

インドネシア家族計画
プロジェクトファインディング調査団
報告書

1986年3月

国際協力事業団

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序 文

日本国政府は、インドネシア国政府の要請に基づき、同国の人口・家族計画分野におけるプロジェクト・ファインディング調査を行うこととし、その実施を国際協力事業団に委託した。

当事業団は、長谷川 豊 医療協力部長を団長とする4名の専門家からなる調査団を編成し、1986年2月24日から3月2日までの間、現地調査を行い、その成果を本報告書として取りまとめた。

本報告書が、今後のインドネシア共和国に対する人口・家族計画分野におけるプロジェクト方式技術協力策定のための基礎として活用されることを切願するものである。

終りに、本調査の任に当られた団員のご協力に敬意を表すると共に、調査に際し、多大のご協力を戴いたインドネシア共和国政府関係機関、在インドネシア共和国日本国大使館、および外務省はじめ国内関係機関各位に対し、深甚なる謝意を表する次第である。

1986年3月

国際協力事業団
理事 末永昌介

国際協力事業団

受入 月日	61. 8. 25	108
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登録No.	15269	MCS

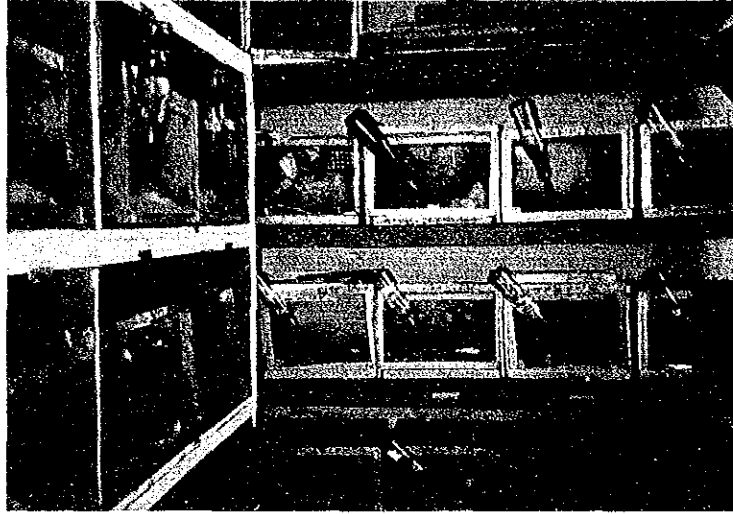


BKKBNにおける協議

インドネシア大学・
学長を表敬訪問



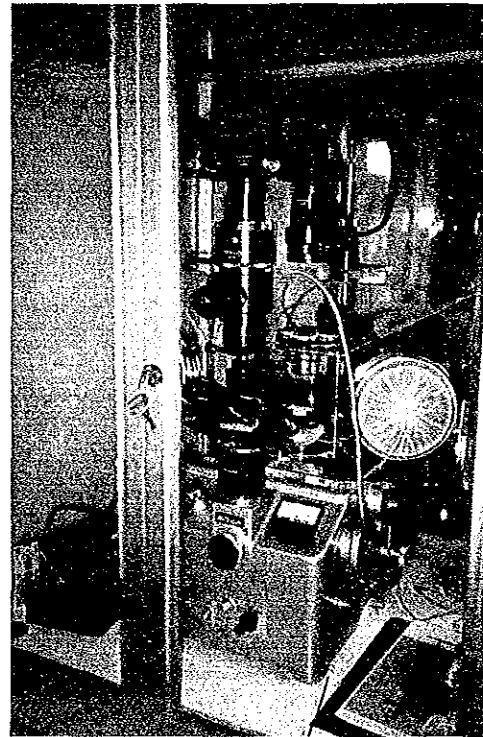
インドネシア大学医学部
・研究室



同 上
(動物舎)

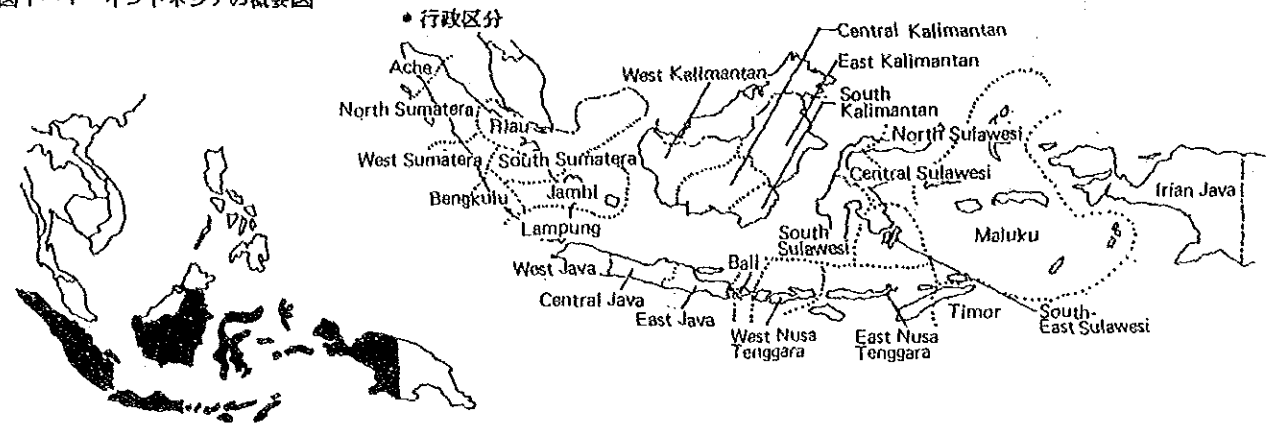


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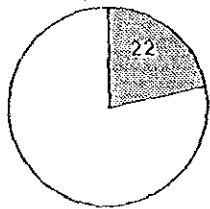


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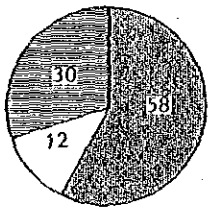
図1-1 インドネシアの概要図



都市化率 (%)



労働力比率 (%)



注) 労働力とは、経済活動を行う10才以上の人口。

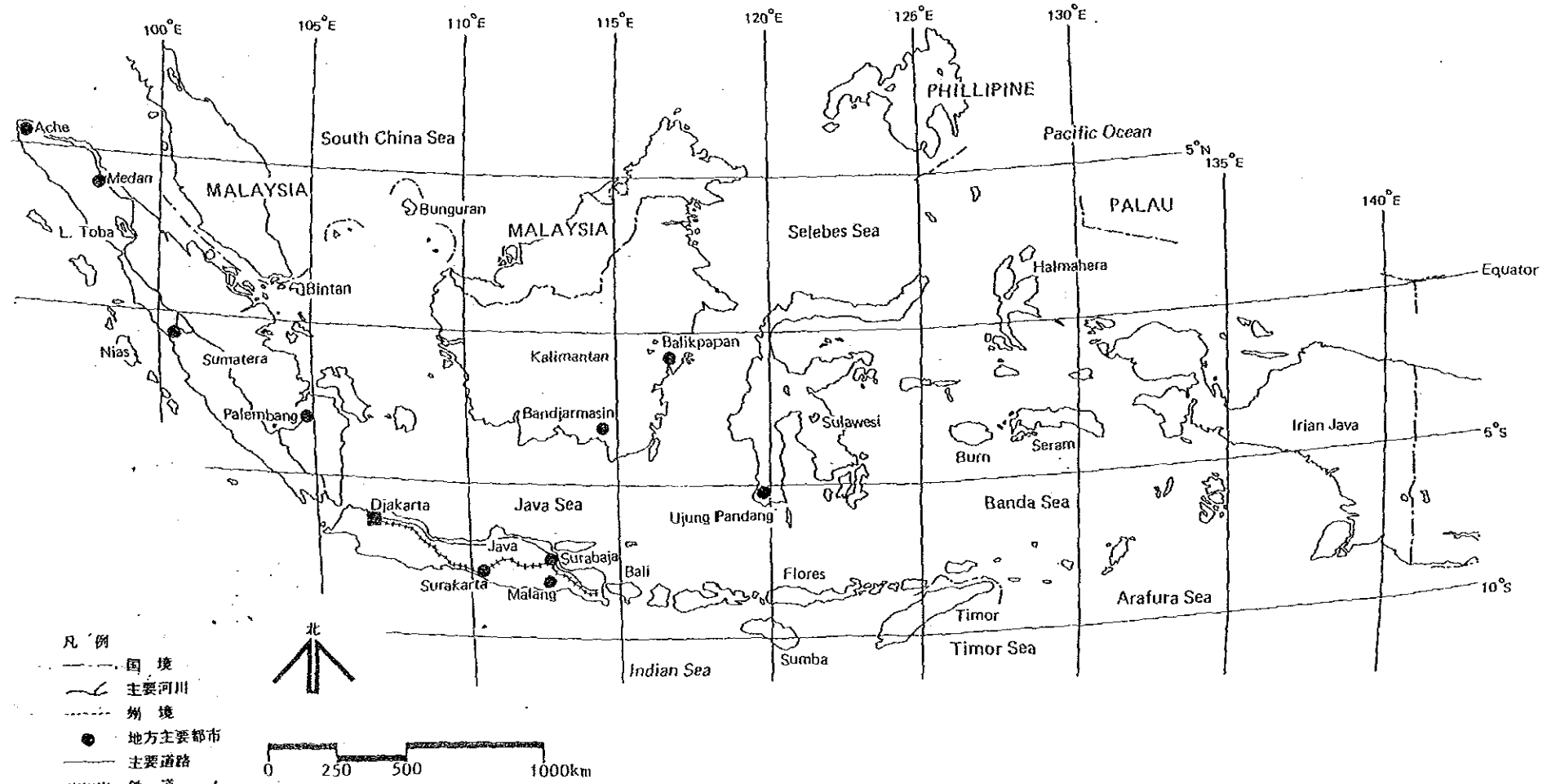
各部門のシェアはILO及び世銀による推定値である。

農業部門 (農林水産業、狩猟)

工業部門 (鉱業、製造業、建設業、電気、水道)

サービス部門 (上記2部門以外の全ての経済活動)

(出典: 世界開発報告 / 世銀 1984)



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られれば、ブルー・ブックに掲載される)、その後各国別要請案件を大統領府技術協力調整委員会に持ち込む。同委員会は、関係各省庁より持ち込まれた援助要請案件を整理の上、再度 BAPPENAS と協議しつつ、各援助国政府に対し援助要請を提出する。

(2) 借 款

関係各省庁は、援助要請案件リストを毎年作成し、年末にかけて BAPPENAS に持ち込み説明する。BAPPENAS はこれを整理の上ブルー・ブックを作成し、各援助国別に援助要請リストを作成、提示する。どのプロジェクトをどの援助国政府に要請するかは、BAPPENAS が関係省庁の希望をも踏まえつつ決定する。

(出 典) (a): 世銀, World Bank Atlas 1984 (b): 世銀, 世界開発報告 (c): 世銀, インドネシア World Tables 1983 (d): IMF, Direction of Trade Statistics Yearbook 1984 (e): IMF, International Financial Statistics, October 1984

インドネシアは、南北約 1900 キロ、東西約 5,100 キロにわたって散在する大小 1 万余の島々から成り、年平均気温 27℃ の熱帯性気候である。

インドネシアの歴史は、①ヒンズー教文明時代、②イスラム教文明時代、③オランダ統治時代、④独立とスカルノ時代の 4 期に大別することができる。第 2 次大戦中日本の占領下にあったインドネシアは、1945 年戦争終結とともにオランダへの復帰を拒否し、独立を宣言し、4 年余にわたる武力闘争の後、1950 年インドネシア共和国となり、憲法を發布した。

混迷する政党政治を経て、権力を得たスカルノ大統領は、軍と共産党の支持を背景に協力的な反帝反植民地闘争(外国企業の接収、マレーシア対決闘争等)を展開したほか、共産圏への傾斜を深め、国連脱退(65年)など急進的外交政策をとったが、政権末期には経済危機と混乱が深まった。68年に誕生したスハルト現政権は「新秩序」の標語のもと、国連復帰、マレーシア紛争和解を図り、ASEANの協力と西側への傾斜を強める一方、実務的内閣で経済開発を進めてきた。しかしながら、国家歳入の 6 割、輸出の 8 割を石油に依存するインドネシア経済が 81 年以降、世界不況による石油減産で大きな打撃を受けたため、数々の経済政策がとられた。今後、長期的には、石油に過度に依存しない産業構造への転換が模索されている。

インドネシア家族計画プロジェクトプロファイ調査団

1 要請内容及び背景

昭和60年3月末家族計画プロジェクトは終了したが、本分野と密接な関連のある“National Center for Biomedical Studies in Family Planning”の要望が正式に60年7月の技協無償年次協議において提示された。当センターの機能は家族計画に必要な諸手段、例えば経口避妊薬、避妊リング等の研究を行い新しい手法の開発をめざすとともに、このセンターで得られた避妊に関する知見をBKKBNの家族計画プログラムの中で実施していくというもので、家族計画プログラム推進のための人材の養成、教育の場としても使用される。本センターの構想に係る我が国への要請の内容はセンターの施設及び機材の無償資金協力及び技術協力となっている。

2 対応方針

1. 当面无償資金協力による対応は考えない。(少なくとも昭和61年度の候補案件とはならない)
2. 技術協力プロジェクト方式についてはコンタクトミッションとしてプロファイ調査団を派遣し、本構想の詳細調査及び日本側の協力可能性を検討する。

3 調査内容、項目

1) 要請の内容詳細調査

- ① 本センターの機能と意義
- ② 無償と技協の連携
- ③ 現状の体制(人材、機械、施設、予算)
- ④ 今後の年次展開

2) 関連機関の視察、調査

(特に本構想と国際援助機関等の関係について留意する)

3) 協力の可能性と協力計画の策定

(留意事項)

1. 無償が将来とも期待できない場合、プロジェクト方式技術協力だけで意味をもつか。
2. 本構想と関連のある国際援助機関等(UNFPA, USAID, WHO, FHI, 世銀, アジ銀, The Population Council)と日本政府に対する要望の関係について明確化をはかる必要がある。
3. 人材の育成について医学分野では多岐、多数に亘るが、人材の育成スケジュールと研

究スケジュールの整合性

4. 本分野における日本側国内支援機関等の有無

4. 調査団構成

SURVEY TEAM ON FAMILY PLANNING IN INDONESIA

MEMBERS

FEBRUARY, 1986

長谷川 豊	総括	国際協力事業団医療協力部 部長
(Dr. Yutaka HASEGAWA)	HEAD	Director, Medical Cooperation Department Japan International Cooperation Agency
我妻 堯	産婦人科	国立病院医療センター産婦人科医長
(Dr. Takashi WAGATSUMA)	OBSTETRICS/ GYNECOLOGY	Director, Obstet./Gynec. Department National Hospital Medical Center
西田 茂樹	人口家族計画	国立公衆衛生院衛生人口学部研究員
(Dr. Shigeki NISHIDA)	POPULATION/ FAMILY PLANNING	Technical Official Public Health Demography The Institute of Public Health
後藤 俊男	業務調整	国際協力事業団医療協力部
(Mr. Toshio GOTO)	COOPERATION PLANNING	医療協力特別業務室 Member of Staff Medical Cooperation Department Japan International Cooperation Agency

5. 調査日程

1986年2月24日から1986年3月2日まで(但し、長谷川団長は北スマトラ地域保健プロジェクト視察の上、3月4日帰国)

月	日	曜日	内 容
2	24	月	12:00 東京発 (GA-873 便) 17:15 ジャカルタ着
2	25	火	12:00 在インドネシア日本大使表敬 14:00 国家家族計画調整委員会(BKKBN)長官表敬

			調査日程打合せ、及び協議
2	26	水	17:00 JICA ジャカルタ事務所次長と打合せ 18:30 JICA ジャカルタ事務所主催の懇談会 9:00 インドネシア大学医学部研究施設及び建設候補地の視察 11:00 保健省Health Research and Development Chiefとの協議 13:00 BKKBNとの協議(プロポーザルの内容) 19:00 BKKBN長官主催の懇談会
2	27	木	9:00 保健省病院局との協議 10:30 UNFPAとプロポーザルに関連する事項につき協議 13:00 UNFPAにおいてBKKBN, インドネシア大学及びBKS PENFINとの合同協議 19:00 長谷川調査団長主催の懇談会
2	28	金	9:00 インドネシア大学 学長表敬 ヒューマンリプロダクション研究グループとの協議 医学部長との協議 14:00 WHOにおいて、ヒューマンリプロダクション、メディカルオフィサーから、プロポーザルに関連する事項につき事情聴取
3	1	土	9:00 BKKBNとの協議 (プロポーザルの修正ガイドラインの策定等) 10:30 薬品品質管理総局において、総局長表敬及び施設視察 19:00 UNFPA 鹿野駐在員主催の懇談会
3	2	日	8:00 ジャカルタ発(CX-710便) ホンゴン経由(CX-500便) 21:15 東京着

6. 面会者リスト

1) 国家家族計画調整委員会 (BKKBN)

- ① Dr. Haryono Suyono
Chairman of F. P. C. Board. (長官)
- ② Dr. Ny. Srihartati P. Pandi; MPH
Deputy for Program Development (BKKBN)
- ③ Dr. Pardoko

Export Staff for Chief of BKKBN.

- ④ Dr. Sunarti Sudomo
Chief of Biomedical and Human Reproduction Research Center (BKKBN).
- ⑤ Ms. Lea Teguh Asmar, MA
Chief Division on Bureau of Planning (BKKBN).
- ⑥ Dr. Sudjana Jatiputra, MPH
Consultant for Biomedical and Human Reproduction Research Center (BKKBN).
- ⑦ Dr. Heru
Staff at Biomedical and Human Reproduction Research Center (BKKBN).
- ⑧ Ms. Rita Roswan, SH
Chief Sub-Division of Bureau of Planning (BKKBN)
- ⑨ Dr. Lely B. Hadjar
Staff at Biomedical and Human Reproduction Research Center (BKKBN).

2) インドネシア大学

- ① Prof. Dr. Sujudi
Rector (学長)
- ② Prof. Dr. Asri Rasad
Dean, Faculty of Medicine (医学部長)
- ③ Prof. Dr. Tadjuddin
Chief, Biomedical, and Human Reproduction Group at School of Medicine,

3) 保健省

- ① Prof. A. A. Loedin
Chief, Health Research and Development
- ② Dr. M. Strait
Director General, Drug and Food Control
- ③ Dr. C. Siregar, M. Sc.
Director, National Drug and Food Quality Control Laboratory
- ④ Dr. S. Amicum
Director of Hospital

4) 国際機関

- ① 鹿野和子
UNFPA 駐在員
- ② Dr. Sathianathan

WHO Programme Coordinator and Representative

③ Dr. E. W. Wilson

Medical Officer, Human Reproduction, Geneva

5) その他

① Dr. Tina Agoestina

Secretary General, BKS PENFIN (Bandung)

② Dr. Ariawan Soejoenoes

Vice Chairman, BKS PENFIN

6) 在インドネシア日本大使館

① 武藤利昭 大使

② 平山一男 一等書記官

7) JICA関係者

① 榎本正義

ジャカルタ事務所次長

② 西尾久光

ジャカルタ事務所員

③ 川村次良

薬品品質管理プロジェクトリーダー

④ 小沼博隆

薬品品質管理プロジェクト専門家

⑤ 会田喜崇

薬品品質管理プロジェクト専門家

7. 調査結果

1) 総括

プロジェクト技術協力の可能性および協力計画の骨子

長谷川 豊

2) 家族計画に関する医学研究所設立要求に関する調査報告書

我妻 堯

3) 人口・家族計画分野からみた協力の可能性について

西田 茂樹

総括 プロジェクト技術協力の可能性および協力計画の骨子

長谷川 豊

1. はじめに

インドネシアに対する JICA の過去における家族計画分野の協力は、昭和 44 年 10 月から 60 年 3 月末まで 15 年半続けられ一応の終止符を打った。その協力内容は、主として IEC (Information, Education & Communication) 分野であった。

さて、今回の要請内容は、前回協力とは打って変って、無償資金協力（研究センターの建設）を含む研究協力である。

無償資金協力については、今回の mission は云々すべき立場にはないが、研究協力に当って、どのような既存の研究施設・設備があるか、どのような施設・設備が不十分で、もし資金協力が可能ならば、どのような施設・設備を供与すれば意味のある研究協力を出来るか、というような検討を避けて通ることはできない。

今回の要請内容は無償+技協であるが、細かい手続上のことを云えば、BKKBN は技術協力と無償資金協力についての別々の要請を提出する必要がある。JICA 側としては今回の要請は技協部分として考えている。

なお、今回の調査団はいわゆる project finding mission であって、JICA の手順の「事前調査」のもう一段階前の要請内容を確認し、必要な infrastructure 等関連報情を収集することが目的である。このような意味・内容からすると project-finding というよりは、“project-identification mission” というべきものであろう。

2. 要請の背景

インドネシア政府は 1970 年以來、全国的な規模で家族計画事業を推進しており、その活動の計画、実施、評価を調整するために「国家家族計画調整委員会 (BKKBN)」が設立

されて来た。今回の要請は、このBKKBNからの協力要請である。

家族計画事業の強化は、第4次5カ年国家開発計画(PELITAN 1984/85~88/89)の重点項目となっており、家族計画の新しいacceptorsを2,500万人、current usersを1,730万人(出産可能夫婦の65%)を目標としている。

current usersの避妊方法は、IUDが27.8%、pillsが54.2%、condomが4.4%、injectionが10.6%、その他(sterilizationを含む)が3%と、多様な方法が用いられている。

これらの方法の中には、安全性(特に長期使用時)や有効性について明らかでないものも多く、これらの方法の使用者や社会が安心して受け入れられ、かつその有効性に信頼をもたせるために、これらについて十分な調査・研究が必要であるとして今回の要請を提出して来たものである。

BKKBNは1983年の大統領布告(Decree)によって、その組織として“Centre for Studies on Bio-Medical and Human Reproduction”を持っており、これは、現在においては名前のみであるが、これを実際に設立するために、本要請となったものである。

3. 要請内容

BKKBNからの要請“Proposal for the Establishment of a National Centre for Biomedical Studies in Family Planning”は、Indonesiaで使われているcontraceptivesおよび新しい開発されたcontraceptivesのsafety/efficacyについて、動物実験を含む基礎研究および臨床研究を中心とする研究協力およびそれに必要な総合的研究施設の建設、研究機器整備のための無償資金協力をあわせて、2,500万USドル(約50億円)に上る極めてほり大なものである。

今回調査団派遣前の打合せ会においても要請内容が余りに大規模で、その割に焦点が定かでなく、具体性に欠けていることが指摘されていた。又、これらの広汎な基礎・応用研究に従事する研究者の確保に強い危惧の念が抱かれた。

更に、必要な研究の内容・レベルについて、インドネシア側関係者間でも、考え方に相当隔りがあることがわかれた。即ち、要請の中味を實際上作製したと見られるインドネシア大学医学部関係者、とくに医学部長(Professor Asri Rasad)などは、インドネシアでは臨床的・疫学的研究は十分に行われており、遅れているのは基礎研究である、と述べたが、保健省のHealth Research and Developmentの責任者であるProfessor A. A. Loedinは基礎研究は必要なし。acceptorsにmotivationをもたせるための研究、contraceptivesと他の健康問題(malnutrition, endemic diseasesなど)との複合作用の問題などunhealthy usersにおける問題に重点を置くべきであるという認識をもっていた。

また、UNFPAの資金援助で1986年から、5年間の予定で始まるWHOのHuman Re-

production の研究協力の内容は、今回の要請と殆ど overlap しており、担当な調整が必要と思われた。

Research manpower については、主としてインドネシア大学医学部と Family Health International (FHI) に関与している研究者が主な供給源であるように思われたが、これらと、BKKBN の附属として設立されるべき今次要請の "Centre" との関連が不明確であった。

以上をとりまとめ、更に具体的なそれぞれの専門分野についての Comments は、担当団員に譲るが主要な問題点は次のように要約される。

- (1) インドネシアの家族計画事業における「研究協力」の、他の分野の協力 (IEC, health service, etc.) との相対的重要性/priority
- (2) 「研究協力」の内容、基礎、臨床、疫学 (フィールド調査)、どの分野に priority があるか?
- (3) BKKBN の附属の centre として、組織的基盤、財政的裏付け (local costs とくに無償で centre が建てられた場合)
- (4) 研究者の recruitment
- (5) WHO/UNFPA 等の機関の同様プロジェクトとの調整
- (6) 無償資金協力との関連

4. JICA 側の position

前記問題点(1)に関しては、Indonesia ではまだまだ普及活動が必要とは見られるものの、この分野では、BKKBN 自体および USAID が相当な活動を進めており、acceptors 数の増加にも表われているように成果が出て来ていると認められる。従って、contraceptives の safety/efficacy に関する研究協力も、普及活動に次ぐ重要課題として協力検討対象となろう。

しかし、前節 3 において種々検討したように original の request にある基礎研究よりも臨床研究かフィールド調査 (疫学) が Indonesia の現状から見て、より重要であると判断される。但し、研究分野につき更に他の機関 (WHO/UNFPA 等) によるものとの調整が必要である。

Proposed Centre の組織的基盤は大統領の Decree により明らかであるが、財政的裏付けおよび研究に従事する Manpower (とくに permanent staff) の確保については十分な保証が得られていない。

研究施設の面では、現状では関連研究が、インドネシア大学医学部内でもいくつかの部門に分れて実施されているので、一つの centre が出来れば、研究の促進に有利である。し

かし、original requestにあるような動物実験部門は不必要で、clinics は病院外来部門を、library は病院の library を利用出来よう。従って必要な施設の規模は相当 cut down 出来よう。

5. 今後の process

4 に述べた JICA の考え方を mission 最終日に BKKBN 側に伝えた。BKKBN は、proposal をこの線に沿って revise し、提出してくるものと思われる。又、無償資金協力の方へも別途要請を提出してくるものと思われる。

家族計画に関する医学研究所設立要求に関する調査報告書

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1. はじめに

家族計画に関する医学研究所は、病院あるいは行政上の研究施設（例：食品・医薬品管理研究施設）のように目的が理解され易いもの、業務の内容が法律で明確に規定されているといった性格を有するものではない。従ってその目的は具体性に乏しく特に素人などには内容が理解し難い。また家族計画に関する医学の研究は基礎的なものである程、その成果が直ちに家族計画運動の成果の向上、避妊実行夫婦の増加、人口増加率の低下などという形で現れるものでもない。この点にこのプロジェクトの困難さと問題点が存在する。

2. 研究の必要性

経口避妊薬（ピル）、IUD（リング）、注射や皮下埋没法によるステロイドの長期投与方法、不妊手術などさまざまな避妊法の副作用、長期使用中の人体に対する影響などについては欧米の先進国では過去約20年間に詳細に研究されている。

即ちピルを長期間内服している婦人では血液中の脂質代謝、糖代謝、などに変化がおこり得る、約10%の婦人において血圧が上昇する、などの変化が見られる。

またピルの内服は静脈血栓症、脳血栓、肺血栓などの疾患の罹患率をわずかながら上昇させる。反対に服用者の間に貧血の頻度は減少し、卵巣、子宮内膜の悪性腫瘍に罹患する率は減少する。ピル内服はこのような副作用の可能性を持つが、内服によって妊娠を確実に防止出来るという長所のために先進国でもインドネシアのような発展途上国でも広く使用されている。その上にこれらのピルによる副作用は最近の低用量ピルの開発によって改善されつつある。

IUDの使用婦人については月経出血量の増加による貧血頻度の上昇、骨盤内感染症の罹患率の上昇、子宮外妊娠の頻度の増加などが注目されている。月経と関係のない出血によって使用を中止する場合も多い。

不妊手術については長期間経過後の人体に対する有意な悪影響については否定的な文献が多いがそれでも男性の免疫系に対する変化をおこす可能性は否定出来ない。

最近開発されインドネシアで既にかなり広範囲に使用されている一カ月、あるいは三カ月に一回の注射や皮下埋没法によるステロイド避妊法はピルのように毎日内服しなくとも避妊が行なえるという点で避妊の動機に乏しい発展途上国には特に使用に適している。しかしピルと同じくステロイドを投与方法であるから女性の身体に上述のような変化をおこしたり、副作用の可能性は十分に考えられる。しかし開発されてから日が浅いために長期間使用後のデータは未だ十分得られてはいない。

上述の如く血液の変化や副作用に関する過去のデータは全て先進国で得られたものである。しかし副作用や長期使用による安全性に関しては人種による差異が存在する可能性があり、インドネシア国民についての研究を希望することは当然考え得るところである。

今回の調査でインドネシアには鉄欠乏による貧血、栄養失調、寄生虫感染、マラリア、甲状腺機能障害（主としてヨード不足による機能低下症で海岸地方には無く、山岳地帯に多い）、などの特異な疾患、病的状態が存在することが判明した。これらの疾患を有する婦人が経口避妊薬を服用したり、TUDを装着あるいは上述のさまざまな避妊法を使用していた場合に避妊効果は正常婦人と同一か、どのように特異的な副作用を起し得るか、安全性への影響はどうか、などについて研究する価値は十分に存在する。このような点から新しい避妊法は既に十分研究されたと言うことは適当ではない。

これらの研究は新しい避妊法をインドネシア女性が使用した場合の避妊効果、副作用、安全性などを判定する場合の重要な参考になる。また現在は上記の避妊法を一旦採用しても途中で中止するケースが多くその原因は良くわからないケースが多い。避妊法の副作用や使用中に人体に起るさまざまな変化を研究調査することによって、避妊法中断の理由を解明しその対策を講じることが出来る可能性がある。

これらの研究には大きく分けると二つの方法があり得る。第一はどちらかと言えば基礎的な研究で、避妊実行婦人の血液、尿、組織の一部などを採取し分析することによって生理的な基礎データや避妊法の影響、副作用などを見る方法である。そのためには組織培養、Radioimmunoassay、電子顕微鏡など、最新の研究設備を必要とする。もうひとつの方法は臨床疫学的方法で、副作用の発生頻度、種類などについて避妊実行婦人から聞きとり調査をおこないデータを集積する研究で、この場合にはあまり高価な設備器具は不要であるが、ジャカルタのような大都会のみでおこなうことは意味が無くインドネシア全国に調査員を在任させて調査を行う必要がある。その為に訓練された調査員やデータの集計分析の専門家が必要となる。勿論二つの方法は互いに密接な関連があり、両者を組み合わせて研究を行なわねばならないが、どちらに重点をおくかによってこのプロジェクトの可能性が影響を受けると思われる。

3. 研究をおこなうについてインドネシアの現状

上述の如く研究の必要性は確かに存在するとして、それを実行するためには、施設・設備と人材の存在が不可欠である。

1) 現在の施設・設備

インドネシア大学を視察した結果から考察すると現状は極めて貧弱である。微生物学 (Microbiology)、免疫病理学 (Immunopathology)、臨床薬理学 (Clinical pharmacology)、産婦人科学などの研究室を見学した。実験用のベンチは全て木製で、実験室全体の冷房は

無いか不完全で高価な器具の多い部屋にのみ冷房をしてある。蒸留水の製造装置なども不完全である。放射性同位元素を利用する測定装置 (Radio immunoassay) は二カ所で見られたが、ひとつは製薬会社からの借り物である。比較的活発におこなわれていたのは組織培養を用いた研究であるが、組織培養に必要な装置も手作りの貧弱なもので滅菌装置が不完全なためにカビや雑菌による汚染がおこり易いとのことである。

動物舎は各研究室の近くに別々に設置されており、小動物のみで施設は貧弱である。但し動物の世話をする人は沢山居る。

日本との研究技術協力に関しては学術振興会を通しての協力が現在比較的活発におこなわれており、東北大学および慶応大学で研究技術を習得した医師が一名、羊水の汚色体分析の研究をしており、また関西の大学医学部産婦人科教授が免疫病理の研究技術協力で短期間訪問したとのことである (これは恐らく神戸大学の国際交流センターを通じての協力かと思われる)。しかしこれらの研究協力は家族計画の研究とは無関係である。関係があると思われる研究としては絨毛性性腺刺激ホルモンの免疫学的方法による定量キットを日本の技術援助により開発したのでこれを市販することを計画中とのことであった。

過去に日本から供与された (ルートは不明) 高価な装置としての顕微鏡、低温冷凍庫、アミノ酸分析器が部品の欠如、あるいは利用者不在のために全く使用されていないことも指摘された。これらの施設・設備の不完全さに対してWHO/UNFPAのプロジェクトは特にステロイドのRadioimmunoassayに限定して研究設備の供与と技術協力を計画しており、この点については後述する。

外国雑誌の購読料が高価なために文献や雑誌は入手困難で最近の世界各国における研究に関する情報を得ることが困難な状態にある。

2) 研究者の存在とその能力

インドネシア大学のリプロダクション・スタディ・グループの医師達と面接したが結果はかなり期待に反するものであった。これらの医師達は主として産婦人科医のほかに男性学 (Andology)、免疫学、病理学、臨床薬理学などの学者達であった。大学の教室内における組織はわが国の大学医学部におけるものとは全く異なるようである。例えばこのグループの長に相当する人物は存在しない。研究は個々の医師に任されており、その間に調整や統一は現在のところでは全く存在しない。これは上記の見学の際にも深く印象づけられた。研究を共同でおこなったり、施設・設備を共有するという方式は現在はおこなわれていない。

インドネシアの医学では臨床・診療を行なうことが過去における伝統であって研究の伝統が存在しなかったためにこのような現状にあるものと思われる。

研究の実態について特に詳細な報告を受けていないから、個々の研究者の能力について

は判断の機会は少なかったが、先方からのプロポーザルに具体的な研究計画が記載されていないこと、WHOのHuman Reproduction ProgrammeのDr. E. Willsonとの面談から得られた情報から判断すると、インドネシアでは上記の伝統のために研究の面では先進国と比較して20年間の遅れが見られること、研究計画を具体的に立案して実行に移す方法の面から指導していく必要性のあることが認識された。しかしこの事実は研究能力を有する人材が存在しないことを意味するものではない。欧米で最新の研究技術を習得して帰国した優秀な医師がインドネシア大学に現在居るし、Dr. E. Willsonが思いつくだけでも他の大学にも数名存在するが、特に他の大学の医師達は設備が存在しないために折角の技術を使うことが出来ずに無為に日を過しているとのことである。

インドネシア大学のみではなく、BKS PENFINの二名の医師にも面接した。この組織はインドネシアの各地の産婦人科医師から成る臨床研究の実行団体で主としてUSAID、FHIその他、製薬会社などから研究費を得て臨床的研究を実行している団体でその成果は学会などで発表されている。かれらは研究の意欲は非常に旺盛であるが研究の計画は全てFHIや製薬会社が立案したものを実行したもので自ら研究計画を立案する能力は無いようである。また基礎的な研究の経験は無い。

1983年におけるFHIのEvaluation Reportから研究の内容を紹介すると次のようなものがある。いづれも臨床疫学的研究であることが理解されよう。

- A) ミニ・ピルの授乳婦人に対する影響、乳汁分泌量、母乳の質、児体重の増加など母児に対する影響に関する研究。
- B) 不妊手術の新しい方法（キナクリンを子宮腔内に挿入する方法）に関する研究。
- C) 皮下埋設法（ノルプラント）の長期間使用による人体への影響に関する研究。
- D) 鉄剤を含んだピルと含まないピルの比較研究。
- E) 授乳婦人の食事と母乳分泌の関係に関する研究。
- F) 避妊法の選択に関する研究。

かれらの中にはインドネシア大学の医師も含まれるがこの団体とインドネシア大学の上記グループとは直接の関係は存在しないようである。

4. 現状のまとめ

- 1) 研究施設・設備は貧弱である。特に、蒸留水製造装置、冷房施設、低温室、超低温冷凍庫、超遠心分離器、電子顕微鏡、組織培養施設、など最新の実験方法を用いるのに必要な基礎的な施設・設備が不足している。
- 2) 最新の研究に関する文献も入手が非常に困難である。但し外国雑誌や文献についてはWHO/UNFPAが供与するプロジェクトを計画中である。
- 3) 研究者については、最新の研究技術を習得した医師は少数存在するが全体としては不足

している。全般的には研究の経験が無いために研究計画の立案能力に欠けるところがあり、その点について十分な指導が必要であろう。最新の研究設備・施設を供与する場合にはそれを利用し得る能力を技術協力のかたちで供与しなければならない。相互に協力してひとつの研究計画を実行する体制が存在しない。またインドネシア大学とBKKBNとの関係が極めて不明確である。BKKBNのスタッフの中には研究能力のある人物は現在存在しない。インドネシア大学の中にも全体を統括して研究施設を効率的に運用出来る人物は現存しない。

5. このプロジェクトに関してインドネシアに対する援助の可能性と問題点

以上のような現状から、もしこのプロジェクトについて援助を行なうとしたら次のような可能性があり、同時に問題点が指摘される。

1) 技術援助とそれに必要な器材、設備の供与のみを行なう。

先方から今後どのような具体的な研究計画が提出されるかによるが、研究計画を実行するために、例えば組織培養、血液中の脂質その他の生化学的物質の定量、電子顕微鏡による組織の研究、Radioimmunoassay（これはWHO/UNFPAと重複するが）、染色体分析、免疫学的研究などの技術を指導することはわが国の研究者にとっては可能である。その場合に研究者を研修のために我国に招聘して技術を指導する方が容易であろう。研修生が技術を習得して帰国時に必要な器材、設備を供与することが考えられよう。

この場合の欠点は上述の如く、研究に必要な基本的な設備、研究室、冷房、蒸留水、冷凍庫、超遠心器などが存在しないか貧弱な状態にあるためインドネシアにおいて研究を続けることが困難になる可能性がある。

2) 小規模の研究所を設立し、同時に技術援助を行なう。

先方から最初に提出されたような膨大な施設ではなく、WHOが韓国の京城大学に援助建設した程度の研究所を設立する。これは具体的には、既に我国がインドネシアに供与した食品・医薬品品質管理施設の動物舎の部分を除き全体を三分の二程度に縮小したもの程度で十分である。全体の冷房、低温室、研究用の水浄化装置、その他の研究に必要な基礎的な設備を最小限備えたものとし、一部には上述の如き、臨床疫学的な研究に必要な調査員の研修室やデータ整理に必要なコンピュータなどを備えたものとする。また高価な研究器材については研究計画毎に研究員が研修を終了した時点で必要な器材を供与する。またその場合にはWHOやFHIなどによる援助と調整を計り協力して重複を避け相互に援助の効率があるように配慮する必要がある。

WHO/UNFPAのプロジェクトではステロイドのRadioimmunoassayによる測定方法に限定してその研究設備と技術をインドネシア大学およびその他の二つの大学で強化することにしており、そのような重点的な援助は効果も明確で効率的で今後の参考にすべきであ

らう。

わが国から供与した研究所の中にそのような援助による設備・器材をおくような援助形式も今後はひとつの方法かも知れない。

3) 解決すべき問題点

いづれの場合にも次のような問題点が解決されることが前提となるであろう。

A) 先方から具体的な研究計画が提出されるか、こちらからそれを示唆してある程度、明確な目的をもった研究について必要な技術協力を行ない得ること。

具体的な研究内容がわからなければ、必要な技術も器材・設備もわからない。但し先方に研究計画を立案する能力のある研究者が少ないとすると、WHOのように研究計画の立案から援助する形式をJICAも採用する必要があるのではないか。

B) インドネシア大学の研究グループとBKKBNとの関係を明確にし、特にこのプロジェクトにおける研究の統括者を明らかにして貰うこと。研究者はインドネシア大学の医師であつても籍はBKKBNにあるようであればBKKBNの研究施設とは言えない。

上述の如く現在のように個々の医師が研究をおこなつてその間に関連がないようでは効率の良い研究は望めない。研究に必要な高価な器材は相互に共同で使用する方が効率的である。また研究施設をインドネシア大学の医師のみではなくインドネシアの他の大学からも一定期間その施設に来て研究を実行出来るような共同研究施設の形式で運営することが望ましいがそれが可能かどうかはあきらかではなく、その点を明確にする必要があろう。

今回のインドネシア側からの Proposal については、無償資金協力との絡み、わが国の協力の受け入れについてのインドネシア側組織の問題（インドネシア大学と BKKBN の関係等）など、いくつかの総括的、事務的等の問題が存在すると思われるが、これらの点には触れず、人口・家族計画、公衆衛生学面からの技術協力の可能性についてのみ報告する。

インドネシアから Proposal された研究所 (A NATIONAL CENTRE FOR BIOMEDICAL STUDIES IN FAMILY PLANNING) の必要性について

インドネシアにおける家族計画事業に関連して、インドネシア側が種々の研究を必要と考え、いくつかの研究を行うことを望んでいることは十分に理解出来る。例えば、種々の避妊法についての研究は主として欧米人種を対象として行われており、インドネシア人を対象とした場合に、効果、副作用等の点で異なった影響を持つ可能性があり、インドネシア人を対象とした避妊法の効果、副作用等についての研究は必要と思われる。特に、保健省への訪問時等にインドネシア側から個人的な意見として言及された、「低栄養状態（栄養失調）・結核・貧血・寄生虫症・甲状腺腫等の病態時における種々の避妊法の影響」等については、インドネシアの国情を考えると、調査研究を行う意味があり、また家族計画事業を推進するうえで役立つことが期待される。今回の Proposal や討議中の発言等からみると、インドネシア側（BKKBN、インドネシア大学）はこれらの研究の方法として、臨床医学的あるいは基礎医学的、実験室的な方法を意図していると思われ、今回の Proposal もこのような方法を用いて研究を行うための施設、機器を中心としたものになっている。インドネシア大学を視察した範囲では、確かに、実験器具、研究施設ともに極めて貧弱な状態であり、家族計画に関連した研究を行うために、わが国からの協力を求めることは十分に理解出来る。

しかしながら、インドネシアにおいて、既に、Pill, I.U.D. を中心とした避妊法が広汎に用いられている現状を考慮すると、臨床医学的あるいは実験室的な研究と同時に、疫学的な方法論を用いた野外調査、すなわち公衆衛生学的な分野での研究もきわめて有益であると考えられる。例えば、種々の避妊法の副作用や避妊薬の連続使用の困難性の問題等については、比較的家族計画の普及率が高く、同時に情報を得やすい地域を選び、パイロットエリアとして情報を集める方法や、避妊薬等の供給システムを同時に副作用等の情報を集める情報システムとして機能するように調整して情報を集める方法（Service Oriented Survey）、さらに基本的な聞き取り調査によって情報を集める等の記述疫学的方法、などを用いて、ある程度の副作用等についての知見を得ることが可能と思われる。今回の調査団の訪問によりインドネシア側の研究方

法等に対する考えが変わる可能性も考慮されるが、少なくとも、現状では、このような疫学的・公衆衛生学的方法論を用いた研究を行う意図はなく、疫学的方法は単に研究におけるデータ処理的な役割とみなしていると思われる。したがって、わが国が協力をを行う場合にも、疫学的、公衆衛生学的な研究分野での協力が有益な結果をもたらすことが期待される。また、資料“RESEARCH AND DEVELOPMENT, BKKBN, 1984”内に記載されているいくつかの研究が必要とされている項目については、公衆衛生学的なアプローチが非常に有効と思われるものがあり（例えば、ある地域において家族計画プログラムを成功に導いた要因の他地域への応用の問題など）、これらについても協力しうる余地があると思われる。

協力をを行う場合に問題点として考えられるのは、臨床医学的、実験室的、疫学的、公衆衛生学的な研究のいずれについても、インドネシア側からの提案には研究内容に具体性が欠けている点である。調査研究を行うにあたっては、まず、どのような内容の研究が実施したいのか、という点が極めて重要であると思われ、その内容に基づいて技術協力の可能性について検討を行うことになると思われる。研究内容に具体性が欠けている現状では、調査研究に対してわが国の研究者が協力しうるか否かを検討することは困難であり、また、施設・研究機器の必要性、研究スタッフの養成、日本側のスタッフ・組織の問題等の面についての検討も行い難く、協力の可能性について検討を加える段階にまだ至っていない印象が持たれる。インドネシア側との討議を通して、臨床医学的、実験室的な分野での具体的な研究プランの必要性や、疫学的方法論を用いた野外調査の重要性が、日本側から指摘されたが、今後のインドネシア側からの Proposal がこれらの指摘をどの程度消化したものになっていくかにより、協力の可能性が大きく変わっていくと思われる。

以上を総括して考えると、現段階では、現状の Proposal に含まれている、家族計画事業に必要なインドネシア側で行いたいと考えている研究に具体性が欠けており、Proposal を受け入れる意義があるか否か、あるいは Proposal された研究センターが真に必要なか否か、などについて、まだ、十分な討議が行える段階ではないと思われる。

但し、調査研究を行うために、最初の Proposal に示されているような大きな研究施設は必要とは考えられず、まず、日本が協力可能な研究が具体的に明らかにされてのちに、個々の研究内容につき、個々に施設、機器、スタッフ等が考慮されるべきと考える。

なお、インドネシア側の研究者の人材層等を推測すると、具体的な研究の内容等についても、日本側の専門家が立案することも考慮すべきかもしれない。

人口・家族計画分野（公衆衛生学分野）からみた協力の可能性

上述したようにインドネシアにおける家族計画事業を推進するための種々の調査研究に、公衆衛生学的な分野から協力をしうる余地、あるいは行える可能性は十分に存在すると考えられる。

但し、インドネシア側の公衆衛生学的・疫学的な研究を行う意志が不明確な段階では、協力の可能性についてのコメントは困難であり、まず、公衆衛生学・疫学的研究を行う意向が確認され、また、ある程度の研究の目的・具体的なプランが明らかになってのちに詳細な検討が可能になると考えられる。実際には、今後のインドネシア側からの新たな Proposal をみて後に検討を加えることになるとと思われる。

現段階で、人口・家族計画分野（公衆衛生学・疫学分野）における協力をを行うとして、問題点として考えられるのは、

- ① インドネシア側スタッフに、量・質ともに、十分な人材が得られない可能性が考えられる。
- ② インドネシア側は疫学的な分野を研究データの処理のための分野としてしか認識していない可能性が考慮され、重要度、方法論についての認識が薄い可能性がある。
- ③ 日本側に家族計画分野における疫学・公衆衛生学の専門家が極めて少なく、インドネシア側の研究協力の要請に答えられない可能性がある。また、人材が存在したとしても、長期または繰り返してのインドネシアへの派遣に応じることが可能かどうかには疑問がある。
- ④ インドネシア側スタッフを日本国内で養成・訓練する場合に、これを行い得る組織・機関が日本にはほとんどなく、また、養成・訓練を担当する人材も少ない。
- ⑤ 疫学・公衆衛生学的な研究に対する技術協力は、基本的に資材・機器をほとんど必要とせず、したがって機器の運用方法等の技術移転といったことはありえず、多くは調査研究方法についての協力になるとと思われる。しかしながら、このような部分の協力については、公衆衛生学関係の学校への研修生、学生の受け入れ、訓練（あるいは留学）という形式になると思われ、技術協力とは意味合いが異なる可能性が考えられる。また、疫学的な調査研究を行う場合に必要な費用は、一般的には人件費、交通費、印刷費といったものが中心となり、調査研究に協力するとしても費用等の支出などに種々の問題点が想定される。フィールドワーカーの養成や、養成のための教育、教育のための施設といった点での協力も可能と思われるが、全般的に技術協力としては成り立ちにくい分野ではないかと思われる。（なお、インドネシア大学を視察した範囲では、疫学研究で用いられる唯一の機器といえるコンピューターは、マイクロコンピューターが相当数既に存在していると思われる。インドネシア大学配付の文書中にも、ミニコンピューター1台及びマイクロコンピューター相当数が既に設置されていることが記載されている。）

8. 添 付 資 料

1. BKKBN組織図及びスタッフ
2. PROPOSAL FOR THE ESTABLISHMENT OF A NATIONAL CENTER FOR BIOMEDICAL STUDIES IN FAMILY PLANNING
3. DECREE OF THE PRESIDENT OF THE REPUBLIC OF INDONESIA NUMBER 64 YEAR 1983
4. RESEARCH AND DEVELOPMENT 1984/85-88/89
5. INSTITUTIONAL DEVELOPMENT PROPOSAL SCHOOL OF MEDICINE UNIVERSITY OF INDONESIA
6. ACTIVITIES IN FAMILY PLANNING AT THE FACULTY OF MEDICINE, UNIVERSITY OF INDONESIA
7. FAMILY HEALTH INTERNATIONAL
8. WHO HRP/CRR/85

Family planning activities in Indonesia were pioneered by the Indonesian Planned Parenthood Association or the Perkumpulan Keluarga Berencana Indonesia (PKBI) in 1957. When the family planning programme was absorbed as an integral part of the national development, a semi-government body known as the National Board of Family Planning or the Lembaga Keluarga Berencana Nasional (LKBN) was established in 1968. As part of the speeding up of the implementation of the family planning programme the LKBN was changed into the National Family Planning Coordinating Board (NFPCB) or the Badan Koordinasi Keluarga Berencana Nasional (BKKBN) in 1970. The BKKBN as a non-department government institution is responsible directly to the President and is in charged with the formulation of family planning and population policies which have to be carried out by the implementing units.

THE NATIONAL FAMILY PLANNING COORDINATING BOARD:

Chairman	: DR. Haryono Suyono.
Vice Chairman	: Dr. Peter Patta Sumbung.
Deputy, Administration & Management	: Dr. Moh. Pangestuhadi Sk.
Deputy, Supervision & Control	: Dr. Soegeng Soepari.
Deputy, Program Development	: Dr. Srihartati P. Pandi. MPH. (Mrs).
Deputy, Program Operational Development	: Dr. H. Mahyudin.
Deputy, Program Personnel Development	: Prof. DR. Santoso S. Hamidjojo, MSc.
Deputy, Program Planning & Analysis	: Drs. Soetedjo Muljodihardjo.
Chief, Bureau of Finance	: Drs. Sunyoto, SKM
Chief, Bureau of Supply & Logistics	: Drs. Aminarto.
Chief, Bureau of Legal, Organization & Work Procedures	: Drs. Mamed B. Kartadisastra.
Chief, Bureau of Administration	: Drs. Sudarmadi.
Chief, Bureau of Planning	: Dr. Pudjo Rahardjo
Chief, Bureau of Recording & Reporting	: Drs. Sardin Pabbadja.
Chief, Bureau of Program Implementation Analysis	: Dr. Sahala Pandjaitan, MPH
Chief, Bureau of Information & Motivation	: Sumarsono, SKM.
Chief, Bureau of Integration Program Services	: Drs. Harry Victor Darmokusumo, MPH.
Chief, Bureau of Guidance to Social Institutions	: Drs. Muchji.
Chief, Bureau of Personnel & Program Workers	: Drs. Slamet Tjiptorshardjo.
Chief, Bureau of Contraceptive Services	: Dr. Hermeni Sutadi (Mrs.)
Chief, Bureau of Guidance for Family Planning Education	: Drs. Sans Hutabarat
Chief, Centre for Development of Family Planning Policy	:
Chief, Centre for Studies on Bio Medicals & Human Reproduction	: Dr. Sunarti Sudomo, (Mrs)
Chief, Bureau of Education & Training of Employees	: Dr. Soemarno, MPH.
Chief, Centre for Studies of National Family Planning	: Drs. Soegang Waluyo, MPH.
Chief, Bureau of Education & Training of Program Workers	: Drs. Slamet Sudarman, MA.
Chief, Centre for Information & Documentation Network of National Family Planning Program	: Drs. Bambang Suryopranoto.
Chief, Centre for Data Processing & Computers	: Drs. Made Are Subrata.
Inspector of Personnel & General Administration	: Dr. Trisnawati Isa, MSc. (Mrs).
Inspector of Finance	: Dra. Daricho Yasin (Mrs).
Inspector of Program	: Dr. Sinurat
Inspector of Material	: Dr. Agus Rukanda
Adviser	: Dr. Henry Pardoko, MPH.
Adviser	: Dr. Ida Sukaman (Mrs).
Adviser	: Dr. Abdullah Cholii, MPH.
Adviser	: Mardhani Saryono Dipo, MA
Adviser	: Drs. H. Moebramsyah.

BKKBN'S ORGANIZATION STRUCTURE

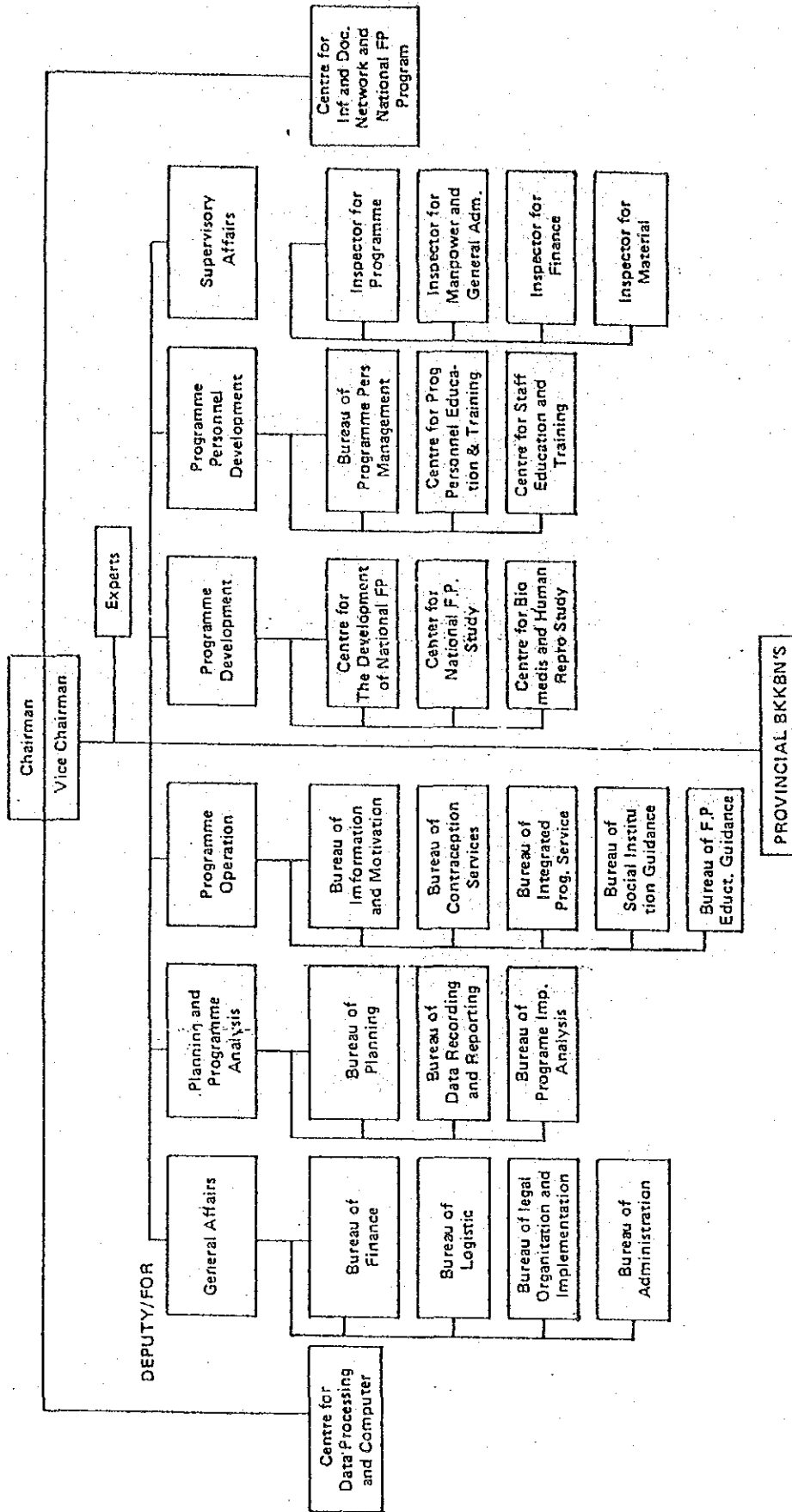


Figure 4.

PROPOSAL
FOR
THE ESTABLISHMENT OF A
NATIONAL CENTRE FOR BIOMEDICAL STUDIES IN
FAMILY PLANNING

Badan Koordinasi Keluarga Berencana Nasional
Jakarta, November 1985.

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1. BACKGROUND AND JUSTIFICATION

To overcome the population problem in Indonesia, the Government of Indonesia, since 1970, has launched a nation-wide family planning program. To coordinate the planning, implementation and evaluation of the National Family Planning program, the National Family Planning Coordinating Board (BKKBN) was subsequently established. To date there are about 7,459 family planning clinics, out of which 80 % are under the Ministry of Health; these clinics together with village contraceptive distribution units, and the private sectors, serve more than 15.0 million current users. This figure corresponds to about 60% of eligible couples.

Out of those current users, about 50% use oral contraceptives, 28% use IUD, approximately 10% use injectables and the rest use condoms and other simple methods. Thus, more than half of these users use hormonal contraceptive drugs (including the implant Norplant).

Pill and IUD are now produced locally, and the establishment of a condom factory has been inaugurated recently. The establishment of the condom factory is assisted by the Japanese Government. Since the type of the Pill and IUD produced locally are limited, a substantial number of contraceptive drugs and devices are still imported.

The objectives of the National Family Planning Program are two : (1) to reduce the birth rate to 22 per thousand live births in 1990, and (2) to institutionalize the small, happy and prosperous family norm. To achieve those objectives, as mentioned

above, the family planning program, in addition to providing contraceptive services, has also embarked on a number of activities including such activities as nutrition education for mother and children, income generating activities for family planning acceptors, village development schemes, and integrated program with various development sectors.

Since the objectives of the national family planning is not only to reduce fertility, but also the welfare of acceptors and their families, research in human reproduction will be not limited to contraceptive drugs or devices, but will include also the area of reproductive health, including infertility and its determinants.

In view of the special conditions of Indonesia, family planning services have been provided according to several guiding principles :

1. The target is couples of fertile age, i.e. husband and wife legally married, and the wife is still of fertile age.
2. The coordinator of this program is the National Family Planning Coordinating Board (BKKBN), which is a non-ministerial government agency directly responsible to the President.
3. It is planned that the organizational structure for providing family planning services will eventually be non-institutional, with private individuals and couples themselves taking the steps necessary to control their fertility.
4. All major methods of contraception are available to Indonesian couples. It is necessary that these methods be safe and effective. Assessment of safety and effectiveness needs to be carried out in Indonesia to assure that proper account is taken of the socio-cultural-economic status of Indonesian men and women.
5. The philosophy of contraceptive service is based on volunteerism and the cafeteria system. Couples are free to choose the contraceptive that most meets their needs.

Contraceptive practice in Indonesia still faces many problems. Contraceptive practice is an attempt to interfere with a normal physiologic process of conception and therefore it must be done with care so as not to endanger the health of the acceptor. Further, several contraceptive methods are medicine, and every medicine is associated with complications and certain side-effects, particularly if used for a long period of time, as is the case in contraception. Furthermore, the users of family planning methods are healthy individuals. The impact of these complications and side effects can be reduced if there is adequate knowledge of the pharmacodynamic and pharmacokinetic characteristics of that medicine.

It is apparent that to support those activities and accelerate the achievement of those objectives, a strong research program is needed, particularly research in biomedicine in family planning. By conducting good quality research, it is expected that program managers have a secure scientific information to improve the quality of services, and therefore increase the confidence of acceptors and community in the safety and efficacy of family planning methods used.

2. RELATED ACTIVITIES.

- 2.1. Aware of the importance of research in supporting the development of the national family planning, and based on the Presidential Decree No.64, 1983, BKKBN has appointed a Deputy for Program Development, who has the responsibility to coordinate and conduct research in family planning. And subsequently three study centres were established, namely¹ the Centre for National Family Planning Policy Development, ² the Centre for National Family Planning Studies, and ³ the Biomedical and Human Reproduction Research Centre, which functions now mainly as coordinator of biomedical studies conducted by the 13 regional centers throughout Indonesia.

2.2. The Government of Japan has provided, over the last 15 years assistance to the National Family Planning Programme through such projects as the Urban Family Planning and the establishment of a Condom factory. Those assistances have contributed significantly to the success of the Indonesian Family Planning Program.

The assistance from the Government of Japan has started at the beginning of the Indonesian Family Planning movement in 1969 and still continues until now. It is expected that the assistance will be continued to beyond 1985. BKKBN considers these assistances as very important in supporting its activities to achieve the goals of the National Family Planning Program.

Although the name of the project is Jakarta Urban Family Planning Project, its activities reach almost all parts of the country. The provision of Family Planning Kits and various equipments, assistance to produce IE&C materials, and training BKKBN personnels in IE&C materials production has strengthened considerably the ability of BKKBN to coordinate and implement its family planning program.

Up to the end of 1984 the above mentioned project has resulted in the production of 13 titles of short opera with each 30 minutes running time, 10 titles of comedy opera, 7 titles of animation or puppet shows, several documentary video cassettes of Family Planning activities, three titles of teaching materials and 70 titles have been copied. A large number of audio cassette programs have been produced which are used for radio broadcastings and for public address systems in districts throughout the country.

In 1983 training was conducted in Jakarta for 35 IE&C personnel. The training lasted for 15 days. The training was organized by the Training Centre and the Bureau of Information and Motivation of BKKBN.

Those activities and the provision of needed equipment have made the Media Production Centre(MPC) at BKKBN central office strong, and therefore more able to conduct its assigned functions. In addition to the activities mentioned above, the provision of IE&C mobile units have made it possible to reach even the most remotest community.

The presence of Japanese experts at BKKBN has benefitted BKKBN through technology transfer. This was made possible by the good cooperative atmosphere created during the interaction of Japanese experts and BKKBN staff. The number of Japanese experts that have served in Indonesia was 47 persons until the end of 1984. In addition to this the sending of BKKBN staff members to Japan, numbering 19 persons until the end of 1984, has also contributed significantly to the abilities of BKKBN staff.

For the purpose of the Urban Family Planning Project, the Government of Japan has contributed, until the end of 1984, an amount of Yen 918 million. This project is coordinated by JICA.

In 1982 an agreement was reached between the Government of Japan and the Government of Indonesia for the Government of Japan to provide loan to BKKBN of an amount of Yen

2,250 million for the purpose of establishing a condom factory in West Java. This project is coordinated by O.E.C.F. The construction was started on 31 January 1985. It is planned that the factory will have daily capacity of 2,730 gross at the end of 1990/91. The Government of Indonesia considers the construction of this condom factory as an important milestone in the effort to be self-sufficient in the supply of contraceptives needed by the National Family Planning Program.

2.3. Under the auspices of the Japan Society for the Promotion of Science a number of universities in Japan and Indonesia have cooperated in research, training and exchange of scientists. A number of research projects have been conducted jointly between Indonesian and Japanese experts. Seminars conducted in Japan were also attended by Indonesian scientists. Several Indonesian scientists have been sent to Japan to receive Ph.D. training in various scientific disciplines. A number of Japanese experts have been visiting Indonesia to assist the Indonesian scientists in planning and conducting planned research projects. This cooperation has benefitted both sides, particularly in exchanging different experiences.

2.4. To date BKKBN is supported by UNFPA with the WHO acting as the executing agency in implementing the project INS/83/F06 "Strengthening Biomedical Research in Family Planning." When this is completed at the end of 1985 an important start will have been made, through some manpower

development and the conduct of a limited number of research projects, in strengthening BKKBN's capability for biomedical research. This is the first project which has been specifically addressed to this end.

- 2.5. At the same time other agencies and organizations have contributed to the capability of several collaborating institutions, mostly universities, to undertake research by providing support for research and some training activities.

USAID either directly or through FHI has provided for conducting of a number of comparative clinical trials of IUD and oral contraceptives. These studies have mainly been undertaken by BKS Penfin either directly or by sub-contract from BKKBN using the network of university departments of obstetrics and gynaecology.

The Population Council has given support to research on Norplant again with much of the research undertaken in universities coordinated by the Kusuma Buana Foundation (YKB).

BKS Penfin has been the principal organization in Indonesia to undertake coordinated multicentred research. With core support from FHI and using mostly the departments of obstetrics and gynsecology in universities many studies, mostly purely clinical, have been or soon will be completed.

This organization as well as YKB will continue to have much in common with BKKBN and both organizations will doubtless provide expertise on which BKKBN may draw.

The Government of Australia has provided in several fields but perhaps the most important in terms of this project has been the training of a number of university staff in reproductive endocrinology both clinical and laboratory.

The World Health Organization has provided fellowships and Research Training Grants to several Indonesian scientists including some BKKBN staff members. supported a workshop on research on family planning and has given support to four short courses on research methodology additional to those held under INS/83/PO6. WHO also has provided the services of a short-term consultant particularly to assist in preparation for the meeting held in December 1984 on National Family Planning Research Policy and Management. This meeting also received some direct support from WHO.

WHO has made several inputs through INS/83/PO6 including manpower development and the design and review of research projects. WHO in 1984 sponsored a national seminar on long-acting hormonal contraception subsequent to a meeting of the steering committee of the Task Force on long-acting hormones. These meeting will provide important contacts between Indonesian scientists and a group of international experts. WHO also is to fund a large field trial of injectable contraceptives which will be carried out by

BKKBN using a network of clinics.

It is expected that several agencies will continue, or start to provide support for biomedical research on fertility regulation during the next few years. These include : USAID, FHI, World Bank, Asian Development Bank and the Government of Japan. All these efforts will relate directly to BKKBN's role in coordinating and conducting research and will provide additional strengthening of capabilities for research.

WHO, also will continue to provide support for the strengthening of research capabilities both by acting as executing agency for UNFPA funded five-year project (1986-1990) and by providing such additional and complementary strengthening inputs as may be needed.

3. OBJECTIVES

A. National.

The national aim of establishing the Center is to support the implementation of the population and family planning program in Indonesia, so that the ideal small, happy and prosperous family can be realized.

B. Intermediate.

1. The control of birth rate and population growth so that it becomes 24.2 per 1,000 people and growth rate decreases to 1.43% at the end of Pelita IV.
2. To increase the number and continuity of Family Planning acceptors by means of their free will, voluntary and by taking under consideration religious norms and the belief

towards One God; and also to increase the number of Family Planning acceptors to a level of 17.24 million at the end of Pelita IV.

3. To improve the welfare of mother and child, increase life expectancy, and decrease infant and maternal mortality rates.
4. To enhance the role and responsibility of women and the young generation towards doing efforts to overcome the population problems.
5. To enhance people's awareness of population problems and directing them to accept and apply the small, happy and prosperous family norm as an appropriate and responsible way of life.
6. To enhance the awareness, roles and responsibilities of the family and society in the management of family planning and population programs.
7. To expand efforts to help control urbanization, improve population distribution and the broadening of manpower in an appropriate and balanced way, especially in population densed areas where agriculture land is getting smaller.
8. To establish a total and integrated population policy, both nationwide and regional, in order to achieve an Indonesian population with the favourable demographic characteristics needed for national development.
9. To expand efforts to upgrade the quality of human resources for better standard of living, intelligence, family and social welfare in the context of institutionalizing the small, happy and prosperous family norm.
10. To develop efforts to strengthen cultural, and religious matters as a means to strengthen the national resilience.
11. To develop efforts to improve ecology.
12. To spread and intensify the Family Planning and Population Program in the whole country and at every strata of the society including new settlements. (um)

C. Specific.

1. To construct a building for the National Centre for Biomedical Studies in Family Planning.
2. To purchase the necessary equipments, furnitures and supplies to be installed in the National Centre for Biomedical Studies in Family, and in order to be able to conduct research in biomedicine for family planning.

Planning

3. To conduct research in biomedicine in family planning.
4. To conduct training both at undergraduate and graduate levels, and to conduct short courses, seminars and workshops in the area of biomedicine in family planning.
5. To recruit and train the necessary manpower to manage the Centre, and to conduct studies and implement the training programmes.

4. LOCATION AND SITE OF THE CENTRE

The National Centre will be set up in urban Jakarta in the premises of the Faculty of Medicine, University of Indonesia. A plot of land measuring about 3,000 square meters will be allocated by the Faculty of Medicine for this purpose. If considered necessary the plot can be widened by including the adjacent parking lot. The plot bordered on Jalan Diponegoro, Jalan Salemba Raya, and the Faculty of Medicine and the Central Hospital Tjipto Mangunkusumo, which is located in the centre of the city.

It will consist of a multistorey building, equipped with the necessary laboratory and clinical facilities and equipments to conduct research and training.

5. PLANNED ACTIVITIES

The activities planned, particularly in research are based on the mandate of The Presidential Decree No.64 1983, which governed the organization, functions and activities of BKKBN, and of the functions of universities, called the Tri Dharma consisting of research, education and community service.

One of the mandate of BKKBN is to conduct research specifically in the area of biomedicine in family planning. This specific mandate coincide with the functions of the University of Indonesia. Therefore this joint activities between BKKBN and the Faculty of Medicine, University of Indonesia will be beneficial for both organizations.

Within BKKBN a Biomedical and Human Reproduction Research Centre was established in early 1984 based on the Presidential Decree No.64 mentioned above. Currently this centre functions as coordinator of research conducted by universities and other research organizations. The grouping of research activities is as follow :

- a. Reproductive Endocrinology
- b. Reproductive Andrology
- c. Steroidal and Non-Steroidal Contraceptive
- d. Pharmacology
- e. Infertility
- f. Reproductive Health

The main purposes of biomedical research in the National Family Planning can be grouped into three areas :

1. Protection of the health of acceptors.
2. Testing and adoption of new contraceptives.
3. Development of new contraceptives.

A matrix type of relationship can be visualized as follow :

Group	Purpose		
	Protection of Acceptor	Testing and Adoption of New Contraceptive	Development of New Contracept
1. Reproductive Endocrinology			
2. Reproductive Andrology			
3. Steroidal Non-steroidal Contraceptive			
4. Pharmacology			
5. Infertility			
6. Reproductive Health			

The followings are specific research areas that need to be conducted :

5.1. Reproductive Endocrinology

5.1.1. Protection of F.P. Acceptors

1. Return of Fertility after contraceptive use
2. Return of ovulation post partum. breast feeding and non-breast feeding mothers
3. Normal Parameter of Female Reproduction
4. The relationship between bleeding pattern and hormonal level
5. Influence of steroidal contraceptive on sexual behavior

5.1.2. Testing and Adoption Of New Contraceptive

5.1.3. Development of new contraceptive

1. Development of HGC Vaccine
2. The use of Gn RH Hormone as Contraceptive
3. The use of Inhibin as Contraceptive

5.2. Reproductive Andrology

5.2.1. Protection of F.P. Acceptors

1. Research of the safety, efficacy and acceptability of male methods (vasectomy, condom)
2. Normal Parameter of Male Reproduction

5.2.2. Testing and Adoption of New Contraceptive

1. Field trial of long acting Androgen

~~5.2.3.~~ Development of New Contraceptive

1. Combination of Gestagen and Androgen
2. Study of the Structure and Functional capacity of residual Sperms in male using contraception
3. Study of epididymal function
4. The use of vasal plugs
5. Development of Vaccine as male contraceptive.

5.3. Steroidal and Non-sterodal Contraceptive

5.3.1. Protection of F.P. Acceptors

1. Steroid levels in the blood of breastfed children whose mother use contraceptive
2. Minimising the disturbances of bleeding pattern
3. Prospective studies of steroid user
4. Relationship between steroid contraceptive and

Cardio Vascular Disease, Ca Cervix, and Ca Mammae

5. The relationship between Uterine size and several types of IUD
6. Determination of Blood Loss
7. Prospective studies of non-steroid contraceptive user
8. The relationship between IUD use and PID (Pelvic Inflammatory Disease)
9. The relationship between contraceptive use and endemic diseases
10. Quality control of contraceptives (distribution and storage)
11. Return of Fertility after contraceptive use
12. Outcome of pregnancy after contraceptive use
13. The use of traditional F.P. methods

5.3.2. Testing and Adoption of New Contraceptive

1. Effectiveness of Steroid Contraception in Anemic User
2. Study on the use of Norplant

5.3.3. Development of New Contraceptive

1. Biodegradable Implant
2. Filshie Clips
3. Acceptance of Vaginal Ring
4. The effectiveness of Steroid IUD
5. Development of new contraceptive (steroidal or non-steroidal)
6. The effectiveness of surgical sterilization and chemical sterilization

5.4. Pharmacology

5.4.1. Protection of F.P. Acceptors

1. Metabolic effects of all kind of Contraceptives
2. Pharmacokinetic and Pharmacodynamic of Long Acting Agents
3. Determination of Copper in blood among IUD users
4. Interaction between Contraceptives and Drugs

5.4.2. Testing and Adoption of New Contraceptive

1. Clinical Trial of New Contraceptive Agent (Phase I, II and III)
2. Pharmacokinetic and Pharmacodynamic Study of Long Acting Agent
3. Monthly Injectable Contraception

5.4.3. Development of New Contraceptive

1. Identification of active substances of traditional contraceptives
2. Preclinical trial of traditional contraceptives

5.5. Infertility

1. Epidemiology of Infertility in Indonesia
2. The relationship between Sexual Transmitted Disease (STD) and Fertility
3. The influence of Varicocele on Fertility
4. Studies on In-Vitro Fertilization
5. Microsurgery for Reversal of Sterilization

5.6. Reproductive Health

1. Influence of Steroid Contraceptive on the quality and quantity of breast milk
2. Influence of F.P. on Mortality

3. Influence of F.P. on Maternal Morbidity and Mortality
4. Management of contraceptive failure
5. The use of Prostaglandin in Human Reproduction (cervical dilatation & induction)
6. Study of Placenta Hormones

6. LABORATORY AND CLINICAL EXAMINATIONS AND EQUIPMENT NEEDED

6.1. Laboratory and clinical Examinations

1. Determination of Blood Lipids
2. Determination of Blood Carbohydrate/Glucose
3. Determination of Blood Proteins
4. Determination of Liver Functions
5. Determination of Blood Coagulation
6. Determination of Serum Ferritin
7. To perform Hormonal Radio Immuno Assay
8. To perform Hormonal Enzyme Immuno Assay
9. To perform Hormonal Fluoro Immuno Assay
10. To determine the circulating antibodies
11. To determine the endometrium functions
12. To determine the uterine functions
13. To determine the ovarian functions
14. To determine the tubal functions
15. To determine the cervical functions
16. To conduct semen analysis
17. To determine the sperm antibodies
18. To determine the blood copper level
19. To determine the cardiovascular functions

20. To conduct Endometrium Biopsy
21. To conduct Chorion Biopsy
22. To conduct Hystero-Salpingoscopy
23. To conduct Fetoscopy
24. To conduct Amnioscopy
25. To perform Tissue Culture
26. To determine the size of the uterus
27. To perform Laparoscopy
28. To perform Radio Receptor Assay
29. To perform determination of blood chemistry

6.2. Laboratory Equipment

1. Spectrophotometer (Double Beam)
2. Ultra Centrifuge
3. Centrifuge
4. Glass Ware
5. Chemical (Kits, Buffer, etc.)
6. Mille Q Water System
7. Water Pre-Treatment Unit
8. Freezer (+4 and -15 degrees)
9. Refrigerator
10. Electrophoresis Unit
11. Gamma Counter
12. Beta Counter
13. ELIZA
14. Refrigerated Centrifuge
15. Clean Laboratory Benches

16. Laboratory Sink Units (Multiple)
17. Vacuum Pump
18. Vacuum Jar
19. Balances : Micro, Fine, Course
20. Voltage Stabilizer
21. Autoclave
22. Incubator
23. Microtome
24. Ultra Microtome
25. Laminar Flow Unit
26. pH Meter
27. Micro Filter
28. Photo Microscope and TV Camera
29. Stereo Microscope and Photographic attachment
30. Inverted Microscope, Photograph and Phase Contrasts
31. Electron Microscope, Scanning and Transmission
32. Operating Microscope
33. Ultra Violet Light
34. Air Conditioner
35. Cold Room
36. Biochemiluminescence Meter
37. Pipettes
38. Cell Counter
39. Atomic Absorption Spectrophotometer (AAS)
40. High Pressure Liquid Chromatography (HPLC)
41. Ultra Sonography (USG)
42. Wing Sound
43. Amnioscope

44. Fetoscope
45. Laparoscope
46. Ultrasonic Doppler
47. Cavimeter
48. Clinical Procedure Room Equipment
49. Metabolic Ward Furniture and Equipment
50. Animal Facility (Rats, Hamster, Monkey etc.)
51. Computer
52. Tissue Culture Equipments
53. Polyacrylamide Gel Electrophoresis
54. Air Dryer
55. Distilled Water Unit
56. Extraction Hood
57. Incinerator
58. Screens for Fluorography.
59. Waterbath
60. Dry Ice Making Equipment
61. Vortex and Multiple Vortex
62. Mixer and Magnetic Stirrer
63. Lyophilisator
64. Geiger Counter
65. Homogenizer
66. Lead Shielded Container
67. Fraction Collector
68. Chromatography Column (with pump)
69. Automatic Pipetting Machines

6.3 Supporting Equipment

1. Telex
2. Telephone
3. Intercome (PABX)
4. Tape Recorder
5. Typewriter
6. Slide Projector
7. Movie Projector
8. O.H. Projector
9. V.C.R. + Monitor
10. Word Processor + printer
11. Public Adress System
12. Stencil Machine
13. Electronic Stencil Machine
14. Offset Machine
15. Main Frame Computer
16. Power Plant
17. Washing Machine
18. Elevator
19. Water Heater
20. Vehicle (four wheels, two wheels)
21. Photocopy Machine
22. Dishwasher
23. Back-up power generator

7. THE LABORATORY

7.1. The Development.

7.1.1. Phase One

The Phase One development would enable basic studies in humans and experimental animals such as RIA, histology, clinical, epidemiology, receptor. This phase will provide the facilities in support of future expansion.

In Phase One the following facilities and services will be established (GENERAL LABORATORY):

1. Radioimmunoassay, ELISA
2. Preparation and Storage of Isotopes used in RIA
3. Data processing
4. Other procedures related to RIA including solvent extraction etc., preparation of reagents, washing of glasswares etc.
5. Staff facilities: Reporting
6. Secretariat
7. Library
8. Seminar Room
9. Storage
10. Office Space
11. Histology
12. Animal Holding and Surgery.

7.1.2. Phase Two

Phase Two will enable more detailed studies of protein purification and basic studies of the responses of cells in vitro.

This phase will consist of the provision of the following equipments and the development of expertise in:

1. High Performance Liquid Chromatography (HPLC)
2. Tissue culture
3. Polyacrylamide Gel Electrophoresis
4. Ultracentrifuge

7.1.3 Phase Three

To establish a "core" facility for STEM

7.2. Function and Equipment

7.2.1. General Laboratory

1. Purpose

General bench space for routine procedures including RIA, other assay, preparation prior to use of specialized equipment areas.

The majority of technical and graduate staff will normally be accommodated in this laboratory. It should be kept simple to allow for flexibility. Non-inflammable procedures only.

2. Equipment

1. Benches, furniture
2. Multiple sink units
3. Vacuum, gas, airlines, power
4. Glassware, equipment storage
5. Multiple -15 degrees freezer
6. Multiple + 4 degrees freezer
7. RIA, ELISA equipment
8. Mille Q (MQ) water system- tissue culture
gradewater
-HPCL gradewater
9. Water pre-treatment unit

7.2.2. Proximity to General Laboratory

A. Four Degrees Room

1. Purpose

Procedures requiring low temperature because of thermal lability of reagents, etc. Some short-term storage of reagent. Incubation of RIA, other assay systems. Facility for chromatography, and purification.

2. Equipment

Column supports-wall-mounted
Shelving
Bench Space

B. Solvent Extraction and Flammable Procedures Lab

1. Purpose

To provide facility in which solvents may be handled in an explosion-proof environment. Unique flame-proof power switches, outlets, light fixtures to be provided. Power outlets unique to prevent use of non-flame-proof equipment.

2. Equipment

Fume extracted bench area

C. Reagents and Balances

1. Purpose

Storage of reagents currently in use, weighing of reagents.

2. Equipment

Shelving

Balances - micro
- fine
- course

Vibration - free bench balances

D. RIA Centrifuge Room

1. Purpose

Centrifugation, general and RIA.
Processing of RIA tubes-

2. Equipment

Refrigerated centrifuges(x2)
Sink, vacuum tube(x2)

E. Equipment Room

1. Purpose

To provide a stable environment for thermal and/or voltage sensitive equipment. Localization of all equipment close to computer facilities interfacing of equipment as required(future HPLC etc).

2. Equipment

High capacity air conditioners.
Stabilized voltage power supply.
Spectrophotometer
Gamma counter
etc.

F. Computer/Data Processing

1. Purpose

To house mainframe in a controlled environment.
Desk space for peripheral devices, operators.

2. Equipment

Mainframe computer
Smaller devoted systems
Printer
Plotter

G. Reporting

1. Purpose

Desk space for use by technicians, graduates etc.

2. Equipment

Desks
Filing cabinets
VDU's (Video Display Unit)

H. Glass Washing

1. Equipment

Washer, air dryer, distilled water.

7.3.3. Isotope Area

1. Purpose

Iodination, purification, storage.
Purification of other labelled substances and storage.
Radioactive wastes.

2. Equipment

Extraction hood containing all utilities, including sink, power outlets.
Fraction collector
Lead shielding
Combined -20/+4 degrees refrigerator.

7.3.4. Library

1. Purpose

Storage of current and bound journals and books, equipment catalogues.

2. Equipment

Security systems
Photocopy facilities
Writing desks
Shelving
Microfilm, video.

7.3.5. Storage

1. Purpose

Longer-term storage of equipment, reagents and disposables

2. Equipment

Security-inventory
Shelving
VDU, linked to mainframe

7.3.6. Seminar Room

1. Equipment

Seating for 50-80 people, video, slide and overhead.

7.3.7. Animal Holding-Surgery

1. Purpose

To provide long-term of experimental animals. Should be organized on a "cubical base" and contain facilities for small and large animal use.
Surgery and procedures rooms

2. Equipment

Incinerator/waste disposal.
Cages; mouse, rodent, primate, goat
Nutrient handling
Sanitation
Surgical-autoclave, illumination
-tables, etc
Staff change, disinfection area
Security system.

7.3.8. Staff Refreshment

1. Purpose

To provide an area outside the laboratory for food consumption.

2. Equipment

Coffee/tea
Refrigerator
Chairs, tables

7.3.9. Histology-Microscopy

1. Purpose

Fixation, embedding, section preparation, staining, photomicrography of specimens.

2. Equipment

Embedding, processing
Microtome, refrigerated in autoradiography on frozen sections is to be done
Fumehood
Microscopes(x2)
Photomicroscope(x1)

7.3.10. Office Space

1. Purpose

Provide office for Director, senior staff, secretariat. Includes requirement for clinical usage. A separate procedures rooms allowed for.

Director, Senior staff : 500
Graduate-Postgraduate : 200
General Secretariat : 50
Patient Procedures/
waiting area : 300

7.3.11. HPLC : can be incorporated into general lab area.

7.3.12. Tissue Culture

1. Purpose

To provide the controlled environment necessary for maintenance of sterility and cultures. Provision is made for preparative area, airlock and autoclave/sterilization.

2. Equipment

Laminar flow units(x2)
Microscope phase optics(x1)
Inverted phase photo microscope
Autoclave
-20 , +4 refrigerators
MQ water supply
U.V.N (overnight)
Incubators(x2)
Gas, vacuum lines
Glas washing
Positive pressure ventilation

7.3.13. 2-D POLYACRYLAMINDE GEL/ELECTROPHORESIS(PAGE)

1. Purpose

To provide a facility for localization of high voltage equipment and extremely toxic chemicals used in PAGE.

2. Equipment

Power supplies(x2)
1-D, 2-D tanks etc.
Wash-up

Chemical storage/balance
 Air dryer
 Screens for fluorography
 Stain/destaining/blotting

7.3.14. Electron Microscopy, Ultrastructure(SEM,TEM)

1. Purpose

To provide a specialist "core" facility for ultrastructured evaluation of specimens.

2. Equipment

Tissue preparation- embedding
 - ultramicrotome
 - critical point drying
 - coating, staining

Scanning Room(SEM)
 Transmission Room(TEM)
 Photographic lab darkroom
 Specimen storage
 Reporting.

8. FLOOR SPACE

8.1 Facilities and Rooms Required

The following facilities and rooms are functionally required for this center for which the total area, including space commonly used such as corridor, staircase, elevator etc. will be 12,000 m² approximately.

SECTOR	FACILITIES & ROOMS
Laboratory & Related Facilities	General Laboratory Bioclean Room 4-Degree Room Solvent Extraction Room Reagents and Balances Room RIA Centrifuge Room Computer/ Data Processing Room Isotope Area Histology-Microscope Room Tissue Culture Room 2-D Polyacrylamide Gel Room Reporting Room Equipment Room Glass washing Room

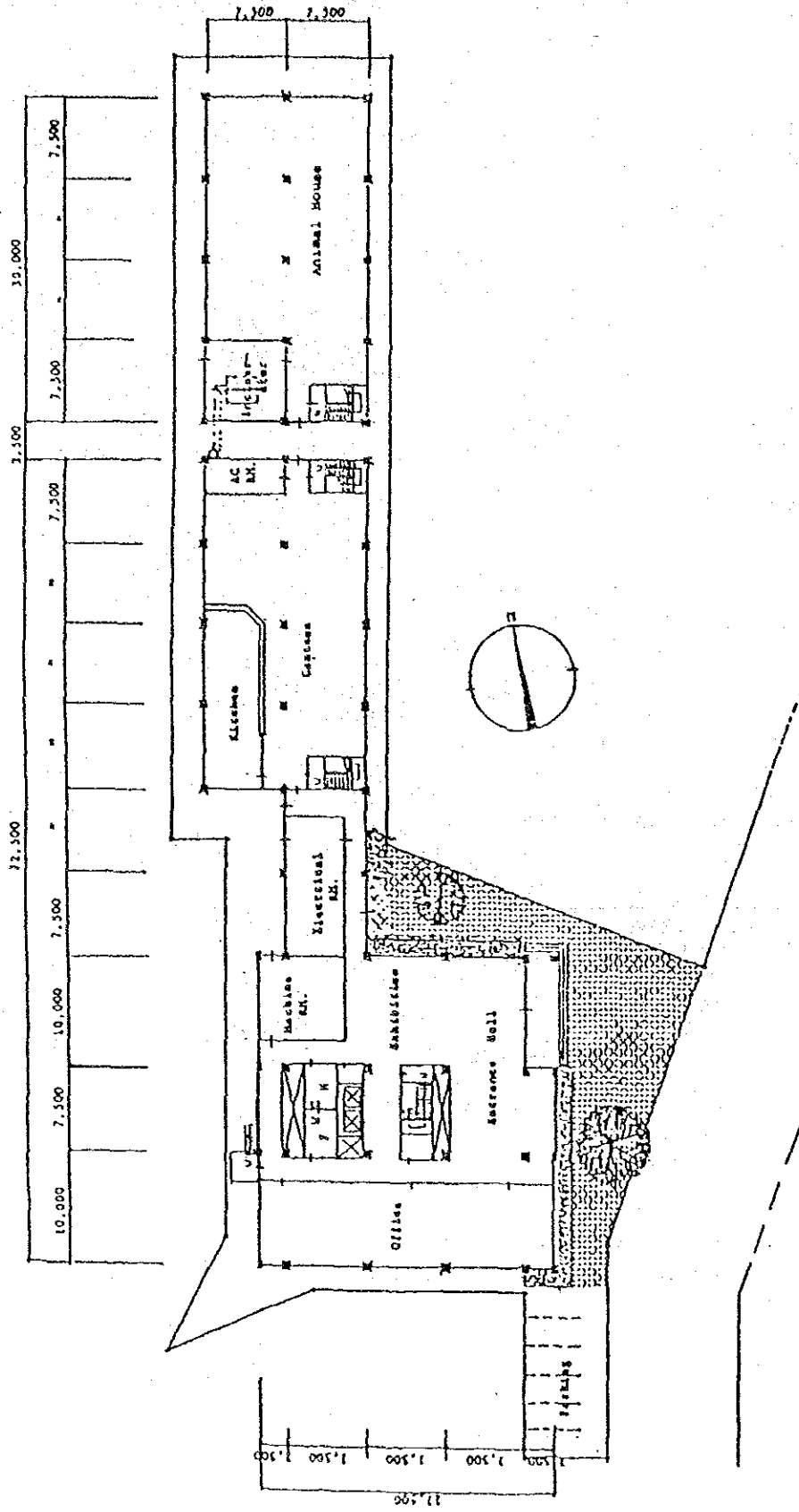
Animal Experiment

Animal Holding Surgery
Animal House
Shower Room
Incinerator

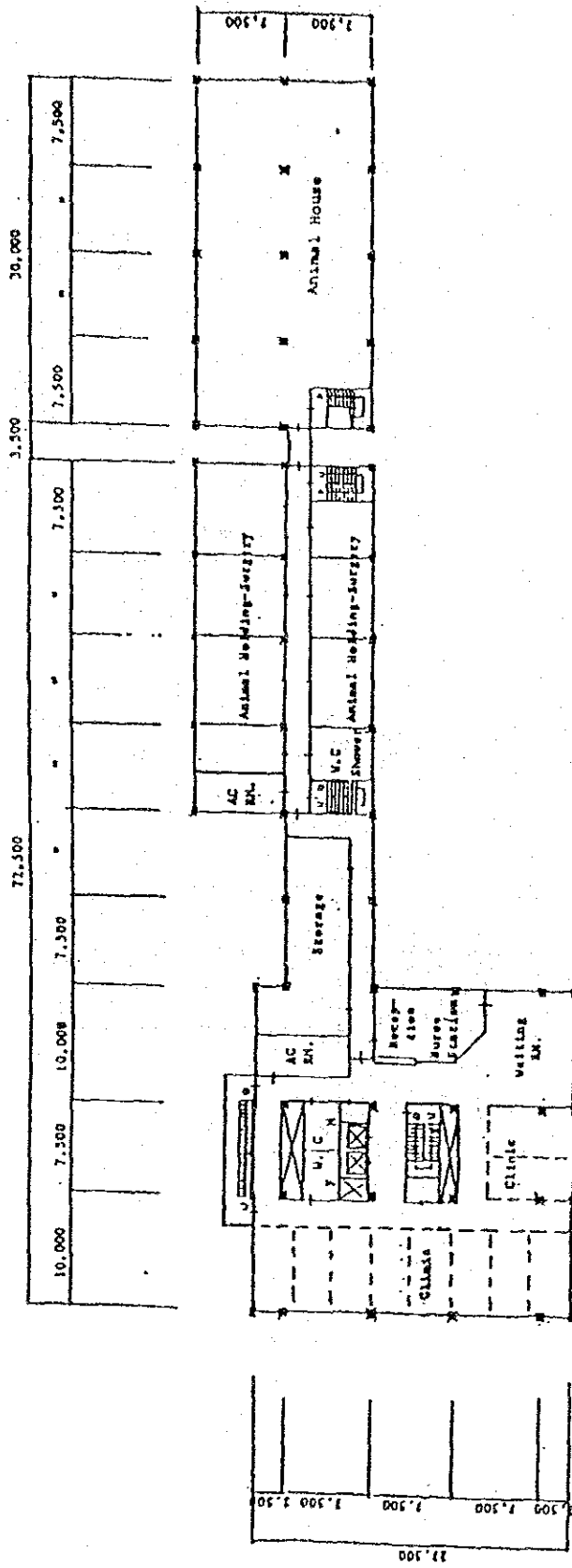
SECTOR	FACILITIES & ROOMS
Clinical Area	Clinic Nurse Station Waiting Room
Education & Instruction	Seminar Room Audio-Visual (AV) Hall A.V. Lecture Room Lecture Room Library
Management & Administration	Office Room Meeting Room Entrance Hall Exhibition Hall Canteen
Others	A/C Machine Room Electrical Room Storage Toilet

8.2 Floor Space Required

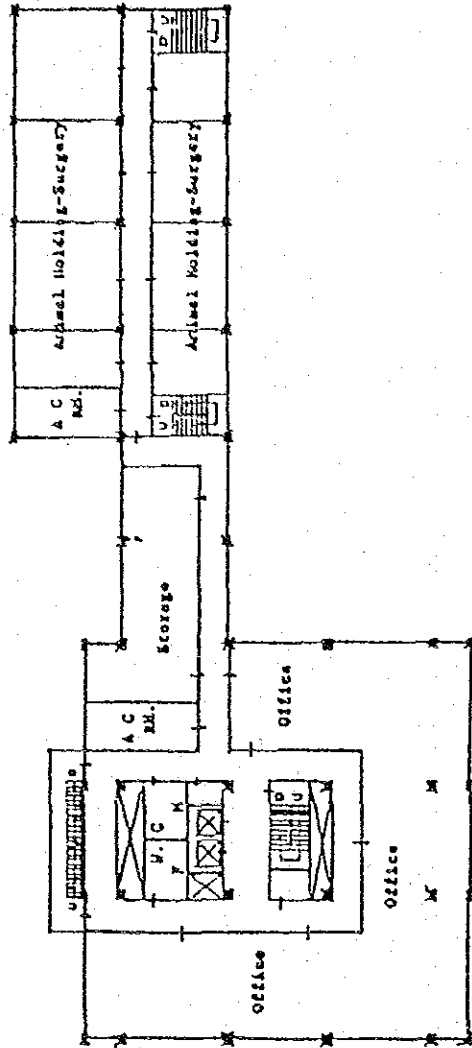
FLOOR AREA	SQUARE METERS
1 FL	1.768
2	1.768
3	1.318
4	1.318
5	1.318
6	1.318
7	1.318
8	772
9	756
PH	368
Total	12.022



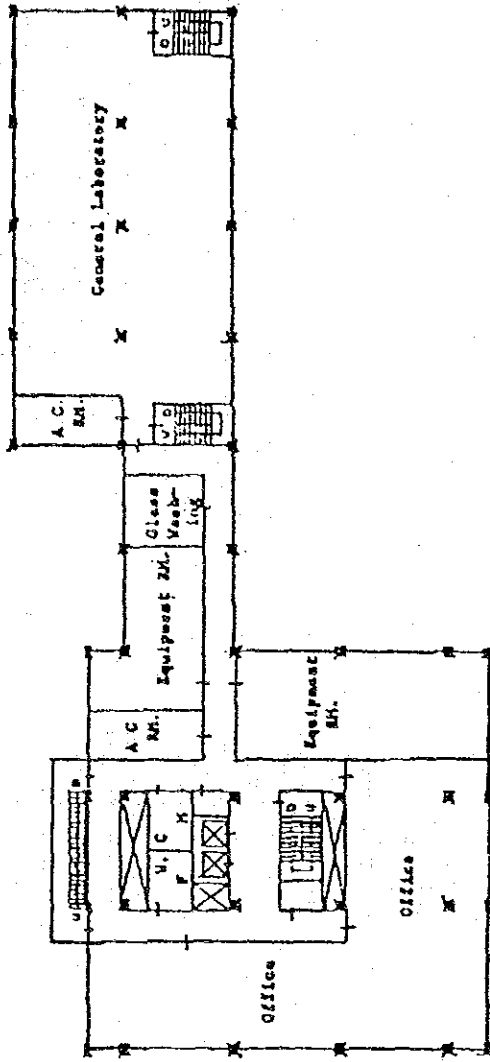
1ST FLOOR PLAN S:1/500
PLOT PLAN



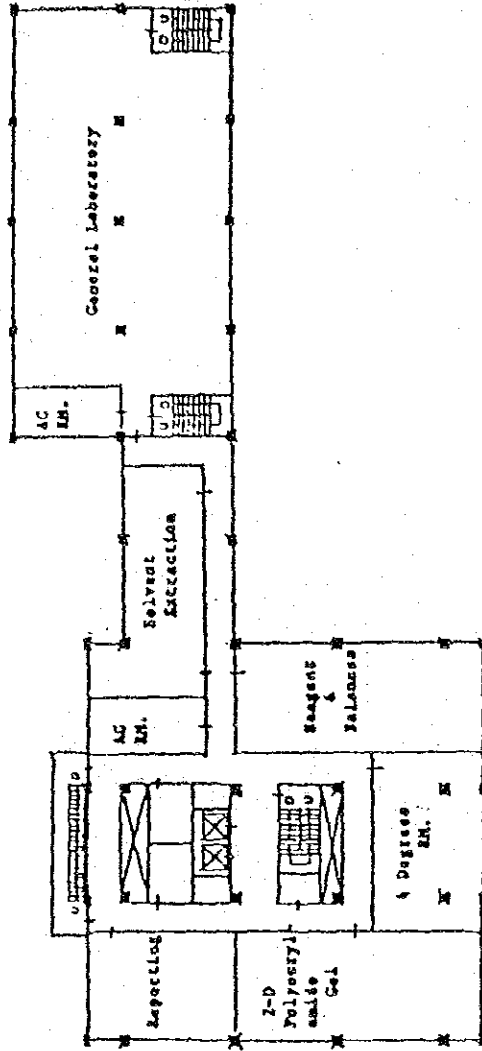
2ND FLOOR PLAN S:1/500



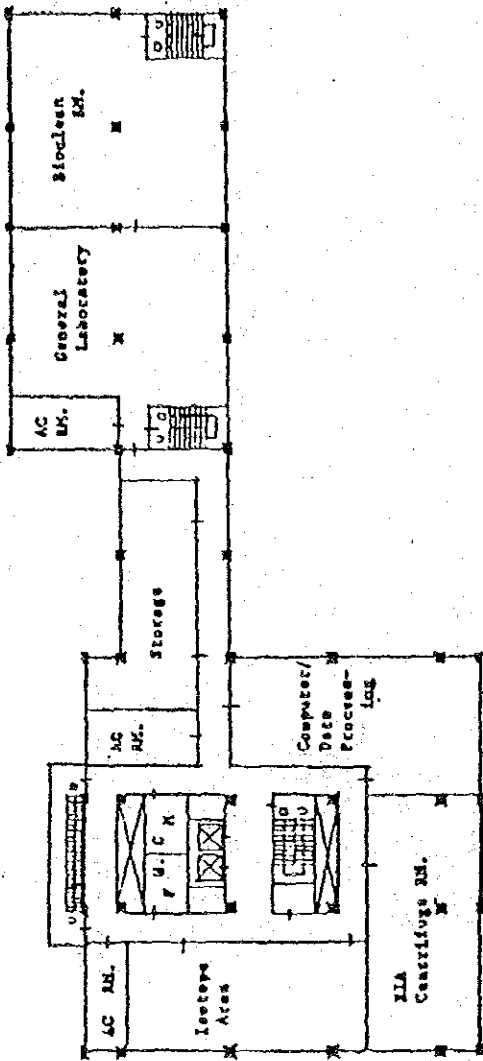
3RD FLOOR PLAN S:1/500



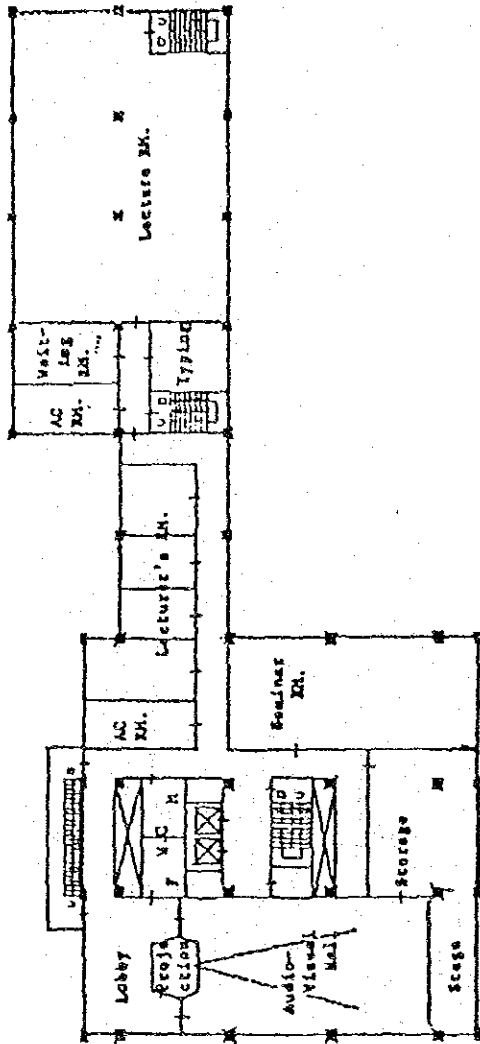
4TH FLOOR PLAN S:1/500



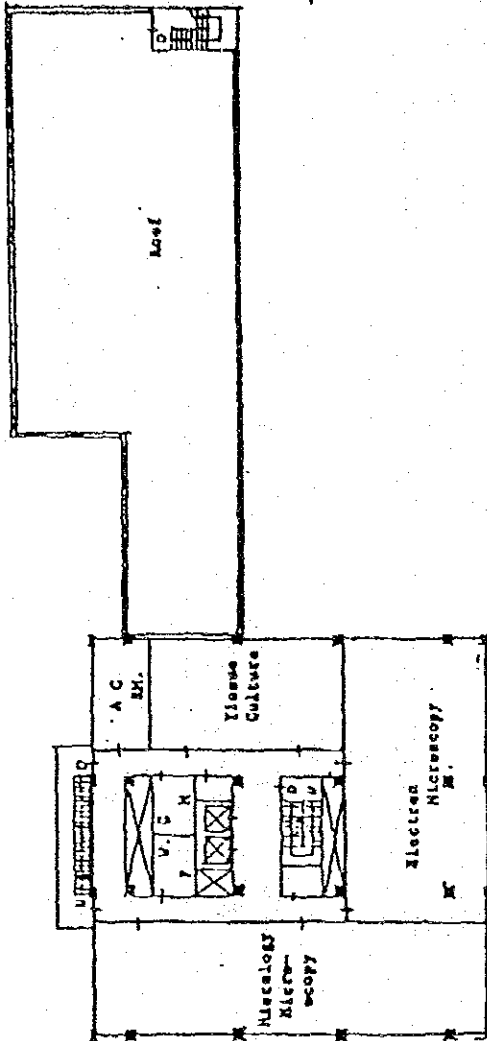
5TH FLOOR PLAN S:1/500



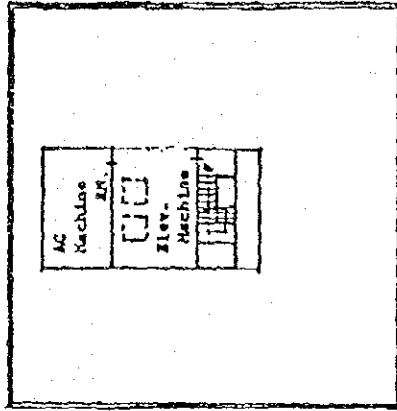
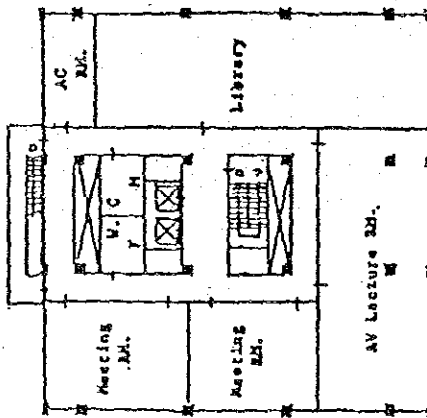
6TH FLOOR PLAN S:1/500



7TH FLOOR PLAN S:1/500



8TH FLOOR PLAN S:1/500



9TH FLOOR, P.H. PLAN S:1/509

3,500	PH	Elev. Machine RM.		
3,750	9FL	Library	AV Meeting	
"	8FL	ELECTRON MICROSCOPY		
"	7FL	AV Hall	Seminar RM.	Lecturer's RM.
"	6FL	Isotope	RIA Computer	Storage
38,500	5FL	2-D Polyacrylamide		General Lab.
"	4FL	Office	Equipment	General Lab.
"	3FL	Office	Storage	Animal Holding-Surgery
3,750	2FL	Clinic	Reception	Animal Holding-Surgery
4,400	1FL	Office	Entrance Hall	Machine RM.
CL				Animal House
				Animal House
				Incubator

SECTION S:1/500

9. MANPOWER DEVELOPMENT

The following are the manpower needed :

9.1. Scientist

Types	Needed	Available	To be Trained (within 5 years)
1. Andrologist	3	1	2
2. Reproductive Biologist	2	0	2
3. Reproductive Physiologist	2	0	2
4. Reproductive Biochemist	3	0	3
5. Pharmaceutical Chemist	2	0	2
6. Pharmacologist	3	0	3
7. Reproductive Endocrinologist	7	3	4
8. Reproductive Epidemiologist	2	1	1
9. Urologist	2	0	2
10. Organic Chemist	2	0	2
11. Synthetic Chemist	2	0	2
12. Biostatistician	2	0	2
13. Clinical Pathologist	2	0	2
14. Pathologist	2	0	2
15. Veterinarian	2	2	0
16. Gynecologist	2	2	0
17. Geneticist	2	0	2
18. Microbiologist	2	0	2
19. Immunologist	3	1	2
20. Demographer	2	1	1
21. Anesthesiologist 2	2	2	0
22. Electron Microscopist	2	0	2
23. Oncologist 2	2	0	2
24. Perinatologist 2	2	0	2
Total	57	13	44

9.2. Technician

Types	Needed	Available	To be Trained (within 5 years)
1. Computer Programmer	2	0	2
2. Computer System Analyst	1	0	1
3. Computer Operator	5	0	5
4. Electric Engineer	1	1	0
5. Electronic Engineer	1	1	0
6. Nurse	10	10	0
7. Midwife	10	10	0
8. Chemical Laboratory Technician	5	5	0
9. Clinical Laboratory Technician	5	5	0
10. Microscopic Laboratory	5	5	0
11. Biology Laboratory Technician	4	2	2
12. RIA Laboratory Technician	4	2	2
13. Electron Microscopic Technician	2	0	2
14. Social Workers	5	5	0
Total	60	46	14

9.3. Administrative Support

Types	Needed	Available	To be Trained (within 5 years)
1. Office Manager	1	1	0
2. Secretary	3	3	0
3. Treasurer	1	1	0
4. Typist	5	5	0
5. Guards (Fire, Safety)	10	10	0
6. Messenger	5	5	0
7. House Keeping Personnel	10	10	0
8. Receptionist	3	3	0
9. Telephone Operator	2	2	0
Total	40	40	0

10. GOVERNMENT INPUTS

The inputs from the Government of Indonesia to this project will consist of (1) provision of a plot of land, (2) provision of manpower (including their salary), (3) maintenance costs of the Centre (including power, gas and water), (4) additional research funds, and (5) local meeting, seminars and workshops.

Specifically the Government of Indonesia will make the following arrangements :

1. To secure land necessary for the construction of facilities and to clear, fill and level the site as needed before the start of construction.
2. To prepare the access road to the site before the start of construction.
3. To provide connections for electricity, telephone to the site.
4. To undertake incidental civil work such as planting and fencing, if needed.
5. To obtain the building permit before construction.
6. To bear all expenses, other than those to be borne by the grant aid, necessary for the construction of the facilities as well as for the transportation and installation of the machinery and equipment.

11. BUDGET

11.1. Budget estimate to be requested to the Japanese Government

1. <u>Construction</u> (Including design, material and building facilities).	US\$ 16,000,000.
2. <u>Equipment</u> (Including vehicles)	US\$ 6,000,000.
3. <u>Expert</u> (for 5 years)	US\$ 2,000,000. <i>41%</i>
4. <u>Fellowship</u> (for 5 years)	US\$ 1,000,000. <i>21%</i>
<hr/>	
Total for Japanese Government	US\$ 25,000,000.

(50~55%)

11.2. Budget estimate to be borne by the Indonesian side

1. <u>Land price</u>	Rp 6,000,000,000.
2. <u>Preparation</u>	Rp 466,000,000.
1. Site Survey (site measurement, soil investigation)	Rp 6,000,000
2. Clearing, filling, leveling of site	Rp 25,000,000
3. Access road	Rp 30,000,000
4. Planting, fencing	Rp 25,000,000
5. In-take of electricity, telephone, water, sewage, etc., including licence procedure	Rp 290,000,000
6. Obtaining building permit	Rp 70,000,000
7. Other expenses not included in the grant aid	Rp 20,000,000
3. <u>Research</u> (Chemicals, pipettes, glasswares, etc)	Rp 150,000,000.

man power??

Total for Government of Indonesia or equivalent to	Rp 6,616,000,000. US\$ 6,014,545. <i>121%</i>
<hr/>	
Grand Total	US\$ 31,014,545.

1 US\$ = Rp 1,100.

Document No.1

MEETING ON NATIONAL FAMILY PLANNING RESEARCH
POLICY AND MANAGEMENT

Jakarta, December 10 - 12, 1984

DECREE OF THE PRESIDENT
OF
THE REPUBLIC OF INDONESIA
NUMBER 64 YEAR 1983

Badan Koordinasi Keluarga Berencana Nasional
Jakarta, 1984

(Seal of the President)

PRESIDENT
REPUBLIC OF INDONESIA

DECREE OF THE PRESIDENT OF THE REPUBLIC OF INDONESIA

NUMBER 64 YEAR 1983

THE PRESIDENT OF THE REPUBLIC OF INDONESIA,

Considering

- a. that the exercises of The National Family Planning Program as an integral part of national development need be enhanced by way of utilizing and expanding to a greater extent the capacities of facilities and resources available ;
- b. that for the purpose of better ensuring an adequate level of people's welfare it is deemed necessary to speed up the reduction of the rate of birth, and therefore to further encourage and make more effective the coordination and participation of all elements concerned in the society and Government towards the attainment of the given objectives and targets ;
- c. that in relation to matters referred to in letters a - and b it is considered necessary to improve the organization of the National Family Planning Coordinating Board as stipulated in Decree of the President Number 38 Year 1978;

With Due Regard To

1. Article 4 par (1) of the 1945 Constitution;
2. Law Number 5 Year 1974 on Basic Statutes of Regional Administration (State Gazette Year 1974 Number 38, Addendum to State Gazette Number 3037);
3. Decision of the President Number 25 Year 1983 on Status, Main Duties, Functions, and Work-System of Ministers of State;

4. Decree of the President Number 45/M Year 1983 on
The National Board of Development Cabinet IV;

H A S D E C I D E D :

By Revoking of the Presidential Decree Number 38 Year 1973 on
The National Family Planning Coordination Board;

ay Down : THE PRESIDENTIAL DECREE OF THE REPUBLIC OF INDONESIA ON THE NATIONAL
FAMILY PLANNING COORDINATION BOARD.

CHAPTER I

GENERAL STIPULATIONS

Article 1

In this Presidential Decree, referred to as the National Family
Planning Program shall be the program of family planning as a
whole, integrated into other development programs which support
the smooth implementation of family planning programs.

CHAPTER II

STATUS, MAIN DUTIES AND FUNCTIONS

Article 2

- (1) The National Family Planning Coordinating Board, in this the
Presidential Decree abbreviated as the NFPCB, shall be a Non
Departmental Government Institution, the status of which
being under and responsible directly to the President.
- (2) The NFPCB shall be headed by a Chairman.

Article 3

The NFPCB shall shoulder the main duty of preparing the formulation of a general policy and coordinating the exercises of the National Family Planning Program in an over-all and integrated manner.

Article 4

In performing its duty as referred to in Article 2, the NFPCB shall carry out these functions :

- a. Preparing the formulation of a general policy on the National Family Planning Program in an over-all and integrated manner;
- b. Coordinating the planning and conducting an analysis with regard to the implementation of the National Family Planning Program;
- c. Guiding and carrying-out the operational activities of the National Family Planning Program;
- d. Coordinating and carrying-out activities of research and development of the National Family Planning Program;
- e. Coordinating and carrying-out activities of building-up personnel in the framework of implementing the National Family Planning Program;
- f. Exercising the management of finance, supply and logistics of the National Family Planning Program as well as providing administrative services within the National Family Planning Coordination Board;
- g. Coordinating and exercising control over and type of personnel, funds and facilities in the implementation of the National Family Planning Program, both originating from within the country and from abroad.

CHAPTER III

ORGANIZATION

First Part

Structure of Organization

Article 5

The Organization of the NFPCB shall consist of :

- a. Chairman;
- b. Vice Chairman ;
- c. Deputy for Administration and Management;
- d. Deputy for Program Planning and Analysis;
- e. Deputy for Program Operational Development;
- f. Deputy for Program Development;
- g. Deputy for Program Personnel Development;
- h. Deputy for Supervision and Control;
- i. Unit of Technical Execution;
- j. Staff of Experts;
- k. Regional Offices of NFPCB in the Regions.

Second Part

Chairman and Vice Chairman

Article 6

The Chairman shall shoulder the duties of :

- a. Heading the NFPCB in accordance with the main duties drawn up by the Government and building up the apparatuses of the NFPCB to make them effective and efficient;

- b. Drawing up a policy for the implementation of the National Family Planning Program;
- c. Maintaining and exercising cooperation with other departments, agencies and organizations with a view to solving problems that arise, especially those related to his area of responsibility.

Article 7

- (1) In performing his duties the Chairman shall be assisted by Vice Chairman who is responsible directly to the Chairman;
- (2) Should the Chairman become incapacitated, the Vice Chairman shall represent the Chairman.

Third Part

Deputy for Management

Article 8

The Deputy for Management shall be an executive element in implementing part of the main duties and functions of the NFPCB who is under and responsible directly to the Chairman.

Article 9

The Deputy for Management shall shoulder the duties of :

- a. exercising the management of finance, supply and logistics;
- b. conducting studies and preparing formulations of legislative regulations as well as building-up the organization and work-procedures of the National Family Planning Program;
- c. providing administrative services within the NFPCB.

Article 10

In performing his duties as referred to in Article 9, the Deputy for Management shall carry out these functions :

- a. managing and providing guidance as regards finance, supply and logistics of the National Family Planning Program;
- b. conducting studies and preparing formulations of legislative regulations;
- c. exercising activities of organizational development and work-procedures of the National Family Planning Program;
- d. arranging administrative services within the NFPCB.

Article 11

The Deputy for Management shall supervise :

- a. Bureau of Finance;
- b. Bureau of Supply and Logistics;
- c. Bureau of Legal, Organization and Work-Procedures;
- d. Bureau of Administration.

Fourth Part

Deputy for Program Planning and Analysis

Article 12

The Deputy for Program Planning and Analysis shall be an executive element in the implementation of part of the main duties and functions of the NFPCB who is under and responsible directly to the Chairman.

Article 13

The Deputy for Program Planning and Analysis shall have the duties of drawing up plans and doing the recording and reporting, analysing and appraising the implementation of the National Family Planning Program.

Article 14

In performing his duties as referred to in Article 13, the Deputy-for Program Planning and Analysis shall carry out these functions:

- a. coordinating the preparation of plans and budget of the National Family Planning Program as a whole on long-term, medium-term and short-term bases, in a regional as well as sectoral scope.
- b. coordinating the preparation of executing guidelines in the implementation of plans and budget in a regional as well as sectoral scope;
- c. following and observing continually the implementation of the National Family Planning Program and making adjustments to meet any improvement required;
- d. coordinating the preparation of plans for cooperation with foreign parties in the field of national family planning;
- e. providing guidances in systems of recording and reporting;
- f. exercising activities of collecting, processing, presenting and storing of data;
- g. conducting analysis and appraisal on the implementation of the National Family Planning Program;

h. carrying-out preparation of over-all reports on results of family planning programs.

Article 15

The Deputy for Program Planning and Analysis shall supervise :

- a. Bureau of Planning;
- b. Bureau of Recording and Reporting;
- c. Bureau of Program Implementation Analysis.

Fifth Part

Deputy for Program Operational Development

Article 16

The Deputy for Program Operational Development shall be an executive element in the implementation of part of the main duties and functions of the NFPCB who is under and responsible directly to the Chairman.

Article 17

The Deputy for Program Operational Development shall have the duties of building up and carrying out operational activities of the National Family Planning Program.

Article 18

In performing his duties as referred to in Article 17, the Deputy - for Program Operational Development shall carry out these functions:

- a. preparing formulations of policies for execution in the fields of communications and information, contraceptive services, integration program services, guidance for family planning education, guidance for social institutions and of the National Family Planning Program;
- b. coordinating the carrying out of activities of communication and information, contraceptive services, integration program services, and guidance for family planning education;
- c. providing guidance for and developing social institutions and formal institutions in the framework of implementing the National Family Planning Program;

Article 19

The Deputy for Program Operational Development shall supervise:

- a. Bureau of Information and Motivation;
- b. Bureau of Contraceptive Services;
- c. Bureau of Integration Program Services;
- d. Bureau of Guidance for Family Planning Education;
- e. Bureau for Guidance to Social Institutions;

Sixth Part

Deputy for Program Development

Article 20

The Deputy for Program Development shall be an executive element in the implementation of part of the main duties and functions of the NEPCB who is under and responsible directly to the Chairman.

Article 21

The Deputy for Program Development shall have the duties of conducting studies and developing the National Family Planning Program in the framework of preparing a policy of National Family Planning Program in an over-all and integrated manner.

Article 22

In performing his duties as referred to in Article 21, the Deputy for Program Development shall carry out these functions :

- a. conducting studies and effecting development of program nationally as well as internationally in the framework of preparing the formulation of a policy of National Family Planning Program in an over-all and integrated manner;
- b. conducting a study of national family planning;
- c. coordinating and conducting research on and developing bio-medicals and human reproduction

Article 23

The Deputy for Program Development shall supervise :

- a. Centre for Development of National Family Planning Policy;
- b. Centre for Studies of National Family Planning
- c. Centre for Studies on Bio-Medicals and human reproduction

Seventh Part

Deputy for Program Personnel Development

Article 24

The Deputy for Program Personnel Development shall be an executive element in the implementation of part of the main duties and functions of the NFPCB who is under and responsible directly to the Chairman.

Article 25

The Deputy for Program Personnel Development shall have the duties of exercising management of personnel as well as conducting and providing guidance for education and training in support of the National Family Planning Program.

Article 26

In performing his duties as referred to in Article 25, the Deputy for Program Personnel Development shall carry out these functions:

- a. managing and providing guidance for personnel within the NFPCB and for the National Family Planning Program Workers;
- b. organizing education and training for workers of the National Family Planning Program;
- c. Organizing education and training for program workers originating from abroad in the field of family planning in the framework of international cooperation;
- d. organizing education and training for personnel within the NFPCB.

Article 27

The Deputy for Program Personnel Development shall supervise :

- a. Bureau of Personnel and Program Workers;
- b. Centre for Education and Training of Program Workers;
- c. Centre for Education and Training of Employees.

Eight Part

Deputy for Supervision and Control

Article 28

The Deputy for Supervision and Control shall be an element of control within the NFPCB over the implementation of the National Family Planning Program who is under and responsible directly to the Chairman.

Article 29

The Deputy for Supervision Control shall have the duties of exercising control over the management of administration of the National Family - Planning Program.

Article 30

In performing his duties as referred to in Article 29, the Deputy for Supervision and Control shall carry out these functions :

- a. Exercising control and audit over general administration, personnel administration, program administration and financial as well as materiel administration in the realization of the National Family Planning Program;

- b. preparing proposals for solving problems and obstacles faced the implementation of the National Family Planning Program;
- c. conducting examinations and evaluations on reports submitted as well as making investigations into the correctness of the reports in question in accordance with the directives from the Chairman;

Article 31

The Deputy for Supervision and Control shall supervise :

- a. Program Inspector;
- b. Personnel and General Administration Inspector;
- c. Finance Inspector;
- d. Materiel Inspector;

Ninth Part

Unit of Technical Execution

Article 32

In support of the smooth performance of its duties, the NFPCB shall have :

- a. Centre for Data Processing and Computers
- b. Centre for Information and Documentation Network of the National Family Planning Program.

Article 33

Job description, functions, organizational structure and work systems of the Unit of Technical Execution shall be decided upon by the Chairman with prior written approval from the Minister in charge of reform of state apparatuses.

Tenth Part
Staff of Experts

Article 34

- (1) To meet the requirement for expertise in certain fields, within the NFPCB there shall be appointed a staff of experts;
- (2) The staff of experts as referred to in part (1) shall be under- and responsible directly to the Chairman;
- (3) The number of persons on the Staff of Experts shall at the most be 5 (five).

Eleventh Part

Regional Offices of NFPCB in the Regions

Article 35

- (1) Regional Offices of NFPCB in the Regions shall form vertical agencies of the NFPCB.
- (2) At each province/First Level Region there shall be formed Provincial Representative Offices of NFPCB;
- (3) At each district/Township/Second Level Region there shall be formed District/Township Representative Offices of NFPCB;

Twelfth Part

Composition of Bureau , Inspectorate and Centre

Article 36

- (1) A Bureau shall consist of at the most 5 (five) Divisions and each Division of at the most 4 (four) Sub Divisions.

- (2) An Inspectorate shall supervise at the most 5 (five) Assistant Inspectors and each Assistant Inspector shall supervise a number of Auditors according to need;
- (3) A Centre shall consist of a number of functional employees or consist of at the most 5 (five) Departments and each Department consist of at the most 4 (four) Sub-Departments.

CHAPTER VI

IMPLEMENTING OF THE NATIONAL FAMILY

PLANNING PROGRAM

Article 37

- (1) In the exercises of the National Family Planning Program, the coordination of program activities shall be in the hands of the NFPCB whereas the execution of the program shall be exercised by the Implementing Unit of the National Family Planning Program;
- (2) The Implementing Unit of the National Family planning Program hereinafter referred to as the Implementing Unit shall be functional institutions and agencies in the society whose work is related to the activities of the National Family Planning Program;
- (3) The Implementing Unit as referred to in par (1) shall consist of :
 - a. Government Departments/Agencies which on a functional basis endeavor and participate in the exercises of the National Family Planning Program both at the Central as well as Regional level.

b. Associations/Organizations in the society and other implementors who on a voluntary basis and on own resources endeavor and participate in the exercises of the National Family Planning Program;

(4) At each Implementing Unit consisting of Government Departments/Agencies at the Central level, the Minister/Head of the Agency concerned shall appoint an official with the status of Echelon I whose work is related to the activities of family planning to act as Head of the Implementing Unit.

CHAPTER V

WORK - SYSTEMS

Article 30

- (1) In performing their duties, Chairman, Vice Chairman, Deputies and other leading officials shall apply the principles of coordination, integration and synchronization within the NFPCB;
- (2) The NFPCB in performing its main duties as referred to in Article 2, shall exercise relations of cooperation with all Government and Private Agencies;
- (3) To better ensure the coordination and relations of cooperation between the NFPCB and the Implementing Units, meetings shall be held periodically between the Leadership of NFPCB and the Implementing Units.

- (4) The NFPCB regularly and continually follows the implementation of the National Family Planning Program carried out by the Implementing Units and shall be obliged to assist in accordance with the policy set-forth;
- (5) The Implementing Units as referred to in Article 37 par (2) shall be obliged to submit periodical/incidental reports on their respective activities to the Chairman of NFPCB;
- (6) For the purpose of solving certain matters in the implementation of the National Family Planning Program, the Chairman of NFPCB may hold consultations with Ministers Heads of other Government Agencies as well as Leaders of Institutions within the society with a view to exercising the principle of integration in planning, coordination and synchronization.

CHAPTER VI

RANKS, APPOINTMENT AND DISCHARGES

Article 39

- (1) Chairman and Vice Chairman shall enjoy the rank of Echelon Ia level;
- (2) The Deputies shall enjoy the rank of Ib level, or at the highest equivalent to Ia level.
- (3) The Staff of Experts shall enjoy the rank of Echelon Ib level at the most.
- (4) Heads of Bureaus, Inspectors and Heads of Centers shall enjoy the rank of equivalent to Echelon IIa level.

- (5) Head of NFPCB Provincial Office shall enjoy the rank of Echelon IIa at the highest.
- (6) Head of NFPCB District/Township Office shall enjoy the rank of equivalent to IIIa at the highest.

Article 40

- (1) Chairman, Vice Chairman and the Deputies shall be appointed and discharged by the President;
- (2) The Staff of Experts shall be appointed and discharged by the President provided they are on rank of Echelon Ib, and shall be appointed and discharged by the Chairman of NFPCB if they are on rank equivalent to Echelon IIa;
- (3) Heads of Bureaus, Inspectors, Heads of Centres, Heads of NFPCB Provincial/District/Township Offices, and Heads of Organizational Units under their supervision shall be appointed and discharged by Chairman of NFPCB.

CHAPTER VII

FINANCES

Article 41

All finances required in the implementation of the duties of NFPCB shall be borne by the State Budget of Income and Expenditures.

CHAPTER VIII

CLOSING STIPULATIONS

Article 42

Job description, functions and organizational structure with

the NFPCB and formation of new regional offices of NFPCB in the regions shall be decided upon by the Chairman with prior written approval from the Minister in charge of reform of State apparatuses and Minister/State Secretary.

Article 43

With this Decree of the President coming into effect all other stipulations contrary to this Decree of the President are declared invalid.

Article 44

This Decree of the President shall come into effect on the date it is laid down.

Laid down in Jakarta
on 20 December 1983

THE PRESIDENT OF THE
REPUBLIC OF INDONESIA

sgd.

SOEMARTO

For copies according to original

CABINET SECRETARIAT OF THE R.I.
Head of Bureau of Legal & Legislation

sgl. (seal)

Bambang Kesowo, S.H., LL.M.

RESEARCH AND DEVELOPMENT

1984/85-88/89

BADAN KOORDINASI KELUARGA BERENCANA NASIONAL

Jakarta, September 1984..

SUMMARY OF REPELITA IV IN
RESEARCH AND DEVELOPMENT
1984/85 - 1988/89

I. INTRODUCTION

The process of developing the REPELITA IV in Research and Development for the period 1984/85 - 1988/89 was started in May 1984, a few months after the appointment of the Deputy for Program Development and the establishment of the three research centers:

A Core Team was appointed, consisting of BKKBN staffs, and researchers from the Center for Population Studies, University of Gajah Mada, the Demographic Institute, the Faculty of Medicine and the Faculty of Public Health, University of Indonesia. The team functions are to plan the planning process, prepare background papers, solicitate problems from other BKKBN components, conduct meetings and write the REPELITA IV in Research and Development.

The first meeting was held in early June 1984. The meeting was attended by BKKBN staffs from the central office, representing all components, head of provincial BKKBN, researchers from various universities, and other related agencies. The participants were divided into four groups, each group discussing a specific area, such as Biomedical/Human Reproduction, Socio-demographic-cultural, Policy related problems, and mechanism and procedures.

The results of the June meeting was used as inputs in the final Core Team meeting, conducted 25 - 27 June, 1984. The meeting's task was to write the final draft. The draft document was presented to the Deputy for Program Development and discussed. The document of REPELITA IV in Research and Development is the final results of the work of the Core Team.

In the following pages some important aspects of the document will be presented, excluding the titles of specific projects. Included are the problems identified for the family planning program, problems in research and development, policy and strategy in research and development, broad outlines of yearly activities and the estimated budget required.

2. PROBLEMS IN NATIONAL FAMILY PLANNING

The following are problems in National Family Planning :

1. It is expected that an additional 600,000 to 700,000 eligible couples will need F.P. service in Pelita IV. This is due to the large growth rate of eligible couples. Therefore, the service has to be improved and enlarged.

2. Large turn-over of young acceptors with low parity.
3. A number of constraints will be faced by the programs, particularly those related to management and implementation of programs and to community attitudes.
4. Factors known to be influential on the success of program implementation in some areas have not been transferred and used to other less successful areas.
5. Community demands for better, improved and integrated services is increasing.

3. PROBLEMS IN RESEARCH AND DEVELOPMENT

1. Up to the present, most researches conducted are oriented towards solving problems of the central office.
2. Utilization of research results are inadequate.
3. Research institutions in general are not able to keep the pace of the progress of the programs.
4. Inadequate research capabilities and the number of able researchers.
5. A substantial number of research projects are not finished on time, and thereby decreasing the value of the results.
6. Inadequate integration of program implementation at the field level.
7. Program implementation faces a number of constraints imposed by program managers and implementers, and from the community.
8. Factors known to be influential on the success of program implementation in some areas have not been transferred and used in less successful areas.
9. It is felt that research were not having much impact on the improvement of program implementation.

3. OBJECTIVE

To develop a comprehensive and integrated national family planning policy through research and development that will be used as guidelines in program implementation and the development of laws and regulations in the area of population.

4. POLICIES

A. General

Research and Development shall be directed towards providing strategic, and relevant contributions to the achievement of the objectives of the national family planning programs, and providing complimentary alternatives in strengthening the programs.

B. Specific

1. Research and Development shall be directed to the improvement of the quality of FP services.
2. Research and Development shall be directed to solving problems in a particular area based on specific characteristics of the population of that area.
3. Research and Development shall be directed to increasing the involvement of community organizations in family planning.
4. Research and Development shall be directed to improving efficiency, effectiveness and relevancy of all operational components.
5. Research and Development shall be directed to increasing the integration of FP programs with other sectors.

5. STRATEGY

1. Greater priority will be given to Operational Research, Action Research, and Evaluative Research.
2. Research will have to be conducted accurately and timely.
3. To increase the utilization of research results, communication and interaction between researchers and BKKBN will be improved (R&D component, other BKKBN components, and provincial BKKBN).
4. To enlarge the scope and coverage of researches conducted, a multicenter and multidisciplinary approach will be used.
5. In order to increase the quality of results, R&D staffs will be trained in research management and research methodology.
6. To increase the quality of researchers, international cooperation will be intensified.
7. To increase the quality of researches conducted by outside institutions, those institutions will be strengthened.

6. WORKING MECHANISM

Research and Development activities begin with identification of research needs and formulation of research problems. Research needs might come from various components of BKKBN, implementing units, research institutions or individual scientists.

Discussion will be conducted between the Deputy for Program Development, the centers and those various sources of research problems. During the discussions research problems will be identified and formulated. The technical parts of the research plan will be developed by the appropriate center, such as formulation of hypothesis, identification of variables, determination of the location of the study, the sampling scheme and the calculation of the budget. Terms of reference will be written and submitted to the Deputy for Program Planning and Analysis for funding.

If funding has been approved, a research team will be appointed, consisting of BKKBN staffs or outside researchers or a combination of both. The team's first task is to develop the research protocol and detail plan. The protocol will be reviewed by an expert committee and when necessary by an ethical committee. Based on the recommendation of the committees the Deputy will approve the research protocol and contract will be signed between BKKBN and the research team.

During the implementation stage, monitoring and supervision will be conducted by the Center's staffs. If it is considered necessary, an advisory committee will be appointed to assist the researchers.

The preliminary results will be presented in a seminar. The results of the seminar will be used as inputs in the final report. In addition, the seminar serves the purpose of early dissemination.

The results of researches will be further analysed by the Center for Policy Development for formulating alternative policies, which will be instrumental in formulating the operational policies.

7. WORK PLAN

The broad outlines of yearly workplan are :

Year I, 1984/85

This period will be used for consolidation of the Centers, developing cooperation with outside institutions, strengthening those institutions, managing research projects carried over from previous years.

Year II, 1985/86

Consolidation of the Centers will be continued. During this period efforts will be devoted to establishing workable working mechanism and procedures, recruiting new staffs and procuring equipments and initiating new research projects.

Year III, 1986/87

While continuing activities that have been initiated in the previous years, analysis and dissemination of results will be intensified.

Year IV, 1987/88

The emphasis in this fourth year will be on evaluation of programs.

Year V, 1988/89

The final year will be used for conducting activities, research and analysis, that will generate information for preparing the fifth five year plan.

RESEARCH AND DEVELOPMENT
ESTIMATED BUDGET FOR
PELITA IV (RP 1000)

A. BIOMEDICAL/HUMAN
REPRODUCTION CENTER

	1984/85	1985/86	1986/87	1987/88	1988/89	T O T A L
1. RESEARCH	479,420	825,000	595,000	587,500	588,000	3,074,920
2. INSTITUTIONAL DEVELOPMENT	34,184	2,040,670	147,000	132,000	120,000	2,473,854
3. MANAGEMENT	10,000	160,000	171,000	184,000	192,000	717,000
T O T A L	523,604	3,025,670	913,000	903,500	900,000	6,265,774

B. CENTER FOR NATIONAL
FAMILY PLANNING STUDY

1. RESEARCH	833,482	2,010,845	2,087,500	2,015,000	1,235,000	8,181,827
2. INSTITUTIONAL DEVELOPMENT	116,960	516,750	315,035	96,000	96,000	1,140,745
3. MANAGEMENT	132,487	207,650	136,450	78,000	78,000	632,587
T O T A L	1,082,929	2,735,245	2,538,985	2,189,000	1,409,000	9,955,159

C. CENTER FOR NATIONAL
FAMILY PLANNING POLICY
DEVELOPMENT

1. RESEARCH	350,770	461,970	206,000	290,500	231,000	1,540,240
2. INSTITUTIONAL DEVELOPMENT	0	211,295	60,700	62,700	22,700	357,395
3. MANAGEMENT	38,024	41,000	42,000	25,000	25,000	171,024
T O T A L	388,794	714,265	308,700	378,200	278,700	2,068,659
GRAND TOTAL	1,995,327	6,475,180	3,760,685	3,470,700	2,587,700	18,289,592

RESEARCH AND DEVELOPMENT
ESTIMATED BUDGET PELITA IV

BIO MEDICAL AND HUMAN
REPRODUCTION STUDY CENTER

	1984/85	1985/86	1986/87	1987/88	1988/89	TOTAL
1. RESEARCH						
1.1. RESEARCH	444,420	735,000	490,000	487,500	488,000	2,644,920
1.2. SEMINAR/WORKSHOP	35,000	90,000	105,000	100,000	100,000	430,000
T O T A L	479,420	825,000	595,000	587,500	588,000	3,074,920
2. INSTITUTIONAL DEVELOPMENT						
2.1. TRAINING						
2.1.1. INTERNAL						
2.1.1.1. LONG-TERM	0	22,000	22,000	22,000	22,000	88,000
2.1.1.2. SHORT-TERM	19,000	18,000	18,000	20,000	24,000	99,000
2.1.2. EXTERNAL						
2.1.2.1. LONG-TERM	0	44,000	22,000	22,000	44,000	132,000
2.1.2.1. SHORT-TERM	0	48,000	48,000	48,000	0	144,000
2.2. FACILITIES						
2.2.1. INTERNAL						
2.2.1.1. OFFICE	0	22,565	10,000	10,000	10,000	52,565
2.2.1.2. DATA PROCESSING	10,184	53,000	0	0	0	63,184
2.2.1.3. LABORATORY	0	1,828,105	0	0	0	1,828,105
2.2.1.4. BOOKS/JOURNALS	5,000	5,000	5,000	10,000	20,000	45,000
2.2.2. EXTERNAL						
2.2.2.1. DATA PROCESSOR	0	0	0	0	0	0
2.2.2.2. LABORATORY	0	0	22,000	0	0	22,000
2.2.2.3. BOOKS/JOURNALS	0	0	0	0	0	0
T O T A L	34,184	2,040,670	147,000	132,000	120,000	2,473,854
3. MANAGEMENT						
3.1. SUPERVISION	10,000	90,000	86,000	97,000	102,000	385,000
3.2. ADMINISTRATION		70,000	85,000	87,000	90,000	332,000
T O T A L	10,000	160,000	171,000	184,000	192,000	717,000
GRAND TOTAL	523,604	3,025,670	913,000	903,500	900,000	6,265,774

RESEARCH AND DEVELOPMENT
ESTIMATED BUDGET PELITA IV

CENTER FOR NATIONAL FAMILY
PLANNING POLICY DEVELOPMENT

	1984/85	1985/86	1986/87	1987/88	1988/89	TOTAL
1. RESEARCH						
1.1. RESEARCH	320,470	386,970	116,000	200,500	131,000	1,154,940
1.2. SEMINAR/WORKSHOP	30,300	75,000	90,000	90,000	100,000	385,300
T O T A L	350,770	461,970	206,000	290,500	231,000	1,540,240
2. INSTITUTIONAL DEVELOPMENT						
2.1. TRAINING						
2.1.1. INTERNAL						
2.1.1.1. LONG-TERM	0	44,000	44,000	44,000	0	132,000
2.1.1.2. SHORT-TERM	0	6,000	8,000	10,000	14,000	38,000
2.1.2. EXTERNAL						
2.1.2.1. LONG-TERM	0	0	0	0	0	0
2.1.2.1. SHORT-TERM	0	0	0	0	0	0
2.2. FACILITIES						
2.2.1. INTERNAL						
2.2.1.1. OFFICE	0	132,295	2,700	2,700	2,700	140,395
2.2.1.2. DATA PROCESSING	0	29,000	6,000	6,000	6,000	47,000
2.2.1.3. LABORATORY	0	0	0	0	0	0
2.2.1.4. BOOKS/JOURNALS	0	0	0	0	0	0
2.2.2. EXTERNAL						
2.2.2.1. DATA PROCESSOR	0	0	0	0	0	0
2.2.2.2. LABORATORY	0	0	0	0	0	0
2.2.2.3. BOOKS/JOURNALS	0	0	0	0	0	0
T O T A L	0	211,295	60,700	62,700	22,700	357,395
3. MANAGEMENT						
3.1. SUPERVISION	28,024	35,000	35,000	25,000	25,000	148,024
3.2. ADMINISTRATION	10,000	6,000	7,000	0	0	23,000
T O T A L	38,024	41,000	42,000	25,000	25,000	171,024
GRAND TOTAL	380,794	714,265	308,700	378,200	278,700	2,068,659

RESEARCH AND DEVELOPMENT
ESTIMATED BUDGET PELITA IV

CENTER FOR NATIONAL
FAMILY PLANNING STUDY

	1984/85	1985/86	1986/87	1987/88	1988/89	TOTAL
1. RESEARCH						
1.1. RESEARCH	669,409	1,753,345	1,880,000	1,865,000	1,085,000	7,252,754
1.2. SEMINAR/WORKSHOP	164,073	257,500	207,500	150,000	150,000	929,073
T O T A L	833,482	2,010,845	2,087,500	2,015,000	1,235,000	8,181,827
2. INSTITUTIONAL DEVELOPMENT						
2.1. TRAINING						
2.1.1. INTERNAL						
2.1.1.1. LONG-TERM	0	50,000	50,000	0	0	100,000
2.1.1.2. SHORT-TERM	32,500	91,000	91,000	91,000	91,000	396,500
2.1.2. EXTERNAL						
2.1.2.1. LONG-TERM	21,000	130,000	154,035	0	0	305,035
2.1.2.1. SHORT-TERM	0	0	0	0	0	0
2.2. FACILITIES						
2.2.1. INTERNAL						
2.2.1.1. OFFICE	0	223,250	5,000	5,000	5,000	238,250
2.2.1.2. DATA PROCESSING	32,750	0	0	0	0	32,750
2.2.1.3. LABORATORY	0	0	0	0	0	0
2.2.1.4. BOOKS/JOURNALS	23,710	15,000	15,000	0	0	53,710
2.2.2. EXTERNAL						
2.2.2.1. DATA PROCESSOR	7,000	7,500	0	0	0	14,500
2.2.2.2. LABORATORY	0	0	0	0	0	0
2.2.2.3. BOOKS/JOURNALS	0	0	0	0	0	0
T O T A L	116,960	316,750	315,035	95,000	96,000	1,140,745
3. MANAGEMENT						
3.1. SUPERVISION	33,950	93,950	65,000	50,000	50,000	292,900
3.2. ADMINISTRATION	98,537	113,700	71,450	28,000	28,000	339,687
T O T A L	132,487	207,650	136,450	78,000	78,000	632,587
GRAND TOTAL	1,082,929	2,735,245	2,538,985	2,189,000	1,409,000	9,955,159

INSTITUTIONAL DEVELOPMENT PROPOSAL SCHOOL OF
MEDICINE UNIVERSITY OF INDONESIA

1. Institution to be developed by the proposed grant

1.1. Complete name: Faculty of Medicine University of Indonesia.

1.2. Postal address: P. O. B. 358
Jakarta 10001
Indonesia.

1.3. Telex address: 45680 UI JKT

1.4. Telegraphic address: FDOK, Jakarta, Indonesia.

1.5. Telephone: (021) - 330373 & 330379

2. Name of the larger Institution within which this Institution belongs:

University of Indonesia.

3. Officers of the Institution:

3.1. Responsible technical officer:

Prof. M. K. Tadjudin
Chairman Study Group on Human Reproduction.

3.2. Responsible administrative authority:

Prof. Asri Rasad
Dean.

3.3. Chief financial officer of the Institution:

Dr. A. Bari Saifudin MPH
Deputy Dean for Administration and Finance.

4. RATIONALE

BACKGROUND

The National Family Planning Program (NFFP) is an integral part of the National Development Plan. To support the NFFP a continuous research program to monitor the results of the NFFP, to solve the problems encountered and to find new methods which are more effective and useful for the program, is needed.

The objectives of the NFFP are not only to reduce fertility, but also to increase the welfare of acceptors and their families, which will ultimately lead to the acceptance of the Happy and Small Family Norm (NIKKS) as the most appropriate new way of life. Thus research in human reproduction supporting the program will not be limited to contraception only, but will also include the area of reproductive health, including infertility and its causes.

The National Family Planning Coordinating Board (BKKBN) does not have the facilities to conduct biomedical research in family planning. Most of the research needs in this area are conducted by universities and other agencies outside the BKKBN, among others the University of Indonesia.

THE ROLE OF THE UNIVERSITY OF INDONESIA

The University of Indonesia (UI) has always been involved in family planning activities in Indonesia, even before there was NFFP. Many faculty members have been or are still active helping the NFFP and as an Institution the University of Indonesia has also been active in supporting the NFFP.

Research in family planning at the School of Medicine has been going on since 1967. The research projects undertaken were mostly small projects requested by the BKKBN or started by interested departments or individuals. These projects have been funded by the BKKBN, Ministry of Education and Culture, national and international agencies like PIACT, BKS-PENFIN, UNFPA and WHO. The research topics range from screening of indigenous plants for contraceptive activities and traditional contraceptive methods to correlation of uterine size and IUD size, and side effects of different types of contraceptives in use. To have a better coordination of these projects several faculty members who were interested in research in family planning established in 1973 a Study Group on Human Reproduction (SGHR).

Besides its involvement in research the School of Medicine has also been involved in training personnel for the NFFP in cooperation with the BKKBN and other agencies. Workshops in methods of tubal sterilization, vasectomy, the use of implants, research methodology, andrology and endocrinology have been held several times. Many of these workshops are held periodically and are attended by faculty members of other medical schools and BKKBN staff.

The manpower, facilities, expertise and experience in conducting research and training in human reproduction and family planning and the close cooperation already present between the UI and the BKKBN make it very ideal for the UI to take part and support the activities of the NFFP especially those related to research and training.

5. INSTITUTIONAL OBJECTIVES FOR THE NEXT 5 YEARS

OBJECTIVES

5.1. STAFF DEVELOPMENT

The objectives of the manpower development program is to develop a critical mass of trained scientists, capable of providing high quality research support to the National Family Planning Programme and of competing at an international level for funds for research.

The manpower available at present are mostly in clinical fields. Only a limited amount of manpower is available for laboratory work. Manpower available at present are in the fields of:

- Obstetrics and gynecology
- Pharmacology
- Endocrinology
- Biochemistry
- Biology
- Immunology
- Epidemiology
- Cell biology
- Biostatistics
- Andrology
- Microbiology

To carry out the proposed programs there is a need for short term training abroad for senior staff to learn new techniques. After their return they can become instructors for courses in research methodology and for training technicians and other personnel. For long term development it is also necessary to train junior staff for higher degrees abroad.

Workshops on new methodology conducted in Indonesia with help from foreign experts will also be useful. Training is needed in the following fields and techniques:

- Reproductive endocrinology
- Research management
- Assay development
- Care for experimental animals
- Electron microscopy of reproductive organs
- Clinical epidemiology
- Immunoreproduction
- Methodology for male fertility regulation
- Clinical pharmacology methodology
- Identification and isolation of active substances

5.2 RESEARCH PROGRAMMES

Research and research expertise will be focussed within the following broad lines:

1. Safety and efficacy of contraceptives for the care and protection of acceptors (pengayoman).
2. Evaluation of newly developed contraceptives and traditional drugs (herbal medicine) used as contraceptives.
3. Reproductive health: - HCG production for diagnostic kits
- Fetal medicine
4. Basic reproductive biology, a knowledge of which is necessary to understand the action of existing contraceptives or for the development of new contraceptives.

The following research activities are planned:

1. Safety and efficacy of contraceptives for the care and protection of acceptors:
 - 1.1. Baseline data of physiological parameters related to reproduction and side effects of contraceptives in males and females.
 - 1.2. Pathophysiology of side effects.
 - 1.3. Trials for prevention and treatment of side effects.
 - 1.4. Effects of IUD and injectables on anemia
 - 1.5. Safety and efficacy of surgical and chemical sterilization.
 - 1.6. Epidemiological studies on the side effects of contraceptives.
 - 1.7. Interaction of contraceptives with drugs used in treatment of endemic diseases.
 - 1.8. The relationship of IUD and pelvic inflammatory disease.
 - 1.9. Pharmacokinetic and pharmacodynamic studies of hormonal contraceptives in Indonesian women.
 - 1.10. Metabolic effects of contraceptives.
 - 1.11. Blood copper level of copper containing IUD users.
2. Evaluation of newly developed contraceptives and traditional drugs used as contraceptives:
 - 2.1. Pharmacokinetics and pharmacodynamics of agents used in fertility regulation.
 - 2.2. Comparative studies of different new contraceptives.
 - 2.3. Studies on traditional drugs used as an antifertility agent in the male.
3. Reproductive health:
 - 3.1. Health benefits of contraception
 - 3.2. Effects of family spacing on maternal morbidity.
 - 3.3. Effects of family spacing on child morbidity.
 - 3.4. Interaction between hormonal contraception and endemic goiter
 - 3.5. Return of fertility after contraception.
 - 3.6. Outcome of pregnancies after contraceptive use.
 - 3.7. Protection of babies nursed by mothers using contraceptives
 - 3.8. The role of prolactin in male fertility and infertility.
 - 3.9. The evaluation of antisperm antibodies in infertile couples.
 - 3.10. Studies on cell mediated immunity in infertile couples.
4. Basic reproductive mechanisms:
 - 4.1. Studies on epididymal function

5.3. RESEARCH TRAINING PROGRAMMES

The purpose of the research training programmes is to strengthen existing capabilities in order to be able to conduct a graduate program in research in reproduction and more training programs in research in reproduction related to the needs of the National Family Planning Program.

The following educational programs are planned:

1. Graduate program in research in reproduction:
This program will train manpower needed for research in reproduction. The program will be a 2-year course and the graduates should be able to conduct research in reproduction in their major field, which are relevant to the national family planning program.
2. Short group learning activities and training programs for personnel involved in research of the biomedical aspects of family planning. These short courses ranging from 4 weeks to 6 months will be used for training in research methodology, laboratory techniques and clinical methods (e. g. sterilization, implants).

5.4. INSTITUTIONAL LINKAGES

The School of Medicine has good working relationships with other faculties, the Ministry of Health and the BKKBN. Many faculty members serve as members of different committees in those institutions.

It is expected that a formal cooperation agreement between the University of Indonesia and the BKKBN will be signed soon.

In Indonesia there are not many research institutes interested or with capabilities in research in reproduction. An Inter-University Centre in Life Sciences Bogor will be established at the Bogor Institute of Agriculture in Bogor (60 km south of Jakarta). This Centre will be working among others on animal reproduction. The construction of this Centre will be finished by 1990. A cooperation with this centre will be established especially on research in basic reproductive biology.

5.5. INSTITUTIONAL RESEARCH REVIEW MECHANISMS

SCIENTIFIC AND ETHICAL REVIEW COMMITTEES

The School of Medicine has already a scientific review committee and an ethical review committee. The members of these committees are appointed by the Dean. The scientific review committee reviews all research proposals submitted by the staff of the School of Medicine. The ethical review committee reviews all research proposals using humans as subjects which has already been passed by the scientific review committee.

5.6. OTHER INSTITUTIONAL CHANGES

In order to carry out the proposed lines of research, the research staff needs to have access to a full range of up-to-date methods in clinical chemistry (including hormone assays), hematology, histology (including electron microscopy), immunology and cytogenetics. Besides these laboratory methods, there should also be access to up-to-date diagnostic tools, such as ultrasound, laparoscopy, chorionic biopsy etc. Data processing facilities for analysis of research data, management of patients used in research and to build data bases are also necessary.

At present a space of about 300 m² is being prepared for use as a laboratory. Present major equipment and the equipment obtained by this grant will be pooled here and the facilities will be open for research in reproduction.

At present discussions are also going on between the BKKBN and the Japanese Government on the development of a National Centre for Biomedical Studies in Family Planning, which will be placed in the compound of the School of Medicine and jointly operated by the BKKBN and the University of Indonesia.

Plans are also being formulated for the development of a Centre for the Development of Medical Science and Technology (FUSPIPTEK Medik) to be submitted to the Institute for the Development and Application of Technology under the Minister for Research and Technology. The idea is to develop a National Centre for the Development and Application of Medical Science and Technology at the School of Medicine.

There are also plans to strengthen the existing capabilities in order to be able to act as the national center for quality control and to produce reagents needed for assays in reproduction.

6. ACTIVITIES PROPOSED FOR THE FIRST TWO YEARS

6.1. STAFF DEVELOPMENT

Acquisition of skills in the following fields and techniques:

1. Reproductive endocrinology (1 Ph.D. & 1 @ 1 yr)
2. Assay development (1 @ 1 yr)
3. Lipid research (1 @ 1 yr & 1 @ 6 mo)
4. Immunoreproduction (1 Ph.D. & 1 @ 1 yr)
5. Methodology for male fertility determination (2 @ 6 mo)
6. Clinical pharmacology methodology (2 @ 6 mo)
7. Electron microscopy of the reproductive organs (1 @ 1 yr & 1 @ 6 mo)
8. Clinical epidemiology (1 Ph.D. & 1 @ 1 yr)
9. Cytogenetics (1 Ph.D. & 1 @ 1 yr)
10. Epidydimal physiology (1 @ 1 yr)
11. Care of experimental animals (1 @ 6 mo)
12. Research management (2 workshops @ 30 persons)

1.1. to 1.11. will be achieved by sending people abroad for training, while 1.12. will be achieved by organizing workshops on research management in Indonesia.

6.1.1. New staff positions

Position Title	Annual salary (Rupiahs)	Percentage of salary requested in this application	Total requested in this application for 24 mos.
Scientist	6,000,000.-	100 %	US\$ 10,000.-
Technicians (3 persons)	3,600,000.-	100 %	US\$ 8,000.-

6.1.2. Research training

Name	Staff position	Discipline	Duration in months
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6.1.3. Consultants

Name/Discipline	Duration	Name of staff members in the Institution who will be working with the consultant
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6.1.4. Other staff development activities

6.2 RESEARCH PROJECTS

1. Hemostatic and erythropoetic profile in hormonal contraceptive acceptors.
2. Immunological consequences of vasectomy.
3. Lipid profile of long-acting contraceptive acceptors.
4. Pharmacodynamic and pharmacokinetic studies of hormonal contraceptives in Indonesian women.
5. The immobilizing effect of anti LDH-X from rat immunized with isolated human sperm LDH-X.
6. Anemia in contraceptive users.

6.3 RESEARCH TRAINING PROJECTS

- 6.3.3. Workshop on research management: Two courses in workshop format are planned in each of the first two years. The workshops will be lead by consultants and each workshop will be attended by 30 participants. The duration of each workshop will be one week.

6.4 INSTITUTIONAL LINKAGES

A formal Agreement for Cooperation will be signed between University of Indonesia and BKKBN.

6.5 INSTITUTIONAL REVIEW MECHANISMS

The Institutional review mechanisms in the University of Indonesia is already well established.

All research proposals will be reviewed first by the Scientific Review Committee. Those proposals which involve human subjects, after approval by the Scientific Review Committee, will be submitted to the Ethical Review Committee. Only after approval of both committees will the research proposals be submitted to outside agencies.

6.6 OTHER ACTIVITIES

6.6.1. Acquisition of equipment to strengthen operational capacity

1. Gamma counter
2. HPLC
3. Water pre-treatment unit
4. Milli Q water system (tissue culture and HPLC grade)
5. Air-conditioners
6. Refrigerators
7. Freezers (-20° & -80°)
8. IBM-PC XT with 20 MB Hard disk external memory
9. Immunoelectrophoresis apparatus
10. ELISA kit equipment
11. CO₂ incubator
12. Hood for tissue culture preparation
13. Spectrophotometer with densitometer
14. High standard pH-meter
15. Ultracentrifuge (Beckman with heads 70 Ti SW 50 & SW 28)
16. Atomic absorption spectrophotometer
17. Eppendorff centrifuge or equivalent
18. SDS Polyacrylamide gel apparatus + power supply
19. Liquid Nitrogen containers
20. High speed refrigerated centrifuge (Sorval with heads SM 40 & SSA)

6.6.2. Acquisition of books, periodicals library equipment for strengthening the library facilities:

1. Books and periodicals
2. Microforms of missing back issues
3. Microfiche reader-printer

7. ACTIVITIES PROPOSED FOR THE 3RD, 4TH AND 5TH YEARS

7.1. STAFF DEVELOPMENT

Staff development activities will be for short term training in special techniques only.

No major research training activities are planned, as by the 3rd year, many staff members who have been trained abroad will have returned already and will be able to carry out the planned research programs. The need for consultants will be limited only to setting up new assays if deemed necessary.

7.2. RESEARCH PROJECTS

The research projects undertaken will be projects which will support the National Family Planning Program. Research activities will continue according to the list of subjects proposed in 5.2.

7.3. RESEARCH TRAINING PROJECTS

After the 3rd year we plan to start a Master's course in Research in Reproduction as by that time enough staff members will have undergone training abroad and research activities will be high enough to support such a program.

Regular short-group learning activities in Research in Family Planning and Human Reproduction are also planned for BKKEB personnel and faculty members from other universities.

7.4. INSTITUTIONAL LINKAGES

Strengthening of existing linkages will be promoted.

7.5. INSTITUTIONAL REVIEW MECHANISMS

No changes planned.

7.6. OTHER ACTIVITIES

7.6.1. Acquisition of equipments, spare parts, expendable supplies and library resources.

8. Bar chart of time schedules

Plot the timing and duration in quarter years of each of the activities mentioned in Section 6, using the layout below for the whole 5-year period. (This chart should include the schedules of consultants and research training.)

9. BUDGET SUMMARY

Project Budget Sheet
US \$

	Year				
	1	2	3	4	5
Local salaries	18000	18000	9000	4500	-
Courses/Seminars/Workshops	2000	2000	-	-	-
Equipment and maintenance	30000	35000	35000	5000	5000
Consumable supplies	5000	10000	10000	5000	5000
Other expenses for research projects	30000	30000	40000	60000	70000
Data processing	10000	1000	1000	1000	1000
Library resources	2000	10000	2000	2000	2000
Transport/vehicles					
Animal facilities					
TOTAL	97000	115000	97000	77500	82000

10. JUSTIFICATION OF THE PROPOSED BUDGET

10.1. LOCAL SALARIES: Support for one scientist and three technicians will be paid full for the first two years at \$ 500 per month for the scientist and \$ 150 per month for a technician. The total amount will be US \$ 18,000.

After appointment as government employee (the process of appointment will take 1 - 2 years) the salary support will not be necessary anymore. Supplements when needed after the end of the project will be taken out of the research budget and out of income obtained by using idle laboratory capacity for service.

10.2. CONSULTANTS: There is a need for consultants in the following fields:

10.2.1. Research management:

The consultant is expected to conduct workshops on research management.

10.2.2. Research methodology:

The consultant is expected to conduct workshops on research methodology.

10.2.3. Laboratory techniques:

The consultant is expected to help setting up assays.

10.3. RESEARCH TRAINING GRANTS

10.4. SHORT GROUP LEARNING ACTIVITIES

A workshop on Research Management is needed as one of the weak points in the organization for research in Indonesia is poor research management. The workshop method is chosen so that in the shortest possible time a maximum number of people can be trained.

10.5. EQUIPMENT AND EQUIPMENT MAINTENANCE

1. Beta counter as none is available now.
2. Gamma counter: For endocrinology as back-up for present available equipment
3. HPLC: For pharmacological studies
4. Water pre-treatment unit: For multipurpose use
5. Milli Q water system: For tissue culture and HPLC
6. Air-conditioners: For laboratory and animal rooms
7. Refrigerators: For multipurpose use
8. Freezers: For multipurpose use
9. IBM-PC XT with 20 MB Hard disk external memory: For data storage and data processing
10. Immunoelectrophoresis apparatus: For studies on antibodies in infertility and in vasectomy.
11. ELISA kit equipment: For hormone and enzyme studies
12. CO₂ incubator: For tissue culture and cytogenetics
13. Hood for tissue culture preparation: For tissue culture and cytogenetics
14. Spectrophotometer with densitometer: For biochemical studies
15. High standard pH-meter: For multipurpose use
16. Ultracentrifuge: For lipid studies and other uses
17. Atomic absorption spectrophotometer: For determinations of trace elements in blood
18. Eppendorff centrifuge for multipurpose use
19. SDS Polyacrylamide gel apparatus for multipurpose use
20. Liquid nitrogen containers for sperm storage
21. High speed refrigerated centrifuge for multipurpose use

The plan is to pool the equipment acquired by this grant and other equipment already in use for research in reproduction in one laboratory, which will be a core facility open for research in reproduction. Most of the equipment will be obtained during the first three years of the project.

Equipment maintenance: Maintenance of equipment will be done by local dealers. For this it is imperative that the equipment obtained should have bonafide local dealers. Small repairs might be done by university workshop technicians. The costs of maintenance should after the end of support should be paid out of the institutional overhead, research budgets and regular government budgets.

10.6. CONSUMABLE SUPPLIES

The supplies needed are for use in the proposed research projects and workshops on laboratory methods.

After the end of the support expandable supplies for research activities will be obtained from research grants provided through the University or BKKBN or other agencies.

Approximate amount needed for consumables:

Year 1 :	US \$ 5000,-
Year 2 :	10000,-
Year 3 :	10000,-
Year 4 :	5000,-
Year 5 :	5000,-

10.7. OTHER EXPENSES FOR RESEARCH PROJECTS

10.8. TRANSPORT/VEHICLES

10.9. DATA PROCESSING FACILITIES:

Although computer facilities are available at the University computer centre, an IBM-PC XT is requested for data processing of laboratory data, research data, patient control and to build data bases which are necessary for day to day use. The machine will be obtained in the first year, while only maintenance costs are needed for the following years. After the end of the project, maintenance will be obtained from research grants and other income of the laboratory.

10.10. LIBRARY RESOURCES:

Books and periodicals obtained will be kept in the University Medical Library and is open to everybody. Until 1982 the Medical Library had a subscription on about 400 periodical titles, including a number of titles in reproduction. Due to budget cuts and administrative problems the number of periodicals subscribed to now is only 25. Within the next year the number of subscriptions will be restored. In the second year a reader-printer and microforms of back issues will be purchased so that back issues which are missing from the collection will be available and if necessary hard copies can be made.

10.11. ANIMAL FACILITIES:

The existing animal facilities need to be improved. At present only rats and mice are kept in those facilities. For hamsters air-conditioners need to be installed.

10.12. OTHER ITEMS:

11. MONITORING AND EVALUATION:

Monitoring of the project will be done by the Dean of the Faculty of Medicine and officers appointed by the Dean.

Evaluation will be done at 6 months intervals by a committee appointed by the Dean.

12. SUPPORT FROM NATIONAL SOURCES:

Input from the University of Indonesia:

- 11.1. Building
- 11.2. Electricity, water, gas
- 11.3. Staff salary
- 11.4. Research grants
- 11.5. Existing facilities

Input from BKKB:

1. Research grants
2. Fellowships
3. Grants for organizing workshops

13. FUNDS FROM OTHER SOURCES:

Funds from other international agencies will be sought especially to fund research projects and grants for equipment needed. One of sources will be the UNFPA Project INS/86/PC 4.

At present discussions are also going on between the BKKB and the Japanese Government on the development of a National Center for Biomedical Studies in Family Planning at the University of Indonesia.

**ACTIVITIES IN FAMILY PLANNING AT THE FACULTY OF MEDICINE
UNIVERSITY OF INDONESIA**

1. BACKGROUND:

The University of Indonesia School of Medicine evolved from the "Sekolah Dokter Djawa" (Javanese Doctors School) founded by the Dutch in Indonesia as the first professional school in 1849. The present facilities were used in 1920 and since then many additions have been constructed. The University of Indonesia was established on February 2, 1950 and the School of Medicine became part of the University. Besides the present facilities at Salemba, and the Cipto Mangunkusumo Hospital, teaching facilities are also available at the Jl. Proklamasi Campus (Microbiology and Public Health), Raden Saleh Clinic and 6 Community Health Centres within and around the city of Jakarta. The Faculty of Medicine is also affiliated with 5 other hospitals in Jakarta and the agency hospital at Tangerang, about 30 km West of Jakarta.

The University of Indonesia School of Medicine has been involved in family planning activities in Indonesia, even before there was a National Program. Many faculty members have been or are still active helping the National Family Planning Program as consultants, committee members, research workers and as an institution the University of Indonesia has also been active in supporting the National Family Planning Program.

Research in family planning at the School of Medicine have been going on since 1967. The research projects undertaken were mostly small projects as part of the National Family Planning Program activities or started by interested departments or individuals. To have a better coordination of these projects several faculty members who were interested in research in family planning established in 1973 a Study Group on Human Reproduction.

The research projects undertaken have been funded by the National Family Planning Coordinating Board (BKKBN), Ministry of Education and Culture, national and international agencies like PIACT, BKS-PENFIN, UNFPA and WHO. The research topics range from screening of indigenous plants for contraceptive activities and traditional contraceptive methods to correlation of uterine size and IUD size and side effects of different types of contraceptives in use.

Besides its involvement in research the School of Medicine has also been involved in training personnel for the National Family Planning Program in cooperation with the BKKBN and other agencies. Workshops in methods of tubal sterilization, vasectomy, the use of implants, research methodology, andrology and endocrinology have been held several times. Many of these workshops are held periodically and are attended by faculty members of other medical schools and BKKBN staff.

2. ORGANIZATIONAL STRUCTURE AND GOVERNANCE PATTERNS

R E C T O R

D E A N

D E P A R T M E N T S

| BIOLOGY | | PHARMACOLOGY | | OB GYN | | PUBLIC HEALTH | | SURGERY |

| PHYSIOLOGY | | BIOCHEMISTRY | | OTHER |

W O R K I N G G R O U P S / S T U D Y G R O U P S

| HUMAN REPRODUCTION | | CANCER | | IMMUNOLOGY | | OTHER |

- The University is under the Department of Education and Culture of the Republic of Indonesia.
- The Rector reports to the Minister of Education and Culture through the Director General of Higher Education.
- The Dean of the School of Medicine reports to the Rector.
- The Department Chairmen report to the Dean.
- Working groups/study groups are functional groups of faculty from different departments, who are interested in a certain problem, e. g. human reproduction, cancer, immunology etc.
- A working group is headed by a chairman, secretary and treasurer, who are appointed by the Dean for 2 years, on proposal by the members of the group.
- The group, through its leaders report to the Dean.

3. LINKS WITH NATIONAL FAMILY PLANNING ACTIVITIES

The School of Medicine has good working relationships with other faculties, other universities, the Ministry of Health and the BKKBN. Many faculty members serve as consultants and members of different committees in the Ministry of Health and the BKKBN.

A formal cooperation agreement between University of Indonesia and BKKBN is at present being prepared.

4. LINKS WITH INSTITUTIONS ABROAD

At present there are no formal links with institutions abroad.

5. RESEARCH MANAGEMENT PRACTICES

Planning of research activities in human reproduction:

1. The principal investigator submits his proposal through his department to the Study Group on Human Reproduction (SGHR).
2. After review by the SGHR the proposal is submitted to the Scientific Review Committee.
3. If the research projects involve the use of humans, it is then submitted to the Ethics Review Committee after it is accepted by the Scientific Review Committee.
4. If the reviews are favorable, then the proposal is submitted to the donor agency through the Dean's office.
5. If the proposal is accepted the funds will be transferred to the account of the School of Medicine (the Deputy Dean for Administration and Finance is the finance officer).
6. The funds are paid to the investigator through the scientific review committee, who is also charged with monitoring research activities.

Funds for research come from different sources: Department of Education and Culture through the University, BKKBN, Ministry of Health, BKS-PENFIN, and International Agencies like UNFPA, PIACT, WHO, US-AID.

Planning of training programmes:

1. Usually training programmes are planned by a department.
2. The proposal is then submitted to the Dean.
3. The Dean will ask the Education Development Committee to review the proposal.
4. If the review is favorable it is then submitted to the donor agency.
5. If the proposal is accepted the funds will be transferred to the account of the School of Medicine and the funds will be forwarded to the project officer by the Deputy Dean for Administration and Finance.

The research priorities in the School of Medicine is set by the Scientific Review Committee. The present priorities are:

1. Population problems and human reproduction.
2. Nutrition problems.
3. Infectious diseases.
4. Degenerative diseases, including cardiovascular diseases and cancer.
5. Dental and oral medicine.
6. Mental disorders.
7. Development of medical technology.

6. CLINICAL FACILITIES

Hospitals and clinics used:

1. Cipto Mangunkusumo General Hospital
2. Raden Saleh Clinic

Obstetric and gynaecological services:

Total number of obstetric beds	92
Total number of gynecological beds	94
Number of clinical "research beds"	0
Total number of deliveries in the last calendar year	4,017
Total number of gynaecological admissions in the last calendar year	3,301

Available diagnostic tools:

Laparoscopy
 Colposcopy
 Hysteroscopy
 Ultrasound model ALOKA 256

Family planning services:

Total number served	93,778
New users	13,184

	<u>Total</u>	<u>New</u>
Oral contraceptives	24,906	322
Injectable contraceptives	3,882	730
Intrauterine devices	35,065	11,162
Condoms	467	100
Female sterilization	3,161	362
Natural family planning methods	-	-
Termination of pregnancy	-	-
Male sterilization	-	-
Implants	4,013	378

Management of infertility:

Infertility in the last calendar year:	
Total number of couples	5,604
Total number of new couples	2,809

7. LABORATORY FACILITIES

Location of facilities:

Departments: Biology, Pharmacology, Biochemistry, Pathology, Ob/gyn, Clinical pathology, Histology, Internal medicine and Central Research Facilities.

Laboratory space:

Less than 20 sq. m.	0
20 - 50 sq. m.	8
greater than 50 sq. m.	1

Equipment:

	<u>Make/Model</u>	<u>Age</u>	<u>Quant.</u>
Liquid scintillation counter & gamma counter	Nuclear Chicago	10	1
Gamma counter	Abbott (manual)	5	3
	Servo Gammachem 6612	2	1
Automated clinical chem. analyzer	Technicon I & II	10	2
	JEOL	5	1
	Olympus	4	1
	Hitachi	5	1
Ultracentrifuge		3	2
Refrigerated centrifuge	IEC	30	2
	Hitachi 10 PR-S	3	2
	Kokusan	5	1
Microscopes	Zeiss Photomicroscope with complete accessories	13	1
	Nikon Labophot with complete accessories	5	5
	Olympus Photomicroscope with complete accessories	5	3
	Nikon inverted microscope with accessories	1	3
Gas chromatograph	Shimadzu G-C-6APFE	3	1
Spectrophotometer	Bausch & Lomb	4	1
	Hitachi	3	2
	Coleman 6/20	10	1
Water distillation apparatus	Autostill 4 l/hr	5	1
	Yamato	5	1
	Homemade	30	2
Deep freeze	Different brands	5-10	5

Other major equipments:

HPLC (Biochemistry)
TLC Scanner (Biochemistry)
TDX Analyzer (Pharmacology)
ELISA Equipment (Obgyn)
Electrophoresis equipment (Pathology)
Scanning electron microscope JEOL (core facility)

Access to major equipment in neighbouring institutions:
Gamma and beta counters at the National Atomic Energy Institute.

Difficulties with maintenance:

Yes, for equipment which do not have local bonafide dealers, e.g. the Nuclear Chicago counter.

Laboratory services:

	Number of specimens/month	Use of reagents
Hormones		
(a) Serum/plasma		
Estradiol	200	DPC
Progesterone	200	DPC
Testosterone	200	DPC
Cortisol	100	DPC
hLH	500	WHO
hFSH	500	WHO
hPRL	500	WHO
Prostaglandin	-	
hCG	1,000	hCS Japan
TSH	50	KIT
T3/T4	on request only	
hGH	on request only	
(b) Urine		
Pregnanediol gluc.	-	
Estrone gluc.	-	
Estriol gluc.	-	
17-ketosteroids	on request only	
VMA	on request only	
(c) Other body fluids		
	-	

List of clinical chemistry assays available:

- | | | |
|--------------------|-----------------------|---------------------------|
| - Serum iron | - Iron binding cap. | - Calcium |
| - SGOT | - SGPT | - LDH |
| - Creatinine | - Ureum | - Uric acid |
| - Acid phosphatase | - Alk. phosphatase | - TTT |
| - Kunkel | - HB _s Ag | - Anti HB _s Ag |
| - Bilirubin | - Australia antigen | - BSF |
| - Albumin/globulin | - Alfa-fetoprotein | - Glucose |
| - Beta-lipoprotein | - Cholesterol | - HDL-cholest. |
| - Electrolytes | - Blood gas chemistry | - Glyco-Hb |

Histopathology and haematology examinations available:

- Routine and special surgical pathology
- Routine haematology
- Haemostatic function tests
- Coagulation tests
- Fibrinolysis
- AT III
- Thrombocyte aggregation
- Pathologic haemoglobins
- Serotyping
- Ferritin

Cervical cytology 6.000 smears/yr

Semen analysis 3.000/year

8. EXPERIMENTAL ANIMAL FACILITIES

The Departments of Biology, Histology, Pharmacology, Microbiology and Pathology keep experimental animals. Due to renovation of the animal quarters building the animals are now housed in temporary quarters or in animal rooms within a Department.

Animals available are mice (different strains), rats (local strain), frogs, rabbits, guinea pigs, monkeys (available only when there are experiments using monkeys) and calves (kept on a private farm and used for obtaining calf's serum).

The animal facilities are not air-conditioned, except the animal room in the Department of Biological Sciences. Animal feed are obtained from local suppliers and usually supplemented with special food (fresh vegetables and fish). Funds for maintenance are obtained from the routine budget, research grants and from service which uses the animals (assays).

9. STATISTICAL AND DATA PROCESSING FACILITIES

Names of staff:

Prof. Widodo Talogo MD, MPH
Dr. Joedo Prihartono, MPH
Dr. Sumedi, MPH
Dr. Dastaman Basuki MPH

Data processing facilities:

Mainframe: Data General B000 Mini computer (at University Computer Centre).

Microcomputers: Many Apple and IBM Compatibles are available in different Departments and also as personal property of individual investigators.

Several sets of statistical packages and other software are available.

10. LIBRARY RESOURCES

The Central Medical Library is located in the main building of the School of Medicine. The total floor space is 1335m² and the seating capacity is 130 persons. The total number of visitors in 1985 is 23,073 persons.

Until 1982 the library used to subscribe to about 400 periodicals among others many titles in human reproduction. But since 1982 due to budget cuts the number of journals subscribed to has dropped drastically to 25. It is hoped that in 1986 subscriptions can be resumed. Temporarily the library has been asking for grants from different sources. The number of bound volumes of periodicals is about 13,000 and the number of volumes of books about 70,000.

Scientific literature is also available in different Departments, which have funds to buy subscriptions and books in their own specialty.

The library is also part of the SEAMIC (South East Asia Medical Information Centre) network which has its centre in Tokyo. Through this network the library has access to MEDLARS and can get reprints of articles which are not available in the library. Users can also look for titles in reference journals like Index Medicus which is available in the library.

The library also serves as SEAMIC Deposit library for Indonesia and as a focal point in the national interlibrary loan network.