警察が捜査中だったため、しばらく入校できないという事件があった。少なくとも学院関連の被害はなかったらしいが、安全管理には十分配慮する必要がある。

2-2 協議の経過

ナイロビ到着後、直ちにJICA事務所長及び担当職員に面会し、情報収集並びに打合せを行った。その後大使館に大使を表敬訪問したところ、本件協力及び対ケニア国協力一般に関する助言を受けた。

引き続き土地定住省を表敬訪問。土地定住省次官補(次官代理)から、本プロジェクトの日本の

協力への感謝と、2月22日に無償資金協力の詳細設計に関する交換公文が署名の運びとなったことへの満足の意が表明された。調査団はケニア側の本件協力成功へ向けての努力を多とし、プロジェクトがおおむね順調に進んできたことへの評価と、今後の成功についての強い希望を表明した。懇談において、ケニア側は会議室に貼られた「権利証の発行を受けて喜ぶ農民」の写真を示して、測量技術者教育への強い期待を表明した。

学科別協議では、部門別活動、専門家派遣、研修員受入れ、2次募集の学生のキャッチアップ方策などについて調査、協議した。

カウンターパート側は、総じて実習スペースの不足を訴えていたほか、日本以外での国際協力事業団による研修の可能性、短期専門家の滞在期間をもう少し長くすることの可能性について、質問する者が多かった。これについては、なかなか難しいであろうことを述べ、事前に専門家などを通じ、打合せをするなどの対策を考えるよう勧めた。日本での研修は評判が良い。調査団側は、何人もが研修を受けることになるので各人が的を絞った研修を受け、ケニア国帰国後、情報交換をするのが適当であろうと示唆し、ケニア側もそれを既に考慮している旨、発言があった。また、遅れて入学した学生には、個別に質問に答えることを考えているが、地図作成については講義時に配ったノートなども渡してあるので、質問を受けて対応したいとしており、一応の心づもりはあるものと思われた。

ラマダン明けのプロジェクト訪問では、ケニア側が建設した仮設教室で打合せを行ったが、仮設ながら十分教室としての機能を果たすものであり、ケニア側としての本件に関する意気込みが十分感じられるものであった。

その後、2日間にわたる合同協議においては、専門家チーム、カウンターパート双方の報告を受け、これに基づいて協議を行い、進捗状況の確認と、全体計画、詳細計画の見直し及び問題点の洗い出しと、その対策について協議した。

主な協議内容は、次のとおりである。

- (1) 建物の不足による生徒受入数の調整を別にすれば、プロジェクトはこれまでのところおおむね計画に従って進捗している。これについては、仮設教室の建設、測量局施設の流用など、ケニア側の努力の跡が見られ、好感が持てる。
- (2) 教室の不足については、ケニア側は当面の措置として、現有の部屋の整理により、2教室を確保したい旨表明し、了承された。
- (3) 無償資金協力の遅れに伴い、ディプロマコースの生徒受入数を、今年度、来年度の2年間、暫定的に4クラス85名とすることになった。クラスの構成についてはプロジェクト運営、

将来必要となろう技術者数の確保などの観点から議論し、2クラスを予定していた土地測量を1クラスとする代わり、土地測量のクラスの人数を30名とすることで合意した。

- (4) 無償資金協力の遅れに伴い、ハイヤーディプロマコースの募集が1年間延期された。これに関し、学院長が、無償分が間に合えば1997年のうちに募集したいこと、資格試験の時期もあるので10月には開始できるように期待している旨の発言があった。
- (5) シラバス、カリキュラム並びに教科書作成はほぼ順調に進んでいる。
- (6) ハイヤーディプロマのシラバスについては、内容が古いので、共通科目に合わせ見直しを行い、年末までにドラフトを仕上げたい旨報告があった。
- (7) カウンターパートの任命は、プロジェクトの進展に合わせ、段階的に行うとされた。
- (8) 学生管理並びに機材管理については、現状では不十分であり、次回合同運営会議でこれらに関する対応策を検討することで合意した。
- (9) 生徒の募集については、ケニア国のシステムとの関係で国立大学と競合する可能性があるため、合格者への連絡を速やかに行い、入学意志の確認を行うこととする旨、ケニア側から説明があった。

週末をはさんで続く2日間は学科別協議並びにミニッツの協議を行った。ミニッツの協議では、ハイヤーディプロマコースの募集手続きについて確認した。これについては、職員からの選考であり、大学との競合などの問題はないことを確認した。また、合同協議において時期が明記されていなかったいくつかの点について時期を明記することとした。

第3章 プロジェクトの進捗状況

3-1 協力部門別活動

4 学科と管理部門について、専門家、カウンターパートと別々に面接し、計画の進捗状況の調査を行った。

3-1-1 ガイドライン・シラバス・カリキュラム開発

- (1) ディプロマコースについては、3 学科で完成している。地図複製科では2月27日にKIE(ケニア教育研究所)に提出、4月に承認される予定である。
- (2) ハイヤーディプロマコースについては、3 学科ともドラフトを提出済み。

3-1-2 教材開発

- (1) ステージⅠについては完成、ステージⅡは未完成。全体的に遅れているが遅くとも11月には完成させる予定である。科によって計画的に実施している科と全く未着手の科があり、ステージⅢ、ハイヤーディプロマコースを含めて計画的運用が必要である。

3-1-3 カウンターパートへの指導

- (1) 専門家とカウンターパートとの関係については、うまく連携して活動している科と、必ずしもそうでない科とがある。その主たる原因は、現在の部屋数の不足により、専門家室とカウンターパート室が完全に分離しているためと思われるが、できるだけ連携を深めるよう努力する必要がある。
- (2) 個別専門家、ミニプロの専門家と違い、プロジェクト専門家はカウンターパートの数が多く、相手の技術レベルもまちまちである。科によっては、教材作成のほとんどをカウンターパートで行った、と自負しているところもあった。

3-1-4 学科運営

- (1) ケニア側の説明によると、カウンターパートの配置は部屋数などの制限により、今年度は計画人員の1/3、次年度は、2/3、3年次にフルメンバーにする、となっている。現状でも、講義、実習などに支障はないが、7月からのケニア国の新年度には、予定どおりの増員が行われ、計画実施上の戦力アップになるはずである。

3-1-5 訓練実施状況

- (1) ステージⅠが1月にスタートしたが暫定定員の85名に達していない。2月27日現在で

66名であるが3月4日から始まる週のうちには定員を満たす予定であるとされた。

- (2) 遅れて来る生徒に対する対応は、各科まちまちであるが、おおむね良心的な救済策(個別に相談に応じる、ティーチングノートのコピーをとるなど)を考えている。
- (3) 実習については、施設、設備がないので一部困難となっているが、変更、工夫しながら実施することとしている。

3-1-6 管理部門

- (1) 施設、人員ともに不足している。1月にスタートしたコースに十分な対応ができていない。早急な人員配置(学生課)が必要である。
- (2) 専門家はカウンターパートへの技術移転が第1であり、直接生徒と接する、あるいは教室で直接教えることは本来の姿ではない、と考えている専門家もいる。どちらがいいのか、プロジェクト内で十分討議し、教育効果のあがる方向で検討すべきだと思われる。
- (3) 現在、専門家とカウンターパートとのコミュニケーションは、必ずしもうまくいっているとはいえない部分もあり、新しい施設では部屋の配置を学科別にしたいとの意見があった。

3-2 専門家派遣

専門家の派遣については、長期は予定どおり8名が派遣されている。短期の専門家については、平成7年度10名が派遣された。それぞれプロジェクトのため有効だったが、各科、各分野(先端技術、教材作成)とも、もっと長期に滞在してほしいとの要望があった。

各科について、もし1分野のみの短期専門家派遣になった場合の優先順位を聴取したところ、先端技術の要望が多かった。

長期、短期ともに専門家派遣は適切に行われた。

3-3 研修員受入れ

平成7年度は6名(地図作成、地図複製、土地測量、測量訓練計画、地球地図環境、測量技術Ⅱ)の研修員を受入れた。

平成8年度は4名(地図作成、地図複製、土地測量、訓練計画)を受入れる予定である。なお、平成9年度からは訓練計画に代えて写真測量の研修員を受入れる。

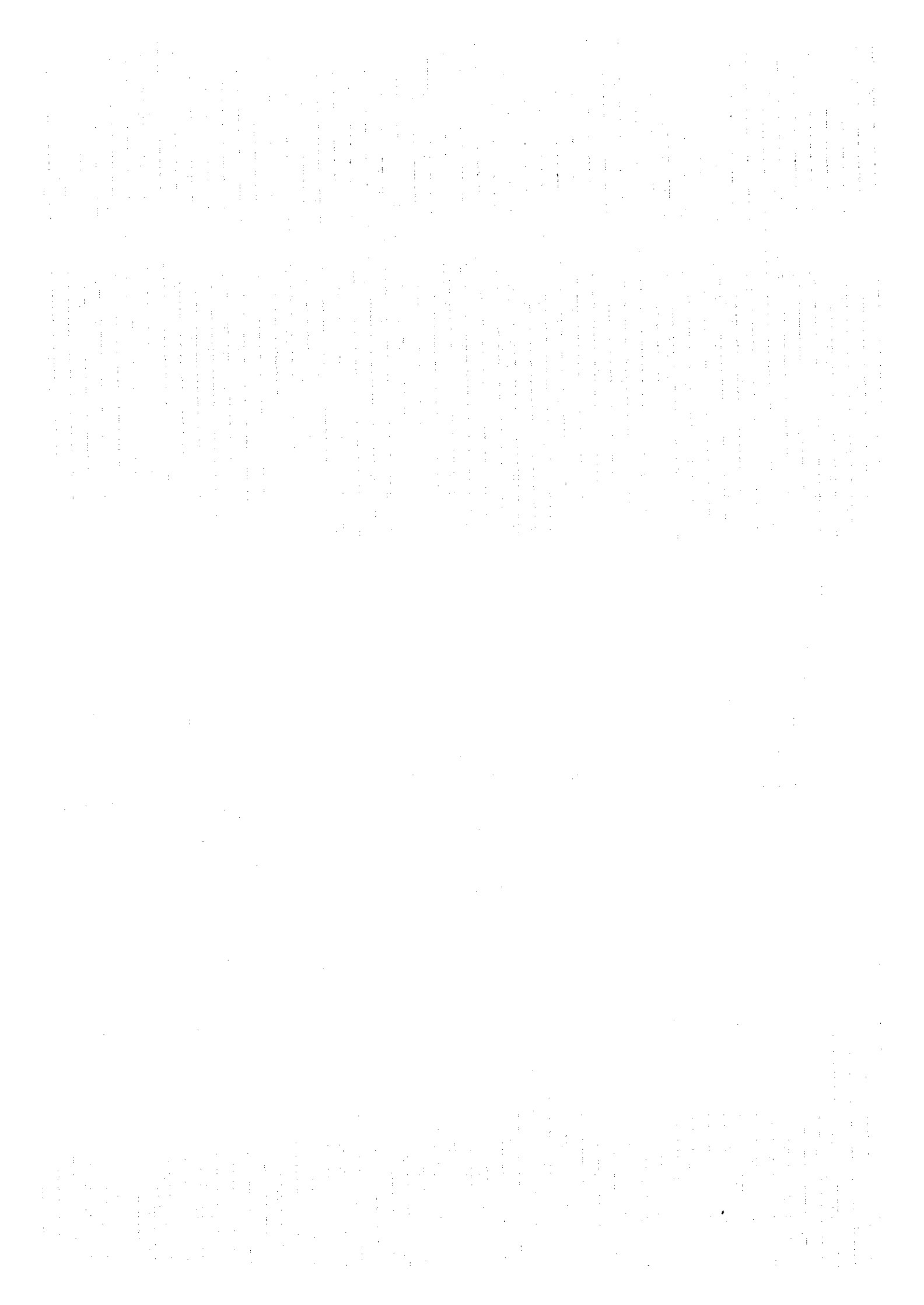
平成7年度の研修員は、それぞれ日本での研修は役に立った、との感想をもっている。研修の成果をプロジェクトに反映させるため、セミナー、報告会などを開催する計画があると聞いたが、まだ実施されていない。

各科の日本研修予定者には、各専門家とよく打合せのうえ、内容については、広範にわたらず、

テーマを絞って来日した方がよいとアドバイスした。

国際協力事業団の支援による第三国研修の希望、文部省の奨学生制度による日本での研修希望も出された。

日本での研修先について、特に、訓練計画分野においては、建設大・学校での研修期間を長くってほしいと、7年度の研修員から強い希望があった。このため日本で検討する旨伝えた。



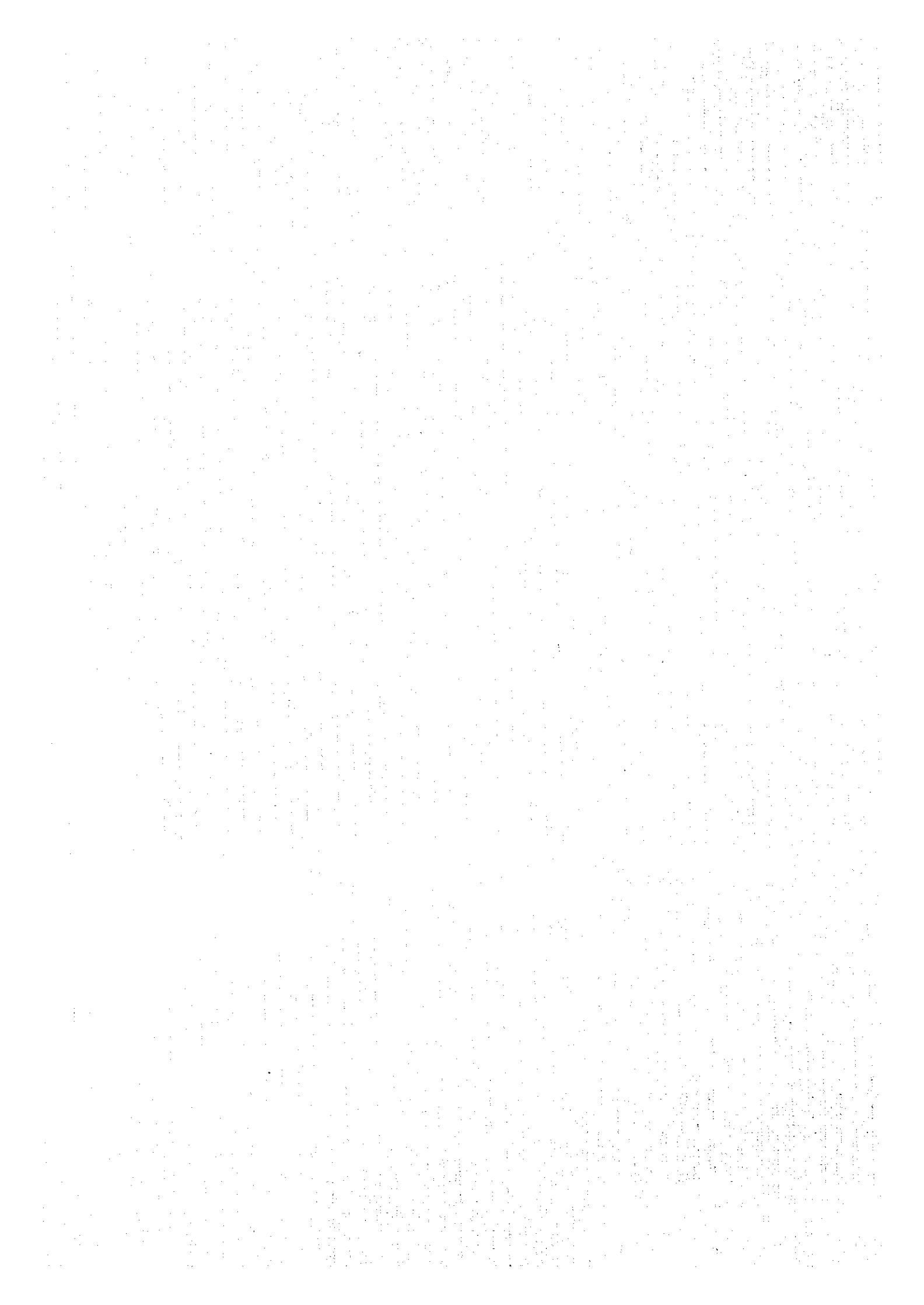
資 料

資料1 ミニッツ

資料2 学院長報告

資料3 チーフアドバイザー報告

資料4 投入計画作成資料



付属資料 1. ミニッツ

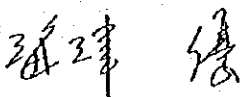
THE MINUTES OF MEETING
BETWEEN
THE JAPANESE CONSULTATION TEAM
AND
THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF
THE REPUBLIC OF KENYA
ON
THE TECHNICAL COOPERATION
FOR
THE KENYA INSTITUTE OF SURVEYING AND MAPPING PROJECT

The Japanese Consultation Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. KAIZU Masaru, visited the Republic of Kenya from February 20 to February 29, 1996.

During its stay in the Republic of Kenya, the Team had a series of discussions and jointly observed the achievement of the Kenya Institute of Surveying and Mapping Project (hereinafter referred to as "the Project") and exchanged views on the possible technical cooperation programmes to be further implemented to fulfill the Master Plan of the Record of Discussions signed on August 25, 1994 with the Kenyan authorities concerned.

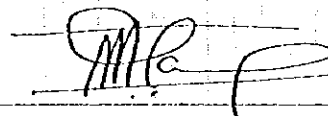
As a result of the discussions, both the Team and the Kenyan authorities concerned agreed to recommend to their respective Governments the matters referred to in the document attached hereto.

Nairobi, February 28, 1996



Mr. KAIZU Masaru

Leader,
Consultation Team,
Japan International Cooperation Agency



Mr. J. K. SANG

Permanent Secretary,
Ministry of Lands and Settlement,
The Republic of Kenya

ATTENDANTS LIST OF THE MEETING

KENYAN SIDE

1. Mr. J. J. R. ONCHIRI
Chairman
Deputy Secretary (Development)
Ministry of Lands and Settlement
2. Mr. W. J. ABSALOMS
Director of Surveys
Ministry of Lands and Settlement
3. Mr. A. K. NJUKI
Deputy Director of Surveys
Ministry of Lands and Settlement
4. Mr. P. B. M. NGUGI
Deputy Secretary (Surveys)
Ministry of Lands and Settlement
5. Mr. H. NYAPOLA
Ag. Principal, KISM
Ministry of Lands and Settlement
6. Mr. K. MWERO
Ag. Deputy Principal, KISM
Ministry of Lands and Settlement
7. Mr. C. M. KAMAMIA
Ag. HoD, Land Surveying Dept., KISM
Ministry of Lands and Settlement
8. Mr. E. ONDIEK
Ag. HoD, Cartography Dept., KISM
Ministry of Lands and Settlement
9. Mr. D. NJUBI
Ag. HoD, Photogrammetry & Remote Sensing Dept.,
KISM, Ministry of Lands and Settlement
10. Mr. S. MUGADI
Ag. HoD, Map Reproduction Dept., KISM
Ministry of Lands and Settlement
11. Mr. I. OUMA
Ag. Lecturer, Photogrammetry & Remote Sensing
Dept., KISM, Ministry of Lands and Settlement



JAPANESE SIDE

1. Mr. M. KAIZU
Leader, Consultation Team
Assistant Director for Geodesy, Geodetic Department,
Geographical Survey Institute, Ministry of Construction
2. Mr. H. TSUNESUMI
Deputy Head of Map Compilation Division,
Cartographic Department,
Geographical Survey Institute, Ministry of Construction
3. Mr. A. YAMADA
Supervisor of International Affairs Office,
Planning Department,
Geographical Survey Institute, Ministry of Construction
4. Mr. G. WATANABE
Special Assistant Director, Planning Division,
Planning and Coordination Bureau,
National Land Agency
5. Ms. M. T. AMANO
Staff, Second Technical Cooperation Division,
Social Development Cooperation Department,
JICA
6. Mr. M. AKIYAMA
JICA Chief Advisor, KISM
7. Mr. K. ISOMOTO
JICA Project Coordinator, KISM
8. Mr. H. MURAYAMA
JICA Training Planner, KISM
9. Mr. K. MIYAZAKI
JICA Expert for Geodesy, KISM
10. Mr. M. NAKASHIMA
JICA Expert for Cadastral Surveying, KISM
11. Mr. T. SAITO
JICA Expert for Cartography, KISM
12. Mr. B. URABE
JICA Expert for Photogrammetry & Remote Sensing,
KISM
13. Mr. S. HARA
JICA Expert for Map Reproduction, KISM
14. Ms. E. SUGITA
Assistant Resident Representative, JICA Kenya Office



THE ATTACHED DOCUMENT

I. Review of the progress

The Team had studied the progress reports submitted by the Kenya Institute of Surveying and Mapping (hereinafter referred to as "the Institute"). Through various discussions with the Kenyan authorities, the Team had observed the following progress and the efforts made by the Institute.

1. Activities of the Project

Activities of the Project are shown in Annex 1.

2. Input from both sides

(1) Japanese side

1) Dispatch of Japanese experts

a. Long-term experts

In accordance with TSI for the Project, the Japanese side dispatched the long-term experts in eight (8) fields as follows:

- (a) Chief Adviser in October 1994
- (b) Project Coordinator in October 1994
- (c) Training Planner in February 1995
- (d) Expert on Geodesy in October 1994
- (e) Expert on Cadastral Surveying in June 1995
- (f) Expert on Cartography in October 1994
- (g) Expert on Photogrammetry & Remote Sensing in September 1995
- (h) Expert on Map Reproduction in October 1994

b. Short-term experts

The Japanese side dispatched ten (10) short-term experts as follows:

- (a) Three (3) experts on Geodesy
- (b) One (1) expert on Cadastral Surveying
- (c) Two (2) experts on Cartography
- (d) One (1) expert on Photogrammetry & Remote Sensing
- (e) One (1) expert on Map Reproduction
- (f) Two (2) experts on Management

2) Training of counterpart personnel in Japan

The Japanese side received nine (9) Kenyan counterpart personnel as follows:

Japanese fiscal year 1994

- (a) Photogrammetry
- (b) Cartography
- (c) Administration

Japanese fiscal year 1995

- (d) Global Mapping (Environment)
- (e) Cartography
- (f) Map Reproduction
- (g) Land Surveying
- (h) Surveying and mapping II
- (i) Administration



3) Provision of machinery and equipment

The Japanese side provided the machinery and equipment. The main items are as follows:
Japanese fiscal year 1994 ; vehicle, theodolite, total station system, audio visual equipment and copy machine.

Japanese fiscal year 1995 ; global positioning system, universal photo-interpretation system, light sensitive coating machine and point pricking & transfer machine.

(2) Kenyan side

1) Counterpart and administrative personnel

Assignment of counterpart personnel and administrative personnel are shown in Annex 2.

2) Building and facilities

The Kenyan side secured five (5) class rooms, the necessary office space for the Japanese experts and the space for the equipment which is procured by the Japanese side.

3) Recurrent budget

The Kenyan side allocated 435,225 K £ in Kenyan fiscal year 1995/96 as recurrent budget for the Project.

II. Implementation schedule of the Project

1. The Project will be implemented in accordance with the TSI in Annex 3 and Plan of Operation for Whole Period in Annex 4 .

2. Annual Plan of Operation for the Japanese fiscal year 1996 is shown in Annex 5.

Both sides agreed that the second intake of diploma courses will be the same as the first intake because of the limitation of the training facilities.

3. Input from both sides for the Japanese fiscal year 1996

(1) Japanese side

1) Dispatch of Japanese experts

a. Long-term experts

The experts whose contracts expire will be replaced with other experts or will extend their term of service.

b. Short-term experts

Short-term experts in Geodesy, Cadastral Surveying, Cartography, Photogrammetry & Remote Sensing and Map Reproduction will be dispatched.

2) Training of counterpart personnel in Japan

Four (4) Kenyan counterpart personnel will be accepted for the training in Japan.

3) Provision of machinery and equipment

The Japanese side will provide the machinery and equipment of which main items are cadastral information system, stereo zoom transfer scope, analytical plotter for training and desk top publishing system.

(2) Kenyan side

1) Assignment of counterpart and administrative personnel

The Kenyan side will assign the counterpart and administrative personnel gradually according to the scale of the training in order to complete the full assignment by beginning of 1998.

2) Allocation of budget

The Kenyan side will allocate the necessary amount of budget in Kenyan fiscal year 1996/97 for the Project.

III. Issues of discussion

1. Organizational capacity building

(1) Assignment plan of the Kenyan counterpart and administrative personnel

The Kenyan side will establish the assignment plan of the counterpart and administrative personnel with its priority as soon as possible.

(2) Administration of the Institute

Both sides recognized the necessity to strengthen the administration of the Institute in student affairs and maintenance and management system of the machinery and equipment. The Joint Management Committee will address these issues at their next meeting.

(3) Improvement of recruiting and selection system of trainees

The Kenyan side will improve the recruiting and selection system of trainees by communicating with the successful candidates and confirming the intention of the entrance to the Institute immediately after the selection.

2. Review of the Project Design Matrix (PDM)

Both sides will review the verifiable indicator and means of verification of PDM by next Joint Coordinating Committee for the smooth monitoring and evaluation of the Project.



ANNEX 1 ACTIVITIES OF THE PROJECT

1. Training

Name of the training	Term	Number of trainees
In-service short-term training	October 3, 1994 - October 5, 1995	Geodetic Surveying : 14 Cartography : 16
Diploma course	from January 8, 1996 for three (3) years	Land Surveying : 30 Cartography : 25 Photogrammetry & Remote Sensing : 15 Map Reproduction : 15

2. Other major activities

(1) Syllabus for Diploma in Map Reproduction

The Project worked on developing the draft of the syllabus of Map Reproduction. In October 1995, Kenya Institute of Education held a technical workshop to examine the draft of syllabus for diploma in Map Reproduction. The draft syllabus is now waiting for its authorization by subject panel and Academic Board expected to be held in April 1996.

(2) Teaching Material Development

The Project has developed new text books for the first stage of the diploma courses. Those text books were distributed to each trainee.

(3) Improvement of Lecturer's Teaching Ability

The Project held one week seminar conducted by the Kenya Technical Teacher's College for teaching methodology in December 1995.



ANNEX 2 COUNTERPART AND ADMINISTRATIVE PERSONNEL

H. Nyapola Ag. Principal
K. Mwero Ag. Deputy Principal

Department of Land Surveying

1. C. M. Kamamia Ag. HoD
2. W. N. Kamau
3. H. E. Waithaka
4. G. Ayoo
5. I. L. Ateya
6. P. Kioi
7. C. M. Lwanga

Department of Cartography

1. E. Ondick Ag. HoD
2. C. Mwangi
3. W. Muasya
4. E. Awino
5. H. Jumba
6. E. Mandi

Department of Photogrammetry & Remote Sensing

1. D. Njubi Ag. HoD
2. S. O. Ayugi
3. I. Ouma
4. K. Ng'eno

Department of Map Reproduction

1. S. Mugadi Ag. HoD
2. M. O. Omach
3. C. Ochieng
4. P. Congo
5. P. M. Manyagi

Humanity Courses

1. J. K. Katunga
2. O. M. Kitonyi

Administration

1. W. K. Kagonda
2. E. M. W. Nyuttu
3. J. N. Kagunda
4. M. Odeny
5. E. Njeri
6. S. Osewe

Accountant II
Supplies Assistant
Storeman
Clerical Officer
S/S (Performing Secretarial duties)
S/S (Subordinate Staff)



ANNEX 3.

TENTATIVE SCHEDULE OF IMPLEMENTATION

Year Month	1994				1995				1996				1997				1998				1999			
	1	4	7	10	1	4	7	10	1	4	7	10	1	4	7	10	1	4	7	10	1	4	7	10
Term of Cooperation																								
1. Activities																								
(1) Pre-service Diploma Course		1st																						
		2nd																						
		3rd																						
a. Land Surveying																								
b. Cartography																								
c. Photogrammetry & Remote Sensing																								
d. Map Reproduction																								
(2) In-service Higher Diploma Course		1st																						
		2nd																						
		3rd																						
a. Land Surveying																								
b. Cartography																								
c. Photogrammetry & Remote Sensing																								
d. Map Reproduction																								
(3) In-service Short Term Training																								
2. Inputs of Japanese Side																								
(1) Dispatch of Long Term Experts																								
a. Chief Advisor																								
b. Project Coordinator																								
c. Training Planner																								
d. Geodesy																								
e. Cadastral Surveying																								
f. Cartography																								
g. Photogrammetry & Remote Sensing																								
h. Map Reproduction																								
(2) Dispatch of Short Term Experts																								
a. Land Surveying																								
b. Cartography																								
c. Photogrammetry & Remote Sensing																								
d. Map Reproduction																								
(3) Training of Kenyan Personnel in Japan																								
(4) Provision of Equipment																								
3. Inputs of Kenyan Side																								
(1) Land, Buildings and Facilities																								
a. Land for the KISM at SOK Field H.Q.																								
b. Buildings & Facilities for Training																								
c. Housing for Staff																								
d. Buildings & Facilities for Welfare																								
(2) Budget for																								
the Implementation of the Project																								
(3) Assignment of Counterpart &																								
Administrative Personnel																								

Note: (a) This is tentatively formulated on condition that the necessary budget will be secured.

(b) This Schedule is subject to change within the scope of the Record of Discussions, if necessity arises.

ANNEX 4. Plan of Operation for Whole Period

Project : Kenya Institute of Surveying and Mapping (KISM)
 Project Purpose : KISM will be established as the Training Organization for fostering Qualified Officers in the fields of Surveying and Mapping

Output	Activities	Target	Schedule (Japanese Fiscal Year)					Responsible Person in Project Team	Inputs*	Remarks
			1994 I B E V	1995 I I I I I	1996 I I I I I	1997 I I I I I	1998 I I I I I			
1. Organization for KISM is to be established	1.1 To assign Appropriate Personnel	Number of Personnel Counterparts : 60	---	---	---	---	Principal Chief Advisor	Deputy Principal Project Coordinator Admin. Secretary Training Planner Long Term Experts Administrative Staff	Personnel Assignment shall be completed by beginning of 1998	
	1.2 To establish the Administration System of KISM	Administrative : 30	---	---	---	---				
	1.3 To establish the Recruiting & Selection System of the Trainees	Annual Intake of Trainees Diploma : 103 Higher Diploma: 30	---	---	---	---				
2. Appropriate Training Facilities and Equipment are to be installed	2.1 To establish Training Facilities	Land, Building and Facilities Management Committee for Equipment and Supplies	---	---	---	---	Principal Chief Advisor	Facilities and Equipment under Grant Aid Scheme are expected to be installed by September 1997		
	2.2 To establish Management & Maintenance System of Equipment & Supplies		---	---	---	---				
	2.3 To keep Maintenance & Utilization Records of Equipment & Supplies		---	---	---	---				
3. Sufficient Number of the Kenyan Lecturers for KISM are to be upgraded	3.1 To introduce Preparation, Managing & Evaluating Method of the Training Courses	Counterpart Personnel	---	---	---	---	Principal Chief Advisor Deputy Principal Training Planner	Hheads of Departments Long Term Experts Short Term Experts	Monthly, Quarterly and Annual Report for Institute shall be developed	
	3.2 To improve the Level of Technical Knowledge and Teaching Method	Hheads of Department Senior Lecturers Assistant Lecturers	---	---	---	---				
	3.3 To evaluate the Acquisition of Technical Knowledge		---	---	---	---				
4. Guidelines, Syllabi and Curricula for Training Courses are to be developed	4.1 To develop Guidelines	Geodesy	---	---	---	---	Principal Chief Advisor Deputy Principal Training Planner	Hheads of Departments Long Term Experts Short Term Expert	Syllabi for All Courses shall be authorized by KIE	
	4.2 To develop Syllabi	Cadastral Surveying Cartography Photogrammetry & Remote Sensing Map Reproduction	---	---	---	---				
	4.3 To develop Curricula		---	---	---	---				
5. Text Books & Teaching Materials for Training Courses are to be developed	5.1 To develop Text Books	Geodesy	---	---	---	---	Deputy Principal Training Planner	Hheads of Departments Long Term Experts Short Term Experts	Random Survey for the Project shall be implemented by Management Committee	
	5.2 To develop Teaching Materials	Cadastral Surveying Cartography Photogrammetry & Remote Sensing Map Reproduction	---	---	---	---				
6. Training in the fields of Surveying and Mapping are to be implemented	6.1 To implement Pre-service Diploma Course	Diploma : 4 courses	---	---	---	---	Principal Chief Advisor	Deputy Principal Training Planner Long Term Experts Short Term Experts	Higher Diploma Course will be postponed until the facilities are available	
	6.2 To implement In-service Higher Diploma Course	Higher Diploma : 3 courses	---	---	---	---				
	6.3 To introduce Up-to-date Technology	Short Term Training and/or Seminar	---	---	---	---				

* Personnel, Equipment and other Measures necessary for implementing the activities

ANNEX 5. Annual Plan of Operation (Japanese FY 1996)

Project : Kenya Institute of Surveying and Mapping (KISM)

Output/Result : 2. Appropriate Training Facilities and Equipment are to be installed

Activities	Target	Schedule (Fiscal Year 1996)												Responsible Person in Project Team	Inputs*	Remarks		
		1996						1997										
		4	5	6	7	8	9	10	11	12	1	2	3					
2.1 To establish Training Facilities	Facilities for Training, Administration & Calibration, and Laboratory & Dormitory	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	Fund for Modification of Existing Classroom, Preparation Work of New Facilities and Procurement of Necessary Equipment	Monthly, Quarterly and Annual Report for Institute shall be developed
2.1.1 To provide Temporary Training Facilities		~	~	~	~	~	~	~	~	~	~	~	~	~	~	~		
2.1.2 To construct Permanent Training Facilities		~	~	~	~	~	~	~	~	~	~	~	~	~	~	~		
2.1.3 To provide Necessary Equipment		~	~	~	~	~	~	~	~	~	~	~	~	~	~	~		
2.2 To establish Management & Maintenance System of Equipment and Supplies	Management Committee for Equipment and Supplies	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	Deputy Principal	- Record of Construction
2.2.1 To establish Management Committee for Equipment and Supplies		~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	Project Coordinator	
2.2.2 To implement Seminar for Management System of Equipment and Supplies		~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	Admin. Secretary	- Record of Supplies
2.3 To keep Maintenance and Utilization Records of Equipment and Supplies	Admin. Secretary	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	Deputy Principal	- List of Equipment and Supplies
2.3.1 To develop Minutice & Utilization Record of Equipment and Supplies	Heads of Departments	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	Project Coordinator	
2.3.2 To implement Periodical Check of Equipment and Supplies	Staff of Stores	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	Admin. Secretary	- Record of Maintenance and Utilization

*Personnel, Equipment and other Measures necessary for implementing the activities

ANNEX 5. Annual Plan of Operation (Japanese FY 1996)

Project : Kenya Institute of Surveying and Mapping (KISM)

Output/Result : 3. Sufficient Number of the Kenyan Lecturers for KISM are to be upgraded

Activities	Target	Schedule (Fiscal Year 1996)												Responsible Person in Project Team	Inputs*	Remarks	
		4	5	6	7	8	9	10	11	12	1	2	3				
3.1 To introduce Preparation, Management and Evaluation Method of Training Courses 3.1.1 To implement Model Training and/or Seminar for Preparation Method 3.1.2 To implement Model Training and/or Seminar for Managing Method 3.1.3 To implement Model Training and/or Seminar for Evaluation Method	Admin. Secretary Heads of Departments Senior Lecturers Assistant Lecturers	~	~	~	~	~	~	~	~	~	~	~	~	~	Deputy Principal Training Planner	Heads of Departments Long Term Experts Short Term Experts Lecturers	KITC Seminar shall be held during the Inter-term Period (April, August and November)
3.2 To improve the Level of Technical Knowledge and Teaching Method 3.2.1 To select Applicants 3.2.2 To arrange Training Courses in Japan 3.2.3 To implement Technical Training in Japan 3.2.4 To implement Model Training and/or Seminar for Teaching Methodology	Heads of Departments Senior Lecturers Assistant Lecturers	~	~	~	~	~	~	~	~	~	~	~	~	~	Principal Chief Advisor	Deputy Principal Training Planner Heads of Departments Long Term Experts	Monthly, Quarterly and Annual Report for Institute shall be developed - Record of Seminar - Report from Inspectors and Candidates - Report from Experts and Counterparts
3.3 To evaluate the Acquisition of Technical Knowledge 3.3.1 To develop Check Lists for Evaluation of Lecturers' Technical Knowledge 3.3.2 To implement Periodical Check	Senior Lecturers Assistant Lecturers	~	~	~	~	~	~	~	~	~	~	~	~	~	Deputy Principal Training Planner	Heads of Departments Long Term Experts	

* Personnel, Equipment and other Measures necessary for implementing the activities

ANNEX 5. Annual Plan of Operation (Japanese FY 1996)

Project : Kenya Institute of Surveying and Mapping (KISM)

Output/Result : 4. Guidelines, Syllabi and Curricula for Training Courses are to be developed

Activities	Target	Schedule (Fiscal Year 1996)												Responsible Person in Project Team	Inputs*	Remarks	
		4	5	6	7	8	9	10	11	12	1	2	3				
4.1 To develop Guidelines															Deputy Principal Training Planner	Heads of Departments Long Term Experts Lecturers Short Term Experts	Instruction Manual for Each Department shall be developed Higher Diploma Syllabus for Land Surveying, Cartography and Photogrammetry & Remote Sensing shall be authorized by Kenya Institute of Education Random Survey for the Project shall be implemented by Management Committee Dmr: Diploma Map Reproduction H : Higher Diploma
4.1.1 To analyze Existing Guidelines																	
4.1.2 To improve Existing Guidelines and/or to develop New Guidelines	Diploma Course: - Land Surveying - Cartography - Photogrammetry & Remote Sensing - Map Reproduction																
4.2 To develop Syllabi																	
4.2.1 To analyze Existing Syllabi																	
4.2.2 To improve Existing Syllabi and/or to develop New Syllabi	Higher Diploma Course: - Land Surveying - Cartography - Photogrammetry & Remote Sensing																
4.3 To develop Curricula																	
4.3.1 To analyze Existing Curricula																	
4.3.2 To improve Existing Curricula and/or to develop New Curricula																	

* Personnel, Equipment and other Measures necessary for implementing the activities.

ANNEX 5. Annual Plan of Operation (Japanese FY 1996)

Project : Kenva Institute of Surveying and Mapping (KISM)

Output/Result : 5. Text Books and Teaching Material for Training Courses are to be developed

Activities	Target	Schedule (Fiscal Year 1996)												Responsible Person in Project Team	Inputs*	Remarks
		1996			1997											
		4	5	6	7	8	9	10	11	12	1	2	3			
5.1 To develop Text Books																
5.1.1 To analyze Existing Text Books	Diploma Course: - Land Surveying - Cartography													Deputy Principal	Heads of Departments Long Term Experts Lecturers Short Term Experts	Random Survey for the Project shall be implemented by Management Committee
5.1.2 To improve Existing Text Books and/or to develop New Text Books	- Photogrammetry & Remote Sensing - Map Reproduction													Training Planner		Audio Visual Material will be developed
5.2 To develop Teaching Materials																
5.2.1 To analyze Existing Teaching Materials	Higher Diploma Course: - Land Surveying - Cartography													Deputy Principal	Heads of Departments Long Term Experts Lecturers Short Term Experts	Di : Diploma Stage I Dii : Diploma Stage II Diii: Diploma Stage III
5.2.2 To improve Existing Teaching Materials and/or to develop New Teaching Materials	- Photogrammetry & Remote Sensing													Training Planner		Hi : Higher Diploma Stage I
																Diploma Courses: - Land Surveying - Cartography - Photogrammetry & Remote Sensing - Map Reproduction
																Higher Diploma Courses: - Land Surveying - Cartography - Photogrammetry & Remote Sensing

*Personnel, Equipment and other Measures necessary for implementing the activities

ANNEX 5. Annual Plan of Operation (Japanese FY 1996)

Project : Kenya Institute of Surveying and Mapping (KISM)

Output/Result : 6. Training in the Fields of Surveying and Mapping are to be implemented

Activities	Target	Schedule (Fiscal Year 1996)												Responsible Person in Project Team	Inputs*	Remarks
		1996			1997			1997			1997					
		4	5	6	7	8	9	10	11	12	1	2	3			
6.1 To implement Pre-service Diploma Course	Modified Annual Intake of Trainees :85 - Land Survey :30 - Cartography :25 - Photo. & R.S. :15 - Map Repro. :15													Principal	Deputy Principal Training Planner Heads of Departments Long Term Experts Lecturers Short Term Experts	
6.2 To implement In-service Higher Diploma Course	Annual Intake of Trainees :30 - Land Survey :10 - Cartography :15 - Photo. & R.S. : 5													Principal Chief Advisor	Deputy Principal Training Planner Heads of Departments Long Term Experts Lecturers Short Term Experts	Higher Diploma Courses will be postponed until the facilities are available
6.3 To introduce Up-to-date Technology	Officers belonging to SOK and Other Related Organizations													Principal Chief Advisor	Deputy Principal Training Planner Heads of Departments Long Term Experts Lecturers Short Term Experts	Seminar and/or Short Term Training will be held during the later-term period (April, August and November)
6.3.1 To prepare Seminar and/or Short Term Training																Di : Diploma Stage I
6.3.2 To implement Seminar and/or Short Term Training																Dii : Diploma Stage II

*Personnel, Equipment and other Measures necessary for implementing the activities

付属資料 2. 学院長報告

MINISTRY OF LANDS AND SETTLEMENT

KENYA INSTITUTE OF SURVEYING AND MAPPING

PRINCIPAL'S PROGRESS REPORT

FEBRUARY, 1996

KENYA INSTITUTE OF SURVEYING AND MAPPING (KISM) PROJECT

Background for the establishment of the Institute

The proposal for the establishment of KISM was mooted through the preparations of five proposal editions, each edition reviewing a previous edition since 1985. The latest editions were prepared in April and June 1992 namely:

edition 5A - proposal for the Japanese Grant Aid Project for the establishment of the Kenya Survey Institute of Training and Research later re-named Kenya Institute of Surveying and Mapping (K.I.S.M)

edition 5B - proposal for the Project-Type Technical co-operation for the establishment of KISM.

The two proposals were forwarded by the Government of Kenya to the Government of Japan seeking support to establish KISM.

The Japanese Technical Co-operation for the Kenya Institute of Surveying and Mapping

The Government of Japan responded to the proposal for Project Type Technical co-operation for the establishment of KISM by sending to Kenya the Japanese Preliminary Survey team to carry out discussions with the authorities concerned of the Government of Kenya from 22nd November, 1993 to 1st December, 1993. Thereafter, the Government of Japan sent a follow-up mission known as the Japanese Implementation Survey team to undertake conclusive discussions with the authorities concerned of the Government of Kenya for the purpose of preparing "Record of Discussions" and "Minutes of meeting" in respect of the desirable measures to be taken by both Governments for the successful implementation of the Kenya Institute of Surveying and Mapping Project. The discussions were held between 22nd August, 1994 to 25th August, 1994 culminating in the signing of the two documents by Mr. J. K. Sang Permanent Secretary, Ministry of Lands and Settlement and Mr. Kunio Nonomura, the leader of the Japanese Implementation Survey team of Japan International Co-operation Agency (J.I.C.A). The two sides agreed to recommend to the "Record of Discussion" and "Minutes of meeting as a supplement to the Record of Discussion for necessary action in order to implement the project. The duration of the technical co-operation for the project will be (5) years commencing on 1st October, 1994.

The Japanese Grant Aid Project for the Establishment of the Kenya Institute of Surveying and Mapping

The Government of Japan responded to the proposal for the Grant-Aid project for the establishment of KISM by sending to Kenya the basic design study team headed by Mr. Yoshiro Nakahori.

The team held discussions with the officials concerned of the Government of Kenya from 10th October, 1994 to 8th November, 1994 and also conducted a field study of the site. The minutes of discussions were signed by the Permanent Secretary, Ministry of Lands and Settlement, Mr. J. K. Sang and Mr. Y. Nakahori the leader of the Basic Design Study of JICA on 19th October, 1994. A follow-up mission was sent to Kenya to discuss the draft report of the basic design study team with the concerned officials of Government of Kenya from 21st February, 1995 to 27th February, 1995, culminating in the signing of the minutes of discussions on the consultation of Draft Report by the Permanent Secretary, Ministry of Lands and Settlement Mr. J. K. Sang and Mr. Minoru Akiyama, the leader of the Study Team for Explanation of Draft Report, JICA on 27th February, 1995. The main aspects of this project are as follows:-

- (i) To construct necessary facilities for Kenya Institute of Surveying and Mapping as follows:-
 - . Administration building
 - . Training building
 - . Laboratory building
 - . Trainee's hostel
 - . Other incidental buildings
 - . Calibration site.
- ii) Provision of equipment as follows:-
 - . General use equipment
 - . Land Survey equipment
 - . Cartography equipment
 - . Photogrammetric and Remote Sensing equipment
 - . Map reproduction equipment.
- iii) Provision of vehicles.

Justification for the Establishment of (KISM)

Demand for agricultural development, social forestry development, development of energy sources, development of water resources, demand for title surveys etc. has increased along with the rapid increase in population. This has brought out the importance of maps, plans, charts and aerial photographs in Kenya's development planning efforts. All these products are required by the decision makers and planners for national development projects. These products are prepared by skilled personnel in the fields of surveying and mapping. The country has insufficient number of these personnel and hence the need for this project.

Project Purpose

To establish Kenya Institute of Surveying and Mapping as the training organization for fostering qualified officers in the fields of surveying and mapping.

The following courses will be conducted at KISM.

1. Pre-Service Diploma courses

- Land Surveying
- Cartography
- Photogrammetry & Remote Sensing
- Map Reproduction.

2. In-Service Higher Diploma Course

- Land Surveying
- Cartography
- Photogrammetry & Remote Sensing.

3. In-Service Short - term Training

- This training will be conducted for the purpose of upgrading the technological level and skills in the fields of Surveying and Mapping.

THE PROPOSED DEVELOPMENT AND RECURRENT ESTIMATES FOR THE INSTITUTE

The Japanese Implementation Survey Team organised by the Japan International Co-operation Agency (JICA) visited the Republic of Kenya from 22nd August, 1994 to 25th August, 1994 and held discussions with the Kenya Government officials for the purpose of working out the details of the technical co-operation program concerning the Kenya Institute of Surveying and Mapping project in the Republic of Kenya.

During the discussions, it was agreed among other things that the input to the project from the Kenyan side will include the allocation of budget (recurrent and development) and the assignment of both technical and administrative personnel to the project.

Recurrent Expenditure

In preparing the recurrent estimates for KISM project, the Department of Surveys made use of the recurrent budgets and personnel establishments of the following Government institutes as references;

1. Kenya Water Institute
2. NYS Engineering Institute
3. Co-operative College
4. Staff Training Department of Ministry of Public Works.

The number of teaching personnel of KISM project, has already been agreed upon and is reflected in the "Record of Discussion" (relevant copies attached) between the Japanese implementation Survey team and the authorities concerned of the Republic of Kenya on the Japanese Technical Co-operation for the Kenya Institute of Surveying and Mapping project.

Development Estimates and Extent of project implementation

The development budget to the project will initially support the Grant-Aid Project. The input by the Government of Kenya is expected to be as follows:

1. To clear and level the site when needed.
2. To construct gates and fences in and around the site
3. To construct roads outside the site
4. To provide electricity to the site
5. To provide water supply to the site
6. Connection of sewer line to the Nairobi City Council main sewer nearby
7. To avail the telephone trunk line to the main distribution panel
8. To procure general furniture.

Meanwhile preparations to have the above works implemented are being handled by the Ministry of Works and are quite at an advanced stage.

Assignment of Personnel

The Government of Kenya will undertake to gradually assign teaching and administrative personnel in accordance with the progress of the Project's implementation.

Proposed Personnel for KISM

The following is the proposal establishment for KISM when it is fully operational;

DETAILS	JOB GROUP	PROPOSED NUMBER
Principal	P	1
Deputy Principal	N	1
Principal Lecturer	N	1
Administrative Secretary	N	1
Senior Lecturer	M	9
Lecturer II/I	K/L	19
Administrative Officer	L	1
Accountant II/I	J/K	1
Executive Officer II/I	J/K	1
Lecturer III	J	31
Supplies Officer	J/K	1
Personal Secretary	J/K	3
Librarian	J/K	1
Technicians	H/J/K	8
Executive Assistants	H	4
Accounts Assistants	H	2
Supplies Assistants	H	2
Maintenance Officer	H/J	1
Cateress	H/J	1
House Keeper	H/J	1
Short Hand Typist	G/H	4
Assistant Librarian	G/H	1
Audio/Visual Aids Officer	G/H	1
Assistant cateress	G/H	2
Sports Officer	G/H	1

Nurse	G/H	2
Assistant Maintenance Officer	G	1
Library Assistant	F/G	2
Copy Typist	E/F/G	6
Clerical Officer	E/F/G	15
Assistant House Keeper	E/F/G	3
Book Binder	E/F/G	2
Store-man II/I	E/F	2
Telephone Operator II/I	E/F	3
Security Officer	E/F	1
Head Cook	E/F	1
Artisan III/III/I	D/E/F	6
Driver	D/E/F/G	10
Mechanic	D/E/F/G	2
Cook	D/E/F	9
Security Warden	C/D/E	10
Boiler Attendant	C/D/E	2
Subordinate Staff (General duties)	A/B/C/D	20
Gardener	A/B/C	4
Messenger	A/B/C	2
Sanitary Cleaner	A/B/C	4
TOTAL		197

APPROVED PERSONNEL FOR KISM

The following is the current approved establishment for KISM by the Directorate Personnel Management (DPM). Since the personnel approved are few, arrangement should be made to re-

designate the current Teaching staff to assume Lecturer status such as to fulfill the personnel formula given above. This would be in line with the original aspirations.

1. 1 post of Principal, Job Group P
2. 1 post of Deputy Principal, Job Group N
3. 1 post of Administrative Secretary, Job Group N
4. 6 posts of Senior Lecturers, Job Group M
5. 8 posts of Lecturers III/II/I, Job Group J/K/L
6. 1 post of supplies Officer II/I, Job Group J/K
7. 1 post of Personal Secretary II, Job Group J
8. 1 post of a Librarian II/I, Job Group J/K
9. 1 post of Accountant II/I, Job Group J/K
10. 1 post of Executive Officer III/I, Job Group J/K
11. 2 posts of Technicians, Job Group G/H
12. 1 post of Executive Assistant, Job Group H
13. 1 post of Accounts Assistant, Job Group H
14. 1 post of Supplies Assistant, Job Group H
15. 1 post of Housekeeper/Caterers, Job Group H
16. 2 posts of Shorthand Typist II/I, Job Group G/H
17. 1 post of Assistant Librarian, Job Group G
18. 1 post of Sports Officer III/II, Job Group G/H
19. 2 posts of Assistant Housekeeper/Caterers, Job Group G/H
20. 1 post of Audio Visual Aids Officer III/II, Job Group G/H
21. 1 post of Technician III (Maintenance), Job Group G
22. 6 posts of Cook III/II/I Senior, Job Group D/E/F/G
23. 4 posts of Driver III/II/I Senior, Job Group D/E/F/G

CURRENT PERSONNEL STAFF AT KISM

KENYAN COUNTERPARTS

H. Nyapola	Ag. Principal
K. Mwero	Ag. Deputy Principal

Department of Land Surveying

1. W.N. Kamau (Undertaking studies in Japan)
2. C.M. Kimamia (Ag. HoD)
3. H.E. Waithaka
4. G. Ayoo
5. B.M. Mutua
6. I.L. Ateya

7. P. Kioi
8. C.M. Lwanga

Department of Cartography

1. E. Ondiek (Ag. HoD)
2. C. Mwangi
3. W. Muasya
4. E. Awino
5. H. Jumba
6. E. Mandi (Ms)

Department of Photogrammetry and Remote Sensing

1. S. O. Ayugi
2. I. Ouma
3. D. Njubi (Ag. HoD)
4. K. Ng'eno

Department of Map Reproduction

1. S. Mugadi (Ag. HoD)
2. M.O. Omach
3. C. Ochieng (Ms)
4. P. Congo
5. P.M. Manyagi

Humanity Courses

1. J.K. Katunga
2. O.M. Kitonyi

Administration Personnel

- | | | |
|----|---------------|-------------------------------------|
| 1. | W.K. Kagundu | Accountant II |
| 2. | E.M.W. Nyuttu | Supplies Assistant |
| 3. | J.N. Kagunda | Storeman |
| 4. | M. Odeny | Clerical Officer |
| 5. | E. Njeri | S/S (Performing Secretarial duties) |
| 6. | S. Osewe | S/S (Subordinate Staff) |

Meanwhile indents have been raised to fill in the approved personnel establishment and re-designate the existing KISM staff so as to satisfy the full staff compliment provided on page 7.

PROGRESS FOR KISM ACTIVITIES

1. CURRICULUM DEVELOPMENT

i. Diploma Courses

The following four courses at diploma level will be conducted at KISM commencing January, 1996

- * Land Surveying
- * Cartography
- * Photogrammetry and Remote Sensing
- * Map reproduction

Kenya Institute of Education (KIE) has already developed syllabi in the following courses

- * Diploma in Land Surveying
- * Diploma in Cartography
- * Diploma in Photogrammetry and Remote Sensing

The above three syllabi were developed and put into use in 1992. The Diploma in Map reproduction course being a new course within the National Technical Education Programme require KIE to develop its syllabi.

KIE organised a KISM funded workshop (Amount spent Ksh.320,000/-) to set out the initial preparation of the syllabus. It is hoped that the final draft of the syllabi will be ready in April, 1996 for use by KISM in implementing its programmes pending its final approval within the year 1996.

ii. Higher Diploma Courses

It is anticipated that when KISM is fully operational, it will conduct the following courses at Higher Diploma Level;

- * Land Surveying
- * Cartography
- * Photogrammetry and Remote Sensing

The draft proposals for the Higher Diploma courses in Cartography and Photogrammetry and Remote Sensing have already been submitted to KIE for development.

The Higher National Diploma Syllabi for Land Surveying is already in use but is modeled on the old Education System. The need to have it reviewed to be in line with the 8-4-4 system of education is now necessary. KISM is in the process of making the draft proposal to be forwarded to KIE to enable the review of the syllabi to be undertaken.

2. TRAINING

i. Recruitment

The trainees to pursue the diploma courses at KISM starting in January, 1996 have already been called and the intake stands as follows:

*	Diploma in Land Surveying	30
*	Diploma in Cartography	25
*	Diploma in Photo & Remote Sensing	15
*	Diploma in Map Reproduction	15
	Total	85

The following have so far reported and are continuing with classes

*	Land Surveying.....	26
*	Cartography.....	21
*	Photogrammetry & Remote Sensing.....	8
*	Map Reproduction.....	13
	Total	68

ii. Trainees Accommodation

At the moment, a few houses exist at the Junior Staff Quarters within Survey of Kenya, Field Headquarters. These houses are insufficient to cater for the large number of trainees recruited for the 1996 courses at KISM. These same houses are still occupied by Survey of Kenya trainees who are still pursuing courses at the Kenya Polytechnic and the last group will complete their studies in November, 1997.

It is anticipated to encourage the in-coming trainees to make their private arrangements for accommodation, particularly those with parents and relative in Nairobi, and to offer accommodation on "sharing" basis to the most needy ones, pending the completion of the hostels at the new KISM buildings.

iii. Preparation of Teaching Notes

Each Department has prepared teaching notes for the first stage. The notes have been bound and issued to trainees .

iv. Classroom Facilities

Presently five classrooms are available, and its hoped that Survey of Kenya will provide two additional rooms to supplement the existing ones next year.

v.1 Modification of initial plan of operation

In view of limited classrooms it is proposed that the following measures put in place.

1) **Diploma course operation**

- a, Reduce the number of classes to four instead of five for the first intake by canceling one Land Survey class.
- b, Reduce the number of classes to four instead of five for the second intake by canceling the Photogrammetry class.

2) **Higher Diploma Course Operation**

- a, Suspend the execution of higher diploma course until facilities for the course are ready.

v.2 Temporary measures to be taken for the course operation of year 1997

1) **Classroom**

- a, Furnish two rooms currently occupied by production side for classroom use by KISM.
- b, Modify one of the rooms to accommodate Trade support classes.

2) **Hostels**

- a, Request SOK to continue making accommodation available for KISM students from its junior staff quarters.
- b, Ask students to find accommodation by themselves.

3. IN-SERVICE SHORT-TERM TRAINING

During the first year of operation KISM conducted a one year model training programme for serving officers within the Survey Department in the field of Geodetic Surveying and Cartography. The programme was successfully concluded on 5th October, 1995 having trained 30

participants 14 of whom were Geodesists while the remaining 16 were Cartographers. The overall performance of the trainees was remarkably satisfying; rated at 85%.

The Cartography trainees undertook in the course of training, the revision of the Nairobi City Map, and it is hoped the map will fetch wide market in the Tourism and other related Industries.

The Geodetic Surveying trainees undertook for their project work the re-establishment of four destroyed Survey marks (pillars) within the Athi-River--Machakos areas and precise levelling circuit along Nairobi-Kiambu-Kamiti road. 12 new first order bench marks were established.

4. KISM MANAGEMENT

The day-to-day activities of KISM on Kenyan side is managed by the Ag. Principal Assisted by the Ag. Deputy Principal. For the effective co-ordination and implementation of KISM activities, the management has put into place the following committees;

i. Joint Management Committee

Members:-

Kenya Side

Ag. Principal

Ag. Deputy Principal

H. Nyapola

K. Mwero

Japanese Side

Chief Advisor

Project Co-ordinator

Training Planner

Snr. Japanese Expert

M. Akiyama

K. Isomoto

H. Murayama

T. Saito

ii. Weekly Departmental Meeting

Members:

Kenyan Side

Ag. Principal

Ag. Deputy Principal

Ag. Heads of Departments (five)

Japanese Side:

Chief Advisor

Project Coordinator

Training Planner

All Japanese Experts (five)

iii. Quarterly year Departmental Meetings

Members:

All members within the department and the respective Japanese Experts

iv **Steering Committee Meeting**

A steering committee of the Joint Coordinating Committee of KISM was put in place, chaired by the Director of Surveys.

Members;

- Kenyan side: -**
- Director of Surveys - Chairman
 - Deputy Director of Surveys
 - Deputy Secretary - Surveys
 - Ag. Principal
 - Ag. Deputy Principal
- Japanese Side:**
- Chief Advisor
 - Project Coordinator
 - Training Planner
 - Sr. Japanese Expert
 - Assistant Resident Rep. JICA in charge of KISM

5. **STAFF DEVELOPMENT**

It is proposed to make use of the following training opportunities for the staff development for KISM;

- * Counterpart training programme
- * Japanese Group Training Course in Surveying and Mapping
- * Japanese Mumbusho Scholarship
- * Japanese Group Training course in Remote Sensing
- * Netherlands Fellowship Programmes
- * Seminars on Teaching Methodologies

6. **GOVERNMENT TRAINING INSTITUTE MANAGEMENT**

The Ag. Principal and Ag. Deputy Principal have visited the following Government training Institutions in order to gather necessary information in order to formulate the best way KISM could be managed.

- * National Youth Service Engineering Institute
- * Kenya Water Institute
- * Kenya Institute of Mass Communication
- * Co-operative College

Further arrangements are being made to visit the following institutes/college;

- * Medical Training College
- * Staff Training College

After the visits to the above institutions a report will be prepared for submission to the Permanent Secretary through the Director of Surveys giving recommendations on the management of KISM.

8. RESTRAINING FACTORS

i. Office space

KISM is experiencing shortage of office space for its teaching staff as well as administrative personnel.

ii. Transport

There is urgent need for full time transport for KISM to meet its administrative obligations.

付属資料 3. チーフアドバイザー報告

Chief Advisor's Report as of February 22, 1996

1. Dispatch of Japanese Experts

1.1 Long Term Experts

According to the R/D, eight experts are being dispatched during the project period. This has been completed by September, 1995 when a photogrammetry expert gathered to KISM. Experts assigned to KISM since October, 1994 are those as follows.

1. Chief Advisor :	Mr. Taketsune Hosono	(Oct. '94 - May '95)
	Mr. Minoru Akiyama	(Jun. '95 -)
2. Coordinator :	Mr. Kenji Isomoto	(Oct. '94 -)
3. Training Planner :	Mr. Hideki Murayama	(Feb. '95 -)
4. Geodesy Expert :	Mr. Kiyohiro Miyazaki	(Oct. '94 -)
5. Cartography Expert :	Mr. Tamotsu Saito	(Oct. '94 -)
6. Photogrammetry and Remote Sensing Expert :	Mr. Bokuro Urabe	(Sept. '95 -)
7. Map Reproduction Expert :	Mr. Shoichi Hara	(Oct. '94 -)
8. Cadastral Survey Expert :	Mr. Masato Nakashima	(Jun. '95 -)

1.2 Short Term Expert

According to the R/D, short term experts in four fields as Land Surveying, Cartography, Photogrammetry and Remote Sensing, and Map Reproduction are being dispatched at appropriate occasions during the project period. Ten short term experts have been dispatched for services since October 1994 as listed below.

1. Experts for New Technology

Two experts for GPS surveying and one expert for GIS technology came in July, 1995 and stayed three weeks to introduce new technology mainly for the Model Course students.

1. Mr. T. Imakiire	July 19, 1995 - Aug. 12, 1995	Expert in GPS
2. Mr. K. Goto	July 19, 1995 - Aug. 12, 1995	Expert in GPS
3. Mr. K. Katsuta	July 19, 1995 - Aug. 12, 1995	Expert in GIS

2. Experts for Text Book Development

Five experts in respective fields came in October, 1995 and stayed six weeks to work with Long Term Experts and Kenyan Counterparts to develop textbooks for each core subjects.

4. Mr. T. Hokugo	Oct. 16, 1995 - Nov. 30, 1995	Expert in Geodesy
5. Mr. R. Miyasaka	Oct. 16, 1995 - Nov. 30, 1995	Expert in Cartography
6. Mr. S. Iida	Oct. 16, 1995 - Nov. 30, 1995	Expert in Map Reproduction
7. Mr. H. Hada	Oct. 16, 1995 - Nov. 30, 1995	Expert in Cadastral Surveying
8. Mr. J. Sato	Nov. 4, 1995 - Nov. 30, 1995	Expert in Photogrammetry

3. Experts for Management

Two experts in Administration and Management came in November, 1995 and stayed two weeks to advise KISM management and administration.

9. Dr. H. Kuroishi	Nov. 19, 1995 - Dec. 2, 1995	Expert in Management
10. Mr. Y. Fukushima	Nov. 19, 1995 - Dec. 2, 1995	Expert in Management

2. Provision of Machinery and Equipment

According to the R/D, the Government of Japan (GOJ) will provide such machinery, equipment and other materials necessary for the implementation of the project. In the Japanese fiscal year 1994, equipment etc. in the value of ¥ 42 million were provided. In the fiscal 1995, equipment etc. values ¥ 55.5 million are confirmed to be provided, and most of them have already provided. Besides, one Land Information System brought and demonstrated by a short term expert was donated to KISM.

3. Training of Kenyan Personnel in Japan

According to the R/D, GOJ is expected to train some Kenyan counterpart personnel in Japan to improve their abilities. Nine officers have been trained since October, 1994 as listed below.

1. Mr. K. Ngeno	Oct. 18, 1994 - Feb. 28, 1995	Counterpart Training in Photogrammetry
2. Mr. W. Muasya	Nov. 29, 1994 - Feb. 28, 1995	Counterpart Training in Cartography
3. Mr. A.K. Njuki	Mar. 19, 1995 - Apr. 2, 1995	Counterpart Training in Administration
4. Mr. J.O. Sogoh	Jun. 19, 1995 - Aug. 27, 1995	Group Training in Environmental Mapping
5. Mr. C.M.K. Mwangi	Jun. 19, 1995 - Dec. 16, 1995	Counterpart Training in Cartography
6. Mr. S.F. Mugadi	Jun. 19, 1995 - Dec. 16, 1995	Counterpart Training in Map Reproduction
7. Mr. G.O. Ayoo	Jul. 17, 1995 - Dec. 16, 1995	Counterpart Training in Land Surveying
8. Mr. W.N. Kamau	Jul. 31, 1995 - Jul. 7, 1996	Group Training in Surveying and Mapping II
9. Mr. H. Nyapola	Oct. 16, 1995 - Dec. 16, 1995	Counterpart Training in Administration

4. Major Activities

4.1 Model Training in Geodesy and Cartography

Model Training Course had been conducted from Oct., 1994 to Oct., 1995 in Geodesy and Cartography. Japanese experts provided technical supports, equipment, materials and other services to operate the courses. Through the courses, Kenyan lecturers could be acquainted with teaching methods, course planning and course operation. Besides the traditional techniques in geodesy and cartography, the contemporary technology as GPS (Global Positioning Systems) and GIS (Geographic Information Systems) had also been introduced and demonstrated by the short term experts during the course. The major result of Geodesy Course is reconstruction of triangular points and the major result of Cartography course is the revision of the "City of Nairobi" map. Those results were transferred to the Survey of Kenya and qualified as the official survey results.

4.2 Syllabus for Diploma in Map Reproduction

Since the diploma course in map reproduction is completely new course in Kenya, its syllabus have to be developed before the course starts. Japanese experts and Kenyan counterparts jointly worked in developing the draft of the syllabus. In October, 1995, Kenya Institute of Education (KIE) hold a technical workshop to examine the draft. Japanese experts and Kenyan counterparts participated the workshop and gave major contributions to decide the draft from the technical points of view. The draft syllabus is now waiting for its authorization by subject panel and academic board expected to be held early this year. However, KISM can use the draft syllabus for the course operation since it has passed the technical workshop.

4.3 Teaching Material Development

Adequate text books for core subjects in Diploma courses were not available in Kenya. Therefore, Japanese experts and Kenyan counterparts have developed new text books with the help of short term experts. Seven volumes of text books for the first stage were developed before the start of the Diploma course. They are "Survey Control", "Surveying Instruments", "Land Surveying Practice", "Topographical Surveying Notes", "Cartography", "Photogrammetry" and "Print Origination". Those text books were distributed to each students and used in lectures and practical.

4.4 Improvement of Lecturer's Teaching Ability

Most Kenyan counterparts had no experience of teaching students in class. Therefore, the project hold one week seminar for teaching method in December, 1995. The seminar was conducted by the

Kenya Technical Teacher's College under the sponsorship of the project. Through the seminar, expecting lecturers could improve their communication skills, could grasp how to prepare and follow up their lectures and how to evaluate students.

4.5 KISM Management

According to the R/D, Joint Coordinating Committee will meet once a year. The first committee is which this report is to be submitted. In order to make mutual cooperation in KISM more effective, the Steering Committee chaired by the Director of Surveys was established under the Joint Coordinating Committee. Three meetings as listed below were held so far.

- | | |
|-----------------------|---------------|
| 1. The first meeting | Aug. 16, 1995 |
| 2. The second meeting | Oct. 11, 1995 |
| 3. The third meeting | Feb. 19, 1996 |

5. Land, Buildings, Facilities, Equipment, etc.

According to the R/D, the Government of the Republic of Kenya (GOK) is expected to take necessary measures to provide land, buildings, facilities, equipment etc., other than the equipment provided through JICA under the project. In this regard, the GOK requested the GOJ for the Grant Aid Assistance on establishment of KISM. In response to the request, GOJ decided to conduct a Basic Design Study and sent three teams listed below to Kenya till its completion.

- | | |
|-------------------|------------------------|
| 1. October, 1994 | led by Mr. Y. Nakahori |
| 2. February, 1995 | led by Mr. M. Akiyama |
| 3. November, 1995 | led by Ms. F. Yoshida |

Based on the result of the Basic Design Study, it is expected that GOJ will start Detailed Design Study as soon as possible followed by its implementation.

6. Plan of Operation for 1996

6.1 Dispatch of Japanese Experts

Eight long term experts will continue to provide services, while some of them may be alternated by his successor. Short term experts in Geodesy, Cartography, Photogrammetry and Remote Sensing, Map Reproduction, and Cadastral Surveying are expected to be dispatched to help teaching material development and to introduce new technology.

6.2 Provision of Machinery and Equipment

In the fiscal 1996, equipment etc. values more than that of fiscal 1995 is expected to be provided.

6.3 Training of Kenyan Personnel in Japan

As far as the Individual Counterpart Training is concerned, four officers in Administration, Land Surveying, Cartography and Map Reproduction are being requested to be trained. Requests for Group Training has not yet been processed.

付属資料 4. 投入計画作成資料

Output/Result : 1. Organization for KISM is to be established

No. / Activities	Verifiable Indicators (Mission)	Verifiable Indicators (Project)	Means of Verification	Responsible Person in Project Team
1.1 To assign Appropriate Personnel	Experienced high quality staff shall be fostered - C/P : 60 staff HoD DL HDL Land Surv.: 1 10 7	Number of Experienced and Qualified Personnel	Monthly, Quarterly and Annual Report for Institute	Principal.
1.1.1 To assign Counterparts Personnel				Chief Advisor
1.1.2 To assign Administrative Personnel				
1.2 To establish the Administration System of KISM	Cartograph.: 1 7 7 Photo & RS: 1 7 7 Map Rep.: 1 7 - Liberal Art.: 1 2 1 - Admin.: 30 staff	Condition of Management and Services	- List of Personnel	Principal
1.2.1 To establish the Administrative Organization			- Record of Services	Chief Advisor
1.2.2 To develop the Rule for Service			- List of Entrance Requirement	
1.2.3 To develop the Data Base				
1.3 To establish the Recruiting and Selection System of the Trainees	Institute shall be operated smoothly	Condition of Recruitment and Selection	- Record of Recruitment, Examination and Selection	Principal
1.3.1 To improve and/or to develop Entrance Requirements	Admirable Candidates shall be joined and reached the full quorum		Chief Advisor	
1.3.2 To improve and/or to develop Standard of Exam. & Selection				
1.3.3 To implement Recruiting				
1.3.4 To implement Examination & Selection				

Output/Result : 2. Appropriate Training Facilities and Equipment are to be installed

No. / Activities	Verifiable Indicators (Mission)	Verifiable Indicators (Project)	Means of Verification	Responsible Person in Project Team	
2.1 To establish Training Facilities	Necessary Facilities for Training shall be established.	Condition of Construction and Supply	Monthly, Quarterly and Annual Report for Institute	Principal	
2.1.1 To provide Temporary Training Facilities				Chief Advisor	
2.1.2 To construct Permanent Training Facilities					
2.1.3 To Provide Necessary Equipment	Management & Maintenance Committee for Equipment & Supplies shall be functioned, and appropriate Annual Budget shall be secured		- Record of Construction		
2.2 To establish Management and Maintenance System of Equipment and Supplies	Instruction and Maintenance Manual for all Equipment shall be secured	Condition of Management	- Record of Supplies	Deputy Principal	
2.2.1 To establish Management Committee for Equipment and Supplies				- List of Equipment and Supplies	Project Coordinator
2.2.2 To implement Seminar for Management System of Equipment & Supplies					
2.3 To keep Maintenance and Utilization Records of Equipment and Supplies	Maintenance and Utilization Record shall be developed, stated correctly and reflected in the Procurement Proposal	Condition of Maintenance and Utilization	- Record of Maintenance and Utilization	Administrative Secretary	
2.3.1 To develop Maintenance and Utilization Records of Equipment & Supplies					
2.3.2 To implement Periodical Check of Equipment and Supplies					

Symbols / Notes for Monitoring

Planned Duration of Activity = = = = =

Actual Duration of Activity + + + + +

Modified Duration of Activity >>>>>

[AS OF JANUARY 1996]

Degree of Completion	Personnel Requirements (M*M)			Equipment and Material Requirements	Costs (Thousand K.£ / yr.)	Important Assumptions and Remarks
	Kenyan C/P	Japanese Expert	Other Personnel			
87%(K) 26/30 100%(J) 6/6 80%(K) 8/10 100%(J) 2/2	2*0.2*12 & 2*0.1*18 2*0.2*12 & 2*0.1*18	1*0.2*12 & 1*0.1*18 1*0.2*12 & 1*0.1*18	2*0.2*30 (LCP) 4*0.2*30 (SP)		300.(K)	Budget(K) DPM(K)
75%	2*0.2*12 & 2*0.1*12	1*0.2*12 & 1*0.1*12	4*0.2*24 (SP)	Computers		DPM(K)
75%	2*0.2*12 & 2*0.1*12	1*0.2*12 & 1*0.1*12	4*0.2*24 (SP)			
10%	2*0.2*12 & 2*0.1*12	1*0.2*12 & 1*0.1*12	4*0.2*24 (SP)			
	2*0.2*3 & 2*0.1*3 2*0.2*3 & 2*0.1*3 2*0.2*3 & 2*0.1*3 2*0.2*3 & 2*0.1*3	1*0.2*3 & 1*0.1*3 1*0.2*3 & 1*0.1*3 1*0.2*3 & 1*0.1*3 1*0.2*3 & 1*0.1*3	4*0.2*3 (SP) 4*0.2*3 (SP) 4*0.2*3 (SP) 4*0.2*3 (SP) 4*0.2*3 (SP)	Duplicating Machine		DPM(K) KIE KNEC

[AS OF JANUARY 1996]

Degree of Completion	Personnel Requirements (M*M)			Equipment and Material Requirements	Costs (Thousand K.£ / yr.)	Important Assumptions and Remarks
	Kenyan C/Ps	Japanese Experts	Other Personnel			
100%	4*0.1*12	2*0.1*12	8*0.5*12 (SP)	Land, Buildings, Facilities, Equipment.	150.(K)	Budget(K)
0%	4*0.1*12	2*0.1*12	8*0.1*12 (SP)	Instruments, Vehicles, Supplies, Tools, etc.	12,500.(J) (GA)	Public Works (K)
50%	2*0.1*24 & 2*0.2*24	1*0.1*24 & 1*0.2*24	4*0.2*24 (SP, LCP)		1,500.(J) (PTC)	Customs(K)
25%	2*0.1*24	1*0.1*24	4*0.1*24 (SP, LCP)	DAI Forms	200.(K)	Customs(K)
10%	2*0.1*6	1*0.1*6	4*0.1*6 (SP, LCP)			
25%	2*0.2*12 & 2*0.1*12	1*0.2*12 & 1*0.1*12	4*0.2*24 (SP, LCP)	Work Station	25.(J) (PTC)	
10%	2*0.2*6	1*0.2*6	4*0.2*6 (SP, LCP)			

Short Term Experts : (STE)

ex-Japanese Experts : (ex-JE)

Support Personnel : (SP)

Locally Contracted Personnel : (LCP)

Grant Aid : (GA)

Project-type Technical Cooperation : (PTC)

Output/Result : 3. Sufficient Number of the Kenyan Lecturers for KISM are to be upgraded

No. / Activities	Verifiable Indicators (Mission)	Verifiable Indicators (Project)	Means of Verification	Responsible Person in Project Team
3.1 To introduce Preparation, Managing & Evaluating Method of Training Courses 3.1.1 To implement Model Training and/or Seminar for Preparation Method 3.1.2 To implement Model Training and/or Seminar for Managing Method 3.1.3 To implement Model Training and/or Seminar for Evaluation Method 3.1.4 To implement Model Training and/or Seminar for Teaching Method	Lecturers shall be able to prepare, teach, manage and evaluate the Training Courses by themselves Technical and Transfer Knowledge shall be reached appropriate Level to implement Training Courses	Number of Experienced and Qualified Lecturers	Monthly, Quarterly and Annual Report for Institute - List of Lecturers	Deputy Principal Training Planner
3.2 To improve the Level of Technical Knowledge and Teaching Method 3.2.1 To select Applicants 3.2.2 To arrange Training Courses in Japan 3.2.3 To implement Technical Training in Japan	Senior Lecturers shall be able to transfer their knowledge to newly-appointed Lecturers	Level of Technical Knowledge Number of Candidates	- Record of Training Courses - Report from Instructors and Candidates	Principal Chief Advisor
3.3 To evaluate the Acquisition of Technical Knowledge and Teaching Method 3.3.1 To develop Check Lists for Evaluation of Lecturers' Technical Knowledge 3.3.2 To implement Periodical Check	Lecturers shall be skilled to handle and able to maintain Training Equipment	Condition of Acquisition	- Report from Experts and Counterparts	Deputy Principal Training Planner

Output/Result : 4. Guidelines, Syllabi and Curricula for Training Courses are to be developed

No. / Activities	Verifiable Indicators (Mission)	Verifiable Indicators (Project)	Means of Verification	Responsible Person in Project Team
4.1 To develop Guidelines 4.1.1 To analyze Existing Guidelines 4.1.2 To improve Existing Guidelines and/or to develop New Guidelines	Improved and/or developed Guidelines shall be authorized Improved and/or developed Syllabi shall be authorized	Contents of Guidelines	Random Survey for the Project - List of Guidelines, Syllabi and Curricula	Principal Chief Advisor
4.2 To develop Syllabi 4.2.1 To analyze Existing Syllabi 4.2.2 To improve Existing Syllabi and/or to develop New Syllabi	Improved and/or developed Curricula shall be authorized	Contents of Syllabi	- Record of Preparation	Principal Chief Advisor
4.3 To develop Curricula 4.3.1 To analyze Existing Curricula 4.3.2 To improve Existing Curricula and/or to develop New Curricula	Kenyan sides shall be able to improve and/or develop Guidelines, Syllabi and Curricula by their own effort	Contents of Curricula	- Report from Experts and Counterparts	Principal Chief Advisor

Symbols / Notes for Monitoring

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[AS OF JANUARY 1996]

Degree of Completion	Personnel Requirements (M*M)			Equipment and Material Requirements	Costs (Thousand K.£. / yr.)	Important Assumptions and Remarks
	Kenyan C/P	Japanese Expert	Other Personnel			
75%	24*0.1*12	6*0.1*12	4*0.2* 3 (STE)			
75%	24*0.1*12	6*0.1*12	4*0.2* 3 (STE)		200.(J) (PTC)	MOC-GSI(J) NLA(J)
25%	24*0.1* 2	6*0.1* 2	4*0.1* 3 (STE)			
50%	20*0.1*12	6*0.1*12	4*0.1* 3 (STE)		40.(J) (PTC)	
	4*0.1* 6	6*0.1* 6				
	4*0.1* 6	6*0.1* 6				
	4*1.0* 6		20*0.2* 6 (ex-JE)		1,000.(J) (PTC)	MOC-GSI(J) NLA(J)
10%	24*0.1* 5	6*0.1* 5	4*0.2* 5 (SP, LCP)			
10%	24*0.1* 1	6*0.1* 1	4*0.2* 1 (SP, LCP)			

[AS OF JANUARY 1996]

Degree of Completion	Personnel Requirements (M*M)			Equipment and Material Requirements	Costs (Thousand K.£. / yr.)	Important Assumptions and Remarks
	Kenyan C/P	Japanese Expert	Other Personnel			
Diploma 1st Stage 100%	24*0.1* 8	6*0.1* 8	8*0.1* 8 (SP)			
75%	24*0.1*16	6*0.1*16	8*0.1*16 (SP)	Computers		KIE
Diploma 1st Stage 100%	24*0.1* 8	6*0.1* 8	8*0.1* 8 (SP)			
75%	24*0.1*16	6*0.1*16	8*0.1*16 (SP)	Computers		KIE
Diploma 1st Stage 100%	24*0.1* 8	6*0.1* 8	8*0.1* 8 (SP)			
75%	24*0.1*16	6*0.1*16	8*0.1*16 (SP)	Computers		KIE

Short Term Experts : (STE)

ex-Japanese Experts : (ex-JE)

Support Personnel : (SP)

Locally Contracted Personnel : (LCP)

Grant Aid : (GA)

Project-type Technical Cooperation : (PTC)

Output/Result : 5. Text Books and Teaching Material for Training Courses are to be developed

No. / Activities	Verifiable Indicators (Mission)	Verifiable Indicators (Project)	Means of Verification	Responsible Person in Project Team
5.1 To develop Text Books 5.1.1 To analyze Existing Text Books 5.1.2 To improve Existing Text Books and/or to develop New Text Books	Improved and/or developed Text Books shall be in use (multiplicity, quantity, quality)	Contents of Text Books	Random Survey for the Project - List of Text Books and Teaching Materials	Deputy Principal, Training Planner
5.2 To develop Teaching Materials 5.2.1 To analyze Existing Teaching Materials 5.2.2 To improve Existing Teaching Materials and/or to develop New Materials	Improved and/or developed Teaching Materials shall be in use (multiplicity, quantity, quality)	Contents of Teaching Materials	- Record of Preparation	Deputy Principal, Training Planner
	Kenyan sides shall be able to improve and/or develop Text Books and Teaching Materials by their own effort		- Report from Experts and Counterparts	

Output/Result : 6. Training in the Fields of Surveying and Mapping are to be implemented

No. / Activities	Verifiable Indicators (Mission)	Verifiable Indicators (Project)	Means of Verification	Responsible Person in Project Team
6.1 To implement Pre-service Diploma Course 6.1.1 To implement Pre-service Diploma Course for 1st Intake Trainees 6.1.2 To implement Pre-service Diploma Course for 2nd Intake Trainees 6.1.3 To implement Pre-service Diploma Course for 3rd Intake Trainees	Kenyan sides shall be able to prepare and implement Pre-service Diploma Course by their own effort	Contents of Diploma Courses	Monthly, Quarterly and Annual Report for Institute - Record of Training Courses	Principal Chief Advisor
6.2 To implement In-service Higher Diploma Course 6.2.1 To prepare for Implementation of In-service Higher Diploma Course 6.2.2 To implement In-service Higher Diploma Course	Kenyan sides shall be able to prepare and implement In-service Higher Diploma Course by their own effort	Contents of Higher Diploma Courses	- Report from Experts and Counterparts - Report from Trainees	Principal Chief Advisor
6.3 To introduce Up-to-date Technology 6.3.1 To prepare for Implementation of Seminar or Short Term Training 6.3.2 To implement Seminar or Short Term Training	Kenyan sides shall be able to prepare and implement In-service Short Term Training and/or Seminar by their own effort	Contents of Seminar and Short Term Training	- Random Survey for the Project	Deputy Principal Training Planner

Symbols / Notes for Monitoring

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[AS OF JANUARY 1996]

Degree of Completion	Personnel Requirements (M/M)			Equipment and Material Requirements	Costs (Thousand K.£. / yr.)	Important Assumptions and Remarks
	Kenyan C/P	Japanese Expert	Other Personnel			
Diploma 1st Stage						
100%	24*0.1*18	6*0.1*18	8*0.1*18 (SP, LCP)	Computers	50.(K)	Budget(K)
75%	24*0.1*18	6*0.1*18	8*0.1*18 (SP, LCP)			
Diploma 1st Stage						
100%	24*0.1*18	6*0.1*18	8*0.1*18 (SP, LCP)	Computers, OHP	25.(K)	Budget(K)
75%	24*0.1*18	6*0.1*18	8*0.1*18 (SP, LCP)			
		4*0.2* 3 (STE)			80.(J) (PTC)	MOC-GSI(J), NLA(J)

[AS OF JANUARY 1996]

Degree of Completion	Personnel Requirements (M/M)			Equipment and Material Requirements	Costs (Thousand K.£. / yr.)	Important Assumptions and Remarks
	Kenyan C/P	Japanese Expert	Other Personnel			
10%	24*0.2* 9	6*0.2* 9	12*0.2* 9 (SP, LCP)		150.(K) (C/P, SP)	Budget(K), KIE, KNEC
0%	24*0.2* 9	6*0.1* 9	12*0.2* 9 (SP, LCP)		300.(K) (Trainee)	
0%	24*0.2* 9	6*0.1* 9	12*0.2* 9 (SP, LCP)			
0%	12*0.2* 3	6*0.2* 3	8*0.2* 3 (SP, LCP)		75.(K) (C/P, SP)	Budget(K), KIE, KNEC
0%	12*0.2* 9	6*0.2* 9	8*0.2* 9 (SP, LCP)		150.(K) (Trainee)	
100% [0%]	12*0.2* 3 [12*0.2*3]	6*0.2* 3 [6*0.1*3]	8*0.2* 6 (SP, LCP)		25.(K) (C/P, SP)	Budget(K) KIE MOC-GSI(J) NLA(J)
100% [0%]	12*0.2* 9 [12*0.2*6]	6*0.2* 9 [6*0.1*6]	8*0.2*15 (SP, LCP)		50.(K) (Trainee)	
			4*0.2* 3 (STE)		80.(J) (PTC)	

Short Term Experts : (STE)

Support Personnel : (SP)

Grant Aid : (GA)

ex-Japanese Experts : (ex-JE)

Locally Contracted Personnel : (LCP)

Project-type Technical Cooperation : (PTC)

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