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GOVERNMENT OF THE REPUBLIC OF INDONESIA  
MINISTRY OF TRANSMIGRATION  
DIRECTORATE GENERAL OF SETTLEMENT PREPARATION  
DIRECTORATE BINA PROGRAM

**TRANSMIGRATION PLANNING  
ADVISORY GROUP**

**SFSE - 82 MID - TERM REVIEW  
AND  
QUARTERLY PROGRESS REPORT**

AUGUST - OCTOBER 1984

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**SIR M. MACDONALD & PARTNERS ASIA**

in association with

HUNTING TECHNICAL SERVICES

WATER AND POWER CONSULTANCY SERVICES

HUSZAR BRAMMAH & ASSOCIATES

INKINDO TAC-I

Transmigration Planning Advisory Group - SFSE - 82 Mid-Term Review and Quarterly Progress Report - August - October 1984 - Sir Macdonald and Partners Asia in

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MINISTRY OF TRANSMIGRATION  
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**TRANSMIGRATION PLANNING  
ADVISORY GROUP**

**SFSE - 82 MID - TERM REVIEW**

**A N D**

**QUARTERLY PROGRESS REPORT**

**AUGUST - OCTOBER 1984**

**SIR M. MACDONALD & PARTNERS ASIA**

in association with

**HUNTING TECHNICAL SERVICES**

**WATER AND POWER CONSULTANCY SERVICES**

**HUSZAR BRAMMAH & ASSOCIATES**

**INKINDO TAC-1**

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                      Progress of Phase IIIA by Province  
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                      Province  
              G   Screening Reports-Phase IB

## GLOSSARY

AGRARIA	: DG of Agrarian Affairs
API	: Air Photo Interpretation
BAKOSURTANAL	: Badan Koordinasi Survey dan Pemetaan Nasional
BINA MARGA	: Highways Development Dept. (Cipta Karya)
BINA PROGRAM	: Programme Development Dept of DG Settlement Planning (Transmigration)
CAG	: Central Advisory Group
CIPTA KARYA	: DG of Housing, Building, Planning and Urban Development
CRIA	: Central Research Institute for Agriculture
CRIFC	: Central Research Institute for Food Crops
DG	: Directorate General
DITADA	: Direktorat Tata Kota dan Tata Daerah (Directorate of City and Regional Planning)
DPU	: Departemen Pekerjaan Umum (Public Works Department)
FAO	: Food and Agriculture Organisation of the United Nations
GOI	: Government of Indonesia
HBA	: Huszar Brammah and Associates
HPH	: Hal Pengusaha Hutan (right to exploit forest)
HTS	: Hunting Technical Services Limited
IBRD	: International Bank for Reconstruction and Development (World Bank)
IRJA	: Irian Jaya
ITB	: Institute of Technology Bandung
KAL BAR	: Kalimantan Barat (West Kalimantan)
KAL SEL	: Kalimantan Selatan (South Kalimantan)
KAL TENG	: Kalimantan Tengah (Central Kalimantan)
KANWIL	: Regional Coordinator
KBLK	: Kelompok Besar Lahan Kering (Large Settlement Schemes Administration)
KKLK	: Kelompok Kecil Lahan Kering (Small Settlement Schemes Administration)
LRDC	: Land Resources Development Centre (ODA)
MMP	: Sir M. MacDonald and Partners
ODA	: Overseas Development Administration (The UK Aid Agency)
JANTOP	: Army Mapping Service



PLPT	: Land Clearing Directorate
PTP (or PNP)	: Perseroan Terbatas Perkebunan (State Owned Estate Corporation)
RAG	: Regional Advisory Group
REPELITA	: Five Year Plan
SATBIN	: Provincial Coordination Committee
SATLAP	: Satuan Lapangan (Dept Transmigration Field Unit)
SEKNEG	: Sekretariat Negara (State Secretary)
SFSE	: Screening (Phase II) Feasibility Studies and Detailed Engineering (Phase IIIA)
SKP	: Satuan Kawasan Pengembangan (Development Unit)
SP	: Satuan Pemukiman (Settlement Unit)
SRI	: Stamford Research Institute (International)
SUL SEL	: Sulawesi Selatan (South Sulawesi)
SUL TRA	: Sulawesi Tenggara (South East Sulawesi)
SUM BAR	: Sumatera Barat (West Sumatera)
SUM SEL	: Sumatera Selatan (South Sumatera)
SWP	: Satuan Wilayah Pengembangan (Regional Development Unit)
TAD	: Transmigration Area Development Project (West German Aid Project in East Kalimantan)
TOR	: Terms of Reference
TRANS I-VI	: IBRD loans for Transmigration Programme
WAPCOS	: Water and Power Consultancy Services (India)
WPP	: Wilayah Pengembangan Partial (Partial Development Region)

## 1. ADMINISTRATION.

### 1.1 INTRODUCTION.

The fourth quarterly progress report of the Transmigration Advisory Group, which covers the period August to October 1984, incorporates the mid-term review of the SFSE-82 Programme. This review summarises the progress of the Consultants' work during the first year of the Programme, identifying and discussing the main difficulties and constraints which have arisen.

The review, which is contained in Chapter 2 of this report, is followed by an account of the activities during the quarter of the Central Advisory Group in Chapter 3 and of the Regional Advisers in Chapter 4. The quarter's progress by the individual Consultants is discussed in Chapter 5.

Appendices have been prepared in three volumes, presenting the reviews of all API, Phase II, and Phase IIIA reports for the quarter August to October, and reports of visits, technical memoranda and screening activities for the six month period May to October.

### 1.2 ADVISORY GROUP CONTRACT.

The Advisory Group Contract was signed on 13 April 1984 and ratified by Bappenas on 17 May. Payment was received from the World Bank in August for the second payment request for the period December 1983 - February 1984, and at end October for the third payment request for the period March to May 1984. The fourth payment request for the period up to August 1984 was approved and awaiting the signature of the Director, Bina Program, at the end of October, and the fifth payment request for September-November 1984 was submitted for processing during October. Owing to delays in processing payment applications 3 and 4, payments are still not up to date, but it is hoped that this situation will be rectified soon.

### 1.3 STAFFING.

Advisory Group staffing remained at full expatriate strength over the quarter, and mobilisation of TAC I Staff continued. The following



TAC 1 inputs commenced during the quarter.

<u>Post No.</u>	<u>Post</u>	<u>Name</u>
L3.	Planning Engineer	M. Rachmat
L6.	Agriculturalist	E. Utama
L10.	Rural Dev. Engineer	Sentot Kartoprayitno
L12.	Doc. Specialist/Librarian	C. Messakh
L13.	Topographer (Banjarmasin)	Waluyo

Details of all inputs are shown in Table 1.1.

Mr. B.H.B. Duncan, Agricultural Economist, was replaced by Mr. M.C.B. Williams in September, and Mr. Laszlo Huszar completed his input on evaluation of Repelita III Transmigration Programme also in September.

#### 1.4 CENTRAL ADVISORY GROUP OFFICE.

The Advisory Group continued to operate from the fourth floor of Blok B Gedung Depnaker. A telex line is still to be installed.

Additional office furniture was purchased during this period.

#### 1.5 REGIONAL OFFICES.

The Pontianak Regional Advisory Group rented premises for two years for themselves and SATLAP staff, and improvements and furnishing were carried out.

The Regional Adviser, Samarinda, obtained quotations for partitioning and furnishing that part of the Provincial Transmigration Office which has been allocated to SATLAP and himself, and the work is expected to start soon.

#### 1.6 EQUIPMENT AND VEHICLES.

The last Government owned vehicle allocated for the Advisory Group in Jakarta from the SFSE 80 programme was returned to the Client's custody

in August. The five Government field vehicles in Pekanbaru, Pontianak, Banjarmasin, Samarinda and Jayapura continued to be used by Regional Advisers, and their registration was renewed.

A RKN 5000 M Computer was purchased from project funds for use by the RePPProT team.

TABLE 1.1

STAFF TIMES TO END OCTOBER 1984

POST NO	P O S T	N A M E	PLANNED	BROUGHT FORWARD FROM SEPT	TIME FOR OCT	TOTAL TO DATE	BALANCE
I EXPATRIATE							
CENTRAL ADVISORY GROUP							
F1	Team Leader	DONALD	22.00	10.97	1.00	11.97	10.03
F2	Agro Economist	HUGHES/DUNCAN WILLIAMS	22.00	10.07	1.00	11.07	10.93
F3	Planning Engineer	GOWER	17.00	13.20	1.00	14.20	2.80
F4	Senior LU Planner	HOLMES	22.00	11.20	0.90	12.10	9.90
F5	LU Planner 1	LAW	12.00	4.37	1.00	5.37	6.63
F6	LU Planner 2	HATTEN	18.00	11.03	0.93	11.96	6.04
F7	Senior Topographer	GOSSAIN	22.00	11.47	1.00	15.07	6.93
F8	Topographer	JYOTI	22.00	14.60	1.00	15.60	6.40
F9	Agriculturalist	WRIGHT	18.00	11.57	1.00	12.57	5.43
F10	Reg. Coordinator	MACKIE	23.00	12.17	1.00	13.17	9.83
F11	Rural Dev. Engineer	GILL	22.00	12.87	1.00	13.87	8.13
F12	Physical Planner	HALL	18.00	8.00	1.00	9.00	9.00
REGIONAL ADVISORY TEAMS							
F13	Planning Engineer (Palembang)	MOBBS	21.00	13.23	1.00	14.23	6.77
F14	Topographer (Pakanbaru)	CHAWLA	22.00	14.50	1.00	15.50	6.50
F15	Planning Engineer (Pontianak)	SIMMONS	21.00	12.17	1.00	13.17	7.83
F17	LU Planner (Pontianak)	HUTCHEON	18.00	2.43	1.00	3.43	14.57
F18	Planning Engineer (Banjarmasin)	MAHE	21.00	11.74	0.33	12.07	8.93
F19	Planning Engineer (Samarinda)	HOCKEY	21.00	13.07	1.00	14.07	6.93
F20	Planning Engineer (Jayapura)	MORPHEW	22.00	11.96	1.00	12.96	9.04
F21	LU Planner 1 (Jayapura)	O'FARRELL	21.00	13.03	1.00	14.03	6.97
F22	LU Planner 2 (Jayapura)	SCOTT	12.00	2.80	1.00	3.80	8.20
F23	Agriculturalist (Jayapura)	REVELL	21.00	12.30	1.00	13.30	7.70
F16	Topographer (Jayapura)	RAI	22.00	14.43	1.00	15.43	6.57
PRINCIPALS AND SPECIALISTS							
	Project Director	DEMPSTER	1.00	0.23	0.00	0.23	0.77
	Project Principals	VARIOUS	4.00	1.94	0.00	1.94	2.06
	Environmentalist	ROBERTSON	3.00	0.00	0.00	0.00	3.00
	System Analyst	THORN	6.00	0.00	0.00	0.00	6.00
	Contracts Engineer	WELLS	3.00	0.00	0.00	0.00	3.00
	Rural WS Engineer	JONES	3.00	0.00	0.00	0.00	3.00
	Info. Specialist	MILNE	4.00	0.00	0.00	0.00	4.00
	Unallocated	AS APPROVED	35.00				27.73
	LU Planner	WALL		5.00	0.00	5.00	
	Principal Planning Specialist	HUSZAR		2.27	0.00	2.27	
TOTAL			519.00	265.22	22.16	287.38	231.62
II LOCAL							
L1	Co Team Leader	L. AMAHORSEYA	21.00	4.50	1.00	5.50	15.50
L2	Agro Economist	L. SUKAHAR	15.00	0.00	0.00	0.00	15.00
L3	Planning Engineer	M. RACHMAT	20.00	1.00	1.00	2.00	18.00
L4	Land Use Planner	S. SARIEF	20.00	0.00	0.00	0.00	20.00
L5	Topographer	M. TAWIL	20.00	2.67	1.00	3.67	16.33
L6	Agriculturalist	E. SUTAMA	20.00	0.00	1.00	1.00	19.00
L7	Forester	SUTISNO P.	20.00	3.80	1.00	4.80	15.20
L8	Systems Analyst	E. SINAULAN	20.00	3.71	1.00	4.71	15.29
L9	Data Processing Spec.	R. KOTAMBUNAN*	20.00	3.00	1.00	4.00	16.00
L10	Rural Development Eng.	SENTOT K.P.	20.00	2.00	1.00	3.00	17.00
L11	Physical Planner	R. PULUNGAN	15.00	0.00	0.00	0.00	15.00
L12	Doc. Specialist/ Librarian	L. KOROMPIS/ C. MESSAKH	20.00	0.97	1.00	1.97	18.03
L13	Topographer (Banjarmasin)	WALUYO	20.00	1.47	1.00	2.47	17.53
L14	L.U. Planner (Jayapura)	R. ADIWIDJAYA	20.00	0.00	0.00	0.00	20.00
L15	Principal	P. RAHARDJO	2.00	0.01	0.00	0.01	1.99
L16	Project Coordinator	LATIEF	2.00	0.01	0.00	0.01	1.99
L17	Visit Spec/Unallocated	AS REQUIRED	40.00	0.00	0.00	0.00	40.00
TOTAL			315.00	23.14	10.00	33.14	281.86

\* The post was filled by Ms. Susanti Widjaja for one month (temporary)

## 2. SFSE-82 PROGRAMME : MID-TERM REVIEW

### 2.1 AWARD OF CONTRACTS

The major component and primary objective of the Trans III loan funded by IBRD is to prepare settlement plans for some 300,000 families who will be settled in the larger outer islands of Indonesia during Repelita IV.

Approximately 40 consortia of foreign and local consultants were invited to submit proposals for Phase II (screening) and Phase IIIA (detailed engineering) studies during the latter part of 1982. It was the intention to award 10 contract packages in the following areas:

- Packet A - Aceh, Riau and Jambi
- Packet B - South Sumatra and Bengkulu
- Packet C - West Kalimantan
- Packet D - West Kalimantan
- Packet E - Central Kalimantan
- Packet F - East Kalimantan
- Packet G - Sulawesi and Maluku
- Packet H - Irian Jaya (north)
- Packet I - Irian Jaya (south)
- Packet J - Irian Jaya (south)

After negotiations nine of these contracts were let, the exception being Packet G where the small number of areas suitable for study and the scattered locations of these few sites resulted in very high unit costs per study area.

After completion of the loan agreement in April 1983, contracts for the nine packages of Phase II and Phase IIIA studies were let as set out in the following table. The locations of the SKPs which were to be studied are shown in Maps 2(a), (b) and (c).



Packet	Foreign Consultant	Local Associate	No of studies	
			Ph II	Ph IIIA*
A	Syarikat Sailcos	Seecons Consortium	25	13/ 9
B	Halcrow Fox & Associates	Indulexco-Parama Consortium	26	11/ 9
C	China Engineering	Biec International	22	11/10
D	Sinotech Engineering	PT. Nasuma Putra	22	11/ 9
E	Kampsax	Amythas-Multi Phi Beta Consortium	25	12/10
F	Pacific Consultants International	PT. Trans Intra Asia	22	11/ 9
H	PRC Engineering Inc.	PT. Tricon Jaya	28	13/11
I	Fenco Engineering Inc.	PT. Fincode International	28	14/10
J	Euroconsult	PT. Nusvey	<u>30</u>	<u>14/11</u>
			228	110/88

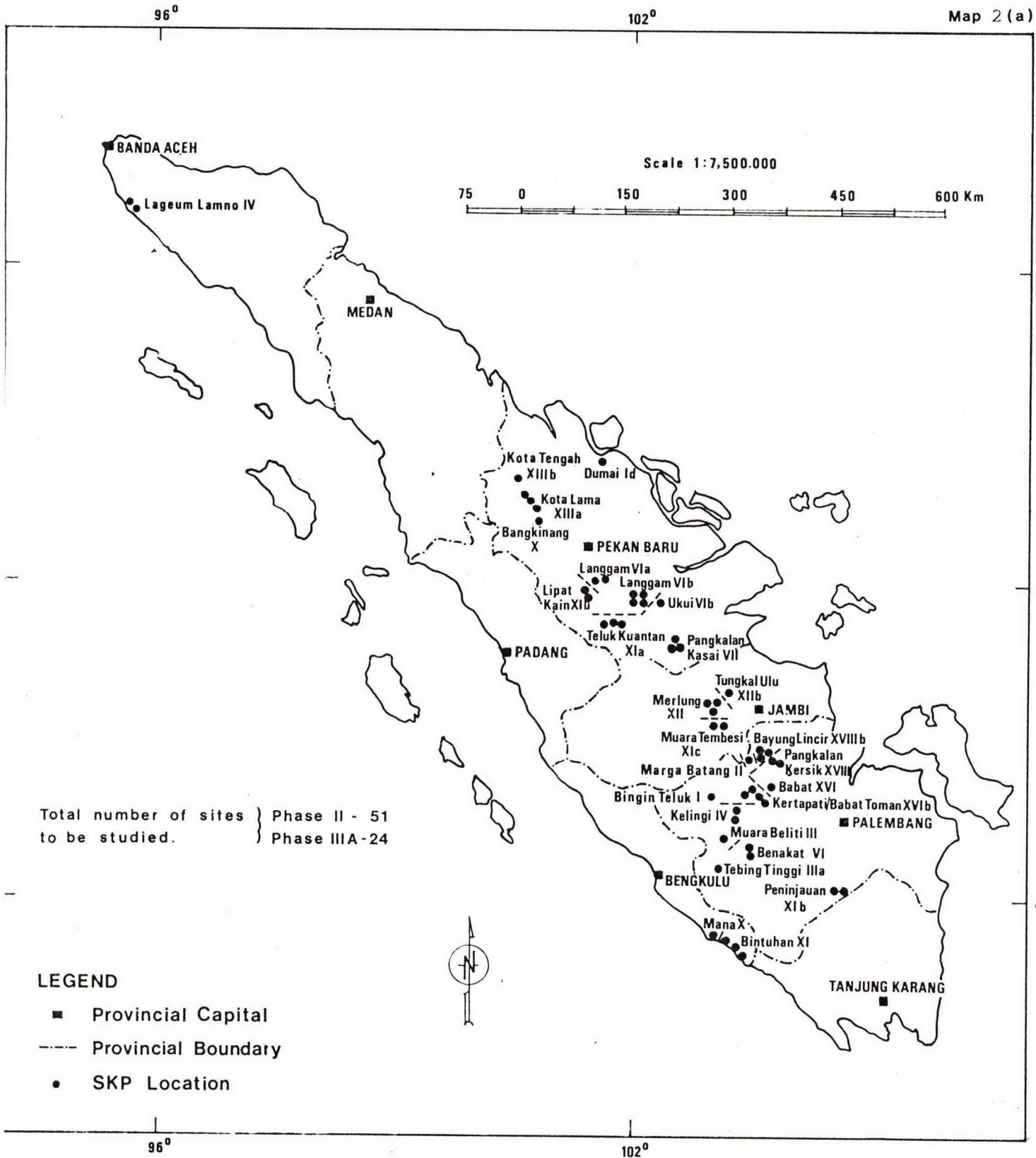
\* First number refers to number of 'task concept' studies, second number refers to number of 'assistance concept' studies.

These contracts were finalised and approved during the period April - August 1983, but mobilisation for the start of the contracts was slow and technical work only commenced towards the end of the year. The following table shows date of contract signature, date of start of technical work and approximate date of receipt of advance payment. The table also shows each Consultant's starting date as defined in their contract, which runs for two years from this starting date.

Packet	Date of Signature of Contract	Starting Date of Contract	Date of start of technical work	Date of receipt of advance payment (approx.)
A	7.5.83	1. 7.83	August 83	-
B	19.8.83	1.12.83	December 83	December 83
C	12.8.83	1. 9.83	October 83	December 83
D	8.4.83	1. 6.83	September 83	December 83
E	9.5.83	1. 8.83	July 83	December 83
F	19.8.83	1.10.83	December 83	December 83
H	12.8.83	1. 9.83	December 83	December 83
I	12.8.83	1. 9.83	August 83	December 83
J	26.6.83	1.12.83.	September 83	December 83

# SUMATERA

Location of sites  
studied / under study during Trans III.



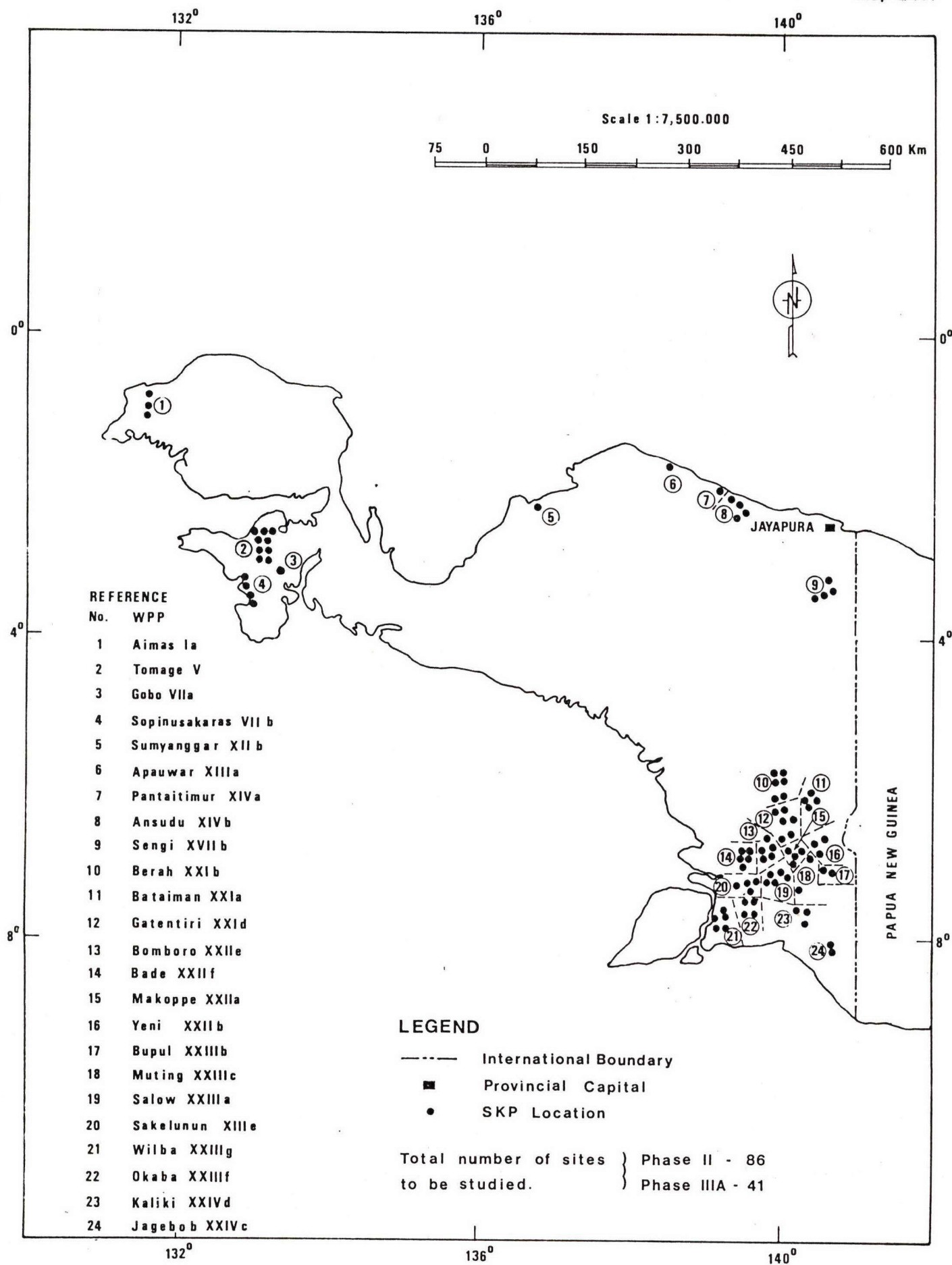




Location sites  
studied / under study  
during Trans III.

# IRIAN JAYA

Map 2 (c)





## 2.2 CONSULTANTS' PROGRESS

The progress achieved during the first half of the SFSE-82 programme has fallen behind the rate necessary for the Consultants to achieve their respective targets. Table 2.1 gives the estimated progress to the end of October 1984 for the Task concept of the contract, and it can be seen that the overall progress is 26.4% complete compared with a target of 57.9%. It is unlikely that any of the Consultants will complete the task part of their studies within the 24 months contract periods.

Table 2.2 shows for each Consultant the percentage of his contract time which had expired at the the end of September, the percentage of his contract man-months, expatriate and local, which he had used at the same date, and an estimate of the progress achieved during the same period. It can be seen that in every case the estimate of work completed is considerably below the percentage of man-months used and, with one exception, even further below the percentage of contract time expired. The position is shown graphically in Figure 2.1 .

At the end of October letters had been sent to all the Consultants requesting them to meet Bina Program to discuss their respective positions and how the problems might be resolved. Particular action has been necessary in the case of Fenco, who would appear to be in the worst position, and at the end of October one of their directors arrived to assess the situation. PCI are also in serious difficulties.

The fulfilment of the SFSE-82 programme will be further curtailed by the delay in the awarding of contracts to Local Associates and Local Consultants who are to be assisted by the Foreign Consultants under the assistance part of the contracts. Since the tendering procedure through to the award of contract could take about five months, there will not be sufficient time for the Local Associates and Local Consultants to carry out the required Phase IIIA studies before the completion dates of the Foreign Consultants' contracts. It must now be accepted that none of the assistance concept studies will be carried out under this programme, which will have the effect of considerably reducing the number

of SKPs studies under the programme. It was originally proposed that the following numbers of Phase IIIA studies be carried out :

- By Task concept                      110
- By Assistance concept                88

With the loss of 88 studies the SFSE-82 programme will be effectively reduced by 44%.

The following table shows the total number of reports submitted by the Consultants during the SFSE-82 programme up to the end of October :

API	reports	228
Draft	Phase II reports	71
Final	Phase II reports	9
Draft	Phase IIIA reports	1
Final	Phase IIIA reports	-

There are several different reasons for this slow progress of the SFSE-82 programme, which are concerned both with the way the work has been carried out and with unforeseen difficulties arising during the course of the studies. The management problems have been of more concern with some Consultants than with others, but the technical difficulties have affected all the Consultants. The problems have included the following :

- the poor quality of some of the draft reports which have required additional man-months for their revision.
- staff mobilisation out of step with the work programme, so that Phase IIIA man-months have been used while Phase II work is still in progress.
- the lack of large-scale aerial photography and suitable topographic maps, or delays in obtaining them for the use of the Consultants.

Packet-Consultant	Equivalent Phase II Progress																				% Completion		
	Contract			Equiv.	Phase II						Phase IIIA Task						Phase IIIA Assist						
					Field			Report			Field			Report			Field		Report				
	II	IIIA	IIIAA																			Ph.II	API
A - Syarikat Sailcos	25	13	9	82	5.4	0.8	4.4	0.8	2.45	0.05	3.6											17.50	21.34
B - Halcrow Fox	26	11	9	77	4	0.4	3.2	0.6	1.75		1.8	1.8	0.6									14.15	18.38
C - DECI	22	11	10	75	4.6	0.2	8.4	1.6	4.55	0.2	3.6	3.6										26.75	35.67
D - Sinotech	22	11	9	73	5		8	1.2	4.9		1.8	5.4	1.8									28.10	38.49
E - Kongsax	25	12	10	81	3.2		5.2	1.4	2.1	0.1	0.9	9.0	2.4	1.05								25.35	31.30
F - PCI	22	11	9	73	3.8		5.2	2.4	1.05	0.05	0.9	1.8	0.6									15.40	21.10
G - PRC	28	13	11	89	6	0.8	4.0		2.45													13.25	14.89
H - Fenco	28	14	10	90	4.8		8.0	1.2	1.4													15.40	17.10
I - Euroconsult	30	14	11	94	8.8	1.0	7.6	0.8	4.55	0.05	2.7	9.0	3.0									37.50	39.89
Total	228	110	88	734	45.6	3.2	54.0	10.0	25.2	0.45	15.3	30.6	8.4	1.05			Overall					193.40	26.35
Factors	1*	3*	2*		0.2	0.2	0.4	0.2	0.35	0.05	0.9	1.8	0.6	1.05	0.15								

Numbers in brackets are actual numbers of SKPs which are multiplied by the factor at the bottom of each column to give progress measured in terms of Phase II equivalent work.

\* These factors are used to calculate, in terms of Phase II studies, the equivalent work volume in Phase IIIA task and assistance studies

Table 2.2

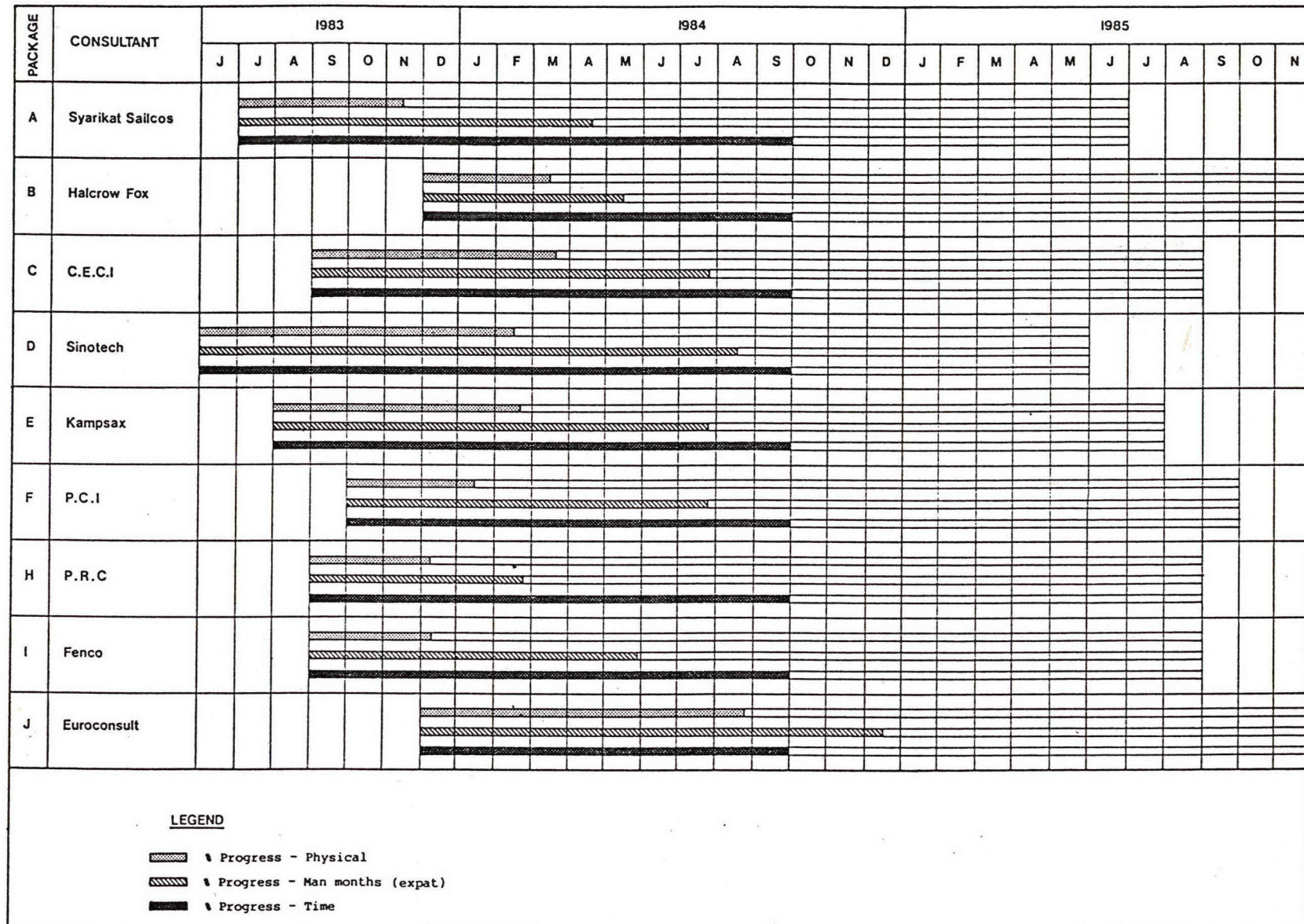
## SFSE82 CONSULTANTS PROGRESS/MAN MONTHS AS AT 30 SEPTEMBER 1984

Packet	Consultant	Contract			Progress %			Man month %	
		Starting Date	Man months Expat.	Local	Contract Time	Actual to date	This Month	Expat.	Local
A	Syarikat Sailcos	1.7.83	395.5	315.0	62.5	18.6	2.0	41.0	31.9
B	Halcrow Fox	1.12.83	423.5	266.0	41.7	16.0	2.3	22.0	33.0
C	CECI	1.9.83	387.0	343.0	54.2	27.9	4.2	45.6	38.1
D	Sinotech	1.6.83	372.0	317.5	66.7	35.6	8.6	60.9	51.1
E	Kampsax	1.8.83	405.0	339.5	58.4	28.2	.6	50.0	59.0
F	P.C.I	1.10.83	393.0	334.5	50.0	15.3	3.0	41.0	32.3
H	P.R.C	1.9.83	427.0	390.0	54.2	13.3	1.3	24.6	15.5
I	Fenco	1.9.83	423.5	381.0	54.2	13.6	1.9	37.5	50.9
J	Euroconsult	1.12.83	435.0	365.0	41.7	36.7	2.4	52.2	52.6
			3661.5	3051.5					



**SFSE 82 CONSULTANT'S PROGRESS**  
as at 30 Sept 1984

Figure 2.1



- constraints on the availability of sites arising from their existing land use, particularly in forestry concessions, but also in other uses.
- the discovery during Phase II studies of serious physical constraints in many areas, especially in respect of soils and topography, which have necessitated modifications to the scope of work required by the Terms of Reference and have led to consideration of alternative models of economic activity for the transmigrant settlements.

No further comment is needed on the management problems, which are most simply handled directly with the Consultants. The technical problems are discussed more fully in the following sections.

### 2.3 SITE IDENTIFICATION AND SCREENING

During the first six months of the project, there was a heavy emphasis on confirming the suitability of sites contracted for the SFSE-82 Phase II studies. The new 1:20,000 photography of 97 sites was screened, in addition to 79 sites for the present programme that were screened during 1982/83. This Pre-Phase II screening consists of a rapid check of photo-cover and quality, an assessment of overall suitability for further study, and general recommendations on boundary revisions or likely constraints. A further 57 sites were screened from existing medium scale photography (1:40,000 - 1:60,000) where large scale was not available. In addition, up to 80 sites were identified by regional screening of 1:100,000 photography, mainly in Kalimantan.

Not all these 313 sites were required for the SFSE programme, but nevertheless rejections on the basis of unsuitability or non-availability leave very few of these sites as reserve for Trans-V. Criteria of suitability were considerably relaxed by the directive of September 1983 instructing consultants to study for a wide range of non-standard models ("STR"), including particularly tree crop and wetland models. Problems of land availability continue to hamper the smooth execution of the programme (see Section 2.4)



Following the screening of sites for Trans-III, the emphasis shifted towards the identification of new sites for future programmes, using particularly the 1:100,000 scale photographs that cover much of Kalimantan. The main areas of interest in West, Central, and the southern parts of East Kalimantan had already been covered in the site selection process for Trans-III, and work now concentrated on the remaining areas of East Kalimantan. Over three million hectares of this province suffered fire damage in the drought of 1982-83, and it is hoped that transmigration will play a major role in the rehabilitation of this area, although it is unlikely that more than three Phase II studies will commence in this zone during Trans-III.

Small scale photography or satellite imagery has not been readily available for Irian Jaya, the other main island of transmigration potential, although some existing large scale photographs were screened in order to find replacement sites for Packet H, while the Consultants for Packet J have made their

Landsat interpretation available for the identification of replacement sites in Packets I and J.

These regional studies consist merely of a preliminary "quick-look", in order to fulfil the requirements of advance planning, especially identification of sites for Trans-V. They serve to identify areas of interest, where constraints particularly of topography and soils are considered to be less severe and further studies are justified. Thus they do not replace the comprehensive reconnaissance mapping being undertaken by the RePPP team, province by province, which will be completed in the most important provinces in time to make the final refinements to site identification for the Trans-V programme.

#### 2.4 SITE AVAILABILITY

Availability of sites for transmigration has bedevilled the programme on a number of factors:

- i ) forestry status
- ii ) forest concession holders
- iii) priority given to tree crop development favoured by many provincial authorities
- iv ) existing land use (forest rubber, shifting cultivation, rattan cropping)
- v ) unwillingness of provincial authorities to approve site implementation in remote areas

One result is that the remaining available areas are often blatantly unsuitable for the SFSE transmigration, even with a relaxation of the land suitability criteria for development (non-standard models).

Priority for tree crops has closed many areas of Riau and Jambi (Packet A), and existing land use (rubber) has had the same result in South Sumatra (Packet B), where the remaining forest areas are also jealously guarded.

In West Kalimantan (Packet C and D), shifting cultivation is very widespread, and remaining forest areas generally prove to be unsuitable. In addition, many suitable sites in areas of low secondary scrub and grassland are unavailable because they still hold a status of Limited Production Forest, and the Department of Forestry claims to have a re-forestation programme.

Forestry criteria, and sometimes present land use, are the main constraints on availability in Central and East Kalimantan (Packet E and F), but tree crop priority and remoteness from existing infrastructure and markets are also key factors in East Kalimantan.

Finally in Irian Jaya (Packet H, I and J), land suitability is usually a greater constraint than availability.

These constraints illustrate the difficulties in arranging the co-ordination between different Ministries of the Central Government, and between the Central Government and Provincial Governments. It must be remembered that the final approval to proceed with surveys or implementation rests with the Provincial Governor and not with the programme's executive authority.

In order to obtain a clear picture on the issue of availability, the Regional Advisory Groups have been instructed to prepare maps on forest status, forest concessions and land allocations (provisional or definite) at provincial scale, and to monitor progress and changes. The compilation of this data requires close co-operation with all the provincial authorities especially BAPPEDA. This compilation is in progress, but so far has been completed only for Riau, Jambi, and most of East Kalimantan.



## 2.5 PHOTOGRAPHY CONSTRAINT

Many of the Consultants have been forced to carry out Phase II surveys without the benefit of large scale photography. Changes in the list of contracted sites because of problems of suitability or availability, both at the start of the SFSE-82 programme and progressively as more information was obtained, delayed the allocation of sites for photography under the 1983/84 GOI budget, while the contracts for aerial survey were then further delayed by changes in administrative procedure. The final list of sites was not ready until April 1984, but the signing of contracts did not take place until September 1984.

Wherever possible, Consultants have utilized existing small-scale photography (generally 1:100,000 or smaller, but locally 1:40,000-1:60,000) for their Phase II studies, or even satellite imagery in Irian Jaya, but unfortunately the quality of this photography is sometimes severely deficient.

The intention was that the new 1:20,000 photography would at least be available in time for report preparation and map production, but this has not proved to be the case, and by necessity reports are now being produced on the basis of what is available. However, it is hoped that the new photography will now be available at least for the Phase III studies.

## 2.6 TOPOGRAPHIC MAPPING

Lack of topographical maps of the project areas at a suitable scale has been a serious constraint for transmigration planning. While some areas in Sumatra and West Kalimantan are covered by 1:50,000 maps, no maps at scale 1:50,000 or larger exist in other areas.

It has therefore been necessary, in order to provide base maps for Phase II studies, to make graphical compilations from 1:20,000 air photographs, specially flown for certain areas, and other existing air photography at scales ranging from 1:40,000 to 1:100,000. Maps compiled from air photographs of scale smaller than 1:60,000 are not satisfactory, and the Consultants have had to wait for 1:20,000 air photographs for producing their final maps and Phase II reports. Because of this mapping deficiency, the accurate delineation of boundaries leading to recommended Phase IIIA study areas has been delayed. In spite of this, the Consultants have been forced to proceed with Phase IIIA studies in order to keep up with their programmes.

For Phase III studies, maps at scale 1:5,000 or 1:10,000 are required. To produce accurate maps at such large scales is time consuming and delays the planning process, and to overcome this, Phase III has been divided into two phases, Phase IIIA and Phase IIIB. For the identification of suitable areas and for Phase IIIA studies, 1:20,000 maps are prepared based on ground control and air survey from 1:20,000 air photographs. For detailed planning at Phase IIIB, maps at scale 1:5,000 are prepared by ground methods to cover only the areas to be developed for house lot and first arable land. Though these procedures have reduced the constraint to some extent, the problem has not yet been fully solved.

#### 2.6.1 Airborne radar topographic mapping

Bina Program has been investigating alternative systems and new techniques for faster and more economical production of topographical maps. Stanford Research Institute (SRI) was contracted during the SFSE-80 Programme to produce topographical maps of Central Kalimantan using airborne radar.

The final report in April 1984 showed that the system needed further modification and testing before it could be considered operational.

SRI has been asked to carry out further tests in an area of 60,000 ha during the present programme. If the tests are successful, it is intended that SRI will prepare maps covering an area of approximately 220,000 ha and that Kampsax International will take up Phase IIIA studies of 14 sites based on these maps.

The final maps and final report of the test area have not yet been submitted, although preliminary versions of the first five sheets and profiles of 49 flights have been received. Complete evaluation of these first drafts cannot be done as some data are still awaited and SRI wish to produce improved versions of the maps, but the preliminary versions in the present form are not of acceptable standard.

SRI has clarified that the radar mapping system is designed ideally for areas with slopes up to (15% with a maximum of 25%) and contour intervals of 5 metres (with a limit of 2,5 m). It cannot be used for mountainous terrain with steep slopes and for swamp areas because of their flat topography.



## 2.6.2 Airborne laser topographic mapping.

Bina Program has also decide to investigate the airborne laser profiling system. Six firms have been short listed and international competitive bidding is being used to select one firm for the pilot project.

The aim of the project is to find out if this system can be used for the preparation of topographical maps in preference to the traditional methods or radar mapping systems. The areas selected for the project contain primary and secondary forest, grassland, existing cultivation and swamp, and are thus representative of areas used for transmigration.

It is proposed that maps be prepared of the same areas using the radar system also, and the maps produced by both systems will be subjected to ground checks. After evaluation in terms of accuracy, time and cost, a decision regarding the extent to which each system should be used will be taken by Bina Program.

## 2.7 FORESTRY CONSTRAINTS.

One of the major constraints to the SFSE 82 programme has been that imposed by forest classification. Soon after the start of the programme, in November/December 1983, new regulations were introduced affecting limits of Phase II and Phase IIIA studies in various categories of forest classification. From this time areas of Limited Production Forest were rejected following API, and Phase IIIA surveys were not allowed to proceed in areas of Production Forest. Prior to this time, and in a very few instances after it, Binapram authorized Phase II studies in Limited Production Forest and Phase IIIA studies in Normal Production Forest. An exception was made in the case of Irian Jaya where the forest classification is provisional only and reclassification for transmigration development is easier to achieve.

In March 1984, general guidelines were contained in a formal agreement between the Ministers of Transmigration and Forestry, and this was followed by an agreement between the relevant Director Generals in May 1984. It was set out that transmigration settlement would not be permitted on forest land classified as follows:

- Limited Production Forest
- Protection Forest
- National Park
- Wildlife Reserve

No study beyond API should be made in these areas. In areas of normal production forest, Phase II surveys can still be carried out, and if found suitable for further study, recommendations can be made to the committees formed under the Joint Agreement to change the status of the forest classification on the following conditions:

- if the area has no timber potential of economic value;
- provided no existing forest concessionaires' timber plans would be disturbed;
- provided Forest Department have no plans for reafforestation of the area;
- if there are available areas of Conversion or Mapped Demarcated Forest which can be exchanged for the production forest to be utilised.

Unless and until approved is obtained, Phase IIIA studies in areas of normal production forest should not proceed.

The working committee of members from Departments of Transmigration and Forestry held two meetings in April, four in May, one in September and one in October, but no forestry problems relating to TRANS III sites have so far been resolved by this Committee. The last meeting discussed the legalisation of forest classification in areas which have been entirely or partially land-cleared.

The SFSE 82 Packets most affected by forestry constraints are those in West Kalimantan and South Sumatra, and to a lesser extent in Riau and Central Kalimantan. Many of the otherwise suitable areas in West Kalimantan lie wholly or partly in Limited Production Forest, but these areas have little or no commercial forest remaining, and are mainly areas of secondary growth. However it appears that the letter of the Joint Agreement is being strictly adhered to, and the Provincial Authorities are keen to promote and expand the concept of 'timber estate' development so that these areas will not be freed for Phase IIIA studies and ultimate transmigration settlement.

The restrictions imposed on site selection have led to a much larger proportion of sites being rejected following API and more restructuring of SKP boundaries to avoid areas of production forest. Lists of Trans III sites which lie wholly or partly in Production Forest have been prepared for the Client.



About 26 sites studied at Phase II under the SFSE-80 programme, found suitable (and in some cases also studied at Phase III/IIIA), have been held up due to forest classification constraints. About 14 sites to date studied at Phase II under the SFSE-82 programme, and found suitable for further study, have been held up for the same reason, and this number is expected to grow as more Phase II studies in Production Forest are completed. These sites are not restricted to those in which a dryfarm model only is recommended, but includes wetland and tree crop recommended development.

## 2.8 PHASE II AND PHASE IIIA STUDIES-COMMENTS ON THE TERMS OF REFERENCE

The objectives of Phase IIIA studies, as set out in their TOR and Guidelines, are to undertake the planning and the design of transmigration settlements in previously selected areas. In the words of the introduction to the TOR, they are "for the activities which lead to the preparation of an SP structure plan and the delineation of blocks" for land clearing and site preparation. Most of these activities are related to the physical planning of a settlement area, from which at the end cost estimates are to be drawn up and tender documents prepared. A financial and economic analysis of the planned investment is to be carried out in some cases. The Guidelines state that "Phase IIIA work is only undertaken for those SKPs which, following Phase II studies, are thought to be suitable for transmigration site development".

The TOR of a Phase II study are "for a rapid reconnaissance of a potential transmigration area, an assessment of its suitability for agricultural development and the preparation of an outline physical plan".

It is clearly implied in the TOR of the two types of study that in most cases the final selection of an area for settlement development is to be based on the results of the Phase II study. Although it is accepted that additional information acquired in a Phase IIIA study may sometimes lead to the rejection of an area, in general Phase II represents the screening or selection process and Phase IIIA the detailed planning process (see para 1.3 of the TOR document of October 1982).

It is also clear that the selection process is in essence based on physical, rather than social or economic, criteria. The socio-economic aspects of the Phase II study are concerned mainly with the size of the existing population, existing opportunities for off-farm employment, and public facilities. It is assumed that agricultural development will follow the standard food crop model, which has levels of inputs previously determined because of limitations on available funds. Economic and financial analysis is confined to a few representative SKPs where the physical planning at Phase IIIA is already completed.

The pressure for early decisions on the selection of settlement sites is intensified by the requirement imposed on the Ministry of Transmigration and Bina Program to meet Government targets laid down in Repelita IV under the settlement programme.

However, during the course of the work on Phase II studies in the SFSE-82 programme, it has become clear that such decisions are difficult to make on the basis of the limited information collected during a Phase II study under the existing TOR. High levels of soil acidity, low inherent soil fertility, and the local topography have imposed severe constraints in most areas on the extent to which the standard food crop model can be adopted in the proposed SKPs. Because of the fertility problems higher levels of fertilizer and lime have had to be considered, and because of both fertility and topographical problems tree crop models, small-scale irrigation, and models for non-agricultural activities such as fishing and limestone quarrying have been proposed. It has also proved necessary to consider the possible development of wetland areas, which would require changes to the TOR for Phase IIIA studies. Some initial proposals have been made for this.

The need for tree crop development and the soil fertility problems are discussed further in Sections 2.9.1 and 2.9.2. In order to examine the potential for the other alternative models, pilot studies have been commissioned as described in Sections 2.12 below.

To correct the soil fertility constraints the SFSE-82 Consultants have been asked to estimate, during the Phase II studies, the levels of fertilizer and lime needed to meet the objectives of food self-sufficiency and food crop surplus to generate cash incomes. Because the original Phase II TOR assumed the use of the standard food crop models with given levels of inputs, this request to the Consultants has presented difficulties for two reasons : a) there is very little information on the yield responses to different levels of fertilizer in the soils of



the SKP areas; and b) the implied need to assess the financial and economic returns to higher levels of fertilizer widens the scope of the study from a physical survey, with some account of social factors, to include an analysis of the relative financial and economic prices of rice, fertilizer and lime.

In the event that a Phase II study were to recommend increased inputs of fertilizer and lime, the Consultant would need to estimate the total requirements for the SKP, the necessary expansion of the infrastructural support, and the costs of both the inputs and the infrastructure. The decision would then have to be made as to whether a shortage of funds and of quantities of lime would prevent the successful implementation of the proposed settlement, and would therefore rule out the need for a Phase IIIA study.

However, as already implied, it is doubtful whether the level of detail in the information collected in a Phase II study, even when modified as stated above, is sufficient to justify a final decision on the suitability of a site for settlement. It may be more satisfactory in the longer term to decide that, where a site cannot be recommended for immediate settlement, nevertheless a Phase IIIA study should be carried out to examine the constraints in more detail and, if possible, make proposals for relieving them. Such proposals are likely to involve non-standard models of development, which would therefore require changes to the Phase IIIA TOR so that they become more suitable for a full feasibility study, rather than a design or planning study as they are at present.

## 2.9 SOILS AND FERTILIZER USAGE

### 2.9.1. Soil analysis

At the instigation of the CAG, Bina Program issued a letter to all Consultants on 1st March 1984 regarding the checking and standardisation of soil analysis. The Consultants attention was drawn to the need for soil analysis in the TOR, in some cases at the Phase II stage:

'Soil analysis may be required for identification of soil groups where data cannot be realistically extrapolated from already classified soils of nearby survey areas'.

Particular concern was expressed about:

(a) areas of extremely poor upland soils, for example Acric groups and subgroups (Acric Ferralsols) and other soils with a high level of aluminium saturation.

(b) areas of 'better-than-average' upland soils.

To identify such soils it was recommended that analyses be carried out at Phase II.

The TOR for soil analysis at Phase IIIA were amended and the Consultants instructed that soil analytical data should be used for (i) pedological characterisation and (ii) agronomic evaluation of soil as a medium for crop growth, including a basis for fertilizer recommendations.

Revised Phase IIIA requirements for laboratory analysis were issued for both pedological samplings and agronomic composite samplings.

#### 2.9.2 Fertilizer Package

After discussion with the Directorate for Agricultural Development in Transmigration Areas (P3DT), Bina Program issued an amendment to the Phase II TOR requiring Consultants to relate the standard fertilizer input package to the objectives of the food crop component of the farm models, i.e. sustained self-sufficiency in food production.

The Consultants are now required at Phase II to provide :

- a) Estimates of the food production required to satisfy the needs of the average transmigrant family. Crop yields required to fulfil this requirement should be specified.
- b) Yield estimates related to nil fertilizer inputs.
- c) Yield estimates related to the standard fertilizer package (200 kg at present) supplied free for the first three years.
- d) Estimates of the amount of lime and fertilizer required annually to enable the transmigrant to attain sustained self-sufficiency in food production.



As a result of this directive, most Consultants have now identified at Phase II whether or not the study areas have soil fertility constraints and, where necessary, have suggested additional input requirements.

Where a fertility constraint is identified, this is highlighted by the Central or Regional Advisory Group in their report review and specifically mentioned in the Advisory Group's letter to Bina Program. Copies of this letter are sent to the Head of Planning Bureau and the Director, Bina Program, Rahbin. Bina Program and the Central Advisory Group then meet to discuss the matter, and Bina Program make a decision as to whether or not the area in question will be released for Phase IIIA studies. To date, no area has been rejected for Phase IIIA study on soil fertility grounds alone.

For the purpose of Phase IIIA studies, a draft letter to all Consultants was prepared for Bina Program amplifying the level of detail for individual crops. This detail should be sufficient for an implementation document and for costing purposes.

The Consultants are asked to consider whether or not the standard Transmigration input package is sufficient for the attainment of the agricultural objectives. If they conclude that the standard inputs are not sufficient, then they should design minimum input requirements for achieving sustained self-sufficiency in food production, and recommend development of the cash crop component of the farm model on an institutional basis, giving outline plans and cost estimates for the second stage of development.

## 2.10 TREE CROP DEVELOPMENT

Standard development is based on farm models containing two components, rainfed food crops and rainfed cash crops. A variety of dryland farm models based on a combination of arable and tree crops are possible, as are wetland arable models, combinations of wetland/dryland arable and wetland/tree crop models.

During the planning process each transmigrant family is allocated 2.25 ha for development as the cash crop component of the farm model. An exception is made in the case of wetland where the second allocation of land is restricted to 1.0 hectare. Under dryland conditions the 2.25 ha is normally land with slopes of over 8% and only suitable for tree crop development.

The three objectives of the food crop component of standard transmigration development are :

- (i) Settler self-sufficiency in food after one year.
- (ii) Surplus food production at a level that will also enable the transmigrant to purchase necessary inputs, such as fertilizer, when support has been withdrawn in year 4.
- (iii) Surplus food production at a level that will also enable the transmigrant to finance development of the cash crop (tree crop) component of the farm model.

Given the logistical problems and high cost of supplying foodstuffs to isolated settlements, the objective of sustained settler self-sufficiency in food production is very sound, particularly as the cash crop (tree crop) component is not being developed.

However, the availability of arable land with slopes of less than 8% suitable for the food crop component of the farm model has become a limiting factor to settlement capacity. Consideration can be given to relaxing the slope constraints, but expensive soil conservation measures would have to be introduced, with the cost of physical structures such as terraces and waterways rising geometrically as slopes increase.

Another alternative is to reduce the area of rainfed arable land allocated to settlers. But a reduction in the area of arable land to below that sufficient for the food requirements of the transmigrant family would mean the need for continued financial support until such time as the cash crop component provides sufficient income. Assuming that a cash crop component of rubber trees were planted immediately after initial land clearing, the settler would require support for about seven years.

On the other hand, an area of arable less than the normal allocation of 1.0 ha, possibly only 0.5 ha, could be sufficient to produce the food needs of the transmigrant family, but only with the important proviso that the soils are well above average in fertility and the farmer receives proper inputs and institutional support. However, although a reduction of the 1.0 ha of arable land is attractive in terms of increased settlement capacity, it will not be possible for the great majority of sites, mainly because of poor soil fertility. Most sites are being identified with very low fertility, requiring a level of inputs well above that of the standard package to ensure sustained cropping. Decisions on additional support are essential in such cases.



As the long term viability of the food crop component under dryland conditions is highly questionable and as food cropping can only be regarded as a temporary expedient until such time as the tree crop component produces cash income, a mechanism for implementing the tree crop component of the standard farm model is urgently required. The standard farm model provides a sound basis for settlement, provided that the tree crop component is in fact developed during the first few years after settlement.

## 2.11 LIAISON WITH DIRECTORATE GENERAL OF ESTATES

In the course of the SFSE-80 and 82 programme, it has become increasingly clear that land suitable for annual arable farming is both of very limited extent and scattered distribution; however, large areas of land suitable for tree crops have been identified in most study areas. Thus during the SFSE 80 programme, over 1 million hectares were identified as suitable and available for tree crop development; a similar large area is likely to be identified by the end of the present programme of studies.

The Directorate General of Estates has a large expansion programme and considerable resources for its development, but does not have a programme for land evaluation by experienced consultants. Team Khusus, who provide advice on site identification, planning and implementation, have said that they would be very interested in the results of API and Phase II surveys carried out by SFSE-82 Consultants, especially in the Provinces of Riau and Kalimantan Barat.

Because of the relative paucity of land suitable for development of the arable model, many Consultants will not be able to carry out the contracted number of Phase IIIA studies under the SFSE-82 programme. This is especially true of Packets A, B and D. One possible answer to this problem is to hand over to the D.G. Estates those Phase II reports which recommend that the particular area is suitable for tree crop development, and with the further recommendation that the SFSE-82 Consultant proceed to Phase IIIA studies for use by the D.G. Estates.

In Kalimantan Barat, Packet D are carrying out Phase II studies in an area in which 30,000 ha have been designated for tree crop estate expansion under PTP XIII, and a further 60,000 ha is planned to be studied in an area adjacent to PTP XII developments. It is hoped that the results of these studies can be made available to the D.G. Estates and the relevant PTPs, and the Consultants can then proceed to Phase IIIA studies. There are similar areas in Riau Province, where land provisionally allocated for PTP and PBS expansion is scheduled for Phase II and Phase IIIA studies.

At present, there is only very limited cooperation between the Ministry of Transmigration and the D.G. Estates. In view of the situation outlined above, it appears that much closer liaison would be mutually beneficial. To this end, meetings have already been held with Team Khusus staff in Jakarta and Dinas Perkebunan in Pontianak, both of which appear to welcome further co-operation between the two Directorates. Meetings will be arranged between the SFSE Consultants, the RAG Pontianak, and the staff of PTP XII during the course of Phase II surveys. A suggested draft letter in Bahasa Indonesia has been prepared by the CAG for the Director Bina Program requesting a meeting with D.G. Estates so that this most important subject can be tackled at the highest level.

## 2.12 ALTERNATIVE PRODUCTION MODELS

At the request, initially, of Biro Perencanaan, Terms of Reference were produced for a series of production models intended to provide economically viable alternatives for transmigrant families on land which is unsuitable for a model based largely on rainfed arable farming. Hence, it is hoped that many sites rejected for the rainfed arable cultivation model might be used for systems including other major production factors less sensitive to adverse physical parameters such as steep land, flooding, swamp etc.

Terms of Reference for nine different models were produced; of these, Bina Program allocated four to existing SFSE-82 Consultants. Halcrow Fox and Associates are carrying out initial evaluation of small-holder arable cropping based on small scale irrigation; they are also evaluating the potential for village level lime production and methods of rationalising spontaneous transmigration. Possible farming systems incorporating fresh or brackish water fish production are being investigated by Pacific Consultants Incorporated. Studies on a fifth model based on sago production were begun by the Consultant RDI in June. The basic aim of the studies, which are financed under the Trans III budget, is to identify and formulate pilot projects for implementation during Trans V.

The first Project Identification Stage has been completed and preliminary draft reports have been submitted by the Consultants; these are presently under review by Bina Program and will be discussed with the World Bank Appraisal Mission during November. Preliminary conclusions from the studies are presented below.



### 2.12.1 Lime Production

The preliminary studies have concluded that limestone quarrying and grinding for the production of agricultural lime appears to be suitable as a basis for transmigration settlements. Returns to labour for the head of the household could be in the order of Rp. 2,250/man-day, and other activities such as rubber production could be incorporated; however labour constraint rules out arable farming. Returns to manday of labour from one hectare of mature rubber are estimated at Rps 10,000 per day.

It is suggested that the limestone quarrying transmigration settlement be based on the following parameters :

- (i) Villages should be 100-150 KK in size.
- (ii) Villages should be located where there are at least 300,000 tonnes of workable limestone reserves.
- (iii) Villages should be located in areas which will generate a market for ground lime of at least 15,000 tonnes per year within a radius of 100-150 km of the production centre.

The lime production enterprise could be cooperatively managed by one or more cooperatives; finance for the necessary machinery and plant could be raised by loans through either the cooperative development agencies or from regional banks under the KIK/KMKP programme.

A suitable site for a pilot project has been located to the south of Batu Raja with adequate reserves of suitable limestone and minimal land use constraints for the tree crop component.

### 2.12.2 Small Scale Irrigation

Four models have been selected which examine two levels of engineering and two different cropping system. They have been analysed with particular attention to labour requirements and financial and economic viability, and have been compared with the standard dryland model. The four models are :

1. Irrigation without flood control or drainage producing two rice crops annually on 0.5 ha.
2. Flood control and drainage without irrigation producing one rice and one palawija crop annually on 0.5 ha.
- 3A. Flood control and drainage with irrigation producing two rice crops annually on 0.5 ha.
- 3B. As 3A, but with one rice crop and two palawija crops annually on 0.5 ha.

It is unlikely that many sites will be found suitable for model 1, that is sites which have no need for flood control; in addition, it is possible that the labour requirement for the proposed area may exceed the labour available to an average, new transmigrant family.

Model 2 is attractive in that it can be operated within the family's labour availability, with enough spare capacity to cope with an area of up to 1.5 ha of rubber.

Model 3A, like model 1, may have a family labour constraint.

Model 3B can be operated with the available labour, and will allow development of rubber on up to 1.5 ha.

Financial/economic analyses suggest that the choice lies between models 2 and 3B, with 3B having marginally better farm income and economic performance as well as the advantage of a secure water supply for at least the rice crop.

It is estimated that farm income from model 3B, including rubber, is likely to be higher than that generated by the standard dry-land model, which may have the further disadvantage that family labour cannot cope with 1.25 ha of arable cropping, or develop and operate an additional tree crop component.

The models assume communities of about 300 families, with a total of some 150 ha of irrigable land. Close cooperation with the relevant Government departments will be essential to the implementation of any scheme and to the transfer of responsibility from the Ministry of Transmigration to local administration once implementation is complete.

The suitability of possible sites for the defined model is being considered, but a final decision has not yet been made.

### 2.12.3 Spontaneous Transmigration

This study covers the following subjects :

- (i) A definition of spontaneous transmigration.
- (ii) The identification of the motivation and resources of the spontaneous settler.
- (iii) The conditions which might prove attractive to settlers.
- (iv) The outline of a system which will permit planning authorities to exercise control over the location of spontaneous settlement and ensure safe and rational land use without blunting settlers' motivation.

The study concludes that the main motivation for spontaneous transmigration is :

- the desire to improve the standard of living.
- the availability of land to a person who is landless.
- assistance to existing transmigrants in opening up their land.
- employment opportunities identified by the spontaneous transmigrant as a result of existing development.

The report argues that spontaneous transmigration aids the Government of Indonesia's policy to develop the outer islands, and helps to improve the living standards of the poorest sections of the rural community. However, the spontaneous transmigrant faces specific problems not common to his umum counterpart, the more important of which are :

- problems with obtaining rights to land.
- problems of losing rights to land in disputes with local inhabitants.
- problems of having to be self sufficient from the beginning.
- problems of wasted effort in periods of difficulty such as severe drought, pest damage etc without Government support.

Measures which could be adopted to ease the problems faced by the spontaneous transmigrant include :



- allowing the spontaneous transmigrant to settle unused land within transmigration areas.
- planning for smaller initial development areas for umum transmigrants, but phasing second stage development to allow swakarsa transmigrants to take up land reserved for later development.
- relaxing rules governing land sales and subdivision.
- reserving areas of land for development by spontaneous transmigrants.
- encouraging logging companies' employees to settle in heavily logged areas.
- encouraging the development of local small-scale industries.

A methodology for outline planning which could be applied to areas set aside for spontaneous transmigration is detailed; the main parameters include :

- allocating areas for the housing and village centre, village and access roads, controlled farming area and uncontrolled farming area.
- clearing land only for village centre and main access and village roads.
- phasing development of village centre facilities.
- leaving transmigrants to clear their own land and paying them for this.
- providing building materials at cost.
- leaving the transmigrant to develop his own farming system.
- improving organisational and administrative capacity of the local site offices.
- the monitoring of any transmigration project developed using this system.

The basic development costs for both umum and swakarsa settlers have been calculated; these costs do not include transport, food aid, tools, seeds and fertilisers, and planning costs. In the calculation, it is assumed that the swakarsa development will be adjacent to existing planned umum settlement and will share the costs of access roads and SKP centre development. On this basis, swakarsa settlement will cost Rp. 1.15 m/KK as against Rp. 3.43 m/KK for standard umum settlement.

#### 2.12.4 Sago Production

The possibility of sago production as a cash crop for transmigrants in areas which have been rejected for the standard model has been the subject of Phase II level studies by the Consultant RDI. Two areas have been studied, Waren SKP B and Sarmi SKP A; the former has been rejected because of existing land use pressure.

Preliminary conclusions are :

- There is adequate good land to provide 1.25 ha of arable for two SP's of about 500 families each in Sarmi A.
- There is 4,000 ha of land suitable for sago production, of which 1,000 ha could also be suitable for rice production.
- All land is under some form of customary rights, both direct ownership and land use right; the former is restricted to small areas of sago, permanent gardens and coconut groves.
- The international market for sago starch is dominated on the consumer side by the Japanese, and entry into it might be possible if prices were competitive; there is no immediately identifiable large scale local market, but sago starch could progressively substitute for cassava starch in a range of uses, especially in the expanding miscellaneous industry group and in plywood manufacture.
- Transport is critical. A coastal road is a pre-requisite, and improvement of port facilities at Sarmi necessary.
- Processing from logs to dry starch will be carried out in a plant at the project site.

A full project outline and farm budgets are awaited.

#### 2.12.5 Fresh and Brackish Water Fish Production

Preliminary studies of this model have outlined some of the basic parameters necessary for successful implementation. The major conclusions are:

##### a. Brackish Water Fisheries

- There is an identifiable international market for fish products, especially for king prawns (*Penaeus monodon*) and tuna in Japan and the USA.
- Present productivity is very low due to inadequate seed-fry supply, poor pond structure and conditions, and lack of adequate processing facilities.
- In spite of the existing constraints, exports from Sulawesi in 1982-83 were over US \$ 20 million in value from production of 2,400 tonnes .
- Pond production should combine king prawns and milk fish (*Chanos chanos*) to maximise productivity. With reasonable management, 350 kg/ha/annum of prawns should be possible.
- It is suggested that 4 ha of pond be accorded to each family, giving a total of 2000 ha of pond surface for a pilot project of 500 families.
- Fish production would be combined with dryland arable or tree crop production.
- Assistance will be required from Government in the construction of the ponds as well as in the necessary infrastructure for the settlement.
- Investment in preparation, refrigeration and marketing should be attracted from the private sector. Production should be organised on a cooperative basis.



- Particular care is required in evaluating marketing strategies to maximise returns.

b. Fresh Water Fish Production

The major conclusions arising from the study of fresh water fish production possibilities are :

- Water quality is poor, with low pH and D.O., and high organic matter content.
- Given the poor water quality, production should be concentrated on the pond production of air breathing fish.
- Fish production should be integrated with agriculture; the latter should aim at providing self-sufficiency in food.
- One hectare of pond water surface should be provided per family.
- Cooperative organisation of the production system would be required, especially on harvesting.
- Government assistance would be required in providing fish seedlings and advice on production methods.
- Production is estimated at 500 kg/ha/annum.
- Marketing of fresh fish provides the best return to the producer; there is no value added in processing.
- The following table outlines the costs of and returns to fish production :

Costs	Year <u>1</u>	Year <u>2 on</u>
	Rp/ha	
Pond Maintenance	-	1,000
Equipment	115,000	31,000
Fertilizer	-	<u>22,000</u>
Total	115,000	54,000
Income(500 kg p.a)	<u>150,000</u>	<u>150,000</u>
Net Return	<u>35,000</u>	<u>96,000</u>

## 2.13 REGIONAL PLANNING FOR TRANSMIGRATION

SFSE-82 Consultants' Phase II and Phase IIIA studies are undertaken in the context of Phase I long-range regional plans now prepared by the Department of Transmigration but formerly by DITADA. Phase I plans tentatively define WPPs (Partial Development Regions) and individual transmigration SKPs within them; they also provisionally identify WPP centres, which are assumed to become the main marketing and service towns for their areas. The plans imply adequate transport links (normally roads) between these centres and the individual SKPs, on the one hand, and the Level 1 regional (SWP) centres on the other; SWP centres are the ports through which necessary inputs must be brought and the cash crop outputs of transmigration sites must be exported to national or international markets. To date there has been little feedback from the SFSE-80 and 82 programmes into the Phase I planning, and little coordination between the regional plans produced by the Department and plans produced by the national and provincial planning agencies. Phase I plans are becoming outdated and unrealistic.

The October 1984 Presidential Decree No. 59 on the Coordination of Transmigration Operations requires an integrated and coordinated approach by the Ministry of Transmigration and other Departments and Government Institutions whose task and function is related to transmigration operations, including the National Development Planning Board (Bappenas). The Decree imposes on the Ministry of Transmigration, amongst a variety of functions, that of initiating other actions which may be needed to ensure the success of transmigration operations; and it delegates coordination of these operations in Level 1 Region Province areas to Governor/ Heads of Level 1 Regions assisted by Heads of Area Offices of other Departments.

The success of transmigration operations depends on a wide range of physical, social, economic and institutional factors, several of which are themselves dependent on the particular regional context and the evolution of development plans on a provincial scale. These factors include:

- a. land suitability of individual sites;
- b. land availability dependent on current land use and on tentative or definite plans for alternative forms of development;
- c. site accessibility for initial development (labour, equipment, materials) and, after settlement, the provision of inputs (standard package and later purchasable inputs);
- d. the availability of accessible local and/or distant markets.

Land suitability is currently assessed by pre-screening of air photography by CAG, by more detailed Air Photo Interpretation (API) by package Consultants, and by Phase II Rapid Reconnaissance field studies. During 1984 an LRDC team commenced regional scale API and mapping of land suitability in Kalimantan and Irian Jaya; this will identify all areas potentially suitable for transmigration or other rural development and will provide a sound basis for revision of Phase I plans.

The Transmigration Advisory Group and the LRDC team are also assembling data on land availability. Current land-use is difficult to assess from old photography although Agraria do maintain provincial maps. The Forestry Department's provincial forest classification maps define forest areas unavailable or potentially available for other uses. The locations and intent of existing and planned treecrop estates are being mapped by Regional Advisers, and attempts are being made to obtain agreement between competing agencies and with the provincial Governors' offices on the validity of these maps. When completed, they will provide a sound basis for the revision of Phase I plans, both by identifying areas definitely unavailable for transmigration and by suggesting areas where close cooperation between the Department and another agency could lead to settlement. It is hoped that these maps will provide the basis for the coordination by Governors and Level 1 Region Heads required under the recent Presidential Decree.



Site accessibility remains the key issue in the successful development of a transmigration settlement, once Phase IIIA Detailed Planning has been completed. For Phase IIIB work contractors must be able to bring in heavy equipment economically; materials not available on site (such as gravel for road sub-bases) must be trucked or shipped in; and initial supplies of food, fertilizers and insecticides must be available on a regular basis once the settlers arrive. After three years when subsidies cease, communications must be adequate for traders to come in or for the settlers to reach markets where further inputs can be purchased. For a group of remote SKPs even the provision of standard package inputs for all settler families involves the movement and storage of very large quantities of materials, normally by truck over roads from riverine or sea ports with adequate docking and handling facilities; these roads require regular maintenance. If the supply of these initial and subsequent inputs fails, settlers' yields will decline below self-sufficiency levels and settlement failure may result. Transmigration settlement based on export-oriented estates, rather than on food production, are even more dependent on accessibility.

All transmigration settlement planning presupposes substantial production from the cash crops component after the first four years, which is intended to enable the transmigrant family to maintain a sustained development in his living conditions over time. Without accessibility to appropriate markets these cash crops will be unsaleable, or saleable only at uneconomic prices. Food crops require access to markets where large numbers of people are not themselves self-sufficient in food production, while other crops must reach national or international markets. It is estimated that, with relatively modest yields, the volume by weight of cash crops produced from an SKP could be four times the inputs required. Communications must be evolved in time to cater for this demand, which implies medium to long term transport planning for those regions or sub-regions where transmigration settlements are proposed. As suitable and available sites become more remote from existing population centres, the provision of adequate communications to ensure their success becomes increasingly difficult and expensive.

SFSE-82 consultants are required by their Terms of Reference to produce one Feasibility Study for a representative site and to discuss the Regional Setting of any site studied at Phase IIIA. The Feasibility Study must address the issue of the site's accessibility to markets over a 15 years period (by the end of which the site should be fully productive). Similarly Regional Setting studies must discuss each site's 'relationship to other existing or preposed transmigration settlements, terms and transport facilities' and to 'the regional development strategy proposed' by the Government. Supplementary Guidelines issued in May 1984 suggested that Consultants present their Regional Setting Studies in separate reports, covering groups of Phase IIIA SKPs with intervening or adjacent developments; this is to encourage the Consultants to think on a broader scale and to ensure that regional planning documents can be separated from site-specific, implementation oriented, Phase IIIA reports. The planning documents can then be directed towards those agencies responsible for interdepartmental coordination and longer term planning, including Provincial Governors' offices and those responsible for revision of Phase I Regional Plans. CAG believes that SFSE-82 consultants are well placed to initiate this work, because of their familiarity with logistic problems of site accessibility and because their studies already cover existing population and current land use. Regional Advisers are assisting in the collection of official data and plans affecting the areas of Consultants' work. The CAG Physical Planner has already held discussions with most of the SFSE-82 Consultants to agree areas to be covered by Regional Setting Reports; it is clear that regional planning issues differ significantly from province to province.

In Southern Irian Jaya the need for an overall regional development plan is particularly acute. It is now estimated that up to 128,000 transmigrant families (including local transmigrants) will be settled in the Merauke-Bade-Muting triangle under Repelita IV, trebling the existing population. There is virtually no infrastructure in this area, road building materials are inadequate and markets non-existent. The success of planned transmigrant settlements depends on parallel physical, social and institutional development. While the Packet I and J consultants will be undertaking regional setting studies for their individual areas, the Advisory Group



is recommending that a separate South Irian Regional Development Study be commissioned to propose carefully staged development, considering physical and financial constraints and the sociological implications of the movement of large numbers of people into the area. The Advisory Group is also recommending that no transmigrants should be settled in any area that is inaccessible from Merauke by boat all the year round until the Development Study is ready for implementation.

To coordinate the various regional setting studies and associated activities, it is proposed to add a Regional Planner to the Advisory Group under Trans V. It is hoped that it will be possible for him to commence work six months before Trans V Consultants' contracts commence, in order to analyse Trans III regional planning work, promote revision of Phase I plans in Kalimantan and Irian Jaya and to establish priorities in site allocation for the new contracts. It is also proposed to add a Principal Physical and Regional Planner to the Trans V group whose main function will be to liaise between Bina Program and the Ministry of Transmigration's Directorate of Planning; he will be especially concerned with second-stage site development and associated regional planning issues in those provinces where new site development is no longer practicable on a large scale, notably in Sumatra and Sulawesi.



### 3. CENTRAL ADVISORY GROUP ACTIVITIES

#### 3.1 GENERAL.

During the quarter the CAG has been involved in the following activities:

- Continued supervision of the SFSE 82 Consultants including review of draft reports.
- Review of progress and future activities of the Airborne Topographical Mapping System.
- Coordination with Forestry Department on the availability of land for transmigration settlement which bears an existing forestry alienation constraint.
- Continuation of liaison with regard to tree crops and estate development.
- Supervision and coordination of the pilot studies on non-food production models.
- Supervision and coordination of the Regional Setting Studies and definition of the areas to be covered by individual Consultants.
- Regional map preparation.
- Completion of the Terms of Reference for the review of the Repelita II and III Transmigration Programmes.
- Forecast of the results of the Trans III Programme.
- Completion of the draft Project Preparation Report for the IBRD Trans V loan.

Most of these items are discussed in Chapter 2 in the mid-term review of the SFSE-82 Programme. A few of them are covered briefly in the remainder of this Chapter.

### 3.2 VISITS

Visits were made by members of the CAG to the regional areas listed below for the purpose of holding discussion with the Consultants and local officials, and for supervision of fieldwork at SKP sites.

August	:	Palembang and Batu Raja Samarinda
September	:	Banjarmasin
October	:	Palembang Pontianak Samarinda Jayapura

The Agriculturalist (Mr. J.P. Wright) attended an international conference in Kuala Lumpur for one week in October on the development of cocoa and coconut production. Papers were presented on agronomic research, extension, processing, and marketing.

### 3.3 INKINDO TAC-I.

TAC-1 Consultants have been increasingly involved in discussions with SFSE-82 Consultants, and in the preliminary studies of the non-food production models presently underway.

Work continues on reviewing the Indonesian language reports of the SFSE Consultants. The general standard of report production is still poor, and there is much room for improvement. During the quarter, the Co-team Leader visited all the Consultants and discussed the problems of report preparation in Bahasa Indonesia.

The Co-Team Leader, System Analyst and Data Processing Specialist prepared a standard structure for the Consultants' monthly progress reports, to ease the monitoring and evaluation of their performance. A draft format in Bahasa Indonesia was completed in October for submission to Bina Program in November.

Work has continued on the implementation of word and data processing systems, and on a library indexing and data storage system.

A start was made on the production of detailed job descriptions for the TAC-1 Consultants, in conjunction with other members of the CAG.

### 3.4 SITE IDENTIFICATION AND SCREENING

Preliminary screening of new sites continues to be a major activity, with the dual purpose of fulfilling the required number of sites for Trans- III and identifying new sites for Trans-V. The main effort has continued to be in East Kalimantan, the province that is still believed to have the greatest potential for transmigration. Studies continued in August over the remaining unscreened areas of the province having 1:100,000 photography, namely the region south of Balikpapan and north of Sangkulirang. Some 12 potential sites were identified in each of these areas, with some further sites that have forestry constraints.

The 1:100,000 CIDA photography in East Kalimantan extends north only to latitude 1°30'N, but the remaining major gap, between Tanjung Redep and the Malaysian border, was filled by the availability of SLAR imagery at 1:100,000 scale. This was studied in October, enabling the identification of some 16 sites in this strategic region.

This now completes the preliminary screening of East Kalimantan, enabling the approximate identification of some 80 sites which should be available for study under Trans-V, together with other sites identified for Trans-III. The majority of these sites would be suitable only for a tree-crop model.

Outside East Kalimantan, only the Steenkool area of Irian Jaya was screened, using 1:25,000 photography from 1974. The identified sites were allocated to PRC for study under Packet H. It has since been ascertained that this 1974 photography covers the southern third of the Bird's Head Peninsula.

A first attempt has also been made at compiling a preliminary list of potential sites for Trans-V. A total of 362 sites has been listed in the four provinces, covering Kalimantan and Irian Jaya. However this list is expected to be continuously refined as new information becomes available, especially the Phase 1b maps under preparation by RePPPProt.



3.4.1 Contract for new 1:20,000 photography (137 sites)

This contract was finally signed in September and is now in progress. The list of sites has been amended since the original list published in our May monthly report, and is now as follows:

<u>Packet Company</u>	<u>Site</u>	
1. P.T. Aerotopografia (South Sumatra)	Marga Batang/Hari Leko Bayung Lincir Pangkalan Kersik Peninjauan	II/E XIIIb/A,B,C XVIII/C,E XIb/A,E
2. P.T. Geojaya Teknik (Riau)  (Completed)	Pangkalan Kasai Kota Lama Tanjung Medan Ukui/Air Molek Teluk Kuantan Lipat Kain	VII/F2 XIIIa/D,E XIIb/C-G VIb/A XIa/A,F,G,H XIb/F
3. P.T. Penas (West Kalimantan)	Tumbang Titi Sukaraja Singkawang Tembawang Muda	XIV/D,E XIVa/F,G,H IV/D,J,C-F-E XIa/E
4. P.T. BIEC Int. (West Kalimantan)	Meliyan Toyon Punjung Merekai Nanga Mahap	XIb/B,C,D,E XVIIc/B,C,D,E XVb/A
5. P.T. Penas (West Kalimantan)	Suhaid Tintin Tengirin Nanga Mau Sungai Antu Nanga Merekai Seranggas Nanga Sahui Lempai	XXIIb/D1 XXIIId/A-C XIXc/B-G XXIa/A,B,C XVIIa/G2,I XXIIc/C,F XXIb/B-C,A-C
6. P.T. Aerotopografia (East Kalimantan)	Ponak Benamang Merawat Muara Klawit Resak Tanjung Pinang/ Kerang Bangkung	XVIa/A2,B2,E2 XVIb/D XVIc/B,D,E XVIId/G,C-D XVc/A XVf/A,B,D

7.	C.V. Kutamas (Irian Jaya)	Timika	XXV/A,B,C,D, E,F,G
8.	P.T. Aerokarto (Irian Jaya)	Sopinusa Karas Tomage  Gobo	VIIb/A V/A-M,B,C, D,E,F,G, I,K,L VIIb/D,F
9.	C.V. Kutamas (Irian Jaya)	Ansudu Senggi	XIVb/A,B,C,D XVIIb/A,B,C,D, E,F,G,H,I
10.	P.T. Megaplana (Irian Jaya)	Kotiak  Erambu/Jagebob Kaliki Makoppe	X/A,B,C,D, E,F,G,H XXIVe/A,B XXIVd/C1,H XXIIa/A,B,E
11.	P.T. Aerokarto (Irian Jaya)	Bomboro  Bade	XXIIe/A,B,C-D E,H,P,O XXIIIf/F,G,I,J, K,L,M,N,R
12.	P.T. Exsa Int. (Irian Jaya)	Gatentiri Okaba Sakelulun	XXId/E,G XXIIIf/B2,C2 XXIIIe/A,B,C,D, E,F,G,H

Photography is complete for Packet 2 (Riau) and delivered on October 26. Flying should have commenced in all other packets with the possible exception of Packets 7 and 9 which were still awaiting security clearance on October 6. Early completion of this photography is now urgent for all SFSE Consultants.

### 3.4.2 Contract for new 1:20,000 photography (72 sites)

Intivitation to tender are now being issued to survey companies for the next flying contract of 72 sites. This contract was to have been confined to East Kalimantan and Irian Java, but with the discovery of good existing photography for some 13 sites in West Irian Jaya, new sites will now be added from West Kalimantan. Sites are expected to be located in the following WPPs.

West Kalimantan	not yet allocated
East Kalimantan	XVa Panajam
	XVb Long. Ikis
	Xa/B Rantau Pulung
	XVIId Serekan
	XVIIb Bromo Kembang Janggut
	XII Muara Ancalong
	XIa Muara Wahau
	Xf Muara Bulon
	XIb Damang Dayak
	IX Talisayan
	Xg Manubar
	Ia Nunukan
	VII Tanjung Kuning
	Ic Apas
Irian Jaya	Ic Ayamaru
	XXIb Kauh
	XIc Manami
	XIIc Nisa
	XXIV Katau

### 3.5 SCREENING BY LOCAL CONSULTANTS

Only seven Phase II reports by Local Consultants have been reviewed during this quarter, covering sites previously rejected on grounds of small capacity. These sites are :



Nangataman	XVa/C	- rejected
Duwa Petunga	XVIIb/D,E	- low potential due to land use constraint
Muara Tewe	XIXa/H	- recommended
Muara Wahau/Dialay	XIb/B	- recommended for tree crop model
Tanjung Selor	VII/B	- findings not accepted
Sumyanggar	XIIb/B	- rejected

The Advisory Group has not played any significant role in the selection of sites or supervision of studies by Local Consultants, except those associated with the SFSE programme. However a major programme of Phase II and III studies is now in progress under the 1983/84 and 1984/85 local budgets, and these sites are listed in Tables 3.1 and 3.2.

### 3.6 LAND ALLOCATION AND SURVEY STATUS MAPS AT 1:250,000

Regional Land Use Planning and the selection of new sites for Transmigration Settlement have been bedevilled by claims by other land users, notably Tree-crop Estates, Forestry Authorities and existing local population, and to a lesser extent by mining, oil, industrial and military instalations.

The Regional Advisory Teams have thus been taking an increasing role in coordination and liaison between the provincial offices of Bappeda, Agraria, the Forestry Department and Dinas Perkebunan. They have prepared Land Allocation Maps at 1:250,000 for Riau and Kal-tim Provinces, and at 1:500,000 for Jambi, and similar maps are currently under preparation for Kal-Bar and Kal-Teng with maps of other provinces to follow.

It is suggested that these maps should also show the current status of soil and land suitability surveys in each province undertaken by SFSE Consultants, Local Consultants, ITB, and any other agencies.

It is hoped that this work on Land Allocation and Survey Status will be published both locally under Bappeda and Agraria, and then finally as part of the work currently being undertaken by RePPPProT. The ultimate aim will be to store this information at BAKOSURTANAL using a digital map processing system.

## Phase II Studies under 1983/84 and 1984/85 GOI Budget

Province	1983/84	1984/85
Aceh	Peureulak X/C,D Lhokseumawe VIII/E Bakungan XVII/F	Legeun Lamno IV/C,D Tui Priya Vb/G
Riau	Natuna XIX/A,B	-
South Sumatra	-	Peninjauan XIb/B,D
West Kalimantan	Sintang Sepauk XVIIIa/E,F Sintang XVIIIb/G Ngabau XIXe/A,B,C,D	Temajuk/S.Tengah Sambas I Nanga Mau XIXc/A
Central Kalimantan	Kumai IXa/P,Q,T Seruyan XII/C,D	-
East Kalimantan	-	S. Merdeka XV/D,F
Central Sulawesi	-	Dataran Bakupodi/Bungku XVII/C,D,E Lampasio/Basidondo III/E Leoh Bokat I/A Dataran Ungkayan IX/G
S.E. Sulawesi	-	Kalisusu VI/A,C,E Lasolo XIa/C,D,E Toari Oko-Okoko IXa/B Toari Poleang IXb/B Wawotobi III/J,K
Maluku	-	Jailolo XIV/B,D,H Bula XIIa/C Nosliku Mafa IIIa/A,B,C
NTB	-	Labangka IV/G Plampang IV/H
Irian Jaya	Armopa XIVc/A,B	Timika XXV/A,B,C, D,F,G Aimas Ia/I Karosa XVIIb/E
Total	20	42

Table 3.2  
Phase III Studies under 1983/84 and 1984/85 GOI budget  
(Number of SPS in brackets)

Province	1983/84	1984/85
Aceh	-	Banda Aceh/Jantoi; Ia/E (1) Kota Nibong/Seuneam Vc/A (3) Sebussalam XV/D (1) Penaron/Peurelak X/E (3) Lamno Patek IV/c (2) Sigli Meuredu II/E (1) Terumon/Bakungan XVII/B (2) Seuneam Vc/C (3)
West Sumatera		Mentawai/Siberut X/B, C, D (6) Pagai Utara/Sikakap/Matobe XIa/A (2) Timpeh III XVII/C (2) S. Kunyit XVIII/D (3)
Riau	Kota Tengah/S. Murai XIIIB/C, D2 Tebingtinggi XIII/D, E1, E2 Kota Lama XIIIa/A, B, (5) Langgam VIa/B1 (1)	Natuna XIX/A, (4)
Jambi	Tungkal Ulu XIIb/D, E (4)	
South Sumatera	Benakat VI/G1, G2, H1, H2 (5) Sriguna XXII/F	Pangkalan Kersik XVII/D (3)
Lampung	Mesuji I/A', B', C, D', E', F (10) Gedong Aji II/B' (2) Tulang Bawang II/F (4) Lupuk Manggai XIV/B (1)	
West Kalimantan	Suhaid XXIIb/D (1) Tintin Tengirin XXII d/B, C (2)	Duwa Petunga XVIIb/B (3) Sintang XVIIIB/G' (3) Sepauh XVIIIa/E (1) Ngabu XIXe/A (2) Padang Tiker Xb/B (3) Nanga Mau XIXc/F (2) XIXe (2) Teluk Batang II x/B (2) Sekadau XVIa/B (1) Nanga Mahap XVb/B (1) Sukadana XIIIa/B (1)
Central Kalimantan	Tewe Timur III/A, B, C, D, E (5) Muara Tewe XIXa/B (1) Kuala Kuayan VIa/J, L (2) Nangabulik XI/B, H (2) Katingan Tengah/Jangkit V/D (1)	Kumai IXa/J, K, L, M, P, T (11) Seruyam XII/E, D (8) Kuala Kuayan VIb/B (2)
South Kalimantan	Sebamban Lasung VI/F' (4)	Puntik Bakumpai IXb/A (1)
East Kalimantan	Kota Bangun XIVc/E (2) Muara Lawa XVic/C (2) Muara Ancalong XII/c (2) Talisayan IX/A, C, D (3) Tanjung Selor VII/A (1)	Melak XVIb/B (1) Tg. Pinang XVC/C (2) Tepangan Xa-b/D', D2, E S. Merdeka
North Sulawesi	-	Sumalata XIII/C (1) Marisa XIV/D (1) Molumbulahe V/E (1)
South East Sulawesi	-	Toari - Oke Oke IXa/A (1) Kalisusu VI/E (1)
East Timor	-	Lumea IX/E (2)
Maluku	Dataran Wasile XVI/B (2)	Dataran Wasile XVIIb/C, D, (2) Jailolo XIV/B, H (2) Pediwang XIVa/E (1) Pasahari XI/D, E (8)
Irian Jaya	Arso XVI/E' (2) Kaliki XXIVd/A, B (4) Muting XXIIIC/A, D (4) Selow XXIIIa/A, C (4) Jagebob XXIVc/J (1)	Aimas Ia/C, I' (8) Sumyanggar XIIb/D (4) Manokwari IV/c (1) Armupa XIVc/A, B (8) Timika XXV/D (2) Paniai/Topo XII/A, F (4) Bupul XXIIb/A (4)



The CAG Physical Planner (L.H. Hall) visited Irian Jaya in October, spending eight days in the Province (15-23 October). Discussions were held with the Regional Advisory Group and with the Packet I (Fenco) and Packet J (Euroconsult) Consultants in Merauke, and with the Packet H (PRC) Consultants in Jayapura. Mr. Hall also visited transmigration sites Semangga I and II, near Merauke, and Koya and Koya Timur near Jayapura, and met representatives of UNDP and the Australian Embassy.

The principal object of Mr. Hall's visit was to discuss the Consultants' regional setting studies (TOR 15.1). It had been hoped that Euroconsult and Fenco would be able to cooperate in the production of a joint report covering all of South Irian affected by proposed transmigration settlement; this would build on the outline paper already produced by the Regional Advisory Group in which the key issues of inaccessibility, lack of materials and inputs, and lack of markets for transmigrants' cash crops are raised. Unfortunately it became clear that the two Consultants' programmes were so out of phase with each other that a cooperative effort could be impracticable. Separate studies are now under discussion.

PRC hope to be able to undertake a regional setting study for either the Tomage or Steenkool area (both equally remote), but the choice depends on the suitability of individual sites for Phase IIIA studies which will not become clear until January or March (respectively).

Phase IIIA physical planning issues were also discussed with all three Consultants. Specific problems needing urgent resolution by Bina Program include:

- i Kakanwil Jayapura's current ruling that all SPs must have 500 KK (which is being insisted on at Phase IIIB/clearing even where Phase IIIA studies have planned smaller villages).
- ii whether full Phase IIIBs are to be undertaken in Irian Jaya (none to date); this affects Consultants' assumptions at Phase IIIA;

- iii whether clearing contractors are to work from Phase IIIA plans (in the absence of Phase IIIB); contractors have been seen using Phase II plans where Phase IIIA plans exist.
- iv the extent to which 250 m rentisan network is required in flat sites.

Furthermore, it became very clear that there are fundamental differences of approach required in Irian Jaya for transmigration settlement planning and development, compared to those in other provinces. Communications and transport problems are immense, yet Transmigration is seen as the main component of provincial development. Programming and institutional development must be greatly improved and expanded if the scale of settlement currently envisaged is to be successfully accomplished.

### 3.8 ALTERNATIVE PRODUCTION MODELS

The CAG has continued the supervision of the Stage I studies of the following models:

Lime Production Model	Halcrow Fox and Associates (HFA)
Small Scale Irrigation Model	
Spontaneous Transmigration	
Sago Production Model - Rural Development Indonesia (RDI)	

Draft Reports have been received for the first three models from HFA, and an executive summary from RDI for the sago model; these have been reviewed by the CAG and discussed with Bina Program. The conclusions of these Stage I studies are outlined in Section 2.12 of this report.

A fifth model, fresh and brackish water fish production, is under study by Pacific Consultants Incorporated; this study has been supervised by Bina Program.

Mr. Laszlo Huszar completed his two month assignment in the second week of September, and a draft document was submitted to the Director of Planning Bureau; an Indonesian translation is in preparation. This document establishes the Terms of Reference for an evaluation study, whose main purpose is "the analysis of past achievements with a view to assisting the formulation of future programmes that reflect the changes in requirements, resource availability and the institutional framework for planning, implementation and development". Because of the proposed evaluation's heavy reliance on the findings of the ongoing socio-economic survey of transmigration areas being prepared by the Central Bureau of Statistics, for which preliminary results are not expected until March 1985, it is not proposed to start the evaluation study before February 1985. It would take about 9 months to complete.

## 3.10

## TRANS V PROJECT PREPARATION

The revised draft of the Project Preparation Document was completed and submitted to Bina Program in October. At the end of the quarter the document was still under discussion. Two main points have still to be finalised :

- a) the planning requirement for the whole of Repelita IV, and
- b) the time scale for Phase II and Phase IIIA studies under Trans V.

The Advisory Group in the revised draft recommend that a total planning requirement of 850,000 KK will be needed during Repelita IV. Government figures suggest planning for 1,050,000 KK is required. The report also recommends that the Phase II and Phase IIIA studies for 300,000 KK during Trans V are carried out over a 3 year period. Bina Program has stated that this should be cut to a 2 year programme.



#### 4. REGIONAL ADVISORY GROUP ACTIVITIES.

##### 4.1 GENERAL.

The activities of the Regional Advisers during the quarter have continued to be concerned mainly with the supervision of the nine Consultants. They have also been involved in discussions with the provincial offices of the Departments of Agriculture, Forestry, Tree-Crop Estate, and D.G. Agraria, in continuing efforts to resolve the constraints to transmigration settlement arising from rival claims by forestry and estate interests in potential sites.

In Jayapura, where land clearing is under way, it is becoming apparent that unsuitable land is being cleared for settlement which may have serious consequences at a later stage for the living conditions of the transmigrants. It seems that for different reasons, the structure plans are not being followed correctly or the wrong plans are being used. This is a cause for concern to the Regional Advisory Group.

##### 4.2 REGIONAL ADVISER, PEKANBARU

The main activities of the Regional Adviser (Mr. Chawla) and Pimpinan SATLAP ( Ir. Benyamin) during the quarter concerned the allotment of areas for transmigration settlement, the need to begin development of the second stage tree crop areas in settlements, and coordination with DG Perkebunan and PTP/PNP estates on questions of boundaries between estate and settlement areas and the development of second stage tree crop settlement areas by estates.

Discussions on these subjects were held with BAPPEDA, Dinas Perkebunan, the Transmigration office, the Directorate Agraria, PTP II, IV, V and VI, and others.

The Pimpinan SATLAP has recommended that planting of second arable plot for tree crops and other Second Stage Developments should be taken in hand in areas already settled.

One difficulty that will arise in making a suitable programme will be lack of adequate maps indicating the distribution and location of the Second Plot. A start has been made in collecting available plans and information in order to compile such maps, with the aim of bringing out the first maps in the near future, but the lack of reliable plans or information is likely to delay this. Phase IIIB surveys on modified TORs were commenced by the I.T.B. team, but the work was suspended in June and was not started again. It is becoming increasingly important that a procedure should be evolved in order to produce final maps showing allotments for Second Arable/Reserved Land to the Transmigrants.

The Pimpinan SATLAP has already expressed his views on this matter.

It has also been suggested that discussions at higher levels be held to bring about greater field co-ordination between D.G. Perkebunan and Transmigrasi, as they both have equally important roles not only in Second Stage Developments but also in new patterns of Transmigration Settlement based on plantation and development of tree crops. These would generally be rubber and oil palm estates, managed by organisations such as PTP's with the required technical experience and competence.

Visits were made Jakarta by Ir. Benyamin and A.C. Chawla in September and by Ir. Benyamin in October to discuss, among others matters, the allocation of areas for Phase II and Phase IIIA surveys to the SFSE 82 Packet A Consultants.

An overall assessment of survey progress in Riau, Jambi, Aceh and West Sumatra Provinces was made in September. In Riau additional areas earmarked for Transmigration were allocated for preliminary study, and it is expected that these areas will prove suitable for Phase II study. In Jambi province no further areas can be allocated for survey for Transmigrasi Umum because of the heavy programmes for estate crop and Transmigrasi Swakarta by PIR KHUSUS; a special supplement on this was submitted to Bina Program and circulated. There is no current programme for survey work in Aceh or North Sumatra, while survey work in West Sumatra is restricted to KBLK/KKLK schemes. In Riau Phase IIIB survey and design work being undertaken by I.T.B. was stopped in June 1984 and remains suspended.

Surveys were completed by the I.T.B. Phase IIIA team as follows:

KOTA LAMA	XIIIa/SKP A	- SP 1,2,3,	completed
KOTA LAMA	XIIIa/SKP B	- SP 2 only	
KOTA TENGAH	XIIIb/SKP C	- SP 2,4 only	
KOTA TENGAH	XIIIB/SKP D2	- SP 3 only	
LANGGAM I	VIa/ SKP B1	- SP 1 only	
TEBING TINGGI	XIII/SKP E1	- SP 1,2,4 only	
TEBING TINGGI	XIII/SKP E2	- SP 1,2 only	
TEBING TINGGI	XIII/SKP D	- SP 1 only	

The fieldwork was completed in August-September 1984 and the team left for Bandung soon after that. The reports have since been received.

Fieldwork was completed by the I.T.B. Phase IIIB team in part of following SKPs before the team left in June:

BANGKINANG	X/D
SUNGAI PAGAR	IXd/C
LIPAT KAIN	XIb/C
LIPAT KAIN	XIb/D

#### 4.3 REGIONAL ADVISER, PALEMBANG

The Project Officer, Ir. Hendro, left to join a higher degree course at Bandung and was replaced in September by Ir. Sigit Suwarno.

Mr. Mobbs continued supervision of the Packet B Consultant and the Local Consultant, maintaining close liaison with the Project Officer and the Provincial Authorities. He made a number of visits to SKPs in Ketapat Babat-Toman during the quarter and to Jakarta in October.

Visits to Palembang from the CAG were made by Mr. Wright (Agriculturalist) and Mr. Law (Land Use Planner) in August, and Mr. Gill (Rural Development Engineer) in October. Ir. Leo Amahorseya (Co-Team Leader) and Ir. Sutisno (Forester) also visited the area in September.

The visit by Mr. Wright was concerned with the extensive areas in the northern parts of South Sumatra where very poor quality rubber has been planted in ladang areas by small numbers of local residents following traditional shifting cultivation. This in effect has laid a permanent claim to the land in areas classified as Production Forest or Limited Production Forest, where the original trees have been removed and replaced by uncontrolled rubber forest. This raises the question of the level of compensation which will be payable in these areas.



During October work was started by the Packet B Consultant on the three Pilot Studies of alternative production models : limestone quarrying, small-scale irrigation, and spontaneous transmigration. Visits were received in connection with these studies from Ir. Umar Hamzah, (Project Officer, limestone study), Ir. Erwin, (Project Officer, small-scale irrigation), and Mrs. Joan Hardjono, transmigration specialist, with representatives of the IBRD planning section and the Dept. of Transmigrasi Swakarsa.

Draft reports and drawing submitted by the Local Consultant were reviewed, and in most cases were returned for revision and amendment, since they were not satisfactory.

The ITB Team concerned with Phase IIIB planning, which left Palembang at the end of June, did not return during the quarter.

#### 4.4 REGIONAL ADVISORY GROUP, PONTIANAK

The stage has been reached where little land remains in West Kalimantan which is suitable for growing food crops, given the normal inputs, and which is also free from constraints such as forestry status or existing land use. Coordination with D.G. Estates in the survey and planning of tree crop plantations has therefore become vital to the continuation of the SFSE-82 transmigration survey programme. Packet D (Sinotech) has a particularly acute shortage of available Phase IIIA sites. Contacts with the Dinas Perkebunan (regional office of D.G. Estates) and approaches by the Project Officer, Ir. Shobirin Muklis, and the Regional Adviser, Mr. Simmons, led to a formal meeting on October 6th at BAPPEDA (regional planning body), between Perkebunan and Transmigrasi. Arising from this meeting, a letter signed by the Governor of West Kalimantan was sent to D.G. Estates and D.G. Settlement Preparation recommending the necessary survey cooperation. The Project Officer followed up this letter personally during a visit to Jakarta.

Coordination with other government departments involved visits by Mr. Simmons to PLPT, Dinas Kehutanan (Forestry) and Agraria, to gather information and discuss progress and proposed developments. Contacts with government offices were assisted by the visit of Pak Leo Amahorseya, Co-Team Leader, and Pak Sutisno Prawotokusumo, Forester from CAG, at the end of August. This visit was also made in connection with the Indonesian-language versions of the Consultants' reports. Other members

of CAG visited West Kalimantan during October: Mr. Wright and Mr. Hall came at the beginning of the month for discussions with the Consultants, particularly with regard to agriculture and regional planning, and Mr. Jyoti and Ir. M. Tawil came towards the end of the month for supervision of topographic survey work.

An additional Phase IIIA area for Packet D, Sepandak, was approved by Bina Program, following a field visit in August by the Regional Advisers which confirmed the potential of the SKP. Previous surveys by ITB in this area, which were roughly equivalent to Phase II, were not sufficiently detailed for adequate definition of land clearing boundaries. Sinotech's API of this SKP is thus being followed directly by Phase IIIA.

Field visits were made by the Regional Advisers during the quarter as follows:

Sepandak	checking Phase II and Phase IIIA
Nanga Mau G and C	field work by Sinotech.
Sungai Antu A and B	
Punjang Merakai E	
Nanga Merakai/Serangas I	
Meliau Tayan C and E	checking Phase II work by China Engineering.
Kedukul XVic/G	inspection of recently established settlement.
Nanga Silat/Nanga Dankan E	inspection of land clearing and final planning.
Nanga Mau G	checking on topographic survey work.

Both Regional Advisers visited Jakarta during September for discussions with Bina Program and CAG.

A large part of Mr. Hutcheon's work during October has been the checking of Sinotech's analysis of field data, mapping, and preparation of reports. This work has been done in conjunction with CAG's reviews of reports, and has included the preliminary checking of the Nanga Ella C report before issue to Jakarta. Draft Phase II reports by this Consultant have been over-optimistic in their assessment of land suitability, and discrepancies have been found between airphotos, field data and maps, due partly to the inadequate use of the airphotos. Sinotech have begun to plot rentis data more accurately, and it is hoped that their reports will become more acceptable as they understand better the requirements of the survey work.

The advisers have also maintained regular contact and consultation with China Engineering. The draft reports by this Consultant for the Sukaraja WPP have been receiving careful study, as some of the data on soils mapped in this area raise grave doubts about the fertility of the soils and the suitability of the area for transmigration development. The Consultant has been hoping for five Phase IIIA sites from this WPP, but final decisions will only be made by Bina Program for some of the SKPs following the forth-coming field visit by the RAG Land Use Planner.

Mr. A.A. Hutcheon arrived at the end of July to replace Mr. Law as Land Use Planner.

In mid-August, the Regional Advisory Group moved into new, rented, premises from the previous borrowed space in the DPU office, and the establishment of the office has been taking place since that time. The direct telephone contact and increased space now available have facilitated the smoother functioning of the office and the compilation of data and maps.

#### 4.5 REGIONAL ADVISORY GROUP, BANJARMASIN

After an initial period in Central Advisory Group, Ir. Waluyo Topographer from TAC 1 transferred to Banjarmasin on 24 August 1984. Mr. Mahendrarajah remained on leave from 10 September to 21 October.



The advisers continued to monitor the work of Packet E Consultants Kampsax International throughout the quarter, reviewing draft Phase II and Phase IIIA reports. Mr. Waluyo particularly checked the topographical and computational work for Sukamandang X/D-West for which Kampsax are completing their report.

During August, while Mr. Hockey the Regional Adviser Samarinda was on leave, Mr. Mahendrarajah spent a week in Samarinda to assist Packet F Consultants PCI and to monitor their progress of work. Mr. Mahendrarajah accompanied by Ir. Muchtar Luthfie, Project Officer, visited Muara Teweh to monitor the progress of radar flights by SRI and later visited their office in Jakarta and discussed the programme of work. Both advisers made a liaison visit to Palangkaraya to collect information regarding land clearing and to introduce Ir. Waluyo to various heads of the offices.

During September, Ir. Waluyo again visited Palangkaraya and discussed various details of transmigration settlement planning with different officials, and in particular with Kepala Bidang Kotawaringin Timur Kal-teng regarding the studies to be carried out by the Local Consultants. It was learnt that the Local Consultants would soon begin studies of the following SKPs, but no work seems to have started yet:

Kumai IXa/J & K	by	SAETI
Kumai IXa/L	by	SRI TUNGGAL
Kumai IXa/M & N	by	BIEC

During September and October the main activity of Ir. Waluyo was the collection of information concerning all the transmigration sites studied during the SFSE-80 Programme. Substantial amounts of data were obtained from Dinas Perkebunan, Dinas Kehutanan and Bappeda to be used in the preparation of land allocation maps at 1:50,000 scale for Central Kalimantan.

At the end of September, the CAG Physical Planner (Mr. Hall) and Agriculturist (Mr. Wright) visited Banjarmasin for discussions with the Regional Adviser and with Kampsax regarding the review of the preliminary final Phase IIIA report of Sukamandang X/D-East. This still lacks considerable detail and needs revision, particularly the sections on agriculture and planning. The land clearing map requires additional information before it can be accepted by Bina Program.

Mr. Mahendrarajah had discussions with CAG and Bina Program at the time of proceeding on leave in September and on his return in October.

#### 4.6 REGIONAL ADVISER, SAMARINDA

The major items of work during the quarter were checking and supervision of the SFSE 82, Packet F Consultant P.C.I., and the continued improvement of the planning information available in the form of maps from the Satlap/Advisory Office. Other facets of the planning cycle, namely land clearing inspection and Phase III B study work, remain substantially dormant except for the Trans IV Sangkulirang/Muara Wahau Project.

The Governor Kaltim remains unprepared to sign various areas over for transmigration development. However, at the initiation of PLP PIMPRO, the Bupati Kabupaten Berau has written to the Governor requesting the release of the three SKPs in Talisayan studied at Phase II by Clyde Surveys and partly at Phase IIIA by local Consultants during 1983. The Governor's reaction is not yet known.

Very slow landclearing progress is being maintained in Salim Batu, in Kabupaten Bulungan. It is still hoped that work will be allowed to continue in SKP Tanjung Selor A, but this is dependent on release of the area for transmigration by the Governor and completion of Phase III studies in the four remaining SPs, only one SP having been studied during the 1983 crash programme.

Initial development of two SPs at Tanjung Redeb in Kabupaten Berau was completed some time ago. The landclearing authorities want to develop extensions under PAYP, but this form of very arbitrary planning is being opposed by SATLAP.

In Kabupaten Kutai, development at Bahu Ulak is now substantially complete. Again the landclearing authorities have funds to continue work within the area of existing allocation, and SATLAP are opposing PAYP extensions. Kota Bangun E development following Phase IIIA study awaits contract finalisation of construction of 30 Kilometres of access road from the existing settlements at Rimbayu.



Regular contact was maintained during the quarter with the Regional Offices of Transmigrasi, Bappeda, P.C.I and T.A.D., on general matters relating to the Repelita IV Transmigration Programme. New contact was established with Dinas Perikanan to obtain general information regarding proposed salt, brackish and fresh water fishery developments during Repelita IV. Further meetings were held with Dinas Perikanan during the visit of Ir. R. Lestari to discuss the proposed Transmigrasi fisheries pilot project planned for WPP Resak.

In September Mr. Hockey was asked to describe the current Transmigration Planning Situation at the joint meeting of the Regional Government Commissi 'D' and Kantor Wilayah Transmigrasi, in Samarinda.

Sustained improvement of mapping has been achieved during the quarter. Most information on topography, forest boundaries, transmigration structure, and up-to-date screening and field survey is mapped at 1:250,000, 1:500,000, 1:750,000 and 1:1000,000 scales. During September and October a copy was made of the Bappeda Land Allocation Atlas which has been sent to Jakarta.

An improved set of maps now needs to be produced, and it is hoped that these maps will be regularly updated by cooperation between the Satlap/ Advisory Office and the Bappeda Mapping Centre (TAD). The intention is to bring this data together at 1:250,000 to describe the current development situation and areas of conflict between Transmigration and other Development Agencies .

Following screening reports of the Fire Damaged Area and the Sesayap/ Malinau area last quarter, further screening studies were completed by C.A.G. for:

- (i) Sangkulirang Area
- (ii) Balikpapan to Tanah Grogot
- (iii) Greater Samarinda
- (iv) The area north of Tarakan.

Considerable information is now being provided to the Regional Authorities which will assist in greater liaison and cooperation during Trans V SFSE Planning.



The following visitors were received during the quarter:

7 to 13 August 84	Mr. Mahendrarajah, Regional Adviser Banjarmasin, deputising while Mr. Hockey was on leave.
23 to 31 August 84	Mr. Gossain (Senior Topographer CAG) for field check on Phase IIIA work by P.C.I.
11 to 14 October 84	Ir. R. Lestari - Fisheries Pilot Project.
31 October 84	Messrs Wright and Hall (CAG). Ir. Leo Amahorseya (Co-Team Leader), Ir. Sutama (Agriculturalist) of the TAC-1, for discussions with TIA and P.C.I.

Field visits were made as follows:

21 to 25 August 84	Jakarta discussions with CAG on return from leave.
13 to 18 September 84	Ponak Benamang/E&F Phase IIIA fieldwork check.
18 to 24 October 84	Jakarta discussions on screening land allocation with CAG and Bina Program.

Due to lack of an electricity supply to the new extension building in the Kantor Wilayah Transmigrasi, the Satlap/Advisory Office move has not yet been possible. A partitioning design has now been made, funding agreed in Jakarta, and it now only remains for the Kepala Transmigrasi to give approval.

Mr. Hockey took home leave in U.K. from end of July to August 19th 1984, during which the Regional Adviser, Banjarmasin acted for Mr. Hockey.

The group has continued to supervise the SFSE-82 Consultants during the quarter with meetings being held regularly in Jayapura and Merauke. There have also been meetings in Jakarta with all three Consultants and with Bina Program and the CAG. Progress meetings with RDI (Sago Study) have been held regularly in Jayapura.

In October Mr. Revell held meetings in Merauke to discuss progress with both Fenco and Euroconsult; discussions were also held with both Consultants' agriculturalists to arrive at a consensus opinion of development possibilities in Southern Irian Jaya.

At the end of the month Mr. Morpew travelled to Jakarta for discussions between CAG, Bina Program, Euroconsult, Fenco and RDI.

Field visits were made during the quarter to a number of the SKPs to check on the field work of both Phase II and Phase IIIA studies.

Mr. Leo Amahorseya (CAG Co-Team Leader) and Mr. Sutisno (CAG Forester) visited Irian during October, and held meetings with Kanwil, Forestry and the three Consultants in Jayapura and Merauke. The main objective of the visit was to discuss with the Consultants the standards expected of the Indonesian versions of the reports, and a visit to existing transmigration sites in Kurik and Saror was made from Merauke.

Mr. Lee Hall (CAG Physical Planner) also visited Irian Jaya during October. Discussions were held with PRC in Jayapura and with Euroconsult and Fenco in Merauke on the regional context of planning and the production of Regional Context Reports.

Mr. Kusubandio of Bina Program (Project Director) visited Jayapura for meetings with the Governor and interested provincial officials on Transmigration. It is believed that land tenure problems, among others, were discussed. The Advisory Group took no part in the meetings.

A total of 10 API and 19 Phase II reports were reviewed during the quarter.

A provincial development map of Irian Jaya (1:1,000,000) showing all transmigration sites and status, forestry classifications, existing and proposed roads and administrative boundaries is close to completion.

During the quarter two problems have begun to emerge. Visits to the Sorong area indicated that unsuitable land is being cleared and settled with potentially serious consequences for the future of the transmigrant.

The problem has two causes :

- a. The administrative decisions, made by those responsible for implementation, to develop all sites to 500 KK or more, thus ignoring lower limits imposed by Consultants who have rejected areas because of soils, topography or flooding, clearing SPs of, for example, 275 KK.
- b. Failure of Contractors to identify the correct area for development and thus clearing land some distance from the land identified by the Consultant. Such cleared land is often unsuitable. It should be PLP responsibility to prevent this from happening.

Visits to the Merauke area have shown land clearing Contractors using Phase II structure plans for clearing, although Phase IIIA studies have been carried out and full Phase IIIA plans are available in the Ministry. In addition, Contractors are failing to follow detailed engineering plans in Semangga B, which will only be suitable for cropping with a complete drainage system. Such drainage as the Contractor has put in is totally inadequate, being no more than 20% of the size shown in the detailed design. Again there is a failure on the part of the PLP to understand the requirements and therefore supervise the work in the proper manner.

Both the above problems indicate a lack of communication between those responsible for studies and planning and those responsible for implementation. In the case of Sorong it is apparent that each are working to a different set of parameters. The planners are working to land suitability parameters and the implementation personnel to budget and quota parameters.

It is also apparent that PLP do not always understand the reasons behind the structure plan they are required to execute. It should be noted here that the Provincial Authorities, who carry out implementation, do not receive any Phase IIIA reports in which the reasons for rejection



of land and the requirements of the structure plan are clearly set out.

Unless this information gap and communication problem are tackled and improved now, it is likely that an increasing number of Transmigration Settlements in Irian Jaya will fail.

Miss O'Farrell was away on compassionate home leave for nearly two weeks in October. Messrs Morpew and Scott also took leave during the quarter.

## 5. SFSE-82 CONSULTANTS PROGRESS.

### 5.1 GENERAL.

The Consultants continued with field-work for Phase II and Phase IIIA studies and with drafting Phase II reports. 33 Phase II reports were submitted during the quarter, but no Phase IIIA reports. The position at the end of October is set out in Table 5.1, together with an estimate of the delays in the over-all programme in Figure 5.1.

Figures 5.2 to 5.10 set out the position for each SKP studied by the individual Consultants.

### 5.2 PACKET A SYARIKAT SAILCOS

By the end of October API reports had been submitted covering 18 SKPs in Riau, 1 in Aceh and 8 in Jambi. APIs in 6 more SKPs in Riau, allocated to Sailcos in September, are in hand but the oled 1:25,000 photography for some sites had not yet been given to the Consultant, while for other sites the coverage was inadequate or incorrectly located; however, new 1:20,000 photography is now available.

An API report covering two SKPs at Lipat Kain XIb was submitted at the end of September; Sailcos have since been instructed to proceed to Phase II in SKP F, but SKP B was found to be too steep and dissected for further study. The report for Ukui A was submitted to Bina Program at the end of October but has not yet been reviewed; Sailcos are anxious to start Phase II fieldwork in this area and to complete remaining API work, so that their Phase II fieldteams may have sufficient work.

Phase II fieldwork has now been completed in 12 SKPs, all in Riau, and is in hand in three more, also in Riau. Reports have been submitted for only seven SKPs, including two submitted in October. At Pangkalang Kasai VII/C Phase II fieldwork has established that the extent of swamp margins in the north and of sandy soils in the south, (suspected by CAG at prescreening), was too great to warrant settlement, although pockets of potentially suitable land may be incorporated into adjacent

TABLE 5.1

SFSE 82 POSITION END OCTOBER 1984

	A	B	C	D	E	F	G	H	I	J	TOTAL
	Syarikat Sailcos	H.F.A	CECI	Sino- tech	Kampsax	P.C.I	-	P.R.C	Fenco	Euro- consult	
Allocated to Consultants for API	36	20	30	26	16	23	-	34	36	46	267
API reports submitted	27	20	23	25	16	19	-	30	24	44	228
Areas rejected on API	4	6	1	1	2+1 (p)	5	-	16	-	16	51+1 (p)
Areas contracted for Phase II study	25	26	22	22	25	22	-	28	28	30	228
Areas allocated for Phase II study	16	14	22	20	13	13	-	24	20	25	161
Phase II Field work in progress	4	2	1	-	-	-	-	4	-	5	16
Field work complete	11	8	21	20	13	13	-	10	20	19	135
Reporting in progress	4	3	8	6	7	12	-	-	6	4	50
Draft Report submitted	7	5	13	14	6	3	-	7	4	13	72
Draft Report reviewed	6	5	10	13	6	3	-	7	2	11	63
Final Report submitted	1	-	4	-	2	1	-	-	-	1	9
Areas rejected at Phase II	2	3	-	3	2	1	-	7	2	7	27
Areas passed to other agencies at Phase II	-	-	2	1 (?)	-	-	-	-	-	-	2
Areas contracted for Phase IIIA study*	13/9	11/9	11/10	11/9	12/10 e	11/9	-	13/11	14/10	14/11	110/89
Areas allocated for Phase IIIA study	3+1 (p)	2	6+3 (p)	4+2 (p)	2	1+1 (p)	-	-	1	9	29+7 (p)
Areas from previous programme for Phs IIIA	5	1	2	-	4	6	-	3	-	2	23
Phase IIIA Field work in progress	4	2	4	2	1	1	-	-	-	3	17
Field work complete	-	1	2	3	5	1	-	-	-	5	17
Reporting in progress	-	1	-	3	4	1	-	-	-	5	14
Draft Report submitted	-	-	-	-	1	-	-	-	-	-	1
Draft Report reviewed	-	-	-	-	1	-	-	-	-	-	1
Final Report submitted	-	-	-	-	-	-	-	-	-	-	-
Areas made available for Land Clearance	-	-	-	-	-	-	-	-	-	-	-

\* First no. refers to foreign consultants as lead consultant, second no. foreign consultant assisting.

(r) = reserves

(p) = pending

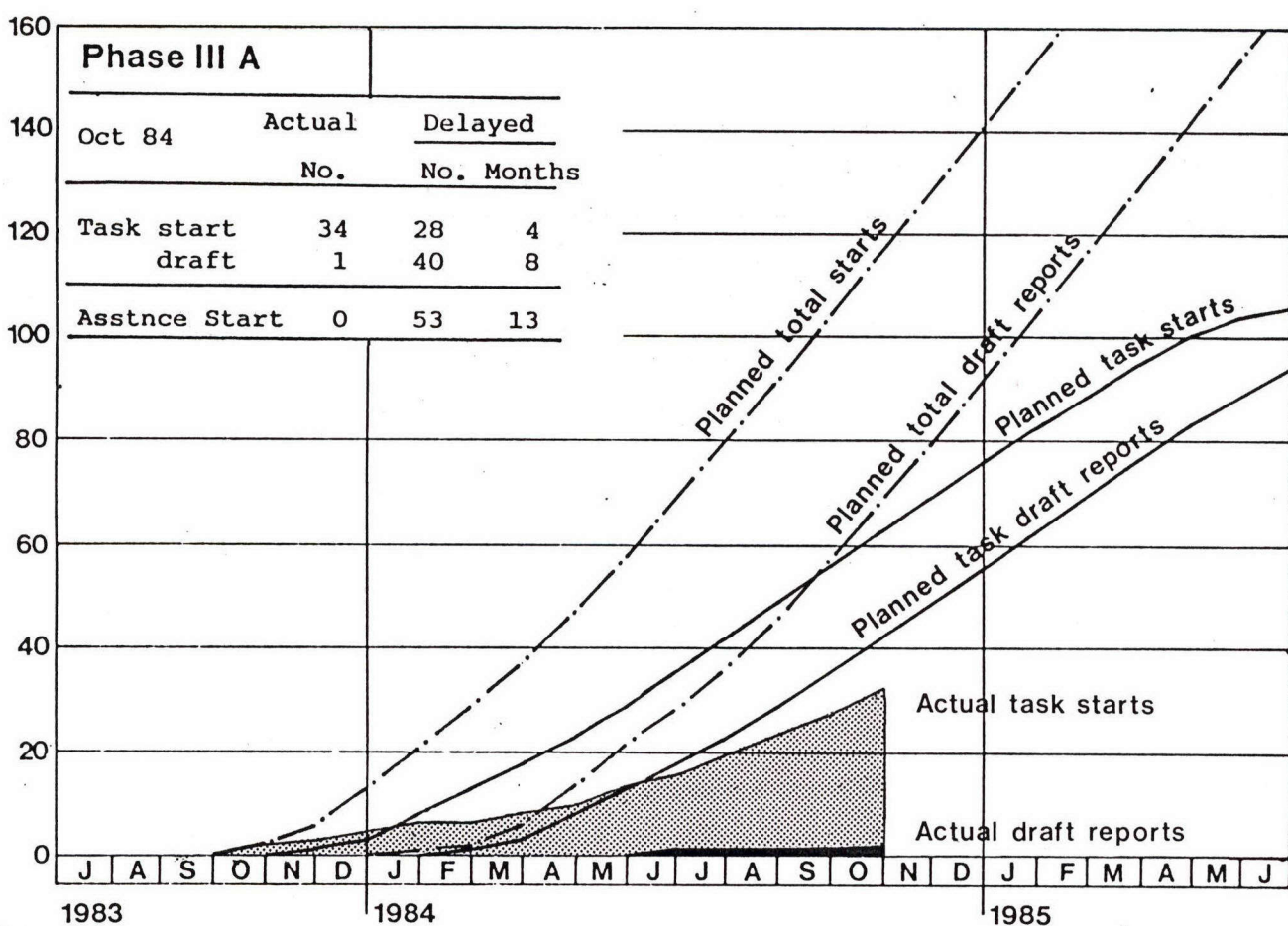
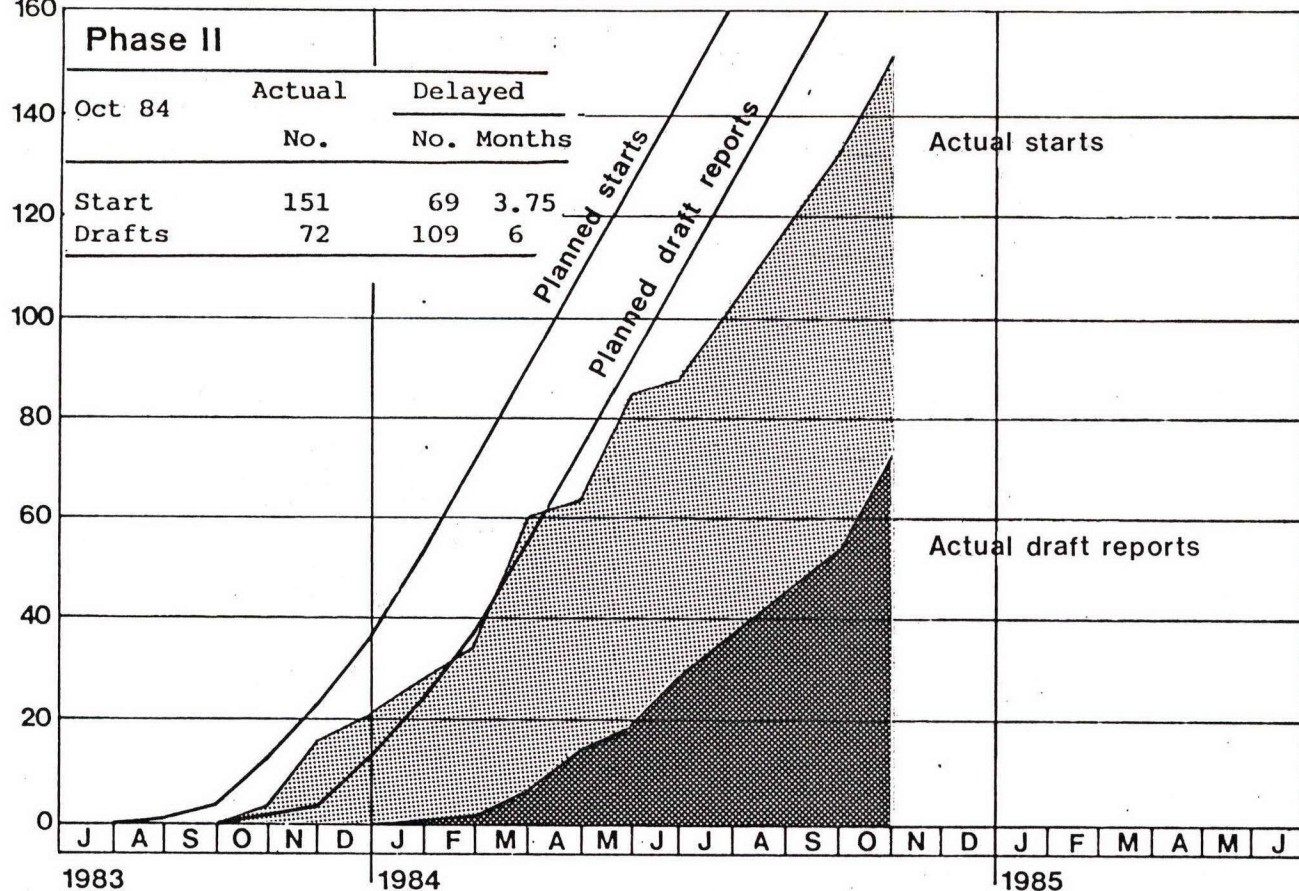
a = 70% of contracted Ph II sites now allocated  
b = work started on 151 sites, not started on  
10 (Ph. II).

c = 46% of contracted lead consultant Ph IIIA  
sites now allocated.

d = work started on 34 sites, not started on  
18 (Ph IIIA)

e = new contract 6 normal task Phase IIIA +  
16 task Phase IIIA based on radar mapping.





total = task + assistance concept Phase IIIA studies

Main Consultant Programme ( Ph II + Ph IIIA ) : 7 months behind

Assistance Concept : 12 months behind

Fig 5.1 : SFSE - 82 Progress to end October 1984

sites. These, however, are classified as partly Production and partly Limited Production Forest. The report on Langgam I VIa/C has yet to be reviewed; it proposes development for 1,200 KK using a pure wetland model, but Phase IIIA studies could not be authorised unless virtually the whole site can be released from Limited Production Forest, which is highly unlikely.

No Phase IIIA report has been received and none is scheduled for completion until the end of January 1985. CAG has become increasingly concerned about the length of time being taken on fieldwork at Phase IIIA sites in Langgam II VIb/A, C and D and at Kota Tengah XIc/B; this could lead to delays in report submission. Sailcos have not planned their 1 km rentisan network to identify those areas most suitable for village centres, houselots and first arable lots. At SKP A (the most advanced site) no Preliminary Structure Plan has yet been prepared although fieldwork started in May and an extensive network of 250 m rentisan has been cut, some of it probably unnecessarily. Delays have evidently been extended because of the Local Associate's method of paying labourers on a time basis (this has now been changed). At Kota Tengah, where deep peat and very poor drainage have presented worse problems than were identified at Phase II (P.T. Perentjana Djaja - P.T. Trans Intra Consortium 1982), an extensive 250 m rentisan network has also been used. Clearly Sailcos should have started with one or two major rentisan across the site to establish as early as possible whether it was capable of drainage. A field visit by a CAG Topo-Surveyor has been arranged for early November, with the object of seeking ways to speed up Phase IIIA fieldwork on sites in progress and to rationalise the approach to four other wetland sites where fieldwork is scheduled to start before the end of the year.

Sailcos report that by the end of September they had expended 40% of their expatriate manmonths and 30% of their Indonesian professional manmonths.

### 5.3      PACKET B      HALCROW FOX AND ASSOCIATES (HFA)

Recent expatriate arrivals have included Mr M. Banfield, Topographer, and Mr R. Wootton, Planner, as well as short term specialists for the pilot studies, Mr N. Rayner, Economist, and Mr C. Schoon, Irrigation Engineer. A temporary office was opened in Jakarta for work on the Pilot Projects,



#### API Studies

For the first two months of the quarter no API studies were possible because the photography was not supplied by Bina Program. During October however, studies were carried out using existing small scale photographs on Peninjauan XIb/ I & J areas, proposed as extensions to the Batumarta Project. More detailed API studies have been carried out on the individual proposed SKPs in Pangpangan Mesuji, which are expected to confirm previous preliminary reports that the areas are unsuitable for transmigration without extensive and costly flood protection and drainage works in swampy areas. A study is in hand of a restructured area of Bingin Teluk I/H and parts of I/I covered by existing photographs. Although rejected under pre-screening owing to apparent existing but unauthorised land use, more detailed Phase II study of these areas may now be recommended.

#### Phase II Studies

Fieldwork was completed during the quarter in Babat Toman XVIb B, E and H and the draft reports are under preparation.

Following correspondence and meetings with the Department of Forestry and Bappeda, authority was obtained on 19th October to permit Phase II survey work in Benakat VI/D & E. Nearly all these areas are currently classified as permanent production forest and are subject to work by local concessionaires (HPH), and if areas are proposed for transmigration, it will be necessary for other areas of conversion forest to be "exchanged". HFA have initiated correspondence regarding the extent of forestry inventory and survey that may be required during the Phase II study instead of Phase IIIA.

Draft reports on Kelingi IV/E and/F where the fieldwork was finished in June were received during October. In both cases HFA have recommended rejection for Phase IIIA studies under existing Terms of Reference. The report on area E proposed a Phase IIIA study with emphasis on sociological aspects in order to increase utilisation of parts of the area by existing inhabitants and thus release land for transmigration settlement. A Discussion Paper was later submitted to CAG amplifying these proposals in general terms, applicable also to Ketapat Babat Toman F, G and B where there are similar problems, particularly concerning rubber.



### Phase IIIA Studies

Fieldwork in Ketapat Babat- Toman XVib/G was carried out during the quarter . A draft structure plan has now been prepared identifying areas suitable for three SPs totalling about 1200 families. Authority from Bappeda was also received to commence survey in the adjoining area XVib/F, and this is expected to start on about 1st November, Where areas proposed for transmigration lie within permanent production forest, it will be necessary to propose areas of adjoining conversion forest which could be "exchanged" .

The Report for Muara Beliti III/E is almost complete, but has not yet been received. The Agricultural Economist is working on a Feasibility study related to this area,

### Pilot Studies

HFA were requested to undertake three Pilot Studies on alternative models of development for transmigration settlement. In discussions with CAG and Bina Program it was agreed that these should be primarily desk studies to define the requirements and general form of the proposed models without being site specific, although brief visits would be made to possible areas recently subject, to Phase II survey by HFA. The draft reports were submitted during October and summarised in Section 2.12.

### Limestone

A draft report has been prepared related to a possible site southwest of Baturaja. The wide range of technical and economic assumptions necessary at this stage require a feasibility study at considerably greater depth.

### Small scale irrigation

Four models of irrigation, flood control and drainage have been proposed. Certain alluvial areas in Ketapat Babat Toman XVib/B and Kelingi IV/E were visited, but the land use and other constraints may make these unsuitable. There is pressure to identify suitable areas in Kabupaten Musi Rawas .

### Spontaneous transmigration.

This study has concentrated on the definition of spontaneous transmigration and the motivation of these transmigrants. Sites initially proposed at Baturaja may not be available as they have been designated for general transmigration.

During October 1984 draft Phase II reports were received for Sukaraja XIVA SKPs A, C, D and E. Following review of the reports, it became clear that several factors indicated that the fertility of the soils was below average for West Kalimantan. A meeting to discuss the matter was held on the 19th October, with members of Bina Program, CAG and CECI present. At this meeting Bina Program decided that Phase IIIA studies should proceed in SKP E and that a decision on whether or not to proceed to Phase IIIA in SKPs A, C, and D would be made on the basis of the Regional Advisory Group's re-evaluation of the soils in these SKPs.

CECI are more or less on schedule with their Phase II field work, but are well behind in reporting. Insufficient manmonths are left for completing the Phase II work and CECI have requested two extra man-months for the Phase II Team Leader. CECI have identified a soil fertility constraint, which is likely to apply to most study areas. This is discussed in their revised draft of Chapter 3, Agricultural Development Possibilities. CAG have edited this draft and revised the conclusions. Following acceptance of the revisions by CECI, the Chapter will be incorporated into the delayed Phase II reports on a site specific basis.

CECI have fallen further behind schedule with their Phase IIIA work. However, for Nanga Tayap SKP C and Tumbang Titi SKP D field work has been completed except for the main village road survey. Topographical surveys have been completed for Nanga Merakai SKP F and Tumbang Titi SKP C, while the survey for Nanga Merakai SKP F is 30% complete. The allocation of Sukaraja SKP E as a Phase IIIA study area will allow full topographical survey work to continue.

During the last quarter three API reports and four Ph II draft reports were delivered (bringing the totals to 25 and 14 respectively). Phase II fieldwork has been completed on a further six SKPs, and only two SKPs remain to be studied under the present programme. Phase IIIA fieldwork has been completed on a further two SKPs, bringing the total to three, and fieldwork was started on two more areas. One of these areas was a site on which some generalised surveys had already been undertaken by ITB.



The last two sites for Phase II work (Singkawang IV D and J) are held up because of lack of photography, but 1:20,000 photos should be made available within a short time. In addition availability of photography is delaying work on Phase II maps for Sungai Antu C.

The major problem of lack of suitable sites for 'standard model' SKPs remains, with many Phase II sites affected by severe forestry constraints and lack of land with 8% slope or less, as well as the universal problem of land requirements for the local population. If forestry constraints were removed, three further sites would be available for Ph IIIA work, bringing the total to eight standard model SKPs.

Up to eight further sites (80,000 ha) may be available for non-standard (treecrop) development in areas adjacent to existing PTP XII and XIII developments. Phase II draft reports are currently under revision for about 30,000 ha of land adjacent to PTP XIII (Nanga Pinoh B and C), while work on the 50,000 ha adjacent to PTP XII (Singkawang IV) is held up because of delays in delivery of air photograph. Dinas Perkebunan (Pontianak) and Team Khusus (Jakarta) both favour this co-operative effort between Transmigrasi and Perkebunan, although approaches have still to be made at Ministerial level in Jakarta, and at estate level in the field.

The standard of Phase II reporting has somewhat improved, but it still leaves much to be desired. A great deal of effort has been spent by the RAG on field supervision over the last quarter, and review of the Phase II reports is taking a large amount of CAG time since primary data is often questionable. The major fault remains lack of sufficiently precise API and failure to relate field observations (particularly on slope) to API. Thus areas of 8% slope and less, which are suitable for first arable cultivation, are usually overestimated by 50% to 200%.

#### 5.6            PACKET E   KAMPSAX INTERNATIONAL

The Consultants continued the Phase IIIA field work in Sukamandang X/E,F and some additional Phase II field work in K. Kuayan II, VIb/P,Q,N,K to satisfy the TOR in view of the comments on the Phase II draft reports of K. Kuayan II, VIb/P,Q. They also continued with the reporting work of SKPs for which field work has already been finished or nearly finished.



At the end of the quarter the Consultants had completed the following:

Fieldwork :	Phase II	13 SKPs
	Phase IIIA	5 SKPs
Reports :	API	16 (13 passed to Phase II)
	Phase II draft	6
	final	2
	Phase IIIA draft	1

Phase IIIA field work is continuing on one SKP.

During the quarter, API of Sukamandang X/A, draft Phase II reports of K. Kuayan II, VIb/P,Q, final Phase II reports of Sukamandang X/E, Nangabulik XI/E and preliminary issue of final Phase IIIA report of Sukamandang X/D-East were received.

In Sukamandang X/A, which was previously surveyed by P.T. Exsa, the API gave no indications of sandy soils, but the area is not suitable for further studies due to limited production forest, existing land use and rolling topography suitable for tree crops only.

Review of draft Phase II reports of K. Kuayan II, VIb/P,Q revealed that the Consultants had studied the SKPs for the standard model only and had not analysed their findings for the STR model. The required length of rentisan had not been cut, and the Consultants have been asked to cut more rentisan in K. Kuayan II, VIb/Q to satisfy the TOR and resubmit the reports.

The first draft of the final Phase IIIA report of Sukamandang X/D-East was reviewed. This still lacked the necessary details, particularly in the sections on agriculture and planning, and the land clearing maps also needed some additional information. Mr. L. Hall, Physical Planner, and Mr. J.P. Wright, Agriculturalist, from CAG visited Banjarmasin and discussed the report with Kampsax.

Out of 13 SKPs for which Phase II studies have been carried out by Kampsax, in addition to Sukamandang X/E,F and Nangabulik XI/E early indications are that only one more site, Tumbangsamba Va/E, may be suitable for further Phase IIIA studies. Others are likely to be rejected due to various constraints.

The future programme of Kampsax is dependent on airborne radar mapping by SRI. The first set of maps which were expected in July have been received at the end of the third week of October, and SRI has indicated that they will soon be submitting a revised version of these maps. The data and maps cover parts of Muara Teweh C and Lahai B, and at present are being reviewed by Kampsax. It is, however, clear that because they do not show details such as logging roads or drainage systems, except the Barito river and another river, they cannot be used for the study programme. If the production of maps by SRI is further delayed or the maps prove to be unsatisfactory, alternative deployment of Kampsax has to be considered. The Consultants have almost completed all the field work, which they were required to do before proceeding with the studies based on radar mapping, and will soon be without work.

#### 5.7 PACKET F P.C.I.

P.C.I. completed A P I Reports for WPP XV/c Muara Kelawit and WWP XVib Merawat. A P I is therefore now complete for 19 SKPs, of which 14 have been recommended for Phase II study. By the end of the quarter fieldwork for 13 of the 14 areas was complete. However, it is a matter of major concern that during this quarter no Phase II draft report has been procured. Of the three draft Phase II reports for Ponak Benamang B, E and F, only E has been brought to the required standard and was approved for Phase IIIA study, but even this report needs to be submitted in final form with some necessary amendments.

Phase IIIA fieldwork started in Ponak Benamang/E in early August. P.C.I. had expected to complete this in mid-September, but in fact only completed it around 20th October. This slow performance seems to be due to a rather segregated approach to the fieldwork. Field survey parties are usually composed entirely of local associate staff under periodic supervision by expatriates, and it is considered that the standard of supervisor by the lead Consultant is insufficient to guarantee a high quality of technical work. P.C.I. have now been allocated Phase IIIA study areas in Muara Wahau North West (three SKPs) and Muara Ancalong XII/A and C. No pressure now exists to identify areas at Phase II to keep Phase IIIA staff busy.



One of the main factors contributing to P.C.I.'s poor performance with Phase II reporting is that, although they were offered areas identified by other Consultants very early on, they preferred to scan and give priority to those areas from within their Phase II allocation that are suitable for Phase IIIA. Thus reports such as Ponak Benamang A, studied in the field in April '84 and of low priority due to forestry constraints, remains incomplete at the end of October '84.

The major reason for the unsatisfactory situation described above is the fact that the Expatriate and Local Associate Team Leaders are not resident in Samarinda. The PCI Team Leader has spent only four days in September and six days in October in Samarinda, and the new Associate Team Leader, Mr Basarah, made a quick visit at the end of October. The Consultant has been requested to rectify this situation as a matter of urgency.

It is currently felt that Phase II work will be finished behind schedule but within the original contract period. Phase IIIA work is expected to overrun by nine months. The combined effect could be the need for approximately 100 additional expatriate manmonths, and similar additional inputs by local associate and support staff.

#### 5.8            PACKET H   PRC

No further API reports were submitted during the quarter. Following allocation of new areas to PRC at the end of August, discussions were held with RePPPProt after screening of the Steenkol area. Finally three areas (Blocks I, II and III) were identified, allocated WPP names and Block II given to PRC for structuring. PRC have 1:25,000 photographs for Block II (WPP Steenkol Va) and it is hoped they will receive authorization to purchase the remainder for Blocks I and III (Winuni I/e Berma I/C) in the near future. In the meantime work has commenced on Steenkol Va.

Phase II draft reports for all seven areas in which field studies were completed at the end of July have been submitted and reviewed. WPP Tomage has been restructured into seven Phase II SKPs, the remainder being rejected due to topography. Field work has been completed in three SKPs A B and C and is currently going on in F, G, K and L. It is expected the fieldwork will be complete before the Christmas break.



The Consultant has now recruited and mobilised the Phase II Team Leader and proposed a co-team leader; both have experience in agriculture. If the seven Tomage SKPs are completed by the Christmas break, then PRC subject to finding sufficient areas at API are likely to be able to complete their Phase II contractual obligations by August 1985.

The Consultant has started to mobilise his Phase III A personnel and the Team Leader is now in Jayapura. A schedule for the first two sites Sumyanggar D and Apauwer A has been approved by Bina Program and the Consultant has been requested to provide a schedule of work for the third area Pantai Timur A. Field work is scheduled to commence in January 1984 and it is considered that the Consultant could complete only four Phase III A surveys within the contract period, provided potential areas can be found.

The technical standards of both fieldwork and reporting are considered satisfactory. The only constraint to further improvement in field efficiency is a continued lack of SSB radios, which were to be supplied by Bina Program under the Contract. Despite agreement for immediate supply at the end of August, the Consultant is still waiting some two months later.

The Consultant has completed an estimated 47% of Phase II work using approximately 65% of the available Phase II expatriate man months.

#### 5.9 PACKET I FENCO

Three A.P.I reports were resubmitted during the reporting period. These had been rejected previously because 1:142,000 photography of poor quality had been used where good 1:20,000 photography was available. The standard of the reports was a considerable improvement on previous submissions.

During October the Consultant presented an Executive Summary Report on Okaba B, the first area which the Consultant has been able to recommend for Phase III A studies. This report was submitted in advance of the full draft Phase II report to enable the Consultant to commence field work before the dry season comes to an end. The report was sufficiently well written and presented (with all maps) to enable approval to start Phase III A studies to be given. Full draft Phase II reports were received at the end of the quarter and these were discussed with the Consultant in Merauke. Before being formally reviewed the field data are awaited.

Logistics for Phase III A field work in Okaba B were in place at the end of the quarter and survey work had just commenced.

Technical standards in the field have improved considerably in the Bamboro, Sakelulun and Okaba areas and are now considered satisfactory, Reporting has improved with three draft Phase II reports being submitted towards the month's end. It is believed a number of other reports are nearing completion for submission early in November. The technical standard of Phase II reporting is satisfactory.

A major constraint to progress has been a lack of Phase III A areas either from previous studies or identified from Phase II early in this series. It is now some half way through the study period before the Consultant has been able to commence Phase III A field work. This problem was compounded by the Consultant mobilising his Phase III A team in an attempt to speed up Phase II work. This led to considerable use of man-months, but did not produce a sufficiently increased work output to warrant the decision. The result is that at the end of the quarter the Consultant has completed approximately 51% of Phase II work, but has used up all Phase II man months in the contract together with 29% of the Phase IIIA man-months available.

In an attempt to resolve the resulting contractual problems, the Consultant's Vice President, Mr. McFarlane, visited Merauke during September and the new Project Director, Mr. E McCormack, spent some 10 days in Merauke in October. This was to be followed by discussions in Jakarta in early November.

#### 5.10            PACKET J   EUROCONSULT

No further API reports were submitted during the quarter, although three more are expected. In total 26 sites suitable for Phase II studies have been identified.

At the end of the quarter, fieldwork had been completed in 19 sites and was almost complete in a further five, bringing the total to 24. Phase II reporting has caught up, with a further nine Phase II draft reports submitted during the quarter, bringing the total to 13 reports submitted in draft form and one in final form.

Phase IIIA fieldwork is now complete in five SKPs and the detailed survey work has been completed in Muting E. The Project Officer cancelled the 250m rentisan survey in SKP Kaliki C, so the Consultant set out the road only. The Phase IIIA work is currently estimated at 4½ months behind schedule.

On completion of his Phase II current surveys the Consultant considers that his contractual obligations have been fulfilled in the following manner:

Extra API reports 17 x 0.25	= 4.25
Complete Phase II studies	= 24.00
Inventory of Southern Irian Jaya	= 1.00
Landsat Interpretation 10 x 0.1	= <u>1.00</u>
Total equivalent Phase II	= 30.25

In view of this the Consultant plans to demobilise the majority of his Phase II team in December 1984. Should Bina Program require the Consultant to carry out any further Phase II work in lieu of Phase IIIA assistance concept man-months, this must be discussed and agreed with the Consultant now.

The Consultant has completed all the Phase II reports for which he has 1:20,000 photography. If the remaining photographs are not made available in the near future, the Consultant will run out of Phase II man months before being able to complete his reporting. It has therefore been agreed that the Consultant should base his remaining Phase II reporting on 1:100,000 Satellite Imagery, enabling him to identify suitable Phase IIIA areas, but probably not an outline structure plan. He can then, if necessary, carry out initial Phase IIIA fieldwork whilst awaiting the photography.



It was reported that PT. Fincode had completed their Phase IIIA study in SKP Aimas I. This area had no Phase II work done previously, but was scheduled for settlement of 1000 KK during Repelita IV. On completion of his fieldwork, but before reporting, the Consultant claims to have identified only 2 SPs of 200 KK and 250 KK respectively. This will again raise the question of study findings being incompatible with development requirements. It is the practise of the staff responsible for development in Aimas to develop all sites to 500 KK regardless of suitability .

PT. Indra Development commenced Phase IIIA studies in Timika A at the beginning of October. There was concern expressed by the Project Officer that the soils in the original SKP would be unsuitable (sand) and a proposal was made to re-orientate the site. However the alternative area turned out to be largely swamp. Fieldwork is expected to be completed

## 5.12

## R.D.I. SAGO PROJECT (IRIAN JAYA)

The Consultant mobilised their team in Jayapura in the last week of the previous quarter.

Phase II fieldwork was completed during October in both Waren B and Sarmi A. A discussion paper was presented in Jakarta on Waren B in advance of the completion of topographical fieldwork, as a result of which the area was rejected for further study because of insufficient land for settlement despite good sago potential.

A similar discussion paper was presented on Sarmi A which shows more potential land for settlement but is not so good for sago. However, with the absence of maps and the limited information presented the Consultant could not be given approval to commence Phase IIIA fieldwork. The Consultant expects to present his Phase II findings in detail in early November.

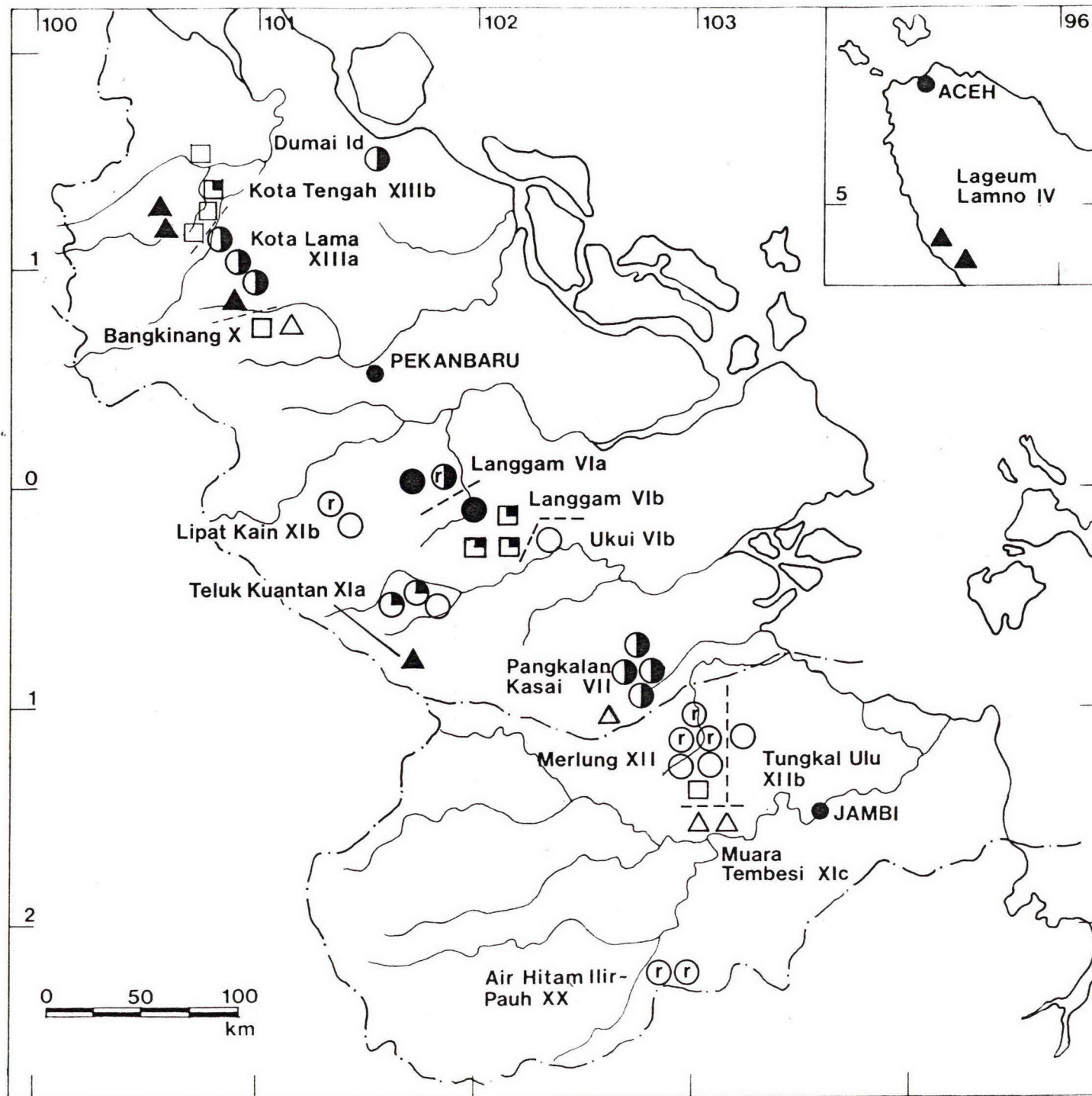
The Consultant has started cutting Phase IIIA rentisan after approval of the layout by JRAG (in the absence of the Project Officer). However, he accepts that he does so at his own risk, not yet having received approval.

On completion of Phase II work, it is considered that there are insufficient man-months remaining in the Contract to carry out an adequate Phase IIIA survey.

- A Syarikat Sailcos
- B Halcrow Fox & Associates
- C China Engineering
- D Sinotech Engineering
- E Kampsax International
- F Pacific Consultants International
- G not allocated
- H Planning Research Consultants
- I Fenco Engineers
- J Euroconsult



SFSE-82  
PACKET LOCATIONS



#### ADVISORY GROUP PRESSCREENING

- △ Site allocated, not yet screened
- △ Screened, site rejected
- △ Screened, needs restructuring
- ▲ Screened, full API required

#### CONSULTANT'S API and PHASE II

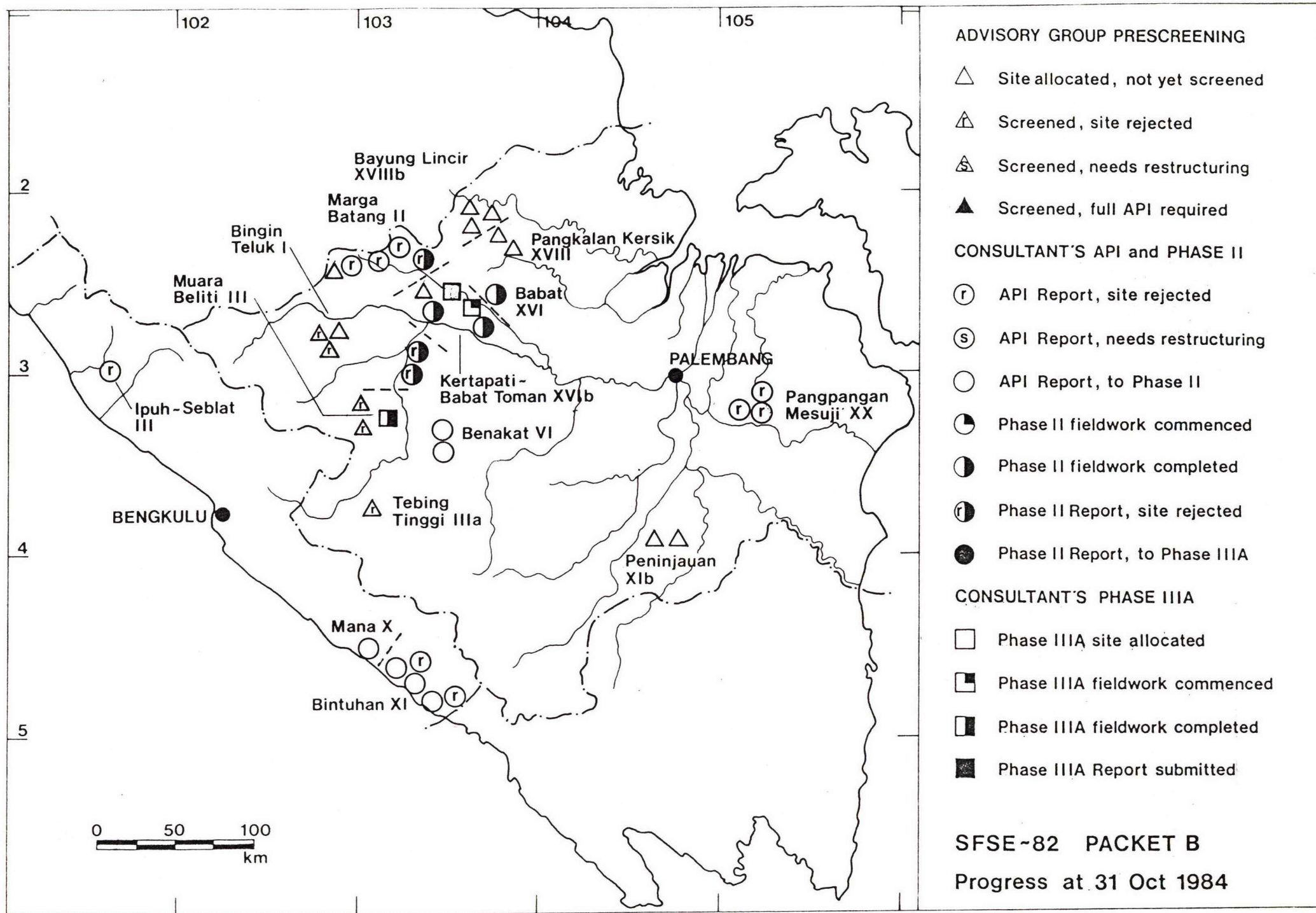
- Ⓐ API Report, site rejected
- Ⓑ API Report, needs restructuring
- API Report, to Phase II
- ◐ Phase II fieldwork commenced
- ◑ Phase II fieldwork completed
- Ⓒ Phase II Report, site rejected
- Phase II Report, to Phase IIIA

#### CONSULTANT'S PHASE IIIA

- Phase IIIA site allocated
- ◐ Phase IIIA fieldwork commenced
- ◑ Phase IIIA fieldwork completed
- Phase IIIA Report submitted

SFSE-82 PACKET A  
Progress at 31 Oct 1984





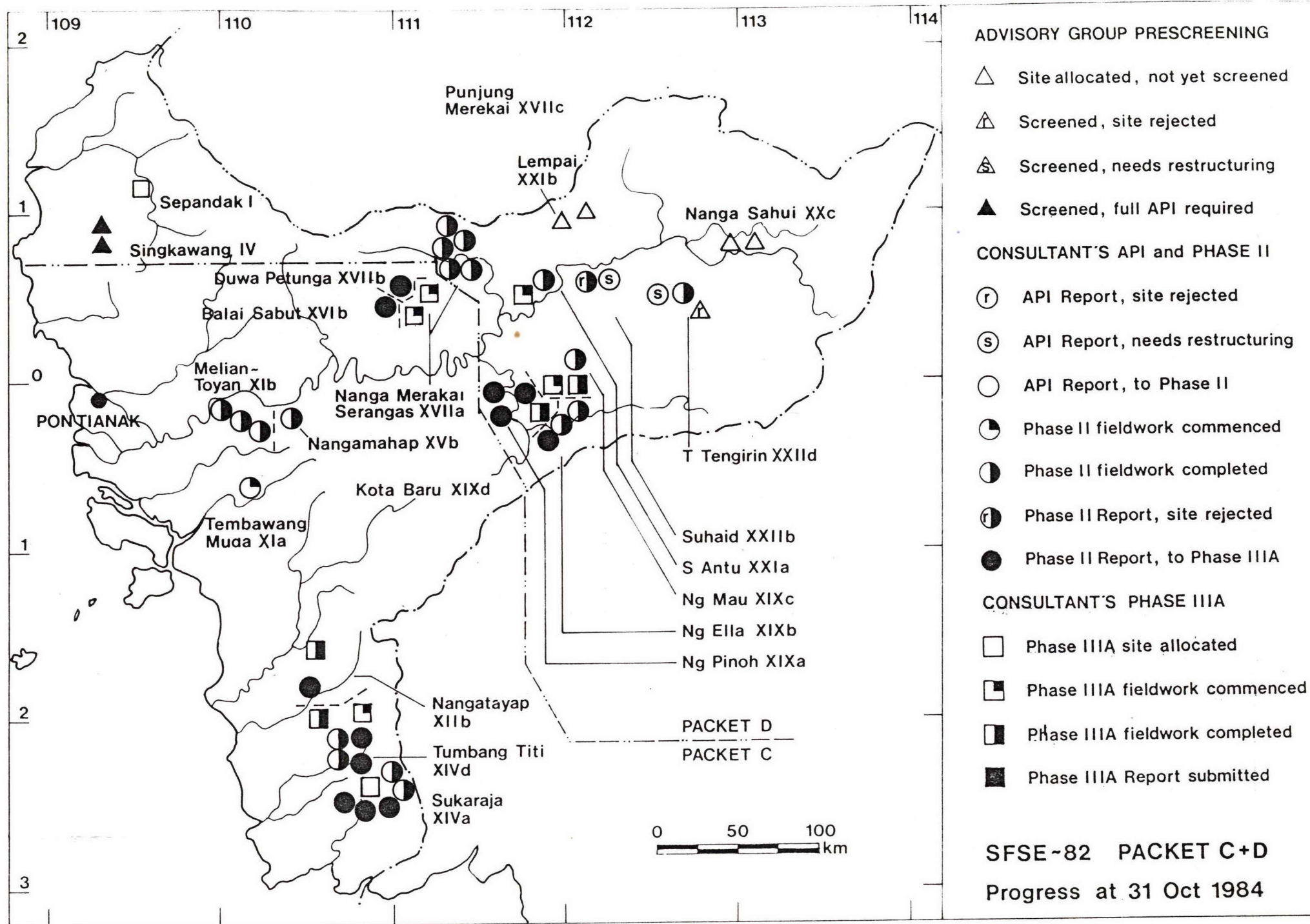
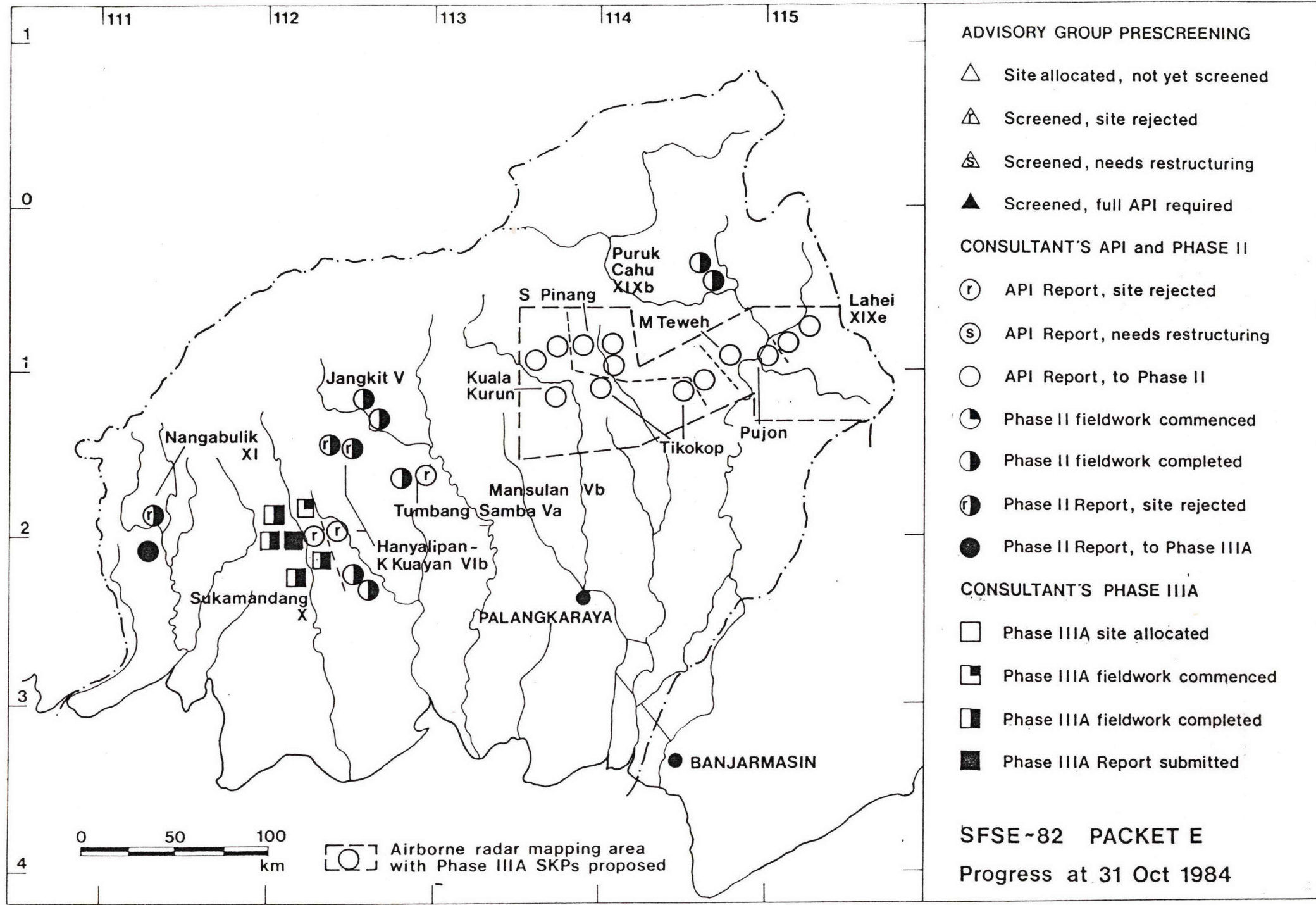
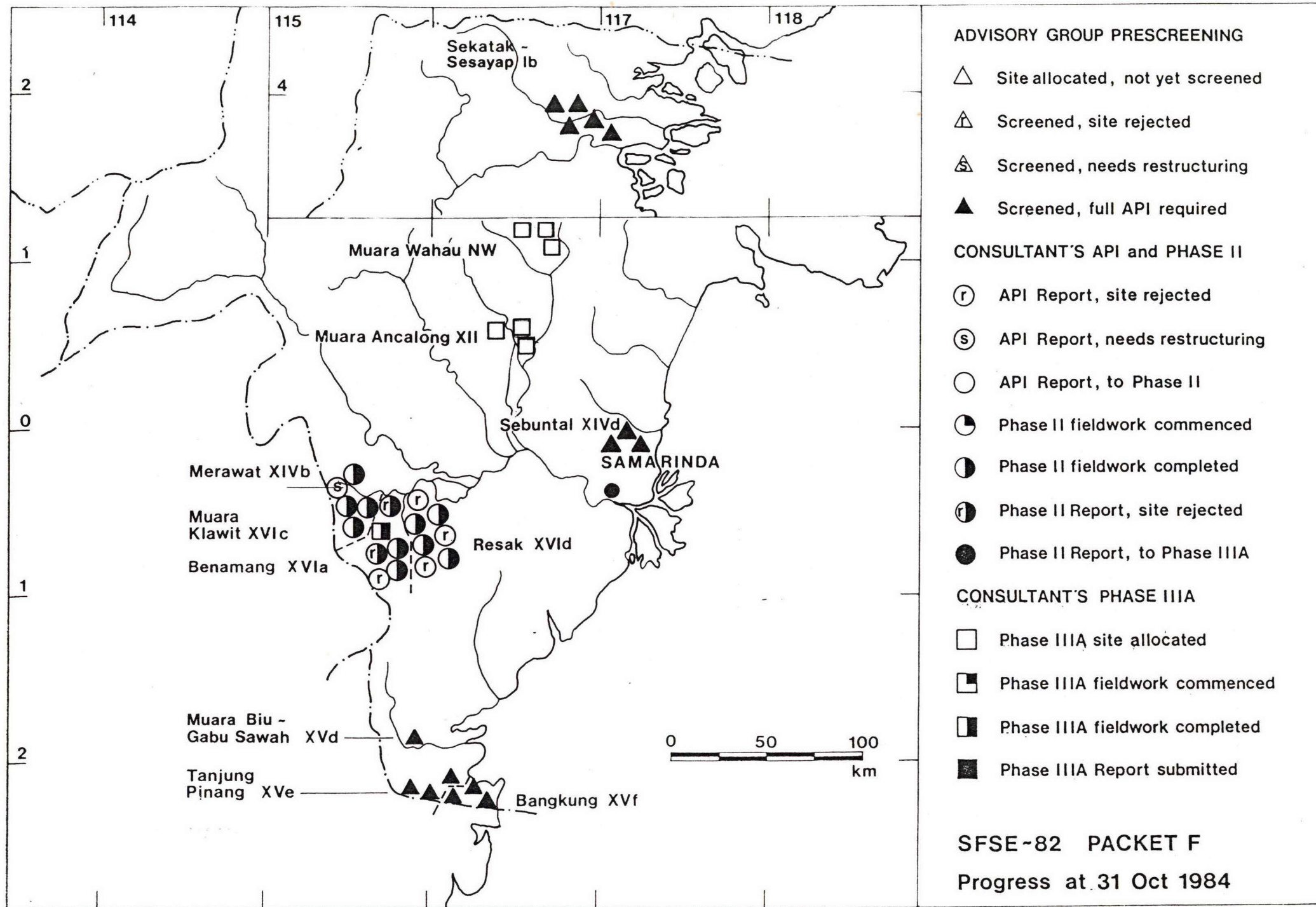


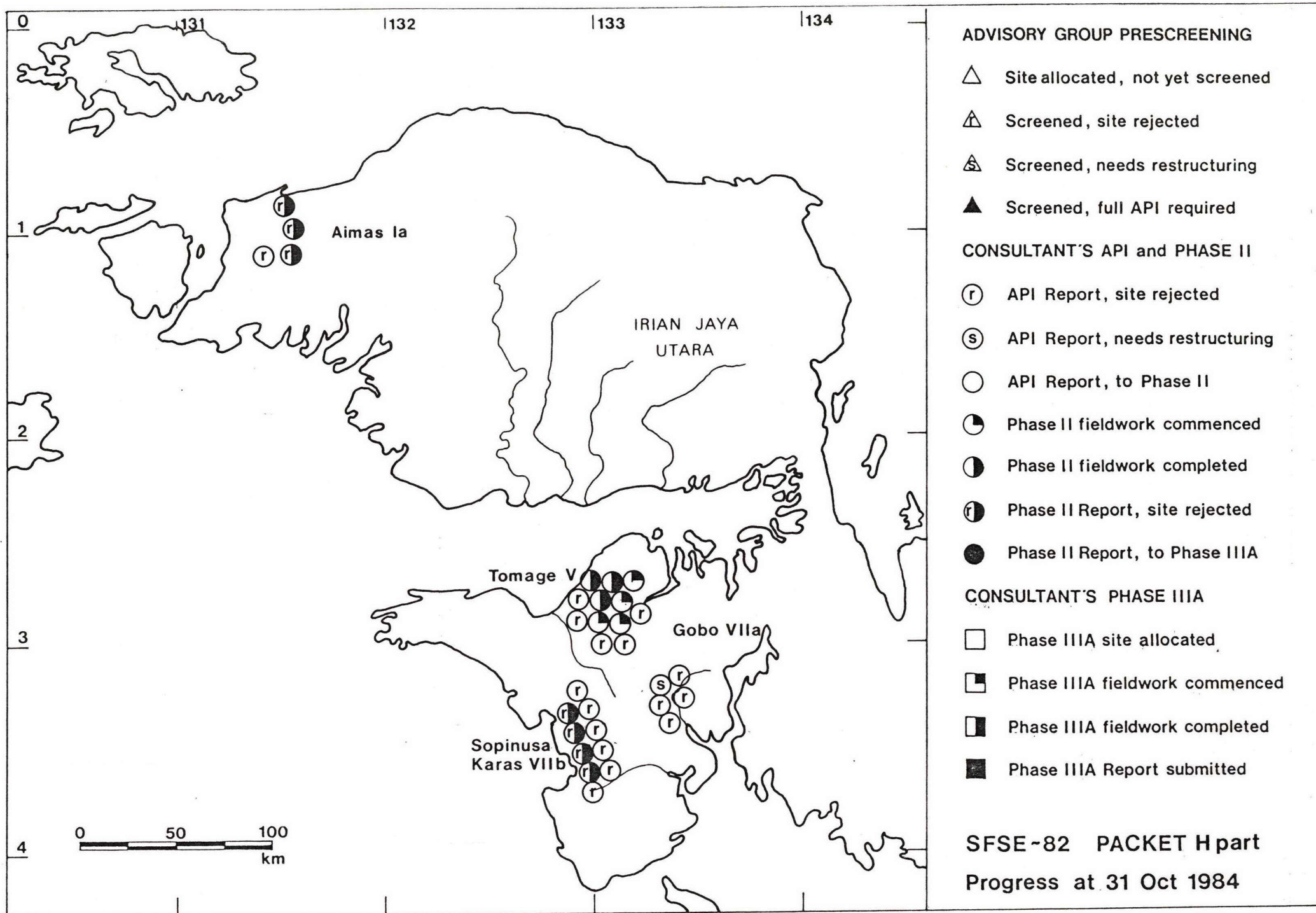


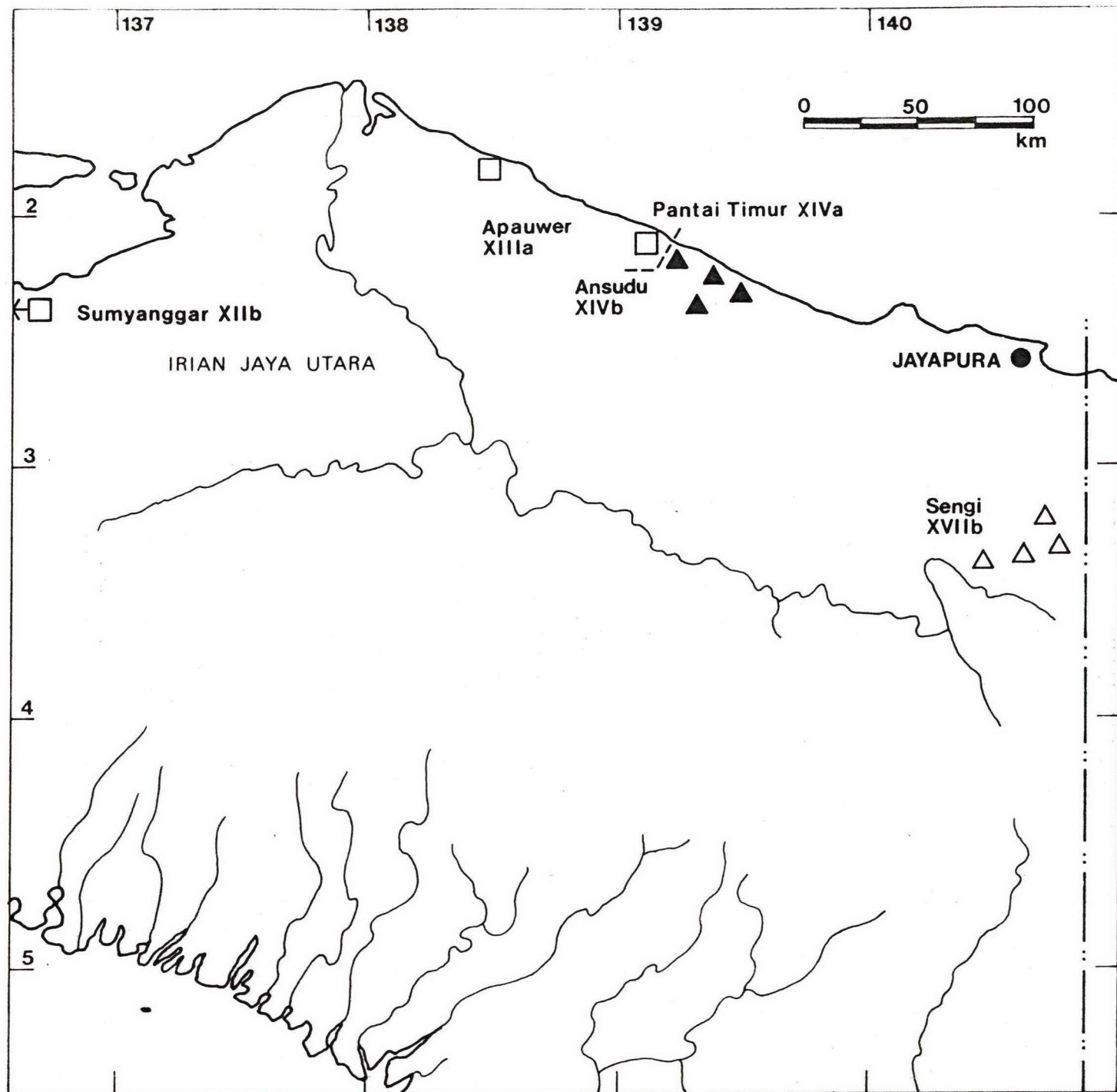
Fig. 5.6 86











#### ADVISORY GROUP PRESSCREENING

- △ Site allocated, not yet screened
- △ Screened, site rejected
- △ Screened, needs restructuring
- ▲ Screened, full API required

#### CONSULTANT'S API and PHASE II

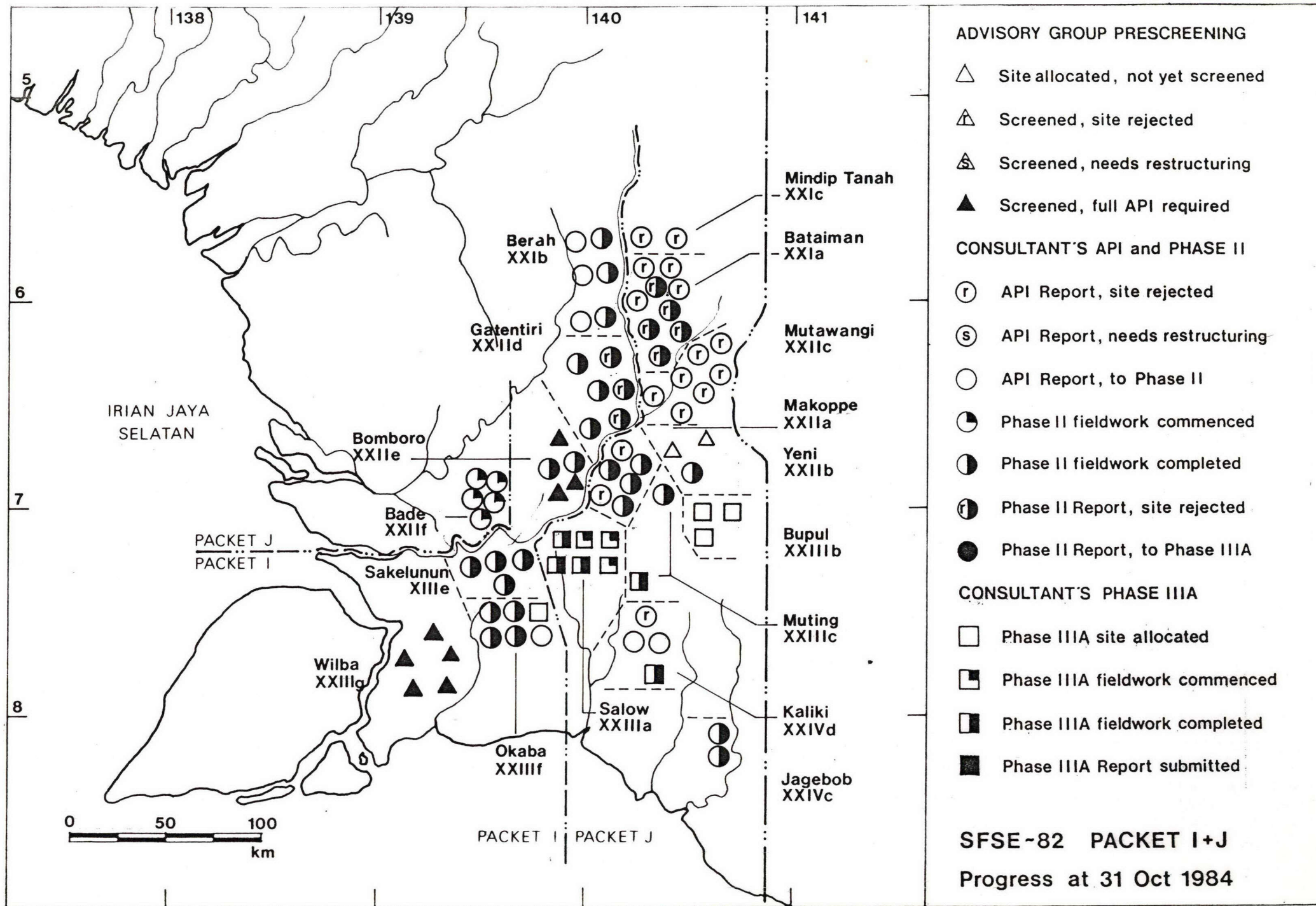
- Ⓙ API Report, site rejected
- Ⓢ API Report, needs restructuring
- API Report, to Phase II
- ◐ Phase II fieldwork commenced
- ◑ Phase II fieldwork completed
- Ⓡ Phase II Report, site rejected
- Phase II Report, to Phase IIIA

#### CONSULTANT'S PHASE IIIA

- Phase IIIA site allocated
- ◻ Phase IIIA fieldwork commenced
- ◼ Phase IIIA fieldwork completed
- Phase IIIA Report submitted

SFSE-82 PACKET H part  
Progress at 31 Oct 1984





NO.	WPP/SKP	NAME	SCALE OF AVAILABLE PHOTOGRAPHY	RESULT OF SCREENING REVIEW BY T.A.G	API DATE	REPORT CONCLUSION
<u>ACEH</u>						
1	Lageum Lamno	IV/C	1: 20 000	To API	03.09.84	To Ph. II but stopped.
2		D	1:100 000	To API		
<u>RIAU</u>						
3	Langgam I	Via/C	1: 20 000	To API	18.02.84	To Ph. II
4		D	1: 20 000	To API	06.09.83	To Ph. II
5	Langgam II	A	1: 20 000	To API	27.10.83	To Ph. II
6		B	1: 20 000	To API	06.09.83	To Ph. II
7		C	1: 20 000	To API	16.11.83	To Ph. II
8		D	1: 20 000	To API	31.12.83	To Ph. II
9	Kota Lama	XIIIa/C	1: 20 000	To API	10.11.83	To Ph. II
10		D	1:100 000**	To API	13.03.84	To Ph. II
11		E	1:100 000**	To API	13.03.84	To Ph. II
12	Pangkalan Kasai	VII/C	1: 20 000	To API	21.03.84	To Ph. II
13		D	1: 20 000	To API	21.03.84	To Ph. II
14		F1	1: 20 000	To API	21.03.84	To Ph. II
15		F2	1: 20 000**	-	-	To Ph. II
16	Dumai	Id/D	1: 60 000*	To API	16.05.84	To Ph. II
17	Ukui/Air Molek	Vib/A	1: 25 000**	To API	01.11.84	To Ph. II
18	Teluk Kuantan	XIa/E	1: 25 000**	To API	03.09.84	To Ph. II
19		F	1: 25 000**	To API	03.09.84	To Ph. II
20		G	1: 25 000**	To API	03.09.84	To Ph. II
21	Lipat Kain	XIb/B	1: 25 000	To API	27.09.84	Reject
22		F	1: 25 000**	To API	27.09.84	To Ph. II
23	Kota Tengah	XXIIIb/F	1:100 000			
24		H	1:100 000			
25	Bangkinang	X/G	1:100 000			
26	Kota Lama	XIIIa/F	1:100 000			
27	Pangkalan Kasai	VII/H	1:100 000			
28	Teluk Kuantan	XIa/H	1:100 000			
				names revised since September		
<u>JAMBI***</u>						
29	Air Hitam Ilir Pauh	XX/C	1: 20 000	To API	13.03.84	Reject
30		G	1: 20 000	To API	13.03.84	Reject
31	Tungkal Ulu	XIIb/F	1: 20 000	To API	30.07.84	Ph. II recomm
32	Merlung	XII/A, E, F	1: 20 000	To API	21.06.84	Reject
33		D	1: 20 000	To API	21.06.84	To Ph. II
34		H	1: 20 000	To API	21.06.84	To Ph. II
35	Muara Tembesi	XIc/A	1: 40 000			
36		E	1: 40 000			

\* Scheduled for 1:20 000 photography

\*\* 1:20 000 photography available end October 1984.

\*\*\* All sitework in Jambi shelved on Governor's instruction.

NO.	WPP/SKP NAME		SCALE OF AVAILABLE PHOTOGRAPHY	RESULT OF SCREENING REVIEW BY T.A.G	API DATE	REPORT CONCLUSION
<u>SUMSEL</u>						
1	Kertapati/ Babat Toman	XVib/B	1: 20 000	To API	23.01.84	To Ph II
2		E	1: 20 000	To API	02.02.84	To Ph. II
3		F	1: 20 000	To API	23.01.84	To Ph. II
4		G	1: 20 000	To API	23.01.84	To Ph. II
5	Klingi	IV/E	1: 20 000	To API	02.02.84	To Ph. II
6		F	1: 20 000	To API	02.02.84	To Ph. II
7	Babat	XVI/H	1: 20 000	To API	24.01.84	To Ph. II
8	Marga Batang	II/A	1: 20 000	To API	19.04.84	Reject
9		B	1: 20 000	To API	31.12.84	To Ph. II
10		C	1: 20 000	To API	23.01.84	Reject
11		D	1: 20 000	To API	19.04.84	Reject
12		E	1:100 000#*			
13	Benakat	VI/D	1: 20 000	To API	26.05.84	To Ph. II (1)
14		E	1: 20 000	To API	26.05.84	To Ph. II (1)
15	Pangpangan/Mesuji	XX/A	1: 20 000	Reject	05.05.84	Reject+
16		B	1: 20 000	Reject	05.05.84	Reject+
17		I	1: 20 000	Reject	05.05.84	Reject+
18	Bayung Lincir	XVIIb/A	1:100 000#*			
19		B	1:100 000#*			
20		C	1:100 000#*			
21	Pangkalan Kersik	XVIII/C	1:100 000#*			
22		E	1:100 000#*			
23	Peninjauan	XIb/I	1: 50 000#*			
24		J	1: 50 000#*			
25	Tebing Tinggi	IIIa/A	1:100 000#*			
26	Bingin Teluk	I/I	1:100 000#			
<u>BENGKULU</u>						
27	Ipuh/Seblat	III/E	1: 20 000	To API	21.03.84	Reject
28	Mana	X/F	1: 20 000	To API	21.03.84	To Ph. II
29	Bintuhan	XI/A	1: 20 000	To API	21.03.84	Reject
30		B	1: 20 000	To API	21.03.84	Reject
31		C	1: 20 000	to API	21.03.84	To Ph. II
32		D	1: 20 000	To API	21.03.84	To Ph. II
33		E	1: 20 000	To API	21.03.84	To Ph. II

Total sites passed to Ph. II 14

- \* Scheduled for 1: 20 000 photography
- # Photography not yet obtained
- + Site visit report, no API required.



Required: 22 SKP (Net) PRE - PHASE II PROGRESS OCTOBER CHINA ENGINEERING

NO.	WPP/SKP	NAME	SCALE OF AVAILABLE PHOTOGRAPHY	RESYKT OF SCREENING REVIEW BY T.A.G.	API DATE	REPORT CONCLUSION
<u>KALBAR</u>						
1	Balai Sabut	XVib/A	1: 20 000	To API	08.11.83	To Ph. II
2	Nanga Merekai/ Serangas	XVIIA/F	1: 20 000	TO API	30.11.83	To Ph. II
3		H	1: 20 000	To API	30.11.83	To Ph. II
4	Duwa Petunga	XVIIb/L	1: 20 000	To API	02.01.84	To Ph. II
5	Nangatayap/ Segagap	XIib/D	1: 20 000	To API	09.12.83	To Ph. II
6		E	1: 20 000	To API	09.12.83	To Ph. II
7	Tumbang Titi	XIVd/A	1: 20 000	To API	20.12.83	To Ph. II
8		B	1: 20 000	To API	20.12.83	to Ph. II
9		C	1: 20 000	To API	20.02.84	To Ph. II
10		E	1:100 000*	To API	19.05.84	To Ph. II
11		F	1:100 000*	To API	19.05.84	To Ph. II
12	Sukaraja	XIVa/A	1: 20 000	To API	08.03.84	To Ph. II
13		C	1: 20 000	To API	08.03.84	To Ph. II
14		D	1: 20 000	To API	08.03.84	To Ph. II
15		E	1: 20 000	To API	08.03.84	To Ph. II
16		F	1:100 000*	To API	25.05.84	To Ph. II
17		G	1:100 000*	To API	20.07.84	To Ph. II
18		H	1:100 000*	To API	20.07.84	(1)
19	Nanga Mahap	XVb/A	1: 50 000*	To API+	07.07.84	To Ph. II
20	Tembawang Muda	XIa/E	1: 50 000*	To API	01.07.84	To Ph. II
21	Meliau Tayan	XIb/B	1: 50 000*	To API		
22		C	1: 50 000*	To API+	01.07.84	To Ph. II
23		G	1: 50 000*	To API+	01.07.84	To Ph. II
24		E	1: 50 000*	To API+	01.07.84	To Ph. II

\* Scheduled for 1: 20 000 photography

False colour 1: 60 000 photography (85% cover) available for areas having 1:100 000 photography.

\*\* To be restructured as 1SKP - revised API map to be presented

+ V. preliminary API maps completed - formal API reports to be presented

(1)Restructured into SKP G.

Total sites passed to Ph. II

22

NO.	WPP/SKP	NAME	SCALE OF AVAILABLE PHOTOGRAPHY	RESULT OF SCREENING REVIEW BY T.A.G	API DATE	REPORT CONCLUSION
<u>KALBAR</u>						
1	Nanga Pinoh	XIXa/B	1: 20 000	To API	27.12.83	To Ph. II
2		C	1: 20 000	To API	20.12.83	To Ph. II
3		D	1: 20 000	To API	17.10.83	To Ph. II
4		E	1: 20 000	To API	21.09.83	To Ph. II
5	Suhaid	XXIIb/B,C	1: 20 000	To API	06.12.83	To Ph. II
6	Tintin Tengirin	XXIIId/D	1: 20 000	To API	23.01.83	To Ph. II
7		E	1: 20 000	To API	23.01.84	Reject
8	Sungai Antu	XXIa/A	1: 50 000*(2)	To API#	23.01.84	To Ph. II
9		B	1: 50 000*(2)	To API#	23.01.84	To Ph. II
10		C	1:100 000*	To API	14.06.84	To Ph. II
11	Nanga Mau	XIXc/B	1: 50 000*	To API#	11.04.84	To Ph. II
12		C	1: 40 000	To API	14.03.84	To Ph. II
13		G	1: 40 000	To API	14.03.84	To Ph. II
14	Nanga Ella	XIXb/A	1: 40 000	To API#	11.05.84	To Ph. II
15		B	1: 40 000	To API#	16.05.84	To Ph. II
16		C	1: 40 000	To API#	16.05.84	To Ph. II
17		E	1: 40 000	To API#	Reject(1)	
18	Nanga Merekai/	XVIIa/G	1:100 000*	To API	11.08.84	To Ph. II
19	Serangas	I	1:100 000*	To API	11.08.84	To Ph. II
20	Punjung Merekai	XVIIc/C	1:100 000*	To API	10.07.84	To Ph. II
21		E	1:100 000*	To API	10.07.84	To Ph. II
22		F	1:100 000*	To API	10.07.84	To Ph. II
23	Lempai	XXIb/A	1:100 000*			
24		C	1:100 000*			
25	Nanga Sahui	XXIIc/C	1:100 000*			
26		F	1:100 000*			
27	Tintin Tengirin	XXIIId/F	1:100 000*	To API	14.06.84	Resubmit API
28		+G	1:100 000*	To API	14.06.84	on new 1:20 000 photos
29	Sepandak	I/C	1: 20 000	To API	24.09.84	To Ph. IIIA
30	Singkawang	IV/C	1: 50 000*	To API		
31		D	1: 50 000*	(as		
32		J	1: 50 000*	2 SKPs)		

\* Scheduled for 1 : 20 000 photography

# 7 Sites now allocated have been screened by Consultant, not by Advisory Group

False colour 1 : 60 000 photography (85% cover) available for areas having 1 : 100 000 photography

(1) Rejected on API screening without formal report.

+ Tintin Tengirin G mostly overlaps with Suhaid D1 - restructuring and agreement on nomenclature pending.

Punjung Merekai F and D synonymous

(2) 1: 60 000 false colour photos give better quality.

Total sites passed to Ph II

20

NO.	WPP/SKP	NAME	SCALE OF AVAILABLE PHOTOGRAPHY	RESULT OF SCREENING REVIEW BY T.A.G.	API DATE	REPORT CONCLUSION
<u>KALTENG</u>						
1	Sukamandang	X/E	1: 20 000	To API	03.11.83	To Ph. II
2		F	1: 20 000	To API	03.11.83	To Ph. II
3	Nangabulik	XI/E	1: 20 000	To API	01.08.83	To Ph. II
4		F	1: 20 000	To API	09.02.84	To Ph. II
5	Hanyalipan/ K. Kuayan	Vib/B	1: 20 000	To API	03.11.83	Pending
6		K	1: 20 000	To API	22.11.83	To Ph. II
7		N	1: 20 000	To API	22.11.83	To Ph. II
8		P	1: 20 000	To API	21.09.83	To Ph. II
9		Q	1: 20 000	To API	21.09.83	To Ph. II
10	Tumbang Samba	Va/D	1: 20 000	To API	11.06.84	Reject
11		E	1: 20 000	To API	21.09.83	To Ph. II
12	Jangkit	V/F	1: 20 000	To API	11.05.84	To Ph. II
13		G	1: 20 000	To API	11.05.84	To Ph. II
14	Puruk Cahu	XIXb/D	1: 20 000	To API	19.05.84	To Ph. II
15		H	1: 40 000	To API	19.05.84	To Ph. II
16	Sukamandang	X/A	1: 20 000	To API	24.10.84	Reject

\* Contract since amended, Remaining studies will be carried out with airborne radar mapping.

Total sites passed to Ph. II

13



NO.	WPP/SKP	NAME	SCALE OF AVAILABLE PHOTOGRAPHY	RESULT OF SCREENING REVIEW BY T.A.G	API DATE	REPORT CONCLUSION
<u>KALTIM</u>						
1	Ponak Benamang	XVIa/A	1: 20 000	To API	11.02.84	To Ph. II
2		B	(1: 20 000)*	To API	11.02.84	To Ph. II
3		C	1:100 000	To API	11.02.84	Reject
4		D	1:100 000	To API	11.02.84	To Ph. II
5		E	(1: 20 000)*	To API	11.02.84	To Ph. II
6		F	1: 20 000	To API	11.02.84	To Ph. II
7		G	(1: 20 000)	To API	11.02.84	Reject
8	Resak	XVId/A	(1: 20 000)	To API	11.02.84	Reject
9		B	1: 20 000	To API	11.02.84	To Ph. II
10		E	1: 20 000	To API	11.02.84	To Ph. II
11		C	1:100 000*	To API	11.06.84	Reject
12		D	1:100 000*	To API	11.06.84	To Ph. II
13		F	1:100 000	To API	11.06.84	Reject
14		G	1:100 000*	to API	11.06.84	To Ph. II
15	Muara Klawit	XVIc/B	1:100 000*	to API	30.08.84	To Ph. II
16		D	1:100 000*	To API	30.08.84	To Ph. II
17		E	1:100 000*	To API	30.08.84	To Ph. II
18	Merawat	XVIb/C	1: 20 000	To API	11.10.84	To Ph. II
19		D	1:100 000*	To API	11.10.84	Pending
20	Muara Biau	XVd/A	1:100 000	To API		
21	Tanjung Pinang/ Kerang	XVc/A	1:100 000*	To API		
22		B	1:100 000	To API		
23		D	1:100 000	To API		
24	Bangkung	XVf/A	1:100 000*	To API		
25		B	1:100 000*	To API		
26		D	1:100 000*	To API		
27	Sebuntal	XIVd/A	1: 30 000	To API		
28		B	(part)	To API		
29		C		To API		
30	Sekatak/Sesayap	V/A	1: 20 000	To API		will
31		B	1: 20 000	To API		require
32		C	1: 20 000	To API		restructuring
33		D	1: 20 000	To API		
34		E	1: 20 000	To API		

Numbers 1 - 19 follow structure plan proposed by Consultant.  
False colour 1:60 000 photography (85% cover) available for areas  
having 1:100 000 photography  
(1:20 000) signifies part cover at 1:20 000 scale; remainder at 1:100 000.  
\* scheduled for 1:20 000 photography.

Total sites passed to Ph II.

13

NO.	WPP/SKP	NAME	SCALE OF AVAILABLE PHOTOGRAPHY	RESULT OF SCREENING REVIEW BY T.A.G	API DATE	REPORT CONCLUSION
<u>IRIAN JAYA (NORTH)</u>						
1	Aimas	Ia/E	1: 20 000	To API	14.01.84	Drop
2		K	1: 20 000	To API	02.02.84	To Ph. II
3		L	1: 20 000	To API	14.01.84	To Ph. II
4		M	1: 20 000	To API	06.01.84	To Ph. II
5	Sopinusa Karas	VIIb/A	1: 20 000	#	19.04.84	To Ph. II (2 SKPs)
6		B	1: 20 000	To API	19.04.84	Reject
7		C	1: 20 000	To API	19.04.84	To Ph. II
8		D	1: 20 000	To API	19.04.84	Reject
9		E	1: 20 000	To API	19.04.84	Reject
10		F	1: 20 000	To API	19.04.84	Reject
11		G	1: 20 000	To API	19.04.84	Reject
12		H	1: 20 000	To API	19.04.84	To Ph. II
13		I	1: 20 000	To API	19.04.84	Reject
14	Ansudu	XIVb/A	1:100 000	#		
15		B	1:100 000	#		
16		C	1:100 000	#		
17		D	1:100 000	#		
18	Senggi	XVIIb/A	1:100 000*			
19		B	1:100 000*			
20		C	1:100 000*			
21		D	1:100 000*			
22	Tomage	Va/A	1:100 000	To API	12.07.84	To Ph. II
23		B	1:100 000	To API	12.07.84	to Ph. II
24		C	1:100 000	To API	12.07.84	To Ph. II
25		D	1:100 000	To API	12.07.84	Reject
26		E	1:100 000	To API	12.07.84	Reject
27		F	1:100 000	To API	12.07.84	To Ph. II
28		G	1:100 000	To API	12.07.84	to Ph. II
29		H	1:100 000	To API	12.07.84	Reject
30		I	1:100 000	To API	12.07.84	Reject
31		J	1:100 000	To API	12.07.84	Reject
32		K	1:100 000	To API	12.07.84	To Ph. II
33		L	1:100 000	To API	12.07.84	To Ph. II
34	Gobo	VIIa/A	1:100 000	To API	23.06.84	Reject
35		B	1:100 000	To API	23.06.84	Reject
36		C	1:100 000	To API	23.06.84	Reject
37		D	1:100 000	To API	23.06.84	Re-structure
38		F	1:100 000	To API	23.06.84	Reject

Total sites passed for Ph II

14

\* Photography not yet obtained

# Screening by PRC

New 1:20 000 photography planned for all sites not yet having this.

NO.	WPP/SKP	NAME	SCALE OF AVAILABLE PHOTOGRAPHY	RESULT OF SCREENING REVIEW BY T.A.G.	API DATE	REPORT CONCLUSION
<u>IRIAN JAYA (SOUTH)</u>						
1	Gatentiri	XXIIId/A,D	1: 20 000	To API	26.12.83	To Ph. II
2		B	1: 20 000	To API	10.12.83	To Ph. II
3		C	(1: 20 000)	To API	29.12.83	To Ph. II
4		E	(1: 20 000)	To API	27.03.84	To Ph. II
5		F	1: 20 000	To API	26.12.83	To Ph. II
6		G	(1: 20 000)	To API	27.03.84	To Ph. II
7	Berah	XXIIb/A	1:100 000	#	23.01.84	To Ph. II
8		B	1:100 000	#	21.01.84	To Ph. II
9		C	1:100 000	#	04.01.84	To Ph. II
10		D,E	1:100 000	#	31.03.84	to Ph. II
11		F	1:100 000	#	15.01.84	to Ph. II
12		G	1:100 000	#	06.01.84	to Ph. II
13	Okaba	XXIIIf/A	1: 20 000	To API	10.10.84	To Ph. II
14		B	(1: 20 000)	To API	09.07.84	To Ph. II
15		C	(1: 20 000)	To API	11.10.84	To Ph. II
16		D	1: 20 000	To API	09.07.84	To Ph. II
17		E	1: 20 000	To API	10.10.84	To Ph. II
18		F	1: 20 000	To API	25.10.84	To Ph. II
19	Wilba	XXIIIf/A	1: 20 000	To API		
20		B	1:100 000	To API		
21		C	1: 20 000	To API		
22		D	1: 20 000	To API		
23		F,G	1: 20 000	To API		
24	Sakelulun	XXIIIf/A	1:100 000+	To API	09.07.84	To Ph. II
25		B	1:100 000+	To API	09.07.84	To Ph. II
26		C	1:100 000+	To API	09.07.84	To Ph. II
27		D	1:100 000+	To API	09.07.84	To Ph. II
28	Bomboro	XXIIIf/A	1:100 000+	To API	02.05.84	To Ph. II
29		B	1:100 000+	To API		
30		C,D	1:100 000+	To API		
31		E	1:100 000+	To API		
32		F	1:100 000+	To API	02.05.84	To Ph. II
33	Bade	XXIIIf/F	Landsat*	To API		
34		G	Landsat*	To API		
35		I	Landsat*	To API		
36		J	Landsat*	To API		

Total sites passed for Ph. II 24

\* Identified by Euroconsult

# Screened by FENCO

+ Photography not seen by Advisory Group, Consultant has procured photography directly.

New 1: 20 000 photography planned for all sites or part sites not yet having this.  
(1:20 000) signifies part cover at 1:20 000 scale, remainder is at 1:100 000.



NO.	WPP/SKP	NAME	SCALE OF AVAILABLE PHOTOGRAPHY	RESULT OF	API REPORT		
				SCREENING REVIEW BY T.A.G	DATE	CONCLUSION	
IRIAN JAYA							
1	Bupul	XXIIb/D	1: 20 000	To API	05.10.83	To Ph. II	
2		E	1: 20 000	To API	05.10.83	To Ph. II	
3	Bataiman	XXIa/A	1:100 000	To API	02.02.84	To Ph. II	
4		B	1:100 000	To API	02.02.84	To Ph. II	
5		C	1: 20 000	To API	02.02.84	To Ph. II	
6		D	1: 20 000	To API	02.02.84	To Ph. II	
7		E	1: 20 000	To API	02.02.84	Reject	
8		F	1: 20 000	To API	02.02.84	Reject	
9		G	1: 20 000	To API	02.02.84	Reject	
10		H	1:100 000	To API	02.02.84	Reject	
11	Mindip Tanah	XXIc/A	1: 20 000	To API	02.02.84	Reject	
12		B	1: 20 000	To API	02.02.84	Reject	
13	Salow	XXIIa/E	1: 20 000	To API	05.10.83	To Ph. II	
14		H	1: 20 000	To API	05.10.83	To Ph. II	
15		I	1: 20 000	To API	05.10.83	To Ph. II	
16		J	1: 20 000	To API	05.10.83	To Ph. II	
17	Makoppe	XXIIa/A	Landsat	#	02.07.84	To Ph. II	
18		B	Landsat	#	02.07.84	To Ph. II	
19		C	(1: 20 000)	To API	02.07.84	To Ph. II	
20		D	1: 20 000	To API	02.07.84	Reject	
21		E	Landsat	#	02.07.84	To Ph. II	
22		F	(1: 20 000)	To API	02.07.84	Reject	
23	Kaliki	XXIVd/F	1: 20 000	To API	19.05.84	Reject	
24		G	1: 20 000	To API	19.05.84	To Ph. II	
25		H	1:100 000		24.05.84	To Ph. II	
26	Muting	XXIIc/F	1: 20 000	To API	05.10.83	To Ph. II	
27	Jeni	XXIIb/B	1: 20 000	To API	05.10.83	To Ph. II	
28		D	1:100 000*				
29		E	1:100 000*				
30	Mutawangi	XXIIc/A	1: 20 000	To API	02.07.84	Reject	
31		B	1: 20 000	To API	02.07.84	Reject	
32		C	1: 20 000	To API	02.07.84	Reject	
33		D	1: 20 000	To API	02.07.84	Reject	
34		E	1: 20 000	To API	02.07.84	Reject	
35		F	1: 20 000	To API	02.07.84	Reject	
36		G	1: 20 000	To API	02.07.84	Reject	
37	Jagebob	XXIVc/N	Landsat	#	02.07.84	To Ph. II	
38		O	Landsat	#	19.07.84	To Ph. II	
39	Bade	XXIIIf/K	Landsat	#	19.07.84	To Ph. II	
40		L	Landsat	#	19.07.84	To Ph. II	
41		M	Landsat	#	19.07.84	To Ph. II	
42		N	Landsat	#	19.07.84	To Ph. II	
43		R	Landsat	#	19.07.84	To Ph. II	
44	Kotiak	X/F	Landsat	#	12.07.84	Not	
45		G	Landsat	#	12.07.84	Allocated	
46		H	Landsat	#	12.07.84		

Total sites passed to Ph II

25

\* Photography not yet obtained

(1:20 000) signifies part cover at 1:20 000 scale, remainder is at 1:100 000.  
New 1:20 000 photography planned for all sites or part sites not yet having this.

# Identified by Consultant.

99

NO.	WPP/SKP NAME	PHASE II PROGRESS			
		FIELDWORK	DRAFT REPORT	FINAL REPORT	TAG RECOMMENDATION
	<u>RIAU</u>				
1	Langgam II Vib/A	0	0 21/3/84	2/11/84	To Phase IIIA
2	B	0	0 5/4/84		Pending (forestry)
3	C	0	0 5/5/84		To Phase IIIA
4	D	0	0 3/9/84		To Phase IIIA
5	Langgam I Via/D	0	0 21/6/84		Reject
6	C	0	0 31/10/84		Reviewing (forestry)
7	Kota Lama XIIIa/C	0	0		
8	D	0	0		
9	E	0		0 12/10/84	Reject
10	Pangkalan Kasai VII/C	0	0 12/10/84		
11	D	0	0		
12	F	0	0		
13	Dumai ID/D	0			
14	Teluk Kuantan XIa/E	0			
15	F	0			
16	G				
	<u>JAMBI**</u>				
17	Merlung XIIC/D	Unavailable - withdrawn			
18	H	Unavailable - withdrawn			
		PHASE IIIA PROGRESS			
		FIELDWORK	DRAFT REPORT	FINAL REPORT	SETTLEMENT CAPACITY
	<u>RIAU</u>				
1	Langgam II Vib/A	0			
2	C	0			
3	D	0			
4	Kota Tengah XXIIIb/B	0			
5	Bangkinang X/F				
6	Kota Tengah XIIB/A1				
7	A3				
8	D1				

0 In progress  
 0 Complete.

NO.	WPP/SKP NAME	PHASE II PROGRESS			
		FIELDWORK	DRAFT REPORT	FINAL REPORT	TAG RECOMMENDATION
	<u>SUMSEL</u>				
1	Marga Batang II/B	Ø	Ø 27/4/84		Under discussion
2	Kertapat B. Toman XVib/B	Ø	Ø		
3		Ø	Ø		
4		Ø	Ø 30/7/84		Pending (forestry)
5		Ø	Ø 30/7/84		To Ph. IIIA
6	Kelingi IV/E	Ø	Ø 17/10/84		Under discussion
7		Ø	Ø 17/10/84		Under discussion
8	Babat XVI/H	Ø	Ø		
9	Benakat VI/D	Ø			
10		Ø			
	<u>BENGKULU</u>				
11	Bintuhan XI/C				
12					
13					
14	Mana X/F				
		PHASE IIIA PROGRESS			
		FIELDWORK	DRAFT REPORT	FINAL REPORT	SETTLEMENT CAPACITY
	<u>SUMSEL</u>				
1	Muara Beliti III/E	Ø	Ø		
2	Kertapat Babat Toman XVib/G	Ø			
3		Ø			

Ø In progress  
 Ø Complete



NO.	WPP/SKP NAME		PHASE II PROGRESS			
			FIELDWORK	DRAFT REPORT	FINAL REPORT	TAG RECOMMENDATION
	<u>KALBAR</u>					
1	Balai Sabut	XVIb/A	Ø	Ø 24/2/84	Ø 7/5/84	Pending (forestry)
2	Ng Merakai	XVIIa/F	Ø	Ø 11/4/84	Ø 23/7/84	To Phase IIIA
3		H	Ø	Ø 11/4/84	Ø 23/7/84	To Phase IIIA
4	Ng Tayap	XIIb/D	Ø	Ø 13/6/84		Pending (forestry)
5		E	Ø	Ø 13/6/84		Resubmit
6	Duwa Petunga	XVIIb/L	Ø	Ø 11/4/84	Ø 23/7/84	Pending (forestry)
7	Tumbang Titi	XIVd/A	Ø	Ø 23/7/84		KKLK scheme
8		B	Ø	Ø 23/7/84		KKLK scheme
9		C	Ø	Ø 23/7/84		To Phase IIIA
10		E	Ø	Ø		Not submitted
11		F	Ø	Ø		Not submitted
12	Sukaraja	XIVa/A	Ø	Ø 5/10/84		Pending (soils)
13		C	Ø	Ø 5/10/84		Pending (soils)
14		D	Ø	Ø 5/10/84		Pending (soils)
15		E	Ø	Ø 5/10/84		To Phase IIIA
16		F	Ø	O		
17		G	Ø	O		
18	Nanga Mahap	A	Ø			
19	Meliau Tayan	C	Ø			
20	" "	E	Ø			
21	" "	G	Ø			
22	Tembawang Muda	E	O			
			PHASE IIIA PROGRESS			
			FIELDWORK	DRAFT REPORT	FINAL REPORT	SETTLEMENT CAPACITY
1	Ng Tayap	XIIb/C	Ø			
2	Tumbang Titi	XIVd/D	Ø			
3	Ng Merakai	XVIIa/F	O			
4		H	O			
5	Tumbang Titi	XIVd/C	O			
6	Sukaraja	XIVa/E	O			

O In progress

Ø Complete

NO.	WPP/SKP NAME	PHASE II PROGRESS			
		FIELDWORK	DRAFT REPORT	FINAL REPORT	TAG RECOMMENDATION
	<u>KALBAR</u>				
1	Nanga Pinoh XIXa/B	Ø	Ø 11/6/84	(Revised)	Resubmit: for PTP expansion
2	C	Ø	Ø 11/6/84		Pending (forestry)
3	D	Ø	Ø 9/4/84		Pending (forestry)*
4	E	Ø	Ø 23/2/84		Reject (soils)
5	Suhaid XXIIb/B	Ø	Ø 13/3/84		Reject (slopes)
6	Tintin Tengirin XXIId/D	Ø	Ø 12/4/84		To Ph IIIA as 1
7	Sungai Antu A	Ø	Ø 19/5/84		large SKP
8	B	Ø	Ø 19/5/84		Fieldwork revision needed
9	XXIa/C	Ø	Ø 3/9/84		To Ph. IIIA
10	Nanga Mau XIXb/C	Ø	Ø 18/6/84		To Ph. IIIA
11	G	Ø	Ø 24/9/84		Revision needed
12	B	Ø	Ø 4/8/84		Pending (forestry)
13	Nanga Ella XIXb/A	Ø	Ø 3/9/84		Reject (slopes + forestry)
14	B	Ø	Ø 11/8/84		
15	C	Ø	O		
16	Punjung Merakai XVIIc/C	Ø	O		
17	E	Ø	O		
18	F	Ø	O		
19	Nanga Merekai/Serangas XVIIa/G	Ø	O		
20	I	Ø	O		
		PHASE IIIA PROGRESS			
		FIELDWORK	DRAFT REPORT	FINAL REPORT	SETTLEMENT CAPACITY
1	Nanga Pinoh * XIXa/E	Ø	O		
2	Sungai Antu XXIa/A	Ø	O		
3	Nanga Mau XIXb/C	Ø	O		
4	Sepandak I/C	O			
5	Nanga Mau XIXb/G	O			
* Phase IIIA started without resolution of forestry constraint.					

O In progress

Ø Complete

NO.	WPP/SKP NAME		PHASE II PROGRESS			
			FIELDWORK	DRAFT REPORT	FINAL REPORT	TAG RECOMMENDATION
	<u>KALTENG</u>					
1	Sukamandang	X/E	Ø	Ø 10/3/84	Ø 19/7/84	To Phase IIIA
2		F	Ø	Ø 24/4/84		To Phase IIIA*
3	Nangabulik	XI/E	Ø	Ø 18/6/84	Ø 27/9/84	To Phase IIIA**
4		F	Ø	Ø 19/7/84		Reject
5	Hanjalipan/Kuala Kuayan	Vib/Q	Ø	Ø 25/8/84		Some more field work required
6		P	Ø	Ø 23/7/84		Reject
7		N	Ø	O		
8		K	Ø	O		
9	Tumbang Samba	Va/El	Ø	O		
10	Jangkit	V/F	Ø	O		
11		G	Ø	O		
12	Puruk Cahu	XIXb/D	Ø	O		
13		H	Ø	O		
	** subject to extension to south.					
			PHASE IIIA PROGRESS			
			FIELDWORK	DRAFT REPORT	FINAL REPORT	SETTLEMENT CAPACITY
1	Sukamandang	X/D (East)	Ø	Ø 30/5/84		1420 KK
2		X/D (West)	Ø	O		
3		C	Ø	O		
4		G	Ø	O		
5		E	Ø	O		
6		F*	O			
	* area under Limited Production Forest excluded from Phase IIIA					

Ø In progress

Ø Complete



0	In progress
1	Complete

0 In progress  
0 Complete

0 In progress  
0 Complete



NO.	WPP/SKP NAME		PHASE II PROGRESS			
			FIELDWORK	DRAFT REPORT	FINAL REPORT	TAG RECOMMENDATION
	<u>IRIAN JAYA (SOUTH)</u>					
1	Bupul	XXIIIb/D	0	0 3/9/84		To Phase IIIA 3 SKPs
2		E	0	0 3/9/84		
3	Salow	XXIIIa/E	0	0 19/5/84	0 19/7/84	To Phase IIIA 3 SKPs
4		J	0	0 19/7/84		
5		H	0	0 31/3/84		To Phase IIIA 3 SKPs
6		I	0	0 31/3/84		
7	Jeni	XXIIb/B	0	0 17/9/84		Reject
8	Muting	XXIIIc/F	0	0 17/9/84		Reject
9	Bataiman	XXIa/A	0	0 22/10/84		Reject
10		B/E	0	0 8/10/84		Reject
11		C	0	0 3/9/84		Reject
12		D	0	0 22/10/84		Reject
13		I	0	0 22/10/84		Reject
14	Jagebob	XXIVc/N	0			Awaiting 1:20,000 Photography for report. completion.
15		O	0			
16	Makoppe	XXIIa/A	0	0		
17		B	0	0		
18		C	0	0		
19		E	0	0		
20	Bade	XXIIIf/K	0			
21		L	0			
22		M	0			
23		N	0			
24		R	0			
25	Kaliki	XXIVd/G				
26		H				
			PHASE IIIA PROGRESS			
			FIELDWORK	DRAFT REPORT	FINAL REPORT	SETTLEMENT CAPACITY
1	Kaliki	XXIVd/C	0	0		
2	Muting	XXIIIc/E	0	0		
3	Salow	XXIIIa/H	0	0		
4		I	0	0		
5		H+I	0	0		
6		XXIIIa/E	0			
7		J	0			
8		E+J	0			
9	Bupul	XXIIIb/D				
10		E				
11		D+E				

0 In progress  
0 Complete

