

第三国研修実施協議報告書

P.N.G.・沿岸漁業開発

昭和59年12月

国際協力事業団
研修事業部

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は じ め に

第三国研修とは、社会的、文化的、言語的に共通の基盤をもつ同一の開発途上地域に研修実施国を選定し、そこに当該地域内の途上国からの研修員を受入れて、より現地事情に適合した技術、知識の移転を図り、これにより、開発途上国間協力の推進に寄与し、将来的には、実施国が独自に研修員受入れ事業を実施できるよう協力することを目的としている。昭和49年度、タイのコーラート養蚕研究訓練センターで初めて実施して以来、年々、第三国研修実施協力要請は増え続け、昭和59年度には12ヶ国で、17コースを実施するに至っている。

PNGにおける沿岸漁業分野での第三国研修については、昭和57年度に派遣された事前調査団により、その実施に対し積極的な報告がなされた。この報告に基づいて、随時検討が加えられ、実施に必要な諸条件の整備がすすめられ、実施協議チームを昭和59年8月17日から8月27日までPNGに派遣せしめることとした。

本報告書は、その調査結果、協議内容を取りまとめたものである。

昭和59年12月

研修事業部長 宮 本 守 也

R/D 署名



PNG工科大学関係者との協議

PNG工科大学関係者との協議



ラエ工科大学所有の実習船

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I 派遣に至るまでの経緯

本案件はR/D署名に至る迄約4年を要した。1980年暮、在PNG日本大使館よりPNG工科大学水産学部に第三国研修についての説明がなされ、これに対し同水産学部は強い関心を示してきた。それには次のような背景もあった。南太平洋諸国は漁業振興が国家経済の基本となっているところ、従来より同地域に対し漁業分野の協力が広く行なわれてきたが、地域住民の生活向上につながり易い沿岸漁業振興が見直され始められており、特に漁民指導者訓練等への技術協力要請が強まっていた。またPNG工科大学は南太平洋で沿岸漁業開発研修実施に必要な施設機材を備えている機関であり、日本大使館も以上の旨を本省に報告するなど、第三国研修実施に積極的な立場をとってきた。

81年末に同水産学部長から第三国研修実施協力要請と実施案が日本大使館宛提出され、82年2月日本大使館より正式に第三国研修実施協力要請が、そして、4月に事前調査団派遣要請が申し越された。しかしながら、日本サイドでは研修内容が明確に把握できずにいたところ、マクロ問題と絡む研修となった場合、業界からの反発の懸念が水産庁から表明された。これによりPNG案の82年12月研修開始は断念せざるを得なくなり、引継ぎ検討を行なうこととなった。

82年1月同水産部長が来日し関係者と協議をかわし、「沿岸中小漁民の技術及びその普及を中心とした研修」である事が明確になった。前述の懸念もぬぐいさられ、82年12月事前調査団がPNGに派遣される段取となった。“PNG関係者から概ね好意的な反応が得られた。工科大学の施設も充実している。外務貿易省は実施に好意的な態度を示すも本件充分承知しておらず、関係者間で協議を重ねる”旨同調査団から報告があり、今後の先方との協議を見定めながら、実施協議チームの早期派遣を同調査団は要請した。その後、工科大学の財政逼迫に伴ない経費負担、特に研修が休暇期間中に実施されるため研修に携わる大学Staffの人件費負担の問題がでてきたが、超過勤務手当で対応することとした。

一通り研修にむけての条件は整ったので、同年7月実施協議チームを派遣すべく準備をすすめていたところ、水産学部のPort Moresby移転計画案が持ちあがった。予定していた84年1月実施が危ぶまれることとなり、実施協議チーム派遣は取止め、83年度の研修実施を断念した。

84年度に入り水産学部長が交替した。他の講師陣から浮きあがり先走りの感のあった前学部長と異なり新学部長は工科大学副学長及びPLANNING OFFICERから本研修実施の同意を得て、新ためて実施協力要請を申し入れた。また、移転計画も財政難を理由に閣議決定がなされず、同計画は一応なくなった。前年度計画された第三国研修の前提条件、単独機材供与については今年度本研修の実施が確定しておらず、単独機材供与措置は講じられていなかった。新学部長とのやりとりで専門家携行機材で対応できるようカリキュラムに調整するとともに、不可欠な機材についてはリースする方向で対処することとした。このように研修実施の環境は整理

されたので実施協議チームが派遣されることとなった。

また実施協議チームの派遣に先立ち、7月上旬新水産学部長が日本で開催された学会に出席するため来日することとなった。その際関係省庁出席のもと同学部長との打合せを行ない、大筋昨年度作成した実施案で合意した。

このような経緯で主に次の点協議すべくチームが8月PNGに派遣された。

1. PNGの政府内の連絡は円滑でなく本件どの程度までPNG政府として対応できているのかを見定め、同国のPROJECTたらしめるよう関係省庁をまきこみ、外務貿易省高官との署名を交すことが望ましい。
2. PNG工科大は漁撈の専門家が手薄なため、水産学部長来日時に協議したカリキュラムで研修が実施できるのか、機材の整備状況等を調査し調整する。
3. 併せて、来年度以降のコース内容とそれに伴う必要機材あらば調査する。

Ⅱ 団 員 構 成

団 長	田 口 定 則	国際協力事業団九州支部長
団 員	美 藤 香 苗	水産庁研究部研究課
"	千 賀 和 雄	国際協力事業団神奈川国際水産センター研修課
"	表 孝 雄	国際協力事業団研修事業部管理課

Ⅲ 日 程

日 付	行 程	訪 問 先	面 接 者 等
8.17(金)	成 田 発		
18(土)	ポート・モレスビ着		
		PNG 大学視察	PNG 大学副学長 Dr. Elton Brash
		JICA 事務所打合せ	
19(日)		漁村, 漁港視察	
20(月)		外務貿易省協議	外務貿易省 Overseas Development Branch, Larry Hulo Steven Baramdataz, Public Service Commission Theodore Varpem. 企画庁技術援助委員会 Paul Boyama, 文部省 Commissioner for Higher Education Mina Siaquru. 第一次産業省水産局 Leo Aisi, 第一次産業省農業教育訓練局 Samuel Lahis
		第一次産業省水産局協議	水産局長 Daniel Takendu, L. Aisi, C. Ratchuffe
		大使館表敬, 打合せ	谷口誠大使, 鈴木愛二三等書記官
21(火)	ポート・モレスビ発 ラ エ 着	PNG 工科大水産学部施設視察, 協議, 漁場視察	PNG 工科大副学長 M. Moramoro, 水産学部長 Dr. W. Y. Tseng, Planning Officer Keeling
22(水)		第一次産業省モロビ支局協議	支局長 Alan Iscaimo, Wacal Benjamin
		PNG 工科大水産学部協議	水産学部長, Technical Officer I. McCallum R. Olivera, Dr. C. Ananthan, Planning Officer
23(木)	ラ エ 発 ポート・モレスビ着	大使館打合せ	坂本一等書記官, 鈴木三等書記官
		外務貿易省 R/D 作成	外務貿易省 L. Hulo
24(金)		外務貿易省 R/D 署名 大使館報告	外務貿易省次官 Paulias N. Matane
25(土)	ポート・モレスビ発		

	シンガポール着		
26(日)	シンガポール発		
	成 田 着	(千賀団員のみ)	
27(月)	成 田 着	(田口, 美藤, 表の各団員は航空会社オーバーブッキングのため予	
		定のフライトに塔上できず26日の夜シンガポールを発ち27日成	
		田着となった)	

Ⅳ 協 議

1. R/D 署名者

派遣に至る迄の経緯で述べたとおり、本案件 PNG 側の進捗は前 PNG 工科大水産学部長の先走りの感があり、一方 PNG 政府内部の連絡が円滑でない趣。当方としては、どの程度 PNG 関係者が本件について理解し、合意がなされているか一抹の不安があった。従って調査団は、関係機関をできるだけ絡ませ PNG としての Project たらしめるべく、R/D 署名者を敢えて PNG 工科大学副学長(学長は首相)とせず、外務貿易省次官といたく申し入れた。

先方との最初の会議は日本大使館、JICA 事務所の手配で第三国研修に関わる全ての省庁の担当者が召集されており(日程参照)、予め配布されていた研修実施案について質疑応答の形で協議を行なった。しかしながら、ほとんどが、本件について必ずしも充分には理解しておらず、この会議の数時間前或は会議中に目を通した者もいた。それ故、PNG 関係者を一同に会した会議は彼らに本件を理解せしめるうえで極めて有益であった。

後日当方希望どおり PNG 側の R/D 署名者が外務貿易省次官に決まった旨通知うけ、8 月 24 日無事 R/D に署名交換を行なった。

2. 実施機関

PNG 工科大学水産学部には漁撈の専門家が少なく、JICA 短期専門家の分担率は当然高くならざるを得ない状況にあったが、第三国研修の趣旨に沿うよう外部講師の活用を検討することとした。幸い、下記のとおり JICA 神奈川国際水産センターの帰国研修員 5 名(いずれも第一次産業省に勤務)があり、彼らの協力を得るよう第一次産業省水産局長他に働きかけたところ、水産局長も快く当方申し出を受入れ、2 名を第三国研修に派遣する旨内諾を得た。これにより本研修が PNG の Project としてその位置付けが明確になり、その結果 R/D 10 (Undertaking of Both Governments) - 1-2 の項には P.N.G University of Technology の後に in Consultation with the Relevant Government Departments が付記されることとなった。

氏 名	参加年度	勤 務 先
Richard Nagai	(1977)	Fisheries Div., Dept. of Primary Industry, P.O.Box 2417, Konedobu, PAPUA NEW GUINEA
Louis Aitsi Naime	(1977)	Ditto
Ave Mesulam	(1979)	Fisheries Div., Dept. of Primary Industry, P.O.Box 73, Lae Morobe Province, PNG

Leo Aisi (1981) Fisheries Div., Dept. of Primary Industry P.O.Box 2417,
Konedobu, PNG

Andrew Ova (1981) Primary Industry Dept. West Sepik Province Aitape, West
Sepik Province, PNG

3. 研修カリキュラム

討議の中心になった研修プログラム(カリキュラム)は、昨年PNG側より提出された案に基づき、当方で作成したもので事実、調査団としてもかなりの見なおしが必要と思料していたものである。このことは、PNG並びに南太平洋諸国の漁業情勢を最も把握しているものと思われる第一次産業省水産局を、8月20日調査団が訪れた時に更に明らかになった。水産局より提示された研修プログラム(カリキュラム)に関する意見は次の通り。①案にもられたいくつかのSubject, 例えば定置網, トロール漁業はPNGにはFitするとしても, サンゴ礁に囲まれた海況の著しく異なる他のSouth Pacific 諸国には適用し難いものなので, 参加する研修員にとって興味が半減する。②極めて短期の研修であるにもかかわらず, 内容が広範囲且つ一般的であるため当研修の焦点が判断しにくい。③現在, PNGをはじめとするSouth Pacific 諸国に求められているものは, 一般的な研修ではなく, 特定のSubjectに限定した専門的, 且つPracticalな研修であること。

この水産局での会議に於いて, 双方が望んでいる研修内容について完全な一致を見たので, 我々は水産局職員(水産局次長)の同行のもとに第三国研修の実施機関となるLaeの工科大学へ移動し, 同大学に於ける第三国研修の責任者となるDr. Tseng水産学部長に研修プログラム(カリキュラム)の問題点と見なおしの必要性を提案した。幸いにして, ここでも我々の提案に対して全面的に同意を得ることが出来たので, 引き続いて水産局, ラエ工科大学そして調査団の間で研修プログラム(カリキュラム)の再調整を実施, R/Dに添付された最終案を作ることが出来た。

今回の研修プログラム作成にあたって特に強く感じたことは, 既述の通り当第三国研修にかかわる水産局, ラエ工科大学そして日本側が, 同じ心がまえと将来構想を持っていることであった。また, 当初はこの第三国研修を南太平洋諸国の漁業の実態に応じた漁具漁法の専門的知識の習得と位置付け, 維持していくものの, 今後のニーズ, 並びに研修結果の分析に基づいて, 水産に於ける他分野の研修(例えば, 船舶機関の取扱い管理, 漁業行政, 養殖等)へと移行させていくという点についても, 全く異論は見られなかった。

Curriculum の選考理由

① Lecture & Practice on Fishing Gear Design

漁具設計論, 漁具製作基礎計算, 網地切断法等について実技を折りまぜて実施する科

目で漁具を作るために不可欠な基礎知識と技術を習得させる。この科目なくしては漁具漁法に関する理解は生まれない。

② Lecture on Environmental Factors & Fish Behavior

③ Lecture on Resource Management & Fishing Efficiency

漁場環境と資源管理そして漁獲効率は直接漁具漁法には関係ないが漁業経営にあたって知っておかなければならない重要な Subject であり、水産局、ラエ工科大からも強い要望があった。①②③はまさに当コースの核心に入るまでの予備知識の習得課程といえる。

④ Lecture & Practice on Pot Fishing

当コースの Curriculum は既述の通り、South Pacific 諸国の沿岸に適用可能な漁具という前提条件に立って選択されたもので、この「かご漁業」もその条件を十分に含んだ、しかも安価で技術的にも簡単に作成出来るものとして取入れた。当漁具は勿論のこと、漁場によってはイセエビ等の捕獲にも極めて適していると判断する。PNG 側が最も注目している Subject の一つである。

⑤ Lecture & Practice on Longline Fishing

この漁業は鮪、カジキ、サメ等を対象にした浮延縄漁業と底魚を捕獲するための底延縄漁業に大別されるが、当コースで実施するものはおそらく底延縄漁業になろう。事前調査団の報告にもこの漁業の必要性が示されているし、事実、網の使用出来ない起伏の激しい岩礁海域でも十分に機能が発起出来る South Pacific に Fit した漁法と云える。また、費用の上でも浮延縄に比べて極めて安価である。

⑥ Lecture & Practice on Gill Net Fishing

この漁業は South Pacific のみならず、あらゆる発展途上国、また先進国に於いても行なわれている世界的にポピュラーな漁業である。この Subject に 4 日もの最も長い時間を設けたのは、ポピュラーな漁業であるからこそ、その漁具の正しい製作技術と応用をしっかりと身につけて帰ってもらいたいからである。発展途上国に於ける漁具は、伝統を生かしつつそれなりの機能を持ちあわせ、時に感心させられることさえあるが、全体的には設計とか計算等の基本的理論に基づいたものではなく、多くの改良余地が存在する。参加した研修員が帰国した後自信をもって漁民の漁具に対してアドバイスを与えられるよう、この Subject については各人が一つの刺網を自分で作成し、それを用いて実際に魚を獲り、そしてその網をこの研修における“おみやげ”として持ち帰ってもらいたいと思う。まさに、当研修に於けるハイライトである。

⑦ Lecture on Handling, Storage & Marketing

この Subject は②③と同様 PNG 側より要望があったものである。魚の取扱い、鮮度保持そして流通等、獲った魚が売れるためには最低限、何が必要であるかを喚起するものである。

4. カントリー・レポート

セントリー レポートは、参加する研修員がそれぞれの国の漁業情勢を知るという点で、当研修に於ける最も重要なプログラムであると同時に、今後の第三国研修の方向を探索するための尊い資料である。参加研修員には、このカントリー・レポートの発表を義務付けると共に、下記についてその提出を求めG.I.に掲げるものとする。

(1) 自国に於ける漁業の現状

- 1) 漁業分類
- 2) 最もポピュラーな漁具漁法の詳細なる紹介
- 3) 漁業開発計画
- 4) 直面している問題点
- 5) 食糧源（たん白源）としての漁業の重要性（国民の食生活に占める魚の割合）

(2) 水産行政概要

- 1) 水産行政機構（具体的に）
- 2) 研修員の現職と具体的業務内容

(3) 水産に於ける最も興味ある学び

5. 実施期間

原案の通り昭和60年1月21日(月)から2月9日(土)までの3週間とすることで合意した。昭和59年8月20日の第1回合同会議においてPNGの一部から、3週間という短期間で多くの要望に応を切れないので期間延長して欲しい旨要請があったが、調査団側からの予算的理由により今年度は3週間を超えることが困難である旨説明し、PNG側の了解を得た。

6. 応募資格

原案通り各国政府により推薦された(7-1)漁業一般に関して2年以上実地経験を有し(7-2)普及事業に従事している(7-3)40才未満(7-4)の英語の読み書きができる者(7-5)等で合意した。

昭和59年8月20日の第1回合同会議において、PNG側の一部から、なぜDiplomaコースにしないのかと質問が出された。

調査団側から、①沿岸漁業に従事している者に対し、現場で役立つ実用的な技術の習得に重点を置いた研修が望ましい、②南太平洋諸国の沿岸漁業事情（従事者の数等）を配慮し、漁業現場歴2年以上としたこと、を説明した。

PNG側は、内部で更に検討したいとし、8月23日の第2回合同会議で再度協議したいと

提案したが、カリキュラムとの関連において原案で了解したものである。

7. 割 当 国

原案通り、キリバス、ナウル、フィジー、ソロモン諸島、パラオ諸島、トンガ、トゥバル、ヴァヌアツ、西サモアの9カ国とすることで合意した。

〔協議経過〕

昭和59年8月20日の第1回合同会議後、PNG側は次が問題点として変更を要請した。

- ① PNGは南太平洋諸国の一員として善隣友好互恵平等の方針を採っている。特定の国を指定することは問題があるのでSPO等包括的表現にならないか。
- ② PNGと親密な関係にあるクック諸島(NZ)、ニューカレドニア(仏)等を加えたい。これに対し、調査団側は次のとおり説明した。
 - ① 割当国は明記する方針である。
 - ② 第三国研修の割当国は独立国であることが条件としている。パラオ諸島は近く独立する予定であるので加えたものである。

PNG側は調査団側の説明を了承し合意した。

第2回目以降は-host国であるPNGの南太平洋諸国への外交的立場も十分考慮を払い何らかの方案を検討する必要があると考える。

8. PNG工科大学水産学部

(1) 沿 革

Government Fisheries Officers, Fishing Masters, Factory として Processing Management, 個人事業家等の中級水産技術者を養成すべく3年間のDiploma Courseとして1976年開設された。

(2) 住 所

Department of Fisheries Technology, University of Technology, P.O.Box 793,
Lae, Papua New Guinea

(3) 人員構成

学部長	1名
秘書	1名
講師	6名
リサーチ・アシスタント	2名
シニア・テクニカル・オフィサー	2名

(4) 講 師

氏名	国籍	学位	専門
• W.Y. Tseng	台湾	Dr	海洋養殖
• T.T. Kan	"	"	養殖
• C.S. Ananthan	スリ・ランカ	"	海洋学
• N.J. Quinn	米国	M.sc	海洋生物学
• R.G. Olivera	フィリピン	B.sc	
• N. Rajeswaran	スリ・ランカ	"	
• K. Tharmaseelan	"	M.sc	

(5) 機材

地曳網1式, ビームトロール, 刺網, オッタートロール, マグロ延縄, 一本竿用資材, 投網, イカ釣り用資材, 水上・水中集魚灯, 曳縄等とナイロン, 鉛, 釣針, 網修理用品等

1980年34フィート漁船を日本より購入

(6) 予算

1981年	Total	32000KINA
内訳	機材等	15000 "
	雑費	13000 "
	学生実習費	2500 "
	職員交通費	1500 "

(7) その他

勤務時間 月曜日～金曜日 0800-1200, 1300-1600
及び休日 土曜日, 日曜日, 祝祭日

9. 実施経費

(1) 外国旅費

最も経済的な路線で順路直行を原則に実費(エコノミー・クラス)支給するが, ソロモン諸島を除く南太平洋地域においてはPNGへの直行便がなく, 到着に3~4日を要する。従ってトランジット他のため余儀なくされる滞在に係る宿泊費等を支給するよう3000米ドルを計上した。

(2) 日当宿泊料

ホテル代は一泊60米ドルと極めて高く, そこで当初より学生寮利用が研修実施の前提となってきた。寮の宿泊費は一泊12米ドルで賄えるが, 学食が閉鎖される土曜, 日曜は, ラエの町で食事をとることになり, 多額の出費が予想される。因みに, ホテルで食事をし

た場合30米ドルは必要となってくる。更に、ラエの町まで交通の便がなくなりタクシーを利用せねばならず、この点を配慮し日当額を算出した。

(3) 傭人費

基本的には工科大学の秘書をあてがうが、同大学の事情でやりくりのつかぬ10日間については当分負担で一名傭上することとした。

10. 保 険

傷病（死亡、後遺障害）疾病（治療費用、死亡）保険を第三国研修員に対し付保するための予算措置がある旨説明した。PNG工科大Planning Officerを通し調査したところ、現地にて上記保険に当分予算内で加入できる旨確認した。

11. PNG工科大水産学部の移転計画

昨年度ラエ工科大学水産学部のポート・モレスビー移転計画案が文部省より提出されるも財政難のため閣議決定をみるに至らなかった。

しかしながら、本調査団が面会したCommissioner for Higher Education（文部省）、PNG工科大水産学部長、PNG大学副学長らはいずれも同移転計画を口にしており、ただ移転時期については85年2月以前の実施はなく、第三国研修に支障は生じないと述べていた。財政措置が講じられれば、実施されるが、誰れもそれがいつ頃になるのか見込めない趣であった。

そこで、本調査団は日本大使館に本件の調査を依頼し、追って報告頂くよう併せてお願いしてきた。

研修実施の観点からすれば、移転先のPNG大学農学部の方が、施設設備の面でより整っており、また首都への移転となるので日本側との連絡そして経費節約の面からも好ましいと思料される。

V 調査団所感

FAOの統計によれば、南太平洋諸国における1982年の漁獲量は、バブアニューギニア、ソロモン、キリバス及びフィジー等を主産国として約10万トン程度である。このうち7万トン程度がカツオ・マグロ漁業、トロール漁業等の大規模漁業によって漁獲される高価なカツオ、マグロ及びエビ等で、そのほぼ全量が輸出されており、7,000万US\$の外貨収入を得ている。漁獲物の域内消費量は、フェダイ、フェフキダイ、アカメ、イワシ、サバ及びボラ等3万トン程度に過ぎない。これらの魚種を対象とした沿岸漁業の多くは伝統的な漁具漁法に依っているほか、使用漁船も丸木舟程度のため生産性は低く、自給自足的漁業の域に止まっている。

一方、フィジー、バブアニューギニア及びバヌアツでは生鮮冷凍魚やイワシ・サバの缶詰が大量に輸入され、その額は4430万US\$(1982年)に達している。これらの量を鮮魚に換算すると6万トン程度と推定される。

南太平洋諸国は島嶼国家であることから海洋開発、特に水産資源の開発に大きな期待をかけている。従って、大規模漁業に対しては輸出産業として振興するとともに雇用機会の拡大と労働者の所得の安定を図ることとしているし、また沿岸漁業に対しては自給自足経済下にある漁業を貨幣経済の中に転換させ、産業として育成し、自国周辺の沿岸水産資源を有効に利用することによって、国民に水産たん白食料の安定供給を図り、併せて輸入水産物の削減を行う努力が為されている。

このように、南太平洋諸国が沿岸水産資源の開発に取り組んでいる時期にバブアニューギニアにおいて南太平洋諸国の水産業普及職員を対象に沿岸漁業に関する第三国研修を開催することになったことは有意義であり、沿岸漁業者が現場で漁業を行う場合に役立つ実践技術及び知識と関連知識に絞ったカリキュラムとしたことに、バブアニューギニア政府は深い理解と第三国研修の実施について意欲を強く示したことに特に感銘を受けた。

第三国研修実施にあたっての各項目については、前述のとおりであるが、特記事項は次のとおりである。

(1) 第三国研修の実施主体について

バブアニューギニア工科大学が関係省庁の協議の結果に基づき、大学の各種施設機器並びに実習船等を使用して実施することについて、Moramoyo 副学長(注：学長は首相が兼任している)は積極的であり、その成功を期待している。中心的役割は曾(Tseng)水産学部長が行うが、同部長は就任後1年の短期間であるけれども、その間第三国研修の実施について学内及び関係省庁に積極的に説明してきており、講師の確保も含め実施体制は十分と認められた。

政府は既にバブアニューギニア工科大学の水産学部(ラエ)とバブアニューギニア大学の農学部(ポートモレスビー)とを交換することを決定し、水産学部は1985年中にポートモレ

スピーの対岸のナバナバに移転することになっているが、相互の移転に多額の経費を要するため、実際にはかなり遅れそうである。いずれにしても第2回以後の第三国研修は水産学部が実質的主体となって実施する考えである。受入れ側のパプアニューギニア大学副学長ブラッシはパプアニューギニア大学は一般科学の教育、即ち、水産関係では海洋生態学、海洋漁業生物学、資源と環境管理、海洋学、食品化学等を行っており、水産学部が移転して来た場合の調整はあるものの、漁業、増養殖、水産加工の実技教育にも強い関心を示していることから問題は無いと考える。

(2) 割当国について

第三国研修は地域的、社会的基盤を同じくする諸国の相互協力を助長し、産業経済の発展を図ろうとするものであるが、南太平洋諸国は第2次世界大戦後植民地から独立した国と依然として植民地となっている島とが、共に弱い力を結集し、互惠善隣の立場を採る特殊な関係にあることから、パプアニューギニア政府の外交方針として独立国以外の諸島をも対象としたいとしている。我が国の基本方針として独立国を対象とするとのことであるが、中長期にわたって本第三国研修が友好裡に円滑に実施され、ホスト国であるパプアニューギニアや周辺諸国から高い評価を得るためには、独立国以外の諸島も割当国にできる何らかの検討が為される必要がある。

(3) カリキュラムについて

パプアニューギニア側から豊富な水産資源の有効利用を図るため、沿岸漁業者が現場で使用する漁業技術の理論と実際を中心とし、魚の生態・習性、資源管理、漁獲物の取扱・保蔵及び販売に関する事項とし、かつ南太平洋諸国が期待を持って参加するような内容にしたい旨提案があったことは、日本側の考え方と同様であり意を強くしたところである。

南太平洋諸国は沿岸漁業の多くが自給自足的漁業の範囲に止まり、国家経済を支える産業となっていないことから、その育成に努めているところである。漁業技術、特に漁具漁法技術、漁撈技術及び保蔵技術は、食品生産管理上の基本であることから、今後数年にわたって継続する必要がある。水産技術は工業生産技術と異なり、現場適用技術は一様では無い。魚種により、時期により、魚の習性、生理生態により各種の工夫がなされ、技術を使う人の個性に合されて生かされてくるものである。第2回目以後のカリキュラムの作成にあたっては、カンントリーレポートや研修評価を通して得られた情報を基に、より内容の充実を図ってゆくことは勿論であるが、研修で得た技術を夫々の特徴のある現場にどのように改良し、伝統的漁具とどのように組合せ、或は伝統的漁具漁法から新しい漁具漁法に転換させてゆくか、またどのように沿岸漁業者の人造りを行うか、更に、できれば、沿岸漁業者、部落をどのようにして貨幣経済の中へ導いていったら良いか等幅広い指導理論や指導法も加えてゆく必要があると考える。

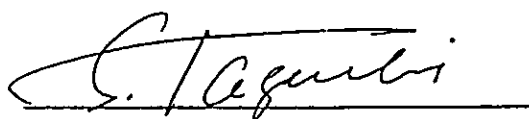
RECORD OF DISCUSSIONS
BETWEEN THE
JAPANESE CONSULTATION TEAM AND THE AUTHORITIES
CONCERNED OF THE GOVERNMENT OF PAPUA NEW GUINEA
ON THE THIRD COUNTRY TRAINING PROGRAMME

The Japanese Consultation Team (hereinafter referred to as "the Team") organized by Japan International Co-operation Agency (hereinafter referred to as "JICA") and headed by Mr. S. Taguchi visited Papua New Guinea from August 18 to August 25, 1984 for the purpose of formulating the training course in the field of coastal fisheries development under the Third Country Training Programme of JICA.

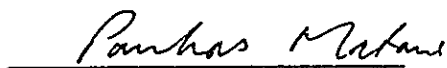
During its stay in Papua New Guinea, the Team had a series of discussions with the authorities concerned of the Government of Papua New Guinea with respect to the framework of the above mentioned training course and the desirable measures to be taken by both Governments to ensure its successful operation.

As a result of the discussions, both parties agreed to recommend to their respective Governments the matters referred to in the documents attached hereto.

Port Moresby, August 24, 1984



Mr. Sadanori Taguchi
Head of the Japanese
Consultation Team



Mr. Paulias N. Matane
Secretary for the
Department of Foreign
Affairs and Trade

ATTACHED DOCUMENT

The Government of Japan and the Government of Papua New Guinea will cooperate with each other in operating the training course in the field of coastal fisheries development at the Department of Fisheries, Papua New Guinea University of Technology (hereinafter referred to as "the course") under the third Country Training Programme of JICA.

The Government of Papua New Guinea will conduct the Course with the support of the technical cooperation scheme of the Government of Japan. The Course will be held once a year from the Japanese fiscal year of 1984 (April 1, 1984 - March 31, 1985) onward, subject to an annual agreement between both Governments.

The Course in the Japanese fiscal year of 1984 will be operated in accordance with the followings;

1. TITLE

The Course will be entitled "Regional Training Course in Coastal Fisheries Development".

2. PURPOSE

The purpose of the Course is to provide an opportunity of refreshing and improving relevant techniques and knowledge to extension workers engaged in fisheries activities in the South Pacific Region.

3. DURATION

The Course will be held from January 21 to February 9, 1985.

4. CURRICULUM

The tentative curriculum of the Course is attached as ANNEX I.

5. INVITED COUNTRIES

The Governments of the following countries will be invited to apply for the Course by nominating their applicant(s);

Kiribati, Nauru, Fiji, Solomon Islands, Palau Islands, Tonga, Tuvalu, Vanuatu, Western Samoa.

6. NUMBER OF PARTICIPANTS

The number of participants from the invited countries shall not exceed nine (9) in total. And the number of participants from Papua New Guinea shall not exceed six (6).

7. QUALIFICATIONS FOR APPLICANTS

Applicants for the Course are;

7-1 To be nominated by their respective Governments in accordance with the procedure mentioned in 9-1 below,

7-2 To have the practical experience of more than two (2) years in the field of fisheries services,

7-3 To be engaged in extension work in a public or private organisation in the field of fisheries services,

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- 7-4 To be under forty (40) years of age in principle,
- 7-5 To have a good command of spoken and written English,
- 7-6 To be citizens of the nominating countries, and
- 7-7 To be in good health to complete the Course.

8. FACILITIES AND INSTITUTIONS

The Course will be conducted at the Department of Fisheries, Papua New Guinea University of Technology.

9. PROCEDURE OF APPLICATION

9-1 The Government applying for the Course shall forward five (5) copies of the prescribed application form for each nominee to the Government of Papua New Guinea through its diplomatic channels not later than November 15, 1984.

9-2 The Government of Papua New Guinea will inform the applying governments whether or not the applicant(s) is/are accepted for the Course not later than December 15, 1984.

10. UNDERTAKING OF BOTH GOVERNMENTS

In organizing and implementing the Course, both Governments will take the following measures in accordance with the relevant laws and regulations in force in each country:

10-1 The Government of Papua New Guinea

10-1-1 Department of Foreign Affairs and Trade

- (1) To forward the General Information brochures (G.I.) of the Course to the Governments of the invited countries through its diplomatic channels,
- (2) To receive application forms and forward them to Papua New Guinea University of Technology, and
- (3) To notify the respective Governments through its diplomatic channels and the Embassy of Japan in Papua New Guinea of the selection of participants.

10-1-2 Papua New Guinea University of Technology, in consultation with the relevant Government Departments,

- (1) To formulate the curriculum based on ANNEX I,

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- (2) To draft and print the G.I.,
- (3) To assign an adequate number of its staff as lecturers/instructors for the Course,
- (4) To provide its training facilities and equipment for the Course,
- (5) To select participants in the Course,
- (6) To arrange accommodations and meals for participants and Japanese experts,
- (7) To arrange international air tickets for overseas participants and to meet and see them off at the airport,
- (8) To arrange domestic study tour(s) to be included in the Course,
- (9) To take budgetary measures to bear the expenses necessary for conducting the Course excluding the expenses financed by the Government of Japan,
- (10) To issue certificates to the successful participants at the end of the Course,
- (11) To submit a course report and a statement of expenditures to the JICA Port Moresby Office (hereinafter referred to as "the JICA Office"), and
- (12) To coordinate any other matters related to the Course.

- (1) To dispatch, following the regular procedures of its technical cooperation scheme, short-term experts who will give advice to Papua New Guinea University of Technology and deliver lectures on such subjects as mentioned in ANNEX I.
- (2) To bear the following expenses for the Course through JICA,
 - a) Such expenses relevant to overseas participants as international economy-class flight fare, accommodation, per-diem and medical insurance premiums,
 - b) Such expenses relevant to Papua New Guinea University of Technology as honoraria for external lecturers, arrangement of meeting and study tour(s), teaching aids, expendable supplies, copies and reprints, and secretarial services.

11. PROCEDURE OF REMITTANCE AND EXPENDITURE

Si.
The remittance and expenditure of the funds for the expenses to be borne by JICA will be arranged in accordance with the following procedure.

- 11-1 Papua New Guinea University of Technology will utilise the special separate account in Papua New Guinea to accept the fund
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remitted by JICA and inform JICA Office of the name of bank, the account code number and the name of the account number.

- 11-2 Papua New Guinea University of Technology will submit to the JICA Office a bill of estimate for expenses to be borne by JICA not later than sixty (60) days before the opening of the Course.
- 11-3 JICA will assess the estimated bill and remit the assessed amount of expenses to the account mentioned in 11-1 above within thirty (30) days after the receipt of the bill of estimate.
- 11-4 Papua New Guinea University of Technology will submit to the JICA Office a statement of expenditures within thirty (30) days after termination of the course.
- 11-5 In case any amount of the fund remitted by JICA remains unspent, Papua New Guinea University of Technology will reimburse the unspent amount to JICA in accordance with the instructions given by JICA. The fund allocated for the flight fare, accommodation and per-diem shall not be appropriated for any other purposes.
- 11-6 By the request of JICA, Papua New Guinea University of Technology will make available for JICA's reference all the

receipts and other documentary evidence
necessary to certify the expenditures
stated in 11-4 above.

12. This attached Document and the following Annexes
attached hereto shall be deemed to be the part of
Record of Discussions:

ANNEX I : Tentative Curriculum of the Course
ANNEX II : Schedule of the Course Operation
ANNEX III: Tentative Estimate of Expenses

ANNEX I

TENTATIVE CURRICULUM OF THE COURSE

Date	08:00 - 12:00	Assigned to	13:30 - 17:30	Assigned to	
January 20 (Sun)		Arrival			
21 (Mon)	Registration Opening Ceremony	PNG, JPN	Orientation	PNG	Welcome Party
22 (Tue)	Country Report	PNG, JPN	Country Report	PNG, JPN	
23 (Wed)	Country Report	PNG, JPN	Study Tour	PNG	
24 (Thu)	Lecture Fishing Gear Design/ Construction	PNG, JPN	Practical Lab.	PNG, JPN	
25 (Fri)	Ditto	PNG, JPN	Ditto	PNG, JPN	
26 (Sat)	Ditto	PNG, JPN	Free		
27 (Sun)	Free				
28 (Mon)	Lecture Environmental Factors & Fish behavior	PNG	Lecture Environmental Factors & Fish behavior	PNG	
29 (Tue)	Lecture Resource Management & Fishing Efficiency	JPN	Lecture Resource Management & Fishing Eff.	JPN	
30 (Wed)	Lecture Pot fishing	PNG	Practice in the sea (setting)	PNG, JPN	
31 (Thu)	Practice in the sea (pick up)	PNG, JPN	Discussion & Film Show	PNG, JPN	
February 1 (Fri)	Lecture Longline fishing	PNG, JPN	Gear Construction	PNG, JPN	
2 (Sat)	*Practice in the sea	PNG, JPN	Free		*start 4 A.M.

3 (Sun)	Free				
4 (Mon)	Lecture Gill net fishing	PNG, JPN	Lecture Gill net fishing	PNG, JPN	
5 (Tues)	Gill net construction (practical)	PNG, JPN	Gill net Construction (practical)	PNG, JPN	
6 (Wed)	Gill net Construction (practical)	PNG, JPN	Practice in the sea (setting)	PNG, JPN	
7 (Thu)	Practice in the sea (pick up)	PNG, JPN	Discussion & film show	PNG, JPN	
8 (Fri)	Lecture Handling, storage & Marketing	PNG, JPN	Lecture Handling, storage & marketing	PNG	Farewell party
9 (Sat)	Discussion & evaluation	PNG, JPN	Free		
10 (Sun)	Departure				

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ANNEX II

SCHEDULE OF THE COURSE OPERATION

Month	PNG Side	Japanese Side
Middle August, 1984	Signing of R/D Submission to Form A-1	Signing of R/D Recruitment of Experts
Middle September	Distribution of G.I.	
Middle November	Submission of Bill of Estimate for Expenses Receiving of Applications	
Middle December	Notification of Acceptance	Remittance of Expenses
January, 1985	Implementation of Course	Dispatch of Experts
Early March	Submission of Statement of expenditures Submission of Course Report	

S.T.

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ANNEX III

TENTATIVE ESTIMATE OF EXPENSES

Item of Expenses	Breakdown	Amount (US\$)
I Expenses for Invitation		
1 Airtickets (round trip)		13,195
	Country	
	Fiji \$ 2200	
	Kiribati 804	
	Nauru 822	
	Palau Is. 1447	
	Solomon Is. 581	
	Tonga 1947	
	Tuvalu 2195	
	Vanuatu 1099	
	W. Samoa 2100	
2 Living Allowance		
(1) Per-Diem	\$30 x 22 days x 9 persons = \$ 5,940	8,208
(2) Accommodation	\$12 x 21 days x 9 persons = \$2,268	
3 Travel Allowance Airport Tax, Transit Accommodation, etc.		3,000
4 Medical Insurance	\$100 x 9 persons	900
SUB TOTAL		25,303

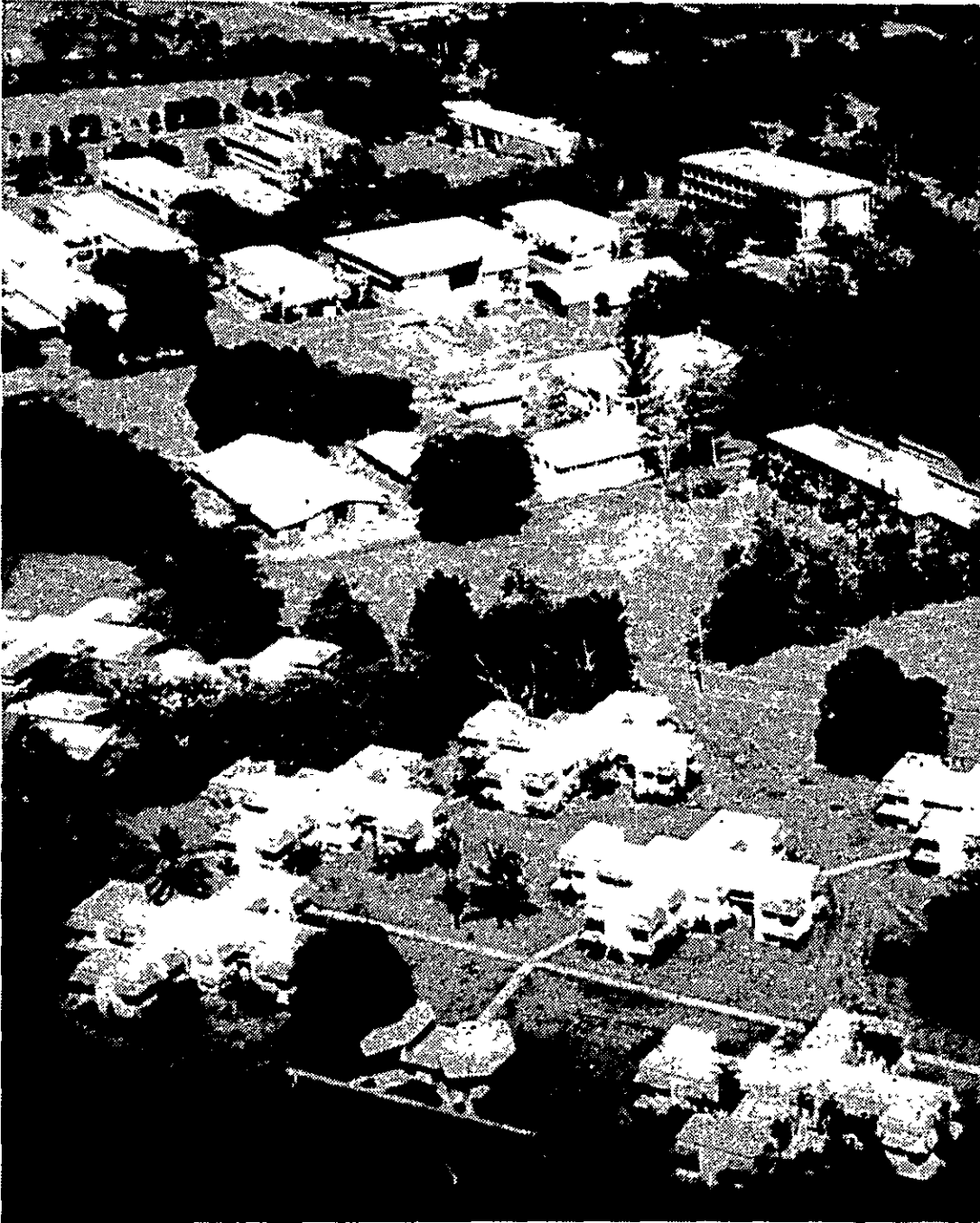
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Item of Expenses	Breakdown	Amount (US\$)
II Training Expenses		
1. Honiara		
(1) Per-Diem	\$30 x 13 days = \$ 390	1,342
(2) Accommodation	\$12 x 9 nights = 108	
(3) Airticket	\$156 x 4 persons = 624	
(4) Honoraria	\$20 x 11 times = 220	
2. Personal Expenses		
(1) Secretary Service	\$22 x 10 days = 220	3,620
(2) Fisheries Staff	\$50 x 6 persons x 20 days = 3600	
3. Meeting Expenses		
(1) Opening Ceremony	\$ 8 x 50 persons = 400	1,260
(2) Coffee Break	\$ 1 x 20 persons x 18 days = 360	
(3) Closing Ceremony	\$10 x 50 persons = 500	
4. Transportation		
Bus Rental	\$30 x 22 days	660
5. Training aids		
		1,500
6. Expendable Supplies		
(1) Fuel for Boat	\$110 x 12 days = 1320	1,620
(2) Others	500	
7. Copy and Reprint		
		1,600
8. Communication		
		400
9. Miscellaneous		
		2,000
Sub Total		14,402
GRAND TOTAL		39,705

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INTRODUCING

**THE PAPUA NEW GUINEA
UNIVERSITY OF TECHNOLOGY**



OFFICERS OF THE UNIVERSITY

CHANCELLOR

Dr. A. Tololo, CBE, Hon. LLD *U.P.N.G.*, Hon. D Tech *P.N.G.U.T.*

PRO-CHANCELLOR

Miss R. Kekedo, MBE, BA *N. Colorado*

VICE-CHANCELLOR

Professor L.J. Lewis, C.M.G., BSc *Wales*, Dip Ed *Lond.*, FCP Hon., FRSA

VICE-CHANCELLOR DESIGNATE

Mr. M. Moramoro, BTech BComm *P.N.G.U.T.*, MITD, MBIM

DEPUTY VICE-CHANCELLORS

Mr. B.B. Boeha, BEd BSc *U.P.N.G.*, MEd Stud *Monash*, MICE

Mr. L. Romaso, BEng *P.N.G.U.T.*

REGISTRAR

Mr. P.B.R. Middleton, BA *Syd.*

BURSAR

Mr. J.H. Bradridge, BA *U.P.N.G.*, FASA, AFAIM

UNIVERSITY LIBRARIAN

Mr. S.A. Patchett, BA *Miami*, MS *Flor.State*

AN INTRODUCTION TO THE UNIVERSITY

HISTORY AND DEVELOPMENT

One of the major goals of both the Australian administration of the Territory of Papua New Guinea and of the national government after independence in 1975 was to provide educational facilities of all levels for the people of Papua New Guinea. Thus it was that by an Act of the House of Assembly of 26 May 1965 the Papua New Guinea Institute of Higher Technical Education was established, becoming in March 1970 the Papua New Guinea Institute of Technology and in August 1973 the Papua New Guinea University of Technology. The University was the second to be established in Papua New Guinea and the intention was to provide a University where technological subjects would be taught. The University of Papua New Guinea at Port Moresby concentrates on the arts, pure sciences, law and medicine.

The Council met for the first time on 30 September 1965 under the Chairmanship of Sir Herbert G. Watkin. In 1966, Dr. J.A.L. Matheson, the Vice-Chancellor of Monash University, was appointed Chairman of the Council following the death of Sir Herbert Watkin.

The first Chancellor of the University was Dr. J.A.L. Matheson who retired in 1975 and was succeeded by Dr. A. Tololo, the then Secretary for Education. Dr. Tololo has held membership on Council since 1969.

The Founding Director of the Institute, Dr. W.E. Duncanson, took up his duties in August 1966 and six months later the first undergraduates were accepted for the start of the 1967 academic year. The initial courses offered were in civil engineering and surveying. Dr. Duncanson retired at the end of the 1971 academic year and was succeeded by Dr. J.A. Sandover who held the position until the end of 1976. Dr. Sandover was succeeded by Acting Vice-Chancellor Mr. M. Tigilai who handed over in 1979 to Dr. A.P. Mead, who in turn was succeeded in November 1982 by Emeritus Professor L.J. Lewis.

GOVERNMENT

The governing body of the University is the Council which is made up of representatives of government, industry, commerce, education, University staff, students and graduates. Council which is presided over by the Chancellor, meets four times a year. The Academic Board of the University, which consists of members of academic and related staff and students, is responsible to the Council for furthering and co-ordinating the academic work of the University and for the general oversight of the Library. It is presided over by the Vice-Chancellor who is the Chief executive officer of the University. Committees of the Council and the Academic Board and other advisory bodies are charged with the duty, as in other universities, of considering and regulating the many activities that contribute to the institution's life. New legislation is presently in preparation to update the current University Act.



ACADEMIC ACTIVITIES

The academic structure of the University is based upon the twelve academic departments and upon the Academic Board and its committees. The departments are listed in alphabetical order on the inside back cover. Currently they offer degree courses in: Accountancy, Applied Chemistry, Architecture and Building, Cartography, Civil Engineering, Commercial Computing, Electrical Engineering, Fisheries Science, Forestry, Food Technology, Land Management, Management, Mechanical Engineering, Mineral Technology, Surveying and Therapy Radiography.

Diploma courses are offered in Commerce, Communication Engineering, Fisheries Technology, Survey Drafting and Surveying. Postgraduate courses leading to the degrees of MSc (by coursework and dissertation) and MPhil and PhD (by research and thesis) may be taken in all academic departments.

In addition, the University has recently introduced taught postgraduate diploma courses in Electrical Engineering, Engineering Mathematics, Land Management and - in conjunction with the University of Papua New Guinea - Physical Planning.

The academic year is divided into two semesters each of which runs for 20 weeks. The first semester starts in mid-February and the second in mid-July. Final yearly examinations are held in November and graduation ceremonies take place at the end of that month.

STUDENTS, GRADUATES AND STAFF

The University employes over 320 members of academic, technical and senior administrative staff. The number of students at the University has grown from 37 in 1967 to nearly 1150 in 1983. Student enrolments on degree, diploma and certificate courses at 30 March 1983 are given in the Appendix at the end of this booklet.

By the end of 1982, the University had awarded 1520 degrees, diplomas and certificates to students mainly from Papua New Guinea but also from neighbouring Pacific Islands.

Graduates are presently employed throughout the length and breadth of Papua New Guinea in government, in education and in the private sector. The University presently has on its staff over 20 former students, now graduates, who hold either academic or administrative positions. The Vice-Chancellor Designate, Mr. M. Moramoro, holds the degree of Bachelor of Commerce of the University.

THE UNIVERSITY AND THE COMMUNITY

It is the intention of the University to provide tertiary educational facilities and courses which will enable graduates to assist in the development of Papua New Guinea. Accordingly, courses are designed to relate closely to local conditions and student educational projects are often arranged to assist in the development of particular villages or regions.



Both staff and students are encouraged to participate in village development projects. One notable example has been a joint project, involving several departments, to install a mini-hydro-electric scheme in Baindoang, a remote village in the Sarawaged Mountains outside Lae. Other such projects which serve both village people and student learning processes are under way. The University provides assistance through its staff and students on a consultancy or practical basis to industry and the community in general.

Industry, business, commerce and government departments are the largest employers of graduates. The national government's emphasis upon filling as many positions as possible with trained Papua New Guineans has created a heavy demand for University graduates. Experience is added to the skills gained at University through on the job training programmes.

Most students are sponsored either by government or their future employer. Sponsors work closely with the University in determining teaching programmes designed to meet the needs of the student, his future employer and the country in general.

DIRECT ENTRY AND SERVICE COURSES

The present secondary educational system in Papua New Guinea provides education through grade 12 (form 6) for only a small number of people. Education through grade 10 (form 4) is provided for a large number of students. As a result many students enter University from grade 10; those entering from grade 12 are known as 'direct entry' students and commence their studies in the second year of the degree courses.

For the grade 10 entries, the first year is designed to bring them up to a standard required for further study. Service courses are provided in English, social sciences, mathematics and physics. These are designed to prepare students for the specialized professional courses they intend to follow.

As the number of senior high schools increases, more students will continue through grade 12. In the future it is anticipated that only direct entry students will be accepted into the University but this will not happen for some years. In 1979 the Departments of Electrical and Communication Engineering and Forestry accepted only direct entry students and in 1980 the Departments of Accountancy and Business Studies, Civil Engineering and Mechanical Engineering followed suit.



The Artifacts Room



Students at the Mailroom.



Surveying student undergoing instructions.

TERTIARY EDUCATION IN PAPUA NEW GUINEA

Education at this level is financed throughout the country by government and covers teacher training, technical and secretarial colleges, agriculture, forestry, fisheries, vocational training, administrative and management training as well as University education.

There are two Universities in Papua New Guinea: The Papua New Guinea University of Technology which concentrates on technological training and the University of Papua New Guinea which concentrates on the arts, humanities and sciences. UPNG has two extensions, one at Goroka and the other at Lae (Agriculture - Final Year).

This separation of disciplines between UPNG and the University of Technology has avoided duplication of staff and resources while allowing each university to concentrate on developing its courses and providing up-to-date, high quality facilities and equipment for the students.

RESEARCH AND DEVELOPMENT

The government of Papua New Guinea places great emphasis on self-reliance in all forms of activity within the country. In keeping with this, the University encourages staff to participate in local development and research programmes. Already mentioned is the Baindoang project which has led to requests from other outlying villages for similar assistance. UPNG Agriculture students on the University of Technology campus participated during 1979 in a conservation programme intended to save the nearby Atzera ranges from destruction through planting of settlement gardens. This project involved not only replanting the hills with trees but also educating people to plant food crops in a manner which will protect valuable top soils from erosion.

Another current programme is the developing of bamboo radio towers for village use of two-way radio. Research is being done into solar pumps and refrigeration units, low-cost housing design and construction, mathematical teaching methods suitable for Papua New Guinea and so on. A Hiri Motu dictionary is being compiled, a computerized valuation system investigated, village water supply improvements are being studied along with much other research in the fields of so-called low and high technology.

A recent addition to the campus is the Appropriate Technology Development Institute which was largely funded by the New Zealand government. The Institute concentrates on developing simple technology for village use. It is also the home of the "LIKLIK BUK", a publication in Pidgin and English, designed to assist village people in improving their life-styles. It covers everything from crop growing to simple tools, such as bellows made from old inner tubes, to making clothes and furniture.

The University also provides so-called high technology assistance such as the use of computers, chemical and mineral analysis services, surveying and valuation work, advice to or consultation with industry or business on future development, assistance to those engaged in developing natural resources such as fisheries and forestry/timber projects.

Such consultation work is often done with other interested bodies such as the Wau Ecology Institute, UPNG, provincial or national government, business and commercial interests.

THE LOCATION OF THE UNIVERSITY

Originally envisaged as occupying a site adjacent to the University of Papua New Guinea in Port Moresby, the then Institute in its first year shared temporary premises with the Idubada Technical and Trade School in Port Moresby. The House of Assembly investigated other possible sites and decided to establish the Institute in Lae, primarily because of the benefits that would result from a location in the industrial and manufacturing centre of Papua New Guinea. In June 1967 the present 500 acre campus area was obtained. It is located approximately 9 kms. from the centre of Lae.

In 1968, teaching on the new campus began. Prefabricated classrooms and borrowed army tents provided the venue and students were accommodated originally at the Lae showgrounds. Following that, staff housing was used until Stage 1 of the Poroman Hall of Residence was completed in early 1970.

Since that time the University has steadily grown and, at present, more than K25 million has been invested in capital works and staff housing. Virtually all students and a large percentage of staff are housed on campus or nearby, although a small number of University houses or flats are available in Lae city.



The Staff Amenities Centre Playschool

During the years since the first classes were taught, the region around the University has grown and developed. Several industries have been established nearby, new settlements developed at East and West Taraka and Igam Barracks (1968), site of the Joint Services College (established 1974), has grown into a large army base.

The high rainfall and tropical climate has ensured that the campus, despite its relative newness, has become quickly established and provides pleasant surroundings for work and study.

THE CITY OF LAE

Located on the Huon Gulf at the mouth of the Markham River, Lae is the administrative headquarters of Morobe Province and the industrial and commercial centre of Papua New Guinea. It is the second largest city in Papua New Guinea and presently has a growth rate greater than that of Port Moresby. Morobe Province has a population of over 300,000 people and Lae has over 60,000 residents made up of both expatriates and nationals.

There are currently two airports which serve Lae - the Lae airport and Nadzab which is located 41 kms. outside Lae. Two wharfs serve Lae - the main wharf for overseas shipping and the small ships wharf for coastal ships and village boats. Lae is the busiest seaport in Papua New Guinea and is the major exporting port for New Guinea coffee.

The city itself was completely destroyed during World War II. Rebuilding gave planners an opportunity to separate the residential and business areas as well as industrial and shopping areas in such a way that the city has four easily distinguished sections. Because of the high rainfall and tropical climate Lae is always green and is fortunate to have the right conditions for creating attractive gardens, tree-lined streets and displays of flora such as those seen in the Botanical Gardens which are situated in the centre of town.

Lae is the "gateway to the Highlands". The Highlands Highway begins in Lae and leads up the Markham Valley before ascending via Kassam Pass into the Eastern Highlands Province. The road continues from Kassam to Yonki (site of the Ramu hydro-scheme) to Kainantu, Goroka, Kundiawa, Mt. Hagen, and terminates at Tari in the Southern Highlands Province. Over 800 kms. of road are available to the traveller from Lae and some of the most spectacular scenery in the world is on view.

Two other roads branch off the Highlands Highway - one to the Wau-Bulolo region which was the site of the massive gold strikes during the 1930's and the other, the Ramu Highway, to Madang which is considered one of the main tourist spots in Papua New Guinea. Wau is about 145 kms. from Lae by road and Madang is about 320 kms. away.

The climate of Lae is tropical with no sudden drops or rises in temperature. Usual temperatures are between 25°C and 30°C with only slight variations during the year. Regular alternation of trade winds and monsoons makes it possible to distinguish between two seasons. January is the driest month and July is the wettest. Rainfall in Lae is frequent but much of it falls at night.

Lae has very good shopping facilities, several clubs, three movie theatres, a community centre, excellent sporting facilities and an active yacht club. Game fishing is a popular pastime among those who have boats. Many specialized clubs such as the Pistol Club or the Aeromodellers Club exist; familiar service clubs such as Lions and Rotary are also very active in the community.

Lae is a thriving and growing community with all the facilities one expects in a town of its size. Enquires can be directed to the University's Information Officer or to the Morobe Province Tourist Association or the Lae Chamber of Commerce.

An A - Z of the University.

ACADEMIC YEAR Is divided into two semesters, each semester running for about 20 weeks. The first semester commences in mid February and the second in July. End of year examinations commence at the beginning of November.

ACCOMMODATION All full-time students are required to live in residence on the University campus unless a student's sponsor can arrange acceptable accommodation elsewhere. All enquiries regarding accommodation should be directed to the Dean of Students. Limited facilities for married students are available. A large proportion of the staff of the University is accommodated in staff housing on the campus and in Lae.

ACCOUNTANCY AND BUSINESS STUDIES The Department of Accountancy and Business Studies offers degree courses leading to the degrees of Bachelor of Commerce in Accountancy, Management and Commercial Computing. A course leading to a Diploma in Commerce is also offered.

ADMINISTRATION Includes the Vice-Chancellor's office, the Registrar's and the Bursar's offices i.e., academic administration, student administration, personnel administration, estates and services administration and accounts.

AGRICULTURE The University of Technology presently hosts the final year of the University of Papua New Guinea's Agriculture degree course. A 48 acre farm has been established on the campus which includes facilities for fruit, vegetable and crop production as well as an animal husbandry section.

AMPHITHEATRE The University has an open air amphitheatre which is located beside the Haus Kopi. It is used for student meetings and traditional dancing.

ANALYSIS LABORATORY This laboratory provides an analytical service to industry, government and the private sector as well as to the University itself. Analyses carried out include geochemical, foliar, metallurgical and general chemical and bacteriological work. Water testing is carried out on potable waters, wastes, effluents and swimming pools. Chemical and bacteriological food analyses are also carried out as well as basic public health bacteriological tests.



Programming the Computer



Students reading the campus newspaper

APPLIED PHYSICS

The Department of Applied Physics is responsible for teaching all grades of theoretical and practical physics in engineering, architecture and building and surveying. It also offers a four year Bachelor of Technology in Therapy Radiography degree course.

APPROPRIATE TECHNOLOGY DEVELOPMENT INSTITUTE

The ATDI is a joint venture of the South Pacific Appropriate Technology Foundation, the University and the Liklik Buk Information Centre for the development of appropriate tools and techniques for Papua New Guinea and the dissemination of information on appropriate technologies. The unit carries out its research work both on campus and in the field. At present the ATDI is made up of a workshop and a library/office building which houses the Information Centre. Anyone may seek assistance or information from the ATDI.

ARCHITECTURE AND BUILDING

The Department of Architecture and Building offers a six year course which includes one year of practical training and leads to the degree of Bachelor of Architecture and Building.

AUDIO VISUAL CENTRE

This unit is one of the academic services, of the University. It provides audio visual software and hardware for academic and research purposes and produces original teaching material specifically for local needs. The Centre is located in the library.

BOOKSHOP

The Union complex includes a University Bookshop where textbooks and stationery supplies are sold.

CALENDAR

The University Calendar contains detailed information about the University, including legal and administrative provisions such as the Act, Statutes, By-Laws, Rules and Regulations, etc. The Calendar may be consulted in the Information Office.

CHEMICAL TECHNOLOGY	The Department of Chemical Technology offers degree courses leading to the degree of Bachelor of Science in three specialized areas - applied chemistry, food technology and mineral technology.
CIVIL ENGINEERING	The Department of Civil Engineering offers a course leading to a Bachelor of Engineering degree in Civil Engineering
CHRISTIAN CENTRE	The University has a Christian Centre which is available for use by various religious denominations. Services are held there on Sundays and on several evenings during the week. Facilities include a chapel, offices and a kitchen.
COMMUNICATIONS	The University operates its own mail room which is located in the Administration Building. Both internal and external mail are handled by this service as well as the University switchboard and telex systems.
COMPUTER CENTRE	The University's Computer Centre is intended to develop as the main Scientific Computing Centre in Papua New Guinea. It currently has one PDP 11/34A computer and a PRIME computer which make possible a large variety of teaching and research programmes. Students on most courses make use of these computing resources not only in the Centre itself but also in a number of terminal rooms situated in the departments of the University.
COUNSELLING SERVICES	The University provides a Student Counselling Service where trained counsellors assist students with any problems they may have, whether academic or personal. The Office is located in the Union complex
COURSES OF STUDY	Are available leading to undergraduate degrees in Accountancy, Applied Chemistry, Architecture and Building, Cartography, Civil Engineering, Commercial Computing, Electrical Engineering, Fisheries Science, Forestry, Food Technology, Land Management, Management, Mechanical Engineering, Mineral Technology, Surveying and Therapy Radiography. Undergraduate diploma courses are offered in Commerce, Communication Engineering, Fisheries Technology, Survey Drafting and Surveying while postgraduate diploma courses are offered in Electrical Engineering. Engineering Mathematics, Land Management and Physical Planning. Higher degree courses leading to the MSc, MPhil and PhD degrees are offered in all departments.

DUNCANSON HALL

The main lecture/performance theatre on campus, Duncanson Hall, has a seating capacity of 480 persons and is fully equipped with sound and lighting facilities. It is used for both teaching and entertainment purposes by students, staff and people outside the University. The Hall is available for hire through the Information Office. The Hall is noted for the Sepik carved house posts which support the outer roof. These are of particular interest to visitors to campus.

ELECTRICAL AND COMMUNICATION ENGINEERING

The Department offers courses in electrical and communication engineering at degree and diploma levels. The degree course leads to a Bachelor of Engineering.

ESTATES AND SERVICES

This grouping in the Registrar's Department has a number of areas of responsibility such as security services, fire services, works and maintenance, grounds and gardens, cleaning, catering services, communications, printing services and housing.

tenance, transport, stores, grounds and gardens, cleaning, catering, services, communications, printing services and housing.

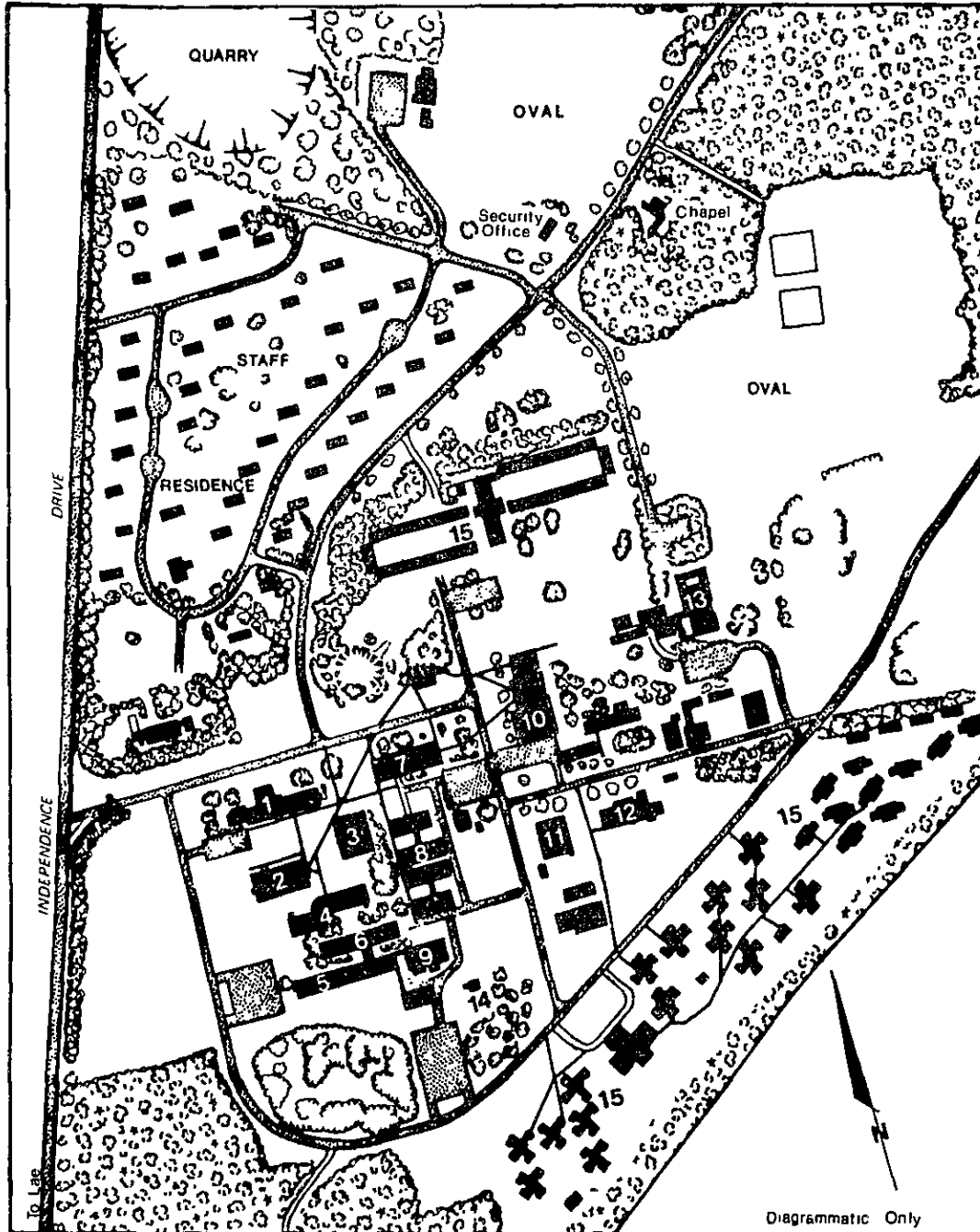
FISHERIES

The Department of Fisheries presently offers a Diploma in Fisheries Technology and a Bachelor of Science in Fisheries Science degree course. The courses cover methods of catching, processing and marketing of fish and other aquatic products, aquaculture practices, methods of conservation and management aspects of aquatic resources and the fishing industry.

FOOD

There are two snack bars on campus. One is located in the Union building and the other is the Haus Kopi. Both offer sandwiches and soft drinks. The Staff Amenities Centre provides hot meals at lunch time and serves dinner on Friday evenings. Staff may sign guests into the Amenities Centre. The students' dining hall is located near the residence halls and provides all meals for students.





Diagrammatic Only

CAMPUS AREA - UNIVERSITY OF TECHNOLOGY, Lae.

1. ADMINISTRATION	6 ELECTRICAL ENG.	11 CHEMICAL TECHNOLOGY	15 HALLS OF RESIDENCE
2. ARCHITECTURE & BUSINESS ADMIN.	7. SURVEYING / LANG. & SOCIAL SCIENCE	AGRICULTURE	
3. DUNCANSON HALL	8 CIVIL ENGINEERING	12 FISHERIES FORESTRY	
4. COMMUNICATIONS & MATHEMATICS	9 MECHANICAL ENGINEERING	13. UNION COMPLEX	
5. PHYSICS	10 LIBRARY	14. A T. DU	

FORESTRY	The Department of Forestry offers a course which leads to the degree of Bachelor of Science in Forestry and is designed to produce professional foresters who are able to meet the managerial needs of the government, the Department of Forests at district, regional and national levels. Considerable emphasis is placed on acquiring a thorough knowledge of timber harvesting and marketing, wood processing characteristics and timber using industries
FOUNDATION YEAR FOR ENGINEERING	All students for the Bachelor of Engineering degree are enrolled initially in the Common Foundation Year for Engineering. Following successful completion of this year, students specialize in one of the following departments - Civil Engineering, Electrical and Communication Engineering, Mechanical Engineering.
GRADUATION CEREMONY	The University normally holds the Graduation Ceremony in November each year in the Duncanson Hall. In 1982, 192 degrees, diplomas and certificates were awarded.
HALLS OF RESIDENCE	The large majority of students live on the campus and are accommodated in the various halls of residence. There is a separate hall for women students. Undergraduates usually share a room with one other student; final year students usually have a room to themselves. All furnishings are provided by the University. Each room has a study area provided.
HAUS KOPI	A central gathering point on campus for both staff and students. Located near the Library, the Haus Kopi is noted for its high roof which was styled after a Sepik Haus Tambaran or Spirit House. Sandwiches and soft drinks are served at the snack bar inside the Haus Kopi.
INFORMATION	The Information Office is located on the ground floor of the Administration Building and is responsible for disseminating news and information concerning the University. Copies of publications can be obtained from this office. The Office is also responsible for the Artifacts Room and Collection, for arranging tours of the campus and for handling bookings of Duncanson Hall. Visitors are invited to call in at this office.
LANGUAGE AND SOCIAL SCIENCE	The Department of Language and Social Science teaches different English language courses related to the specific purposes of each of the professional courses in the University; the courses include study skills and technical communication and are given to all first and second year students. In many courses they are also given to third, fourth and fifth year students. Non-credit Pidgin and Hiri Motu courses are also conducted. Social science is taught in the first year and social science inputs are given in later years in various professional areas such as tenure in relation to valuation or the role of the engineer in society.

LIBRARY	The function of the Matheson Library is to help students carry out the courses of study they are pursuing, to assist teaching staff in their work and to act as a national centre of scientific and technical information. People outside the University may borrow books subject to University needs being given priority. The Library includes a lending section, a reference section, a Papua New Guinea collection, recreational fiction, childrens' books and a well-equipped Audio Visual Unit which incorporates a theatre and video-teaching facilities. Photocopiers and electronic calculators are available. A "List of Additions" and a "Library Guide" are published.
MATHEMATICS	The Department of Mathematics provides courses at a variety of levels to students in all disciplines. The emphasis is placed on practical applications and numerical examples related to the mathematical concepts encountered.
MATHEMATICS EDUCATION CENTRE	The Centre plays a national role in assisting to improve the standard of mathematics learning in schools and institutions throughout Papua New Guinea. It also maintains a printery and a resources centre which is used by students during their normal mathematics courses.
MECHANICAL ENGINEERING	The Department of Mechanical Engineering offers a course leading to the Degree of Bachelor of Engineering in Mechanical Engineering. A wide range of studies is available to students, including energy technology, manufacturing engineering and mechanical equipment.
MEDICAL CENTRE	The Medical Centre is located adjacent to the Union complex and is staffed by a Medical Officer, Medical Assistant and two trained nursing sisters. The Centre's services are available to all campus residents and an out-of-hours emergency service is maintained.
MUSEUM	The University maintains an artifacts collection, representative of most areas of Papua New Guinea, which is located next to the Information Office on the ground floor of the Administration Building. Visitors are welcome and the collection is open for viewing between 8 am and 12 noon, 1 pm and 4 pm each working day. Special arrangements can be made, upon request, for school groups or weekend visitors through the Information Office. Many of the contributions to this collection have come from students as well as staff members.
PLANT NURSERY	The grounds and gardens section has established a nursery to raise plants for use on campus. Seedlings, trees and other flora are available for purchase by campus residents only. The University setting is a particularly attractive one and a profusion of greenery enhances the appearance of the campus.
POSTGRADUATE DEGREES	The degrees of Master of Science, Master of Philosophy and Doctor of Philosophy may be taken, subject to the approval of the appropriate Head of Department and the Higher Degrees Committee. Postgraduate degrees are offered by all academic departments.

PUBLICATIONS

The following publications can be obtained from or consulted in the Information Office:

Calendar
Handbook
Information for Intending Students
Information for Intending Appointees
Annual Research Report
Students' Handbook
The Reporter
Vice-Chancellor's Annual Report

The University has a fully equipped printing section which handles the printing of University materials and publications.

REPORTER

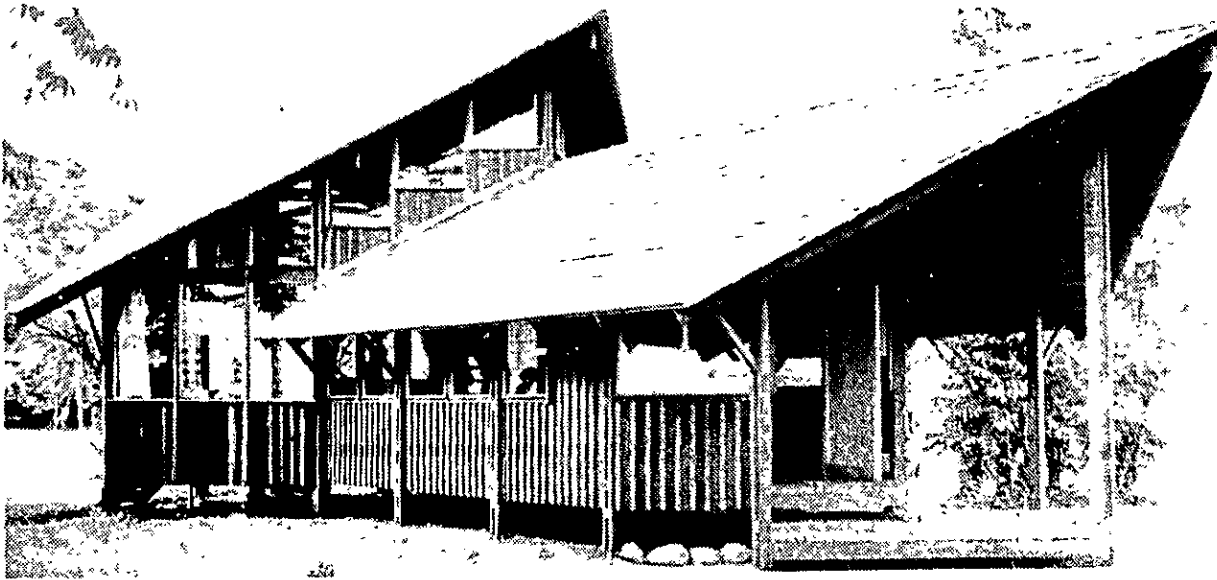
A weekly news and information sheet which is published by the University's Information Office for circulation within the University. Contributions from members of the University community are most welcome.

SCHOLARSHIPS

The government of Papua New Guinea offers scholarships to students meeting the entry requirements of the University and who satisfy the criteria set by the awarding body. These scholarships cover tuition fees and board and lodging fees; a book allowance and pocket allowance are also given. Union fees (K5.00 per annum) are paid by the students. Details of these scholarships are available from the Scholarships, Branch, Department of Education, P.S.A. Haus, Private Mail Bag, Boroko, PNG. Private companies and semi-governmental authorities provide a large number of scholarships tenable at the University but these are not available to students until they have successfully completed the first year of study.



Duncanson Hall



Appropriate Technology Development Institute

SPORTING FACILITIES

The University has two sporting ovals which cater for Australian rules, rugby union and league, soccer, basketball, softball, cricket, hockey, tennis, athletics, badminton, volleyball and netball. Students and staff make use of these facilities regularly and sports and sporting events are popular on campus. The University often hosts provincial sporting competitions, school competitions and outside sponsored events.

**STAFF AMENITIES
CENTRE**

Usually known as the "Staff Club" this building was opened in early 1977 and is located between No. 1 and No. 2 housing areas, adjacent to the athletics oval. The Club includes a games room, a bar, fully-equipped kitchen/dining area and is open for certain times each day. During the week hot lunches are served for the staff at moderate prices. On Friday evenings dinner is served. Attached to the centre is a play-school for the children of staff members.

STAFF HOUSING

Housing is provided for as many members of staff as possible. Limited staff housing is available in town but the majority of houses are on the campus.

**STUDENT AFFAIRS
OFFICE**

Located on the ground floor of the Administration Building. It is concerned with such matters as student selection, scholarships, examinations and graduation as well as student records. It is open daily for student enquiries during normal business hours.

SURVEYING

The Department of Surveying offers diploma courses in Surveying (4 years) and Survey Drafting (4 years) and degree courses in Surveying (5 years), Cartography (5 years) and Land Management (4 years). All courses are primarily concerned with the basic unit, the

land. Students undertake both classroom and practical work in the field.

UNION

The Union Complex includes a main building in which are located a large hall used for students' dances, social functions or meetings, a lounge area, a snack bar, licensed premises and offices for the Students' Representative Council and Union Management. Other buildings in the complex house the offices of the Dean of Students, chaplains, student counselling services, a bank agency, post office, bookshop, a small supermarket and the medical centre.

TOURS

Tours of the campus or special arrangements to see departments can be made through the Information Office.

TRANSPORT

The University is located on a main road, Independence Drive, about 9 kms. from Lae. It can be reached either by taxi or by PMV's which make frequent calls at the University and depart from either the front of the Haus Kopi or from the Main Gate.



APPENDIX

Student Enrolments 1983 as at 31 March 1983

A. UNDERGRADUATE

Department of Accountancy and Business Studies

Diploma in Commerce	Year 1	93
	Year 2	82
Bachelor of Technology in Accountancy	Year 3	52
Bachelor of Technology in Business Studies	Year 3	20
Bachelor of Technology in Computer Studies	Year 3	12
Bachelor of Commerce	Year 4	7
Departmental Total		266

Department of Applied Physics

Bachelor of Technology in Therapy Radiography	Year 2	4
Departmental Total		4

Department of Architecture and Building

Bachelor of Architecture and Building	Year 1	6
	Year 2	27
	Year 3	21
	Year 4	11
	Year 5	4
	Year 6	20
Departmental Total		89

Department of Chemical Technology

Common	Year 1	17
Common	Year 2	35
Bachelor of Science in Applied Chemistry	Year 3	9
	Year 4	11

Bachelor of Science in Food Technology	Year 3	8
	Year 4	11
Bachelor of Science in Mineral Technology	Year 3	4
	Year 4	5
Departmental Total		100
Foundation Year for Engineering		
Year 1		101

Department of Civil Engineering

Bachelor of Engineering in Civil Engineering	Year 2	25
	Year 3	20
	Year 4	20
Departmental Total		65

Department of Electrical and Communication Engineering

Bachelor of Engineering in Electrical Engineering	Year 2	23
	Year 3	12
	Year 4	19
Diploma in Communication Engineering	Year 1	34
	Year 2	16
	Year 3	22
	Year 4	21
	Year 5	18
Departmental Total		165

Department of Mechanical Engineering

Bachelor of Engineering in Mechanical Engineering	Year 2	30
	Year 3	28
	Year 4	19
Departmental Total		77

Department of Fisheries

Diploma in Fisheries Technology	Year 1	24
	Year 2	8
	Year 3	12
	Year 4	10

Departmental Total 54

Department of Forestry

Bachelor of Science in Forestry	Year 1	12
	Year 2	11
	Year 3	12
	Year 4	12

Departmental Total 47

Department of Surveying

Preliminary Year		53
Diploma in Survey Drafting	Year 2	8
Diploma in Surveying	Year 2	30
Bachelor of Technology in Cartography	Year 3	1
Certificate in Surveying	Year 3	8
Bachelor of Technology in Surveying	Year 4	18
Bachelor of Technology in Surveying	Year 5	19
Bachelor of Technology in Land Management	Year 1	16
	Year 2	11
	Year 3	8

Departmental Total 172

University Undergraduate Total 1140

B. POSTGRADUATE

Postgraduate Diploma in Electrical Engineering	3
Postgraduate Diploma in Engineering Mathematics	6
Postgraduate Diploma in Land Management	1

Degree of Master of Science	6
Degree of Master of Philosophy	11
Degree of Doctor of Philosophy	8
University Postgraduate Total	35

HEADS OF ACADEMIC DEPARTMENTS

ACCOUNTANCY AND BUSINESS STUDIES

.....

APPLIED PHYSICS

Professor E. Balasubramaniam, MSc PhD *N.S.W.*, FRMIT, FAIP

ARCHITECTURE AND BUILDING

Professor R.M. Aynsley, MS *Penn.State*, BArch PhD *N.S.W.*, ARIBA,
FRAIA, MAIB, AIRAH, MIA *P.N.G.*

CHEMICAL TECHNOLOGY

Professor D.F. Stewart, MScPhD *Melb.*, ARACI, AMAusIMM

CIVIL ENGINEERING

Professor R.C. Coates, BSc(Eng) *Lond.*, PhD *Nott.*, FEng, FICE, FIStructE

ELECTRICAL AND COMMUNICATION ENGINEERING

Professor P. Greenwood, MSc *Leeds and Stir.*, DipEE, CEng, MIEE,
MemIEEE, MSPE *P.N.G.*, FPNGIM

FISHERIES

Professor W.Y. Tseng, BS *National Taiwan*, MS *Guam*, PhD *Tokyo*

FORESTRY

Professor D.L. Wigston, BSc PhD *Exe.*, MIBiol, MI EnvSc, FLS

LANGUAGE AND SOCIAL SCIENCE

Professor A. Taylor, BA DipEd *Syd.*, BD *Melb.Div.Coll.*, PhD *A.N.U.*

MATHEMATICS

Professor Kathleen Collard, OBE, MSc *Lond.*, MA *Oxf.*, PhD *Edin.*

MECHANICAL ENGINEERING

Professor W.C.K. Wong, MSc *Aston*, PhD *Birm.*, FRMIT, CEng,
MIMechE, MIProdE, MIEAust

SURVEYING

Professor K.N. Toms, MBE, BSurv BEconMUS *Q'ld*, FIS Aust, MAIC



Tollman Way, the main entrance to the University

Fourth Edition

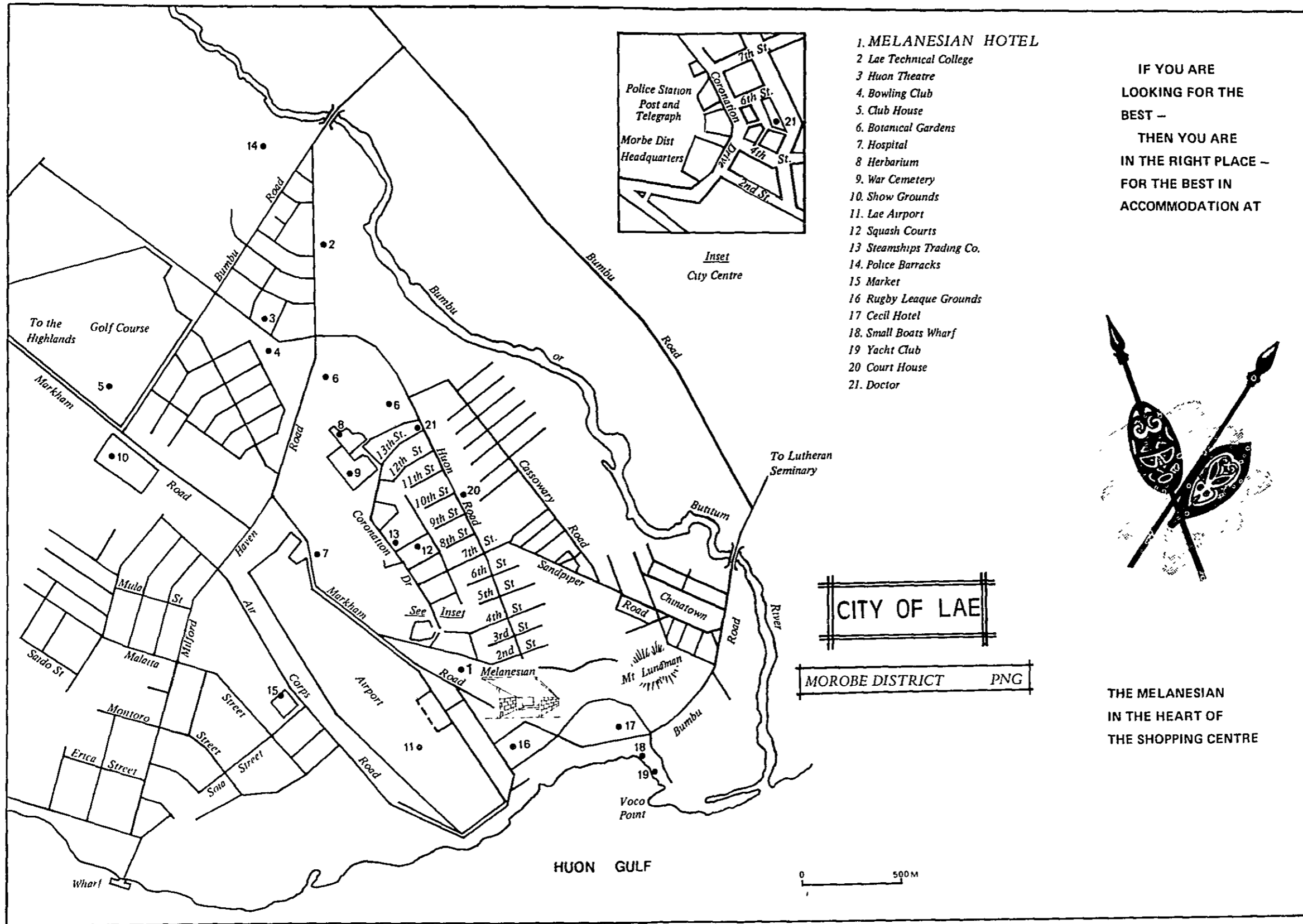
May 1983

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The Papua New Guinea University of Technology
P.O. Box 793
Lae
Morobe Province
PAPUA NEW GUINEA

(42 4999)

from whom further information about the University may be obtained.



The Japanese will train our fishermen.

by LOUJAYA
KOUZA

PAPUA New Guinea has been blessed with "Umi No Sachi", by a Japanese consultation team who were in Port Moresby to sign a fisheries training programme agreement with the national government.

"Umi No Sachi is the best way I can describe

the abundance of marine resources you have in your waters," said Mr. Sadanori Taguchi, head of the consultancy team.

The week long visit to Port Moresby by the team was for the purpose of formulating a training course in the field of coastal fisheries development sponsored by the Japan International Cooperation Agency.

Fisheries colleges and the university of technology students will be taught relevant techniques in fisheries allowing them to exploit their own resources without the usual sight of the Japanese fishing in PNG waters.

The course planned for January 21 to February 9, 1985, at the University of Technology Lae, is open to the Pacific Islands of

Kiribati, Nauru, Fiji, Solomon, Palau, Tonga, Tuvalu, Vanuatu and Western Samoa.

According to the team the number of participants from invited countries should be no more than nine with an additional six from Papua New Guinea.

After the agreement was signed, Foreign Affairs Secretary Paulias Matane said:

"We appreciate your assistance and want to make sure that our fish are caught by our own people for our economic development."

Resources

"Fish is one of the major resources in the Pacific and so we sincerely hope that the K39,000 your Government has given us will assist in the training of Papua New Guineans and their Pacific island counterparts to become better fishermen."

Last week an employee of the Open Bay Timber Company in East New Britain, Mr. Emmanuel Boisen left PNG to start a three month training in forestry management in Japan under a JICA sponsorship.



• Paulias Matane and Sadanori Taguchi talk over the programme.

THE JAPANESE WILL TRAIN OUR FISHERMEN.

by LOUJAYA KOUZA

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JICA