

WOSSAC: 25665
711.2
(911.14)

MIRI-BINTULU REGIONAL PLANNING STUDY

FOR

THE GOVERNMENT OF MALAYSIA

AND

THE STATE OF SARAWAK

PROGRESS REPORT

No. 9

OCTOBER 1973

MIRI-BINTULU REGIONAL PLANNING STUDY
FOR THE
GOVERNMENT OF MALAYSIA & THE STATE OF SARAWAK

PROGRESS REPORT NO. 9

C O N T E N T S

	<u>Page No.</u>
INTRODUCTION	1
PROJECT MANAGEMENT	
1. Staffing	3
2. Administration and Finance	3
3. Schedule of Work	3
4. Survey Maps and Reports	4
PROGRESS	
<u>SECTION A: NATURAL RESOURCES STUDIES</u>	
1. SOILS	5
1.1 Study of Soil Erosion	5
1.2 Sample Areas	5
1.3 Broad Transect Survey Area	6
1.4 Semi-Detailed Survey Area	6
2. AGRICULTURE AND LIVESTOCK	7
3. AGRICULTURAL ECONOMICS	7
4. FISHERIES	8
5. FORESTRY	9
6. WATER RESOURCES	9
7. MINING	9
<u>SECTION B: POPULATION AND PRODUCTION</u>	
1. MANPOWER TRAINING	12
2. GENERAL AND INDUSTRIAL ECONOMICS	13
3. FINANCING	14

SECTION C: TRANSPORT AND COMMUNICATIONS

15

SECTION D: SETTLEMENTS AND INSTITUTIONS

1. GENERAL

16

2. REGIONAL AND PHYSICAL PLANNING

16

3. PUBLIC UTILITIES

17

4. SOCIOLOGICAL ASPECTS

18

APPENDIX I WORKING PAPER INDEX

19

Progress Chart

at cover

INTRODUCTION

This report covers the period from 1st of August to the end of September, 1973. During this period the results of the soil surveys have begun to emerge, thus enabling the team to commence preliminary more detailed studies and planning. The further development of cropping alternatives has added to the detailing of the studies.

A Working Paper has been prepared on the future agricultural services of extension, training, credit, research and marketing. Planning has therefore been able to proceed to more integrated considerations. The ideas and findings within the several disciplines of the Study can now be combined into coherent, logical patterns and layouts for development. To this end the Sociological, Physical Planning, Agriculture and Land Classification teams have worked together in order to reach solutions which best meet the technical, botanical and human demands and constraints encountered in the Study Area.

The two Consultant Sociologists have completed their term on the Study and their final report is now under preparation.

The Physical Planning Team has continued working out models for patterns of urban settlements and for specific types of urban areas. These ideas will be explained at the next Steering Committee meeting to supplement the material presented to the Steering Committee members at the meeting held in Bintulu on the 15th of August. That meeting and the associated arrangements were attended by H.E. The Minister for Lands and Mineral Resources, Dr. Sulaiman Hj. Daud, who addressed the Committee and took part in the subsequent discussions. The members of the Steering Committee spent the whole of 15th of August in Bintulu visiting Tanjong Kidurong in the morning and having the meeting in the afternoon. The following day the members travelled by road to Miri. Several stops were arranged en route to enable the Consultants to explain and demonstrate subjects relevant to the development.

The Consultants found this arrangement most rewarding, as it made it possible to combine "writing desk approaches" with demonstration as well as giving time for informal discussions. The Consultants appreciated the opportunity of giving at first hand, a presentation of our thinking and working methods to a Minister and to learn directly his reactions to the ideas presented.

The Consultants' office in Miri was visited by H.E. the Federal Minister of Primary Industries, Taib Mahmud on the 14th of September. The Minister was briefed by the Project Manager and members of the Study Team who, through subsequent discussions, obtained valuable reactions and ideas. At the time of writing this Report, it is understood that H.E. The Federal Minister of Health is scheduled to visit the Project on 27th September.

During the next period the Consultants will attempt to identify separate but integrated and phased projects from the overall development plans.

In the course of the Study, the Consultants and Government have foreseen that emphasis on certain of its aspects would need strengthening or re-direction, and to this end the Consultants have submitted proposals to Government requesting certain changes to the original staff input schedules.

A consolidated schedule of required changes - as we see them to the end of the Project term has been submitted to Government, which we understand will be considered at the time of the next Steering Committee meeting in October.

PROJECT MANAGEMENT

1. Staffing - additional to Report No. 8

<u>Name and Position</u>	<u>Chargeable dates</u>
5. R.D. Law, Land Classifier	to 31.8.73 (final)
7. R.A.J. Harrison, Fisheries Specialist	to 12.8.73 (final)
8. F.S. Walker, Forest Inventory/Utilisation	from 30.8.73
12. T.E. Wetteland, Transport Planner	to 11.9.73 (final)
15. C.A. Sather, Sociologist	15.8.73-24.9.73 (final)
19. T.V. Andersen, Agricultural Extension/Credit	to 29.8.73 (final)
25. S. Hoff, Principal H & O	15-19.8.73
C.1 H.S. Morris, Sociologist	19.8.73-26.9.73 (final)

Mr. Richard Jong, Assistant Planning Officer was withdrawn from the Project on 31.8.73.

2. Administration and Finance

- (a) Supplies and Services - satisfactory.
- (b) The 15th and 16th Statements of Account were submitted on the due dates.
- (c) Deposit of local funds Nos. 12 and part 13 have been received.

3. Schedule of Work

The programme of work for the next reporting period is as set out in the progress chart at cover.

4. Survey Maps and Reports

Drafting work on all the resources maps was completed by early September and fair drawing (scribing) of the boundaries completed by mid September. Preparation of the colour separation sheets for the sample area maps was completed by mid September. The line work was processed to final negative at the Land and Survey Department in Kuching and the screens passed to the Directorate of National Mapping in Kuala Lumpur for further processing.

Preparation of the colour separations for the 1:100 000 scale series of resources map is now well in hand and the legend details for all of the maps have been finalised and processed.

The structure of the final report, including the supporting volumes is still under discussion and revision.

PROGRESS

SECTION A NATURAL RESOURCES STUDIES

1. SOILS

During the previous reporting period (Progress Report No. 8) Mr. Lim Chin Pang spent a total of 15 days on the project. During the period under review the time spent on project work amounted to 22 days (20th August to 11th September). This time was mainly used for soils and terrain mapping of the areas covered by the semi-detailed soil survey. Some considerable time was also spent on soil classification and mapping problems.

1.1 Study of Soil Erosion

Routine maintenance and checking of the erosion trials at Bukit Peninjau and near Niah has continued.

1.2 Sample Areas

Sample Areas A, B and C - nothing to report.

Final checking of the Soil, Terrain and Land Capability maps of the Sungai Karabungan Area has been completed and the maps are ready for processing and printing.

Area measurements of mapping categories for the Terrain, Soil and Land Capability maps covering the Sungai Karabungan Area were completed some time ago but due to the revision of the Soil Classification system a number of mapping units had changed. Therefore this exercise is being repeated on the corrected maps.

1.3 Broad Transect Survey Area

Mapping

Sheets 1 and 2 of this survey area's Soil, Terrain and Land Capability maps (scale 1:100 000) have been finally checked and are ready for processing and printing. However the checking of colour separations for the Soils and Land Capability maps of both Sheets 1 and 2 and Terrain map Sheet 2 is still outstanding.

Area measurement of mapping categories for the Land Capability maps Sheets 1 and 2 is completed and computations of these categories is in hand. Area measurement of the mapping categories for the Terrain and Soil maps Sheets 1 and 2 is in hand.

This exercise shows that in total approximately 1 500 000 acres have been studied at this level of survey.

1.4 Semi-Detailed Survey Area

Mapping

Soil and Terrain maps at 1:25 000 scale covering the Sungai Sebuok, Sungai Gelasah, Sungai Sawai and Beluru Survey Areas have been completed and handed to the Drawing Office for reduction to 1:50 000 scale and final drawing.

The Land Capability map at 1:50 000 scale for these areas has been drafted and handed over for final drawing.

Area measurement of mapping categories of the Land Capability map has been completed and computations are in hand.

The total area covered by this survey amounts to approximately 90 000 acres. It is not yet possible to calculate the area covered by the Niah Forest Reserve since boundaries shown on the 1:50 000 Topographic maps series T735, do not agree with those given by the Forest Department. But it is hoped that this problem will be solved before the next Steering Committee meeting on 4th October.

2. AGRICULTURE AND LIVESTOCK

Mr. T.V. Andersen, the Consultants' Agricultural Organisation and Credit Specialist completed his term with the Study Team. He, together with the Senior Agriculturist, compiled a draft working paper describing the Consultants' present ideas on the future organisation of agricultural extension, training and research among independent farmers in the Study Area. The Working Paper which envisages the creation of an Agricultural Development Unit (ADU) especially trained and orientated to cater for independent farmers has been distributed to members of the Steering Committee. An outline of some of the ideas contained in the paper was given, by the Senior Agriculturist, to the Steering Committee meeting in Bintulu on the 15th August.

Work has continued on a paper describing an implementation organisation for overall agricultural development in the Study Area. This incorporates changes considered necessary, to a previous paper, following discussions with senior staff of SLDB.

The completion of the Land Capability maps has enabled work to commence on alternative crop distributions within the priority development areas. Some results of these considerations will be presented at the next Steering Committee meeting.

The close liaison established with the SLDB planning staff has been intensified as SLDB is now considering new development within the Miri-Bintulu Study's area selected for immediate development.

3. AGRICULTURAL ECONOMICS

Work on the detailed activity analyses of the main commercial agricultural activities has continued as information has become available on agronomic aspects. Particular attention was given to cocoa and rubber. Detailed appraisals of oil palm and rubber enterprises for final economic evaluation were commenced.

A study of the marketing chains for rubber, pepper, copra, rice, pigs and poultry was completed by the Counterpart Agriculturist. Data for this survey was collected from all major centres in the Study Area and a preliminary draft report of the findings was prepared.

The market assessments carried out early on in the study for palm oil, rubber and cocoa were reviewed in conjunction with the preparation of economic appraisals of the enterprises producing them. Detailed assessments of essential oils and spices other than pepper were also commenced.

Tabulation of the data from the farm survey was completed and work on a report of this study was started. As part of this study a Gutman innovation scale was constructed for the farmers covered by the survey.

Other activities in which the Agricultural Economics Section was involved during the period included the following:-

- a) Transport and road requirements for the main agricultural activities and the Study Area as a whole;
- b) Preparation of agro-economic criteria on which planning of development in the action programme area should be based;
- c) Outlining possible settlement systems and organisation patterns for new development with particular reference to the agro-economic factors relevant to these.

4. FISHERIES

The Consultants' Inland Fisheries Specialist completed his period with the Study Team and wrote the Working Paper No. 51 "Inland Fisheries" which has been distributed. Several ideas and schemes for promotion of inland fisheries are put forward in the paper and the Consultants would be grateful for comments from members of the Steering Committee before the final report on this subject is written.

5. FORESTRY

The Consultant Forester rejoined the Project on 31st August. Analysis of all Diagnostic Sampling data has been completed by the Silviculturist and agreement reached on the method of final assessment. Some preliminary figures are available and suggest that natural regeneration may be feasible in all the areas sampled.

During a visit to Kuching discussions were held with the Conservator of Forests about the area in the Niah Forest Reserve that the Consultants have investigated for possible inclusion in the first five year agricultural development plans. Also contact was made with Mr. V. Clark, the FAO Team member now attached to the Sarawak Timber Industry Development Corporation. Preliminary discussions were held on the dove-tailing of forest exploitation with agricultural development.

6. WATER RESOURCES

Data collection within the Project network will be discontinued on 31st October, but it is anticipated that a further six weeks work will be required to complete its analysis and interpretation. A decision on the take-over by Government of the whole or part of the network is a matter of some urgency.

7. MINING

The economics of an antimony production from the stibnite (Sb) occurrences in the Tinjar Area have only been mentioned briefly in previous Study papers. However, the search for feasible projects within the Study Area has from time to time revived the discussion on the availability of raw materials for local production or export.

In order to obtain a qualified assessment of the information available from surveys already carried out, by Dr. J.G. Potts of Hunting

Geology and Geophysics Ltd. was asked, by the Consultants, to give his opinion on the data. An extract from his reply is quoted below.

"Investigation of Stibnite Occurrence in the Batang Tinjar Area - North Sarawak

The above occurrences of stibnite is typical of several described for this general area of Sarawak. They have been examined by several interested parties since the mid nineteenth century. However, we have seen no account which does other than report the occurrence. No attempt has been made to relate the mineralisation to a mode of genesis.

The antimony sulphide is usually described as being related to sulphides of arsenic and, more problematically, to mercury. There are hints that certain of the stibnite may be alluvial, while other reports allude to occurrences in fault zones, veinlets and as disseminations.

The host rock to the mineralisation is the Miocene Setap Shale Formation, which consists predominantly of argillites with minor sandstones. Quartz in discrete grains sometimes occurs with the stibnite, but there is a general absence of quartz veining of the country rocks. In one area (Sungei Palutun), though there is an absence of vein quartz in situ, pebbles of vein quartz have been observed in nearby streams.

The size of stibnite specimens is interesting, "fragments several inches across" and one specimen "nine inches long" have been found. Pieces of such dimensions, in a shale formation, cannot have been transported mechanically and their presence suggests that the mineralisation is epigenetic.

The occurrence of stibnite may, in itself, not be of primary importance. It is evident from descriptions of the area that inaccessibility would, at the present time, rule out the working of all but a deposit of major size. However the possible association of stibnite with other sulphides notably mercury suggests that copper or gold mineralisation may occur in the area. Antimony, arsenic and mercury occur in the Bau Goldfields area of southern Sarawak and are genetically related to intrusions of

microgranodiorite and dacite prophyry (Geological Survey Annual Report 1966). These intrusions are regarded as Middle Miocene or younger in Age. Granitic intrusives of post late-Eocene age occur near Tatau (Geological Survey Annual Report 1958), between Batang Tinjar and the Bau Granites.

It seems likely that the sulphide occurrences in the Tinjar area could represent mineralisation emanating from unexposed granite intrusives in the area. Presumably the possibility that such rocks outcrop has been investigated by examination of stream debris. Under normal circumstances antimony and arsenic could be expected in the outer haloes of such intrusions. Examination for trace element amounts of copper, lead, zinc, arsenic, mercury and fluorine could establish the source of the sulphide mineralisation. The possibility that workable amounts of more valuable metals, notably copper, exist in the area could then be established by a more detailed survey."

A summary of our findings was sent to the Geological Survey Malaysia. The Consultants were informed that the Geological Survey in recent years had concentrated their main efforts on what is considered as more promising areas and that further geochemical prospecting work is not warranted in the Batang Tinjar Area.

This attitude of the Geological Survey Malaysia is supported by the fact that the present quotation c.i.f. Europe of lump sulphide (60 per cent Sb) is M\$30 to \$40 per ton and that the distance from the Tinjar site to Kuala Baram is approximately 140 miles. Transport costs from the site to the open sea might amount to more M\$25 per ton.

Consequently the Consultants have decided not to proceed any further with the possibilities for an economic exploitation of the antimony within the framework of the Miri-Bintulu Study.

SECTION B
POPULATION AND PRODUCTION

1. MANPOWER TRAINING

The Perspective Plan contained preliminary estimates of the distribution of the economically active part of the population on main occupations. A rough first indication of the necessary future input for vocational training was also presented. Since then much material has been gathered and many impressions gained from interviews and discussions.

Information on present general trends and ideas on manpower training has been received from Hoff & Overgaard headquarters. Also from the State Financial Secretary we have received a confidential report prepared by the Manpower Advisory Mission to Sarawak. During July the Project Manager and the Regional Planner visited the Ministry of Labour and Manpower in Kuala Lumpur where they had a conference with the Director General of the Manpower Department and some of his staff. Also a visit was paid to the Industrial Training Institute, Kuala Lumpur, and valuable written material collected. The Miri office of Educational Department has been visited for discussion.

The material and impressions thus compiled have been the basis for an Internal Working Paper: Education for Work. This paper which will now be used for further contacts with pertinent institutions and persons deals with the more general aspects of education. The specific requirements for skilled and trained manpower at various levels will be dealt with in reports and papers on sociology, industry and agriculture. These will contain details on selection of farmers, education of welfare workers, extension service personnel, etc. These various specified requirements will be summarised in a final report on Education for Work.

2. GENERAL AND INDUSTRIAL ECONOMICS

The industrial development has been the main concern of the General Economist. A report on the feasibility of a glass manufacturing plant in the Bintulu area has been finished, and preliminary discussions on the report have been held with representatives from the Sarawak Economic Development Corporation and the State Planning Unit. It appears the possibilities are quite good for the establishment of a glass factory as a contribution to the general industrial development in Bintulu and the Study Area. However, further surveys and relevant negotiations will have to be carried out.

Close contact with the Sarawak Timber Industry Development Corporation (STIDC) has shown that complete preliminary studies into timber processing economics by the Consultants are not necessary. STIDC are presently in negotiation with parties interested in establishing timber industries, and the FAO Forest Industries Development Project has recently published reports that partly cover this field.

Studies by the Consultants of general development and the economics of wood-industries are under progress and a paper will be prepared at a later stage. Of particular importance to the Study are the specific wood-based industries associated with the needs for housing in rural and industrial projects. There is need for a new concept in house building. The requirements for special types of houses and the possibilities for a pre-fab housing industry have been jointly considered by the Sociologists, Town Planner and the Project Economist. A paper on these subjects is in preparation.

The identification of small scale industries has been continued. The Counterpart Economist especially has been occupied in this field. At present the work is concentrated in the creation of a model for different town sizes assessing the requirements and markets for different trades with emphasis on small scale industries.

Although the macro-economic aspects of the Study area, for the time being, have only just been touched on, co-operation on financing aspects has been the subject of discussion between the Financial Analyst and the General Economist.

3. FINANCING

Two papers concerning new types of savings institutions that could be created in Sarawak to raise money for development have been worked out in draft and sent to various persons for comments. The purpose of these institutions is to increase the propensity to save in the State. The first paper - Sarawak People's Savings and Loan Society - emphasises the demands of most depositors namely:-

- a) nearness of the savings institution to the savers;
- b) maintenance and augmentation of the real value of the money saved;
- c) guarantee against possible losses resulting from investment of the money deposited;
- d) knowledge of and influence on how the saved money is invested.

The other paper - Premium Bonds - gives an outline description of a bond system which could attract part of the money usually spent on plain gambling and canalize it into savings, thus contributing to an overall increase in the propensity to save.

In addition to these papers, preliminary calculations have been made of the expected regionally procured funds available for development purposes in the Study Area during the period 1975 to 1980.

In association with the Project Manager the Financial Analyst has prepared a draft paper dealing with LAND RENT and LAND TAX. The paper describes a flexible payment system which could apply to farmers who have benefited from public development projects. At the same time the system could prevent private land owners from obtaining "working free incomes" through incremental land values brought about by public development schemes.

The Financial Analyst has, together with the Counterpart Economist, been looking into financing and organisation of Small Scale Industries.

Work presently in hand is a "Draft Development Report". The Report, which will be of an interim character, will deal with the Action Programme for the period 1975 to 1980. The projects which the Consultants recommend the Government to carry out in that period will be presented in a summarised form.

SECTION C
TRANSPORT AND COMMUNICATIONS

During August the Transport Planner continued work on the preparation for the Action Programme within the transport sector. This work included a Working Paper "Truck Transport Costs" also draft memoranda on "Road Costs" and "Roads and Bridges".

However, the road planning work could not be finalised because the Transport Planner left the Study Team before the Land Capability maps were completed. There is a very close inter-relationship between road planning, town and regional planning, and agricultural planning, all of which can only be undertaken on the basis of the Land Capability maps which have only very recently been completed by the Land Classification Team. The criteria for this planning have been drawn up by the Transport Planner but circumstances are expected to arise in the future when the Consultants would need the secondment to the team of a Counterpart Highway Engineer. Such assistance could help to bring the road action programme as close as possible to the implementation stage. Taking into consideration the importance of sea transport a Working Paper on sea transport costs and conditions was under preparation. A considerable amount of material has been collected and further material is still being received. The utilisation of this uncompleted material will be considered.

SECTION D
SETTLEMENTS AND INSTITUTIONS

1. GENERAL

The departure of the Town Planning Assistant, Mr. Richard Jong after only six weeks work with the Project has reduced the expected capacity of the Physical Planning group. Moreover, the Land and Survey Department has advised the Consultants that it may not be possible to extend to the Project the two promised Town Planning Assistants who were expected to participate in finalising the town planning. In order to compensate for this reduction of counterpart inputs the Consultants have suggested that their Physical Planner should complete his work in Copenhagen with staff in that office. The costs of such an arrangement, \$10 000, are available within the overall project budget.

2. REGIONAL AND PHYSICAL PLANNING

The ideas presented in Working Paper No. 48 "A Study of Settlements in the Lambir-Subis Development Area", have been further elaborated in a memorandum on the locations of service centres along the Miri-Bintulu Road. This paper was presented at the Steering Committee meeting in Bintulu on the 15th August. It was decided there that another meeting between representatives from SLDB, Land and Survey Department, the Consultants and the Minister for Lands and Mineral Resources should be called to discuss this item further. The meeting has not yet been held, but some associated discussions have taken place. The physical and regional planning group in co-operation with the Agriculturists has continued the planning of rural settlements in the Priority Area (50 000 acres). The outcome of these activities is included in a paper "Urbanisation of the Rural Areas", which will be presented at the next Steering Committee meeting. This paper gives an indication of the inter-relationships between cropping patterns, types of agricultural organisations and different settlement models.

The work on the Planning Manual for housing and services is in progress, and the chapters on education, health, postal services, police services and open space requirements are completed in draft form.

The Physical Planner and the Counterpart Town Planner have visited the Land and Survey Headquarters in Kuching to discuss settlements and town planning aspects. The result of the visit was a general agreement of the format of the physical planning group work, which will be submitted to Lands and Surveys for further elaboration.

The structure plan for Bintulu new town, presented at the Steering Committee meeting in Bintulu, has been further developed in sketch form ready for final draft.

The town planning group has, in co-operation with the Transport Planner, looked into the overall structure of Miri town in order to present a sketch layout of the town expansion programme.

3. PUBLIC UTILITIES

The Public Utilities Engineer has studied in detail the existing water supply schemes in the Study Area, and the plans for their enlargement; and for new waterworks. Studies of water consumption and distribution to new settlements were made.

A visit was made to Brunei to inspect the main sewerage system of Bandar Seri Begawan which has recently been completed. Following the visit preliminary work has been done on sewerage proposals for Miri and Bintulu. Discussions have also been held in Kuching with representatives of Government departments and other bodies concerned with all forms of public utilities.

4. SOCIOLOGICAL ASPECTS

The Consultant Sociologists completed their term on the Study at the end of September. During their period here they have written several important Working Papers which have been widely distributed. Their final report is presently being circulated among the Study Team in draft form.

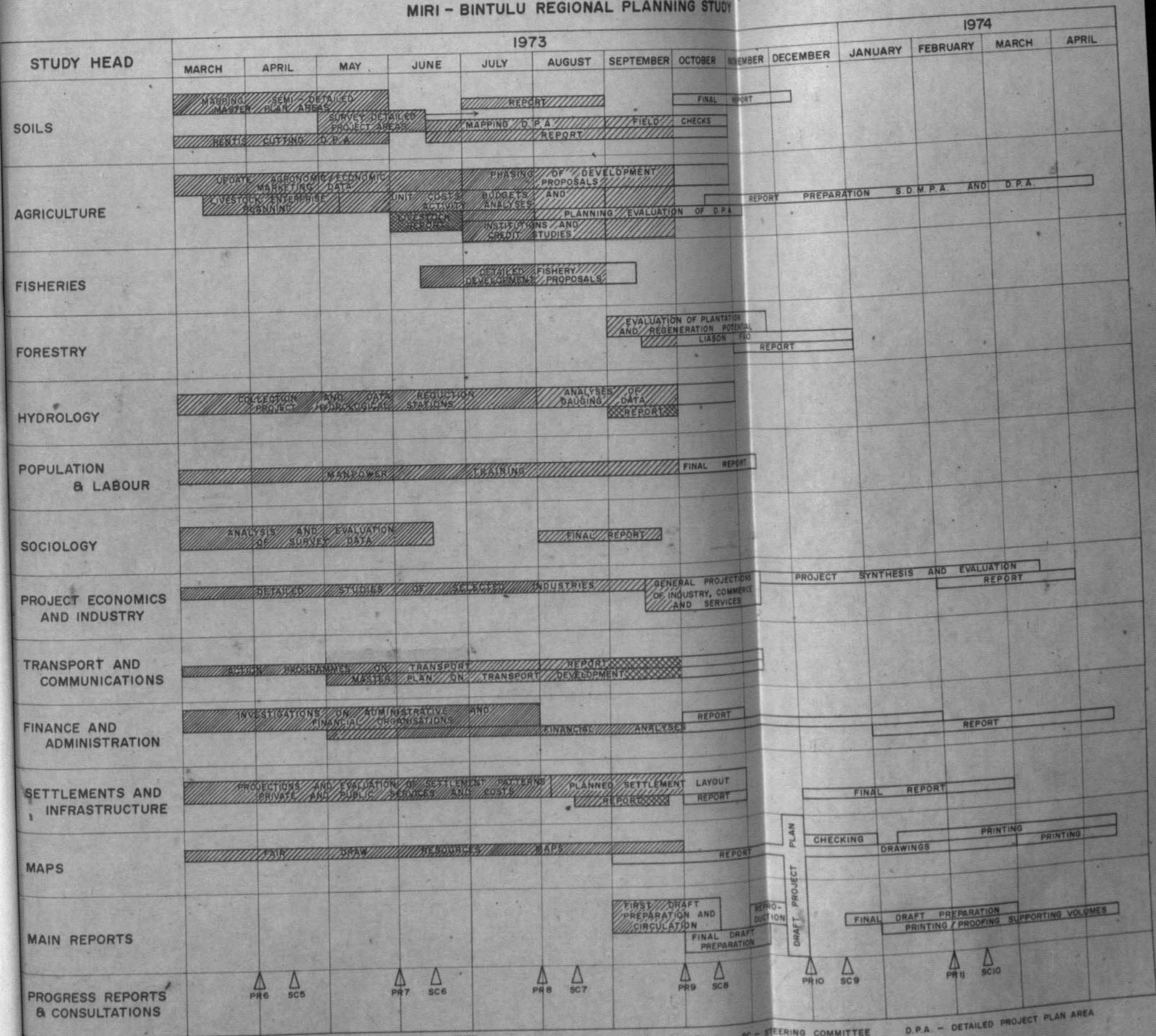
The Counterpart Sociologist will stay to the end of October to incorporate relevant comments to the Final Report, and to edit the Sociological Working Papers which are to be attached as Appendices to the Report.

APPENDIX I
WORKING PAPER INDEX

<u>No.</u>	<u>Date</u>	<u>Author</u>	<u>Title</u>	<u>File reference</u>
50	Jul 31	C.J. Mathiesen	Some Social and Financial Problems in Rural Development	MB/3/AGRIC/GEN/3
51	Aug 7	R.A.J. Harrison	Inland Fisheries	MB/3/FISH (not filed)
52	Sept 3	C.A. Sather	Social Survey of the Lambir Land Development Scheme	MB/3/SOC/ECON/27
53	Aug 23	H. Solhee	Sociological Study of the Labour Force at Bukit Peninjau Oil Palm Estate	MB/3/SOC/46
54			Reprint of No. 43	
55	Sept 8	T.E. Wetteland	Truck Transport Costs	MB/3/TRAN/LAND/44
56	Sept 18	M. Cooper and T.V. Andersen	Agricultural Production Services	MB/3/AGRIC/GEN/6
57	Sept 15	M. Iuul	Preliminary Report on the Manufacturing of Glass Containers in Bintulu	MB/3/IND/GLASS/24

PLAN OF OPERATIONS & MONTHLY PROGRESS CHART

MIRI - BINTULU REGIONAL PLANNING STUDY



▨ IN HAND

▩ DELAYED

PR - PROGRESS REPORT

SC - STEERING COMMITTEE

D.P.A. - DETAILED PROJECT PLAN AREA

S.D.M.P.A. - SEMI DETAILED MASTER PLAN AREA