

カサウリ市内 I

道 標



スーパーマーケット



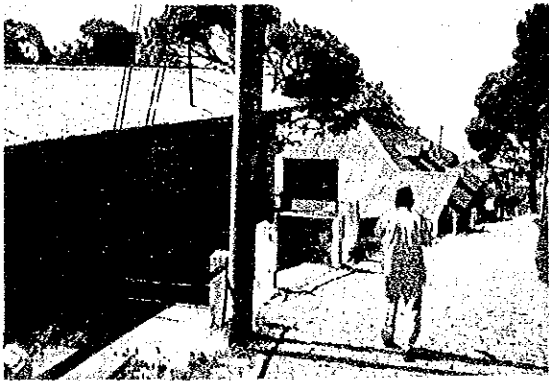
唯一の映画館



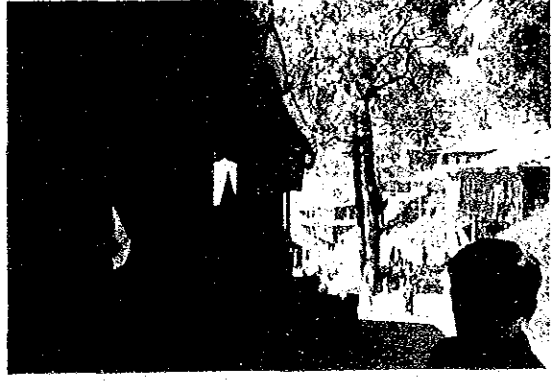
バス・ターミナル



電 話 局



郵便・電報局



カナウリ市内Ⅱ

調査団が利用したアラシア・ホテル



同左(部屋数：5部屋)



3.8 協力期間と実施スケジュール

(1) 協力期間

当初計画では、3年を見込んでいたが、印側負担分の建屋改造工事及び無償資金協力による機材の現地到着に要する期間等を勘案した場合、ワクチン製造着手まで諸々の準備作業が必要であることよりその準備期間を概ね1年とし、それを含め協力期間を4年とした。

(2) 実施スケジュール

実施スケジュールの概略については、R/Dに添付されている「Tentative Implementation Schedule」に記載されているが、その詳細計画は、表-6のとおりである。

この計画にもとづき、実施する場合の留意事項は次のとおりである。

① 無償機材の据付・操作指導専門家の派遣

カサウリ中央研究所における印側の説明によって、機材の本邦船積時期を1983年の1月とした場合、2月にボンベイ港着、5月カサウリ着（内陸輸送に4ヶ月要する由）、9月まで据付工事を完了させるとの線引をした。

無償機材のうち次のとおり技協サイドからその据付・操作指導の専門家を上記時期にあわせて派遣する必要がある。

機 材 名	専門家人数, 分野	派遣期間 (日)
KIIゾーナル超速心機 関連機器	3 (技師 配管, 電気)	54
バイアル充填・打栓機	2 (機械, 電気)	17
凍結乾燥機	2 (機械, 電気)	60 30
蒸気滅菌器及び乾熱滅菌器	2 (電気, 配管)	24
空調システム	2 (機械, 配管)	17

② 1983年度の事業計画打ち合せ、及び、印側負担工事進捗状況確認のための日本側チームの派遣

本プロジェクト運営・管理については、3.6で述べたとおりであるが、調整委員会での次年度事業計画策定のため日本側チームを派遣する必要がある。併せて、本チーム

によって印側の負担となっている建屋の改造工事の進捗状況の確認を行わしめることが重要であると判断される。

③ 日本人専門家の派遣

専門家の派遣については、研修員受入によって帰国したカウンターパートを現地にて指導するとのサイクルを考えていたが、今回の調査によって、2年次目、即ち、1983年の専門家派遣は、全体計画が、少しずれたことによって、研修員受入期間中に、専門家を派遣することとなっているので、上記基本的考え方をどう整理するかの議論はでてこよう。

しかし、スターティング・セット・アップの重要な時期であるので、この時期の現地における専門家活動は多岐に渡ることが予想され、1984年以降のワクチン試作段階へ向っての現地での準備指導の役割を果たすことが期待されている。

表-6 インド日本脳炎ワクチン技術協力実施計画

年月	1982 1	4	7	10	1983 1	4	7	10	1984 1	4	7	10	1985 1	4	7	10	
mouse 生産		E/N R/D															40,000 U/Week
VAC 生産		2/5 3/12															20,000 U/Week
設備 機械 与 供						建屋改造, 用役, 配線, 配管											仕込 透心 製剤
研修員 受入						無償 技師											
専門家 派遣																	
品管																	
Bulk A																	
Bulk B																	
製剤																	
品管																	
Bulk A																	
Bulk B																	
製剤																	

4. 無償資金協力

4.1 経緯及びE/Nの内容

56年2月に派遣した予備調査団の報告により、本プロジェクトを開始するためには印側で基本的機材（総額5.2億円相当、うち2.7億円相当は国外からの輸入によらなければならない。）を購入しなければ（日本側技術協力の枠ではとうてい供与できないので）ならないことが明らかになった。そこで、わが方は、在印大使館を通じ、再三にわたって印側にその費用を負担するように交渉したが、印側は、機材については本プロジェクトのマスター・プランを作成した吉岡博士（WHOの専門家として53年12月訪印）の算出した4000万円ですぐであり、また、仮にそれが必要であっても外国製品の輸入は原則的に禁止（又は多額の税金がかかる）として、印側による対応（又は資金手当て）は困難であることを主張してゆずらなかった。つづく、56年8月の事前調査団は、機材の資金手当て問題を一応棚上げにして、さらに製造場所、要員をはじめ機材の種類、仕様、数量について検討、協議を行ない、必要機材のリストを作成した。また、このうち、インド国内で調達可能なものは、印側負担とし、インド国外からの輸入によらなければならないものについては、改めて日本からの供与を考慮することとなった。同調査団の報告により、技術的には何ら問題のないことが明らかになり、その後日本側の協力体制についても「細菌製剤協会」が傘下8社をまとめて積極的に協力することとなった。また、在印大使館からも、本件協力に対する積極的な働きかけがあり、日本側は、56年末、本件機材を無償資金協力により供与することを決定した。そして、57年2月6日、わが方原大使と先方マルホトラ大蔵省次官との間で交換公文（E/N）に署名がなされ、3億円を限度とした、無償資金が印側に供与されることとなった。

E/Nの内容は、この資金（3億円以内）は、日本脳炎ワクチン製造に必要な機材の購入とその輸送（インドの港まで）にあてられ、償還の義務はないこととなっている。また、印側は、これら機材を公開入札により調達し、57年2月5日までディスペースを完了しなければならず、国内輸送費、建物改造費、据付費等国内で必要なローカル・コストを全額負担することとなっている。なお、調達する機材については、第3国製品でもさしつかえないが、購入は日本の企業（商社）を通じて行うことが義務づけられている。

4.2 印側の実施体制

印側は、E/N署名後すみやかにとるべき銀行取極（B/A）や入札準備等を本調査団派遣まで何らアクションをおこなっていない。その理由として本プロジェクトは、E/Nに署名してもまだPlanning Commission（経済開発計画評議会、以下P.C.と略す）のSanction（裁可）を得ておらず、すべての事務手続はその裁可のあとにならざるをえないということであった。実際に入札にかける手続をおこなうのは、保健省、カサウリ中央研究所である。P.C.の裁可は本年6月ごろにはおきる予定である由であるが、その前に実質的に事務手続をすすめることは非常に困難であることを先方は再三強調していた。つまり、P.C.はすべての省庁の1ランク上にあり、その承認なしには、いかなるプロジェクトであってもスタートできないという説明であったが、3億円程度のプロジェクトであり、若干簡便にできない道もないわけではないようにみうけられた。

4.3 実施スケジュール

日本側より、先方に要望したスケジュールは以下のとおりであるが、先方は、これに強い難色を示し、E/N期限の延長を求めてきた。よって、外務省本省に請訓しその延長の可否について問い合わせたところ、延長できても、57年3月31日までであるという回答であったので、その旨、財政法上の問題（明許繰越費の再繰越はむずかしい）と合わせ先方に説明しておいた。

月/日	内 容
3/1	銀行取極（B/A）
3/15	入札
5/15	落札，契約締結
6/15	契約認証，発注 支出承諾書発行，通知 （納期7ヶ月）
1/15	船積 支払請求（日本企業→外為銀行→日本政府）

2/5 支払（日本政府）

先方は、上記スケジュールに対し、本年6月がプロジェクトの開始時期となり、それから入札手続等を開始するので、6ヶ月程度のE/Nの支払期限延長を希望している。

4.4 問題点

(1) E/Nの支払期限延長

日本側としては、本件予算は56年度の「明許繰越」であり、これを「事故繰越」としてさらに1年間延長することは、天災等の特別の事情が招来した場合のほかは極めて困難という財政法上の制約がある。ところが、先方の主張は、P.C.の裁可に時日を要するという理由であり、事故繰越に該当する事由とはなりえないので、その手続を何とか早めさせる必要がある。しかし、調査団からの再三の勧告にもかかわらず、先方はあくまでいまから3ヶ月（つまり本年6月まで）かかるということ譲らず、また行政機構上その手続を早めることがかなり困難であるという事情がある。カサウリ研究所における、本プロジェクト計画書作成については、4月までには可能としており、むしろ、その上部機関（保健省、P.C.等）の決裁手続に時日がかかる模様である。よって、本E/Nがうまくディスパースされるためには、早急に実施促進のためのミッションあるいは専門家をインドに派遣し、さらにつつこんだ協議を行う必要がある。

(2) 機材据付費の負担

印側は、購入した機材については、購入先（日本）が、スムーズに稼動するまで責任をもつことが常識であると考えている。機材の欠陥による保証については、契約によりカバーできるが、据付費の負担についてはE/N上印側が手当てすることになっており、契約ではカバーできない。ところが、本件機能中特にKIIゾーナル遠心分離機、凍結乾燥機については、製造元であるアメリカあるいは日本から据付専門家を派遣する必要がある（印側のみでの据付は不可能）。後者については、技術協力の枠内で派遣することは可能であるが、前者については、外国人を派遣することとなり技協でカバーすることはむずかしい。よって前者のみでも、無償資金協力の枠内で認めてやる必要がある。

(3) 手 続 き

印側は、自分で購入するよりも、日本から機材を送ってもらう方が良いと考えており、また、保健省では、日本の無償資金協力を得るのははじめてであり、はたして調達手続が順調に行われるか若干不安が残る。さらに、無償と技協の区別をはっきりと理解しておらず、再三にわたってその区別を説明する必要があった。そこで、わが方より、無償、技協及び印側負担の機材リストを一覧表にまとめて先方に手交することとなった。これにより、基本的概念の理解はさておいても、具体的機材の購入にあたっては、混乱がおこらないものと確信する。なお、入札手続に必要として、無償による供与機材についてさらにくわしい仕様を知らせてほしいとの要望があり、わが方はこれを了解した。無償により購入すべき機材のリストを表-7のとおり手交した。

表-7 無償機械リスト

LIST OF MACHINERY BY GRANT AID

March, 1982

- Conditions :
- (1) Price is Ex-godown price (including packing fee and transportation fee in Japan)
 - (2) Price does not include margin of Japanese trade company, ocean freight and insurance fee for the cargo from Japanese port to Bombay.

No	Name	Specification	Maker & Type	Qty	Total Price (thousand Yen)	Remarks
1	Ultra low temperature cabinet	-85 -45°C, 35l liters with recorder and standard accessories	REVCO/ULT-1285	2 sets	5,900	
2	Refrigerated centrifuge	6,000 rpm, 6,760 g with standard and special accessories	HITACHI/6PR-52	5 sets	10,500	4 set for bulk process 1 set for Q.C.
3	KII-Zonal centrifuge	1) 35,000 rpm, 90,000 g, over 80 liters per hour, 8 liter rotor capacity with accessories and spare parts	ENI/R-MARK-II (COLOMBIA TRADE CO. LTD in Japan)	1 lot	87,000	including installation fee and adjustment fee
		2) Air compressor (317 KW), after cooler, drain separator filter, receiver tank, dryer, cooling tower (10t), pump (0.75 KW), chiller, piping & electric wiring materials	HODOGAYA-GIKEN			including lay out fee/excluding installation fee
4	Automatic vial filling line	Rotary turn table, Automatic filling machine, Automatic half-way and fully rubber stoppering machine, Automatic single tray leader (intermediate accumulator), Automatic sealing machine with spare parts for line	KEETE CO. LTD /At-900, AT-800	set	53,120	excluding installation fee
			5F-L	3		
			8I-U	1		
			AB-100	1		
			4E-4	1		
5	Freeze-dryer	8 shelves, bial 24.5 φmm × 50H mm (or 36H mm) 18096 bials, condenser capacity-ice 240 kg, -70°C with gas exhausting device, cooling water device, moisture content measuring system, pall filter 0.2 u,	EDWARDS/CH-80 (NISSAN EDWARDS SHINKU in Japan)	1 set	89,258	excluding installation fee
				set		
				1		
				1		
				2		

No	Name	Specification	Maker & Type	Qty	Total Price (thousand, Yen)	Remarks
5	(cont'd)	pall filter with spare parts for line		2 sets		
6	Steam auto- clave	900 × 1,000 × 2,500 mm, 250l, automatic, with vacuum pump, recorder and acces- sories	NITTO RIKA KOOCYO/UC-A- 202D	1 set	8,500	excluding installation fee
7	Dryer oven	1,200 × 1,200 × 1,500 mm, Max 250°C with recorder and accessories	NITTO RIKA KOOCYO/DSP- A-68	1 set	8,800	excluding installation fee
8	Water purifica- tion system	860 × 1,100 × 1,800 mm, 20 l per hour with spare parts	TOYOKAGAKU/ GS-200T	1 set	4,800	
9	Filtration device for purified water	with spare parts	MARUSHO SAN- GYO/G723H4	2 sets	2,720	
10	Air condition- ing system	Air conditioner with heater, air condi- tioning fan, control cabinet, duct, wiring materials and spare parts	HITACHI REI- NETSU/Air handling Unit UA-30AR	1 set	8,300	excluding installation fee
TOTAL					278,898	

5. 資料

5・1 インド側関係者名簿

1. 大蔵省

Department of Economic Affairs, Ministry of Finance:

- (1) Mr. B.M. Oza, Joint Secretary
- (2) Mr. S. Gurumurthi, Deputy Secretary
- (3) Mrs. Ranjana Chowdhary, Under Secretary
- (4) Mr. Surup Singh, Colombo Plan Section

2. 保健省

Department of Health, Ministry of Health & Family Welfare:

- (1) Dr. I.D. Bajaj, Director General of Health Services
- (2) Mr. C.V.S. Mani, Additional Secretary
- (3) Mr. N.N. Vohra, Joint Secretary
- (4) Mr. A.K. Singhal, Director
- (5) Dr. Sengupta, Deputy Director General of Health Services
- (6) Dr. H.W.T. Syiem, Deputy Secretary (International Health)
- (7) Dr. S.N. Saxena, Director, Central Research Institute, Kasauli
- (8) Dr. N. Dutta Banik, Deputy Director General, Indian Council of Medical Research (ICMR), New Delhi

5・2 保健者機構図

STRUCTURE AND FUNCTIONS

The organisational chart of the Department of Health is given in Appendix I. There are two Subordinate Offices viz., Homoeopathic Pharmacopoeia Laboratory, Ghaziabad, and Pharmacopoeial Laboratory of Indian Medicine, Ghaziabad, directly under the Department. The Directorate General of Health Services is an attached office under which there are 69 Subordinate Offices. The number of Subordinate Offices under the Department of Family Welfare is 18. Regional Health Offices and six Regional Coordinating Offices were functioning in different States to maintain liaison with State Governments and to give technical guidance and assistance, whichever necessary, in connection with the implementation of the Family Welfare and National Malaria Eradication Programmes. These two offices were merged into one in 1979 and named as Regional Office for Health and Family Welfare. 17 Regional Offices have now been set up in the different States so that generally a single office will look after the implementation of the Family Welfare and National Malaria Eradication Programmes for the present in each large state or a combination of 2-3 States. The Subordinate Offices are the field agencies, which help in the implementation of the different programmes of the Ministry.

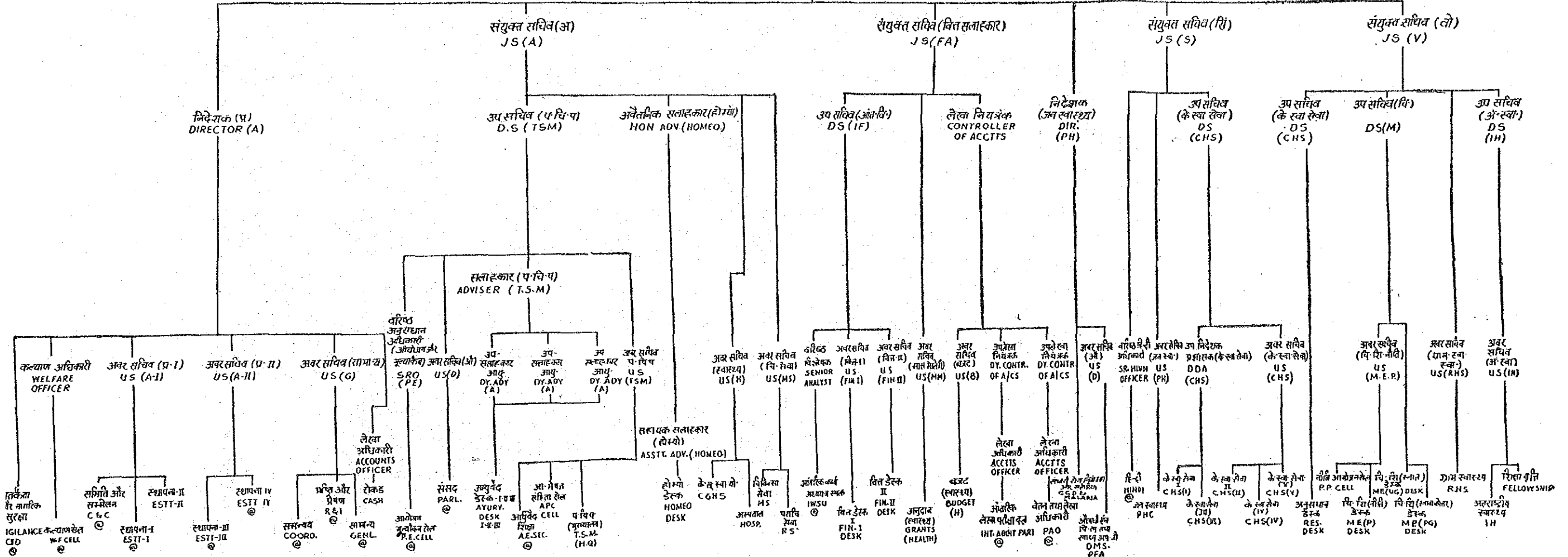
The Department of Health deals with medical and public health matters, including drug control and prevention of food adulteration. The Department has the sole executive responsibility for the subject included in the Union List and has concurrent legislative responsibility with the States for the subjects contained in the Concurrent List. Technical advice on all medical and public health matters is rendered to the Department by the Directorate General of Health Services.

出典 ANNUAL REPORT 1980-81
Ministry of Health and Family Welfare 19

संगठन चार्ट
ORGANISATION CHART
स्वास्थ्य और परिवार कल्याण मंत्रालय
MINISTRY OF HEALTH AND FAMILY WELFARE
स्वास्थ्य विभाग
DEPARTMENT OF HEALTH

1.1.81 की स्थिति के अनुसार
AS ON 1.1.81

सचिव
SECRETARY
अपर सचिव (स्वास्थ्य)
ADDITIONAL SECRETARY
(HEALTH)



NOTES:-

- SECTIONS SHOWN AS ⊙ SERVE BOTH THE DEPARTMENT OF HEALTH AS WELL AS THE DEPARTMENT OF FAMILY WELFARE.
- TECHNICAL MATTERS RELATING TO ARCHITECTURAL WING OF D.T.E.G.H.S. WILL ALSO BE LOOKED AFTER BY DIRECTOR(A) WHO WILL WHERE REQUIRED SEND CASES TO ADDL. DG IN D.T.E.G.H.S.
- THE SECRETARY WILL BE DIRECTLY DEALING WITH THE FOLLOWING SUBJECTS:-
(i) CENTRAL HEALTH SERVICE (ABOVE G.O.GRADE-I)
(ii) MATTER CONCERNING INSTITUTIONS/ORGANIZATIONS OF WHICH SECRETARY IS THE CHAIRMAN/VICE-CHAIRMAN OR A MEMBER OF THE GOVERNING BODY.
(iii) INTER NATIONAL HEALTH/FELLOWSHIP
(iv) RURAL HEALTH SERVICE
- THE WORK RELATING TO C.H.E-B BEING LOOKED AFTER BY US(PM) WILL BE SUBMITTED DIRECT TO JS.(N) BY US(PM)
- ALL AYURVEDA DESKS & HOMEOPATHY DESKS WILL SUBMIT THEIR CASES TO DS (TSM) AFTER OBTAINING THE TECHNICAL ADVICE OF ASSTT. ADV./DY. ADV.(TSM)/ADY(HOMEOP)
- WHERE NECESSARY THE OTHER SECTIONS VIZ. A.E. P.F.C. T.S.M. SUBMIT THEIR FILES TO US(TSM)
- THE WORK RELATING TO M.S. DEPOTS BEING HANDLED IN D.P.S & P.F.D. SECTION WILL BE LOOKED AFTER BY JS(S)

नोट :-

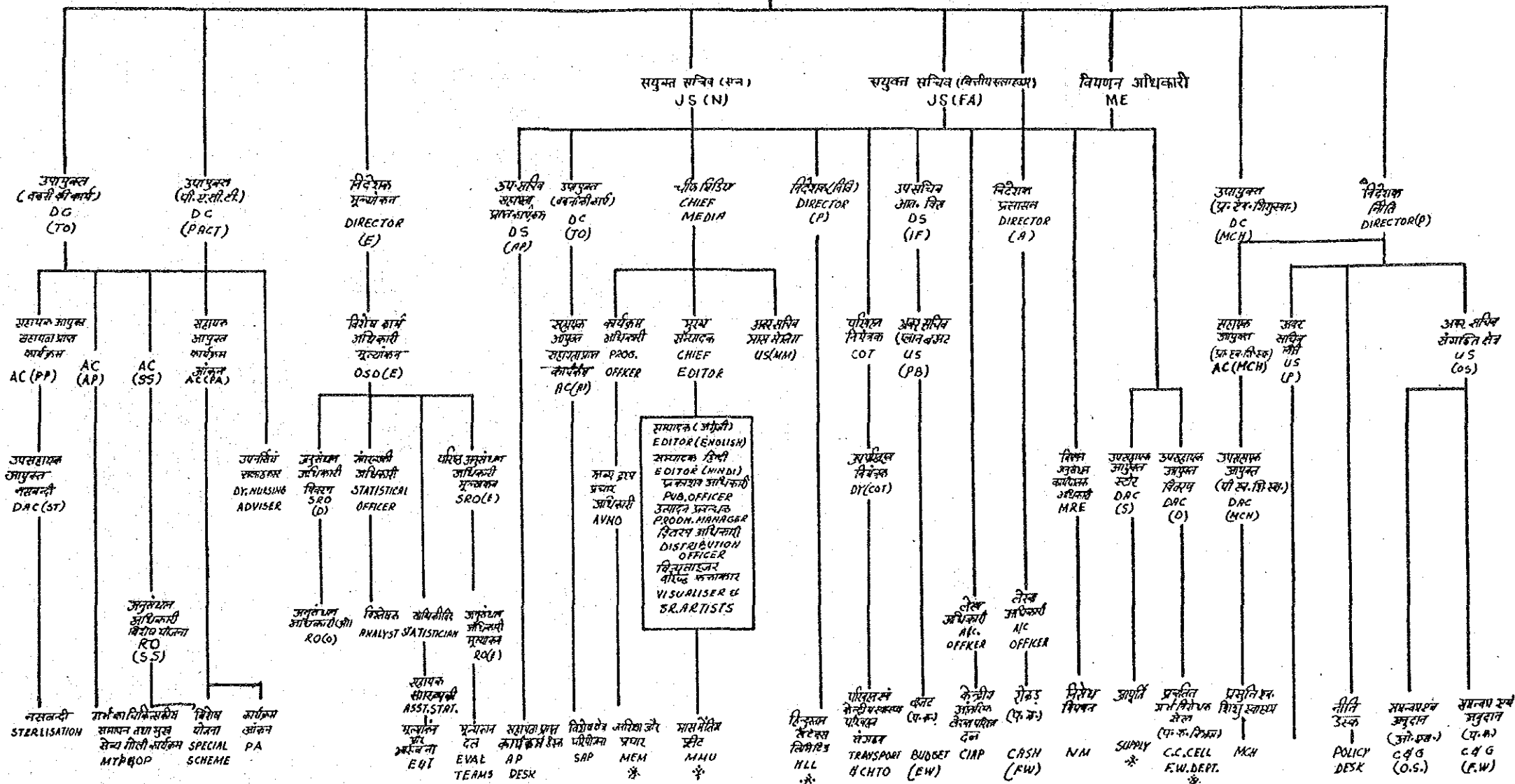
- ⊙ चिह्न वाले अनुभाग स्वास्थ्य और परिवार कल्याण दोनों विभागों का कार्य करते हैं।
- निदेशक (अ) स्टाफ सेल महाविद्यालय के वास्तुकार विभाग के तकनीकी मामलों को भी देखेंगे और डिज़ॉनिंग या मतों को वह आरक्षक मामलों उन्हें अपर महाविद्यालय, स्टाफ सेल महाविद्यालय को भेजेंगे।
- विशेषज्ञता के क्षेत्रों में सीधे सचिव को भेजे:-
(1) केन्द्रीय स्वास्थ्य सेवा (जी.ओ. ग्रेड-1 से ऊपर) ; (2) उन संस्थाओं/संगठनों के मामले जिनके शासी निकाय के सचिव अध्यक्ष/उपाध्यक्ष पदाध्यक्ष हैं। (3) अन्तरराष्ट्रीय स्वास्थ्य/शिक्षा/वृत्ति (4) साम्प्रदायिक सेवा
(5) केन्द्रीय स्वास्थ्य शिक्षण न्यूनतम कार्य अपर सचिव (अन्तरराष्ट्रीय) देख रहे हैं और वे इसे सीधे संयुक्त सचिव (स्वा) को प्रस्तुत करेंगे।
(6) सभी आयुर्वेद, वैद्य तथा होमियो केस, जो आवश्यक हो सहायक महाविद्यालय/उप महाविद्यालय/प.फि.प./सहायक (होमियो) की तकनीकी सलाह लेने के बाद अपनी फाइलें उप सचिव (प.फि.प.) को भेजेंगे।
(7) (पिफिलस सामग्री) अंडर से सन्निहित न्यूनतम (जैसे) और भी सब पिफिलस सामग्री तथा स्वाद्य उपविभाग निवासिता अनुभाग में रखा है, संयुक्त सचिव (स्वा) देखेंगे।

संगठन चार्ट
ORGANISATION CHART
स्वास्थ्य और परिवार कल्याण मंत्रालय
MINISTRY OF HEALTH & FAMILY WELFARE
परिवार कल्याण विभाग
DEPARTMENT OF FAMILY WELFARE
सचिव
SECRETARY

परिशिष्ट-II
 APPENDIX-II

१-१-८१ की स्थिति के अनुसार
 AS ON 1-1-81

अवर सचिव (परिवार कल्याण)
 ADDL. SECRETARY & COMMISSIONER FAMILY WELFARE



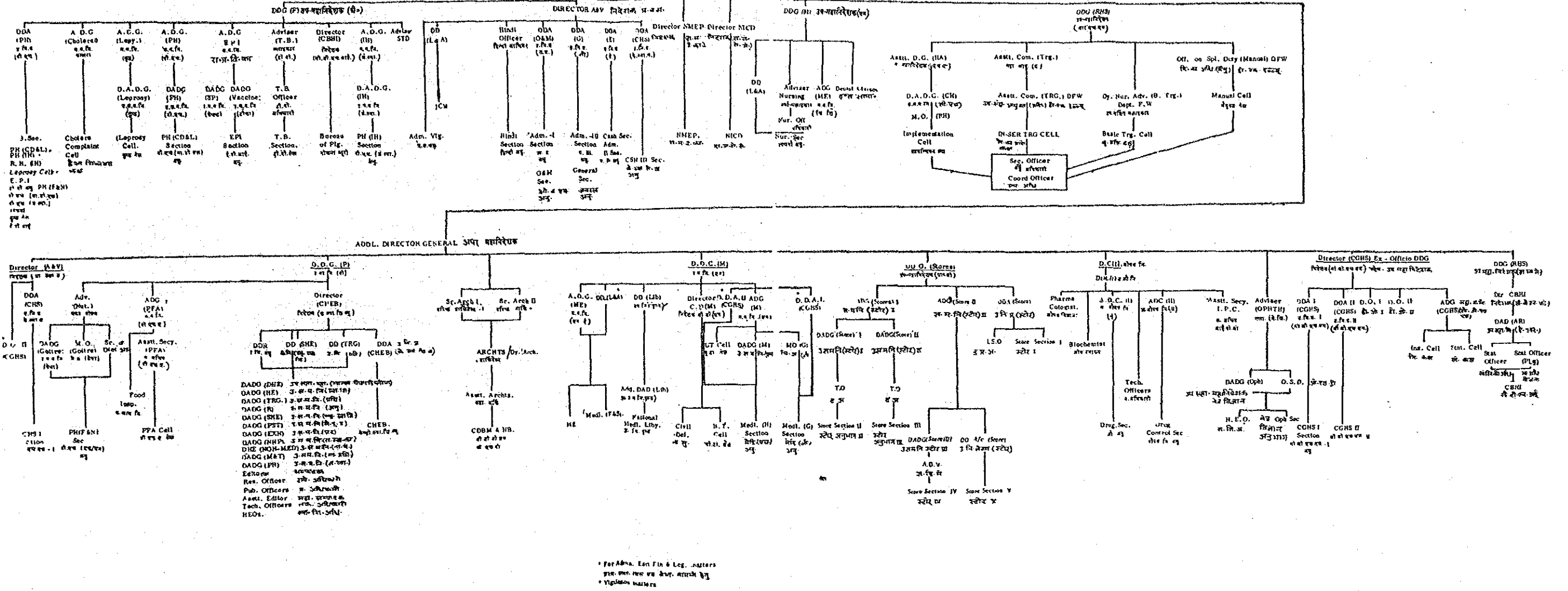
टिप्पणियाँ:-
 NOTE:-

1. स्थापना, प्रति और निर्माण, सामान्य अनुभागीय आदि जो जो स्वास्थ्य और परिवार कल्याण मंत्रालय के दोनों विभागों अर्थात् स्वास्थ्य विभाग और परिवार कल्याण विभाग को सेवा करते हैं स्वास्थ्य विभाग के संगठन चार्ट में दिखाया गया है।
 1. SECTION SUCH AS ESTABLISHMENT R.H.I. GENERAL ETC SERVING BOTH THE DEPARTMENTS I.E. DEPARTMENT OF HEALTH & DEPARTMENT OF FAMILY WELFARE HAVE BEEN SHOWN IN THE ORGANISATION CHART OF THE DEPARTMENT OF HEALTH.
2. जिन अनुभागों के साथ चिह्न अंकित किया गया है उनके परस्परिक और वित्तीय मामले अवर सचिव (सांसाधन) के माध्यम से संबंधित संयुक्त सचिवों पर प्रस्तुत किये जाते हैं।
 2. CASES RELATING TO ADMINISTRATIVE AND FINANCIAL MATTERS IN THE SECTIONS SHOWN AS ARE REFERRED TO CONCERNED JOINT SECRETARIES THROUGH US (MIA)
3. राष्ट्रीय स्वास्थ्य और परिवार कल्याण संस्थान तथा जनसंख्या अध्ययन के अन्तराष्ट्रीय संस्थान से सम्बंधित कार्य के अवर सचिव (प्लान वजट) देख रहे हैं, जो जोन या कम निदेशक (नीति) प्रस्तुत करते हैं।
 3. THE WORK RELATING TO NIH & FW AND IIPS IS BEING LOOKED AFTER BY US (OS) WHO SUBMITS TO DIRECTOR (P)

ORGANIZATIONAL CHART
DIRECTORATE GENERAL OF HEALTH SERVICES
 DIRECTOR GENERAL

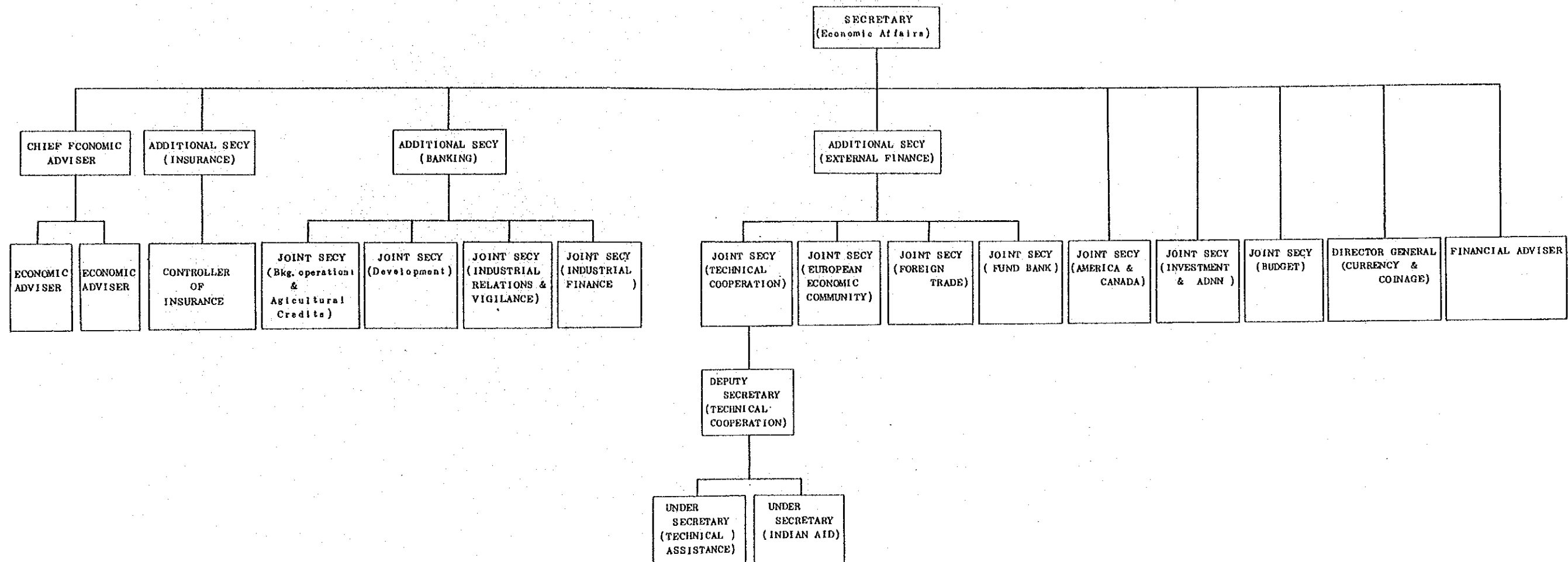
1.1.81 की दिवस के अनुसार
 AS ON 1.1.81.

परिशिष्ट III
 APPENDIX III



5.3 大蔵省経済局機構図

Organizational Chart of the
MINISTRY OF FINANCE (DEPT. OF ECONOMIC AFFAIRS)

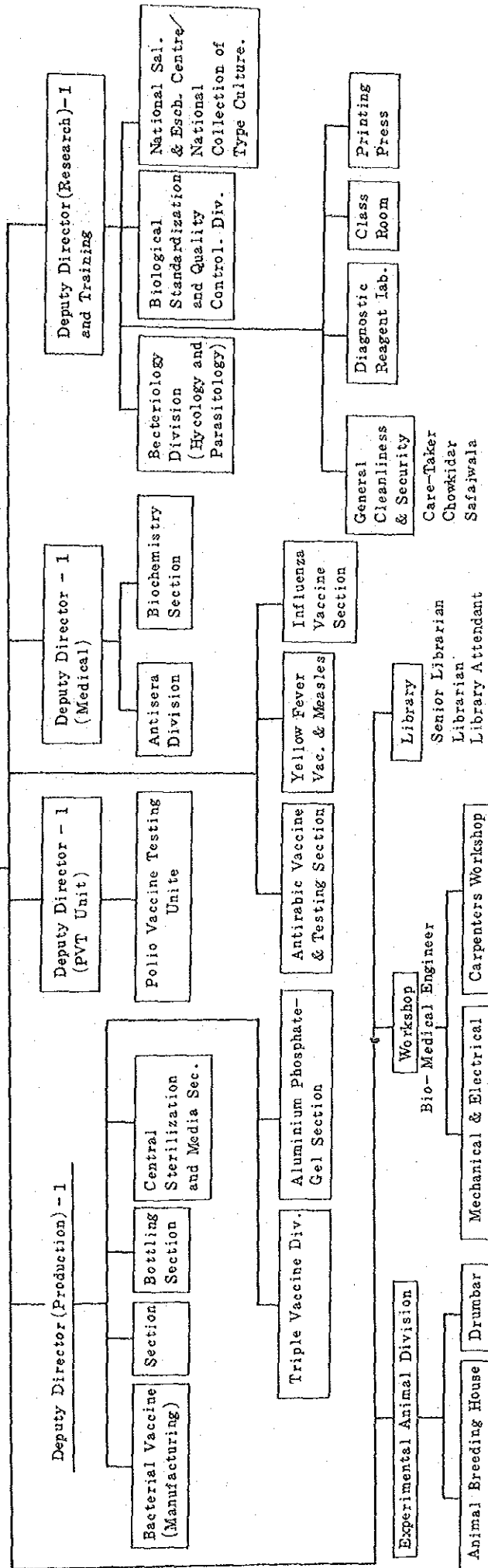


5.4 (1) カサウリ中央研究所機構図

CENTRAL RESEARCH INSTITUTE KASAULI

ORGANIZATIONAL CHART (TECHNICAL SIDE)

DIRECTOR



Staffing Pattern of each Section

Assistant Director (Medical/Non-Medical)
 Deputy Assistant Director (Med/Non-Med)
 Assistant Technical Officer
 Technical Supervisor; Laboratory Tech
 Iad. Assistant; Laboratory Attendants,
 Khalasis/labourers; Safaiwalas,
 Daily Labourers.

5 • 4 (2)カサウリ中央研究所人員名簿

LIST OF OFFICERS OF THE CENTRAL RESEARCH INSTITUTE, KASAUJI

DIRECTOR

Dr. S.M. Saxena, M.D. (Path. & Bact.), Dip. Bact.

DEPUTY DIRECTORS

1. Dr. H. Singh, M.R.C. Path., Ph.D.
2. Dr. (Mrs.) S. Ahuja, M.B.B.S., M.Sc. (Micro.)

ASSISTANT DIRECTORS (MEDICAL/NON-MEDICAL)

1. Sh. A. Chaudhury, M.Sc. (Micro.)
2. Dr. (Miss) J. Sokbey, M.D., Ph.D.
3. Dr. P. Gupta, M.B.B.S., D.C.P.
4. Sh. S.M. Saha, M.Sc. (Micro.)
5. Dr. L.M. Lee Bhou, M.D. (Micro.)
6. Smt. S.B. Sharma, M.Sc. (Micro.)
7. Dr. G.L.N. Prasada Rao, M.B.B.S., Dip. in Med. Virology
8. Dr. G. Saran, B.V.Sc., P.G. Bact., M.Sc. (Vety.)
9. Dr. V.B. Mandke, M.B.B.S., Dip. in Med. Virology

DEPUTY ASSISTANT DIRECTORS (MEDICAL/NON-MEDICAL)

1. Sh. Banarsi Dass, M.Sc. (Micro.)
2. Sh. Ashok Kumar, M.Sc. (Micro.)
3. Dr. B.K. Das, M.B.B.S., M.Sc. (Micro.)
4. Sh. Inderjit Rawal, M.Sc. (Micro.)
5. Sh. C.N. Misra, M.Sc. (Micro.)
6. Sh. P.L. Sud, M.Sc. (Micro.)
7. Sh. A.K. Bhagwan Ramteke, M.Sc. (Biochemistry)
8. Sh. K.K. Tripathi, M.Sc. (Micro.)

FACTORY MANAGER

1. Sh. D. Mahadevan, B.Sc. (Micro.)

ASSISTANT TECHNICAL OFFICERS

1. Sh. O.P. Kaushik, M.Sc. (Micro.)
2. Sh. Romesh Chander, M.Sc. (Micro.)
3. Sh. Surat Ram, B.A.
4. Sh. S.K. Bhandari, M.Sc. (Micro.)
5. Sh. M.L. Mago, M.Sc. (Micro.)
6. Sh. Dhani Ram, Matric.
7. Sh. Ram Jas, Intermediate (English only)
8. Sh. S.C. Maheshwari, B.Sc., B.Sc. (Microbiology)
9. Sh. P.C. Dutta, M.Sc. (Micro.)
10. Sh. V.K. Mahta, B.Sc., B.Sc. (Microbiology)

11. Sh. Gural Singh, B.Sc., B.Sc. (Microbiology)
12. Sh. S.K. Malik, B.Sc.
13. Sh. Virender Kumar, M.Sc. (Microbiology)
14. Sh. Sohan Lal, B.Sc., B.Sc. (Microbiology)
15. Sh. P.C. John, Matric.
16. Smt. Rita Mittra, M.Sc. (Microbiology)
17. Sh. Mussadi Lal, B.Sc.
18. Sh. Ramesh Kumar Aggarwal, M.Sc. (Microbiology)

BIO-MEDICAL ENGINEER

1. Sh. R. Thiagarajan, B.K. (E. & Common Engg.), D.M.E.T. (Dip. in Med. Equip. Technology), M. Tech. (in the final phase of thesis sub.)

ASSISTANT ELECTRICAL ENGINEER

1. Sh. H.L. Wangneo, B.Sc., B.Sc. Engineering (Elect.)

VETERINARY OFFICER

1. Dr. Bhoop Singh, B.V.Sc. & A.H.

VETERINARY ASSISTANT SURGEON

Vacant

SENIOR LIBRARIAN

1. Sh. Harish Chandra, M.A., Dip. in Library Science

<u>Sl. No.</u>	<u>Designation of the posts</u>	<u>No. of posts</u>	<u>Qualifications required</u>
1	Technical Supervisors	33	B.Sc. or B.Sc. (Microbiology)
2	Laboratory Technicians	18	By promotion
3	Laboratory Assistants	36	By promotion
4	Laboratory Attendants	102	Middle pass with some laboratory experience
5	Khalasis/Labourers/ Animal Attendants	198	Literate
6	Safaiwalas	40	Literate

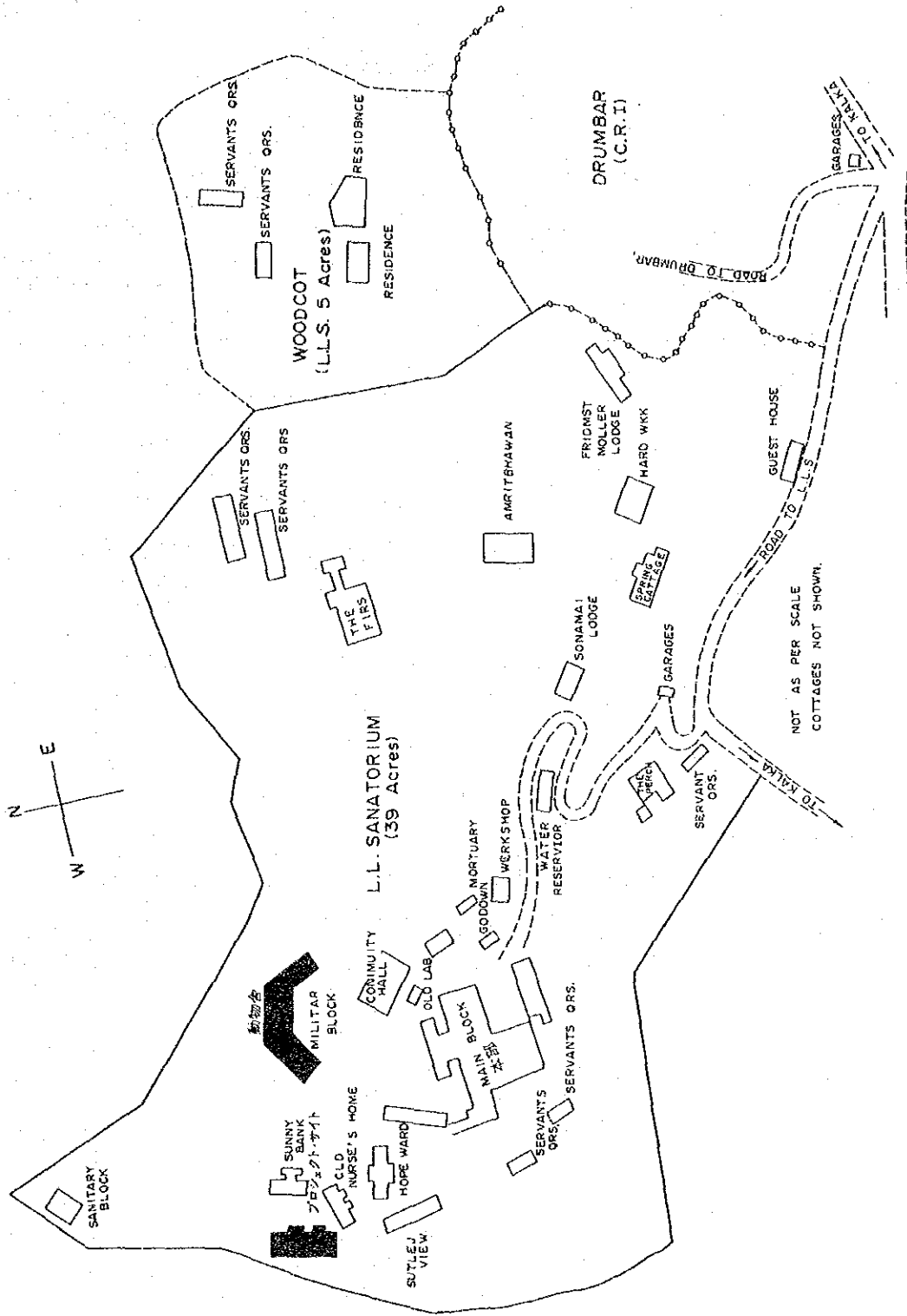
*	人 員	655人
	現 員 数	625人
	欠 員	30人
	日 雇 勞 務 者	110人

<u>Sl. No.</u>	<u>Designation of the posts</u>	<u>No. of posts</u>	<u>Qualifications required</u>
<u>WORKSHOP</u>			
1	Bio-Medical Engineer	1	<p>i) Degree in Electronics or Electrical Engineering from a recognised University or equivalent.</p> <p>ii) 5 years' experience in the maintenance and repair of machinery, equipment etc. preferably in Bio-Medical Engineering in a Hospital.</p> <p>(Qualification relaxable at the discretion of the Union Public Service Commission in case of candidates otherwise well-qualified; in particular the qualification regarding experience is relaxable in case of candidates belonging to Sch. Castes & the Sch. Tribes for posts reserved for them)</p>
2	Assistant Electrical Engineer	1	<p><u>ESSENTIAL:</u></p> <p>i) Degree in Electrical Engineering or a recognised University or equivalent.</p> <p style="text-align: center;">OR</p> <p>Diploma in Elect. Engineering with 5 years experience (Professional)</p> <p>(Qualifications relaxable at Commission's discretion in the case of candidate otherwise well qualified)</p> <p><u>DESIRABLE:</u></p> <p>i) Training in Refrigeration and Air-conditioning.</p> <p>ii) Experience in the assembling, installation maintenance and repair of cold storage, freezing and drying equipment and air-conditioning plants.</p>
3	Foreman	1	<p>i) Matriculation or equivalent qualifications.</p> <p>ii) Diploma in Electrical/Mechanical Engineering (3 years course) or iii) Craftman Trade Certificate in Electrician/Mechanist/Refrigeration (3 years course) or iv) I.T. I. Cert. in refrigeration/Air-conditioning Mechanist/Electrician with experience in the maintenance of Lab. equipment and refrigeration plants of 5 years in the case of candidates pos-</p>

<u>Sl. No.</u>	<u>Designation of the posts</u>	<u>No. of posts</u>	<u>Qualification required</u>
			sessing qualification at (ii) above. 8 years' in the case of candidates at (iii) and 15 years in case of those at (iv) Recruitment Rules under approval.
4	Technical Supervisor (Elect.)	1	i) At least matriculation or equivalent qualification. ii) Diploma in electricity with particular reference to Refrigeration.
5	Technicians	6	i) Matriculation or equivalent qualifications. ii) Diploma/Certificate in Air Condg. Ref. and Mechanical Engineering/Electrical Engineering.
6	Mechanicians	3	- do -
7	Cage Mistry-cum-Boiler Attendant	1	i) Competency Certificate of required standard to hold charge of Boiler Act, 1923 (5 of 1923). ii) Two years' experience of looking after the Boilers. iii) Proficiency in sheet metal work including gas and electric welding.
8	Boiler Attendants	8	2nd Class Boiler Attendant Certificate with 3 years' experience of attending the boilers.
9	Armateur Winder-cum-Welder	1	i) Matriculation or equivalent qualification. ii) I.T.I. Certificate in Armateur Winding or Electrician with professional experience of two years.
10	Head Carpenter	1	<u>ESSENTIAL:</u> Certificate of Carpentry from a recognised Institution with one year's experience or 5 years' experience in the case of those having no Certificate. <u>DESIRABLE:</u> Middle School i.e. passed VIII Standard.
11	Carpenters	7	Experience of Carpenter's work.

<u>Sl. No.</u>	<u>Designation of the posts</u>	<u>No. of posts</u>	<u>Qualification required</u>
12	Tin Smiths	2	i) Middle School Standard pass. ii) Previous experience of two years' in Tin Smith's work.
13	Fitters	4	i) Middle School Standard pass. ii) Experience of Fitter's work.
14	Stokers	6	Literate with experience of Stoker's work.
15	Labelling Supervisor/ Packing Supervisor	2	By promotion
16	Head Packer	1	By promotion
17	Packers	6	Middle School Standard Pass Previous experience of Packing and Labelling work preferable.
18	Labellers	4	Middle School Standard Pass Previous experience of Packing and Labelling work preferable.

5.4 (3) カサウリ中央研究所見取図



5・5 インドにおける日本脳炎ワクチン輸入と消費

NATIONAL INSTITUTE OF COMMUNICABLE DISEASES: DELHI

J.E. Vaccine Received/Distributed

Source of receipt	Qty. of doses received		Qty. of doses distributed	Balance
<u>Received during 1978</u>				
1. M/S Toshiba Japan	47,900 (liquid)	U.P. W.P. Orissa	24,500 1,000 1,000	
2. WHO-SEARO	20,100 (FD)	Bihar Assam	20,000 21,000 (includes all UNICEF)	
3. UNICEF	20,000 (liquid)	Karnataka A.P. A.P. Arunachal Pradesh West Bengal Institutiios under Min. of Health/Indian Council of Medical Research	4,980 2,000 2,200 200 10,020 2,100	
Total	88,000		88,000	NIL
<u>Received during 1980</u>				
1. WHO	24,800	Assam Assam	5,000 5,000	
Total	24,800		10,000	14,800 doses
<u>Received during 1980-81</u>				
1. WHO	25,000	—	—	25,000
Total				39,800

5・6(1) 日本脳炎の現状と対策(1)

JAPANESE ENCEPHALITIS

Taking into account the recurrent incidence of this disease, a cell has been established in the National Malaria Eradication Programme Directorate to coordinate the work of containment of this disease. A statement indicating cases/deaths reported due to Japanese Encephalitis outbreaks during 1978, 1979 and 1980 is at Annexure III. It would be seen that during 1978, Uttar Pradesh, West Bengal, Bihar, Assam, Tamil Nadu and Maharashtra States were badly affected by outbreaks of Japanese Encephalitis. In 1979, West Bengal reported the highest number of cases (less than that of 1978) and Karnataka,

Karnataka and Andhra Pradesh States also reported a very large number of cases. During 1980, the major incidence areas have been Uttar Pradesh, and Bihar with large number of deaths.

Technical investigations are carried out by expert institutions like the Institute of Virology, Pune, National Institute of Communicable Diseases, Delhi, Tropical School of Medicines, Calcutta, All India Institute of Hygiene and Public Health, Calcutta and the State Medical Colleges in order to advise the local authorities in diagnosis and cure of this disease. A detailed working note on the Japanese Encephalitis outbreak indicating the causes, transmission, epidemiology and entomology signs/symptoms, methods of treatment, information about the vaccine and other preventive measures has been issued by the Director General of Health Services in 1979 to all States/U.Ts. and attention thereto has been drawn by the Ministry of Health again in 1980 of all concerned States/U.Ts.

MEASURES TAKEN TO COMBAT JAPANESE ENCEPHALITIS

1. Monitoring Cell opened in NMEP Directorate.
2. All the States were asked to spray BHC/DDT insecticide over an area of 2-3 km. around the case wherever it was reported.
3. BHC/DDT were supplied/diverted from the NMEP for this purpose.
4. For spray operations, Tifa, Fontaine, Leco and Tiga machines have been supplied and staff has been trained in operating these machines. Additional machines are being obtained through W.H.O. and under USAID arrangements.
5. All States and Regional Directors, HPW have been requested to carry out entomological work in J.E. areas including susceptibility tests, vector density etc. V.R.C. Pondicherry has carried out some work in Pondicherry in this respect.

A decision has been taken in principle by the Government to undertake manufacture of Japanese Encephalitis vaccine at CRI, Kasauli, on a scale of 2 million doses per year. Technical assistance for this project is being sought from Japan.

出典 ANNUAL REPORT

Ministry of Health and Family Welfare 19

ANNEXURE III

STATEMENT SHOWING CASES/DEATH DUE TO JAPANESE ENCEPHALITIS DURING
1978, 1979 AND 1980

Sl. No.	Name of the States/ Union Territories	No. of cases		No. of deaths		Cases 1980	Deaths
		1978	1979	1978	1979		
1	2	3	4	5	6	7	8
1.	Uttar Pradesh	3550	150	1117	72	1604	530
2.	West Bengal	1303	1222	592	465	84	40
3.	Bihar	1252	109	452	57	737	336
4.	Assam	422	Nil	213	Nil	360	194
5.	Madhya Pradesh	34	Nil	15	Nil	108	72
6.	Arunachal Pradesh	22	Nil	5	Nil	Nil	Nil
7.	Tripura	33	Nil	30	Nil	69	62
8.	Meghalaya	12	Nil	12	Nil	Nil	Nil
9.	Pondicherry	163	65	114	32	Nil	Nil
10.	Mizoram	2	Nil	Nil	Nil	Nil	Nil
11.	Karnataka	72	920	18	223	9	5
12.	Kerala	5	Nil	1	Nil	Nil	Nil
13.	Tamil Nadu	412	83	122	4	188	67
14.	Rajasthan	20	Nil	11	Nil	Nil	Nil
15.	Manipur	27	Nil	4	Nil	—	—
16.	Andhra Pradesh	Nil	254	Nil	54	289	121
17.	Haryana	5	Nil	5	Nil	Nil	Nil
18.	Maharashtra	117	Nil	34	Nil	21	5
19.	Chandigarh	NA	42	NA	19	Nil	Nil
20.	Andaman Nicobar	NA	NA	—	—	4	2
21.	Nagaand	12	Nil	10	Nil	Nil	Nil
		7463	2845	2755	925	3473	1434

5 • 6 (1) 日本脳炎の現状と対策(2)

D.O.No. T.21015/5/79-PH(CD & L)

GOVERNMENT OF INDIA
MINISTRY OF HEALTH & FAMILY WELFARE
NEW DELHI-1

R.K. SINGHAL,
JOINT SECRETARY

9th July, 1980

As you are aware, Japanese Encephalitis cases are being reported from time to time from several parts of the country. This disease has got a very high mortality rate - sometimes up to 50%. Apart from the loss of life, residual paralysis, loss of speech, involuntary movements, loss of memory and other sequelae have made this a dreadful disease. This disease is more frequent in the younger age groups of the weaker sections of the society. During the current year, reports of an out-break in Madhya Pradesh have already come in.

The Director General of Health Services, Government of India, had, vide his letter No. T.21015/5/79-PH(CD & L), dated the 2nd April, 1979, circulated to all the Directors of Health Services of the various State Governments, a detailed note containing the latest information on (i) clinical diagnosis and management of Japanese Encephalitis, (ii) role of vaccination against Japanese Encephalitis, and (iii) health education. An abstract on brief technical information and health education in respect of this disease is attached for ready information. For effective prevention and control of the disease, it is important that any occurrence of Japanese Encephalitis cases should be promptly reported and also where such cases occur in districts contiguous to other States, inter-State coordination meetings should be held for joint line of action.

The Government of India have nominated the following institutions for epidemiological studies and for technical advice to the various State Governments in regard to this disease:

1. All India Institute of Hygiene and Public Health, Calcutta and School of Tropical Medicine, Calcutta for Eastern and North Eastern States.
2. The N.I.C.D. Branch at Patna for Bihar.
3. N.I.C.D., Delhi for North and Western States.
4. National Institute of Virology for Southern States, Maharashtra and Gujarat.

I am bringing this to your personal notice so that you may take appropriate action to gear up the State machinery in the event of any outbreak of Japanese Encephalitis in your State. For this purpose, you may also consider keeping some quantities of insecticides, fogging machines, Malathion Technical, Pyrethrum extracts, etc. readily available at vulnerable points for being used immediately on receipt of information about the outbreak of this disease.

Apart from the preventive and control measures, adequate facilities should be provided for the treatment of the disease and management of its

ill effects such as paralytic attacks, etc.

I would very much appreciate if you will kindly keep us informed about the Japanese Encephalitis cases in your State as and when they occur.

With kind regards,

Yours sincerely,

(R.K. Singhal)

JAPANESE ENCEPHALITIS

Japanese encephalitis, which has been much in the news till recently, is a disease of short duration. It is a disease of the brain caused by a tiny germ called Japanese-B-encephalitis virus. The virus affects the brain and its meninges (covering of the brain) and spinal cords.

Signs and symptoms

How does one recognise a case of Japanese encephalitis. There are some definite symptoms. The victim experiences sudden rise in temperature. This is moderate to high. There are also signs of headache, backache and neck rigidity. The patient may also show symptoms like loss of consciousness of various grades, such as confusion, convulsions, coma and paralysis.

How does it spread?

Japanese encephalitis, as has been stated earlier, is caused by a tiny germ. This diseased germ is transmitted to man by a particular type of mosquito. Usually, the infection is confined to birds, pigs and cattle. Interestingly enough, these birds and animals, when infected do not show the disease. Man normally does not harbour the germ but can get infected if a germ carrying mosquito bites him. But it should be remembered that not every person bitten by an infected mosquito will suffer from the disease. According to estimates, the disease has been found to occur only in a very few infected persons. It has been found that the disease has occurred in less than one person in one lakh of people.

Another pattern to be noted is that Japanese encephalitis is not contagious, via. it does not spread from man to man. Or in other words, a diseased person is not of any risk to any other person. Therefore, there is no need to keep a patient isolated.

The disease also is not spread by eating food including meat or drinking water or milk, i.e. food articles do not act as 'carrier' of the disease.

Who gets the disease?

It should be remembered that Japanese encephalitis does not have affinity to any age group of population, or to any sex. It can attack people of all age groups and both males and females are equally prone to it.

Preventive Measures Important

Although Japanese encephalitis is a disease of short duration and occurs in a very few infected persons, it can often prove fatal if not managed properly in time. Hence preventive measures are of extreme importance in keeping this disease away. As the disease is caused by only by the bite of the germ carrying mosquitoes, all possible measures should be taken to eliminate chances of mosquito breeding or getting bitten by mosquitoes. These measures should be followed:-

- i) Prevent breeding of mosquito by taking care to see that there is no stagnant water in and around houses.
- ii) If mosquitoes are seen to be breeding in large pools of water like ponds, etc., the anti-malaria workers should be contacted and asked to take remedial measures.
- iii) Get rooms and verandah where mosquitoes rest, sprayed by the malaria workers.
- iv) Use mosquito nets while sleeping.
- v) If the residence is near where cattle and pigs are kept, ensure that these places are thoroughly sprayed by anti-malaria team.

It should be remembered that Japanese-B-encephalitis often resembles malaria, meningitis, and other diseases with fever. It is, therefore, essential to make a proper diagnosis. Hence call for a doctor or health worker whenever there is a case of high fever, alongwith unconsciousness, or headache or neck rigidity. Early diagnosis and treatment can save a life.

5 • 6 (1) 日本脳炎の現状と対策(3)

DR. B. SANKARAN
Director General of Health Services

Tel. No. 373424

D.O.No. T.21015/5/79-PH(CD & L)

DIRECTORATE GENERAL OF
HEALTH SERVICES
NIBMAN BHAWAN
NEW DELHI-110001

April 2, 1979

Dear Dr.

You are aware that the outbreak of Japanese Encephalitis in some states during the later part of 1978 brought in a number of pertinent issues regarding the disease. In order to brief the medical profession in certain important aspects of the disease, a note containing latest information on (1) clinical diagnosis and management of Japanese Encephalitis, (2) role of vaccination against Japanese Encephalitis, and (3) health education is attached herewith for your perusal.

May I request you to send copy of this note to all medical officers working under you, particularly those working in the hospitals and dispensaries and Primary Health Centres for their information and guidance?

With kind regards,

Yours sincerely,

Sd/-

(B. Sankaran)

To

Enc: As above

I. Clinical Diagnosis and Management of Japanese Encephalitis

1. Clinical Diagnosis

Suspicion of Japanese encephalitis must not be based upon observations of fever and headache along; clinical diagnosis necessitates the presence of other signs and symptoms as described below:

A. Early Symptoms

1. Headache
2. Fever

3. Stiff neck
 4. Impaired consciousness
 5. Abnormal movements (coars tremor, convulsions in children)
 6. Accompanying symptoms - vomiting, nausea, chills, anorexia, excitement, indifference, confusion.
- B. Later signs and symptoms (by third to fifth day)
1. Muscular rigidity (mask-like facies)
 2. Coma
 3. Abnormal breathing
 4. Dehydration
 5. Weight loss
- C. Other signs and symptoms (early or late)
1. Increase in deep tendon reflexes
 2. Thick slow speech
 3. Paresis (bilateral)
2. Clinical Laboratory Diagnosis
- A. Blood examination
1. Total white blood cells count (may be elevated in JE)
 2. Blood film for malaria parasites and differential count (may be neutrophilia in JE)
- B. Cerebrospinal Fluid Examination
1. Appearance : Watery clear or very slightly turbid
 2. Cell count : 20 to 1,000/mm³ (predominantly clear cells : neutrophils may predominate in early stages)
 3. Total protein and sugar (may be slightly elevated)
3. Differential Diagnosis (common diseases)
1. Cerebral malaria (most closely resembling JE)
 2. Bacterial meningitides (CSF examination differentiate from JE)
 3. Febrile convulsions in children
 4. Rabies
 5. Reye's syndrome
 6. Other viral encephalities, Toxic encephalopathies
4. Etiologic Diagnosis

Clinical & clinical laboratory diagnosis must be considered presumptive but require etiologic confirmation, however, initiation of treatment must be started on the basis of the clinical presumption.

5. Patients Management

As JE virus is not found in blood, secretions, or excretion at any stage in the disease, no particular measures of isolation disinfection are required.

There is no specific treatment but supportive and symptomatic treatment is crucial. Case fatality rate may be greatly reduced with proper nursing care. Patients should be transferred to hospital. If possible some of the elements of treatment listed below should be instituted before transfer.

6. Treatment

1. If there is doubt about JE diagnosis it may be indicated to treat with anti malarials and anti-biotics.
2. Anti convulsants-convulsions may be encountered in the febrile stage of JE especially in children. This requires prompt remedy with anti-convulsants because protracted convulsive status results in neurologic sequelae through cerebral hypoxia. Intravenous diazepam is the drug of choice (0.3 mg/kg, 4-6h). Phenobarbital injection (10%, 0.5 to 1.0 ml intramuscular) may be used in cases where diazepam fails to work.
3. Control fever Cold sponging or ice packs may be used. Antipyretic suppositories may be given for high fever if oral administration of aspirin is impossible.
4. Respiratory management - clearing bronchial secretions from airways during coma is of utmost importance in preventing pneumonia. Oxygen may be given when signs of hypoxia are present (1 to 2 litre/min. with nasal catheter).
5. Fluid-electrolyte replacement - patients in the first week of illness are more or less dehydrated due to fever, vomiting and insufficiency of oral intake. Drip infusion of 5% glucose in normal saline (for adults) or in half concentration saline (for children) should be used. Precautions are necessary to avoid excessive rehydration which could cause pulmonary edema.
6. Cerebral edema treatment - a hypertonic solutions of mannitol dextran or glucose (intravenously) is indicated to reduce cerebral edema.
7. Prevention of secondary infections - parental administration of antibiotics, preferable broad-spectrum antibiotics, should be used to prevent pulmonary bacterial infections and urinary infections resulting from catheterization.

COMMENTS: There is no conclusive evidence concerning the efficacy of gamma-globulin or corticosteroids.

II. Role of Vaccination against Japanese Encephalitis

- A. 1. At present JE vaccine is available only at a very limited scale and at a high cost.
2. As there is no man to man transmission and man is a dead end for the virus, it is noted that vaccination protects only those who are vaccinated and does not protect the community at large.
3. In endemic situations where sporadic cases are occurring all year through in extended geographic areas and large population vectors,

vaccination would be of a very low effectiveness for its cost to be considered as the method of choice for control.

4. In epidemic situations, vaccination programme should take into consideration the 1-month delay after the second dose before actual protection, the necessity of 2-dose injections (and a third one for longer protection), the definition of groups)* and the fact that unless a coverage of 80 to 90 percent is attained, there will be no obvious effect on the morbidity and mortality rates. Circumstances may be such that the cost-effectiveness and feasibility are not in favour of vaccination.

* at higher risk (certain age groups are occupational groups)

B. Vaccination Programme

While launching on a vaccination programme the following steps should be undertaken so that the same may be effective.

1. The epidemiological pattern of the outbreaks the morbidity rate, the seasonal variation, the duration of the outbreaks, and the immune status of the population of the concerned area should be carefully studied.
2. Based on these facts the size of the population at risk should be determined.
3. It is to be clearly understood that only an adequate coverage of 80-90% of the population at risk will lower the morbidity rate.
4. Whom to vaccinate? The age groups to be covered by the programme should be decided area-wise in the country based on the above epidemiological findings and the priorities established depending on the availability of the vaccine.
5. In endemic areas, the most vulnerable and high risk group of the population for immunization should be determined by the local health authority.
6. In an epidemic situation, vaccination can also be undertaken. Those with previous vaccination history may be given one booster dose. Regarding those without previous vaccination history, it will be for the local public health authority to determine the risk groups and accordingly vaccinate with two doses as described in the schedule given below. Protective immunity develops about one month after the second dose.
7. In case of limited supply of vaccine, areas which have no reported incidence of the disease or which have low vector population may receive lower priority.

C. Vaccination Schedule

1. For primary vaccination a schedule of two doses at an interval of 7-14 days followed by a booster anytime after 4 weeks but before one year is recommended.

2. The programme should be completed at least one month before an anticipated outbreak.
3. Subsequent boosters should be given if an outbreak occurs.

D. Precautions

1. Persons with apparent ill health.
2. Persons with allergic diseases and history of convulsions.
3. Pregnant women unless they are at risk in the face of an outbreak.
- (4. Vaccination have been undertaken in pregnant women without any harm to mother or foetus)
4. Other situations regarded as unsafe by the physician.

E. Precautions to Be Taken Regarding Storage and Handling of Vaccine

1. An adequate "cold chain" should be strictly maintained at all times, vaccine must be transported in an icebox.
2. The liquid vaccine should not be frozen but stored at lower than +10C and kept protected from light.
3. Vaccine vials/ampules once opened should not be retained for further use as the reconstituted vaccine is not stable.

III. Health Education

1. All steps to be taken including the use of mass media to avoid panic among the population in the face of an outbreak.
2. Steps to be taken, to educate the medical profession and the para-medical personnel regarding the epidemiological feature of the diseases and the preventive measures to be adopted.
3. Carefully prepared handouts and literature regarding the general management and treatment of cases should be made available to the profession.

A copy of the handout prepared by the Central Health Education Bureau is also attached.

5 • 6(2) 日本脳炎発生状況(1978年)

STATEWISE AND MONTHWISE CASES AND DEATHS OF ENCEPHALITIS FOR THE YEAR 1978

Sl. No.	States/ U/Ts	Jan.		Feb.		Mar.		Apr.		May		Jun.		Jul.	
		C	D	C	D	C	D	C	D	C	D	C	D	C	D
1	Assam	-	-	-	-	-	-	-	-	-	-	-	-	1	0
2	Bihar	-	-	-	-	-	-	-	-	-	-	-	-	-	-
* 3	Pondicherry	4	2	8	1	3	0	7	0	11	7	4	0	5	1
4	Tripura	1	0	0	1	1	1	3	2	0	1	1	0	0	1
5	Tamil Nadu	24	9	89	24	179	30	19	29	48	10	4	0	16	7
6	Uttar Pradesh	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	West Bengal	-	-	-	-	-	-	-	-	80	25	89	42	103	26
8	Madhya Pradesh	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Arunachal Pd														
10	Meghalaya														
*11	Pondicherry	(In Pondicherry total cases & deaths were 163 & 114 respectively among these monthwise distribution of 66 cases & 88 deaths are not available.)													
12	Tamil Nadu														
13	Mizoram														
14	Karnataka														
15	Kerala														
16	Rajasthan														
17	Manipur														
18	Madhya Pradesh														
19	Haryana														
20	Maharashtra														
21	Nagaland														
TOTAL:		29	11	97	26	183	31	29	31	139	43	98	42	125	35

Sl. No.	States/ U/Ts	Aug.		Sep.		Oct.		Nov.		Dec.		TOTAL	
		C	D	C	D	C	D	C	D	C	D	C	D
1	Assam	109	65	272	124	34	22	6	2	-	-	422	213
2	Bihar	48	14	-	-	148	47	916	315	140	76	252	452
* 3	Pondicherry	11	4	4	0	8	3	22	6	10	2	97	26
4	Tripura	1	1	2	2	7	6	16	15	1	0	33	30
5	Tamil Nadu	5	2	-	-	-	-	-	-	-	-	384	111
6	Uttar Pradesh	-	-	5	0	1934	541	1480	506	131	70	3550	1117
7	West Bengal	434	200	339	154	133	77	93	47	32	21	1303	592
8	Madhya Pradesh											34	15
9	Arunachal Pd											22	5
10	Meghalaya											12	12
*11	Pondicherry											66	88
12	Tamil Nadu											28	11
13	Mizoram											2	-
14	Karnataka											72	18
15	Kerala											5	1
16	Rajasthan											20	11
17	Manipur											27	4
18	Madhya Pradesh											-	-
19	Haryana											5	5
20	Maharashtra											117	34
21	Nagaland											12	10
TOTAL:		608	286	622	280	2264	696	2533	891	314	169	7463	2755

Remarks - Sl. No. from 8 to 21 monthwise distribution not available.

5.6(2) 日本脳炎発生状況(1979年)

STATEWISE AND MONTHWISE CASES AND DEATHS OF ENCEPHALITIS FOR THE YEAR 1979

Sl. No.	States/ U/Ts	Jan.		Feb.		Mar.		Apr.		May		Jun.		Jul.	
		C	D	C	D	C	D	C	D	C	D	C	D	C	D
1	Andhra Pradesh	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Bihar	-	-	-	-	-	-	-	-	-	-	3	1	54	28
3	Pondicherry	4	2	4	1	4	1	7	3	6	2	4	4	7	2
4	Tamil Nadu	2	0	18	2	45	2	13	0	3	0	2	0	-	-
5	Uttar Pradesh	-	-	-	-	-	-	17	5	16	4	10	1	69	45
6	West Bengal	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Karnataka	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Chandigarh	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL:		6	2	22	3	49	3	37	8	25	6	19	6	130	75

Sl. No.	States/ U/Ts	Aug.		Sep.		Oct.		Nov.		Dec.		TOTAL	
		C	D	C	D	C	D	C	D	C	D	C	D
1	Andhra Pradesh	-	-	-	-	26	5	175	41	53	8	254	54
2	Bihar	6	0	-	-	39	26	7	2	-	-	109	57
3	Pondicherry	8	5	8	5	13	7	-	-	-	-	65	32
4	Tamil Nadu	-	-	-	-	-	-	-	-	-	-	83	4
5	Uttar Pradesh	29	14	9	3	-	-	-	-	-	-	150	72
6	West Bengal	-	-	961	367	62	28	199	70	-	-	1222	465
7	Karnataka	-	-	-	-	-	-	-	-	-	-	920	223
8	Chandigarh	-	-	-	-	-	-	-	-	-	-	42	19
TOTAL:		43	19	978	375	140	66	381	113	53	8	2845	926

Remarks - Sl. No. from 7 to 8 monthwise distribution not available.

5.6(2) 日本脳炎発生状況(1980年)

STATEWISE AND MONTHWISE CASES AND DEATHS OF ENCEPHALITIS during 1980

States/uts	January		February		March		April		May		June		July		August		September		October		November		December		Total Cases Deaths	Remarks
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D		
Assam	-	-	-	-	-	-	-	-	-	-	6	5	32	19	63	177	87	14	6	6	360	194				
Andaman Nicobar	-	-	-	-	-	-	-	-	-	-	-	-	4	2	1	1	1	1	-	-	9	4				
Andhra Pradesh	27	7	4	2	1	1	1	1	-	-	45	22	4	3	-	124	56	21	18	9	289	121				
Karnataka	-	-	-	-	-	2	1	6	4	1	-	-	-	-	-	-	-	-	-	-	9	5				
Madhya Pradesh	-	-	-	-	-	-	-	-	-	55	34	53	38	-	-	-	-	-	-	-	108	72				
Maharashtra	-	-	-	-	-	-	-	-	-	21	5	-	-	-	-	-	-	-	-	-	21	5				
Tamil Nadu	10	-	8	2	37	5	15	1	70	46	7	5	4	1	5	3	-	-	-	2	-	30	4	188	67	
Tripura	-	-	-	-	-	-	-	-	-	-	-	-	-	69	62	-	-	-	-	-	-	-	-	-	69	62
W. Bengal	12	7	10	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54 23 (Oct. + Nov.)	8	4	84	40			
Uttar Pradesh	-	-	-	-	-	-	-	-	-	-	10	5	5	2	1	-	191	58	1307	428	85	32	5	5	1604	530
Bihar	-	-	-	-	-	-	-	-	-	-	408	209	1	1	9	6	50	19	37	15	-	-	-	-	737	336
Total	49	14	22	10	37	6	18	2	76	50	547	280	77	52	117	90	355	141	1646	587	235	90	67	28	3478	1436

Cases Deaths- Monthwise
232 86
distribution
not available

5 • 6(2) 日本脳炎発生状況(1981年)

STATEWISE AND MONTHWISE CASES AND DEATHS OF ENCEPHALITIS during 1981

States/uts	January		February		March		April		May		June		July		Total		Remarks
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	Cases	Deaths	
Assam	2	2	1	1	-	-	-	-	7	-					10	3	
Arunachal Pradesh																	
Andhra Pradesh	6	-	4	1	10	6	8	8	13	8	6	5			47	28	
Andaman Nicobar																	
Bihar	19	9	10	5	14	6	3		6	5					52	25	
Chandigarh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Delhi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gujarat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Goa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haryana	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Himachal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
J & Kashmir	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Karnataka											47	14			47	14	
Kerala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lakshdeep	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Madhya Pradesh																	
Meghalaya	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mizoram	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manipur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maharashtra	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nagaland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D.N.Haveli	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orissa																	
Pondicherry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Punjab	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rajasthan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sikkim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tripura																	
Tamil Nadu	52	8	17	5	18	2	4	0	6	0	6	0	3	0	106	15	
Utter Pradesh	2	2	1	1	23	5	9	2	5	1	6	3	5	1	51	15	
W. Bengal																	
Total	81	21	33	13	65	19	24	10	37	14	65	22	8	1	313	100	

5・7 カサウリにおける月間降雨量と温度

RAINFALL MINIMUM & MAXIMUM TEMPERATURE FOR THE YEAR OF JANUARY TO DECEMBER, 1980

<u>Month</u>	<u>Rainfall</u>	<u>Minimum</u>	<u>Maximum</u>
January	0.30"	2°C	12°C
February	0.23"	2°C	15°C
March	1.09"	2°C	24°C
April	0.39"	4°C	33°C
May	0.24"	6°C	36°C
June	8.88"	12°C	36°C
July	20.66"	9°C	27°C
August	9.87"	12°C	30°C
September	0.80"	10°C	18°C
October	3.00"	11°C	16°C
November	2.66"	2°C	14°C
December	1.47"	2°C	12°C
Total	48.99"		

5・8 チャンディガール市の人口等

Information obtained from Shri Y.K. Saxena, Area Planner, Chandigarh
Phone No. 23621:

1. Population of Chandigarh 3,800,000
 - i) Area on the north of Madhya Marg is low density zone 30 to 40% per acre.
 - ii) Between Madhya Marg and Dakshin Marg i.e. road coming from Ambala - Medium Density Zone with 40 to 60% per acre.
 - iii) South of Dakshin Marg i.e. Sectors 31 to 47 - High density zone with 60 to 80% per acre.
2. Cost of living Costlier station than others.
3. Position of water supply At present supply is regulated by means of tube wells. There is a proposal to

bring water from Bhakra Canal, work on which has already commenced. The position of water supply will be satisfactory after the completion of the work.

4. Accommodation

Accommodation is available.

5.9 無償資金協力交換公文

(Draft)

(Japanese Note)

Excellency,

I have the honour to refer to the recent discussions held between the representatives of the Government of Japan and of the Government of India concerning Japanese economic cooperation to be extended with a view to strengthening friendly and cooperative relations between the two countries, and to propose on behalf of the Government of Japan the following arrangements:

1. For the purpose of contributing to the execution of the project for manufacturing the Japanese encephalitis vaccine (hereinafter referred to as "the Project") by the Government of India, the Government of Japan will extend to the Government of India, in accordance with the relevant laws and regulations of Japan, a grant up to three hundred million yen (¥300,000,000) (hereinafter referred to as "the Grant").
2. The Grant will be made available during the period between the date of coming into force of the present arrangements and February 5, 1983, unless the period is extended by mutual agreement between the authorities concerned of the two Governments.
3. (1) The Grant will be used by the Government of India properly and exclusively for the purchase of the products of Japan and the services of Japanese nationals listed below necessary for the execution of the Project: (The term Japanese nationals whenever used in the present arrangements means Japanese physical persons or Japanese juridical persons controlled by Japanese physical persons.)
 - (a) equipment for the production of the Japanese encephalitis vaccine; and
 - (b) services necessary for the transportation of the equipment referred to in (a) above to ports in India.
- (2) Notwithstanding the provisions of sub-paragraph (1) above, when the two Governments deem it necessary, the Grant may be used for the purchase of the products of the kind mentioned in (a) of sub-paragraph (1) above, which are products of countries other than Japan and the services of the kind mentioned in (b) of sub-

paragraph (1) above, which are services of nationals of countries other than Japan.

4. The Government of India or its designated authority will enter into contracts in Japanese yen with Japanese nationals for the purchase of the products and services referred to in paragraph 3. Such contracts shall be verified by the Government of Japan to be eligible for the Grant.
5. (1) The Government of Japan will execute the Grant by making payments in Japanese yen to cover the obligations incurred by the Government of India or its designated authority under the contracts verified in accordance with the provisions of paragraph 4 (hereinafter referred to as "the Verified Contracts") to an account to be opened in the name of the Government of India in an authorized foreign exchange bank of Japan designated by the Government of India or its designated authority (hereinafter referred to as "the Bank").
 - (2) The payments referred to in sub-paragraph (1) above will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay issued by the Government of India or its designated authority.
 - (3) The sole purpose of the account referred to in sub-paragraph (1) above is to receive the payments in Japanese yen by the Government of Japan and to pay to the Japanese nationals who are parties to the Verified Contracts. The procedural details concerning the credit to and debit from the account will be agreed upon through consultation between the Bank and the Government of India or its designated authority.
6. (1) The Government of India will take necessary measures:
 - (a) to ensure prompt unloading and customs clearance at ports of disembarkation in India and internal transportation therein of the products purchased under the Grant;
 - (b) to exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in India with respect to the supply of the products and services under the Verified Contracts;
 - (c) to accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts such facilities as may be necessary for their entry into India and stay therein for the performance of their work;
 - (d) to ensure that the products purchased under the Grant be maintained and used properly and effectively for the execution of the Project; and
 - (e) to bear all the expenses, other than those to be borne by the Grant, necessary for the execution of the Project.
- (2) The products purchased under the Grant shall not be re-exported from India.

7. The two Governments will consult with each other in respect of any matter that may arise from or in connection with the present arrangements.

I have further the honour to propose that this Note and Your Excellency's Note in reply confirming on behalf of the Government of India the foregoing arrangements shall be regarded as constituting an agreement between the two Governments, which will enter into force on the date of Your Excellency's reply.

I avail myself of this opportunity to renew to Your Excellency the assurance of my highest consideration.

(Draft)

(Indian Note)

Excellency,

I have the honour to acknowledge the receipt of Your Excellency's Note of today's date, which reads as follows:

"(Japanese Note)"

I have further the honour to confirm on behalf of the Government of India the foregoing arrangements and to agree that Your Excellency's Note and this Note shall be regarded as constituting an agreement between the two Governments, which will enter into force on the date of this reply.

I avail myself of this opportunity to renew to Your Excellency the assurance of my highest consideration.

供与機材積算

機材品目	数量	単価(円)	金額(円)	備考
(1) 超低温槽	2	1×1,470 1×2,660	4,130	<ul style="list-style-type: none"> ○バルク作成用 ○品質管理用
(2) 簡易接種機	10	1,000	10,000	
(3) 真空ポンプ	1	2,000	2,000	
(4) ウルトラディスペルサー	3	590	1,770	
(5) 冷去遠心機	7	1,700	11,900	
(6) ミリポア・フィルター	5	440×4 660×1	2,360	
(7) ゴーナルKⅡ遠心機	1	62,500	62,500	
(8) 屈折計	1	400	400	
(9) ストラント洗浄, 滅菌, 充填, 溶閉機	1	85,880	85,880	
(10) 凍結乾燥機	1	64,500	64,500	
(11) チャンバーガス抜き装置	1	1,000	1,000	
(12) 含湿度測定装置	1	2,500	2,500	
(13) ポール・フィルター	2	250	500	
(14) エチレンオキサイドガス滅菌器	2	1×800 1×10,500	18,500	<ul style="list-style-type: none"> ○エンジニアリング用 ○最終製品化用
(15) 蒸留水ろ過装置	2	750	1,500	
(16) 顕微鏡	1	220	220	<ul style="list-style-type: none"> ○最終製品化用
(17) ろ過器	1	750	750	
(18) スペアパーツ	-	-	27,000	<ul style="list-style-type: none"> ○品質管理用
(19) 海上運送料等	-	-	7,500	
計			304,910	(1)~(18)の計 270,410 × 0.1 ÷ 27,000

JICA 技術協力事前調査団調べ

5.10 在ニューデリー大使館発表プレス・リリース

PRESS RELEASE No.4

E M B A R G O

12th March 1982 : 18:00.
p.m.

Both India and Japan have reached the agreement to implement the technical cooperation project for producing Japanese Encephalitis Vaccine on 12th March, 1982. Dr. A. OYA, Director of Department of Virology and Rickettsiology, National Institute of Health, from Japanese part and Dr. I. D. BAJAJ, Director General Health Services, Ministry of Health, Government of India, from Indian part signed the basic documents to this effect. Dr. A.OYA and his party have been discussing with the authorities concerned of the Government of India since their arrival in India on 2nd March, 1982.

As regards to the financial assistance by Japan to India for this project the Exchange Note was signed between H.E.Mr. E. Hara, Japanese Ambassador to India and Mr. R. N. Malhotra, Secretary of the Ministry of Finance, Government of India, on 6th February, 1982 to extend 300 million yen (Rs. 1.25 crores) to India.

The encephalitis

The encephalitis now raging in certain parts of India has been known widely prevailing in Asia. The causative agent, a virus was first isolated in Japan in 1935 and ironically enough, the encephalitis caused by the virus has been called the Japanese encephalitis. In this connection, it should be stressed that some erroneous information, to the effect that this disease is geographically originated from Japan, is far from the truth.

Subsequent to the wide-spread occurrence of Japanese encephalitis in India in 1978, the Indian Government requested the Japanese Government in 1980 to cooperate with India on a government to government basis for the production of the Japanese Encephalitis vaccine which was very effective in Japan and to this the Government of Japan gave positive consideration in view of the humanitarian nature of the request and the visit of Dr. Oya is to conclude the Technical Agreement before setting up the project.

After setting up the project, it is expected to produce the Japanese Encephalitis Vaccine for immunization of about 2 million persons for the period of 4 years.

5.11 最終製品化工程に関する確認事項

A. 資材関係

- 1) 凍結乾燥実験用ゴム栓は、まだ受取っていないので3月20日までにゴム栓 20,000個を入手したい。20,000個のゴム栓供給ができなければ、指定日までに少なくとも3,000個はワクチンの含湿度、力価試験のために要求する。(インド側了承)
- 2) カサウリにて凍結乾燥を週1回実施するとゴム栓、アルミニウムキャップ及びバイアルは1か月に各々80,000個ずつ用意しなければならない。カサウリにて、その物の供給は可能か。(インド側了承)
- 3) 現在、カサウリで使用しているアルミニウムキャップの直径は若干大きいと思う。我々はゴム栓、キャップ及びバイアルの標準寸法を知りたい。(機械の設計のために必要)。(インド側より1か月後発送予定)

B. 建屋関係

- 1) 機械を搬入するために、建物の側面の正確な図面がほしい。(インド側了承)
- 2) 床は設置する機械の重さと振動に耐える強さが必要である。改造予定建屋のコンクリート床の厚さは何mmか。(インド側より何mmを必要とするか?)-帰国後、回答する。
- 3) 無菌室内の壁は発塵を防ぐために油性ペンキを塗る必要がある。(インド側了承)
- 4) なお、日本側案が当初一般通路幅(別添図面1-Fig.3参照)を1.5mに予定していた根拠は、大型設備機器の搬入据付経路として考えていたためである。荷重壁の関係から約1mに縮小したために別添図面2-Fig.3A及び9Aに認められるように壁撤去位置の一部を訂正したい。

C. その他

- 1) 凍結乾燥機を運転するためには、容量200KVAの電圧安定器を用意できるか。(インド側は調査する)

The matters for confirmation of the final production's process.

A. For materials

1) We has not yet received any rubber-stoppers for the experimental freeze-drying, therefore, 20,000 rubber-stoppers need to be sent us for the above experiment as soon as possible at all. Unless these stoppers can be supplied to us, we will ask you to send us at least 3,000 rubber-stoppers for the moisture contents and the potency tests.

N. B. For your personal ;

In case of your conducting the freeze-drying once per week in your Kasauli, you will need 80,000 per each of rubber-stoppers, aluminium-caps and vials.

2) We suppose that the aluminium-caps used in Kasauli will be too large in diameter, therefore, will you inform us of each standard size of the rubber-stoppers, the aluminium-caps and the vials ; These sizes are required for our design of machines.

B. For building

1) The accurate side-views (figures) of the buildings are required for our planning to carry machines into facilities ; will you send us the drawing concerning the above.

2) The floor need to be proof against the weight and the vibrant intensity of machines, therefore, the buildings improved are required to be their concrete floors of 20 cm or more thickness.

3) The wall s surfaces of sterile rooms are required to be coated with the oily paint in order to be preserved from self-raising dust.

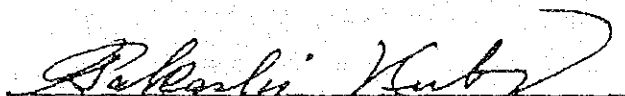
4) The ordinary corridor of 1.5 m width was originally suggested by the Japanese party (refer to the attached drawing 1-Fig 3),

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because we were deeming the above corridor as the route for carrying the large-sized machines into rooms ; However, the above corridor's width was reduced to about 1.0 m under consideration of the supportability of loaded walls, therefore, a part of position of removing walls shall be amended such as appearing in the attached drawing 2-Fig 3A and 9A.

5) Others

To drive and operate the freeze drying machine, will you inform us of whether you can make arrangement for the electric voltage stabilizer of the capacity 200 KVA.



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