

MINUTES OF THE FINAL MEETING BETWEEN JICA STUDY TEAM (JST) AND  
SURVEY OF KENYA (SK) HELD ON 27TH & 28TH FEBRUARY, 1990 AT  
SURVEY FIELD HEADQUARTERS, NAIROBI.

PRESENT:

- Mr. J.R.R. Agenyo - Assistant Director of Surveys (Mapping)-Chairman  
Mr. A.L.O. Odhiambo - Superintending Surveyor (Mapping)  
Mr. D.A. Chabeda - Principal Photolithographic Assistant:  
Mr. J.J. Kibore - Principal Photogrammetric Assistant:  
Mr. J. Ogutu - Chief Cartographic Assistant:Secretary  
Mr. C.A. Kimele - Oi/c 1/50,000 Mapping Drawing Office:  
  
Mr. A. Itabashi - Japanese Expert:  
Mr. M. Nakai - Japanese Expert:  
  
Mr. S. Saito - JICA Study Team (Team Leader):  
Mr. K. Muraoka - JICA Study Team (Deputy Team Leader):  
Mr. T. Hidaka - JICA Study Team (Chief Surveyor):  
  
Mr. R. Matsunaga - JICA Kenya Office - 28/2/90:

The Chairman opened the meeting at 9.40 a.m. and welcomed the JST Leader, Mr. S. Saito, who arrived in Kenya on Saturday 24th February, 1990 to supervise the progress of the Mapping project. He (the Chairman) told Mr. Saito to feel at home during his stay in Kenya. He then invited the Deputy Leader Dr. K. Muraoka to table the Agenda for the meeting.

Agenda:

1. Introduction of Team Leader
2. Progress Report
3. Report of Sub-Committee Meetings
4. Printing Materials
5. Items for Confirmation to be agreed
6. Programme of next phase which will be done in Japan
7. Any Other Business (A.O.B.).

1. Introduction of Team Leader:

The JST Deputy Leader Dr. K. Muraoka introduced the Team Leader Mr. S. Saito to the participants and said that majority of the participants had met Mr. Saito before.

2. Progress Report:

The Deputy Leader of JST Dr. Muraoka presented a prepared progress report of the third year's field work for the topographical mapping of South Kenya - (Attachment II). The report cited a number of tasks and the way they were scheduled to be tackled.

After touching on the objective of study and scope of work for the third phase the report dealt with the following:

2.1 Field completion:

Field work for this phase was devoted mainly to field completion for the whole area to clarify important items to be presented on the map - topography, ground features, place names and



AA. B .../2

doubtful points which arose while plotting and compiling the map sheets.

It was observed that for verification and inscription of names and administrative boundaries, close cooperation of SK counter-parts was cordially requested and that important changes of ground features after aerial photography were supplemented in the field when necessary. The most important thing noticed in the field was the construction of the Kilifi Bridge, Dr. Muraoka said in his report.

## 2.2 Field verification:

It was reported that for the areas covered by aerial photographs taken in Phase II, plotting and compilation were executed without field verification of aerial photographs. Field verification for such areas was executed at the time of field completion.

Dr. Muraoka observed that the method of verification in Kenya was slightly different from that practised in Japan. In Japan, verification is done by photographs before plotting while in Kenya it is done after plotting.

Dr. Muraoka's report also dealt with plotting and compilation, field completion, field verification and organization of the field survey team. It was observed that on field completion there were many changes in the names as indicated in the progress report.

On organisation of the field survey team, it was reported that the team was divided into 4 (four) parties, each party comprising two Japanese Surveyors and one Kenyan counter-part.

### Survey Schedule:

The base camp for field work was established near Mombasa and the study area was divided into three areas A, B and C and all the parties worked in one area at the same time. The Base Camp was at 'A' and Sub-Camps at 'B' and 'C' at Malindi and Voi respectively.

The Survey Team was scheduled to return to Nairobi on Wednesday 28th February, 1990.

### Acknowledgement by JST:

With the end of field completion and field verification, the field survey for the study is finished. The remaining tasks are fair-drawing (by scribing) and printing of maps which will be executed in Japan and expected to be completed by March, 1991.

At the completion of the field survey, Dr. Muraoka (Deputy Team Leader) on behalf of the JST expressed their indebtedness to the cooperation of the S.K. counter-parts who worked with the team in the field. The counter-parts did a splendid job, he confirmed.



A.S. P. ....13

The Team was also indebted to the Provincial Surveyor, Coast, the Provincial Wildlife Officer, Mombasa, the District Officer, Malindi and the authorities concerned for their kind cooperation.

The Chairman told the JST that S.K. had noted their progress report with appreciation. He (the Chairman) was pleased to hear that JST were happy with the work of S.K. counter-parts. This observation was encouraging since the success of the field completion depended on the cooperation between the JST and the counter-parts.

3. Printing Materials:

Dr. Muraoka (Deputy Team Leader) supplied S.K. with a copy of the list of printing materials being supplied by JICA to the Survey of Kenya in connection with the mapping project as earlier agreed.---(Attachment III) ---In accordance with the list, he explained the details of materials and the use.

4. Report of Sub-Committee Meetings:-

S.K. presented a report of the Sub-Committee Meetings held at Survey Field Headquarters, Ruaraka on 12th, 17th and 18th January, 1990. The meetings were held between JST and S.K. members and dealt with specific subjects which are recorded in the minutes attached to these minutes as Attachment I. It was observed during the discussion that some specific items which require action by S.K. have already been solved and some are still being solved to be ready before the JST leaves for Japan in early March, 1990.

During the presentation of the Sub-Committee Report, Dr. Muraoka wanted to know what should be done where an administrative name appears different from the one from the Boundaries Section. It was discussed and agreed that where such a situation arises then the name from the Boundaries Section should be accepted and the area name collected in the field corresponding to the administrative name shall be shown in parenthesis.

5. Fairdrawing, Scribing and Printing:

JST requested that before printing, S.K. should supply 3 (three) representative printed maps of different areas including the violet sample to be used as sample for selecting the printing colours in Japan.

2 ND FOLLOW-UP MEETING HELD ON 28TH FEBRUARY, 1990:

The Chairman opened the meeting at 9.50 a.m. and welcomed all the participants particularly the JICA representative to the meeting. The JICA representative Mr. R. Matsunaga had come to the meeting to report about the type and condition of the vehicles to be handed over to S.K. by JICA after the completion of the study. The Chairman then asked Dr. Muraoka to guide the meeting on the items to be discussed.



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In his address to the meeting, Dr. Muraoka told the participants that most of the items of agenda had been discussed the previous day and that this particular meeting was to discuss how to hand over the vehicles used during the study period by the JST to S.K. He also said that there were a few points which needed clarification before the minutes are finalised. He presented the draft sheet History to the meeting for scrutiny and confirmation. The sheet History was checked and confirmed as follows:-

SHEET HISTORY (DRAFT)

Edition 4 reconstructed by Japan International Cooperation Agency (JICA) under the Japanese Government's Technical Cooperation Programme.

Field Survey Data by JICA and partly by Survey of Kenya.

Aerial Photography by JICA February, 1988 and January, 1989.

Field Identification by JICA and partly by Survey of Kenya.

Aerial Triangulation. Plotting and Compilation by JICA.

Field Completion by JICA and Survey of Kenya March, 1990.

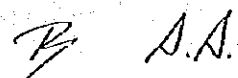
Administrative and Cadastral boundaries by Survey of Kenya.

Fairdrawing and preparation for Reproduction by JICA 1990/1991.

Administration and Publication by Survey of Kenya.

JST reported the draft to JICA HQ., Tokyo and got the approval.

In his report to the meeting the JICA Representative Mr. Matsunaga told the meeting that there were six vehicles which were used in the field by the JST members during the study period and which would be handed over to S.K.



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He reported that there were:-

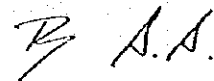
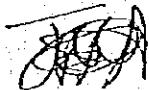
3 (three) Pajeros, 2 (two) Subaru Saloons and 1 (one) Toyota Pickup.

The JICA representative further told the meeting that of the six vehicles, 3 Pajeros were rather old; 2 Subarus (Saloons) were in good condition and would be used by JICA experts in the Department.

After discussion SK accepted that SK will have 3 Pajeros and 1 pick-up and that JICA will retain Subarus for the use of Japanese Experts in Survey of Kenya.

6. The S.K. Counter-parts Report:

Mr. Z. W. Gitau's report on behalf of the S.K. counter-parts gave a brief account of their impression. He (Mr. Gitau) said that they were very happy with the way they were received by JST in Mombasa and the cooperation of the JST members in the field during the field completion exercise. He said that the S.K. counter-parts had benefitted from the experience of the JST members and said that they (counter-parts) had learnt much on how to organise their work schedules in future. The JST worked very hard until very late in the night and this was an inspiration to them.



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JICA representative reported to the meeting that he had received a report from JICA HQ. in Tokyo that it will not be possible this time to send some senior S.K. staff to Tokyo to check the proofs after fairdrawing and before actual printing.

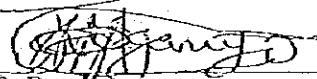
It was, however, observed by the meeting that this procedure is necessary to get good final products (maps) and it was therefore discussed and S.K. strongly appealed to the JICA representative and JST members to take up the matter further with JICA Headquarters in Tokyo to reconsider their earlier decision not to allow S.K. members to go to Japan to check the final proofs and sign the agreement for printing the maps. The JICA representative and JST members noted the S.K. appeal and took note of the appeal.


7. JST Leader's Comments:

The JST Leader Mr. S. Saito, on behalf of himself, JICA representative and JST members thanked the Director of Surveys and his staff for the cordial reception extended to JST during their stay in Kenya. He was pleased to note that the mapping exercise had been executed as scheduled. He was also pleased that both JST and S.K. members had worked co-operatively for the success of the mapping project and hoped that the cooperation between S.K. and JICA will continue.

8. Chairman's Comments:

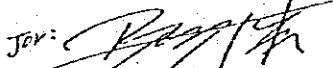
The Chairman thanked the JICA representative Mr. Matsunaga, JST Leader Mr. Saito, JST and S.K. members for their useful contribution to the discussions which were conducted in a candid, cordial and friendly atmosphere and the seriousness with which they tackled the various issues connected with the mapping project. He also thanked the Sub-Committee members who discussed the various technical issues in detail. Furthermore, he thanked all those who carried out field completion and field verification and who contributed to the success of the exercise. He said that the Department was looking forward to receiving the printed maps and repromats as scheduled. Finally, he hoped the co-operation between JICA and Survey of Kenya will continue. The Chairman then wished the JST delegation a safe journey to Japan and closed the meeting at 11.15 a.m.

  
J.R.R. Aganyo  
for: DIRECTOR OF SURVEYS

  
Mr. S. Saito  
LEADER JST

Date: ... 2nd March, 1990

Date: ... 2nd Mar. 1990

for:   
Mr. K. Kumigishi  
RESIDENT REPRESENTATIVE  
JICA Nairobi Office

Date: .... 2nd March 1990 .....

RECORD OF DISCUSSION  
ON CARTOGRAPHIC AND LITHOGRAPHIC ASPECTS  
OF THE SOUTH KENYA MAPPING PROJECT

1. Date and time:
 

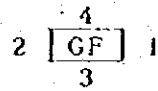
12th Jan. 1990	14:30 ~ 16:30
17th Jan. 1990	14:30 ~ 17:00
18th Jan. 1990	11:00 ~ 12:30
	14:30 ~ 17:30
  
2. Place:                      Field Headquarters, SK, Ruaraka
  
3. Attendants:
  - (1) Survey of Kenya
 

Mr. D.A. Chabeda	Principal Lithographic Assistant
Mr. J. Ogutu	Chief Cartographic Assistant
Mr. P. Muia	Chief Lithographic Assistant
Mr. C.A. Kimele	Officer-in-charge-1/50,000 Mapping
Mr. S.F. Mugadi	Photolithographic Assistant I
Mr. Z.N. Gitau	Assistant Officer-in-Charge -1/50,000 Mapping
  
  - (2) JICA Study Team
 

Dr. K. Muraoka	Deputy Leader
Mr. M. Yoshida	Mapping Planner
Mr. T. Hidaka	Chief Surveyor
  
4. On specific subjects meetings were held by small groups.
  
5. Concerning the field completion, JST made request of undertakings by SK. After discussions followings were accepted.
  - a. Place name and its location shall be checked and revised, when necessary, on the data sheet for place name in reference to the compiled manuscript.
  - b. Administrative boundaries shall be drawn on the compiled manuscript.
  - c. Data for property boundaries shall be prepared and supplied.
  
6. Dr. Muraoka, Deputy leader of JST, read the "Draft Plan of Operations for Phase IV". In connection with the Study for this Phase, followings were discussed and agreed upon:

a. Map symbols and their applications

(i) When the important ground feature and annotation are superimposed on each other, the latter shall be shifted. The priority of shifting is as shown in the figure.



(ii) Cut line passable by vehicles shall be represented by the same symbol and colour as those of track (in red) with annotation "Cut line" in black. Others are represented in black with annotation "Cut line" in black.

(iii) Fence shall be annotated in black.

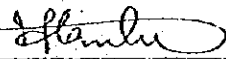
b. Map style

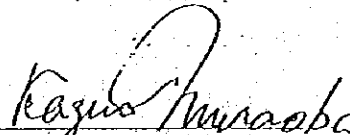
- (i) Sheet history shall be prepared by SK.  
(ii) Sample sheet of new legend shall be prepared by SK.  
(iii) Representation of number of prints shall be as follows:
- |                            |  |
|----------------------------|--|
| For general use map        | 500/3/91 (in black)                          |
| for administrative use map | 500/3/91 (in black)<br>500/3/91 (in violet). |

c. Number of prints

For sheets on which no sub-district boundary appears, it is not needed to prepare administrative edition. For such sheets number of prints of general use edition shall be the total number of 1,000.

31st January 1990, Ruaraka

  
\_\_\_\_\_  
J. Ogutu  
Chief Cartographic A

  
\_\_\_\_\_  
K. Muraoka  
Deputy Leader



PROGRESS REPORT  
OF  
THE THIRD YEAR'S FIELD WORK  
FOR  
THE TOPOGRAPHIC MAPPING OF SOUTH KENYA  
IN  
THE REPUBLIC OF KENYA

--- March, 1990 ---

STUDY TEAM  
OF  
TOPOGRAPHIC MAPPING IN SOUTH KENYA  
IN  
THE REPUBLIC OF KENYA  
  
JAPAN INTERNATIONAL COOPERATION AGENCY

## I. INTRODUCTION

The topographic mapping of South Kenya (hereinafter referred to as the "Study") started in October 1987, in four-year term study, as a technical cooperation program of the Japan International Cooperation Agency (hereinafter referred to as "JICA").

In compliance with the Scope of Work agreed upon between the Ministry of Lands and Housing and JICA on the 19th March, 1987 (hereinafter referred to as "S/W"), a JICA Study Team (hereinafter referred to as the "Team"), composed of 13 members, was despatched to Kenya on the 8th January, 1990, for 60 days to execute the third year's field work. Meanwhile 4 Kenyan counterparts despatched by the Survey of Kenya (hereinafter referred to as "SK") joined the Team for field work with successful results.

In accomplishing the third year's field work, the summary of the progress of the work is reported.

## II. OBJECTIVE OF THE STUDY

The objective of the Study is to prepare 1/50,000 topographic maps covering an area of approximately 29,800 km<sup>2</sup> in South Kenya from east of Longitude 37°45'E to the coast and from south of Latitude 3°S to the Kenyan territory of the Tanzanian border. Main items of the Study are as follows:

1. Aerial photography approximately 29,800 km<sup>2</sup>
2. 1/50,000 topographic mapping approximately 29,800 km<sup>2</sup>.

## III. SCOPE OF WORK FOR THE CAPTIONED PHASE

The scope of work for the third year covers following studies:

### 1. Plotting and compilation

Plotting and compilation shall be continued from the preceding phase to prepare the compiled manuscript of 1/50,000 topographic maps for remaining 28 sheets. The whole work for 43 sheets shall be completed by December, 1989.

## 2. Field work

### 2-1. Field completion

Field work for this phase shall be devoted mainly to field completion for the whole area to clarify important items to be represented on the map - topography, ground features, place names and doubtful points arisen while plotting and compilation.

For verification and inscription of names and administrative boundaries, close cooperation of SK counterparts is cordially requested. Important change of ground features after aerial photography shall be supplemented in the field when necessary.

### 2-2. Field verification

For the areas covered by aerial photographs taken in Phase II, plotting and compilation were executed without field verification of aerial photographs. For such areas, field verification shall be executed at the time of field completion. The areas are shown in Fig. 1.

## 3. Preparation of original manuscript of maps

After returning to Japan, original manuscript of map shall be prepared by arranging compiled manuscript by using field-completed data.

## IV. PLOTTING AND COMPILATION

Continuing from the plotting and compilation works in Phase II, the works for the remaining 28 sheets were executed and compiled manuscripts of 1/50,000 topographic maps of total of 43 sheets were prepared by December, 1989.

## V. FIELD COMPLETION

On the basis of the compiled manuscript, field completion was executed.

Confirmation of topography and ground features was executed chiefly by the Team members and that of toponomy by Kenyan counterparts.

For the confirmation of place names, information was obtained by visiting district offices, chief's offices, etc., and supplemented by local people.

In the course of survey, it was found that there were many changes in name and location of locations, sub-locations, places, areas, vilages, etc. during decades from those represented on the old maps to which the manuscript of the new maps refer.

#### VI. FIELD VERIFICATION

Field verification of the photo-interpreted items was executed for the areas of which aerial photographs were not field-verified in the course of field completion. (Fig. 1)

#### VII. ORGANIZATION OF THE FIELD SURVEY TEAM

The Team is divided into four parties, each party composing of two Japanese surveyors and one Kenyan counterpart. The whole parties are supervised and controlled by the chief surveyor.

#### VIII. SURVEY SCHEDULE

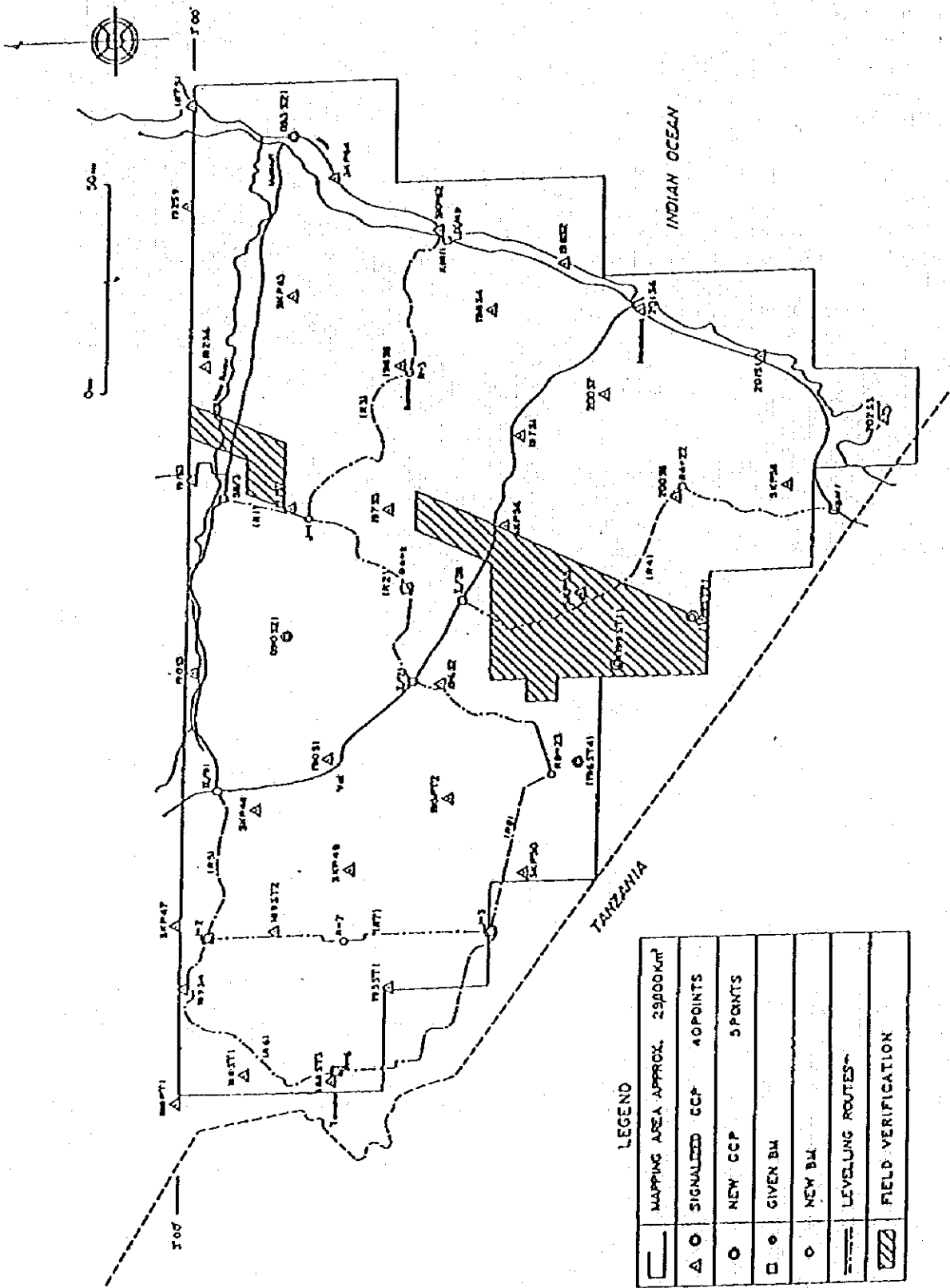
The base camp for field work was established near Mombasa. The study area is divided into three areas A, B, and C as shown in Fig. 2. All parties worked in one of the divided areas at the same time and executed the survey on respective sheets based on base camp Mombasa for the area A and on sub-camps Malindi and Voi for the areas B and C respectively during the periods as shown below:

Area	Volume	Period	Sub-camp	Base camp
A	14 shts	19 Jan.- 4 Feb.	---	Mombasa
B	8 shts	5 Feb.- 11 Feb.	Malindi	Mombasa
C	21 shts	12 Feb.- 27 Feb.	Voi	Mombasa

## IX. ACKNOWLEDGEMENT

With the field completion, the field survey for the Study is finished. The remaining works are fair-drawing (by scribing) and printing of maps, which are to be executed in Japan and expected to be completed by March, 1991.

At the completion of the field survey, the Team would like to express their indebtedness to the cooperation of the counterparts done in the field. They are indebted also to the Provincial Surveyor, Coast, Provincial Wildlife Officer, Mombasa, District Officer, Malindi, and other authorities concerned for their kind coordination.



LEGEND

[Hatched Area]	MAPPING AREA APPROX. 25000M <sup>2</sup>
△	SIGNALLED CCP 40POINTS
○	NEW CCP 5POINTS
□	GIVEN BM
○	NEW BM
---	LEVELING ROUTES
[Hatched Area]	FIELD VERIFICATION

FIG. 1 AREAS FOR FIELD VERIFICATION

TOPOGRAPHIC MAPPING IN SOUTH KENYA

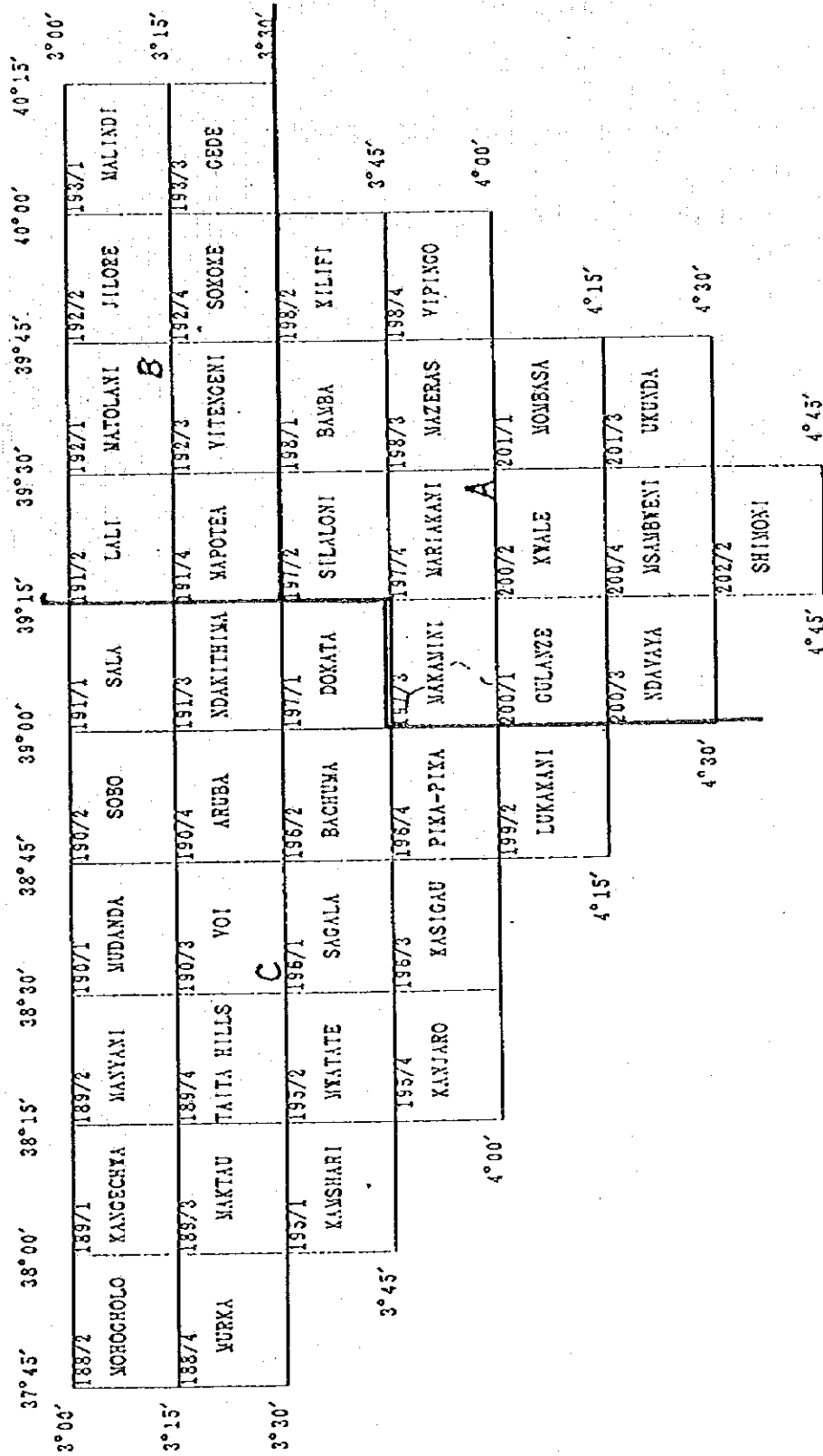


Fig. 2. SCHEDULE OF FIELD COMPLETION

## MATERIALS FOR PRINTING

Item	Number
printing paper (map paper, basis weight 90g/m <sup>2</sup> )	52,000 sheets
Printing ink	200 kg
Printing plate (PS plate)	280 sheets
Gummi	10 gallons
Blanket	4 rolls
Roll clean	72 litres
Drier	8 pieces
Super compound	4 kg
PS plate developer	10 bottles
Fountain solution	5 litres
Image remover	large 12 pieces
	small 12 pieces
Sponge	5 pieces
Plate cleaner	2 litres
Developing pad	2 pieces
Receptacle	2 pieces
Cloth	200 sheets





JICA