DRAFT PROGRAMME

BOARD OF TRUSTEES MEETING 21-26 NOVEMBER, 1987

Saturday, 21 November

9.00 a.m. - 10.30 a.m.	Interview candidates, if any, for international level positions/Prepare recommendations
10.30 a.m. - 11.00 a.m.	TEA
11.00 a.m. - 12.30 p.m.	Programme Committee Meeting
12.30 p.m. - 2.00 p.m.	LUNCH
2.00 p.m. - 4.00 p.m.	Finance Committee Meeting
4.00 p.m. - 5.00 p.m.	Joint Meeting of Programme Committee and Standing Committee of Programme Coordination Committee (PCC)

Sunday, 22 November

9.00 a.m. - 5.00 p.m.	Personnel & Selection Committee Meeting

Monday, 23 November

9.00 a.m. - 10.30 a.m.	Meet with Scientific Staff
10.30 a.m. - 11.00 a.m.	TEA
11.00 a.m. - 5.00 p.m.	Free for Report Writing (all Committees)

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Note: Trustees not directly involved in a particular Committee are also welcome to attend or may use the free time for preparation work, meet with staff, etc. New Trustees are especially encouraged to participate in the Programme Committee discussions.

Tuesday, 24 November	-	Board Meeting
9.00 a.m. - 9.30 a.m.		Welcome, Approval of Agenda; Approval of June 1987 Minutes
9.30 a.m. - 10.15 a.m.		Presentation and discussion of Director's Report
10.15 a.m. - 10.30 a.m.		TEA
10.30 a.m. - 12.30 p.m.		Presentation, discussion and resolutions of Programme Committee Report
12.30 p.m. - 2.00 p.m.		LUNCH
2.00 p.m. - 3.30 p.m.		Presentation of Personnel and Selection Committee Report
3.30 p.m. - 3.45 p.m.		TEA
3.45 p.m. - 5.00 p.m.		Discussion/Resolutions of Personnel and Selection Committee Report

Wednesday, 25 November		
8.30 a.m. - 10.15 a.m.		Presentation and Discussion of Finance Committee Report
10.15 a.m. - 10.30 a.m.		TEA
10.30 a.m. - 12 noon		Discussion/Resolutions of Finance Committee Report
12 noon - 12.30 p.m.		Meet with representatives of the Staff Welfare Association
12.30 p.m. - 2.00 p.m.		LUNCH
2.00 p.m. - 3.30 p.m.		Discussion
3.30 p.m. - 3.45 p.m.		TEA
3.45 p.m. - 5.00 p.m.		Discussion

../3.

Thursday, 26 November

8.30 a.m. - 9.00 a.m.	Dates of Next Meeting
9.00 a.m. - 10.15 a.m.	Miscellaneous
10.15 a.m. - 10.30 a.m.	TEA
10.30 a.m. - 12.30 p.m.	Open for unfinished business
12.30 p.m. - 2.00 p.m.	LUNCH
2.00 p.m. - 4.00 p.m.	Passage of all Resolutions
4.00 p.m.	Closure of Meeting

Note: The Programme Committee Meeting and Full Board Meeting will be held in the Training Lecture Room (Ground Floor)

The Finance and Personnel and Selection Committee meetings will be held in the Director's Conference Room (2nd Floor)

DB:jc

30.9.87

DRAFT AGENDA

BOARD OF TRUSTEES MEETING 24-26 NOVEMBER, 1987

1. Approval of Agenda

2. Approval of Draft Minutes of Board Meeting, June 1987

3. Director's Report

4. Programme Committee Report
   - (a) Review of Laboratory Sciences Division
   - (b) Teknaf Paper
   - (c) External Scientific Review 1988

5. Personnel & Selection Committee Report
   - (a) Progress Report on Ranking
   - (b) Evaluation System
   - (c) Various categories of Staff
   - (d) Salary Survey

6. Finance Committee Report
   - (a) Resources Development Report
   - (b) Approval of 1988 Budget
   - (c) Interaction between Donors
   - (d) Procedures for project approval
   - (e) Plans for improvement of hospital

7. Dates of Next Meeting
   - (a) Possible Changes in Board Schedule

8. Miscellaneous
   - (a) Election of New Board Members

DB:jc

30.9.87

APPROVAL OF AGENDA

DRAFT AGENDA

BOARD OF TRUSTEES MEETING 24-26 NOVEMBER, 1987

1. Approval of Agenda

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   - (c) Various categories of Staff
   - (d) Salary Survey

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   - (a) Resources Development Report
   - (b) Approval of 1988 Budget
   - (c) Interaction between Donors
   - (d) Procedures for project approval
   - (e) Plans for improvement of hospital

7. Dates of Next Meeting
   - (a) Possible Changes in Board Schedule

8. Miscellaneous
   - (a) Election of New Board Members

DB:jc

30.9.87

APPROVAL OF DRAFT MINUTES OF BOARD MEETING JUNE, 1987

DRAFT

Minutes of the Meeting of the Boar l of Trustees, ICDDR.B held at Dhaka, June 16-18, 1987.

Members Present

Professor D. Bell - Chairman
Mr A.K. Chowdhury
Dr I. Cornaz
Prof. R. Eeckels - Secretary
Prof. D. Habte
Prof. J. Kostrzewski
Dr M. Merson
Dr K.A. Monsur
Dr Nyi Nyi
Mr T. Rahman
Prof. V. Ramalingaswami
Prof. D. Rowley
Dr P. Sumbung

Members Absent

Dr A.R. Al-Sweilem
Prof. R. Feachem
Prof. L. Mata

Invited Staff

Mrs J. Chowdhury, Executive Assistant to the Director

Day 1 up to discussion of Programme Committee Report

Dr A.N. Alam, Head, Dhaka Hospital
Mr M.R. Bashir, Associate Director, Resources Development
Dr I. Ciznar, Associate Director and Head, Immunology & Bacterial Genetics Laboratory
Dr Badrud Duza, Associate Director, Population Sciences & Extension Division
Mr H.A.N. Janssen, Chief Finance Officer
Mr M.A. Mahbub (to join 1 July, 1987 as Associate Director designate & Head, Personnel, Finance and Administration)
Dr M.G.M. Rowland, Associate Director, Community Medicine Divsion
Dr D. Sack, Associate Director, Laboratory Sciences and Epidemiology Division
Mr Md. Shahabuddin, Special Assistant to the Director

The Chairman of the Board, Professor David Bell, opened the meeting at 8.30 a.m. on Tuesday, 16 June, 1987. He welcomed everyone to the meeting and introduced the two new Bangladeshi members of the Board, Ambassador A.K. Chowdhury who is Director General (Economic Affairs), Ministry of Foreign Affairs and Mr Taslimur Rahman, Joint Secretary, Family Planning Wing, Ministry of Health and Family Planning. He said that both gentlemen are most welcome and that they both have backgrounds and experience which will be extremely valuable to the Board.

Professor Bell said that regrettably this is the last Board Meeting for two distinguished colleagues, Professors J. Kostrzewski and V. Ramalingaswami, both of whom have given long service and are original members of the Board when it became ICDDR,B. He said that also retiring, but not here today, is Professor Leonardo Mata, also a vigorous and valuable member of the Board who will be missed with the others.

A motion, moved by Dr Nyi Nyi, to send a congratulatory message to H.E. President H.M. Ershad on being presented with the United Nations Population Award, 1987, was passed by acclamation.

Professor Bell led the Board through the programme to ensure that the Board Members were aware of the time schedule. He pointed out that Members should keep Wednesday evening free in case this was needed to continue unfinished discussions, leaving the flexibility at the end of the meeting on Thursday for drafting any Board comments, if required, on the Plans and Prospects Supplement.

The following resolution was passed:-

Resolution 1 June/87 The Board resolves to send a congratulatory message to His Excellency, President H.M. Ershad, President of the People's Republic of Bangladesh, on the recent presentation of the United Nations Population Award 1987, in recognition of his outstanding contribution to raising awareness of population problems and their solution. The Board further wishes to express its gratitude to the President and Government of Bangladesh for their continued support to the International Centre for Diarrhoeal Disease Research, Bangladesh, and to reaffirm its commitment to strengthen further

the welfare of the people of both the developing and developed countries. The Chairman of the Board is authorized to send the message on behalf of the Board.

Agenda 1: Approval of Agenda

The agenda was accepted as presented. It was suggested that agenda 6(c) on selection of SAARC participants for training fellowships could be handled by the Director and agreed that it be done that way.

Agenda 2: Approval of Draft Minutes of Board Meeting, November, 1986

The draft minutes of the Board of Trustees Meeting held in Dhaka from 24-26 November, 1978 were approved without change.

Professor Eeckels was then requested to go through the Resolutions of the November 1978 meeting advising the Board on what action had been taken on each resolution. This he did.

Agenda 3: Review of Executive Committee Minutes

Professor Bell reported that before the Executive Committee meeting a successful 2-day Donors' Consortium had been held, in which an outline of a bargain was agreed on subject to resumed action and a meeting in Geneva in June. There was a strong turn-out of donors' representatives, including some half-dozen from headquarters, in addition to others from Dhaka and one from the regional office. The Consortium was not satisfied with the Plans and Prospects document and requested that a supplement be prepared which would respond to three questions (a) what the Centre sees as its mandate; (b) a clearer statement on the priorities of the Centre; and (c) a financial statement outlining what the Centre's programme would be if it had varying levels of funding. Assuming the donors find the supplemental report satisfactory, they will agree to no more than 50% of the funds they make available to the Centre will be earmarked for projects. This would mean more flexibility in the use of funds and consequently be of great help to the Centre. The

Donors' meeting was adjourned to Geneva on June 27th, when the new document will be looked at and, if it is considered satisfactory, an agreement on funding will be made. Geneva was chosen for the meeting because the senior health officials of donor agencies will be there earlier in that week for other meetings, and it was considered convenient for them to stay an extra day to consider ICDDR,B matters.

At its meeting in March, the Executive Committee made a draft timetable for preparation of the supplemental document, requested by the Donors, which was sent to all Board members. While it was not possible to hold fully to the schedule, the meeting planned to be held in Geneva on 21 May to discuss the draft was held as scheduled. The draft was revised after that meeting and sent out to donors during the first week of June. As stated in the introduction of the supplementary document, it will be reviewed by the full Board later in this meeting. The meeting in Geneva on June 27 will be held in the offices of UNDP, and the meeting will be chaired by Mr Tim Rothermel, Director, Division for Global and Interregional Projects, UNDP, New York.

The Executive Committee then went on to review proposed international appointments, as authorized by the Board in its November 1986 meeting. Professor Bell drew the Board's attention to the fact that there was a larger than usual representation of Board members on the Executive Committee; this had been made possible by the fact that several members had been in Dhaka for the Donors' Consortium. It was noted that the Executive Committee had approved the appointment of:-

(a) Mr Md. Ali Mahbub as Senior Administrative and Finance Officer and that Mr Mahbub will join on 1 July, 1987.

(b) Dr Dilip Mahalanabis as Senior Scientist and Head, Clinical Sciences Division. Dr Mahalanabis will visit the Centre in August and will take up his duties full-time late in the year.

(c) Dr Diana Silimperi for secondment from Johns Hopkins University to the Centre as Project Director of the Urban Volunteers Programme. Professor Bell explained that a problem arose in the terms of her employment caused by the difficulty of relating WHO pay scales to U.S. salary levels. As the minutes note, Professor Bell said that he spoke with both the University and with Ken Bart, head of health in AID. When it appeared that it would not be possible to follow the conditions the Executive Committee laid down for a reimbursable secondment, Dr Bart agreed to arrange a non-reimbursable secondment, which would be in accord with

WHO rules. Dr Silimperi was thus recruited in good faith. Just two weeks ago, however, Dr Bart advised that he could not keep his commitment of a non-refundable secondment, so it is now for the Board to decide on what course of action is required - this will come up for discussion as part of the Personnel and Selection Committee Report. (The problem resolved itself later in the meeting when information was received that Dr Ken Bart had been able to arrange for the non-refundable secondment as promised.)

It was also noted that, until the time of the Executive Committee meeting, there had been no suitable candidates for:-

(a) the Senior Scientist and Head Laboratory & Epidemiology Division.

It was hoped that WUSC is would be able to fund a replacement for Mr Hartley Janssen (Chief Finance Officer) and someone for the Grants Administrator position, but individuals had not been identified as yet.

The report of the external personnel consultants to the Executive Committee was not discussed, since the full reports have now been received and are in the Board Members' folders.

A question was raised, and discussed, as to whether fully seconded persons report to supervisors in the Centre or to those who fund them. Professor Bell replied that there has been considerable effort on the Director's part to ensure that persons on full secondment do report to their Centre supervisors. Professor Eeckels said that the question is broader than whether a person is on full secondment or paid by the Centre, as in both cases you will find those loyal to the Centre and those who are not! There is a policy in the Centre that staff should report through the proper channel, but it is not always easy to implement it. Professor Eeckels said that there have been problems in one instance, and that he is trying to redress this and get full accountability.

Dr Cornaz said that these problems have also been mentioned in the Personnel Structure Committee report, and were discussed by the Personnel & Selection Committee along with the question of first authorship and the responsibility of the programme head to see that the person who does the work gets first authorship and not the supervisor. She said that this should be looked at separately and a stronger rule made.

It was agreed that this should be discussed in the Programme Committee.

In response to a query as to the number of cases where a report has been published without going through the proper channel, Professor Eeckels said that he is aware of one instance only. In that instance, which happened in CRL times, the Centre was acknowledged, but did not receive a preprint or know that the work had been carried out at the Centre. He said that he knew of two cases where reports had been presented at congresses and the Centre not been acknowledged. Both Professors Bell and Eeckels said that in such cases there is no ready avenue for recourse.

Agenda 4: Director's Report (including 1986 Annual Report)

Professor Eeckels presented his report which is attached as annex 1. He completed his report after the tea break with a summary on the progress which has been made with institutional linkages.

Professor Bell thanked Professor Eeckels for his report and said that the evolution of institutional linkages is extremely important and that the Board should be pleased that they are growing and strengthening in number.

Dr Cornaz spoke as a donor saying that Switzerland is very interested in collaborations, presently supports a collaboration between the Centre and Prof. Klaus Gyr, and would like to consider supporting the possibility of people from other developing countries coming to the Centre. A proposal along these lines should come from the Centre.

Professor Bell invited questions and comments on the Director's Report, except in reference to the supplement as this will be discussed later.

Board Members agreed that the Annual Report was well presented, the best to date, and that the scientific thrust had been maintained despite problems. They said that those responsible for preparing the report should be congratulated.

Observations and concerns raised by Board Members included:-

(a) The Matlab study by Dr Fauveau, mentioned on page 13 of the Annual Report - the maternal mortality figure was felt to be extraordinarily high. Confidence was expressed in the Centre figures and their validity. It

was because of this and the fact that ICDDR,B facilities are relatively better than most other places, that it was felt that this should be fully pursued. The Programme Committee might wish to set-up a Task Force to look at this, working closely with the Government.

(b) Appreciation for the continued immunology and molecular biology studies, noting that the study of gut immunology is a major thrust. It was suggested that all these areas should be intensified.

(c) The question of malnutrition in a public health setting was raised, along with the observation that no opportunity exists elsewhere as it does in the Centre to study nutrition as an operational research question. Vitamin A is an important subject and requires a well-planned ongoing study with goals. Over the years, both CRL and ICDDR,B have developed a good interest in nutrition. It is hoped that the Centre will take the lead and work out an operational research programme to link up malnutrition, excess population growth and infectious diseases. It is believed that it has the opportunity and setting to do some work in this area.

(d) Dhaka Treatment Centre - concern was expressed at the climate and temperature in the hospital and the question asked as to what could be done to improve the situation for the patients.

At the same time, congratulations were expressed on the laboratory being so well equipped and the fact that a proper job was being done there was noted.

(e) More reports had been expected from the vaccine trial; it is two years since the vaccine was given. Are there any plans to give a booster?

(f) Is it possible to receive Board papers earlier, e.g. six weeks ahead of meetings? As a suggestion, for example, members might be sent the Annual Report plus an internal document on management issues from the Director.

(g) With respect to the CDD Programme, the largest recent impact of ICDDR,B's work has been from 3-4 publications on Urban Volunteer Programme interventions - this contribution is outstanding. Concern was raised re the Centre's carrying out training in diarrhoeal disease control. WHO is closing down its centres and building-up national centres. The Centre needs to concentrate on research training. Institutional linkages should be with Bangladesh and other developing countries - WHO

would be pleased to participate.

(h) With the reduction in international level staff, worries were expressed about ICDDR,B retaining a critical mass.

(i) Re the Annual Report itself, it was suggested that maybe one colour should be chosen and that colour used each year; more space should be given to important programmes that are coming up; there should be more pictures; and scientific references should be given at the end of write-ups of papers.

Professor Eeckels responded to the points made by the Board Members saying he was pleased that the general impression of the Annual Report was a favourable one. He said that a great part in its preparation was played by programme heads and that a major role in its finalization was played by Dr Andrew Hall, without whom it would not have been possible to produce it on time. Progress has been made concerning points (a) to (c) and we will try to implement the suggestions. Everyone is unhappy about the physical facilities of the hospital (d) but capital is needed before anything can be done to expand it. This was mentioned to the donors in March. Attempts have been made to cool it by adding new roofing and ventilators. It is a problem to send out Board papers even three weeks ahead (f) as we have a skeleton staff and too many unforeseen problems. Professor Eeckels said that he's happy to hear that the Urban Volunteer Programme has made an outstanding contribution to the CDD Programme (g); that he's also concerned about the training programme and that this must be solved in the near future. He agreed that institutional linkages must involve national institutions but that donors' help is needed to establish linkages here and in the region. Critical mass (h) is vital to the Centre and this problem should be explained to the donors in Geneva.

Dr Sack replied to (e) saying that there is no possibility of giving a booster dose of the vaccine. This is an interesting scientific question but totally impractical.

The following resolution was passed:-

Resolution 2/June 87 In order to streamline the preparation of the Board meeting, the Board requests the Director that documents pertaining to the proceedings of the Board meeting should be sent to reach the members two weeks before the commencement of the meeting. The Board further requests that Board documents, where appropriate, should include alternatives and options available and an

indication of the decisions that will need to be taken by the Board.

Professor Bell said that the summary reports on Resources Development and the financial situation (Agenda 5) will be discussed tomorrow when the full reports are presented. He said that the Resources Development activity is going quite well and that the finances of the Centre are much better than they were two years ago, and are continuing to improve marginally. There will be a short discussion after lunch on the Programme Committee Report before discussing the supplement to the Plans and Prospects document. The meeting broke for lunch at 1 p.m.

The meeting reconvened at 2 p.m. on Tuesday, 16 June.

Agenda 6: Programme Committee Report

Professor D. Rowley, Chairman of the Programme Committee, presented the report which is attached as annex 2.

(a) Teknaf Paper

The first item discussed was the Teknaf Research Station with the Programme Committee's report being taken as a proposal. Arguments against Teknaf remaining open included:-

(i) not productive;

(ii) same studies can be carried out cheaper elsewhere;

(iii) technically closed twice and Centre should discuss with Government handing over of Teknaf to them;

(iv) inaccessible - can't studies be done in Dhaka?

while arguments for Teknaf Station remaining open included:-

(i) it is the scientists who are productive, not the Station;

(ii) ICDDR,B has the funds to do the Shigella studies now and it would take two years to open another field area. The Director requested that he not be asked to open a new field area now. The only other feasible place would be Rangpur and the distance would be about the same. It is only a question of time until the infection will spread outside the area. It is better to do the studies now where we have the facilities;

(iii) we are facing a major health problem in a priority area and the Centre just can't walk out on it;

(iv) in Dhaka we can't follow-up on hospital patients. Will try to do so when we have the link between the Child Health Programme and the Urban Volunteer Programme in place - but even then staff will be needed to trace patients;

(v) rate of shigellosis in Teknaf is ten times higher than in Matlab. If there were to be a shigellosis vaccine, the surveillance system is already in place;

(vi) Teknaf can be one of the areas where the EPI programme may be introduced.

In weighing the research advantages against the management difficulties (cost) it was decided, by vote, to keep Teknaf open provided certain conditions are met. These conditions are outlined in resolution 4/June 87 (see end of this report) and include the necessity of producing a document justifying the choice of the Teknaf area for the shigella studies. A question was raised as to what would happen if a proposal is presented in November and rejected - what alternatives exist if Teknaf is closed? Professor Eeckels replied that over the next few months it would not be possible to develop alternatives because of shortages of scientific staff.

(b) ERC Document Report

It was agreed that the Ethical Review Committee (ERC) has done an excellent job with this. The favourable general comments of Drs Campbell and Laurence were noted, and their specific suggestions have been taken into account. Comments from the relevant WHO section were submitted during the meeting; their main comment suggested that annex II needs to be rewritten. It was mentioned that protocols without human subjects should not go to the ERC. Dr Monsur, Chairman, ERC Ad-hoc Committee, said that this would not be a problem, but

that if this were the case the Board would have to set up separate committees to look into laboratory matters, e.g. radio isotopes, laboratory hazards, etc., which at the moment the ERC is trying to take care of. It was agreed that a biological safety committee would be needed and Professor Eeckels replied that the Centre does have a Laboratory Safety Committee at present. The wisdom of having a Board Member on the ERC, by rotation, was brought up. Dr Monsur spoke against this, saying that he is on the ERC in an individual capacity. Resolution 3/June 87 gives the decision made re the ERC report.

(c) Selection of SAARC participants for Training Fellowships

As agreed earlier, this is for the Director's action.

There was a general discussion on the Board's responsibilities and involvement in setting the programme and priorities of the Centre; in administration and in financial matters. Professor Eeckels said that the Board and the Centre's management should speak with one voice; after a dialogue between the Board and Centre scientists the Board makes the final decision. Setting of programme priorities and review of Centre's programmes were seen as regular features of the Programme Committee's work. Resolutions 5 and 6/June 87 refer.

The following resolutions were passed:-

Resolution 3/June 87 — The document entitled "Recommendations on the Composition, Method of Work, Duties, Powers and Functions of the Ethical Review Committee (ERC) of ICDDR,B", as presented to this meeting of the Board, was considered, modified and approved. The ERC should confine itself to considering ethical aspects of research involving human subjects.

Resolution 4/June 87 — The Board resolves that Teknaf can be retained as a field study area provided three conditions be fulfilled. These are: first, a document suitably describing shigella studies and justifying the choice of the Teknaf area is presented to the Programme Committee for its approval; second, a suitable leader for these studies is identified with epidemiological skills; and, third, project money is available.

Resolution 5/June 87 — It was resolved that the Programme Committee would arrange for each Scientific Division to be reviewed by at least two Board members with assistance from staff on a regular basis so that one Division would be reviewed before each Board meeting. The reports of such reviews would be presented to the Board in the report of the Programme Committee.

Resolution 6/June 87 — The Board requests the Programme Committee to review the scientific priorities of the Centre annually in June.

Next, the Donors' Consortium was discussed, in particular the blue supplement, prepared by the Director and some Trustees, to the Plans and Prospects document.

Agenda 8: Resources Development Report

(a) Donors' Consortium

It was agreed that the blue supplement was good and that a transmittal letter only was required from the Board. This letter is to highlight points felt to be important by the Board. Discussions are summarized in the transmittal letter which reads as follows:-

"The Board of Trustees of ICDDR,B, meeting at Dhaka from 16 to 18 June, reviewed the document entitled Plans & Prospects: Supplement, June 1987, prepared in response to questions raised by the Donors Consortium meeting in Dhaka on 25 and 26 March, 1987.

2. The views of the Board are stated briefly in this letter of transmittal, which formally forwards the Supplement to the Donors Consortium meeting to be held in Geneva on 27 June 1987 as a document presenting the joint views of the Board and the Management of the Centre on certain features of the Centre which are germane to the current dialogue with the donors. The Supplement was sent to you early June to facilitate your advance study and examination.

3. The Board of Trustees, after careful and detailed discussion,

a. strongly endorses the main thrust of the presentation made in the Supplement;

b. decides to augment and enrich the programmes priorities outlined in the Supplement in ways as elaborated later;

c. stresses the importance of the financial conclusions contained in the Supplement.

4. In conveying its views, the Board believes it is important to recognize that there is a certain uniqueness to the ICDDR,B. It is one of the very few health research institutes in the world with an international charter, set up in a developing country with active support from WHO, UNDP, UNICEF and UNFPA and a number of countries, both developed and developing, to conduct research and training on one of the most serious and widespread health problems of the Third World, namely diarrhoeal diseases, and find solutions for its control. To carry out this mandate, the Centre undertakes a wide range of field, clinical and laboratory studies in an inter-disciplinary manner. The Ordinance promulgated by the Government of Bangladesh establishing the ICDDR,B provides autonomy of functioning and access to the ablest scientists across the world. The Board is proud to acknowledge that a unique model of an international institute dedicated to health research in the developing world is emerging.

5. The continuing studies of the ICDDR,B over the years not only in diarrhoeal diseases but also in the closely interrelated areas of nutrition, demography and fertility regulation provide an unprecedented opportunity to engage in extensive research to develop replicable models of diarrhoeal diseases control within the overall context of integrated health care services aimed at achieving the goal of Primary Health Care. The Centre has also emerged as an important institution in helping to realise the great potential of modern biology in vaccine development against the major infectious diseases of the gastrointestinal tract.

6. The Centre serves as a valuable training ground in laboratory, clinical and health services research for scientists and health care personnel. Such training opportunities are critical to the solution of health problems in developing countries: they facilitate transfer of technology and building of research capabilities in these countries.

7. In the course of the Board discussions of the Supplement, it was able to advance and underline the Centre's position on the following three important programme priorities:

(i) In the context of child survival activities which have been accorded high priority in the Supplement, the Board wishes particularly to emphasize the Centre's immense

opportunities to conduct research on the prevention of acute diarrhoeal disease in children, and its strong commitment to pursue those opportunities. The Centre conducts research on the development and testing of vaccines against various diarrhoeal diseases. The Centre has on its active research agenda the behavioural aspects of preventing diarrhoeal diseases, such as storage and use of water, handwashing, personal and community hygiene, environmental sanitation, etc. And the Centre conducts research on the inter-relationships of nutrition and diarrhoea, such as the protective effect of breastfeeding, reducing contamination of weaning foods, and rational infant nutrition. Together with research on population and family plannning, this range of approaches offers remarkable opportunity to test the efficacy of various interventions and their combinations.

(ii) In the Centre's training activities, the Board is of the clear view that one of the major priorities for future training at the Centre should be research training, principally for scientists of developing countries, in the various fields of natural and social sciences in which the Centre is strong. We expect this type of training to increase considerably over the coming years. The Board believes that the Centre will continue to have a comparative advantage as a place for training courses in laboratory techniques for diarrhoeal diseases identification and control, and wishes that such courses will continue. With regard to training courses in clinical management, epidemic control and related subjects, it is expected that these will continue to be needed for some years and should be conducted in ways that help strengthen and decentralize the training capacity in Bangladesh. As a major world resource in research and training on diarrhoeal disease, ICDDR,B should plan to serve as a communications and experimental centre, helping to develop and disseminate advancements in research and control methodologies related to diarrhoeal diseases. Much better integration of the Centre's training activities with those of global WHO/CDD programme is desirable and should be achieved.

(iii) With respect to collaboration with developing countries, ICDDR,B gives highest priority to developing institutional linkages and collaborative research with key centres of research and training in other parts of the developing world. It can also offer in collaboration with WHO and UNICEF, assistance to developing countries in technical training of senior health personnel working in control programmes. In this context, the Centre's role in promoting technical cooperation among developing countries deserves support.

8. The Board of Trustees would like to underscore that despite the recent severe set-backs to the Centre, fully

known to the donors, the Board and Management of the Centre working together have been able to withstand these set-backs and to demonstrate the Centre's ability to take hard decisions and achieve effective budgetary controls in the larger interest of the effectiveness of the Centre. The Annual Report of the ICDDR,B for 1986, forwarded to you with the Supplement, reflects adequately the continuing scientific vitality of the Centre.

9. However, uncertainties still continue threatening to cripple the Centre's activities. Shortage of central funds and the lingering heavy debt are hampering the ability of the Centre to attract talented scientists from around the world to come to contribute to the Centre's research resources. Continuing increase in earmarked project funding is leading to further difficulties. Timely remedial action along the lines suggested in the Supplement can, it is believed, correct the distortions rapidly and move the ICDDR,B from its present posture of survival to one of balanced growth and development in the fulfilment of its mission.

10. In order to place the Centre on an independent and operationally viable basis and, also to enable the Centre to seize opportunities for research, all funds contributed should be appropriately allocated to central funds. The Board is, of course, aware of constraints of the donors in this regard and has taken due note of the efforts made by them to improve the situation during the Consortium meeting in March. In that context, it is suggested that contributions should preferably have not more than 50% earmarked for specific purposes. The Board believes that the size of the contribution which should be subjected to such an arrangement should be decided taking into account the recommendation of the donors meeting in March rather than the recommendation contained in the Supplement.

11. The Centre has tightened its budgeting process and financial control and both for 1986 and 1987 the Centre has been and will be operating with a small surplus. However, the accumulated debt remains at $2.7 million at the end of 1986. Since it entails heavy interest payments and creates an uncertain working atmosphere, it is worthy of consideration if the donors could make special contributions which could relieve the Centre of this burden. For the longer run, the option of an endowment fund remains a viable means of providing a desirable independence to the Centre and donors are encouraged to consider actively to contribute to such a fund.

12. In presenting its views to the donors, the Board of Trustees strongly believes that the priorties of the Centre have been appropriately established and what is needed now is

a concrete and timely support from the donors to provide adequate funds to enable the Centre to fulfil its mandate with a stable financial base. The Board is fully aware of its responsibilities as the policy-making body of the Centre and is duly seized with all the important matters which have a bearing on the effectiveness of ICDDR,B.

13. The Board looks forward to a constructive and fruitful dialogue at the donors meeting on 27 June and hopes for a successful outcome."

The meeting adjourned at 6.40 p.m.

The meeting reconvened at 8.30 a.m. on Wednesday, 17 June.

Agenda 8: Resources Development Report

Mr Bashir presented the Resources Development Report which is attached as annex 3. It was pointed out that the figures presented by Mr Bashir in his tables reflect those in which his office is directly involved. Other figures, e.g. WHO funding of protocols, show up in the financial report. Professor Bell said that he has also requested, in the Finance Committee, that in-kind support should be shown in the report to the Board and the Annual Report, as footnotes.

The Board emphasized that no individual scientist should be able to make a request for funds on behalf of ICDDR,B. Professor Eeckels agreed but said that it is hard to control as sometimes scientists do hand over protocols for review and funding. They should give a copy to Mr Bashir, and the source of funding must be indicated on each protocol. It is difficult for the Principal Investigator to understand he has to go to Mr Bashir, hence the sometimes late notice. It was agreed that a statement on how projects are developed, reviewed and approved, and what controls are in place (while maintaining the initiatives of scientific staff), should be prepared by the management for review by the Finance Committee and submission to the Board at its November 1987 meeting. Mr Bashir assured the Board that all project documents from the scientific divisions follow a strict procedure of review within the Centre, (including appropriate scientific Associate Directors, the Director and Mr Bashir), and are not forwarded to the donor without the Director's signature.

It was agreed that donors should be advised at the Geneva meeting that the Board agrees that the maximum amount for unmatched contributions should be $100,000, not $250,000 as indicated in the Supplement. It was pointed out that once the Centre has its rules it is up to the donors to convince each other to follow them, thus ensuring that the Centre has the independence and freedom to do what it wants to do. This is to be discussed at the Donors' Consortium. If it is decided to follow the set of rules laid down, it would not be appropriate for the Centre to accept funds not abiding by these rules.

It was queried as to why there was a lower income projected for 1988 than 1987. Mr Bashir replied that he is waiting until after the Donors' Consortium to make revisions - by the third quarter we always have a better idea of next year's funding. Professor Bell said that the Board should be aware that no substantial increases in funding are expected. The Centre should follow-up on new donors. Mr Bashir said that a proposal was sent to Italy last month and that Mr Iqbal Ali, is presently in Bangkok and is following-up there on Finland (which has a headquarters for foreign aid in Bangkok).

The following resolution was passed:

Resolution 7/June 87 — The Board requests the Management to present to the Finance Committee at its November, 1987 meeting the relevant rules and regulations of the Centre relating to the approval of research projects, negotiations with donors for funding of protocols, and other related matters, alongwith comments of the Director regarding their compliance.

Agenda 9: Finance Committee Report

In Professor Feachem's absence, Professor Bell, as Acting Chairman of the Finance Committee, presented the Committee's report which is attached as annex 4.

Mr Janssen was asked if provision has been made in the budget for the likely upgradings as a result of the NO level ranking review exercise. He replied that there had not been but that it will cost less than Tk. 20,000 per person upgraded.

The meeting adjourned for a tea break.

After tea, discussions on the finances of the Centre continued. The Director and Mr Janssen were congratulated on the improved budget position. It was suggested that a programme budget document would be useful and of interest to donors too. This was agreeed to and both Professor Bell and Mr Janseen said that they had expectations of using such a sheet in 1988 and that they would like it to go to the Programme Committee in November and be part of the 1988 budget discussions.

With respect to the current (1987) budget, the management were congratulated on the anticipated budget surplus of $220,000 as requested by the Board last November. In view of this it was suggested that the target be raised to $300,000 by the end of the year, not as a binding resolution, but a target only. At the same time the salary rises should be given to the GS and NO level staff as of July 1, 1987, and the 10% cut be withdrawn for international level staff. In response to a query as to possible areas where he would expect to be able to make more savings, Professor Eeckels said that he hopes for more money and to bring down expenses in administration and procurement, transport, etc.

One Trustee said he was disturbed to see the size of the general staff growing again. Professor Eeckels explained that the Centre's policy is to keep the number of staff down and for that purpose transfers (whenever possible) core staff to projects, but this cannot always be done. The increased staff are all project funded, and if the Centre did not spend the money on the staff that money would have to be refunded to the donors.

It was agreed that NO level staff and GS level staff should receive, as of July 1, 1987, the pay increases determined by the UN in 1986 for Dhaka staff, namely 8.42% for GS 1 & 2 staff, 10.68% for GS 3 to 5 staff and 16.98% for GS 6 to NO D staff, and that this should be announced by the Director, not the Board. There will be no retroactivity. The Board agreed that the 10% voluntary reduction in salary for international level staff should also cease from 1 July, 1987, without retroactivity. The Board also agreed that Board members should continue receiving two-thirds of their regular honorarium and that they wait until 1 January, 1988 for full restoration of the honorarium. This too would take effect without retroactivity.

Further discussions on the Finance Committee Report were postponed until after lunch so that the Board could meet with the representatives of the Staff Welfare Association as scheduled.

Meeting with SWA Representatives

Professor Bell said that the Board is pleased to have this opportunity to meet the President and other members of the Staff Welfare Association. He went on to say that the Board values the hard and dedicated work of staff members, professional and support, and wishes to know what matters they feel the Board should be considering.

Mr Shafiqul Islam, President of SWA, thanked Professor Bell and in his speech highlighted the local salary scale; the problem of those being "stuck" on the last step of a salary level; the non-implementation of the meritorious increase rule; the local per diem rate; the status of CHW's; and the provision of a stipend for meritorious children of lower level staff.

Professor Bell thanked Mr Islam for his clear and helpful statement. He said that the salary scales are on the agenda of this Board Meeting and that the Board is considering whether budgetary provision allows for the raises; Professor Eeckels will be able to inform SWA of their decision at the end of the meeting. Thanks to the economy measures taken and to extra donations the Centre is in a better position, the financial crisis being considerably improved with a thin margin of surplus. However, until the major accumulated debt is eliminated and there is a strong surplus, the Centre continues to be in a precarious position. Nevertheless, the situation has improved and it is hoped that it will be possible to give the increase. The Board doesn't see a way to provide retroactive payments as the Centre is unable to obtain funds for retroactive raises, so Professor Bell said he could not be encouraging about retroactivity. Professor Bell said that the Board is not comfortable about being in the position of paying salaries based on the UN survey and its considerable retroactivity. Thus an agenda item of the Board will be whether or not the Centre can pay good comparable salaries, not necessarily tied to UN terms of payment. However, this will not be done without due study and all concerned being able to make their views on it known. Professor Bell said that the other matters raised by Mr Islam are noted but that he has no immediate comment on them.

Mr Bashir said that management had met with SWA last week and discussed all the matters raised today. He said that the personnel office is working on the question of meritorious increases and pointed out that this is not automatic, it is something special. They are also seeing what can be done for the 42 short-term employees. The stipend for meritorious children has been agreed to in principle and the international level staff have been asked to support this. It is expected that SWA should come up with some suggestions to save money - the Director has already asked for this.

Professor Eeckels added that SWA is also concerned that the Matlab Staff Clinic is not satisfactory and they would like to see it improved with a doctor and better space. The same thing concerns Dhaka where we would like to have a special room for staff hospitalization but there are no solutions to either problem for the time being.

Mr Islam said that it is conventional to ask for salary arrears, can't there be a mechanism in the budget to provide for it, or shouldn't staff ask for it? Professor Bell said that there is no way to deal with it at present.

The meeting broke for lunch.

When the meeting reconvened after lunch on Wednesday, 17 June, Professor Bell informed the Board that USAID has been able to make the arrangements for a collaborative agreement between JHU and the Centre which will allow for the non-reimbursable secondment of Dr Silimperi and others.

Agenda 9: Finance Committee Report (cont'd)

Professor Bell asked if Board Members agreed that there should be reviews of the local staff salary policies and of salary policies affecting international level staff. He said that the Finance Committee thought that the Director should ask Mr Mahbub to take the lead (maybe with one or two consultants being involved) and that a report and recommendations would be expected in November 1987.

Dr Cornaz said that the Personnel and Selection Committee had agreed that the matter should be looked into too and that they were going to ask for a comparison in Dhaka (they had been told that higher NO levels are attractive but not lower NO levels) and for the European and American universities to

be looked at. Professor Eeckels said that he already has the information on 118 universities in the United States.

Other comments noted the fact that the Centre should have an attractive, but affordable, salary system at the international level; donors have to know that unless the Centre spends money on scientists there will be no science at the Centre; concern was expressed that the whole problem be looked at, the personnel system and structure, personnel operations, not just salaries, and that all should be dealt with both at the international and local levels; how to deal with the decline in value of international level salaries; alternatives to UN/WHO system for local/international level staff. Further discussions were deferred until the Personnel and Selection Committee Report is discussed.

Professor Bell drew the Board's attention to the fact that the Finance Committee had a lengthy discussion on the UNROB funds and that they had come to the conclusion that the best way for it to be resolved is through discussion and negotiation through the Ministry of Health and Family Planning. This may be reported to the donors' meeting where the matter of deficit payment is on the agenda.

Next, Professor Bell reported that letters had been sent to four large nationalized banks to see if they could provide the necessary banking facilities for the Centre. Mr Janssen will follow-up to get replies in writing for the record. It was felt that as no interest had been shown, they would not be likely to be able to provide the services required. Mr Rahman suggested that the Centre should approach the Bangladesh Bank and that if they can't provide the services we require, then it is in order for the Centre to go on with the present arrangements it has with American Express - i.e. the Centre has exhausted all possibilities as required by the Ordinance. Professor Bell said that Messrs Janssen and Rahman and Professor Eeckels should go ahead, making sure that the course of action is appropriate.

Finally, the auditors' report was approved and Messrs Rahman, Rahman Huq & Co. were approved as auditors for a second year.

The following resolutions were passed:-

Resolution 8/June 87 — The Board reviewed the budget for 1987, and requested that the surplus of not less than $220,000, mentioned in resolution 15/Nov. 86, be increased to $300,000.

Resolution 9/June 87

The Board resolves that the December 1, 1985 UN salary increase, announced October 20, 1986, for local staff:
8.42% for GS 1 & 2
10.68% for GS 3 to 5
16.98% for GS 6 to NO D respectively,
be put into effect for Centre staff from July 1, 1987, without retroactivity.

Resolution 10/June 87

The Board resolves that its request of November 1985 that international level staff accept a 10 per cent reduction in pay and benefits, be ended from July 1, 1987.

Resolution 11/June 87

The Board notes the Government of Bangladesh request to repay the UNROB loan plus any accrued interest by June 30, 1987. The Board also notes that the donors' consortium meeting of June 27, 1987 has on its agenda the matter of the accumulated deficit, a substantial part of which is the UNROB loan. The Board therefore resolves that the management discuss with the Ministry of Health and Family Planning of Bangladesh the UNROB matter and report on the outcome of the donors' meeting. In view of the Centre's present financial position, the Government should be requested for an extension of the repayment period to permit further exploration of alternatives for dealing with the matter which would be mutually acceptable to the Government of Bangladesh and the Centre.

Resolution 12/June 87

The Board accepts and approves the auditors' report on the Centre's financial statements for 1986.

Resolution 13/June 87

The Board accepts the Director's response to the auditors' management letter.

Resolution 14/June 87

The Board authorizes the Director to write-off the following advances:
- to suppliers $4,408.8
- to ex-employees $2,856.5
as specified in the auditors' management letter.

Resolution 15/June 87 — The Board finds satisfactory the work of Rahman, Rahman Huq & Co. and their associates Price Waterhouse for 1986, and appoints them for a second year as auditors for 1987 for a fee not exceeding US$9,000.

Agenda 7: Personnel & Selection Committee Report

Dr Cornaz, as Acting Chairman of the Committee, presented the Personnel and Selection Committee Report which is attached as annex 5. Dr Cornaz said that added to this report should be a recommendation that the Board request the Centre, in particular Mr Mahbub, to examine the recommendations of the consultants (Messrs Rahn & Hiscock and Gormbley) to ascertain which are within the competence of the Centre to handle and which should be brought to the Board's attention for approval/decision. She continued saying that the Personnel and Selection Committee had reviewed the Personnel Structure Committee report very carefully and brought the relevant points to the Board's attention, however, Rahn & Hiscock's and Gormbley's reports were not specifically discussed.

(a) Personnel Structure Committee Report & (b) Personnel Consultants' Reports

Professor Eeckels said that there have been enough consultants and that it is important that now the process of implementation is started in the right way as this will take a lot of time by an experienced person - organogram, positions, job descriptions, etc.

The Board agreed with the recommendation that the 6-year rule of June '84 be reconfirmed and that the Nov. '85 rule barring reapplication for 2 years be rescinded. Note should also be taken of the fact that an independent evaluation is required at 3-year intervals i.e. before renewal of contracts and that all posts at the Centre should be approved by the Centre (includes Board). In discussing the fact that the Board has to be aware of all appointments in the Centre (and show donors they are), it was decided that the Director should give a list of ways people come to the Centre, with present procedures, to the Personnel and Selection Committee which will then pursue this and bring recommendations on how it will handle each option to the November 1987 meeting of the Board. Dr Merson said that he will help with this if a draft proposal is circulated.

Next, the Board discussed the career ladder and ranking of National Officers. Dr Merson pointed out that in classifying the people rather than the post the Centre was deviating from WHO rules. Professor Bell said that this is not a matter of a vacant post but rather the wish to promote an individual for good work without the post classification changing (if the person presently holding the post left, it would be advertised at the original level, not the level of the person leaving). Dr Merson said that this is a good goal (he is all for a career ladder) but that he wouldn't support this at this time because first there needs to be a good evaluation system in place. He noted the consultants recommended that any changes in the system for classifying posts and the establishment of a career ladder not be implemented until the personnel operations have been considerably strengthened. The efforts required for these activities must not be underestimated. Professor Eeckels pointed out that normally the Board does not have input at NO levels and that this was brought up as a response to the Task Force Report. He said that he would like to implement the system as quickly as possible. Professor Bell noted that the foregoing was not in the Board's jurisdiction and that the Director had asked for advice only, the Board's advice being that the Director should be cautious and not get prematurely into a system which cannot be carried out. The word "tenure" should not be used. The Board agreed that it is desirable to move toward this new system, and the Director is authorized to do so as rapidly as may be feasible, but in view of the inadequacies in the present personnel operations, as noted by the consultants, he should proceed prudently, and the Board requests a progress report in November. Professor Eeckels noted that strong support is needed in order to implement it.

The meeting broke to interview candidates for international level positions.

8 p.m. on Wednesday, 17 June.

Discussions continued on how to get good scientists to the Centre while achieving a mix of nationalities. It is difficult to document what is happening to competitive markets - would UNDP fund a survey? Would this be enough? Trustees were asked to think about this overnight.

The meeting adjourned at 8.30 p.m.

The meeting reconvened at 8.30 a.m. on Thursday, 18 June, 1987.

Agenda 12: Dates of Next Board Meeting

The dates for the next Board Meeting were discussed and it was agreed to confirm the dates of Saturday, 21 November to Thursday, 26 November, 1987 inclusive. Following is the agreed on schedule for that meeting:- Saturday 21 and Sunday 22 November - Committee meetings; Monday 23 November is free for report writing and a meeting with the scientific staff; Tuesday 24 to Thursday 26 November, inclusive are set aside for the full Board Meeting. Board Members were asked to keep the evening of Wednesday 25 November free in case an evening meeting is necessary.

Tentative dates for the June 1988 Board of Trustees Meeting are Saturday, 18 June to Thursday, 23 June, 1988 inclusive.

Agenda 10: Selection of Trustees

Professor Bell reminded trustees that all trustees serve on the Board in their individual capacities. He expressed the sincere appreciation of the Board to the three retiring members, Professors J. Kostrzewski, L. Mata and V. Ramalingaswami and to Professor Y. Takeda, who resigned earlier.

Professor D. Habte was re-elected by acclamation. The replacement chosen for Professor V. Ramalingaswami was Professor V.I. Mathan; for Professor J. Kostrzewski it was Professor Alf A. Lindberg; and Professor Hiroshi Tanaka was chosen to replace Professor Y. Takeda. It was agreed that additional curriculum vitae were needed from the Latin American region and that once these are collected the Chairman of the Personnel and Selection Committee should arrange a mail ballot, endeavouring to ensure that the new trustee is selected before the November Board Meeting; outgoing and continuing members of the Board will vote on this selection.

The following resolutions were passed:-

Resolution 21/June 87 — The Board expresses its sincere appreciation to Prof. J. Kostrzewski, Prof. L. Mata, Prof. V. Ramalingaswami and Prof. Y. Takeda for their sustained and distinguished contributions to the Centre. The Centre has been fortunate to have Trustees of such high capacity and international stature. All four individuals were leaders of the Board in their own ways and will be greatly missed.

Resolution 22/June 87 — The Board reappoints Prof. D. Habte as a member of the Board for three years from 1 July, 1987.

Resolution 23/June 87 — The Board requests the Chairman to write to the following persons asking them to join the Board of Trustees as of 1 July, 1987

Prof. Alf A. Lindberg, Chairman, Dept. of Clinical Bacteriology, Karolinska Institute, Sweden;

Prof. V.I. Mathan, Christian Medical College, Vellore, India;

Prof. Hiroshi Tanaka, Chairman, Dept. of Parasitology, University of Tokyo, Japan.

As for the fourth new Trustee, the Board resolves the following: the member should come from Central or South America or the Carribean, and will be elected by mail poll through the Chairman, Personnel and Selection Committee.

Agenda 11: Selection of Chairman of the Board

Professor David Bell was selected as Chairman of the Board for the 1987/88 period, by acclamation. It was noted that, as a rule, no Chairman should exceed two one-year terms, but, due to the special situation, Professor Bell was elected for a third term. Professor Bell was thanked for accepting to continue for a third term and appreciation was expressed on the excellent job he has done. Professor Bell thanked the Board for their confidence in him.

(a) Membership of Committees of the Board

The present members of the Board were assigned to the three committees, three members having responsibilities on two committees. New members will be assigned to committees if, and when, they accept to become a Trustee.

In discussing the Committee Reports to the Board, Chairmen were requested to write-up the reports so that it is clearly known what matters are for the Board's decision and those that are for information only. Draft resolutions from each Committee should be attached to the report to the Board. In turn the Director was asked to arrange for Committee papers to be sent out as early as possible, with options, the Committees being aware of the fact that they may receive an updated version on their arrival in Dhaka.

The following resolutions were passed:-

Resolution 24/June 87 — The Board re-elected Prof. D. Bell as Chairman for the term 1987-88, with thanks for his willingness to serve, as an exception, for a third year as Chairman.

Resolution 25/June 87 — The Board appoints to the Personnel and Selection Committee:

Dr I. Cornaz, Chairman of the Committee
Dr M. Merson
Dr K.A. Monsur
Mr T. Rahman
Prof. D. Rowley

Prof. D. Bell, Ex Officio (Chairman of the Board)
Prof. R. Eeckels, Ex Officio (Director)

for one year effective 1 July, 1987.

Resolution 26/June 87 — The Board appoints to the Finance Committee:

Prof. R. Feachem, Chairman of the Committee
Mr A.K. Chowdhury
Dr Nyi Nyi
Dr P. Sumbung

Prof. D. Bell, Ex Officio (Chairman of the Board)

Prof. R. Eeckels, Ex Officio (Director)

for one year effective 1 July, 1987.

Resolution 27/June 87

The Board appoints to the Programme Committee:

Prof. D. Rowley, Chairman of the Committee
Dr A.R. Al-Sweilem
Prof. D. Habte
Dr M. Merson
Dr K.A. Monsur

Prof. D. Bell, Ex Officio (Chairman of the Board)
Prof. R. Eeckels, Ex Officio (Director)

for one year effective 1 July, 1987.

Agenda 7: Personnel & Selection Committee Report (cont'd)

Professor Bell re-opened the discussion of the Personnel & Selection Committee Report by commenting on the need to have a survey of salaries on both the local and international sides. This should be a survey, not a report, giving information from institutions of relevance to the Centre. Dr Nyi Nyi added that the implications and options should be shown. It was noted that the personnel structure is linked to this too.

Dr Cornaz drew the Board's attention to the problem faced by some staff members due to the loss of income caused by the fluctuation in exchange rates. She said that a paper has been written on this but that it is not yet in final form whereby a decision may be made on it. The Personnel and Selection Committee will consider this at the next meeting and decide whether or not it needs to be brought to the full Board.

Next, recruitment of international level staff was discussed. Dr Merson expressed disappointment that Mr Mahbub was not appointed at the P6 level.

Dr Cornaz said that 5 persons had been interviewed for the Senior Scientist and Head, Community Health Division. Preliminary information showed that none of the three internal candidates was suitable, references need to be obtained for these and the two external candidates and be

circulated to the Personnel and Selection and Programme Committees. After discussion, it was agreed that both the external candidates (Drs W. Van Lerberghe and H. Van Loon) should be brought to Dhaka on a 2-month consultancy, giving a report at the end of that time. The Personnel & Selection Committee will have another look at these two candidates in November. Meantime, the position is open for other candidates to be considered and Trustees were asked to assist in identifying possible candidates.

In continuation of the Personnel & Selection Committee's Report it was advised that WUSC is definitely recruiting the Chief Finance Officer.

The positions of Head, Child Health Department and Head, Clinical Research Department were approved to be created. It was noted that Dr P.L. Kofod has been seconded by DANIDA to fill the position of Head, Child Health Department and that the position of Head, Clinical Research Department would be advertised after the arrival of Dr Mahalanabis. Meantime, someone could act in this position.

The matter of evaluation of staff before renewal of contracts was discussed and a resolution passed on this. It was stated that it is expected that such evaluations should take place at least a year ahead of the contract expiry date.

It was proposed and accepted that an accelerated evaluation process should be carried out for the Dr M. Badrud Duza, Trustees and external reviewers being asked to evaluate him.

The following resolutions were passed:-

Resolution 16/June 87 — The Board resolves that scientific staff members at international level should be formally evaluated before renewal of their contracts. No contract should be renewed after 6 years. If the post is to be continued, it must be advertised internationally, and the incumbent of the post can apply.

Administrative staff at international level should also be formally evaluated before renewal of their contracts.

Resolution 17/June 87 — The Board recognizes the importance to the Centre and for its staff of correct ranking of all staff and appropriate career ladders, as discussed in document 7a/BT/June 87 which was presented to this meeting of the Board. It

requests the Director to pursue the development of a ranking system and procedures for career ladders.

Resolution 18/June 87

Aware of the crucial importance of the post of Chief Personnel Officer and of the urgency to fill the post which will be vacant as from July 1987, the Board requests the Director to advertise without delay for the post of Chief Personnel Officer at a high NO level. If no suitable candidate were to be found within 6 weeks, the Board authorises the Director to internationally advertise the post at P4 level.

Resolution 19/June 87

The Board promotes Dr Badrud Duza, Associate Director and Head, Population Sciences and Extension Division, to grade P6. With regard to the renewal of Dr Duza's contract for a second three-year period, the Director is requested to proceed with a formal evaluation by independent evaluators, with the objective of completing the evaluation within the coming six weeks. The Board authorizes the Director, with the concurrence of the Chairman of the Board and the Chairman of the Personnel and Selection Committee, after the evaluation has been completed, to take the decision on the renewal of Dr Badrud Duza's contract.

Resolution 20/June 87

The Board requests the Director to prepare a survey of remuneration systems in a sample of universities and other research institutions in industrialized and developing countries, and of the personnel structure of comparable research institutes, with reference to the UN System. A survey should also be made of salary scales in Bangladesh. The report should be presented to the Board of Trustees at the November 1987 meeting. The report should indicate the implications of the findings for the Centre.

The meeting adjourned for lunch.

The meeting reconvened at 2.30 p.m. on Thursday, 18 June, 1987. At this time there was general discussion on various points which included:-

(a) Dr Nyi Nyi wanted it on record that he is concerned that the Board should have definite resolutions, not vague ones.

(b) It was emphasized that the Director should see what can be done to improve the hospital. Plans both for an intermediate solution and for a second floor need to be prepared along with the financial implications. These should be presented to the Board in November 1987. It is expected that an intermediate solution would be something that could at least be commenced before the end of the year.

(c) Dr Cornaz explained the system of mail ballot for election of the fourth Trustee. Board members should send the curriculum vitae and any other information they may have on candidates to Dr Cornaz, who will forward it to all current members of the Board with a request that each Board Member give a first and second choice. If there is no simple absolute majority in the first ballot, voting information will be sent out and Board Members asked to vote on the first two candidates.

The Personnel & Selection Committee should discuss the procedure for selection of Trustees next meeting.

(d) Professor Bell said that Dr Cornaz will act as Chairman of the Board delegation to the Donors' Consortium meeting on 27 June in Geneva. Other Board Members attending this meeting will be Mr A.K. Chowdhury, Prof. R. Feachem, Dr K.A. Monsur and Prof. V. Ramalingaswami. Prof. R. Eeckels will also be attending. One secretary from the Centre will go with the delegation, with additional secretarial support being provided by UNDP Geneva.

(e) Re Agenda 6(c) - It was reported that the Government has been contacted re the SAARC fellowships and we have been advised that the SAARC Secretariat will handle this - the Government of Bangladesh will bring it to this SAARC meeting. It was pointed out that the Centre should ensure that it has good criteria for selection of candidates so it may reject candidates if they do not fill the criteria.

(f) Professor Eeckels advised that there was a six-monthly Laboratory Services Department report available if Board Members were interested. The Director was urged to encourage such reports and circulate them to the Board.

Professor Kostrzewski, on behalf of Prof. Ramalingaswami, and in absentia of Prof. L. Mata, thanked the Board for the opportunity to have such a rewarding experience and for the extremely interesting type of work they have had while on the Board. He congratulated the Chairman of the Board and the Director on the improvement of co-operation with the Board and said that it has been a most enjoyable type of work.

Professor Eeckels replied that he is grateful to Professor Kostrzewski for starting the process of his coming to the Centre and that it is extraordinarily exciting and rewarding to be able to serve others. He said that it has been a great privilege and honour to work with the Board and that they have been a great help to him. In speaking of the collaboration with WHO, Professor Eeckels said that he is sure that the Centre will go on to achieve its aim of absolute collaboration as a serving institution to the Global CDD programme. He thanked Professor Kostrzewski and the other outgoing Trustees for all they have done for the Centre over many years.

The meeting closed at 6.30 p.m.

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21.7.87

DRAFT

Board of Trustees Meeting
16-18 June, 1987

RESOLUTIONS

Resolution 1/June 87

RESOLVED: The Board resolves to send a congratulatory message to His Excellency, President H.M. Ershad, President of the People's Republic of Bangladesh, on the recent presentation of the United Nations Population Award, 1987, in recognition of his outstanding contribution to raising awareness of population problems and their solution. The Board further wishes to express its gratitude to the President and Government of Bangladesh for their continued support to the International Centre for Diarrhoeal Disease Research, Bangladesh, and to reaffirm its commitment to strengthen further the scientific contributions made by the Centre to the welfare of the people of both the developing and developed countries. The Chairman of the Board is authorized to send the message on behalf of the Board.

Resolution 2/June 87

RESOLVED: In order to streamline the preparation of the Board meeting, the Board requests the Director that documents pertaining to the proceedings of the Board meeting should be sent to reach the members two weeks before the commencement of the meeting. The Board further requests that Board documents, where appropriate, should include alternatives and options available and an indication of the decisions that will need to be taken by the Board.

Resolution 3/June 87

RESOLVED: The document entitled "Recommendations on the Composition, Method of Work, Duties, Powers and Functions of the Ethical Review Committee (ERC) of ICDDR,B", as presented to this meeting of the Board, was considered, modified and approved. The ERC should confine itself to considering ethical aspects of research involving human subjects.

Resolution 4/June 87

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Prof. Alf A. Lindberg, Chairman, Dept. of Clinical Bacteriology, Karolinska Institute, Sweden;

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APPROVAL BOARD MEETING
RESOLUTIONS, JUNE 1978

DRAFT

Board of Trustees Meeting
16-18 June, 1987

RESOLUTIONS

Resolution 1/June 87

RESOLVED: The Board resolves to send a congratulatory message to His Excellency, President H.M. Ershad, President of the People's Republic of Bangladesh, on the recent presentation of the United Nations Population Award, 1987, in recognition of his outstanding contribution to raising awareness of population problems and their solution. The Board further wishes to express its gratitude to the President and Government of Bangladesh for their continued support to the International Centre for Diarrhoeal Disease Research, Bangladesh, and to reaffirm its commitment to strengthen further the scientific contributions made by the Centre to the welfare of the people of both the developing and developed countries. The Chairman of the Board is authorized to send the message on behalf of the Board.

Resolution 2/June 87

RESOLVED: In order to streamline the preparation of the Board meeting, the Board requests the Director that documents pertaining to the proceedings of the Board meeting should be sent to reach the members two weeks before the commencement of the meeting. The Board further requests that Board documents, where appropriate, should include alternatives and options available and an indication of the decisions that will need to be taken by the Board.

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DIRECTOR'S REPORT

4/BT/NOV.87

PROGRAMME COMMITTEE REPORT

Report of the Programme Committee

Present: Prof. D. Bell, ex-officio Chairman of the Board
Prof. R. Eeckels, ex-officio Director
Prof. R. Feachem
Prof. Demissie Habte (Acting Chairman, PC)
Prof. V.I. Mathan
Dr. M. Merson
Dr. K.A. Monsur
Mr. T. Rahman
Dr. P. Sumbung

Invited ICDDR,B Staff: Mr. M.R. Bashir
Mr. M.A. Mahbub

Agenda

1. Review of Laboratory Sciences Division.
2. Teknaf Paper.
3. External Scientific Review.
4. Authorship of Centre Publications.
5. Patent Rights.

Agenda 1. Review of Laboratory Sciences Division

Dr. Eeckels suggested that a head of the division will not be in place until April 1988 and therefore consideration of review of this division be postponed. This was accepted.

Agenda 2. Teknaf Field Station

Members were reminded of the decision of the Board at its last meeting. A document justifying Teknaf as a particularly advantageous and unique study area for shigellosis, and five research protocols of studies to be conducted in Teknaf formed

the basis of the discussion. After a prolonged exchange of opinions the following points emerged:

a) Slightly over 1 million dollars are available for studies on shigellosis.

b) It has not been possible to find a satisfactory arrangement for the presence of senior investigators in Teknaf to assume proper management of the functions of the station. This finding is in accord with previous statements of the Board and of an external review of Teknaf.

c) The research protocols submitted were unanimously assessed to be of inferior quality and unlikely to receive funding in a competitive setting. In addition, the absence of a comprehensive, long range plan for the study of shigellosis made the relevance of these studies unclear.

d) Postponement of the decision on Teknaf has delayed the development of a shigella research thrust by the Centre.

On the basis of the above, the Committee agreed that no convincing argument has come to light to retain Teknaf, and therefore decided to close it as a research station.

At the same time, it requested the Centre Management to undertake the necessary arrangements to transfer the service function to the Government of Bangladesh, and to make all efforts to absorb the field staff by the Centre.

Agenda 3. External Scientific Review

.The recommendation of the Director for the Clinical Sciences Division to be reviewed was accepted. The following names were suggested for membership to the team:

Dr. M.K. Bhan, All India Institute of Med. Science (India)
Prof. M.S.Akbar, Dhaka Shishu Hospital (Bangladesh)
Prof. Dr. R. Hamilton, McGill University (Canada)

Dr. J-P Desjeux (INSERM, France) was held as a reserve in the event Dr. Hamilton fails to take up the appointment.

Agenda 4. Authorship in Centre's Publications

The Director informed the Committee of procedures for authorship in Centre's publications. These procedures ensured fairness, were in accord with general guidelines followed elsewhere, and well known and accepted by scientists at the Centre. Members were pleased to learn this.

The issue of scientists taking results of studies carried out at the Centre and publishing findings without the permission of the Centre was also taken up. It was agreed that all results of studies conducted at the Centre was the property of the Centre and could appear in print only with the consent of the Centre. In addition, a clause in the contract of scientists joining the Centre forewarning of these conditions would deter unpleasant practices.

Agenda 5: Patent Rights

The issue of protecting the Centre's and investigators' rights in the event that researches lead to discoveries with

commercial applications was presented. The Committee agreed that it was appropriate to seek legal advice on the implication of patents for the Centre and instructed the Director to take such action.

DH:ls

REVIEW OF LABORATORY SCIENCES DIVISION

4(b)/BT/NOV.87

TEKNAF PAPER

TEKNAF PROPOSAL

Teknaf Field Station, by its geographic, climatic, and socio-economic conditions, and some biomedical aspects of diarrhoeal diseases offers ICDDR,B scientists unique opportunity to explore several questions relevant to development of effective control of shigellosis.

The Teknaf and Matlab field stations have both been considered as sites for epidemiologic studies of Shigella infection. Both areas are surveyed by the Demographic Surveillance System (DSS) which provides accurate denominator data for population-based studies, but the similarities end there. Population-based studies are not feasible at the Diarrhoea Treatment Centre in Dhaka, but this site has been suggested for clinical studies of Shigella infection.

Table 1 presents some comparisons of the three sites relevant to the study of shigellosis:

Table 1: Some comparisons of ICDDR,B Treatment Centres relating to opportunities for Shigella research.

	Teknaf	Matlab	Dhaka
Demographic Surveillance System (DSS)	Yes	Yes	No
DSS Area Population	75,000	205,000	N.A.
Out-migration rate in 1984: All ages	25/1000	42/1000	N.A.
Under 10	14/1000	35/1000	N.A.
Proportion of patients residing in DSS Area	80%	30%	N.A.
Number of Shigella patients treated in 1986	1727	578	1134
Proportion of all Shigella isolates resistant to nalidixic acid* (Aug '87)	65%	2%	2%

*Resistance has been found only in S. dysenteriae type 1 isolates.

Although true incidence figures are not available, a rough estimate of the risk of Shigella infection in each of the DSS areas may be obtained by dividing the estimated yearly number of resident Shigella cases by the population of the surveillance area. By this calculation the risk of Shigella infection in Teknaf appears to be over 20 times that seen in Matlab. This is a crude approximation, but by any measure the rate of Shigella infection in Teknaf is extraordinarily high, as is the proportion of infections which are resistant to nalidixic acid and all other commonly used antibiotics.

With the emergence of Shigella organisms resistant to nalidixic acid research on Shigella infections has been given high priority and has recently attracted major funding at ICDDR,B. Most of the research has been directed towards the development of a Shigella vaccine. Insight into the nature and protective effects of naturally acquired immunity is needed to identify appropriate antigens. Until an effective vaccine is available, new therapies for antibiotic-resistant infections must be evaluated, and other prevention strategies must be explored.

Past and ongoing activities (DSS and the Treatment Centre) already have formed solid base for immediate and future studies in Teknaf station. Therefore, in this proposal we present two categories of research projects i.e. immediate and future ones.

A. Immediate Studies: (See attached protocols)

1. A prospective evaluation of the protective effect of serum antibodies to Shigella

   Budget including overhead for 1 year: US$142,900.

2. An active surveillance system for shigellosis in Teknaf.

   Budget including overhead for 3 years: US$609,250.

3. A cohort study for identification of the risk factors of shigellosis in Teknaf.

   Budget including overhead for 2 years: US$221,676.

4. ICDDR,B surveillance program, Teknaf Treatment Centres.

   Budget including overhead for the period of centre's requirement US$19,960.

5. A clinical trial to compare the effectiveness of pivmecillinam and combination of pivmecillinam cephalexin in the treatment of childhood shigellosis in Teknaf.

   Budget including overhead for 1 year: US$23,401.

Projected total expenditures for 3 years

Year -	1988	1989	1990
Expenditure -	US$495,859	US$330,478	US$236,750

Dr. Munshi as a resident in Teknaf is proposed to take the responsibility of a supervisor of the studies. He will be assisted by another epidemiologist (to be recruited) residing in Teknaf. One medical officer will be recruited to relieve Dr. Munshi from Treatment Centre routine duties.

Consultants coming from Dhaka to Teknaf will be:

Dr. C. Ronsmeans - two weeks per month.

Dr. G. Hlady - one week per month.

Dr. A.K.M. Siddique - 2-3 days per month.

B. **Future Study**

The Teknaf station appears to be the most suitable place for a future Shigella vaccine trial, provided the DSS program and surveillance program would continue. At present there are several candidate shigella vaccines that are in the preparatory stage of development and in 2-3 years the demand for field trials will probably increase. The vaccine development program for shigellosis has been strongly supported by WHO and therefore ICDDR,B can expect continued support from external donors and funding agencies.

Environmental studies, though not currently related to Shigella studies represent another area wherein Teknaf may provide a valuable venue for research. The geographical location of the Teknaf station adjacent to the Naf river which has a salinity gradient makes Teknaf uniquely suited for studies of the distribution of Vibrios in a variety of diverse environments. Scientists of University of Maryland have recently expressed an eagerness to collaborate with ICDDR,B scientists on this topic and to seek necessary funding.

Finally, with an operational DSS in Teknaf, population data collected in Teknaf may be compared with that of Matlab. The differences in climate, socioeconomic conditions, health and sanitation problems and medical care reinforce its value.

Outline of proposed research project

Section I: Research Protocol

1.	Title:	A Prospective Evaluation of the Protective Effect of Serum Antibodies to *Shigella*
2.	Principal Investigators:	MH Munshi, WG Hlady
	Co-Investigators:	AKM Siddique, I. Ciznar
3.	Starting Date:	January 1, 1988 (tentative)
4.	Completion date:	February 1989
5.	Total Direct Cost:	US$ 142,900

Approved by: Associate Director, Community Medicine Division

Signature: _____

Date: _____

6. **Abstract Summary:**

Children and adults over 5 years of age who are household contacts of symptomatic shigellosis cases will be tested for serologic evidence of prior *Shigella* infection, and followed on alternate days for a period of 10 days. The purpose will be to evaluate the protective effect of prior infection while controlling for other known and suspected risk factors. The analysis will determine if a protective effect exists and, if so, whether the effect is type-specific. The study will take place in Teknaf, an area of Bangladesh hyperendemic for shigellosis.

Section II: Research Plan

A. Introduction

1. Objective: To evaluate the effect of naturally acquired serum antibodies on the risk of symptomatic Shigella infection among household contacts of an index case.

2. Background: Infection by Shigella organisms produces an antibody response in both the serum and intestinal fluids. The first serum antibody to appear is IgM, which may be detected within days of infection, but which does not persist for more than a few weeks. Intestinal antibodies (IgA) are also short-lived. IgG antibodies are produced later in the course of infection but they persist in detectable quantities in the serum for years. Serum antibodies, therefore, may serve as biochemical markers of prior infection either in the very recent (IgM) or distant (IgG) past.

Experimental evidence from vaccine trials using live attenuated strains of Shigella has demonstrated a protective immune response which is type-specific. Laboratory studies with monkeys have also demonstrated a type-specific protective immune response following natural infection, yet no data exists to describe the protective effect of natural Shigella infection in humans in a community setting.

Two intriguing observations from Teknaf suggest that serum antibodies may exert a protective effect against subsequent

disease due to Shigella. First, the risk of clinical infection appears highest among the younger age groups, with decreased risk associated with advancing age. This may be due to behavioural factors, but it may also be due to a protective effect of prior infections. Secondly, the clinical observation in Teknaf, a hyperendemic area, has been that shigellosis there is much less severe than that seen elsewhere, despite the fact that the most prevalent strain, S. dysenteriae type I, is considered to be the most virulent. This moderation of host susceptibility may be due to nutritional factors or to protective immunity acquired from previous infections.

3. Rationale: The character and protective effect of the immune response in community-acquired Shigella infection may differ from that observed in vaccine trials because of differences in infective dose and pathophysiology; and extrapolation from primate studies is tenuous. A more complete understanding of the immune response to Shigella infection will further efforts to develop an effective vaccine.

B. Specific Aims:

1. To determine if a history of Shigella infection, as indicated by the presence of type-specific serum antibodies, is protective against symptomatic Shigella infection among household contacts of Shigella patients.

2. If a protective effect is demonstrated, to determine whether the effect is type-specific.

C. Method:

1. Location: Teknaf DSS area and the Teknaf Diarrhoea Treatment Centre.

2. Research Design:

a. Overall plan: A 10% systematic sample of culture-positive cases of shigellosis who are diagnosed at the Teknaf Treatment Centre and who are registered in the Teknaf DSS area will be taken as index cases. Household contacts over the age of 5 years will be visited within 48 hours of admission of the index case and a formal consent will be obtained for participation in the study. One cc of blood will be obtained from those who consent to determine type-specific Shigella antibody status, and rectal swabs will be obtained from all symptomatic contacts. Other nutritional, medical, demographic and behavioural risk factors for Shigella infection will be evaluated by examination, questionnaire, and observation for all household contacts, not just those who consent to blood drawing.

Study households will be visited on alternate days up to 10 days to identify cases of diarrhoea or

dysentery. Rectal swabs of symptomatic cases will be evaluated for Shigella. Shigella isolates will be identified by species and serotype and tested for antibiotic susceptibility.

Serum samples will be tested for type-specific antibodies to Shigella at the ICDDR,B lab in Dhaka. They will also be tested for Vitamin A.

b. Sample size: 1000 household contacts (approximately 170 index cases).

c. Analysis: The presence of serum antibodies to Shigella will be evaluated as a negative risk factor for symptomatic infection by using multiple logistic regression to control for confounding variables. Multiple regression models will be used to test type-specific antibody-pathogen interactions.

Risk factors and infection rates among participants in the serum study and other household contacts will be compared to detect and adjust for any selection bias which may have occurred.

D. Significance:

If immunity acquired from natural infection by Shigella has a broad protective effect, i.e. is not strictly type-specific, then further research into the mechanism and antigenic

determinants of that immunity could lead to more efficient and more effective vaccines. Such vaccines would have the greatest impact in developing countries such as Bangladesh, where multiple antibiotic resistant is increasingly common.

If infection by Shigella organisms confers only type-specific protection against subsequent episodes, then this too would have important implications for vaccine development.

If prior infection confers no protection, then other risk factors will have to be analysed to explain differences in the risk of disease and to formulate more effective prevention strategies.

E. Facilities Required:

Facilities of the Teknaf field station will have to be improved to accommodate this research activity. Improvements include: 2 rooms added to existing residence facility at the Treatment Centre, a microscope, an additional incubator, a four-wheel drive vehicle, and a boat.

Personnel requirements include a Medical Officer to relieve Dr. Munshi of his current clinical and administrative responsibilities, a senior staff nurse to assist in the Treatment Centre, a research officer (microbiology), and two paramedic clinical assistants.

F. Collaborative Arrangements:

No external collaboration is required.

Summary sheet of Budget Estimate

	Amount in US $
1. Personnel services	75,000
2. Travel and per diem	4,400
3. Supplies and materials	33,000
4. Other contractual services	500
5. Inter-departmental services	30,000
Total	142,900

GR:ls

Outline of proposed research project

Section I: Research Protocol

1. Title: An Active Surveillance System for Shigellosis in Teknaf.

2. Principal Investigators: MH Munshi, WG Hlady

   Co-Investigators: AKM Siddique, C Ronsmans

3. Starting Date: January 1, 1988 (tentative)

4. Completion Date: February 1991

5. Total Direct Cost: US $ 609,250

Approved by: Associate Director, Community Medicine Division

Signature _____

Date: _____

6. Abstract Summary:

An active surveillance system is proposed for the Teknaf DSS area, an area of southeastern Bangladesh hyperendemic for multiple-antibiotic-resistant Shigella infection. The system will be one of stimulated active surveillance, where epidemiologic case investigations will identify, diagnose, and provide treatment for symptomatic household and neighbourhood contacts of index cases identified at treatment centres. The results of field investigations will be linked to laboratory and demographic surveillance data to generate incidence figures. The surveillance system will identify and respond to outbreaks,

stimulate epidemiologic research, and establish a baseline for testing of prevention strategies, including possible vaccine trials.

Section II: Research Plan

A. Introduction

1. Objectives: To establish an active surveillance system for Shigella dysentery in the Teknaf Demographic Surveillance System (DSS) area.

2. Background: Since 1974, the Teknaf DSS area has been recognised as hyperendemic for shigellosis according to treatment centre statistics, yet no current community-based figures for incidence or prevalence of disease exist. There are no data to describe spread of infection within the community, clustering of cases, or the emergence of new strains; and no mechanism to identify and respond to outbreaks. Case counts at the treatment centre have been rising, and the predominant strains of Shigella are multiple-antiobiotic-resistant. An average of 33 cases of shigellosis was seen at the treatment centre each week in 1986.

An accurate census of Teknaf DSS area residents has been maintained since 1976. It provides reliable demographic data which could be linked to morbidity data for the calculation of rates. The DSS also has established a framework of 10 surveillance units within the area. The size of each unit corresponds to the area which could be

covered by a surveillance team on foot in one day. These units will be useful in the organization of an active surveillance system for shigellosis.

3. Rationale:

Multiple antibiotic resistance and a hyperendemic situation combine to make shigellosis an urgent public health problem in Teknaf. They also make Teknaf a natural laboratory for development of effective intervention and prevention strategies. Community surveillance is the cornerstone of any public health response and is essential to the targeting and evaluation of prevention efforts, including possible vaccine trials. Surveillance will also facilitate prompt diagnosis and treatment of shigellosis and other diarrhoeal diseases, and provide a stimulus and a foundation for epidemiologic research.

B. Specific Aims:

To establish an active surveillance system for shigellosis in the Teknaf DSS area which will provide incidence figures for research and public health intervention.

C. Methods:

1. Location: The Teknaf DSS area (population 75,000) in extreme southeast Bangladesh, and the Teknaf Field Station of ICDDR,B.

2. Overall Plan: A clinical case of shigellosis will be defined as a registered resident of the Teknaf DSS area who has bloody diarrhoea (dysentery). A definite case of shigellosis will be defined as a registered resident of the Teknaf DSS area who has bloody diarrhoea and a stool culture or rectal swab positive for Shigella. All definite cases presenting to the Teknaf Treatment Centre or any of the 10 DSS Unit Centres will be investigated epidemiologically by a team of 2 health assistants (1 male, 1 female). The epidemiologic investigation will consist primarily of case-finding. Household and neighbourhood contacts will be interviewed within 48 hours of identification of the index case and again one week later. Rectal swabs will be obtained from all persons with dysentery and specific treatment, referral, and preventive recommendations (e.g., handwashing, hygiene) will be provided as indicated.

Weekly clinical case figures will be collected and entered into a computer at the Teknaf Field Station. A resident epidemiologist will supervise this activity and act as the onsite programme director. Information on clinical cases will then be linked to laboratory and DSS records. Case counts will be monitored weekly to identify areas of increased disease activity which may require epidemic assistance. Epidemic assistance will be provided by the Epidemic Control Programme, ICDDR,B,

following consultation with the Principal Investigators and the Head, Epidemiology Department.

3. Analysis: Summary figures will be calculated each month and distributed to all programme personnel. A more detailed analysis of trends will be published yearly as the Teknaf Shigella Surveillance Report. This report will include incidence figures by age, sex, geographical location, time of year, family size, etc., as well as summary statistics from the laboratory regarding the pattern of Shigella isolation. Databases will be available upon request to other researchers investigating shigellosis.

4. Quality control: All activities of the onsite programme director will be supervised by the Principal Investigators. Random audits of case reports will be conducted by repeat interviews of household contacts.

D. Significance:

An active surveillance system for shigellosis in Teknaf will provide diagnosis, treatment and epidemic assistance. It will identify patterns of illness in the community, and target areas for intervention, with the ultimate goal of reducing the incidence of disease. Surveillance data will stimulate hypothesis generation and serve as the foundation for epidemiologic research. An active surveillance system will also be essential to the testing of new vaccines and other prevention strategies.

E. Facilities Required:

Laboratory facilities of the Teknaf Field Station will have to be expanded. Improvements will include an additional incubator, a microscope, personnel computer, electric generating capacity, and a constant water supply. A second PC, printer, and copy machine machine will be required for entry, analysis and distribution of surveillance data. Subcentre treatment facilities will also have to be improved.

Personnel requirements will include 24 health assistants (12 male, 12 female), a resident epidemiologist, a medical officer to relieve Dr. Munshi, a senior staff nurse, three paramedic clinical assistants, and a data entry assistant.

Housing facilities at the treatment centre will also have to be expanded by two units to accommodate senior research staff and consultants. An airconditioned data processing room will also have to be provided. Other expenses will include a four-wheel drive vehicle, a speed boat, and travel expenses. Additional funds will also be needed to cover publishing costs of the Annual Report.

Summary Sheet of Budget Estimate

Amount in US $

	1st year	2nd year	3rd year	Total
1. Personnel services	100,000	110,000	121,000	331,000
2. Travel and per diem	4,000	4,400	4,840	13,240
3. Supplies & materials	70,000	44,000	48,400	162,400
4. Other contractual services	1,000	1,100	1,210	3,310
5. Inter-departmental services	30,000	33,000	36,300	99,300
Total	205,000	192,500	211,750	609,250

Outline of Proposed Research Project

Section I: Research Protocol

1.	Title	:	A Cohort Study for Identification of the Risk Factors for Shigellosis in Teknaf
2.	Principal Investigators	:	AKM Siddique, ABM Qamrul Islam, MH Munshi
	Co-investigators	:	W G Hlady, I Ciznar
3.	Starting Date	:	January 1, 1988 (Tentative)
4.	Completion Date	:	December 31, 1989
5.	Total Direct Cost	:	US$ 221,676

Approved by: Associate Director
Community Medicine Division

Signature: _____

Date: _____

6. Abstract Summary

To determine and describe the magnitude, and to clarify certain risk factors for symptomatic shigellosis, a cohort of four hundred children aged 0-48 months will be followed on alternate days for two years in rural Teknaf, Bangladesh, where shigellosis is hyperendemic. A trained health worker will visit each child every other day, to collect the history of diarrhoeal/dysentery and other morbidities during the previous 24 hours. Baseline information including demographic features and socio-economic status will be collected at the onset of the

study. Each study family will be subjected to a prolonged observation once every 2 months, to record detailed dietary practices, water supply and storage, personal and domestic hygiene. Anthropometric measurements will be recorded monthly. The data from the prospective surveillance will be analysed to determine incidence, to evaluate the potential risk factors for shigellosis, and to assess the degree and duration of protection conferred by clinical shigellosis.

7. Reviews:

a) Ethical Review Committee: _____

b) Research Review Committee: _____

c) Director: _____

Section II: Research Plan

A. INTRODUCTION

1. Objectives: The objectives of the proposed study are as follows:

   a) To describe and determine the magnitude of the problem of shigellosis in Teknaf, a rural area of Bangladesh.

   b) To evaluate risk factors of symptomatic shigellosis in this population.

   c) To determine the factors that influence the risk of a shigella episode becoming persistent.

   d) To determine the degree and duration of protection offered by one attack of shigellosis from subsequent attacks.

2. Background: Diarrhoeal diseases have long been recognized as major public health problems in developing countries(1). Dysentery and diarrhoea caused by shigellae are a major cause of morbidity and mortality, both through their direct impact on the host and through their adverse effects on nutrition. As the dominant cause of invasive diarrhoeas, shigella is found to produce severe dehydrating watery motions during the so-called 'small intestinal phase', followed by severe colitis or the 'colonic phase'. Shigellosis is the most communicable of all bacterial enteric diseases. As few as 10 live organisms can cause clinical disease in healthy adults(2). Transmission is primarily from person to person and is greatest when personal cleanliness and domestic hygiene are very poor(3).

A pandemic of shigellosis due to shigella dysenteriae type 1 began in 1969 in Central America. During the Central American epidemic; between 1969-70, in Guatemala alone there had been 112,300 deaths (CFR=12%) (4,5). The present Asian pandemic of shigella dysentery type 1 was first noted in Bangladesh in 1972(6), which later spread to the neighbouring countries(7,8).

In 1970, the isolation rate of shigellae as a pathogen in Dhaka hospital of the ICDDR,B, Bangladesh was only 0.6%. The rate increased gradually to 9% in 1972 and 14% in 1973. The shigellae isolation rate peaked in 1974, when nearly 20% of the patients yielded shigella(9). Part of this dramatically increased isolation rate might be attributable to a changing case-mix of the hospital and/or better isolation techniques, but much of it was thought to be real. A high rate of isolation was maintained thereafter. During 1980-84, 11% of all patients attending the ICDDR,B Dhaka hospital were suffering from shigellosis. Little year-to-year variation was seen in the overall shigella isolation rate. But there was substantial year-to-year fluctuation in the isolation of shgiella dysenteriae type 1 to S.flexneri; the two predominant shigellae species isolated in this population. S.dysenteriae type 1 began to increase in importance in 1983, when the species ratio increased from 0.15 in 1982 to 0.51 in 1983. This ratio increased to 1 during 1984(10). During 1983-84, 11% of all patients attending the Matlab Field hospital of the ICDDR;B were suffering from shigellosis (unpublished observation). Shigella is hyperendemic in Teknaf. During 1985, 24% of all patients attending the Teknaf field hospital of the

ICDDR,B yielded shigella. This rate increased to 32% in 1986. During the first 8 months of 1987 more than half of the patients (53%) attending Teknaf Centre yielded shigella (unpublished observation). Age specific rates of isolation were available from Dhaka and Matlab hospital. The lowest rate of isolation was found in infants and highest in pre-school children. 82% of hospitalized shigellosis cases in Dhaka were less than 5 years of age(12). Mortality in hospitalized shigellosis cases was very high, despite antibiotics and other supportive measures, the Dhaka hospital experienced a case-fatality rate of 10%(13). Treatment of shigellosis becoming more difficult, given the high prevalence of multiply antibiotic resistant strain(14-17). In recent months, 86% of shigella isolates in Teknaf have been resistant to all commonly available antibotics including Nalidixic acid(29) a problem which is being increasingly apparent in other areas in Bangladesh.

Hospital based surveillance often does not reflect the magnitude of the problem. In hospitals we see a select subset of the population who may be more health conscious and/or live closer to the health centre. Many patients arrive at the treatment centres after self-medication has failed, which might reduce the isolation rates. The incidence rate of shigellosis should ideally come from prospective community-based studies. However, very few studies provide accurate incidence or prevalence figure. No such data exists for Teknaf area. A cohort study of 197 under-five children carried out at Matlab field project area of the ICDDR,B during 1978-79 noted shigella as the second most

common cause of diarrhoea. Shigellae were isolated from 12.8% of all episodes reported in these children. Shigella associated diarrhoea had the lowest incidence in infancy and peak incidence (1/child/year) in children aged 24-35 months. Shigellae diarrhoea had a duration of (7 days) which was significantly longer than the duration of any other types of diarrhoea and the highest proportion (16%) of the shigellae cases became persistent(11).

Shigellosis is known to be associated with poor hygiene. A single intervention, like washing of hands with soap and water, sharply reduces the incidence rate of the diseas (17). This study showed that secondary infection rate of shigella was 10% in the study group, as opposed to 32% in the control group. It has been suggested that,ash could be used, when soap is not available(18). Epidemiological and anthropological studies carried out at the ICDDR,B suggested that water use and storage, sanitary practices, weaning practices, food handling practices etc. might be important factors for the spread of Shigellosis (12,19). Once it is possible to clarify what specific behaviours are important in the transmission of Shigellae, it may be possible to design simple, practical and culturally acceptable intervention measures.

A large number of studies suggested that diarrhoeal illnesses are either mild or infrequent in breast-fed infants of developing countries. The literature on breast-feeding and diarrhoea is of varied quality; sometimes the findings are contradictory and

substantial areas of ignorance remains(20). It is possible that the level of protection provided by breast-feeding vary by pathogen, but no hard data is available to support this conviction.

There is an association between the time and type of weaning and the incidence of diarrhoea(21). However, it is yet to be addressed whether the timing of introduction of complementary foods or any particular behavior related with the preparation and serving of complementory foods increases the risk of Shigellosis.

Much has been written about the interaction between diarrhoea and malnutrition(22). Many studies have shown that diarrhoea lead, to malnutrition (23,24). An aetiology specific study of this relationship was carried out in rural Bangladesh (25). This study reported nutritional decline in children following Shigellosis, but that the decline was limited to faltering of linear growth rate, rather than weight faltering. However, it might be possible that the study was unable to detect weight faltering, given it small sample size. The literature offers conflicting information regarding the question - whether malnutrition predisposes to diarrhoea. Among the studies measuring incidence rates, those of Tomkins and Dalgodo found that nutritional status was predictive of the frequency of episodes (24,26). From studies of Bangladesh, Chen and Black reported that malnutrition is a determining factor of diarrhoeal prevalence, but it does not increase the overall incidence (27,28). However, none of these studies were aetiology-specific.

Recent studies have revealed that patients with a variety of bacterial or viral infection such as influenza, measles, mumps, varicella, tuberculosis etc. manifest a depression of systemic cell-mediated immune (CMI) response of variable duration (30,31). Measles, for example, may depress immunity for several months after an acute attack, during which period the host becomes more susceptible to a variety of micro-organisms, specially shigellae(32). Measles leads to higher incidence of diarrhoea and depressed immunity following measles is a possible explanation for such increased rates. But there may be other mechanisms involved. Also there may be an association between other morbidities and diarrhoeas of various aetiologies. More data is needed to further evaluation of this relationship.

Recently Sommer has reported from Indonesia that vitamin A deficient children more often get diarrhoea. But the role of vitamin A supplementation on diarrhoea control is uncertain(23). This needs further study. There is no data available to study the association between vitamin A dificiency and shigellosis.

Several lines of evidence indicate that shigellosis is an immunizing disease. These include epidemiologic data, studies in volunteers and animal studies. Studies in a home for severely retarded children where infection with S.sonnei and S.flexneri serotype 2 were endemic showed that children with very poor personal hygiene experienced a very high attack rate during the first 12-24 months after admission. Thereafter, the attack rates

fell sharply and remained low despite continued frequent exposure to infected and ill children(31). This pattern is consistent with our observation that in a population, such as Bangladesh, where shigellae is endemic, shigellae isolation rate is highest in pre-school children and declines with increasing age. This seemed to indicate that after one or more clinical infections with shigellae the host becomes atleast partially immune to infection. Studies in volunteers demonstrated that young adults who developed shigellosis after an initial experimental challenge were protected against a homologous re-challenge(35). Further studies are required to measure the degree and duration of immunity offered by one attack of shigellosis from subsequent attack. Both epidemiologic and volunteer studies suggested that the protection offered by shigellae is possibly serotype-specific. More data to support or refute this scenario is critical from the point of view of the vaccine development. Also we need to know what are the shigellae species/serotype that are prevalent in a particular community.

3. Rationale: Shigellosis is increasingly recognised as a major cause of diarrhoeal disease in Bangladesh, for its high morbidity and mortality. This impression is largely based on hospital-based data. Little community-based data is available which is urgently needed to assess the magnitude of the problem.

At present, the only strategies that could prevent shigellae infection are improved watery supply and sanitation, which require large capital inputs and is unlikely to be available in

most developing countries in immediate future. Interim strategies, such as to modify the personal behaviors and cultural practices, will be required to cut down morbidities and mortalities. Development of these strategies require data clarifying risk factors. For the development of Shigellae vaccine, we need to know which species and serotype of Shigellae are prevalent in our propulation, which sub-groups of the population are most vulnerable to Shigellae infection and the degree and duration of protection offered by clinical Shigellosis. The proposed study will generate data in all these important areas.

B. SPECIFIC AIMS

1. We will attempt to identify all Shigellae diarrhoea/dysentry episode in the study population. The aim is to describe and determine the magnitude to the problem.

2. We will attempt to relate several hypothetical risk factors with the occurrence and severity of shigella episodes.

3. We will attempt to identify the factors that determine the duration of shigellae episodes.

4. We will determine the degree and duration of protection that a clinical shigellae episode offers from suibsequent attacks.

C. METHODS AND PROCEDURE

1. Location:- The proposed study will be carried out at Teknaf, a rural area of Bangladesh, where the International Centre for Diarrhoeal Disease Research (ICDDR,B), Bangladesh has been maintaining a field research project since 1974. Teknaf is hyperendemic for Shigellosis with frequent epidemic outbreaks. It is a narrow peninsula, located at the south-eastern most tip of Bangladesh. The climate is sub-tropical with three distinct seasons : monsoon, cold-dry and hot-dry . Due to the various typographical, climate and other socio-cultural reason including crowding and rapid transition of population accross the international border, Teknaf still remains a hyper-endemic area for different diarrhoeal diseases, particularly shigellae.

Current ICDDR,B activities in Teknaf area include a diarrhoea treatemnt Centre which caters treatment to approximately over 5,000 patients a year and a demographic surveillance system covering 46,000 population.

2. Study subject:- In the beginning of the study = 400 children will be selected from several adjacent villages. These children will be between 0-48 months of age. The detailed sample size calculation has been shown in Annex-1.

3. Study Procedure:

a. Disease Surveillance

A field worker will visit each child every other day to

inquire about illness on that day and the preceding day. At each visit information on study children will include presence of diarrhoea/dysentery in the previous 24 hours, vomiting, fever, skin rash, nasal discharge, cough, draining ears and anorexia. The form to be used to record this is indicated as Appendix II.

Persons with diarrhoea for more than 14 days will be taken to Teknaf treatment centre for a more complete evaluation including repeat rectal swab culture, stool examination for parasite etc. and for appropriate treatment.

b. Medical Services: The field worker will provide simple treatment when appropriate. The treatment will consist of ORS for diarrhoea, paracetamol, scabies lotion, vitamins (for vitamin deficiency), eye ointment, topical anti-fungal and antibiotic ointments etc. children with clinical dysentery and positive culture for shigellae will receive appropriate antibiotic in conventional doses. All persistent diarrhoea cases and severely ill patient will be referred to Teknaf Treatment Centre for further evaluation and management.

c. Rectal Swab Culture: When a study child has diarrhoea, rectal swab will be collected and placed in Buffered Glycerol Saline (BGS). Swabs will also be obtained from all study children once a month regardless of illness. All swabs will be taken to Teknaf Centre on the day

collection.

d. Processing of rectal swabs: All swabs will be immediately plated on SS and Maconkey's agar and the plates incubated for 18-24 hours. The plates will be examined for shigella and salmonella. Shigella will be grouped serologically using the slide agglutination test with antisera (36). Sensitivity will be done using the method of Bauer et al (37).

e. Blood Specimen: At the time of admission to the study and at subsequent 3 monthly intervals a fingertip blood specimen will be obtained from all study children. A Natelson microblood collection tube (resulting in approximately 100 l of plasma) will be used. Plasma will be separated at Teknaf and frozen. It will subsequently be transported to the Dhaka laboratory for estimating vitamin A levels. Plasma vitamin A levels in the blood samples will be estimated by high pressure liquid chromotography (HPLC) method (38,39).

f. Base-line Information: This will include demographic features and socio-economic information.

Demographic features will include age and gender of all children in the family, child spacing, number of living siblings, earlier death of an under 5 year old child, age and pariety of the mother's current marital status, mother's presence, family size and religion.

Information regarding socio-economic status will comprise education of mother and head of household, household crowding (expressed as number of persons per sleeping room), family income, ownership of house and land, type of house construction, possession of luxury items, and latrine type.

g. Dietary Studies: To evaluate the role of foods and feeding patterns we will initiate a monthly survey and types of foods and food preparation taken by all children. In addition, dietary information and information about therapies will be collected during all episodes of diarrhoea within first 3 days of illness. Dietary history will include the breast feeding status of all children under 3 years of age e.g. breast milk only, breast milk plus water, breast milk plus foods or only foods. If the child takes food only, then information will be obtained regarding the age at which breast milk was stopped. Weaning practices of all children under 12 months of age will also be noted. The particular practice that will be looked at is the age at which water and other foods were introduced. Early and late weaning will be defined as introduction of complementary foods to exclusively breast-fed infants before 4 months (i.e. 0-3 months) and after 6 months (i.e. 7 months and over) of age, respectively (44). Feeding practices during the acute episodes of diarrhoea in the under 5 children will also be noted. Information will be collected regarding the change in the

breast-feeding pattern or in other foods after the onset of the illness. Intake of vitamin A rich foods, and the use of potash alum in drining water will also be noted.

h. Observations: Each study family will be subjected to prolonged observation once every 2 months. The observations to be noted are water supply and storage of the family, food handling practices of the family, and personal and domestic hygiene.

The source from which the family fetches its drinking and cooking water will be observed. It will be noted whether there is opportunity of drainage from latriness into any of the water sources. It will also be observed whether the drinking and cooking water are stored in narrow or wide necked containers, whether they are covered or not, whether stored inside or outside the house, and whether dipping of hands occurs while using the stored water.

A female Senior Health Assistant will reach the assigned household in the morning and she will look for the presence of any stored child's food and ask how long ago it was cooked. She will observe whether it is stored in closed or an open container. She will note whether the food taken by the child is specially cooked for the child or part of the adult diet. She will also note whether it is served cold or hot.

Perosnnel hygiene of the child, mother, or other persons

who attend the child will be observed. Handwashing practices (use of soap, ash, soil, water or nothing) of the mother before preparing food, feeding child, defaecating, and after washing anal region of child and touching stool will be observed. If the child self-feeds then the handwashing practices of the child before eating and after defaecating will be noted. Disposal of faeces of children will be observed. When a crawling child defaecates then the time elapsing before it is cleaned will be noted. For an ambulatory child, the site of defaecation will be noted (inside or outside the compound). Whether the children place garbage or waste products inside their mouths will be observed.

The presence of exposed human faeces in proximity to the latrines will be observed. The presence of domestic animals (indicator of flies) or heaped garbage in the compound will be recorded.

i) Anthropometrics: The weight will be taken by 25 kg salter scales (to the nearest 0.05 kg). Length boards will be used to take the length of under 2 year olds, and height sticks will be used to take the height of the over 2 year olds (to the nearest 0.1 cm). The children will be classified using weight for age, weight for height, and height for age compared to the NCHS standard (40). Mid-upper-arm circumferences will also be recorded.

Definitions: A) Definition of symptomatic shigellosis- A

child having clinical diarrhoea/dysentery and a positive culture for shigella (41). B) Definition of persistent Diarrhoea - Diarrhoea lasting for more than 2 weeks will be defined as persistent diarrhoea (42, 43); C) Definition of episode of diarrhoea: An illness with at least with 3 non-bloody loose motions or 1 bloody loose motion in 24 hours period. The end of the episode is the last day of diarrhoea followed by 3 consecutive diarrhoea-free days.

Analysis Plan: Data from the prospective surveillance will be used to calculate the proportion of diarrhoeal episodes that were due to shigellosis and the incidence of shigellae diarrheoa. These proportion and rates will be calculated by age group and other potential risk factors, such as nutritional and breast-feeding status of the child.

The monthly anthropometric data will be compared with NCHS reference population and the children will be classified by weight for age, length for age, and weight for lenght. Then the rates of all diarrhoea and shigellae diarrrhoea will be calculated for various anthropometric classification systems. We will also examine the probability of experiencing shigellae diarrhoea in the study children according to weight gain/loss (growth velocity) in the four weeks prior to the observation period. Changes in weight over a four weeks period will be presented according to absolute weight change (kilograms), weight change as a percentage of initial body weight, and percent change of weight for height between two measurements. The probability of persistent diarrheoa will be estimated by the number of

episodes experienced by the respective children in the four weeks period of observation following the second weight measurement.

We will identify several different feeding categories of interest in the study children and then calculate the rates of shigellae diarrhoea by these categories. In this analysis we will control for factor like age, and child's nutritional status.

Similar analysis will be performed for other potential risk factors, such as socio-economic status, breast-feeding status and personal and household hygiene.

After this two-way statistical evaluations of individual variables, we will perform a multifactorial analysis controlling simultaneously for all potentially important individual variables, with multiple regression analysis.

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Shigella Cohort Study

Sample size calculation

Assumed that the incidence of shigellosis in the study children (<5 yrs) will be 0.8 episode/child/year. (At Matlab it was 0.5 episode/child/year).

For nutritional cohort:

Assumed that 70% of the study children are malnourished and risk of aquiring shigellosis is twice (RR=2) in malnourished children.

Based on the above assumption, the expected incidence of shigellosis are:

Well nourished children = 0.47/child/year = m

Malnourished children = 0.94/child/year = m

Given these above incidence rates, the proportion of children who will develop shigellosis over the study year are : (assuming poison distribution)

Well nourished = P = $(1 - e^{\quad}) = .375$

Malnourished = P = .609

If we want to detect the above difference with an assumed type I error of .05 and type II error of 0.1, then we will need n children in each category.

Where X =

$$= \frac{(1.96 + 1.28)}{(.234)} \frac{(2 \times .492 \times .508)}{}$$

$$= 96$$

Correction for unequal exposed and non-exposed groups
(= Ratio of malnourished and well-nourished 70/30 = 2.33

Correct Sample size

$$N' = \frac{(C+1)n}{2C}$$

$$= \frac{(2.33+1)(96)}{2 \times 2.33} = 69$$

$$\text{Total under 5 needed} = \frac{69}{0.3} = 230$$

Sample size required for other potential risk factors

Possible risk factor		Prevalence	RR	Incidence/ Child/ Year	Proportion who will get shigella	Total <5 required
1. Nutritional Status	Well nourished	30%	2	.47	.375	230
	Malnourished	70%		.91	.609	
2. Vitamin A Status	Poor	10%	3	2.0	.865	184
	Adequate	90%		.67	.488	
3. Personal Hygiene	Poor	40%	2	1.15	.68	175
		60%			.43	
4. Water Storage	Poor	20%	2	1.34	.738	250
	Adequate	80%		.67	.488	
5. Water Supply	Poor	80%	2	.888	.588	310
	Adequate	20%		.444	.358	
6. Breast-feeding (3 yrs old)	No	50%	2	1.066	.655	180
	Yes	50%		.533	.413	
7. Weaning Practice	Poor	60%	2	1.0	.632	194
	Adequate	40%		.5	.394	

SUMMARY SHEET OF BUDGET ESTIMATE FOR SHIGELLA COHORT STUDY AT TEKNAF

24 months

		Amount in US$		
		1st year	2nd year	Total
1.	PERSONNEL SERVICES	66,057	72,664	138,721
2.	TRAVEL AND PER DIEM	3,435	3,779	7,214
3.	OTHER CONTRACTUAL SERVICES	500	500	1,000
4.	INTER-DEPARTMENTAL SERVICES	20,080	21,848	21,928
	GRAND TOTAL :	105,698	115,978	221,676

munpro

Outline of proposed research project

Section I: Research Protocol

1.	Title	:	ICDDR,B Surveillance Program, Teknaf Treatment Centres.
2.	Principal Investigator	:	Dr. M.H. Munshi
	Co-Investigator	:	Dr. M.A. Islam
3.	Starting date	:	Jan-01, 1987
4.	Completion date	:	To be continued as long as the Centre requires.
5.	Total direct cost	:	US$ 19,960

Approved by :

Associate Director
Laboratory Sciences Division

Signature:

Date:

6. Abstract Summary

Teknaf is an endemic area for Shigellosis and other diarrhoeal diseases. Over 5,000 patients are being treated annually at the ICDDR,B Treatment Centre in Teknaf. The surveillance program aims to evaluate the various clinical, epidemiological and microbiological data collected from all the patients attending the ICDDR,B Treatment Centre in Teknaf. This will be used to determine the spectrum of diarrhoeal diseases in Teknaf which possesses distinct socio-demographic-climatic characteristics in respect to other parts of rural Bangladesh.

The surveillance program will be the routine activity of the ICDDR,B Treatment Centre in Teknaf. Regular and necessary treatments will be provided to all patients by the usual clinical staff in the Treatment Centre. A questionnaire will be used in the Treatment Centre to obtain necessary information and a fresh sample of stool / RS will be collected from each patient for investigations. The patients/attending guardians will be interviewed and the patients will be examined by the usual clinical staff in the Treatment Centre. The Surveillance Program will help us to monitor the spectrum of diarrhoeal diseases in Teknaf and to generate new ideas for further research into the control of diarrhoeal diseases, particularly shigellosis.

7. Reviews:

a) Ethical Review Committee:

b) Research Review Committee: _____

c) Director: _____

Section II: Research Plan

A. INTRODUCTION

1. Objective:

Teknaf, during the last 12 years, has been found to be an endemic area for shigellosis with frequent epidemic outbreaks. During the last few years, Teknaf also experienced periodic Cholera epidemics. S.dysenteriae type 1 strains isolated in Teknaf have become resistant to commonly used antibiotics including nalidixic acid. During 1988 over 5,000 patients attended in the ICDDR,B Treatment Centre in Teknaf, and attendance (7.5 p) is increasing. The objective of this Surveillance Program is to evaluate detailed clinical, epidemiological and microbiological data from the patients attending the ICDDR,B Treatment Centre in Teknaf. The surveillance data will be analysed on an ongoing basis.

01. To permit early recognition of seasonal or localised diarrhoeal outbreaks in the Teknaf area.
02. To determine the aetiologic agents of diarrhoea in Teknaf.
03. To study the changing trend of Shigella isolations and their antibacterial sensitivity in the Teknaf area.
04. To identify evidence of outbreak of MARVe in Teknaf.
05. To generate new ideas for further research appropriate for controlling diarrhoeal diseases, particularly Shigellosis.

2. Background

Diarrhoeal diseases are the major public health problem in the developing world. Diarrhoea is the leading cause of death in young children and constitutes an important contributing factor in malnutrition. Diarrhoea is recognised as one of the most important cause of morbidity and mortality in Bangladesh and similar developing countries (LC Chen, et al,1977; WJ Van Zijil, et al, 1966; WH Baker, et al,1975; JA Walsh, et al,1979; RE Black, et al, 1980, LC Chen, et al,1980). Shigellosis is a serious disease in childhood, particularly for children who are malnourished. The problem of increasing resistance to the drugs used to treat shigellosis means that shigellosis is a growing problem in Bangladesh and in the other parts of South Asia (ICDDR,B Annual Report, 1986,pp-25).

Teknaf is an endemic area for shigellosis with frequent epidemic outbreaks. The study of the transmission of shigellosis in Teknaf can considerably expand the understanding of the epidemiology of shigellosis.

The Teknaf Upazila is situated at the southeastern tip of Bangladesh in the Cox's Bazar district. It is a narrow peninsula. The eastern side is bounded by the Naf river bordering Burma and the western side is circumscribed by the Bay of Bengal. The Upazila is 55 KM long and 6 KM wide. Almost two-thirds of the Upazila are hilly areas, constituting a part of the Reju-Teknaf range of reserved forest where human habitation is not permitted. Human habitation is limited to the western bank of the Naf, the beach area on the western side, and the southern plain.

A motorable road, about 85KM long, links Teknaf and the district headquarter of Cox's Bazar. The communication within the Upazila is mainly on foot by dirt roads. The water transport in the Naf river and motor transport along the beach is not properly developed, and may be used only during the winter season.

The climate of Teknaf is sub-tropical with three distinct seasons: monsoon, cool-dry and hot-dry. Monsoon usually starts in June and continues until September. Most of the 510 cm of average annual rainfall occurs during this season. It often rains several times daily with heavy showers, and it often rains continuously for days. Due to the very quick natural drainage of rain water to the Bay of Bengal, the people of Teknaf are not inundated with flood-water as are the people of the deltaic and flooded regions of Bangladesh. Then follows the cool-dry season, which is very pleasant and extends until February. The hot-dry season begins in March and ends with the beginning of monsoon.

As there is a rocky layer underground, shallow tube-wells (hand pumps) cannot be installed in most of the habitable regions of Teknaf. As a result, the people are dependent on the polluted surface water from the dug-wells for their drinking and domestic uses. The usual water sources are ditches and ring-wells. Most of the shallow water sources run dry and water shortages occur during the hot-dry season.

Almost all the people in Teknaf are Bangladeshi Muslims with conservative outlooks. There are a negligible number of tribal

people in Teknaf. About ten percent of the population is literate. The principal occupations of the people are cultivation and fishing.

Rice grows in Teknaf only in monsoon, but plenty of betel leaves and betel nuts grow there. Large quantities of seafishes are caught in the Naf river and the Bay of Bengal. Consumption of good amounts of fish results in good nutritional status and absence of vitamin A deficiency in the community, but nutritional deficiencies in children have been observed in the pre-harvest period.

Crowding is relatively common in Teknaf. A few years ago, almost all the houses had earthen floors, bamboo walls and roofs made of leaves and straw. But very recently, due to the huge amount of foreign remittances from the Arab countries and the yields of border-tradings, Teknaf area has experienced a very rapid socio-economic change, resulting in the construction of pucca dwelling houses. Unfortunately, the literacy rate remains the same. Though the development process has already been initiated in Teknaf, it will not be possible to develop public health facilities in the near future. Due to various topographical, climatic and other socio-cultural reasons, including crowding and rapid transition of population across the international border, Teknaf still remains a hyper-endemic area for diarrhoeal diseases. Almost every year, at the beginning of monsoon, epidemic outbreaks are sure to occur.

ICDDR,B (former CRL) activities in Teknaf area in the form of a diarrhoeal disease treatment and surveillance program were instituted in latter part of 1974 after a severe outbreak of dysentery caused by multiresistant Shigella dysenteriae type 1 (MM Rahaman, et al, 1975). A census was taken in December,1974 and January,1975 of Teknaf Upazila. Demographic and diarrhoeal surveillance was initiated in 1976 with a population of about 46,000 in 4 Union Parishad areas.

The diarrhoea treatment centre provided free services to the community for diarrhoeal diseases, was staffed by a physician, a nurse and other staff. The treatment centre was backed up by a field laboratory with the facilities of stool microscopy and bacteriological cultures for common enteric diseases. The field laboratory was equipped with innovative technologies such as kerosene-run refrigerator, kerosine-run incubator (egg hatcher), pressure cookers and demineralizer.

The beach area was covered by a chain of community-based ORS distribution centres. In 1980, the Water and Sanitation Intervention Study was undertaken in the community and the study was completed in 1983. Regular diarrhoea surveillance was discontinued in 1981. A second demographic census was taken in 1982. A new village was included and a new demographic surveillance at monthly interval was initiated in 1983 under the DSS-Teknaf protocol, in a population of about 61,000. Since the starting of ICDDR,B (former CRL) activities in Teknaf, a number of scientific publications have been made using the information

generated through the surveillance and treatment centre programmes.

The demographic characteristic of Teknaf are quite remarkable, with a very high Crude Birth Rate and a high marital separation rate. The CBR in Teknaf is the highest in Bangladesh. The IMR in Teknaf has been recorded in 1983 as 153.8 (M. Rahaman et al, 1983 ICDDR,B Scientific Report # 66, pp-4). One out of five deaths in children age 1-4 yrs in 1977 was caused by diarrhoeal illness (M. Rahaman et al, 1979 ICDDR,B Working Paper # 13, 1979, pp-24; and for the years 1982-1985, 23% of deaths in children between 1 and 59 months of age were attributed to diarrhoea and dysentery (ICDDR,B Annual Report, 1986, pp-37).

Since the inception of ICDDR,B activities, Teknaf has been found to be endemic for shigellosis, the predominant strain is S. flexneri. The proportion of patients attending treatment centre with loose/watery diarrhoea was found to be less than 20 % during the years 1976 to 1980, but the proportion has increased to 33 % in 1986. During 1986, 201 Vibrio Cholerae isolates were made in the field laboratory.

During 1986, there were simultaneous epidemics of cholera and shigellosis due to S. dysenteriae type I. The strains of S. dysenteriae I isolated were resistant to most of the commonly used antibiotics. Nalidixic acid was introduced in the middle of 1986, but resistance to nalidixic acid was detected and the percentage of the resistant cases increased over time. By the end of 1986, nalidixic acid became virtually useless for the

treatment of shigellosis caused by S. dysenteriae 1 in Teknaf. Previously, resistance to nalidixic acid was thought not to be associated with a transferable plasmid; however, in Teknaf, resistance to nalidixic acid appears to be mediated by a 20 megadalton plasmid (MH Munshi et al, 1987, in press). This is particularly worrisome because nalidixic acid was the drug which had been reserved to treat 'resistant' strains of shigellosis. Alternative antibiotics are few, and the nalidixic acid resistant strains readily developed resistance to Pivmecillinum and ciprofloxacin in the laboratory (MH Munshi et al, 1987, in press). As we have begun using Pivmecillinum as the only currently available antibiotic in Bangladesh to treat patients infected with resistant S. dysenteriae type 1 strains, the monitoring for the resistance to this drug in the community is highly imperative.

During the period of 1978 to 1982 in Teknaf laboratory, only 12 strains of Vibrio cholerae were tested for antibiotic sensitivity. All the strains were sensitive to tetracycline, and all were resistant to ampicillin. After 1982, no Vibrio strain was tested. The appearance of Multiple Antibiotic Resistant Vibrio cholerae (MARVc) in Bangladesh (MU Khan, et al, 1986; MI Huq, et al; RI Glass, et al, 1980) and increasing numbers of isolations of Vibrio in Teknaf emphasize the need for further studies in Teknaf, particularly monitoring for MARVc.

Besides Shigella and Vibrios, ICDDR,B studies indicated that Enterotoxigenic Escherichia coli (EREC) and rotavirus are

important aetiologic agents of diarrhoeal disease in rural Bangladesh (RW Ryder, et al, 1976; RE Black, et al, 1980). From the samples collected during the Water and Sanitation Intervention Study in Teknaf, 8.5% of MacConkey's yielded a positive diagnosis of E.coli containing enterotoxins and 3% of the PBS samples were positive for rotaviruses (MM Rahaman et al, report of the WSI study in Teknaf, ICDDR,B June 1985). So far, no effort has been made to isolate Campylobacter as an aetiologic agent for diarrhoeal disease in Teknaf, although ICDDR,B studies suggested that Campylobacter infection is common in Bangladeshi children (MJ Blaser et al, 1980).

Considering the socio-cultural, topographical, climatic and demographic characteristics of Teknaf, the determination of E. coli, rotaviruses and Campylobacter as aetiologic agents of diarrhoeal disease can certainly widen the understanding of the epidemiology of diarrhoeal diseases in similar rural settings.

3. Rationale

Similar surveillance systems are continuining in ICDDR,B Dhaka and Matlab Hospitals. There is no question about the importance of surveillance systems in order to monitor and better characterize the enteric pathogens in both rural and urban settings, and to monitor the changes in morbidity pattern to forecast epidemic outbreaks.

Over 80% of the patients attending the Treatment Centre at ICDDR,B Teknaf are residents of the Teknaf Demographic Surveillance area with DSS identification numbers, and they can

be traced to the household levels. A Shigella epidemiological study is anticipated in Teknaf. But before that we would like a continued utilization of the facilities of ICDDR,B in Teknaf with this surveillance proposal to collect baseline information by monitoring the changing pattern and antibiotic sensitivity of the aetiologic agents of diarrhoeal diseases.

B. Specific Aims

01. To establish ongoing surveillance of all patients attending the ICDDR,B Treatment Centre in Teknaf, irrespective of residence.

02. To determine the aetiologic agents of diarrhoeal diseases for patients attending the ICDDR,B Treatment Centres in Teknaf according to age/sex/clinical picture/seasons.

03. To collect information pertinent to the epidemiology of diarrhoeal disease, eg. food history before the onset of diarrhoeal disease, water uses, use of latrine, nutritional status, practices of hand washing before taking food and after defaecation, associated illness, use of ORS/antibiotics, etc.

04. To generate new ideas for further research appropriate to controlling diarrhoeal diseases, particularly shigellosis.

C. Methods and Procedures

All patients with diarrhoeal disease attending the in ICDDR,B's Treatment Centres in Teknaf will be included in this surveillance

program. About 5,000 patients attend the Treatment Centres annually, but recently an increasing attendance has been observed. It has been a regular practice for the last 12 years that whenever a patient attends our Treatment Centre, he is interviewed and examined by a clinical staff and asked to provide a fresh sample of stool for examination. The patiemts from DSS area are also required to bring their DSS card for identification. The community has accepted this procedure, and as the same procedure will be followed in this surveillance program, no written consent will be required. Verbal consent will be obtained from the patients/attending guardians. After completion of history taking and clinical examination, using the set questionnaire, the patient will be asked to provide a sample of fresh stool in a clean container (provided by the treatment centre). After collection and proper labelling, the sample will be sent to the laboratory for microscopic examination (both saline and iodine preparation) and microbiological culturing for enteric pathogens. If fresh stool sample cannot be collected, R/S sample will be collected for culture. The R/S sample will be streaked in the Treatment Centre on TEA/SS/McC/TTGA plates and the plates, after proper labelling with identification numbers, will be sent to the laboratory for incubation. Stool microscopy will be done later during followup visits.

In the laboratory, culture specimens will be processed for pathogenic Vibrios, Shigella and Salmonella using standard laboratory methods. From each culture, 10 lactose positive colonies with typical E. coli morphology will be picked from

MacConkey's agar plates and preserved on nutrient agar slants. Those will be sent to Dhaka Laboratory periodically for LT & ST testing. A 10% systematic sample of stool/RS from patients will be inoculated on to a Campy-BAP medium for isolation of Campylobacter. Those plates will be incubated in candle jars at o 40 C for 48 hours. The identification of organisms as Campylobacter jejuni will be done according to standard criteria (MJ Blaser, 1980). A second sample of stool/RS will be collected from each patient under 5 years of age, and will be refrigerated in PBS tubes. Those will be sent to Dhaka Laboratory in ice flasks for further testing for rotaviruses.

Sensitivity to antibiotics (ampicillin, tetracycline, gentamicin, nalidixic acid, pivmecillinum and TMP-SXT) will be performed by standard disc diffusion method (AW Bauer et al, 1966) on bacterial isolates. 20% of S. dysenteriae 1; 10% of S. flexneri, 10% of other Shigella, 10% of Vibrios and 10% of Campylobacter jejuni will be tested.

For all patients, physical examinations including vital signs, admission weight, state of hydration and signs of nutritional deficiencies, will be done in the treatment centre by the attending Physician/clinical staff. When available, appropriate follow-up entries will be made in the forms. The results of the bacteriological tests will be incorporated in the questionnaire forms. The data collected will be preserved properly. The questionnaire forms will be precoded and completed forms will be sent periodically to Dhaka for computerization. Monthly data analysis will be performed in Teknaf by hand tabulation by

tallying the patient data at the end of each month by age/sex/residence/clinical presntation/enteric pathogens.

D. **Significance**

This surveillance activity will generate a wide range of data on patients attending ICDDR,B Treatment Centre in Teknaf. This surveillance program will monitor the changing pattern of isolation of aetiologic agents causing diarrhoeal diseases in Teknaf and their susceptibility to antibacterial drugs.

After establishment of this surveillance activity, whenever appropriate, this can be linked to other epidemiological studies in Teknaf, or this can serve as a basic data collection unit.

E. **Facilities Required**

No additional space for office/clinic/laboratory is required. No additional logistic support is required. The modified battery/electric-run incubator supplied by the Dhaka Microbiology Laboratory is to be renovated for *Campylobacter* culture. Laboratory personnel will need inhouse training for isolation of *Campylobacter* and for the preparation of Campy-BAP medium. ST/LT determination for *E. coli* and assays for rotavirus will be performed in Dhaka laboratory. Help from Animal Resources and reagents for Elisa will be required. Culture media, drugs, stationery and computer tapes will be needed.

F. **Collaborative Arrangement**

None other than inhouse arrangement, will be required.

SECTION III

A. DETAILED BUDGET

(ICDDR,B Surveillance Programme, Teknaf Treatment Centres)

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1. Local Salary, A/C No. 3100

Job Title	Level	Man month	Rate	Amount in US$
Sr. Lab. Tech	GS-4	12	170	2,040
Lab. Tech	GS-3	12	174	2,088
Sr. Lab. Attdt.	GS-2	12	161	1,932
Cleaner	GS-1	12	145	1,740
			Sub Total	7,800

2. Local Consultant
A/C No. 3300

R.O./Sr. Microbiologist;

Dhaka - Teknaf - Dhaka Trip:

Perdiem		168
Travel Cost		172
	Sub Total	340

3. Local Travel
A/C No. 3500

Asstt. Scientist, Medical Officer, Lab. Tech;

Teknaf - Dhaka - Teknaf Trip;

Perdiem		450
Air Ticket		200
Ground Expenses		70
	Sub Total	720

4. **Supplies & Materials**
A/C No. 3700

3702		850
3704		500
3705		1,000
3706		150
3707		600
3708		150
3709		150
3710		100
3712		3,000
3713		1,000
	Sub Total	7,500

5. **Other Cost**
A/C No. 4000

3800		1,500
4300		500
	Sub Total	2,000

6. **Inter Deptl. Services**
A/C No. 4800

4801		750
4808		750
4814		100
	Sub Total	1,600

Total direct operating cost for 1987 US$ 19,960

SECTION III

B. BUDGET SUMMARY
(ICDDR,B Surveillance Programme, Teknaf Treatment Centres)

BUDGET SUMMARY

Expense category

A./C No.	Description	1987 (IN US$)
3100	Local salaries	7,700
3300	Consultant	-
3500	Travel Local	550
3700	Supplies & Materials	9,956
3800	Other costs	575
4800	Inter. Departmental services	1,125
	Total direct operating costs	19,906

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VERBAL CONSENT STATEMENT

(ICDDR,B Surveillance Programme, Teknaf Treatment Centres)

As you know, Teknaf is a hyper endemic area for diarrhoeal diseases, and ICDDR,B is providing you with free investigations and treatment for your diarrhoeal diseases through the treatment centres in Teknaf for last 12 years. It has been a regular practice in ICDDR,B treatment centres that when a patient attends the treatment centre, he is interviewed and examined by a clinical staff and he is also asked to provide a fresh stool sample/rectal swab sample for necessary investigation. Also the patients from the DSS area are required to bring their DSS card for identification.

ICDDR,B is continuing a surveillance programme for determination of the changing trend of aetiologic agents and their antibacterial susceptibility in Teknaf area. If you participate in this surveillance programme, you will be provided with usual treatment for your diarrhoeal diseases; we will examine the patient as usually and will need a fresh stool sample/rectal swab sample as we have been doing last 12 years. All the answers you give and all the investigation report will be treated as confidential. If you have any additional question about this surveillance programme, we will try to answer them. We request your participation in this programme by giving your verbal consent. You may, at any time, refuse to participate at your free will; even in that case, you will get usual services from ICDDR,B Teknaf.

munshi

Outline of proposed research project

Section I: Research Protocol

1. Title: A clinical trial to compare the effectiveness of pivmecillinam and combination of pivmecillinam-cephalexin in the treatment of childhood shigellosis in Teknaf.

2. Principal Investigator: Dr. M.H. Munshi

   Co-Investigator: Dr. M.A. Islam

3. Starting date: January 01, 1988

4. Completion date: February 1989

5. Total direct cost: US$ 23401

Approved by: Associate Director
Community Medicine Division

Signature: _____

Date: _____

6. Abstract Summary:

This study proposes to reduce severe morbidity and mortality in dysentery caused by multiple antibiotic resistant Shigella organisms by determining effectiveness of pivmecillinam and its synergistic combination with Cephelxin in children. 225 patients fulfilling prefixed enrollment criteria will be studied in two treatment groups and one placebo control group. Pivmecillinam and cephlosporin derivative have few side effects. This study will

benefit cases by reducing suffering and will benefit society by finding effective antibiotic treatment for shigellosis resistant to all conventional antibiotics including nalidixic acid, and by reducing spread of epidemic infections due to faecal shedding of pathogens. The long term effect of this study will be to greatly decrease fatal outcomes of shigellosis in children. These benefits to families and society outweigh the mild risks and transient psychological inconvenience of the patients under study.

7. Reviews:

a) Ethical Review Committee: _____

b) Research Review Committee: _____

c) Director: _____

Section II: Research Plan

A. Study Background:

Shigellosis is gaining importance as a major diarrhoeal disease in developing countries. Its importance lies in the fact that it causes severe morbidity in all ages with mortality specially in young children. Though shigellosis is a self-limited disease, it has been shown that effective antibiotic therapy reduces the clinical symptoms (Haltalin KC et al, 1967; Tong MJ et al, 1970; Haltalin KC et al, 1973). Appropriate antimicrobial therapy in shigellosis ameliorates the clinical manifestations and shortens the course of the illness. It may also reduce of spread of infections by rapidly eradicating faecal shedding of pathogens. It is expected that early recovery prevents fatal complications of shigellosis.

Shigellosis is hyperendemic in Teknaf, the southernmost tip of Bangladesh. Currently the predominant Shigella strain is S. dysenteriae 1, which is known to be more virulant than other Shigella strains. Diarrhoea Treatment Centre in Teknaf, a field research station of ICDDR,B, renders services to approximately 5,000 patients per year. Starting from May 1986, 'Multiple antibiotic resistant' S. dysenteriae I strains have been isolated which are resistant to nalidixic acid as well as to other conventional antibiotics used in the treatment of shigellosis (Munshi MH et al, 1987).

During the first six months of 1987, a total of 482 strains of S. dysenteriae I were isolated, out of which 397 (82%) were

resistant to nalidixic acid. All the strains tested against pivemecillinam were found to be sensitive. Extension of this multiple resistant strain of S. dysenteriae 1 is also reported elsewhere in Bangladesh (Bennish M, et al, 1984) as well as in other parts of the world (Frost JA, et al, 1981; Panhotra BR, et al. 1985; Paul SC, 1984).

Nalidixic acid was the drug reserved to treat resistant shigellosis. Presently, as no available antibiotic is effective, search for alternative antibiotic is vital and imperative. A possible alternative drug, pivmecillinam, has been shown to be effective in shigellosis in adult male patients (Kabir I et al, 1984). Studies by Neu have demonestrated that pivmecillinam shows synergy with ampicillin, amoxicillin, carbenicillin, cephalothin, cefazolin, cefoxitin and cefamandole (Neu HC, et al, 1976). This drug needs evaluation in children. The clinical/therapeutic potential of this antibiotic in shigellosis has not yet been fully explored. In vitro effectiveness of pivmecillinam against Shigella and Salmonella organism have been shown by a number of authors (Chau PY, et al, 1981; Marwan et al, 1981). Pivmecillinam is amidinopenicillin, a new type of penicillin, with bactericidal effect against Gram negative bacilli, shows synergistic antibacterial activity in combination with cephalosporins (Pharmaceutical Company Literature of Selexid, Leo, No. 91113270000 T.02). This study will also explore possible alternative combination therapy for shigellosis. Effective combination therapy is important, as strains resistant to nalidixic acid readily develop resistance to mecillinam and

ciprofloxacin in the laboratory (Munshi MH, et al, 1987), and in patients receiving pivmecillinam for shigellosis (Kabir I, et al, 1984).

B. Study Objectives:

1. To evaluate the effectiveness of pivmecillinam in children with Shigella infections.

2. To evaluate the effectiveness of pivmecillinam in combination with cephalosporins (Cephalexin) in shigellosis in children.

3. To compare the effectiveness of pivmecillinam alone to combination of cephalosporin and pivmecillinam in shigellosis.

4. To identify adverse reactions resulting from the combination of pivmecillinam and cephalexin.

C. Study Significance and Rationale:

Shigellosis is a major health hazard causing morbidity and mortality in developing countries. Patients with Shigella infection benefit if treated with appropriate antibiotics patients (Haltalin KC et al 1967, Haltalin KC, 1973). Bangladesh is experiencing epidemics in several areas of multiple antibiotic resistant Shigella dysenteriae type 1 (Bennish M et al, 1984). Epidemics may spread to other parts of the country. Increasisng

resistance to all the first line drug therapy as well as nalidixic acid, necessitate the search for effective alternative antibiotics. Pivmecillinam is found to be effective against Shigella in adult, but this drug needs evaluation in children. This study is intended to determine the effectiveness of pivmecillinam in children and the effectiveness of pivmecillinam in combination with a cephalosporin derivative (cephalexin) in a placebo controlled trial.

Ineffectiveness of all the available antibiotics and possible risks of Shigella complication outweighs the cost of the drugs. Furthermore, the cost of Pivemecillinam is expected to be reduced in near future when it will be marketed competitively.

The resistance of the S. dysenteriae 1 isolated in Teknaf to the first line of antibiotics, including nalidixic acid justifies this placebo-controlled trial, as whatever antibiotic other than pivemicillinam is used, in fact, will serve as placebo. In addition, the average nutritional status of children in Teknaf is quite high. The case fatality rate is low and most of the patients not attending ICDDR,B Treatment Centre will go without any effective medication. In the Treatment Centre, the placebo treated children will be on constant follow up by a physician. If any deterioration is detected during the study period, the patients will be withdrawn from the study and will be treated accordingly.

D. Study Design:

1. Patients who fulfill prefixed criteria will be enrolled in the study.

2. The number of patients will be 195. There will be 65 patients in each group. To ensure 195 patients after exclusion, it is estimated that a total of 225 patients will be enrolled into study.

3. Enrollment Criteria:

a) Males or females in the age group of 3 months to 10 years with more than 3 unformed stools in the preceding 24 hours.

b) History of bloody, mucoid diarrhoea for less than 72 hours.

c) Faecal leucocytes count >20 per HPF of microscopic examination.

d) History of abdominal pain and or tenesmus.

4. Exclusion Criteria:

a) Recent consumption of antibiotics (Pivmecillinam/ cephalosporin or others if the isolate is found to be sensitive in subsequent antibiotic sensitivity tests).

b) History ofpPenicillin hypersensivity.

c) Presence of Entamoeba hystolytica (trophozoites) or Giardia in stool M/E, not assiciated with the isolation of Shigella organism.

d) Patients with complications e.g pneumonia, sepsis, leukomoid reaction (WBC > 50,000), severe malnutrition (<60% of weight for age and/or A.C <116mm)., peritonitis/toxic megacolon (no bowel sound tenderness), HUS, etc.

5. The procedure and objectives of the study will be explained to the attendant/guardians before enrollment, and informed consent will be obtained from the closest relative attending the patient in the Treatment Centre.

6. Study patients will be allocated to one of the three groups. The first patients fulfilling enrollment criteria and willing to participate in the study by giving written consent, will be allocated to pPivmecillinam group. Similarly, subsequent second and third patients will be allocated to Pivmecillinam and cephalexin conbination group, and placebo group respectively.

7. When a patient is enrolled into the study and informed consent is obtained, a complete medical history will be taken, and complete physical examination will be performed by an investigating physician.

a) History of Diarrhoea

- Duration in days
- Frequency in 24 hours
- Character of stools
- Associated sign & symptoms (as fever, vomiting, abdominal pain, anorexia, nausea, rectal prolapse).

b. Physical examination

Thorough examination including pulse, respiration, temperature, state of hydration, abdominal distension, tenderness, bowel sounds, chest auscultation, liver & spleen palpation, ear examination, etc. Findings will be recorded in appropriate clinical forms.

8. The following laboratory investigations will be done before starting the therapy:

a) Stool: i) Routine and microscopic examination of a fresh sample, ii) Culture for Shigella, Salmonella and Vibrio.

b) Blood (F.B): i) Haemoglobin p.c, ii) Total leucocyte, and differential count.

c) Urine: Routine and microscopic examination.

d) Antibiogram of the Shigella strain isolated from stool sample by standard disc diffusion assay (Bauer AW, et al, 1966). Antibiotic discs will include ampicillin, trimethoprim-sulfamethoxazole, gentamicin, nalidixic acid, pivmecillinam and cephalexin.

9. The patients will be admitted to the Treatment Centre, and after correction of dehydration status (if required), therapy will be started as specified in the clinical forms in appropriate dosage, three times daily. The therapy will be continued for 5 days.

Chart for Dosage

Group	Drug Given	Total daily dose
1. Pivmecillinam	Pivmecillinam	40 mg/kg
2. Pivmecillinam & Cephalexin combination	Piv	20 mg/kg
	Cph	40 "

Dosages of pivemicillinam and cephalaxin combination have been determined by using the lowest range of recommended dosages for the individual drug.

10. Patients will be carefully monitored, during therapy, and will be examined for evidence of adverse effects e.g urticaria, maculopapular rash, genital or anal pruritus, anaphylaxis, altered consciousness, abdominal upset, jaundice, etc. which will be recorded in the clinical chart.

In the Treatment Centre, frequency of stool every 24 hours will be counted by putting a knot in a string of thread/rope by the patient or attendant each time a stool is passed. In young children, diaper will be used and counted. Vital signs will be recorded every 6 hours and pertinent physical findings will be recorded daily.

In the Treatment Centre, microscopic examination of a fresh stool sample will be performed on the 3rd and 6th day

of therapy. Stool culture will be repeated daily or until there is negative culture for 2 consecutive days. Antibiotic sensitivity tests (if culture is positive) and blood and urine analysis will be repeated as described above on the 3rd and 6th day after beginning therapy (i.e during and after therapy).

11. Therapy will be terminated and the patient will be withdrawn from study if:

a) no NLF colony is found in any plate after 24 hours.

b) no Shigella organism is isolated from stool in 48 hours.

c) marked clinical deterioration of patients, e.g development of complication (as described earlier). These patients will be treated accordingly.

d) isolation of Vibrio or Salmonella, not associated with Shigella.

e) if E. histolyticus (vegetative) or Giardia is found in repeat stool microscopic examination and no Shigella organism is isolated from the same stool sample.

12. No concomitant antimicrobial therapy will be given. Other medication (as paracetamol, antispasmodics) will be avoided. If used, they will be recorded properly in the clinical chart.

13. Improvement Criteria:

a) Formed stool or unformed stool <3 times in 24 hours.

b) Clearence of blood in faecal sample.

c) In febrile cases, returning of normal body temperature.

d) No episode of abdominal pain and tensmus.

e) Faecal leucocyte count <10 per HPF.

f) Reduction of numbers of bacterial colonies in each positive plate.

g) Stool culture negative.

14. Improvement grading: After completion of therapy, improvement criteria, as mentioned above, will be analysed individually and improvement grading will be assessed as follows:

* Marked improvement- marked reduction in the severity of all the signs or symptoms and eradication of causative organisms after the completion of therapy.

* Moderate improvement - reduction in the severity of some of the signs or symptoms with eradication of causative organisms after the completion of therapy.

* Failure - no or insufficient reduction of signs and symptoms with persistant positive culture after the completion of therapy.

* Indeterminate - for any reason no evaluation is possible/drop-out cases.

15. Follow up: Patient will be re-evaluated one week after completion of therapy.

Stool culture and sensitivity will be repeated to test for recurrence or re-infection (as distinguished by comparing the germs, species and antibiogram of the organisms cultured before and after therapy).

E. Data Processing and Analysis:

* Data sheetscontaining all information will be kept for all cases by the investigating physician (s).

* Patients allocated to the three groups will be analysed for comparability; and effectiveness of the trial drugs will be compared with placebo groups with respect to clinical and bacteriological responses.

* Statistical correlations will be examined by standard statistical tests.

F. Facilities required:

Current treatment Centre and laboratory facilities in Teknaf Treatment Centre will do well.

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Consent Form
Pivmecillinam Study 1988
ICDDR,B, Teknaf Station

Probably you know that at present Shigellosis is hyperendemic in Teknaf as well as some other parts of Bangladesh. Antibiotics those were previously effective against Shigellosis are gradually proving to be ineffective. In case of children it is more severe can even cause death. Undoubtedly situation will be more grave if no new effective drug can be found out. Pivmecillinam, a new penicillin derivative, is found to be effective against Shigellosis is adult. But this disease being more fatal in children, we are going to study the comparison of Pivmecillinam to Pivmecillinam - Cephalexin combination in children. ICDDR,B authority and the elite of society gave their consent in this study. You have to know the following points if you want to enroll your child in this study for the greater benefit of mankind.

1. Your child have to stay in the treatment centre for six days for the sake of study though patient may improve earlier, to see whether your child is completely cured or not reinfected. You have to report again with the patient 7(seven) days after discharge from hospital to make sure that the disease has been fully cured, when history will be taken as well as physical checking and stool examination of your child will be performed.

2. After admission all findings regarding the child's illness will be recorded.

3. On the day of admission a drop of finger blood will be taken for examination. At the same time stool and urine will be examined. These examinations will be done three times in all. During finger prick no other inconvenience will occur except slight pain.

4. From the day of admission stool will be examined daily and daily stool frequency and stool characteristics will be recorded.

5. During the period of stay in the treatment centre pulse rate, temperature and respiratory rate of the child will be recorded 4 times daily (6 hoursly). And at least once daily the patient will be examined by a physician.

6. During the period of study, you, in favour of your child, can withdraw the consent at any time, and this withdrawal will not affect the treatment of your child.

7. To participate or not in the study is entirely upon your free choice and non-participation in the study will also ensure good conventional treatment of your child.

8. All the information collected from you and your child will be confidential and any result of examination, if known to us, will be reported to you if you want.

If you are agreed to enroll your child in this study, please put your signature or left thumb impression below.

Signature of investigator:

Date: _____

Signature/left thumb impression of nearest relative

Date: _____

Relation with the patient:

Name of the patient

T.C. # _____

SECTION III

A. DETAILED BUDGET

(Pivmecillinam Study, Teknáf)

1. PERSONNEL SERVICES

Position	Pay Level	Rate/mm in US$	mm required	Amount in US$
Asstt. Scientist	NOC	943	4	3,772
Med. Officer	NOA	481	4	1,924
Sr. Staff Nurse	GS-5	220	3	660
Asstt. Staff Nurse	GS-4	206	3	618
Aid Nurse	GS-1	164	3	492
Cleaner	GS-1	170	3	510
R.O. Microbio.	GS-5	220	3	660
Sr. Lab. Tech.	GS-4	206	3	618
Lab. Tech.	GS-3	225	3	675
Sr. Lab. Attdt.	GS-2	200	3	600
			Sub Total	10,629

2. SUPPLIES & MATERIALS

Drugs & Hospital Supplies	1,200
Chemicals, Media and other lab. supplies	1,000
Antisera & Antibiotic Discs	800
Stationery & other supplies	400
	3,400

3.	EQUIPMENT	None.	
4.	PATIENTS HOSPITALIZATION	6,000	
5.	OUT-PATIENTS CARE	200	
6.	ICDDR,B TRANSPORT (TEKNAF)	800	
7.	TRAVEL AND TRANSPORTATION OF PERSONS		
	Teknaf - Dhaka - Teknaf Trips for Investigators:		
	Air Ticket		350
	Ground Expense		150
	Perdiem		252
	Sub Total		752
8.	TRANSPORTATION OF THINGS	200	
9.	RENT, COMMUNICATION & UTILITIES	None	
10.	PRINTING & REPRODUCTION		
	Printing of clinical & other forms		200
11.	OTHER CONTRACTUAL SERVICES		
	Computer charges		200
	Consultant (Air ticket & perdiem)		420
	Sub Total		620
12.	CONSTRUCTION, RENOVATION & ALTERATION	None	
13.	MISCELLANEUOUS		
	Data processing & analysis		600
	Grand Total		23,401

B. BUDGET SUMMARY

(Pivmecillinam Study, Teknaf)

Category	Amount in US$
1. Personnel Services	10,629
2. Supplies & Materials	3,400
3. Equipment	--
4. Patients Hospitalization	6,000
5. Out-patient care	200
6. ICDDR,B Transport	800
7. Travel of persons	752
8. Transportation of things	200
9. Rent, Communication & Utilities	--
10. Printing & reproduction	200
11. Contractual Services	620
12. Renovation	--
13. Miscellaneous	600
Total	23,401

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EXTERNAL SCIENTIFIC REVIEW 1988

1988 External Review - Selection of Programmes for Review and List of Reviewers

Logically, the Programmes to be reviewed in 1988 are the Clinical Sciences Division and the Laboratory Sciences and Epidemiology Division. However, both of these Programmes will have new Division Heads (only one has been appointed and will join towards the end of 1987) so a decision has to be made whether they should be reviewed now or in 1990. As you will see from the information provided below, the Training Programme has never been "officially" reviewed under the External Scientific Review system. Yet, we might be more in need of a consultant than of reviewers.

Previous External Scientific Reviews have been carried out as follows:

June 1981	Reviewers
Pathogenesis & Therapy W.G.) Host Defence W.G.) Disease Transmission W.G.) and supporting Branches)	Dr A.S. Muller Dr D. Mahalanabis Dr O. Ouchterlony
May/June 1982	
Population Programme (Community Services Research W.G.)	Dr Samuel Preston
Nutrition Programme	Dr Vinodini Reddy
Nutrition Programme (Suggestions for further development)	Dr E.F. Patricia Jelliffe Dr Derrick B. Jelliffe
August 1984	
Pathogenesis & Therapy W.G.	Dr D. Habte Dr G. Keusch
Nutrition Programme	Dr J. A. Kusin Dr P. Sukhatme Dr R.G. Whitehead

../2.

November 1986

	Reviewers
Population Sciences & Extension Division Community Medicine Division	Dr John Ross Dr Shanti Ghosh

The Council of Associate Directors has discussed the above and have suggested that the External Review be held in November, 1988 to overlap with the Board Meeting. The Council has made the following suggestions for reviewers:-

Laboratory Sciences Division

*Jack Craig
*Peter Echeverria
Mike Levine
Prof. Mashiur Rahman (IPGM&R)
Hilton Whittle (MRC, Gambia)

Clinical Sciences Division

*John Walker-Smith
*John Lindenbaum
Michael Gracey
Alan Walker

Prof. Habte was suggested as the Board Member to assist in the review.

* 1st two persons to be contacted.

../3.

Professor Rowley has suggested the following persons to review Immunology and Bacterial Genetics Department:-

Jan Holmgren

Martin Blaser

Sam Formal

5/BT/NOV.87

PERSONNEL & SLECTION COMMITTEE REPORT

Report of the Personnel & Selection Committee

The meeting was held at the Rama Gardens Hotel in Bangkok on 21, 22 and 23 November, 1987.

I. Recruitments

1. New Fixed-Term Staff (International Professional

(a) Senior Scientist (Head Laboratory Division)

This position was discussed simultaneously with (b) below as some candidates were seen to be eligible for consideration for both positions and keeping in mind the need that the persons in the two positions should work as a team.

It was agreed that the names of Dr John P. Heggers and Dr Syed M.H. Qadri should be submitted to the Board for further consideration and a decision.

(b) Head, Laboratory Services Department

The interviews for this position were held in three phases once in the United States and on two occasions in Dhaka. Out if six shortlisted candidates, two were interviewed in the USA and subsequently all of them in

Dhaka. In view of two candidates moved up for consideration as Head, Laboratory Sciences Division, Dr S.S. Kasatiya was found to be the best of the remaining candidates.

After discussion, it was agreed that Dr Shanti S.I. Kasatiya should be recommended to the Board for appointment to this position.

(c) Senior Scientist (Head, Community Medicine Division)

There was again a dearth of candidates for this position. Prof. Eeckels informed that one applicant, Dr Michael Dibley, was to have been interviewed in Dhaka last week, which could not be done. As he would be in Bangkok the next day, it was decided that Board Members should meet with him then and interview him. He had already been to the Centre on a consultancy and met with the staff there.

Dr Dibley was considered relatively young and without sufficient experience to be considered for a P6 position.

It was then agreed to (a) interview him for a lower position in the same Division;

(b) request Board Members to give suggestions of other persons who might be followed-up for recruitment.

(d) Scientist/Senior Scientist (Population Studies-DSS)

The minutes of the interview committee were discussed and it was agreed that Dr Rallapalli Sarma should be recommended to the Board for appointment to this position at P5, Step 10.

(e) Computer Information Systems Manager

The position of Technical Services Manager has been collapsed and merged with the Computer Information Systems Manager position. Thus, it is expected that the successful candidate will be competent in both areas. However, it was recognized that consultant assistance may be required and the Centre is presently trying to arrange an institutional linkage with a Canadian institute.

The minutes of the interview committee were discussed. The Committee agreed with the recommendation of the interview committee together with the inadequacies of the candidate. As the best of compromises, it was agreed that Mr A.H. Mostafa should be recommended to the full Board for appointment to this position as per proposal of the interview committee.

(f) Scientist (Operations Research - MCH-FP Extension Project)

This position was advertised in September 1987 and some applications have already been received.

(g) Scientist/Senior Scientist (Epidemiologist)

This position was advertised in August 1987 and applications received are presently under review. It was requested that the job description be revised, with the epidemiology duties being stressed, and forwarded to Trustees.

As a general rule it was recommended that job descriptions and advertisements should be circulated to all Trustees.

2. Seconded Staff Appointments

This paper was for the information of the Committee only. It was queried as to whether or not the cases of Drs Diana Silimperi and Gary Hlady have been resolved. It was advised that these persons are on non-reimbursable secondments.

It was requested that in future more information be given i.e. whether the persons are on reimbursable or non-reimbursable secondments, along with a paragraph on the work each person was doing in the Centre with the post description and curriculum vitae of that person.

3. Contract Renewals

Contract renewals in respect of the following were discussed:

(a) Mr Iqbal Ali

(b) Mrs Judith Chowdhury

(c) Prof. Roger Eeckels

Professor Eeckels supplemented the working paper with a brief presentation on (a) and (b) above.

It was agreed to (1) recommend to the Board the contract renewals as proposed by the Director; and

(2) more information should be provided to the Committee before seeking consideration of cases of this nature in future.

II. New International Positions

1. Scientist/Senior Scientist (Immunology) - P4/P6

This position is for a replacement for Dr Ivan Ciznar who leaves at the end of next year. Professor Eeckels said that he would like a Senior Scientist in the vacancy if possible. It was agreed that the position may be advertised.

2. Scientist (Clinical Pathology) - P4

This is a new international level position and would be a core position, with funding initially from the Shigella Project and later, hopefully, from protocols for which the successful applicant will find funding. It is a research cum service position, with emphasis on research.

The Committee recommended that the post of Research Pathologist be created and accepted Prof. Mathan's proposal to rewrite the job description with a 20% service commitment. The revised job description should be circulated to the Personnel Committee and the Chairman of the Board for approval.

III. Working Papers

1. Local Staff Salary Survey

Professor Eeckels explained that the Centre is obligated, by Ordinance, to have salaries and emoluments comparable to thos paid by the UN Organizations in Bangladesh. The UN salary rises are usually paid with retroactivity; the Centre has generally been following these increases, but with retroactivity for only the first one. If the Centre pays the last increase it will cost $1,660,000 in the 1988 budget. Three options were given for a portion of the salary rise to be approved by this meeting. However, it only a portion was given, the staff would expect to receive the remaining portion in the near future.

The three options were discussed. Professor Eeckels clarified that the present salary was 100% and in the event of a partial raise now, the residual payment would be made on the basis of the current salary. Dispelling concern with regard to the depletion of projected surplus, Professor Eeckels further explained that the projection of surplus was

always made without catering for such increase. It turned out that even after meeting such additional demand resource flow generated a higher surplus than projected. Presently however, the Centre includes a 15% salary increase across the Board in all projects each year.

It was agreed to recommend to the full Board that one third of the UN increase (ranging from 9% to 22%) be implemented as from 1 January, 1988 and that the Centre be requested to make efforts to adjust expenses and augment receipts so as to enable a surplus of $500,000 in 1988. Provision should be made to accommodate all such increases in the project budgets.

2. International Staff Compensation Survey

Professor Eeckels reported that the management did the salary survey, as requested by the Board last meeting. Review of this survey concludes that the existing UN(WHO) salary scale, as applied at ICDDR,B, is at the low end for recruitment of scientists with a medical degree engaged in basic scientific research, and is considerably lower for those in clinical research, particularly for applicants from Western Europe and North America. The Centre is faced with the problem of being able to offer only low salaries and four options were given as ways to improved the situation: namely:-

(a) Maintain the current salary scales, but rely more on non-reimbursable secondments.

(b) Maintain an adapted UN(WHO) system.

(c) Pay national salary scale plus expatriation allowance.

(d) Follow CGIAR Model.

Discussion favoured following a system based on the UN(WHO) practices, but with enough flexibility. Switching on to a new system was considered to entail large management problems. It was agreed to recommend to the full Board that the Centre should keep within the WHO system considering the options available within that system.

In view of the difficulties faced by the Centre in attracting qualified international staff from the industrialised countries even in the existing UN scale of compensation, it was recommended that the Centre should look to the developing countries and particularly those of the region as a source of recruitment especially for mid and lower level staff as duly qualified international staff may be attracted from these countries at the existing UN scale of compensation and even lower. The desirability of adequate multinational representation is, however, to be kept in mind but may not be insisted upon in case of mid and lower level international staff.

3. Secondment Policy

Full discussion of this paper was deferred until next meeting when a revised paper should be submitted considering the

following points, among others, as a matter of procedure regulating seconded appointments:

(a) The basic framework for a secondment needs to be an agreement between the Centre and the seconding institution.

(b) In future, the Board should have approval over anyone that comes on secondment to the Centre. However, it is realised that it may not always be possible for the Centre to select the person to come on secondment.

(c) For quick decisions on secondment the Director should consult with the Chairman of the Personnel & Selection Committee and the Chairman of the Board. If their approval is obtained, action may be taken and the Board informed at its next meeting.

(d) Before seeking approval, the management should carefully work out the cost aspect and recommend only viable ones.

(e) Seconding institutions should receive the job description as a guide for selection and the Board would have the freedom to rank the person seconded. It was recognized that in some instances the person may arrive at the Centre and only after arrival will he/she be placed in a position.

4. Evaluation of International Scientific Professional Staff

The management have requested that an external evaluation not

be done after the first 3 years. Instead, an evaluation report by the Head of the Division (of the staff member) and the Director would be sent to the Chairman and Members of the Programme Committee.

As there is a probationary period of 1 year for all staff it was suggested that an evaluation be done then (by the relevant Divisional Head and the Director) and a form be prepared for this. A second evaluation would be done, in a similar manner, before 3 years has elapsed and again an evaluation form should be prepared. An external evaluation with papers submitted for review, would only be carried out after 6 years and then only if the staff member was re-applying for a position at the Centre.

The evaluation forms should be prepared and submitted, for approval, to the next Personnel & Selection Committee meeting.

It was suggested that an option could be given at the end of the first three years for a one-year or three-year extension, this would depend on the performance of the staff member.

IV. Miscellaneous

1. <u>Reclassifications - International Staff</u>

(a) <u>Dr V. Fauveau</u>

Professor Eeckels requested that the position of Matlab MCH-FP Coordinator be reclassified at P4 and that he be

allowed to upgrade Dr Fauveau to this position.

One Committee member refused to consider this without the post description being submitted. An upgraded c.v. and full job description was not enough. So this was deferred until next meeting.

It was agreed, however, that Dr Fauveau should receive a meritorious 3-step increase in view of his contribution to the service activities and research output since joining the Centre. The Director was authorized to give this increase.

(b) Dr Fitzroy Henry

It was agreed that Dr Fitzroy Henry should receive a personal promotion from P2 to P3.

2. Pension Fund Contribution - Dr D. Mahalanabis

It was agreed that the Centre may pay 14.5% as employer's contribution to the pension fund for Dr Mahalanabis. The Committee recommended to the Board the payment as proposed.

3. Director's Workload

It was decided that the matter should be taken to the Board for decision.

4. Proposed amendments & Revisions of Rules & Regulations (SR and Manual)

It was noted that this paper was for approval of the Board and not for information. Discreet presentation of facts were sought.

(a) Nomenclature

This being a technical change was sought to be approved. The abolition of the post was irregular as much as its introduction without reference to the Board. In future rules should not be changed in such a mannger; the duties of the vacant position should be delegated by an administrative memo. The Board may approve the change.

(b) Within Grade Increases

This is to be resubmitted to the Board with full justification for the change. On preliminary review, the Committee felt that to allow this change would mean that staff would stagnate earlier and in the long run be more disgruntled.

(c) Meritorious Within Grade Increase

It was agreed that 20 years should be removed, keeping 25 and 30 years of satisfactory service and all employees receiving this increase at that time.

(d) Election of New Board Members

Professor Bell drew the Committee's attention to an agenda item of the full Board Meeting (which should also have been discussed by the P&S Committee), namely "Election of New Board Members".

5(a)/BT/NOV.87

PROGRESS REPORT ON RANKING

Progress Report on Ranking

As per recommendation of the Personnel Structure Committee and the decision of the BOT a Committee constituted of the following members was requested to identify appropriate criteria for ranking the Scientific and Medical staff of the Centre : The Committee members were :

Director
Prof. K.A. Monsur
Dr. I Ciznar
Dr. M.G.M. Rowland
Dr. M. Badrud Duza
Mr. M. R. Bashir
Mr. R. H. Dery
Dr. A. N. Alam

The Committee after considerable deliberation developed the criteria for ranking scientists and medical officers. Potential scientific and medical staff were requested to submit their individual CV's and 3 best publications. This, together with the predetermined criteria at each scientific rank level, allowed the Committee to arrive at their conclusions.

../2.

Thirty eight scientists and medical staff were reviewed with the following results :

Number upgraded to NOE	- 2
Number upgraded to NOD	- 3
Number upgraded to NOC	- 11
Number upgraded to NOB	- 3
	19
Change of title	- 10
No change	- 9

The new ranks/titles were implemented effective July 1, 1987.

Recently, the Committee initiated a similar exercise for scientific support staff. The Committee hopes to report on this exercise in the next meeting of the BOT.

This is for your information.

SCIENTIFIC & MEDICAL NATIONAL STAFF

PAY LEVEL	SCIENTIFIC	MEDICAL
NOA	Research Fellow	Medical Officer
	A. i) Masters degree OR MBBS* (or equivalent) WITH ii) Outstanding academic record	A. i) MBBS (or equivalent) AND ii) for clinical post: 1 year post-qualification internship leading to full registration OR iii) for non-clinical post: 3 years postgraduate experience and 1 year training
NOB	Assistant Scientist	Senior Medical Officer II
	A. i) Masters degree OR MBBS (or equivalent) WITH ii) 4 years research experience AND iii) Demonstrated growth potential including one research publication in a professional journal as first author OR B. Recent PhD with good dissertation research	A. i) MBBS (or equivalent) AND ii) 4 years post-qualification experience B. i) ICDDR,B Medical Officer WITH ii) 3 years outstanding performance at NOA

* Medical graduate may enter two steps higher than others.

PAY LEVEL	SCIENTIFIC	MEDICAL
NOC	Associate Scientist	Senior Medical Officer I
	A. i) Doctoral degree WITH ii) 4 years additional research experience OR iii) 2 research publications in international journals as first author OR B. i) Advanced Masters degree WITH ii) 8 years research experience AND iii) 2 research publications in international journals as first author OR An MBBS or ICDDR,B staff, without the above academic qualifications but with 5 research publications in international journals as first author	A. i) MBBS WITH ii) a postgraduate degree AND iii) 8 years post-qualification experience B. i) ICDDR,B Senior Medical Officer II WITH ii) 4 years outstanding performance at NOB

T E N U R E

PAY LEVEL	SCIENTIFIC	MEDICAL
NOD	Scientist	Senior Medical Officer - special grade
	A. i) Doctoral degree WITH ii) 6 years postdoctoral experience AND iii) Scientific achievement including 5 research publications in international journals as first author OR B. i) MBBS WITH good post- graduate degree or advanced diploma in an appropriate speciality	This grade may be awarded to senior Medical Officer at NOC with outstanding medical, public health or clinical laboratory skills and leadership qualities
NOE	Senior Scientist	
	This grade may be awarded to an NOD Scientist with sustained scientific achievement and an exceptional publication record.	

PAY LEVEL	SCIENTIFIC	MEDICAL
NOF	Senior Scientist - Special Grade	
	A. i) 5 years as Senior Scientist AND ii) Outstanding achievement and leadership including guidance of junior scientific staff resulting in demonstrable career development	

Appendix E

Agenda 5(a)

SECONDMENTS

Background

1. ICDDR,B has always accepted scientists who come to work at the Centre on various secondment arrangements. This policy has allowed the Centre to attract very high to fair quality scientific and administrative personnel who otherwise would not have joined, and, for some of them at least, at little or no cost. Secondments are thus an important source of expatriate personnel for the Centre. There are two main reasons for the use of secondments.

1.1 Many mid to senior level scientists in developed countries are already attached to a university or research institute where they have recognition and possibly tenure, and often higher salaries and benefits. It makes little sense for such individuals to surrender these advantages to come and work at the Centre. For example, Dr David Sack has stated that, if he would not have been seconded by JHU (reimbursed by ICDDR,B), he would not have been able to join the Centre. Other persons have declined ICDDR,B positions because their parent institutions could not grant them leaves of absence (i.e. keep their positions open until their return home).

1.2 Some countries and organizations (Belgium, Denmark, France, Finland, U.K., Population Council) are offering staff fully paid by them as technical assistance to the Centre. These persons do not always fit into the Centre's recruitment priorities, but their overall contribution has been very good to fair, with some notable exceptions. As a whole, these secondments have strengthened the ICDDR,B. To date no agency involved has asked that staff paid by them should have their own agenda, either in research or administration.

2. At the November 1986 Personnel and Selection Committee Meeting the Centre's Management discussed the various types of secondments that were then in use e.g. reimbursable, non-reimbursable, partially reimbursable. The Board resolved at that time (Ref. Resolution 7/BT/Nov. 86) "that as a matter of policy the Centre would reimburse an institution only up to an amount equivalent to the budgeted cost at mid-level of the level agreed to for the seconded person". Implied is that "the level agreed to" is according to the Centre's salary scale. In addition, the Centre would pay the local benefits for that person in Bangladesh (education allowance, installation grant, etc.). This would ensure that the Centre would pay no more for reimbursable seconded personnel than it

would if it recruited the person directly.

3. Whereas the principle "equal pay for equal work" seems fully justified, the Board's resolution does not resolve all issues.

3.1 Since the resolution makes it impossible to meet the salaries and benefits some candidates are receiving in their own country, it gives no answer to the problem raised in para. 1.1.

3.2 In some agreements with donors, salaries are mentioned by the grantor agency at much higher levels than allowed by ICDDR,B scales. The donor may insist that these salaries are in keeping with their normal practice, and that putting them at a lower level would preclude nationals from their country to be appointed - which they consider as discrimatory.

3.3 The resolution has already led one donor to reroute money (not yet allocated to ICDDR,B) through the parent institution of an individual scheduled to join ICDDR,B. This leads to a loss of overhead for ICDDR,B in addition to overhead being paid to the parent institution (see below). There also have been misunderstandings about this particular issue with

another major donor.

3.4 Finally, the "equal pay for equal work" principle is not applicable at ICDDR,B. To give only one example, some fully funded (and non refundable) staff are definitely earning considerably more than what their normal ICDDR,B salary would have been.

Present Situation

4. Currently, the Centre has two main types of secondments and a rather exceptional one.

4.1 Fully Funded Secondment/Technical Assistance

The individual is seconded from the parent institution or organization with all direct costs paid by the collaborative or funding organization, e.g. Dr Koenig (Pop. Council), Dr Briend (ORSTOM), Mr Felsenstein, and Drs Lenders and Ronsmans (BADC).

For the period of the secondment, the candidate is governed by the administrative rules and procedures of the Centre, although, for example, entitlement to vacation and home leave might differ.

4.2 Reimbursable Secondment

The candidate is seconded from his parent organization

with all direct and indirect costs met from the Centre's core or project funds, even if salary and benefits are higher than the Centre would normally pay (e.g. Dr B. Kay and, in the recent past, Drs Sack and Greenough, JHU). It should be made clear that there are as yet no reimbursable secondments complying with the recent Board resolution.

In past and present practice, two types of refundable secondments have evolved.

4.2.1 The Centre refunds the parent organization directly, without paying any overhead. On the contrary, if, as is the case, project money is used, the Centre receives overhead on the money spent, making the employee as it were "cheaper".

4.2.2 The parent organization is being funded by the donor agencies with money, that (i) has, or (ii) has not yet been included in a co-operative agreement with ICDDR,B. The overhead goes to the parent organization and not to ICDDR,B making, certainly in the first case [(i)] the employee more expensive. With an overhead of 31%, the loss to the Centre is 62% or, for a total cost of e.g. $100,000, a loss to core of $62,000. It is obvious that subtype 4.2.1, while in contradiction with the Board resolution, is much more favourable

than subtype 4.2.2(i), whether core or project funds are being used. In fact, subtype 4.2.2(i) does not correspond to the term "reimbursable secondment" if money already allocated to ICDDR,B is being diverted to a parent organization which obtains overhead. One might call this system rather awkwardly "non-reimbursable secondment after deduction from ICDDR,B".

4.3 Partially Funded Secondment

This constitutes an exception. The individual is seconded from his organization with a partial, mutually agreed level of funding for direct and indirect costs, met by the collaborative organization/funding agency, e.g. Hartley Janssen, (WUSC).

5. Hiring Procedures

They have always been different from the Centre's usual practices. In fact, in many cases, no hiring, in the true sense of the word, is involved.

5.1 Generally speaking, only one candidate is proposed by the parent organization or donor and we can only refuse him (a very rare occurrence) or accept him.

5.2 Time pressure makes it usually impossible to inform the Board prior to agreeing to the secondment.

Numbers and Types of Seconded Staff

6. Currently the Centre has, out of a present total of 27 international staff, 12 staff members from various institutions and Governments seconded to the Centre. Three out of 12 are on reimbursable secondments (one of type 4.2.1 and two of type 4.2.2 -- see page 5). All are shown on the staff list which appears as Agenda 7(b).

Major Issues

7. It would seem advisable to consider secondments and the problems they raise in conjunction with institutional linkages and the international staff salary structure. This, however, goes beyond the scope of this working paper.

Inevitably, in the multinational society that constitutes ICDDR,B and its Board of Trustees, the issues raised by secondments and related matters will be considered differently, according to a person's background and past experience. What may be perfectly normal to some will be frowned upon, or even rejected, by others. An acceptable compromise, which focuses on ICDDR,B's best advantages, may

not be easy to achieve.

8. The following issues will be discussed.

* Are secondments acceptable and, if so, which types?
* Compensation differences between regular and seconded staff.
* Staff loyalty, and the role of seconded staff in key postions.
* Payment of overhead to parent institutions.
* Procedures for requesting, accepting or refusing secondments.
* Hidden costs.

8.1 Are secondments acceptable and, if so, which types?

- Fully funded secondments/technical assistance positions.

  This mechanism has provided the Centre with some excellent collaborators. Some of them have held important positions and performed very well. As one might expect, others have caused problems. The balance seems clearly positive, and it is proposed to continue with this type of secondment.

- Reimbursable secondments.

  These have been the basis of the Centre's

collaboration with Johns Hopkins University. As long as it is ICDDR,B that reimburses the parent organization no overhead was or is charged. For funded positions overhead goes to the Centre. This system has provided the Centre with its past director, an associate director, and still now an excellent department head. Despite the salary differences, the Centre would seem to have profited: without the support of JHU, these valuable staff would either not have joined, or would have left much sooner. It seems obvious that especially for staff members who contribute to fund-raising through high-quality projects, the past and present experience is definitely a positive one.

On the other hand, if the reimbursement has to go through funds which are rerouted by the donor (USAID) to the parent institution, the situation becomes financially far less attractive (see para. 4.2.2).

We should try to eliminate the latter type. This may take some years. Reimbursable secondments, even at higher salary levels than ICDDR,B may be the price the Centre has to pay for collaboration with certain universitites in the USA and other developed countries. This is, however, in contradiction with the June 1987 BOT decision.

8.2 Salary and compensation differences between regular and seconded staff.

This has never given rise to serious problems in the past. It still does not for staff joining under the Technical Assistance arrangement.

Problems have recently arisen when the Centre has to reimburse the parent institution, even if there is ample project money, with overhead to the Centre. The points raised in para. 4.2 must be looked into. Decisions taken in that respect will define the Centre's policy on this issue.

8.3 Staff loyalty and seconded staff in key positions.

It is submitted that staff loyalty is determined by a person's character and motivation, not by the way he is paid.

Ideally, key staff may have to be regular employees. Yet, past and present experience with seconded key staff has not been negative, far from there.

8.4 Payment of overhead by ICDDR,B to parent institution.

I am strongly opposed to this. The problem is part of those discussed under 4.1 and 8.2.

8.5 Rules for requesting, accepting or refusing secondments.

I submit no hard and fast rules can cover all the complex issues involved. Quick decisions are often required, which makes it frequently impossible to refer the matter to the Board. Yet, if the Director makes the decision, and the Board would disavow his action, possibly embarrassing situations will arise; this has threatened to happen in June 87.

It is proposed that the Director should consult with the Chairman of the Board. If his approval is obtained action can be taken, and the Board will be informed at its next meeting.

8.6 Hidden costs

Even fully seconded persons may result in the Centre incurring expenses (travel arrangements, passbooks, cars on rental basis, advance for house rent and school fees). On the other hand, full secondment can also include research money and better links with donors.

Finance is working on a full costing. It is proposed to take no action until this costing exercise is completed.

RE:jc

26.10.87

VARIOUS CATEGORIES OF STAFF

EVALUATION OF INTERNATIONAL SCIENTIFIC PROFESSIONAL STAFF

Background

Staff Rule 5.30 forms the basis for an administrative evaluation of an international level staff member's performance. The rule says that an appraisal be made prior to the end of the probation period (normally 1 year of service) and subsequently before the anniversary date of appointment and once before a contract's renewal. In addition, supervisors make informal evaluations of the performance, conduct and potential which are periodically discussed with the staff member.

The Centre has not yet fully adhered to these evaluation rules for administrative or scientific international level staff. The Personnel & Selection Committee, at its June 1987 meeting, stressed that such performance evaluations for international level scientific staff are a prerequisite for contract renewal.

Suggestions

Performance appraisal (administrative evaluation) should be implemented for international level staff in accordance with

the staff rules. In addition, external scientific peer review should be re-implemented for international level scientific staff.

Procedure

(1) Twelve months prior to a contract expiry date an international level scientific staff member would have to submit to the Director a scientific and administrative activity report and an updated list of publications. The list of publications and the three best recent papers would be sent to 3 external reviewers identified by the Director in consultation with the respective Associate Director.

(2) The yearly professional performance appraisals (administrative) to be completed by the staff member's first and second line supervisors would be joined to the file. The full file, with the Director's comments would be available for review at the Personnel and Selection Committee Meeting so as to allow for a minimum 3 months notice period.

Comments

(1) The process should start 12 months beforehand, or two years after joining. Even then, time may be short: external reviewers are known to be slow responders - or non responders.

(2) If a scientific staff member has to invest much time in administrative and organizational matters, his scientific productivity may be quite low during his first two years. One should also take into account that getting a scientific protocol approved can require much time. Once a protocol is approved, ordering of new equipment, or hiring and training of new staff is frequently a slow process at ICDDR,B.
Clearly, depending on the field of activity, administrative responsibilities and other factors, some scientists will be advantaged, others disadvantaged.

(3) Peer reviews are, inevitably, rather subjective exercises. They also are difficult ones if the factors mentioned under (2) have to be considered.

(4) Finally, is it reasonable to expect that the scientific and personal qualities that led to a person's selection only two years beforehand will have changed so dramatically as to make him unsuitable for re-

appointment? If such a thing happens, it will be obvious enough.

Conclusions

(1) The rules and regulations do not seem adapted to the time available. The above procedures seem appropriate for persons re-applying for their positions after two terms of 3 years (i.e., the process would start after five years).

(2) It is submitted that a far more simple system involving the Chairman and members of the Programme Committee should be set up for the renewal of contracts after 3 years.

5(c)/BT/NOV.87

EXTERNAL SCIENTIFIC REVIEW 1988

MANPOWER STATUS (INTERNATIONAL)

November 1, 1987

FIXED TERM STAFF (Recruited through normal process)

	Name	Nationality	Title	Pay Level	Start date	End date	Funding Status
1.	Alam, Dr. A.N.	Bangladesh	Head, Dhaka Hospital	P3	1.7.86	30.6.89	Core
2.	Ali, Mr. M. Iqbal	"	Programme Officer	P1	16.6.85	15.6.88	Core
3.	Ashraf, Mr. M. Hira	Canada	System Development Manager	P3	11.8.85	10.8.88	CIDA
4.	Bashir, Mr. Bashir	Bangladesh	Associate Director, Resources Development	P6	1.7.87	30.6.89	Core
5.	Chowdhury, Ms. Judith	Australia	Executive Assistant	P1	16.6.85	15.6.88	Core
6.	Ciznar, Dr. I.	Czeckoslovakia	Senior Scientist	P5	1.1.84	31.12.89	USAID
7.	Clemens, Dr. John D.	U.S.A.	Scientist	P4	1.1.84	31.12.89	USAID
8.	Duza, Dr. Badrud	Bangladesh	Senior Scientist	P6	1.7.85	30.9.91	USAID
9.	Eeckels, Prof. R.	Belgium	Director	ASG DO4	1.4.85	31.3.88	Core
10.	Fauveau, Dr. Vincent	France	MCH-FP Physician	P3	1.1.86	31.12.88	USAID
11.	Henry, Dr. Fitzroy	Guyana	Int.Research Associate	P2	1.1.84	31.12.89	USAID
12.	Mahbub, Mr. M.A.	Bangladesh	Associate Director, Admn, Personnel & Finance	P5	1.7.87	30.6.90	USAID
13.	Wojtyniak, Dr. B.	Poland	Scientist	P4	1.8.83	31.12.87	CIDA

SHORT TERM

14.	Huq, Dr. M.I.	Bangladesh	Team Leader , KSA		30.6.86	31.5.88	KSA
15.	Islam, Dr. Syed S.	"	Epidemiologist,KSA		4.9.85	3.9.87	KSA

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SECONDED (Recruited through Technical Assistance)

	Name	Nationality	Title	Pay Level	Start date	End date	Funding Status
16.	Briend, Dr. Andre	France	Scientist		29.12.83	open	OSTROM
17.	Felsenstein, Mr. A.	Belgium	Biologist		1.4.87	30.4.89	BADC
18.	Hall, Dr. Andrew	U.K.	Visiting Scientist		8.5.84	28.2.89	ODA
19.	Koenig, Dr. M.	U.S.A.	Scientist		17.2.84	open	USAID
20.	Rautanen, Dr. Tarja	Finland	Research Fellow		18.11.86	17.11.87	Finnish Academy
21.	Ronsman, Dr. Carine	Belgium	Physician		30.8.87	29.8.89	BADC
22.	Lenders, Dr. Carine	Belgium	Physician		31.5.87	30.5.89	BADC
23.	Kofod, Dr. Paul Eric	Denmark	Head,Child Health Programme		29.11.87	28.11.89	DANIDA
24.	van Loon, Dr. F.P.L.	Netherlands	Gastro Enterologist		1.8.84	31.7.89	WOTRO/Holland
25.	Patra, Dr. F.C.	India	Research Fellow		1.4.86	30.11.87	WHO

SECONDED (Recruited through Reimbursable Secondment)

26.	Hlady, Dr. Gary	U.S.A.	Int. Research Associate		14.8.87	13.8.89	USAID
27.	Kay, Dr. Brad	U.S.A.	Microbiologist		1.8.84	30.6.88	USAID
28.	Silimperi, Dr.Diana	U.S.A.	Project Director, UVP		20.4.87	19.4.90	USAID

CONSULTANT (Long term)

29.	Rao, Mr. Malla R.	India	Computer Consultant, Vaccine Trial		1.11.86	30.9.88	USAID
30.	Simons, Mr. J.Charles	U.S.A.	Computer Consultant, Vaccine Trial		23.1.87	3.2.88	USAID

SALARY SURVEY

SALARY SURVEY - INTERNATIONAL

1. Executive Summary

1.1 Because the Centre has had difficulty recruiting international level scientists at the current UN (WHO) pay levels, the Board in June 1987 requested management to conduct a salary survey of universities and other research institutions. Our review concludes that the existing UN (WHO) salary scale, as applied at ICDDR,B, is at the low end for the recruitment of scientists with a medical degree engaged in basic scientific research, and is considerably lower for those in clinical research, particularly for applicants from Western Europe and North America.

1.2 This document compares international salaries at ICDDR,B with those offered in other countries (USA and UK) and by other organizations. It should be kept in mind that the social and other advantages in W. Europe make comparisons difficult. It is proposed that the Board would discuss this document, give guidelines, but not binding decisions, despite the urgency of the problem. Several alternative options will be proposed

in this document.

2. Statement of the Problem

2.1 UN (WHO) salaries and benefits are not anymore sufficiently attractive to recruit and retain top level scientific personnel from North America and most Western European countries. The following factors were considered in concluding that the Centre's international professional level salaries are inadequate -

2.1.1 The International Civil Service Commission (ICSC) findings that the UN professional remuneration packages were inferior to those of other international organizations and bilateral programmes; and that UN organizations are having increasing difficulties attracting well-qualified staff to serve in the field, particularly staff who have out-of-area commitments in high-cost countries (North America and Western Europe).

2.1.2 Centre salary scales are applied conservatively as compared to WHO practices. For Ph.D.'s we are below the salaries offered at the CGIAR centres - putting our M.D.'s in an even less favourable situation. Compared

to our salaries, those paid by U.S.A. universities are between 150% and 210% higher (of course, one compares here salaries before taxes with tax-free salaries) - see Appendix A.

2.1.3 For European staff the problem is compounded by the severe devaluation of the U.S. dollar relative to their home country currencies and the growing insecurity on the financial markets.

2.1.4 The refusal by several candidates (Silimperi, Hlady, Van Loon) to accept the UN scale as applied at ICDDR,B. Two were eventually engaged through a secondment arrangement with Johns Hopkins University, funded by USAID.

3. Possible Alternatives

In theory, there are four main possible alternative schemes to improve the Centre's salary and benefits package:

- maintain the current UN (WHO) system, but rely more on secondments, reimbursable or non-reimbursable;
- retain most of the UN (WHO) system but adjust salaries and benefits to reflect market conditions for the hiring of research scientists;
- use the national salary scale and add to it an

expatriation allowance equal to the difference between local and home country salary levels;

- redesign a new salary scale based on the CGIAR system but taking into account that many on our staff are M.D.'s.

There follows a brief discussion of the pros and cons of each of the alternatives in terms of cost, ease of administration and internal and external equity.

3.1 Maintain the current scales, but rely more on reimbursable secondments

3.1.1 Cost: After perusal of the document "Secondments" (P&S Agenda 5 - copy attached, Appendix E) it should be obvious that only reimbursable secondments with project money attached are financially acceptable. They are, however, unable to meet salary expectations higher than those allowed for by ICDDR,B rules (November 1986 BOT decision). A non-reimbursable secondment with money that has or could have been allocated to the Centre, is very expensive because of overhead paid to the parent institution. For as yet only two individuals the net annual loss to core funds amounts to about $80,000.

3.1.2 Administration: The arrangement of suitable secondments are considerably more cumbersome than straight hiring. So far, it has only been successful in the U.S., and will probably not be so in Europe

(where technical assistance seems more appropriate). Problems can also arise with regard to administrative rules and regulations.

3.1.3 Equity: While maintaining external equity, reimbursable secondments do not mute but rather accentuates the internal comparisons by staff of differences in salaries and benefits.

3.2 Adapted UN (WHO) System

Until now, the ICDDR,B has applied the UN (WHO) scale rather conservatively. Frequently, the "three tiered system" (e.g. a P4 position can be paid at either the P4, or P3, or P2 grades) has been used at its lowest end: a PhD in nutrition being paid at P2, an MD, MPH paid at P3.

Also, some benefits are rather low, being part of a system that has not been adapted to inflation since 1978.

This option implies using the UN (WHO) scale more correctly, and, if need be, more generously.

3.2.1 Cost: The costs would be higher than presently. They should remain manageable if we can continue the present policy of paying most salaries out of funded projects.

3.2.2 Administration: By retaining most of the UN (WHO) allowances and grants, there would be little change

from current administrative practices except for their method of computation. There might also be the necessity to conduct salary surveys every few years. However, IIE now conducts these on behalf of the CGIAR. Yearly automatic fixed step salary increase could change to a fixed percentage. This could, however, be varied every year by the Board depending on the Centre's financial situation and changes in other international organizations. Consideration could also be given to a merit system for salary increases in place of an automatic step increase.

3.2.3 Equity: In order to maintain both external and internal equity -- which will always be difficult -- more judgement will have to be exercised by the Director than under the present less flexible UN (WHO) system.

There is another way to modify the UN (WHO) system which would have as its purpose the raising of current salary levels to those prevailing in the market place. By adding the post adjustment factor for the country of origin, the Centre might also be able to compensate for exchange losses. Its merit is that it would offer a way of dealing fairly with staff who have continuing obligations in their home country. Yet, the post adjustment system could become inappropriate should there be a fundamental alteration in the UN system, or

if exchange rates would change very rapidly, as is presently the case.

3.3 National salary scale plus expatriation payment

This method is most often used by large international corporations to totally disguise what expatriates are paid beyond the local payroll. Payments for the expatriation grant are made by the head office directly into the expatriates' bank accounts at home. It implies that all staff at the Centre would be graded either in the GS or NO scale. For expatriates, an expatriation payment would be provided and equal the difference between home country income and local scale.

Needless to say, this system cannot and should not be used at ICDDR,B. Among several other reasons, it would go against the spirit and the letter of the Ordinance.

3.4 CGIAR Model

The consultant Gormley strongly recommended that the Centre review the CGIAR personnel policies and adapt those features which are better suited to the Centre's requirements. The main difference between this alternative and the modified UN (WHO) system proposed is one of degree. Therefore, if required further, future changes could be contemplated if that were considered useful. However, at the present time

the most pressing requirement deals with pay and benefits.

The following table summarizes the three alternatives worth considering.

	Status Quo	Modified UN (WHO)	CGIAR Model
Reasonable cost	Probably no	yes	yes (?)
Easy to administer	no	yes - relatively	no
Equitable	no	yes	no

4. Choice of Salary Scale

The table in Appendix A clearly indicates that the UN (WHO) scale, as we use it, is well below all comparable salary scales for M.D.'s at U.S. universities. For Ph.D.'s at U.S. universities and CGIAR only the entry level salaries are competitive.

One difficulty in establishing a salary scale for the Centre is the significant difference - 54 per cent or more between Ph.D. and M.D. remuneration levels at U.S. universities. Similar differences exist in Europe. Therefore, the salary ranges will need to be quite wide to accommodate both, if ever the BOT opted for such a system.

The CGIAR base mean average salary scale (note 1), when compared with the Centre's scientist and senior scientist levels, are about 10 to 15% higher and at the Director level are 20% higher. Appendix B & C show further details for the CGIAR centres. It should also be noted that the CGIAR non-salary compensation and benefits package is (on average) superior to that of the Centre (e.g. spouse travel, use of vehicle, housing allowance, 100% insurance cost). The total of just these benefits would be worth between $5,000 to $10,000 per year on average.

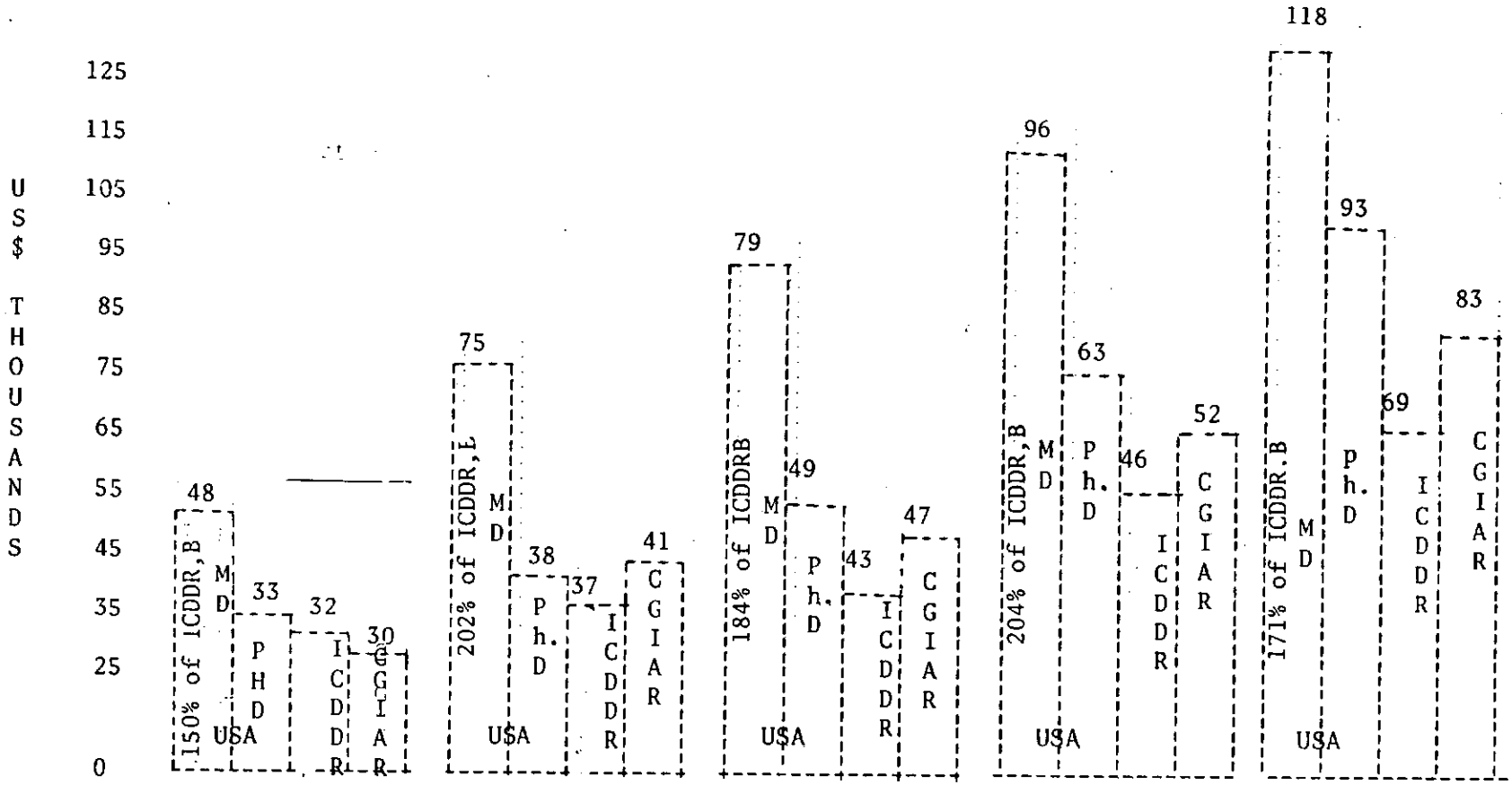
APPENDIX - A

MEAN BASE SALARIES FOR MD'S AND Ph.D'S (1987)

COMPARED TO MEAN ICDDR,B P & CGIAR I LEVEL EQUIVALENTS

NOTE - MD & Ph.D AVERAGES FOR FOLLOWING DISCIPLINES IN CLINICAL MEDICINE FACULTIES FOR U.S. UNIVERSITIES:

COMMUNITY HEALTH
FAMILY PRACTICE
MEDICINE
PATHOLOGY
PEDIATRICS
PREVENTIVE MEDICINE
GASTROENTEROLOGY (MD ONLY)



U.S.A.	INSTRUCTOR	ASSISTANT PROFESSOR	ASSOCIATE PROFESSOR	PROFESSOR	CHAIRMAN
ICDDR,B	P-3 ASSOCIATE SCIENTIST	P-4 ASSISTANT SCIENTIST	P-5 SCIENTIST	P-6 HEAD DIVISION SENIOR SCIENTIST	D-2 DIRECTOR

Appendix B /

CGIAR and Associated Centres Base Salary levels.

SCIENTIFIC STAFF

POSITION	MINIMUM	MEAN	MAXIMUM
Associate Scientist/ Entry level	$18,800 pa	$30,280 pa	$46,000 pa
Scientist/ 5-7 years experience	$30,715 pa	$41,089 pa	$60,000 pa
Senior Scientist/ Project Leader	$27,612 pa	$52,191 pa	$65,000 pa
Administrative Officer	$ 45,000 pa	$ 52,544 pa	$ 75,260 pa

Source : IIE - 1987 Compensation & Benefits Survey, James Mullaney, Director, International Personnel Service memo of 27.7.87.

Appendix C.

CGIAR Base Salary Levels 1987

Indicated are the medians (M) and the two extreme values (L-H) of salaries paid by 8 to 10 IAR centres. There are three categories: average current salary (ACS) and the minimum (MIN) and maximum (MAX) figures for four levels of scientific staff (in $ x 10^3).

	MIN			ACS			MAX		
	L	M	H	L	M	H	L	M	H
Post-doct. fellows	12.6	20.0	28.0	15.0	23.4	33.0	18.0	25.5	35.0
(%)	(63)	(100)	(140)	(64)	(100)	(141)	(71)	(100)	(137)
Entry level staff*	18.8	26.8	33.0	21.5	30.2	38.5	24.7	34.9	46.0
(%)	(70)	(100)	(123)	(71)	(100)	(127)	(71)	(100)	(132)
Exprncd. staff*	31.7	35.5	42.0	34.8	39.8	50.4	41.8	47.0	60.8
(%)	(89)	(100)	(118)	(87)	(100)	(127)	(89)	(100)	(129)
Project leaders*	27.6	42.0	45.7	31.0	54.3	62.4	35.1	59.8	65.0
(%)	(66)	(100)	(109)	(57)	(100)	(115)	(59)	(100)	(109)

* In the material received these terms are not clearly defined. Experienced staff indicates persons with 5-7 years experience, presumably at the same Centre.

Comments

1. Almost all CGIAR Centres have an annual merit increase between 3% and 10%, on average 5%.

2. The material received indicates that certainly for the highest level the figures are showed to the right, as also shown by the last percentages row.

3. The table clearly shows the very wide spread of salaries within the 4 levels. To see this, one has to compare the lowest minimum level with the highest maximum level in the same row. For the four levels, taking the minimum as 100%, the maximum are at respectively 278%, 245%, 192% and 236% (in ascending order of level).

4. Quite remarkably, for each of the 3 lowest levels, the highest maximum exceeds the median of the ACS level immediately above: e.g. the best paid "experienced staff" earns more than the median "project leaders".

Appendix D

Comparative Analysis of Net Total Remuneration- ICDDR,B (w/Zero PA) versus ILCA for Select Positions

Post	ICDDR,B	ILCA
Associate Directo : (Science)-P-6/1		Division Head
Base Salary	$ 43,461	$ 51,820
Recurrent Benefit	9,500	13,631
	$ 52,961	$ 65,451
Principle Investigator-P-5/1		Team Leader
Base Salary	$ 39,290	$ 52,920
Recurrent Benefit	9,500	13,631
	$ 48,790	$ 66,551
Scientist - P-4/1		Scientist (Natural)
Base Salary	$ 32,605	$ 41,300
Recurrent Benefit	8,900	13,631
	$ 41,505	$ 54,931
Associate Scientist-P-3/1		Jr. Scientist (Natural)
Base Salary	$ 27,294	$ 31,710
Recurrent Benefit	8,900	13,631
	$ 36,194	$ 45,341
Associate Director, AP&F-P5/1		Head, Administration
Base Salary	$ 39,290	$ 52,720
Recurrent Benefit	9,500	13,631
	$ 48,790	$ 66,351
Chief Personnel Officer-P-4/1		
Base Salary	$ 32,605	$ 37,070
Recurrent Benefit	8,900	13,631
	$ 41,505	$ 50,701

Note : International Centre of Insect Physiology and Ecology; African Medical & Research Foundation; ILRAD; International Council for Research in Agro Forestry; World Bank; UNEP.

LOCAL STAFF SALARY SURVEY

Background

The Centre introduced the UN/WHO salary structure for national staff (National Officer and General Service) effective January 1, 1983. This decision was taken in pursuance of Clause 14(2) of the ICDDR,B Ordinance No. LI of 1978 which stipulates that the salaries and emoluments of non-international level position should be comparable to those paid by the UN organizations in Bangladesh.

It is important to note that the UN local salary structure is under constant review by an Inter-Agency Salary Survey Committee, and salary increases are normally implemented every year.

Since several years, due to inherent difficulties in obtaining retroactive incremental project funding, the Centre has not been able to implement salary raises effective at the same time as those of the UN organizations. This fact has caused considerable staff frustration. Despite the July 87 salary increase, the "comparability" with UN salaries, requested by the Ordinance, is quite in jeopardy.

The difficulty of following the UN salary structure with its frequent increases was discussed at the June 1987 BOT meeting. Resolution 20/June 87 of the Board requested the Centre's Management to conduct a local salary survey prior to their November Meeting. A preliminary survey of 5 representative organizations along these lines was conducted using readily available information. The results of this Survey are available with the Personnel Office.

Discussion

This preliminary survey and internal discussions revealed that to do a comprehensive survey and analysis of local institutions remuneration packages such as the type done by the United Nations and American Embassy would be a lengthy, time consuming and repetitive exercise; and would certainly be beyond the manpower and financial resources of the Centre. Moreover, it is not a survey that the Centre needs at this stage, but a policy as to whether its staff should remain "the best" or "one of the best paid" vis-a-vis other international, multi-national and national organizations in Bangladesh.

Suggestion

It is suggested that the Board should first decide the matter of compensation philosophy within the limits of the Ordinance. If it is decided to 'cut loose' from the UN System, the Centre would first have to ask for official legal advise on the interpretation

of the Ordinance, Article 14(2). Dependent on such an advise, we could possibly base our compensation package on either an existing compensation survey, e.g. American Embassy, or conduct its own independent survey on an annual basis. We suggest that the use of the American Embassy Survey would be the best alternative.

6/BT/NOV.87

FINANCE COMMITTEE REPORT

Report of the Finance Committee - November 22 & 23, 1987

1987 Financial Report

2.1. Contributions from Donors, 1987

The committed and anticipated contributions from donors, by donor, are shown in Annex 1. The total for the year is estimated at $ 10.1 million, of which $ 1.7 million was contributed to unrestricted core, $4.6 million to restricted core and $3.7 million to projects. Although the spread of donors is wide and pleasing, many are small contributors. The Committee considered that it was important to continue to increase the number of different donors and to reduce gradually the proportion of the budget contributed by any single donor.

Contributions in kind are shown in Annex I for the first time. The Commmittee welcomed this andrecommended that the practice continue, making sure to include all such contributions and not to under-value them.

2.2 Income and Expenditure, 1987

The projected surplus before depreciation (on the accrual accounting system now adopted) has increased from the previous estimate of $323,000 made at the June 1987 meeting of the Board, to a new estimate of $ 499,000. The surplus before depreciation has been increased by reductions in centrally-funded expenditure, in spite of reduced recovery of indirect costs as a result of a reduction in project-funded expenditure. The actions that have caused the increase are shown in Table 1.

Income and expenditure for 1986, 1987 budget, and 1987 as now estimated, are shown in Table 2. Comparing the 1987 budget with the current 1987 estimate, income to central funds increased. Income to projects (direct amd indirect costs) decreased, due to a reduced rate of expenditure on projects. This will lead to a substantial carry-over to 1988 of commitments to expend monies received (see section 2.5). Estimated expenditures for 1987 are down on the budget assumption but up on 1986 (Table 2).

2.3. Accumulated Deficit, 1987

The accumulated deficit at start of 1987 was $2.7 million. This will be reduced by prudent financial management to an estimated level of $ 2.3 million by the end of 1987.

2.4. Overdrafts, 1987

The state of the bank balances for the year is shown in Figure 1. The overdraft touched $2 million in mid-year but will end the year with a small positive balance of $91,000. The main reason for this improved position is prompt payment by donors of money in advance of expenditure. This will lead to a substantial carryover of advances to 1988 (see below). The overdraft interest paid since 1984 is:

1984	$ 162,000
1985	285,000
1986	240,000
1987 (estimated)	70,000

2.5. Carryover of advances to 1988

An estimated $2.0 million of advances received but not yet expended will be carried over to 1988. This reflects prompt donor payments and a slower rate of project expenditure during the year. The net carryover to 1987 from 1986 was $ 1.5 million. This carry over is the major cause of the reduced overdraft at year end (Figure 1) but is a matter for concern in the absence of a similarly large carryover in bank deposits. It will cause a particularly serious problem in 1988 if donor payments are not as prompt as they were in 1987.

3.0 1988 Budget

3.1. Contributions from Donors, 1988

Anticipated contributions from donors in 1988 are shown in Annex II. The figures are very similar to 1987 (Annex I).

3.2. Income and Expenditure, 1988

Income and expenditure budget figures for 1988 are given in Tables 3 and 4, in comparison with the current projections for 1987. There is a striking increase of expenditure in Health Care Services from $ 1.8 million in 1987 to $ 3.2 million in 1988. There is also a major increase in the budget figure for Extension of Research/Services. The Committee recommends that this aspect of the budget be discussed in detail by the Board.

The budget surplus before depreciation for the year is shown as $ 591,000 (Table 3). However, this may be reduced by the following items that may be agreed by this meeting of the Board of Trustees.

Salary Increase to GS and NO level staff	$ 284,000
Salary increase to the Director	Unknown
Asset accounting system (recurrent)	$ 4,000
Inventory control system (development)	$ 50,000
Increase in post adjustment for International Staff	$ 6,500
Support staff re-ranking	$ 45,000
Insurance of computers and stock	$ 1,100
Strengthening of Director's Office	Unknown
Total minus unknowns	$ 390,600

The Committee recommends that a surplus before depreciation of $ 300,000 should be achieved in 1988 despite these additional expenditures.

3.3. Overdraft, 1988

The budgeted overdraft fluctuations through the year are shown in Figure 1. A maximum overdraft of around $ 1.0 million occurs twice. At year end there is an anticipated small positive balance of $ 29,000. These figures assume, however, a continuation of prompt donor receipts and substantial underspending leading to another large carryover into 1989 commitments as in the recent past, the overdraft could rise to $ 2.0 million.

4.0. NO and GS Level Staff

4.1. Salary Award

The recent history of salary awards and increases to NO and GS level staff are shown in Annex II. The Committee, together with the Personnel and Selection Committee, discussed fully the appropriate response to the large and retroactive awards announced by the UN in August, 1987. After careful consideration of several options, and being mindful of the improving but still not very satisfactory financial position of the Centre, the Committee recommends that 1/3 of the UN increase announced in August 1987 be implemented from January 1, 1988. This will allow the following increases:

GS 1-4	22%
GS 5	18%
GS 6	12.3%
NO A-E	9.3%

The cost of this decision in 1988 will be:

Project-funded staff	$ 347,200
Central-funded staff	$ 284,000
Total	$ 631,200

Thus, the projected 1988 surplus will be reduced by $ 284,000, assuming that project budgets will be fully able to cope with the increase to pr ject-funded staff.

4.2 Ranking

The Committee approved the outcome of the ranking review of scientific staff and the consequent extra budgetary obligations of $ 19,000 for 1987. The Committee also approved a provision of $ 100,000 in the 1988 budget for the consequences of the further ranking reviews.

5.0 International Staff

5.1. Post Adjustments

The UN announced a change in the post adjustment factor for Dhaka from a negative 10 to zero with effect from September 1, 1987. The Committee recommends that this be implemented from July 1, 1988 without retroactivity. This will cost $ 16,500 in 1988; $ 10,000 project funded and $ 6,500 central funded.

5.2. International Salary Comparisons

The Committee discussed the results of a survey of international staff compensation in the light of current difficulties faced by the Centre in recruiting staff from certain countries. The survey focussed mainly on the salaries offered by the Centre in comparison to those offered by CGIAR and faculties of clinical medicine in US universities. These comparisons are summarised in Annex IV. The Committee noted that the gap between ICDDR,B and CGIAR was not as wide as had been feared and the gap between ICDDR,B and US universities should be seen in the light of the tax-free status of the former and the taxable status of the latter. After lengthy discussion of the options,

the Committee decided to recommend that the international staff system continue to follow the WHO system.

5.3. Currency Fluctuations

The fall of the US dollar against certain currencies, especially those of Western Europe, has caused some international staff members to suffer substantial loss of income if expressed in the currency of their home country.

The Committee debated whether to introduce a scheme for compensating for severe currency fluctuations. It was decided not to recommend this. Instead it was recognized that when a staff member came to negotiate a new contract, the relationship between the US$ and the currency of his home country might properly enter into the negotiations.

6.0. Reserve Fund and Overdraft

The reserve funds now stand at $ 1.5 million, of which $ 0.5 million are provided by the Ford Foundation and cannot be drawn from. The funds are on deposit with American Express and are partial security against the Centre's overdraft facility (currently $ 3.0 million) with the same bank.

Various options for both the reserve fund and the overdraft were discussed. The following actions are recommended:

1. That the reserve fund be placed in longer term deposit accounts that will yield the most interest (current interest rate is 6.3%).

2. That, in view of the extreme unlikelihood of requiring an overdraft of over $1.5 million, during 1988, the spread of interest between the overdraft and the reserve fund deposits be negotiated with the aim of achieving a spread of 1%.

Further it was recommended that the Centre might move cautiously towards using part of the reserve fund as an operational fund to reduce borrowing requirements. The Committee would like to receive proposals on this subject at its June, 1988 meeting.

7.0. UNROB Loan

The discussions between the Centre and the Government concerning the UNROB loan are continuing. The Committee hoped that a satisfactory resolution would be found. The Committee emphasised the importance of obtaining agreement on this matter before the September 1988 donor consortium meeting.

8.0 Banking Arrangements

The Committee was informed that the management has continued its efforts to interest local banks in taking over some or all of the financial services required by the Centre. So far, there has been no positive outcome, but in the absence of documentation on the reported lack of response from local banks it was not possible to conclude that all avenues have been fully explored. Mr. Anwar offered to assist the management in making renewed contact and holding discussions with selected banks, if requested by the management. The Committee welcomed Mr. Anwar's offer.

10.0 Protocol Approval and Funding Procedures

At the request of the Board at its June 1987 meeting, the Centre prepared a guidelines paper on this subject. The Committee reviewed this paper.

The Committee expressed concern that the guidelines emphasised the role of the Resources Development Division and did not sufficiently

recognize the desirability of a strong role for senior scientists in making informal contacts and in "selling" their scientific ideas to donors. The Committee felt that guidelines such as "all communications with donors, even after the funds have been obtained, are routed through the Resources Development Office" were inappropriate.

The Committee recommends that the Board request that a revised set of guidelines be prepared. These should be put before the next meeting of the Board after consultation with the senior staff at the Centre.

11.0 Donor Relationships

The Committee noted with satisfaction the strong foundation for improved don or relationships which had been laid by the donor consortium meetings in March and June, 1987. The Committee had a lengthy discussion of how the Centre should now build on these foundations. The Committee made the following recommendations to the Board:

1. That a donor consortium meeting be organized in Dhaka during late October or early November.
2. That the following documents be prepared for review at the June 1988 Board meeting, submission to the Donors in July, 1988 and discussion at the consortium meeting.
   - a programme description and a programme-based budget for 1989.
   - an outline programme and indicative budget for the five year period 1989-93.

3. That the Trustees support the Director in every way possible in preparing these documents and that the Director make specific requests for assistance from individual Board Members.

4. That the second meeting of the Board in 1988 be held immediately following the Donor Consortium meeting.

5. That the Board pass a strong resolution concerning its hopes for future relationships with donors and the 50:50 funding principle and that this resolution, together with news of the October/November consortium meeting, be sent to the donors in December, 1987.

6 That these arrangements for donor liaison in 1988 be made in the expectation that they will, if satisfactory, be followed each year on a routine basis.

12.0 Payment to Trustees

12.1. Per Diem

Trustees are paid a per diem when on Board business. It was recommended that such payments be made according to WHO rules. All Trustees should receive a per diem. A Trustee working on Board business at his home station should receive 50% of the standard per diem.

12.2 Honorarium

The honorarium has been set at $ 150 per day since the creation of ICDDR,B. The Committee recommends that this rate should continue.

Following the 1985 financial crisis, the Board decided that no honorarium should be received and subsequently reinstated a two-thirds honorarium ($ 100 per day). In June 1987, the Board resolved to reinstate the full honorarium from January 1, 1988. The Committee recommends that the full honorarium should not yet be reinstated but should remain at $ 100 per day.

13. Miscellaneous

13.1. Systems Development

The Committee approved of the implementation of an asset accounting system from January 1, 1988 at an annual recurrent cost of $ 4000.

The Committee approved of the development of an inventory control system at a cost of $ 30,000 - $ 50,000.

The Committee emphasized the need for financial savings, as well as increased managerial efficiency, to result from both these expenditures on systems development. The Committee hopes that staff reductions may follow from the successful establishment of these new systems.

13.2 Donors Consortium Expenses

The Committee approved expenditures of $ 2,276 related to the attendance of Chinese and Bangladeshi representatives at the donor consortium meetings in March and June of 1987. The Committee noted that some of these expenses might be recovered from UNDP.

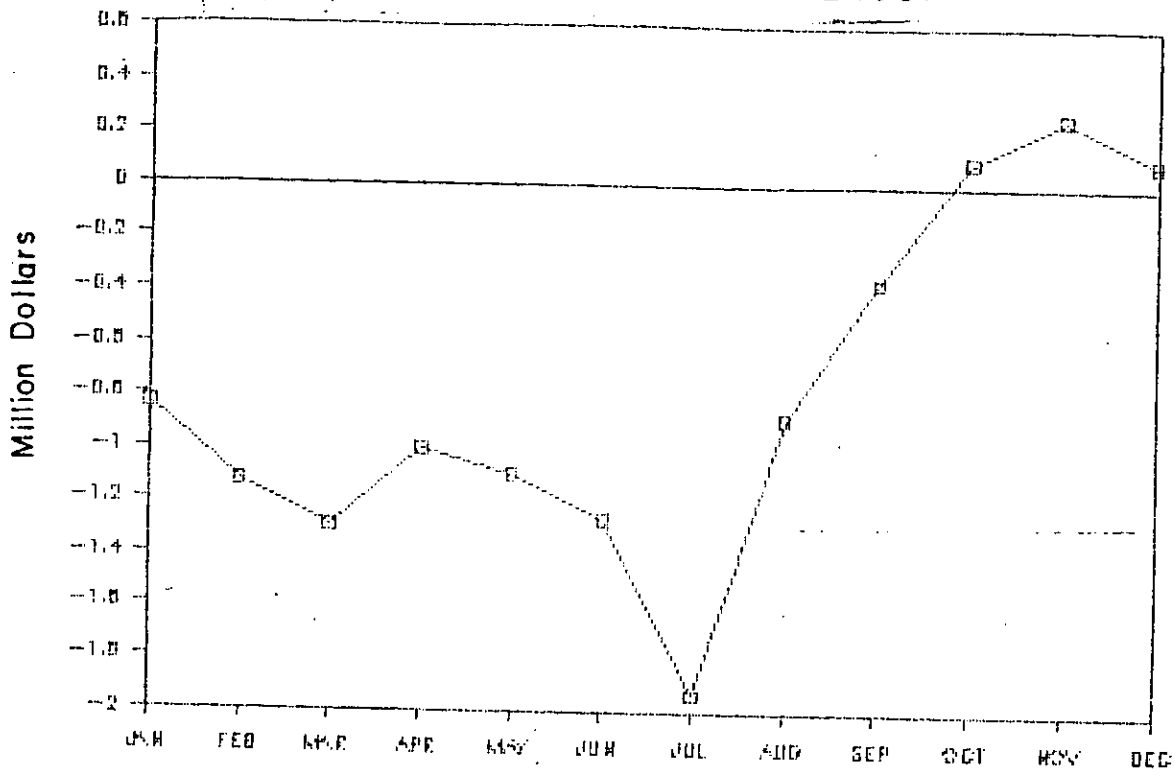
13.3 Insurance

The Committee approved a proposal to insure the Centre's computer, its stock of supplies, and cash in transit. The cost of this may be $ 2,600 per year, of which $ 1,500 will be charged to projects.

FIGURE 1

ICDDR,B

OVERDRAFT/BANK BALANCE 1987



OVERDRAFT/ BANK BALANCE 1988

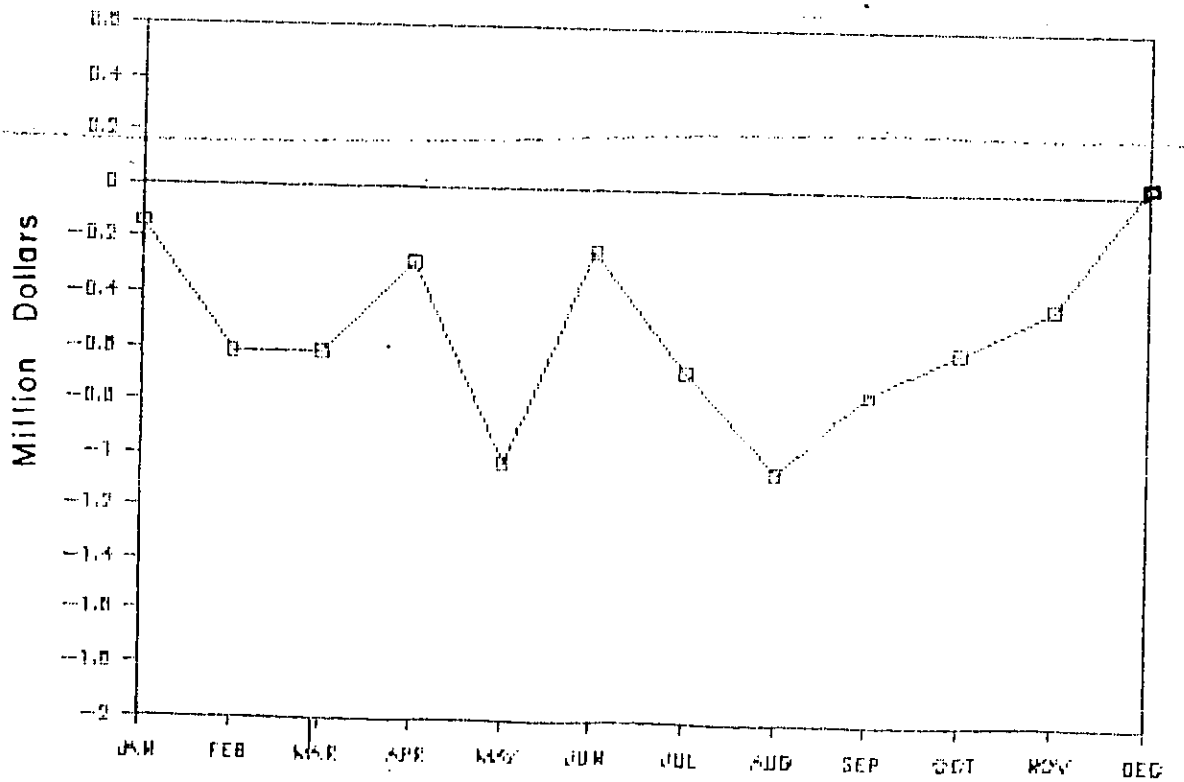


Table 1

CHANGES IN THE FINANCIAL POSITION OF ICDDR,B
BETWEEN MAY 1987 AND OCTOBER 1987

(In thousand US Dollars)

Projection of surplus for the year 1987 (May 1987)	323
Action taken as per Board's directives:	
Local staff salary increase (effect on central fund)	(90)
Decrease of other expenditures	74
Additional project fund received to offset centrally funded expenditure:	
AG Fund	250
UNICEF - Chandpur Project	67
Decrease of overhead due to reduction of project expenditure	(192)
Increase of Central Fund	67
Revised projection of surplus for the year 1987 (October 1987)	499

Table 2

INCOME AND EXPENDITURE FOR 1986-1988

(In thousands of U.S. Dollars)

	ACTUAL 1986	BUDGET 1987	ESTIMATED 1987 (October 1987)
INCOME			
Project Funds (Direct Cost)	5,393	6,318	6,095
Project Funds (Indirect Cost)	961	1,174	982
Central Funds	1,538	1,550	1,617
Sub-total	7,892	9,042	8,694
EXPENDITURE			
Research	3,823	4,198	3,962
Training	834	447	507
Health Care			
Treatment Centres	907	1,186	970
Community Health	490	659	819
Management/Services	1,689	1,929	1,937
Sub-total	7,743	8,719	8,195
SURPLUS/-DEFICIT BEFORE DEPRECIATION	149	323	499
Allowance for depreciation	462	500	500
SURPLUS/-DEFICIT AFTER DEPRECIATION	-313	-177	-1

TABLE 3

INCOME AND EXPENDITURE PROJECTION FOR 1987 AND 1988

(In thousand US Dollars)

	PROJECTED 1987	BUDGET 1988
INCOME		
Project Funds (Direct Cost)	6,095	7,755
Project Funds (Indirect Cost)	982	1,080
Central Funds	1,617	1,577
Sub-total	8,694	10,512
EXPENDITURE		
Research	3,962	4,303
Training	507	584
Health Care		
Treatment Centres	970	1,412
Community Health	819	1,812
Management/Services	1,937	1,791
Sub-total	8,195	9,921
SURPLUS BEFORE DEPRECIATION	499	591
Allowance for depreciation	500	800
DEFICIT AFTER DEPRECIATION	-1	-209

Table 4

INCOME AND EXPENDITURE PROJECTION FOR 1987 AND BUDGET FOR 1988

(In thousand US Dollars)

PROGRAMME AREAS	1987 Expenditures	1988 Expenditures	1988 Income Sources: Project Direct	Funds Indirect	Central Funds
1. RESEARCH					
Shigellosis	649	594	594		
Vaccine Trials	718	654	654		
Rehydration and Feeding	317	342	342		
Chronic Diarrhoea	58	134	134		
Child Survival	143	52	52		
Extension of Research/Services	878	1,290	1,290		
Demographic Surveillance and Studies	670	749	749		
Environmental Microbiology	60	61	61		
Other	469	427	427		
Sub-total	3,962	4,303	4,303		
2. TRAINING AND EXCHANGES					
Courses	112	197	197		
Int.Conference	10				
TCDC	355	387	387		
Inst.Linkage	30				
Sub-total	507	584	584		
3. HEALTH CARE SERVICES					
Treatment Centres	970	1,431	183		1,248
Community Health	819	1,812	1,780		
Sub-total	1,789	3,243	1,963		1,280
4. MANAGEMENT AND CENTRAL SERVICES					
Scientific Management	469	585	228		357
Central Services	1,468	1,206	27	1,080	99
Sub-total	1,937	1,791	251	1,080	456
GRAND TOTAL	8,195	9,921	7,105	1,080	1,736

Annex I

ATTACHMENT

1987 INCOME STATEMENT
(In US dollars)

A. Unrestricted-Core

Donors	Committed	Estimated	Total
1. Australia/ADAB	164,000		164,000
2. Bangladesh	31,000		31,000
3. Saudi Arabia		70,000	70,000
4. Switzerland	650,000		650,000
5. UK/ODA	235,000		235,000
6. UNICEF	250,000		250,000
7. USAID	250,000		250,000
SUB-TOTAL	1,580,000	70,000	1,650,000

B. Restricted-Core

Donors	Committed	Estimated	Total
1. AG Fund	250,000		250,000
2. CIDA/DSS	803,000		803,000
3. DANIDA	490,000		490,000
4. Japan	280,000		280,000
5. UNDP/Cl. Res.	300,000		300,000
6. USAID (Wash)	2,470,000		2,470,000
SUB-TOTAL	4,593,000		4,593,000

1987 INCOME STATEMENT

C. Restricted-Projects

Donors	Committed	Estimated	Total
1. Aga Khan Fndn.	35,000		35,000
2. Belgium	160,000		160,000
3. CIDA/Training	70,000		70,000
4. Ford Foundaiton/ ECPP	30,000		30,000
5. Ford Foundation/ Maternity Care	42,000		42,000
6. IDRC/DISC	55,000		55,000
7. NAS/BOSTID	28,000		28,000
8. NORAD/MCH	455,000		455,000
9. Norwich Eaton	12,000		12,000
10. Saudi Arabia/ Projects	500,000		500,000
11. SDC/Em. Relief	140,000		140,000
12. UNICEF	106,000		106,000
13. USAID/MCH-EXT.	1,300,000		1,300,000
14. USAID/UVP	650,000		650,000
15. World Bank/ Mirzapur	92,000		92,000
16. WHO	190,000		190,000
SUB-TOTAL	3,865,000		3,865,000

		COMMITTED	ESTIMATED	TOTAL
	A.	1,580,000	70,000	1,650,000
	B.	4,593,000		4,593,000
	C.	3,865,000		3,865,000
GRAND TOTAL		10,038,000	70,000	10,108,000

IN-KIND CONTRIBUTION

1.	Bangladesh	$ 1,457,000
2.	Belgium	$ 100,000
3.	JAPAN	$ 15,000
4.	Switzerland	$ 20,000

ANNEX II

ICDDR,B DONORS 1988 PROJECTIONS*
(In US dollars)

A. Unrestricted-Core

Donors	Committed	Estimated	Total
1. Australia/ADAB		170,000	170,000
2. Banglndesh		34,000	34,000
3. Saudi Arabia		70,000	70,000
4. Switzerland		650,000	650,000
5. UK/ODA		235,000	235,000
6. UNICEF		250,000	250,000
7. USAID	270,000		270,000
SUB-TOTAL	270,000	1,409,000	1,679,000

B. Restricted-Core

Donors	Committed	Estimated	Total
1. AG Fund	300,000		300,000
2. CIDA/DSS		803,000	803,000
3. DANIDA	500,000	-	500,000
4. Japan		280,000	280,000
5. UNDP/Cl. Res.		300,000	300,000
6. USAID (Wash)	2,375,000	-	2,375,000
SUB-TOTAL	3,175,000	1,383,000	4,558,000

* These projections may vary due to changes in the international financial and political situation.

1988 PROJECTIONS

C. Restricted-Projects

Donors	Committed	Estimated	Total
1. Aga Khan Fndn.	118,000		118,000
2. Belgium		100,000	100,000
3. CIDA/Training	70,000		70,000
4. Ford Foundaiton/ ECPP	100,000		100,000
5. NORAD/MCH	358,000		358,000
6. Saudi Arabia/ Dammam/Riyadh	500,000		500,000
7. Switzerland		400,000	400,000
8. World Bank/ Mirzapur	184,000		184,000
9. USAID/MCH-FP Ext.	1,160,000		1,160,000
10. USAID/CVP	750,000		750,000
11. UNICEF		100,000	100,000
12. WUSC/MCH		200,000	200,000
SUB-TOTAL	3,240,000	800,000	4,040,000

	COMMITTED	ESTIMATED	TOTAL
A.	270,000	1,409,000	1,679,000
B.	3,175,000	1,383,000	4,558,000
C.	3,240,000	800,000	4,040,000
GRAND TOTAL	6,685,000	3,592,000	10,277,000

IN-KIND CONTRIBUTION

1. Bangladesh $ 1,500,000

Annexure III

I: Local salary Increases Based on UN Salary system

Level	Increase	Effective date of UN Increase	Effective date of ICDDR,B Increase
GS I	9%	Jan 1,1983 (July 15,1984)	Jan 1,1983
GS 2-3	7%		
GS 4-6	5%		
NO A-D	4%		
GS 1-6	10.8%	Oct. 1,1984 (July, 1985)	Jan 1,1986
NO A-D	8%		
GS 1-6	10%	Jan 1,1985 (Nov, 1985)	Jan 1,1987
NO A-D	17%		
GS 1-2	8.42%	Dec 1,1985 (Oct 20,1986)	July 1,1987
GS 3-5	10.68%		
GS 6-NOD	16.98%		
GS 1-4	66%	Aug. 1,1986	Not implemented
GS 5	54%	Aug. 1,1986	Not implemented
GS 6	37%	Aug. 1,1986	Not implemented
NO A-D	28%	April 1,1987 (Aug. 19,1987)	Not implemented

announcement date in brackets.

ANNEX IV

APPENDIX - A

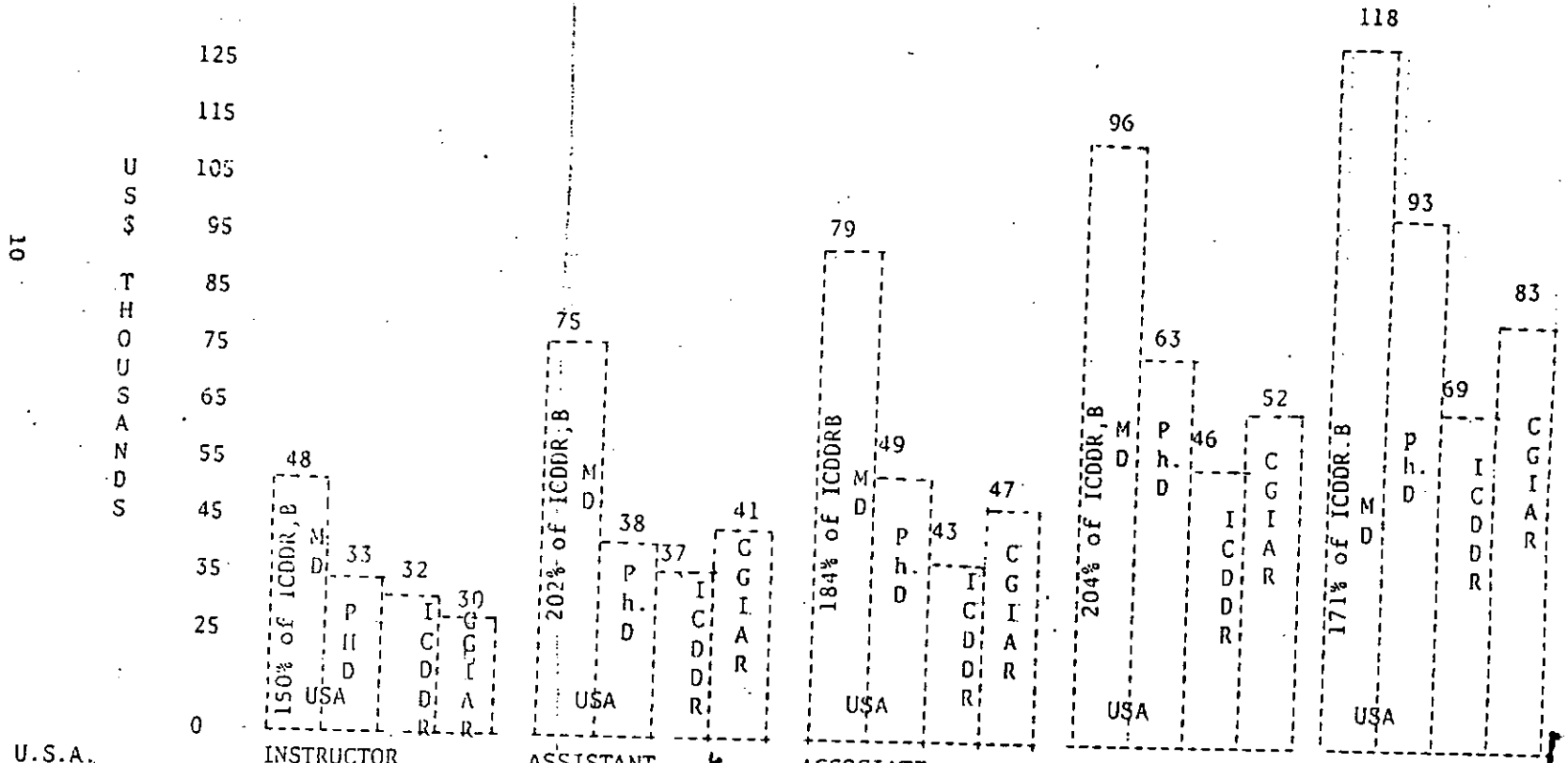
MEAN BASE SALARIES FOR MD'S AND Ph.D'S (1987)

COMPARED TO MEAN ICDDR,B P & CGIAR I LEVEL EQUIVALENTS

NOTE - MD & Ph.D AVERAGES FOR FOLLOWING DISCIPLINES IN CLINICAL MEDICINE FACULTIES FOR U.S. UNIVERSITIES:

COMMUNITY HEALTH
FAMILY PRACTICE
MEDICINE
PATHOLOGY

PEDIATRICS
PREVENTIVE MEDICINE
GASTROENTEROLOGY (MD ONLY)



U.S.A.	INSTRUCTOR	ASSISTANT PROFESSOR	ASSOCIATE PROFESSOR	PROFESSOR	CHAIRMAN
ICDDR,B	P-3 ASSOCIATE SCIENTIST	P-4 ASSISTANT SCIENTIST	P-5 SCIENTIST	P-6 HEAD DIVISION SENIOR SCIENTIST	D-2 DIRECTOR

RESOURCES DEVELOPMENT REPORT

RESOURCES DEVELOPMENT REPORT(Revised)

The two Donors' Meeting held by ICDDR,B in March and June,1987 had led to the expectation that a new fund raising plan would be developed, where short- and long-term and core fund requirements of the Centre would be addressed. Both meetings however ended without any tangible decisions in these regards and no firm fund raising policy seems to be forthcoming in the near future. In fact some donors may have withheld their decisions regarding core contribution because no firm resolution was adopted at the donor meeting. In the light of the above, the Resources Development Office maintained its efforts to successfully meet the Centre's financial requirements for 1987.

In the June 1987 meeting of the ICDDR,B Board of Trustees, Resources Development Report had projected the Centre's 1987 income at US $ 9.8 million. The actual commitments now stand at US $10 million with another US $70,000 expected to be pledged by the end of the year. We are pleased to report that, as in the past, we have again succeeded in achieving the objectives set before us for the year 1987.

Another area that merits special mention is the Centre's cash-flow situation. For the first time in recent years we have succeeded in bringing about a change in the status of the Centre's bank balance, from debit to credit. This is the result of a sustained effort to obtain early donor disbursements. With our continued efforts, coupled with adequate financial controls, we hope that this trend will be maintained and we will close the year with a surplus, as directed by the Board, before making any allowance for depreciation.

Since our last report in June, 1987, Resources Development was involved in the following major activities:

USAID/Dhaka: USAID grant to the Centre's MCH-FP Extension Project has been renewed for another 4 years. This grant was routed through USAID/Washington and was signed by the Chairman of the ICDDR,B Board of trustees. We would like to mention here that finalisation of this grant involved some of the toughest negotiations we have had to date.

USAID/Washington: The USAID grant to ICDDR,B for 1987 under the Cooperative Agreement was negotiated and signed. Institutional collaboration was also negotiated with Johns Hopkins and Tufts Universities and agreements are expected to be signed with them soon.

UNDP: The UNDP Clinical Research grant to ICDDR,B has been extended for one year, 1988. We have held discussions with UNDP/New York and expect that this grant will be extended for further period of three years.

The Ford Foundation: The Ford Foundation grant to the Centre's Epidemic Control Preparedness Programme, which ended in August 1987, has been renewed for another two years.

UNICEF/Dhaka: UNICEF/Dhaka has renewed its support to two on-going Centre projects. Our request to UNICEF/New York for project support in 1987 however was not approved.

Aga Khan Foundation: The Aga Khan Foundation has extended a three year grant to ICDDR,B in partial support of the Centre's collaborative activities in China.

Emergency Relief Activities: In the wake of the unprecedented floods in Bangladesh, pressure on the Centre's Treatment facilities and epidemic intervension activities increased tremendously. To meet with this situation, grants were negotiated and obtained from Switzerland, Belgium and Japan.

Switzerland: Beginning 1988, the Swiss Development Cooperation has agreed to provide programme support to ICDDR,B, over and above their core contribution. A proposal has been submitted for their consideration.

Saudi Arabia: Dr. K.A. Monsur, Trustee, ICDDR,B , the Director and the Associate Director, Resources Development visited Riyadh and met with the His Excellency Minister for Health, Kingdom of Saudi Arabia and Dr. Abdul Rahman Al-Swailem to request an increase in the annual Saudi core contribution to the Centre. No decision has been taken in this regard yet.

UNROB: Fate of the UNROB loan still remains undecided. We have approached the Hon'ble Minister of Health, Bangladesh, to take up the matter with the relevant authorities to convert this loan into a grant. A decision in this regard may be expected soon.

Donors' Meeting:

Donor-ICDDR,B Interaction: The June 1987 ICDDR,B Donors' Meeting discussed the posibility of an increased interaction between the donors and the Centre. We hope that the Board of Trustees will develop an appropriate mechanism for achieving this.

Grant Mix: It was also tentatively agreed that each donor should give at least 50% of their grant to ICDDR,B to its central fund. To achieve this, the Board of Trustees should develop a set of guidelines, keeping in view the divergent nature of the Centre's multifarious donors. We also request the Board to give us guidelines for obtaining long-term commitments from donors. This will enable us to make firm long term income projections and consequently activity plans.

Cancellation of Debts: ICDDR,B Donors in their June Meeting recognised the importance of cancelling the Centre's debts. Some were willing to assist the debt cancellation on a sharing basis. Building up of the Centre's Reserve Fund was also not addressed. We request the Board to establish requisite guidelines for this purpose.

We also request the Board to give us their decision as to where and when the next Donors' Meeting will be held.

The Centre's income projections for the year 1988, made in June 1987, was US $9.8 million. We hope to achieve this target during the course of that year and increase the income to US $ 10.2 million.

The income statement for 1987 and the projection for 1988 are attached to this report.

ATTACHMENT

1987 INCOME STATEMENT
(In US dollars)

A. Unrestricted-Core

Donors	Committed	Estimated	Total
1. Australia/ADAB	164,000		164,000
2. Bangladesh	31,000		31,000
3. Saudi Arabia		70,000	70,000
4. Switzerland	650,000		650,000
5. UK/ODA	235,000		235,000
6. UNICEF	250,000		250,000
7. USAID	250,000		250,000
SUB-TOTAL	1,580,000	70,000	1,650,000

B. Restricted-Core

Donors	Committed	Estimated	Total
1. AG Fund	250,000		250,000
2. CIDA/DSS	803,000		803,000
3. DANIDA	490,000		490,000
4. Japan	280,000		280,000
5. UNDP/Cl. Res.	300,000		300,000
6. USAID (Wash)	2,470,000		2,470,000
SUB-TOTAL	4,593,000		4,593,000

1987 INCOME STATEMENT

C. Restricted-Projects

Donors	Committed	Estimated	Total
1. Agn Khan Fndn.	35,000		35,000
2. Belgium	160,000		160,000
3. CIDA/Training	70,000		70,000
4. Ford Foundaiton/ ECPP	30,000		30,000
5. Ford Foundation/ Maternity Care	42,000		42,000
6. IDRC/DISC	55,000		55,000
7. NAS/BOSTID	28,000		28,000
8. NORAD/MCH	455,000		455,000
9. Norwich Eaton	12,000		12,000
10. Saudi Arabia/ Projects	500,000		500,000
11. SDC/Em. Relief	140,000		140,000
12. UNICEF	106,000		106,000
13. USAID/MCH-EXT.	1,300,000		1,300,000
14. USAID/UVP	650,000		650,000
15. World Bank/ Mirzapur	92,000		92,000
16. WHO	190,000		190,000
SUB-TOTAL	3,865,000		3,865,000

		COMMITTED	ESTIMATED	TOTAL
	A.	1,580,000	70,000	1,650,000
	B.	4,593,000		4,593,000
	C.	3,865,000		3,865,000
GRAND TOTAL		10,038,000	70,000	10,108,000

IN-KIND CONTRIBUTION

1.	Bangladesh	$ 1,457,000
2.	Belgium	$ 100,000
3.	JAPAN	$ 15,000
4.	Switzerland	$ 20,000

ICDDR,B DONORS 1988 PROJECTIONS*
(In US dollars)

A. Unrestricted-Core

Donors	Committed	Estimated	Total
1. Australia/ADAB		170,000	170,000
2. Bangladesh		34,000	34,000
3. Saudi Arabia		70,000	70,000
4. Switzerland		650,000	650,000
5. UK/ODA		235,000	235,000
6. UNICEF		250,000	250,000
7. USAID	270,000		270,000
SUB-TOTAL	270,000	1,409,000	1,679,000

B. Restricted-Core

Donors	Committed	Estimated	Total
1. AG Fund	300,000		300,000
2. CIDA/DSS		803,000	803,000
3. DANIDA	500,000	-	500,000
4. Japan		280,000	280,000
5. UNDP/Cl. Res.		300,000	300,000
6. USAID (Wash)	2,375,000	-	2,375,000
SUB-TOTAL	3,175,000	1,383,000	4,558,000

* Thése projections may vary due to changes in the international financial and political situation.

1988 PROJECTIONS

C. Restricted-Projects

Donors	Committed	Estimated	Total
1. Aga Khan Fndn.	118,000		118,000
2. Belgium		100,000	100,000
3. CIDA/Training	70,000		70,000
4. Ford Foundaiton/ ECPP	100,000		100,000
5. NORAD/MCH	358,000		358,000
6. Saudi Arabia/ Dammam/Riyadh	500,000		500,000
7. Switzerland		400,000	400,000
8. World Bank/ Mirzapur	184,000		184,000
9. USAID/MCH-FP Ext.	1,160,000		1,160,000
10. USAID/UVP	750,000		750,000
11. UNICEF		100,000	100,000
12. WUSC/MCH		200,000	200,000
SUB-TOTAL	3,240,000	800,000	4,040,000

		COMMITTED	ESTIMATED	TOTAL
	A.	270,000	1,409,000	1,679,000
	B.	3,175,000	1,383,000	4,558,000
	C.	3,240,000	800,000	4,040,000
GRAND TOTAL		6,685,000	3,592,000	10,277,000

IN-KIND CONTRIBUTION

1.	Bangladesh	$ 1,500,000

APPROVAL OF 1988 BUDGET

BUDGET - 1988

Summary

The Budget for 1988 does not differ materially from the estimated income and expenditure of 1987. Central Fund contribution estimated to be US$ 1,677,000 in 1988 against US$ 1,617,000 in 1987. The marginal increase of US$ 60,000 is expected to come from USAID, Australia and U.K. government.

Income on the project funds are estimated to be much higher than in 1987 a substantial amount of which is a carry over from prior donor advances. The increase does not effect the surplus as expenditure and income are both matched on an accrual system of accounting.

Central funded expenditures have been assumed to be in the same level as 1987. No increase in salary or staff at any level other than existing approved positions has been considered in this budget. With these assumptions surplus projected for 1988 could reach US$ 591 thousand. This figure is obviously a tentative one.

More details of estimates for 1987 and budget for 1988 are given in the attached tables and graphs (to be presented in the meeting).

Overdraft*

	Budgeted Level	Maximum Level
Opening balance at 01.01.1988	91	91
Receipts during the year 1988	9,859	9,859
Expenditure during the year 1988	(9,921)	(11,950)
Closing (overdraft) at 31.12.1988	29	(2,000)

Budgeted level indicates that there may not be any overdraft if income and expenditure as budgeted are achieved, in other words, if existing level of donor advances are maintained. Should donors not pay advances as in the recent past the maximum overdraft level will be US$ 2,000 thousand.

*For details please see Table 6

Table 1

CHANGES IN THE FINANCIAL POSITION OF ICDDR,B BETWEEN MAY 1987 AND OCTOBER 1987

(In thousand US Dollars)

Projection of surplus for the year 1987 (May 1987)	323
Action taken as per Board's directives:	
Local staff salary increase (effect on central fund)	(90)
Decrease of other expenditures	74
Additional project fund received to offset centrally funded expenditure:	
AG Fund	250
UNICEF - Chandpur Project	67
Decrease of overhead due to reduction of project expenditure	(192)
Increase of Central Fund	67
Revised projection of surplus for the year 1987 (October 1987)	499

TABLE 2

INCOME AND EXPENDITURE BUDGET FOR 1987 & 1988

	Projected 1987	Budget 1988
A. Income	(In thousand US Dollars)	
Central Funds	1,617	1,677
Project Funds (Direct Cost)	6,095	7,755
Project Funds (Indirect Cost)	982	1,080
Total Income	8,694	10,512
B. Expenditure		
Local salaries	4,065	4,665
Inter'l salaries	1,436	1,903
Consultants	431	367
Mandatory committees	96	82
Travel	327	467
Supply and materials	1,077	1,101
Other contractual services	822	930
Interdepartmental services	1,323	1,692
Total Operating	9,577	11,207
Less: Recovery	1,713	1,692
Net Operating	7,864	9,515
Add: Capital expenditure	331	406
Total Expenditure	8,195	9,921
C. Surplus/-deficit		
Surplus before Depreciation	499	591
Depreciation	-500	-800
Net Deficit for the year US $	-1	-209

TABLE 3

INCOME AND EXPENDITURE BUDGET FOR 1987 & 1988

	Proejcted 1987			Budget 1988		
	(In thousand US Dollars)					
	CENTRAL	PROJ.	TOTAL	CENTRAL	PROJ.	TOTAL
A. Income						
Central Funds	1,617		1,617	1,677		1,677
Project Funds(Direct Cost)	707	5,338	6,095	650	7,105	7,755
Project Funds (Indirect)	982		982	1,080		1,080
Total Income	3,306	5,388	8,694	3,407	7,105	10,512
B. Expenditure						
Local salaries	1,822	2,183	4,065	2,049	2,616	4,665
Inter'l salaries	531	905	1,436	568	1,335	1,903
Consultants	105	326	431	18	349	367
Mandatory committees	95	1	96	82	0	82
Travel	95	232	327	55	412	467
Supply and materials	671	406	1,077	571	530	1,101
Other contractual services	482	340	822	475	455	930
Interdepartmental services	573	750	1,323	590	1,102	1,692
Total Operating	4,434	5,143	9,577	4,408	6,799	11,207
Less:Recovery	1,713		1,713	1,692		1,692
Net Operating	2,721		7,864	2,716	6,799	9,515
Add:Capital expenditure	86	245	331	100	306	406
Total Expenditure	2,807	5,388	8,195	2,816	7,105	9,921
C. Surplus/-deficit						
Surplus before Depreciation	499	0	499	591	0	591
Depreciation	-500		-500	-800		-800
Net Deficit for the year US $	-1	0	-1	-209	0	-209

TABLE 4

INCOME AND EXPENDITURE PROJECTION FOR 1987 AND 1988

(In thousand US Dollars)

	PROJECTED 1987	BUDGET 1988
INCOME		
Project Funds (Direct Cost)	6,095	7,755
Project Funds (Indirect Cost)	982	1,080
Central Funds	1,617	1,577
Sub-total	8,694	10,512
EXPENDITURE		
Research	3,962	4,303
Training	507	584
Health Care		
Treatment Centres	970	1,412
Community Health	819	1,812
Management/Services	1,937	1,791
Sub-total	8,195	9,921
SURPLUS BEFORE DEPRECIATION	499	591
Allowance for depreciation	500	800
DEFICIT AFTER DEPRECIATION	-1	-209

Table 5

INCOME AND EXPENDITURE PROJECTION FOR 1987 AND BUDGET FOR 1988

(In thousand US Dollars)

PROGRAMME AREAS	1987 Expenditures	1988 Expenditures	1988 Income Sources: Project Direct	Funds Indirect	Central Funds
1. RESEARCH					
Shigellosis	649	594	594		
Vaccine Trials	718	654	654		
Rehydration and Feeding	317	342	342		
Chronic Diarrhoea	58	134	134		
Child Survival	143	52	52		
Extension of Research/Services	878	1,290	1,290		
Demographic Surveillance and Studies	670	749	749		
Environmental Microbiology	60	61	61		
Other	469	427	427		
Sub-total	3,962	4,303	4,303		
2. TRAINING AND EXCHANGES					
Courses	112	197	197		
Int.Conference	10				
TCDC	355	387	387		
Inst.Linkage	30				
Sub-total	507	584	584		
3. HEALTH CARE SERVICES					
Treatment Centres	970	1,431	183		1,248
Community Health	819	1,812	1,780		
Sub-total	1,789	3,243	1,963		1,280
4. MANAGEMENT AND CENTRAL SERVICES					
Scientific Management	469	585	228		357
Central Services	1,468	1,206	27	1,080	99
Sub-total	1,937	1,791	251	1,080	456
GRAND TOTAL	8,195	9,921	7,105	1,080	1,736

TABLE 6

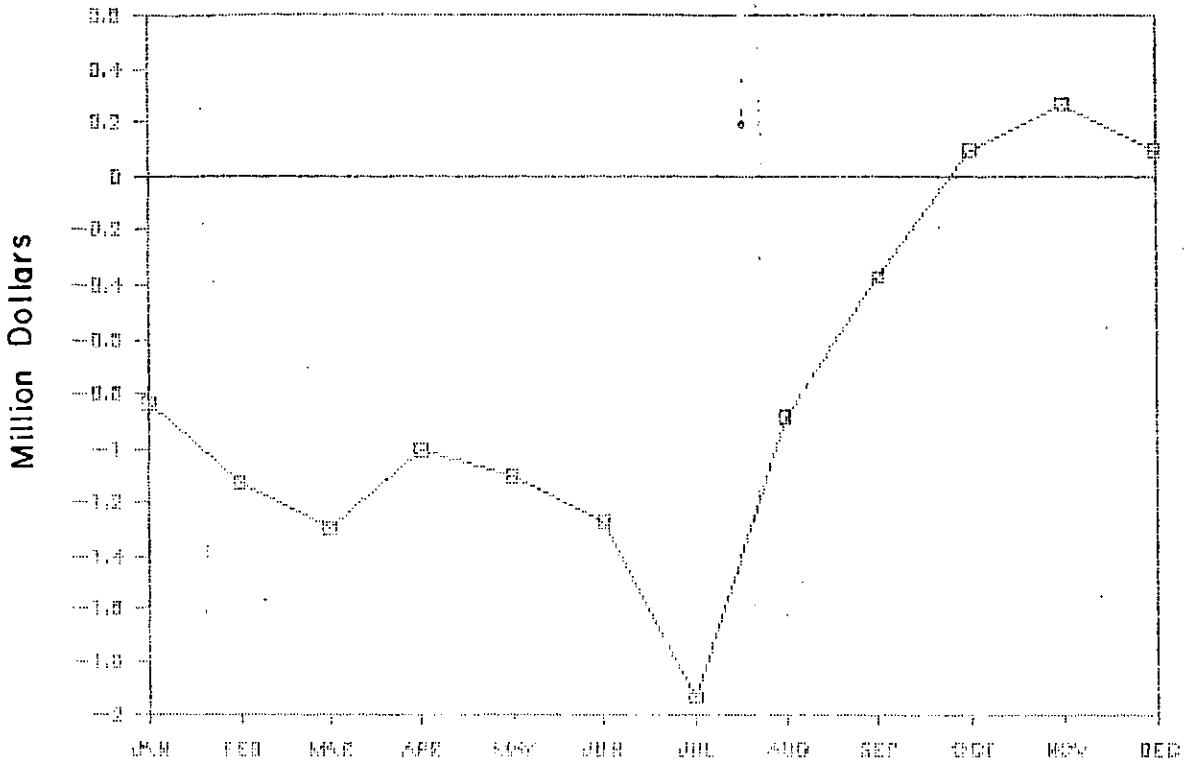
MONTHLY CASH FLOW 1988

(In thousand US Dollars)

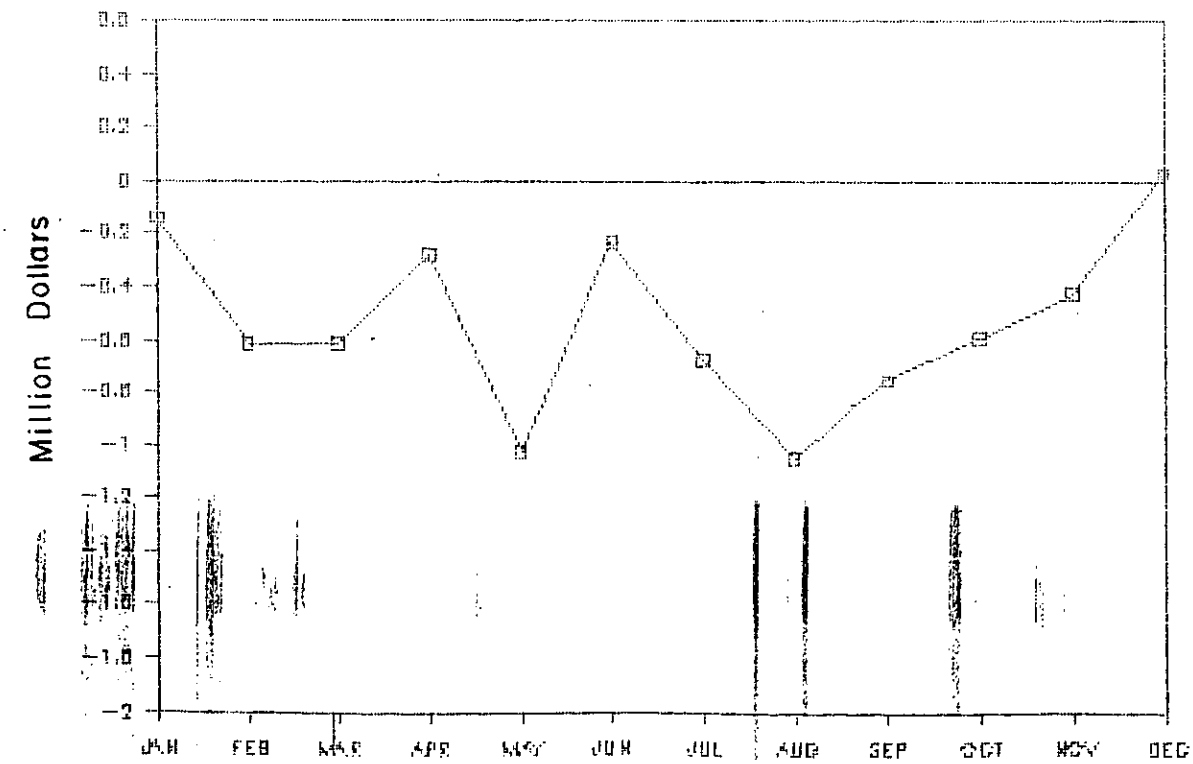
	Receipts	Payments	Balance
Opening bank overdraft as at January 1, 1988			91
January	427	660	-142
February	162	637	-617
March	800	797	-614
April	1,087	750	-277
May	50	797	-1,024
June	1,665	872	-231
July	378	822	-675
August	430	803	-1,048
September	1,284	992	-756
October	1,010	847	-593
November	1,073	907	-427
December	1,493	1,037	29
	9,859	9,921	
Closing bank overdraft as at December 31, 1988			29

ICDDR,B

OVERDRAFT/BANK BALANCE 1987

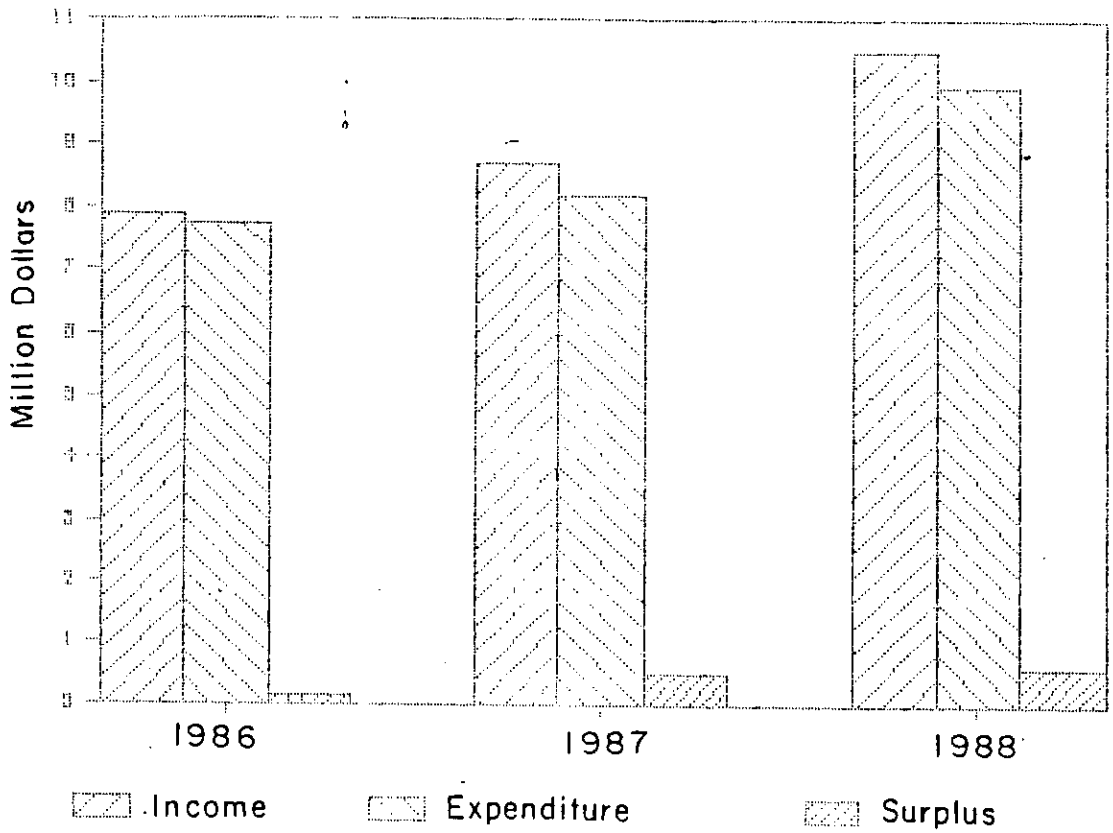


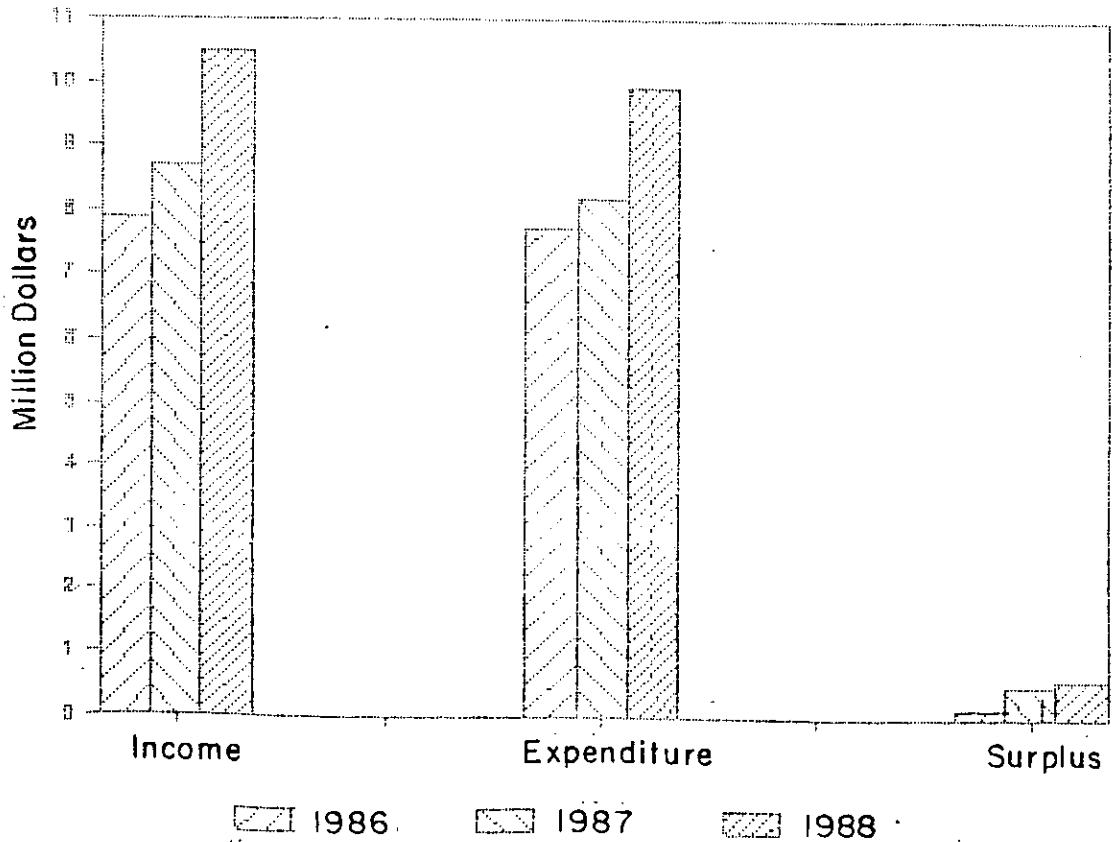
OVERDRAFT/ BANK BALANCE 1988



ICDDR, B

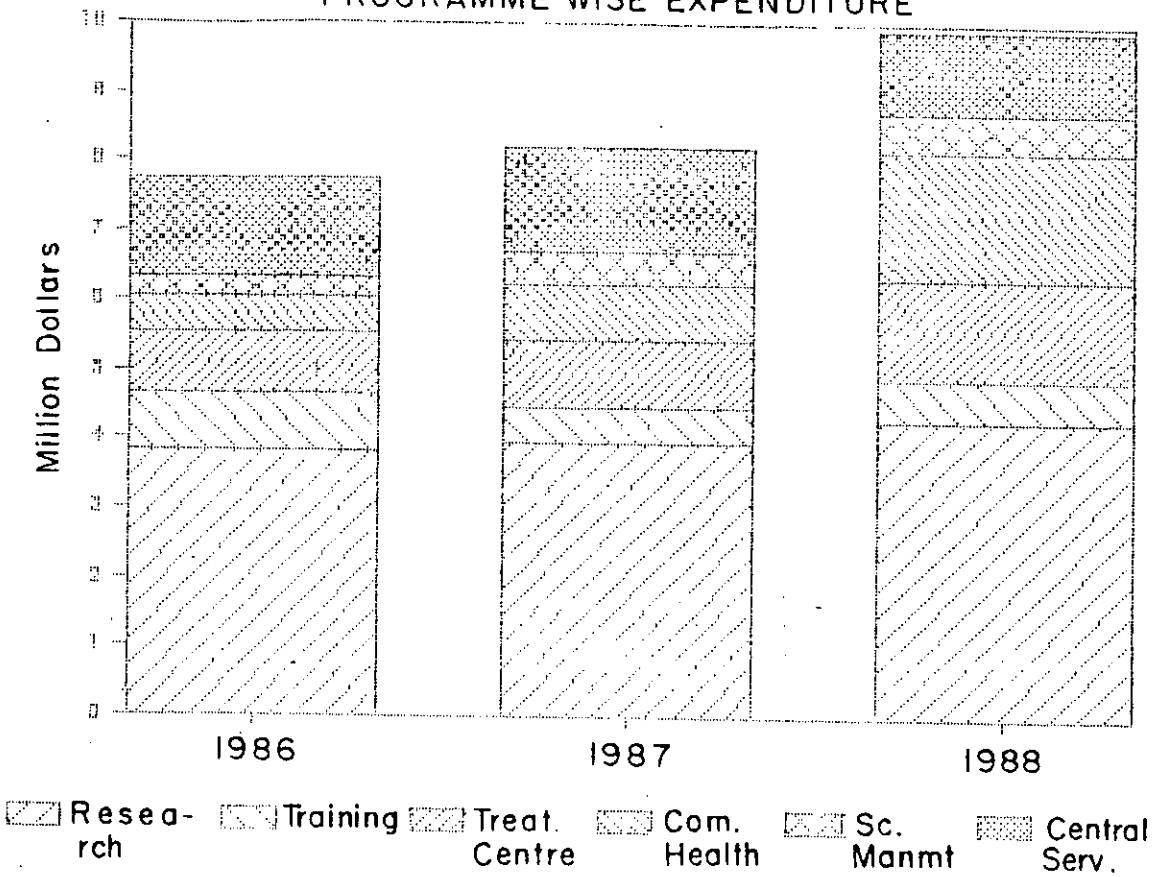
INCOME, EXPENDITURE AND SURPLUS



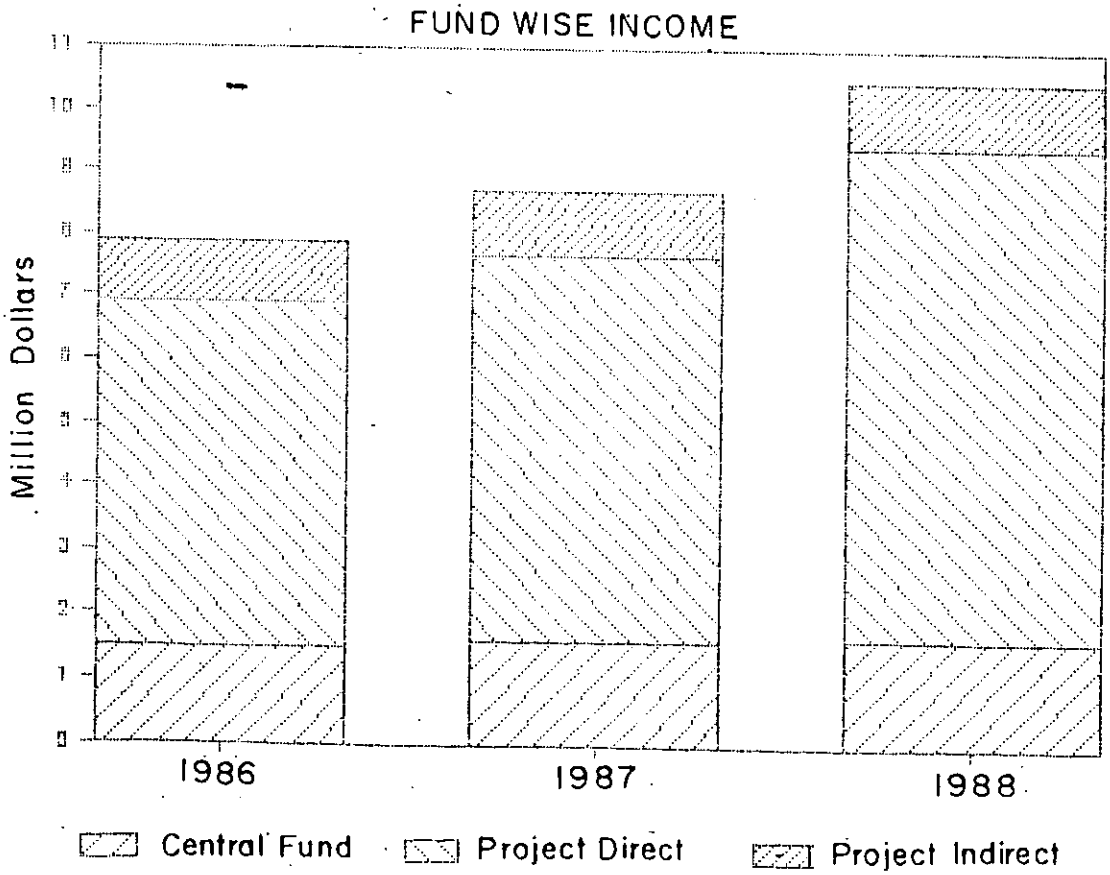


ICDDR, B

PROGRAMME WISE EXPENDITURE

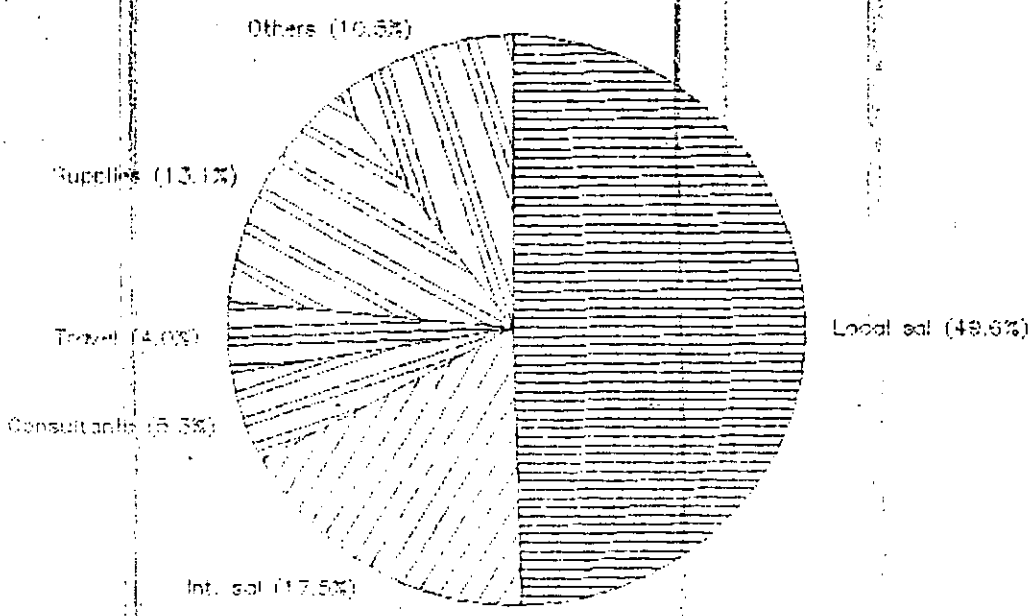


FUND WISE INCOME

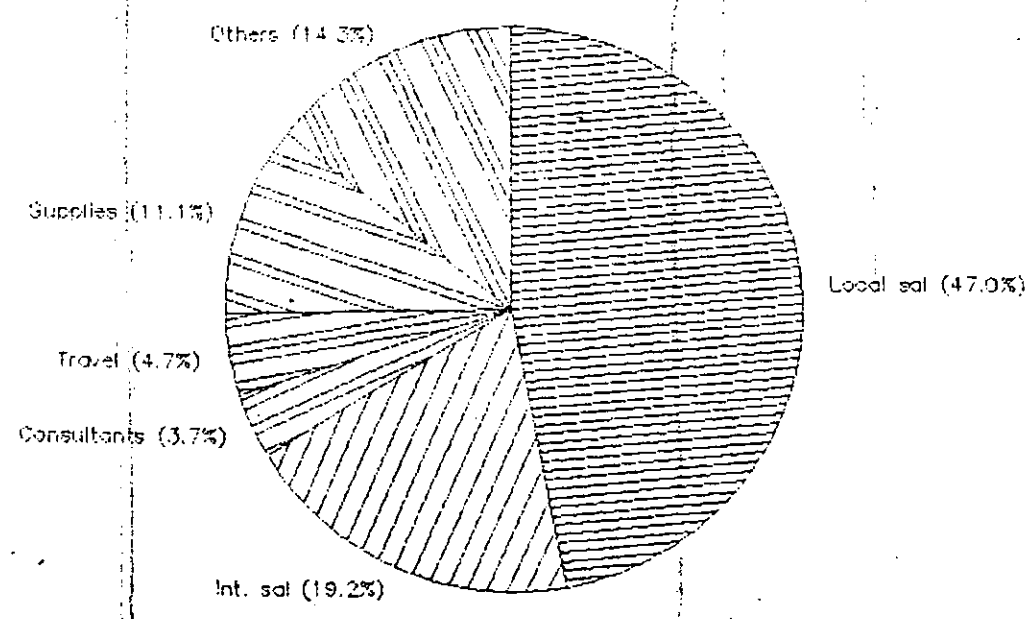


ICDDR,B

Expenses for 1987



Expenses for 1988



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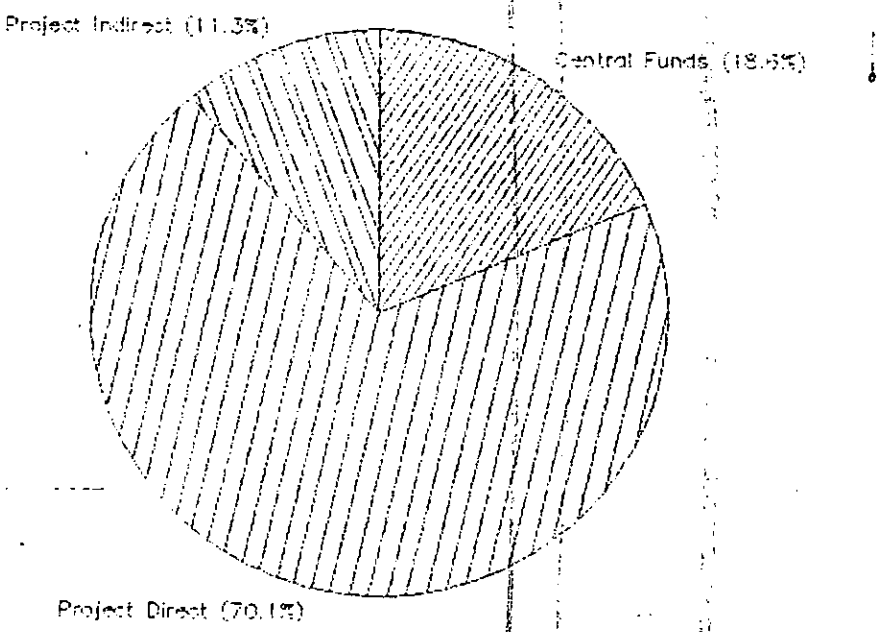
Income for 1987



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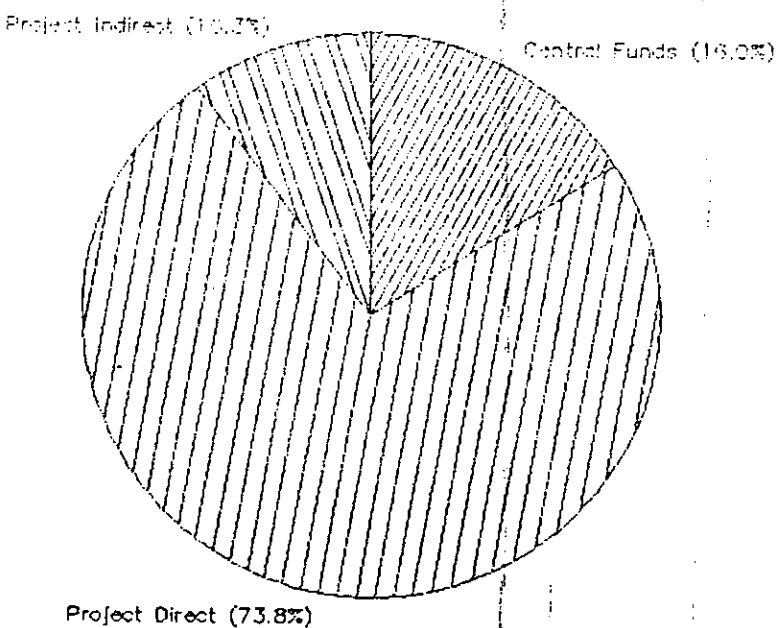

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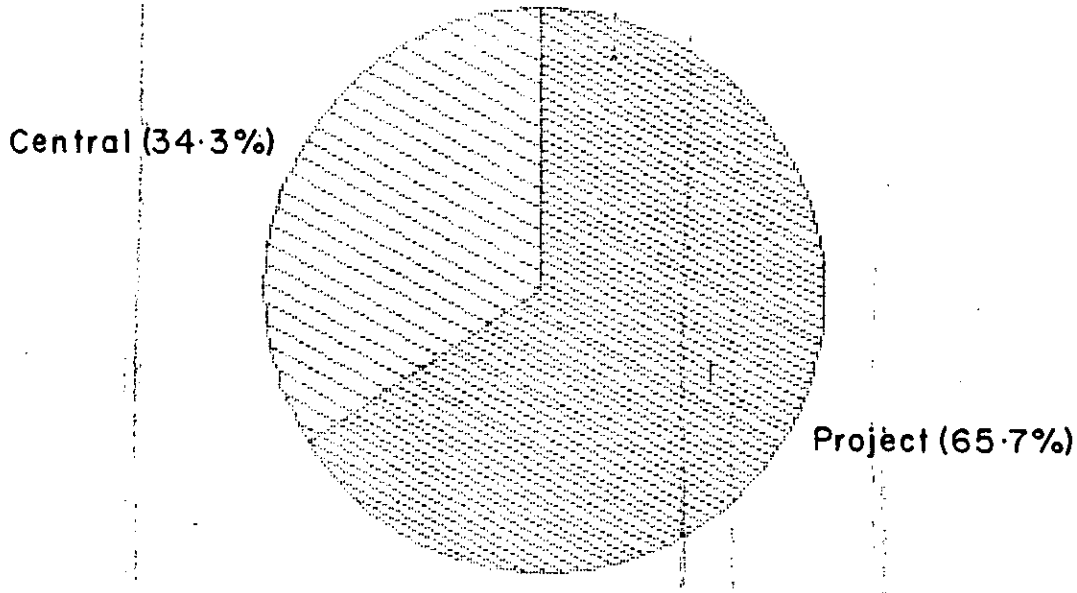

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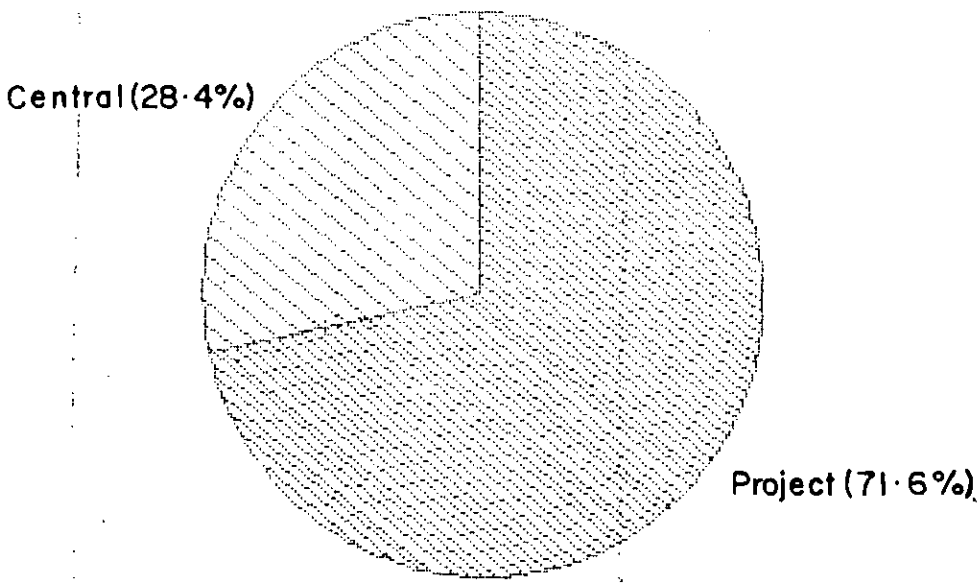

INTERACTION BETWEEN DONORS

Contacts with the Donors

Donors' Consortium

1. In 1987, the Centre has had two donors' consortia (March - Dhaka, June - Geneva). The success of the meetings are not easy to evaluate, and have been judged somewhat differently by some members of the Board and of the Centre's management.

2. I'd like to propose to hold a yearly meeting of the Donors' representatives in Dhaka (occasionally another venue could be considered). I think the best time would be after the November Board Meeting. Obviously, the work involved in preparing both a Board Meeting and a Donors Consortium would be considerable. It might be almost impossible with the present dearth of senior staff, but we hope to be in better shape next year.

3. If this proposal is approved, it would entail the Chairman of the Board and some members to stay in Dhaka for a maximum of two or three days after the BOT meetings.

Reporting to Donors

4. It is proposed that, after every BOT meeting the Chairman would write an individual letter to all donors (and other interested parties?). This letter would be a summary of the budgetary situation, the scientific progress, and decisions taken by the Board. In some cases, this letter may have to be customized, to address specific donors' concerns and interests.

5. Besides that, the Senior Management and the scientists concerned, acting in close collaboration, should inform individual donors about activities and problems in the areas they support. In many cases this is a contractual requirement, but even when this is not the case, "customized" reporting might be useful.

Scientific Writer/Editor

6. The amount of written material produced in the Centre is considerable, not to say staggering. All too frequently the quality of this material is far from optimal. This is quite understandable if one takes into account that the majority of the Centre's staff members are not native English speakers (in that respect also, the departure of Drs Rowland and Sack has been a grave loss), and have had no training in writing

skills. The Centre would need a scientific writer/editor, but I submit that we cannot yet afford to pay him from the core budget. Specific donor support ought to be found. Few donors, however, are interested in funding such a position and they are already heavily sollicited (UNDP, IDRC, (ODA?)).

7. Still, the need is real. I'm very grateful to Prof. Rowley for an offer he made in a letter dated September 1. I quote "At the end of this year, I will retire from my Chair and will have more time. If it were the wish of the Board, I would be prepared to take on the job of developing and writing scientific priority documents in consultation with donors, board members and Centre staff. This could preferably be done in collaboration with a 'Management Review Group', which is another name for the Programme Committee. If such an initiative were to occur in 1988, it would also need to be on the Board Agenda in November."

I propose the Board should take a resolution in this matter, and help identifying a donor.

RE:jc

PROCEDURES FOR PROJECT APPROVAL

Per Resolution of the Board of Trustees number 7/June 1987, following are the protocol approving and funding procedures of the Centre

All protocols are initiated by the Principal Investigators with the provision that they must fall within the Centre's mandate. These protocols are reviewed and considered by the respective divisional working groups where the scientific and financial aspects are reviewed.

If the protocol is approved it is forwarded to the Research Review Committee for its review and approval.

After the approval of the Research Review Committee, the protocol is sent to the Ethical Review Committee for final approval.

Most of the protocols fall under certain umbrella programmes which have already received funding from donors. The individual approved protocols are then given budgetary allocations.

For unfunded protocols, requests are made to donors for their support or are supported by the Centre's core fund, if available.

Regarding institutional collaboration and secondment of personnel to the Centre, a well defined policy needs to be established by the Board.

Programme-wise proposals are initiated by Programme Heads (Associate Directors) in consultation with Resources Development Office. All proposal budgets are reviewed and cleared by finance. Once the proposal is finalised by the management, Resources Development identifies donors and negotiate their support. During this process Resources Development is assisted by the respective Programme Heads/Director.

.. /2

While negotiating with the donors the Management/Resources Development ensures that the agreements with the donors fully respect and are in full compliance with all the accepted rules, procedures and guidelines of the Centre, as laid down by the Board from time to time. To avoid any lapses in this respect, no scientist, on their own, should make any commitment to the donors, on behalf of the Centre.

This is the normal procedure for negotiating with donors for funding. However, there has been a few lapses where scientists have negotiated directly with donors resulting in unnecessary complications.

All communications with donors, even after the funds have been obtained, are routed through the Resources Development Office. There have been some lapses here also, examples of MCH-FP Extension and the Urban Volunteer Programme can be cited here.

The Director has issued memos requesting all Principal Investigators to comply with the ICDDR,B procedures and to channel their communications to donors through the Resources Development/Director's Office.

PLANS FOR IMPROVEMENT OF HOSPITAL

THE ICDDR,B DHAKA TREATMENT CENTRE (DTC)

Notes on a possible extension of the physical facilities

1. Introduction

1.1 The ICDDR,B Dhaka Treatment Centre cares for about 65,000 cases of diarrhoea per year. Sixty-five per cent of the patients are children, many of them malnourished. No patients are refused admission; all are treated free of cost.

1.2 More than 90% of the patients are treated on an out-patient basis, either (i) exclusively with oral rehydration therapy (ORT) combined with short sessions of health - and nutritional education, or (ii) during a brief hospitalization (<24 h) with, if need be, first a 4-hour intravenous rehydration, and subsequently ORT. Antibiotics or other drugs are not used.

1.3 About 5,000 persons per year are in-patients, their disease being too severe to warrant ambulatory treatment. They receive a full medical work-up, with the required microbiological and biochemical examinations. The treatment is based on the clinical status and the laboratory results; only essential drugs

are used. The DTC's budget (US$ 853,441 projected for 1987; US$ budgeted for 1988) comes from the Centre's core donors and from the Danish International Development Agency (DANIDA). Support from other donors is actively being sought.

1.4 The overall results are satisfactory if one takes into account the young age and poor general conditions of the majority of patients, the severity of their illness, and the means available. Some case fatality rates for inpatients are as follows (in %)

- Cholera 1.1
- Other watery diarrhoeas 6.9
- Typhoid fever 8.6
- Shigellosis 7.8

The highest fatality rates are seen in young, malnourished children with invasive diarrhoea complicated by pneumonia, meningitis, septicaemia, hypoglycaemia, etc. (20%),

1.5 Besides its service function, the DTC also fulfils an important role in two other activities mandated by the ICDDR,B's Ordinance.

- Training is being given to many types of health workers from Bangladesh and abroad, including urban volunteer health workers from the poorest

parts of Dhaka*, nurses and medical students from many developed and developing countries, medical practitioners and health policy makers.

- Research in the clinical, metabolic and laboratory aspects of diarrhoeas, physiopathology, and new treatments is being pursued systematically. All research is subject to approval by the ICDDR,B's Research Review and Ethical Review Committees, and informed consent of the patients or their legal guardians.

1.6 The DTC has a staff of 210. Some key staff are

- Medical doctors : 25 (belonging to six nationalities)
- Nurses and other paramedics : 58
- Laboratory technicians : 35

2. The present problem

2.1 Despite the stress on ambulatory treatment the patients coming to the ICDDR,B Dhaka Treatment Centre suffer from intense overcrowding. Expecially the two major wards, with 120 and 60 patients respecitvely, are much too big, badly proportioned and difficult to ventilate.

2.2 There is a lack of separate wards for children, women

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* About 1,500 Urban Volunteer Workers trained at the DTC gave home-treatment to 79,000 cases of diarrhoea in 1986, using 250,000 ORS sachets.

and men, and for patients with different types of diarrhoea (watery, invasive and chronic).

2.3 Many needs of the patients and their relatives remain unmet due to lack of space (or capital money):

- Isolation rooms
- Procedure rooms
- Mortuarium with waiting space for relatives
- Grief rooms, prayer room
- Emergency power generator

2.4 The DTC is about to start a Child Health Outreach Programme with support from DANIDA, but there is as yet barely any space available for this important activity.

It has been tried in the past to overcome the overcrowding and its ensuing problems by two approaches:

* Collaboration with other medical institutions in Dhaka and helping them in setting up diarrhoea treatment wards.
* Offering home treatment to the urban pooor through the Urban Volunteer Programme (see footnote p.3).

The number of patients has indeed come down from about 100,000 in 1979 to the present stable figure of about 65,000 per year. Yet, the proportion of severely ill patients requiring prolonged stay has increased considerably.

For the present problems there seem to be only two solutions:

- Either refuse admission to at least 50% of the patients
- Or expand the existing physical plant.

Refusing patients has to be considered as unethical (the DTC is still the only big facility for patients with diarrhoea in Dhaka). Therefore, the ICDDR,B is requesting the help of countries and agencies that are already supporting it, or are willing to do so, to fund an extension of the physical plant as it exists now. This means adding one floor to the existing building.

3. The existing building

3.1 The ICDDR,B's DTC is built on land generously donated by the Government of Bangladesh. Thanks to support from the OPEC Fund the ground floor of what was planned to become a multi-storey building was opened in 1983.

3.2 The DTC has two parallel wings. The total surface is 2,976 sq. metre or 32,000 sq. feet. The net surface available for patient care as such (excluding toilets, corridors, nurses' stations, etc.) is 809 sq. metre or 8,715 sq. feet*. All too frequently, patients must also be cared for in the south lobby and corridors**. Once, during a particularly severe cholera epidemic, tents had to be set up around the building.

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* Indicated by cross-hatching in Fig. 1
** Indicated by single-hatching on Fig. 1

3.3 There are 5 different wards used for patients' care, each of them with a different function according to the severity of the patients' condition. This is determined immediately on the patients' arrival. Allocation of the patients to the different wards is done according to the following criteria (Table 1).

Table 1

Ward	Oral Re-hydration	Short-stay re-hydrtn.	General In-patients	Intensive Care	Nutri-tional rehab-ltatn.
	1	2	3	4	5
General condition	Good	Fair to poor	Poor	Poor to critical	Poor
Dehydration	Not detectable	Mild to severe	Mild to severe	Mild to critical	None
Nutritional status	Good to fair	Good to fair	Fair to poor	Fair to critical	Criti-cal
Symptoms of complicatious	None	None	None to severe	Severe to critical	None to mild
Length of stay	1-2 hours	12-24 hours	4-5 days	3-10 days	15-30 days

3.4 The screening on admission is done in the lobby. Patients are followed during their stay and, if their condition worsens, are moved to a ward with a higher level of care (from 1 to 4 - Table 1). Patients

staying in the Nutritional Rehabilitation Ward (5) come from the General Inpatients (3) or the Intensive Care Wards (4), after they have recovered from their acute illness.

Patients admitted for research purposes to the Study Ward (6) and the Metabolic Ward (7) are, as a rule, not critically ill (see para. 1.5).

3.4 Table 2 indicates the surface (S) of the different wards, the average daily number of patients (ANP) per ward and the surface per patient (S/P). The ORT Ward, which is an outpatient facility, is to be considered separately (See also Fig. 1).

Table 2

Ward	S		ANP	S/P	
	sq.ft.	sq.m.		sq.ft.	sq.m.
1. ORT	730	68	180	39.8	3.7
2. Short-stay	3,360	312	120	28.0	2.6
3. Inpatients	1,940	180	60	32.3	3.0
4. Intensive Care	700	65	15	46.6	4.3
5. Nutrition. rehab.	650	60	15	43.3	4.0
6. Study	1,190	110	18	66.0	6.1
7. Metabolic	875	82	6	145.8	13.6

- Both the Short-stay Rehydration (2) and the Inpatients (3) wards are too big, badly proportioned, unacceptably overcrowded, offer no privacy, have a high level of noise and insufficient ventilation. It must be stressed that the patients have to be accompanied by an attendant who, together with the visitors, further reduce the already very limited floor space.
- The Intensive Care Ward (4) is well proportioned, but too small to accept all patients (the vast majority infants and small children) who need a high level of care. It is in this ward that most patients die, making the lack of privacy extremely painful. The Nutritional Rehabilitation Ward (5) is also too small: many children requiring nutritional treatment have to be refused admission.
- Only the Study Ward (6) offers a reasonable surface per patient, has a proper size, and appropriate proportions.
- The Metabolic Ward (7) is too big, which is due to its inadequate proportions.

3.5 When one compares Fig. 1 with Fig. 2 the reason for the inappropriate sizes and proportions of the Short-stay and Inpatients Wards becomes clear. Whereas central corridors were planned throughout the DTC, they were omitted in the South wing, to maximize usable space. If they are added, the proportions of the wards

become fully appropriate. Presently, however, the overcrowding would only increase if corridors were added.

To offer acceptable conditions to the patients and to give a proper answer to many as yet unmet needs, it will be necessary to add one floor to the existing building. The ground floor has been constructed with this possibility in mind: the foundations are fully appropriate, staircases and lift shafts are already in place.

4. First Floor and Renovation of the Ground Floor

The proposed aim is to offer to the patients and their attendants an average net floor space of about 6 sq. metre or 65 sq. ft. Children, women and men should, as much as possible, be separated. The as yet unmet needs mentioned in paragraphs 2.3 and 2.4 have to find an appropriate answer.

For a good understanding of the next paragraphs, the DTC should be looked upon as having four lateral wings: north west (NW), north east (NE), south west (SW), south east (SE), and two central wings, north (CN) and south (CS).

What follows are proposals put before the Board of Trustees and yet to be discussed with the architect.

Ground Floor (Fig. 3)

4.1 SE Wing

- Entrance for all patients, their attendants and relatives (through an existing but unused door).
- Triage area
- Emergency reanimation
- ORT Ward
- Separate Short-stay ward for males
- Pharmacy and storage

4.2 CS Wing

- Separate Short-stay wards for children

4.3 SW Wing

- Laboratories (unchanged)

4.4 NE Wing

- Same as before; kitchen possibly to be expanded and to receive better equipment.

4.5 Metabolic Ward

- This Ward would be moved upstairs and the present location used as additional storage area.

4.6 CN Wing

- Intensive care (expanded), 2 isolation rooms, procedure room [inner side].
- Female Short-stay ward and sluice room [outer side].

4.7 NW Wing

- Grief room, cold room, post mortem, waiting room.

First Floor (Fig. 4)

4.8 SE Wing

- Child Health activities
- Prayer room
- Medical records

4.9 CS Wing

- Clinical and Metabolic Research ward (with metabolic kitchen, research office, research laboratory, and procedure room).

4.10 SW Wing

- Doctors' offices

4.11 NE Wing

- Nutrition Rehabilitation Ward with demonstration kitchen, storage area.

4.12 CN Wing

- Watery diarrhoea
- Invasive diarrhoea
- 1 procedure room, 1 isolation room

4.13 NW Wing

- Seminar room

- Travellers' clinic
- Procedure room

Concluding Remarks

1. The present proposal is nothing more than a draft. Planning hospital facilities is notoriously difficult. The indispensable input from our architects is still to be requested, provided the Board decides this document is an acceptable starting point.

2. If the second floor of the DTC is built, operating costs will increase even if the numbers of patients do not; a rule of thumb is that the yearly operating costs are equal to the cost of the building. As a manager, I find this very worrisome. As a doctor, I have to stress that our patients are in great need of better facilities.

RE:jc

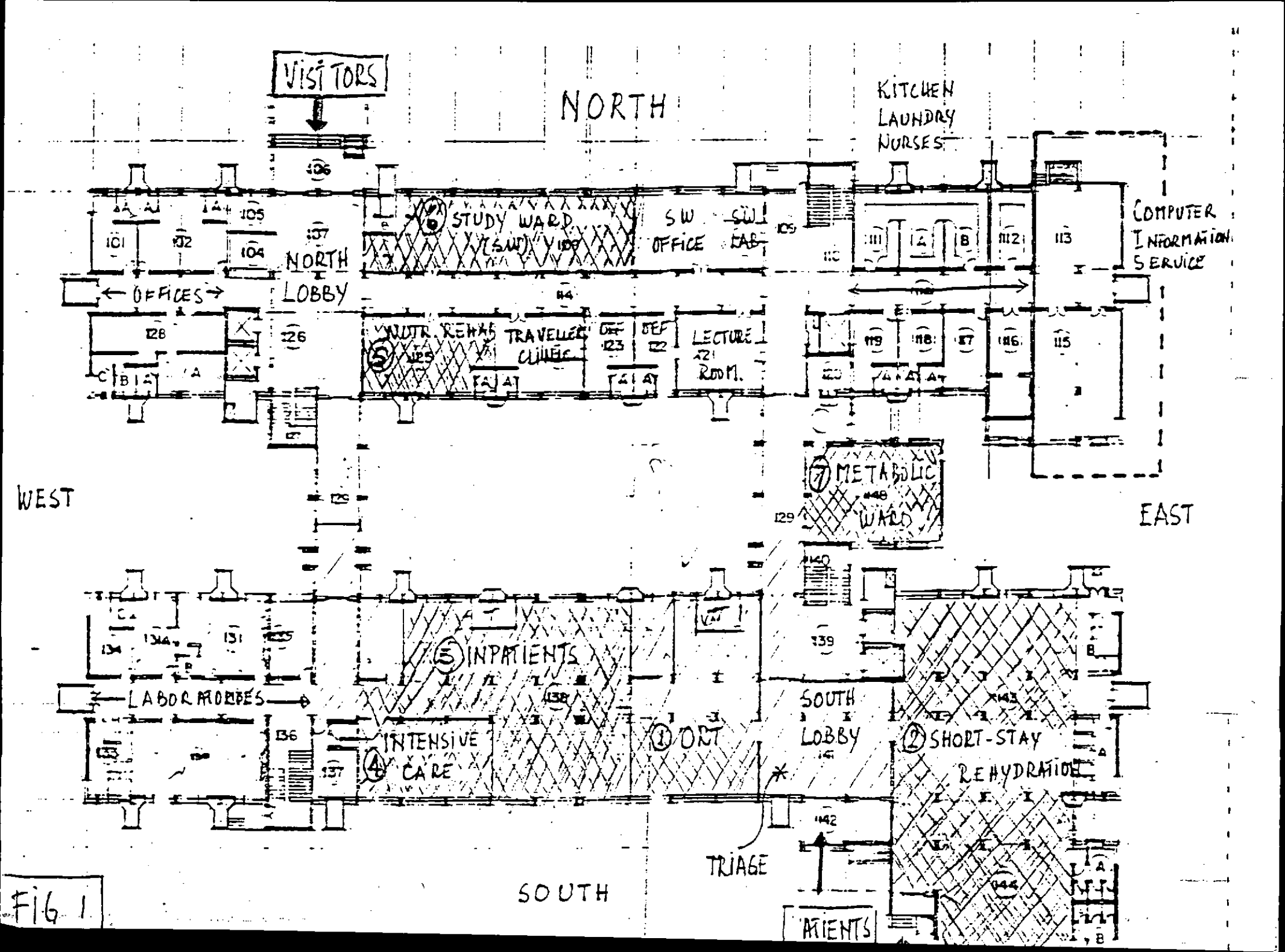
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Fig 1

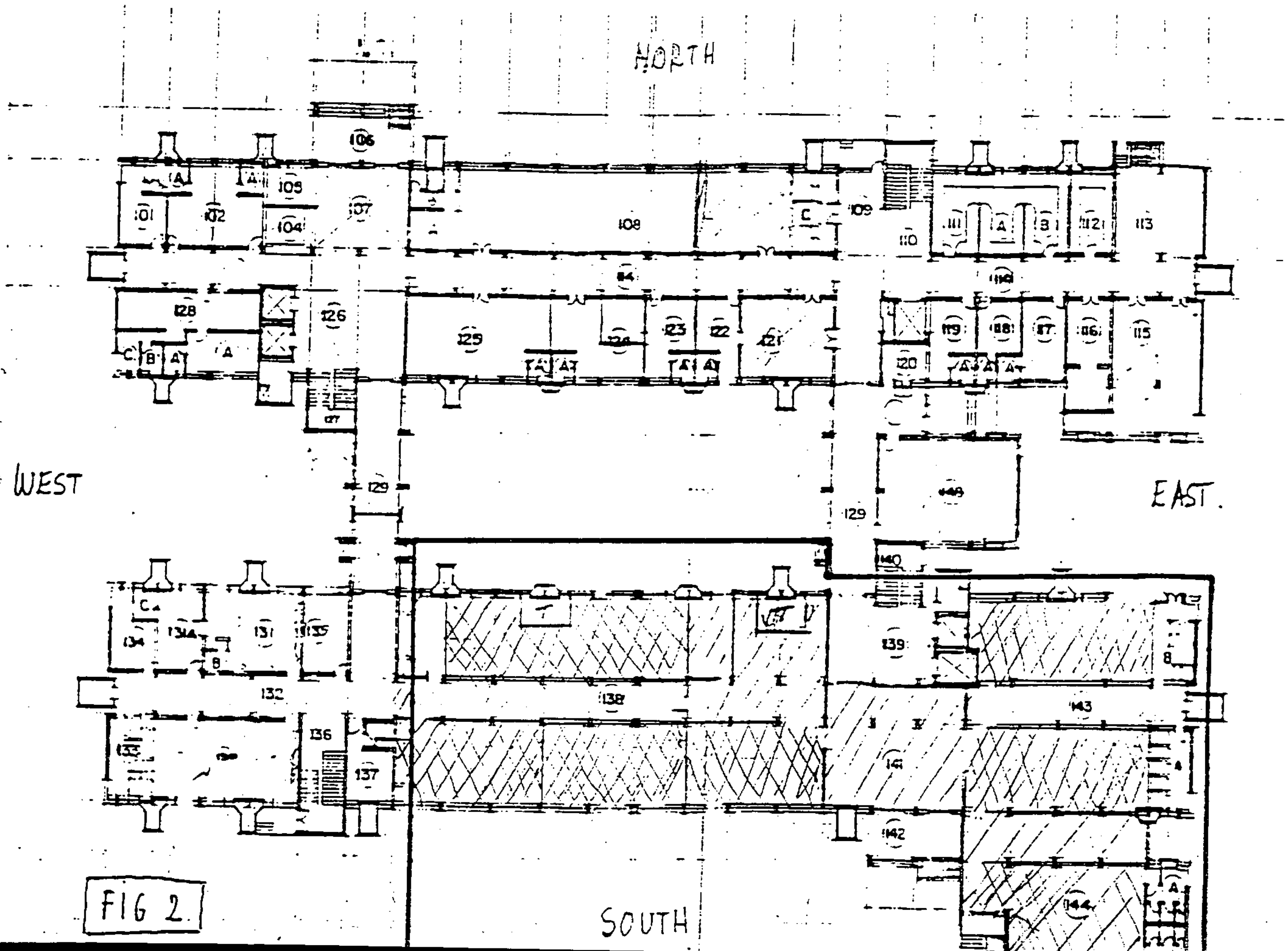
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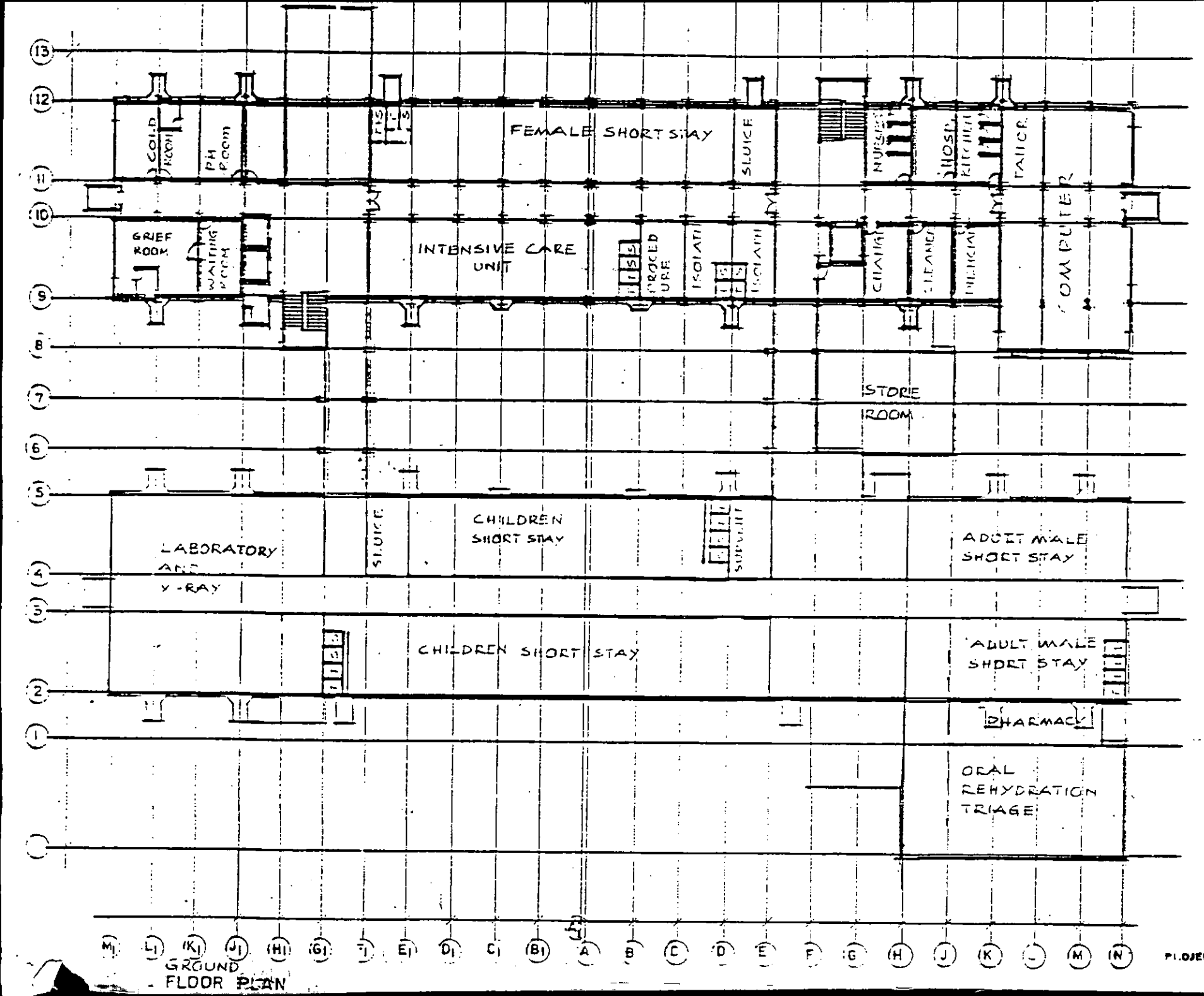
FIG 2.



PROJECT : INTERNATIO
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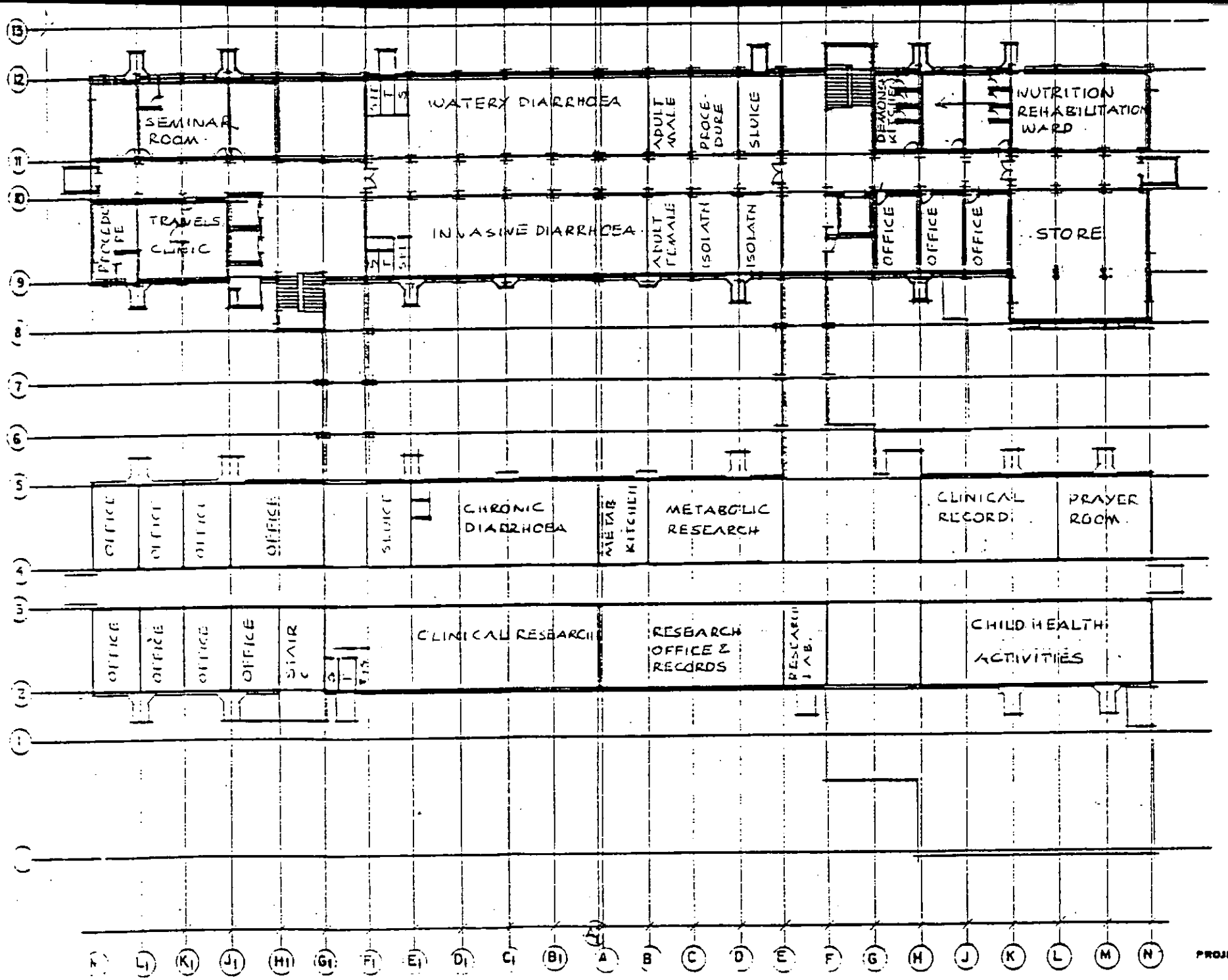
DHAKA (H



FIRST FLOOR PLAN

Fig 4

PROJECT : INTERNA DIARRHO DHAKA

DATE :

DATES OF NEXT MEETING

DATES OF NEXT MEETING

In June, 1987 it was decided that the tentative dates for the June, 1988 meeting would be Saturday, 18 June to Thursday, 23 June inclusive. In accordance with usual practice, i.e. allowing 2 days for Committee meetings, 1 day for report writing and 3 days for the full Board Meeting, the June 1988 dates would be as follows:-

Saturday, 18 June and Sunday, 19 June	-	Committee Meetings
Monday, 20 June	-	Meet with scientific staff/ Free for report writing
Tuesday, 21 June	-	Full Board Meeting commences
Wednesday, 22 June	-	Full Board Meeting continues (may need to work in the evening)
Thursday, 23 June	-	Full Board Meeting concludes

Tentative dates for November 1988 are:

Saturday, 19 November to Thursday, 24 November, 1988 inclusive

or

Saturday, 26 November to Thursday, 1 December, 1988 inclusive

POSSIBLE CHANGES IN BOARD SCHEDULE

POSSIBLE CHANGES IN BOARD SCHEDULE

It is realized that it is difficult for Board Members to make time available to come to Dhaka twice a year for an extended length of time. However, the Ordinance of the Centre states under section 9(2) that "... at least two meetings of the Board shall be held in one calendar year.". Also, it is difficult to further cut down the length of the meetings. There are even reasons to do the reverse. The Management is now trying its very best to send you material beforehand, and not to ask your attention for minor issues. We should also take into account the wish of the Board Members to keep their fingers on the Centre's pulse by interacting with individual researchers, get acquainted with the bigger projects and talk to the senior staff. Two days wouldn't seem too much for that, if one takes also into account contacts with, and courtesy visits to, the Minister of Health, the Secretary of Health, other officials and donors' representatives.

May I request you to give some thought to possible alternatives such as -

* Do we require meetings of all three committees before both Board Meetings? The Personnel and Selection Committee might have to meet twice a

year, but the Programme Committee could meet e.g. in June and the Finance Committee in November.

* Can the Committee Meetings be cut down to half-day meetings (this used to be the case; but in recent years the Management has probably been providing too much information too late)?

* There have been some discussions about having only one Board Meeting per year, and substituting an Executive Committee Meeting for one of the two full Board Meetings. This would require a change in the Ordinance which states under section 12(1) Executive Committees "... shall have the power to act for the Board in the interim between Board meetings ...". However, a change of the Ordinance could be requested so as to enable e.g. an Executive Committee Meeting (delegated to handle personnel matters, etc.) in June with a full Board Meeting in November. The November meeting then would, of course, be longer e.g. 2 weeks with one week for committee and full Board meetings and up to one week for interaction with staff, field visits, visiting donors, etc.

R. Eeckels

27.10.87

MISCELLANEOUS

ELECTION OF NEW BOARD MEMBERS

ELECTION OF NEW BOARD MEMBERS

The twelve elected Board Members (the Members appointed by the Government of Bangladesh and by the Directors General of UNICEF and WHO are governed by somewhat different rules) normally stay on for one or two successive periods of three years, starting on July 1 of the year of their election.

Replacement of outgoing Board Members is discussed at the November Board, preceding the end of their mandate on June 30 of the next year, and a final decision is reached in June of that year. The rather limited time before the next Board Meeting in November makes it difficult for newly elected Members to attend. This year, of the four new Members only one (Prof. Mathan) can attend the full session; another one (Prof. Tanaka) can only attend the full Board Meeting itself, and Dr Ashley and Prof. Lindberg are not able to come.

I'm requesting the Board Members to consider starting the election procedures one year beforehand June) and, if anyhow possible, finalize the choice at the No ember meeting. I'd suggest that the appointment of a succe sor to Prof. Bell should be pursued as far as possible uring the oncoming

meeting.

Please find attached a list of the present Board Members with the period of their mandate.

R. Eeckels

27.10.87

List of Board Members as at October 1987

	Joined Board	End of Mandate
Prof. D. Bell	1 July 1982	30 June 1988*
Dr A.R. AlSweilem	1 July 1983	30 June 1989*
Dr I. Cornaz	1 July 1983	30 June 1989*
Prof. D. Rowley	1 July 1983	30 June 1989*
Prof. R. Feachem	1 July 1985	30 June 1988
Dr M.H. Merson (WHO)	1 July 1985	30 June 1988
Prof. R. Eeckels	1 July 1985	30 June 1988
Dr Nyi Nyi (completing Dr Joseph's term - UN)	April 1986	30 June 1988
Dr P. Sumbung	1 July 1986	30 June 1989
Dr D. Habte (completed Dr Sebina's term)	1 July 1986	30 June 1989*
Dr K.A. Monsur (completing Maj.Gen. Huq's term - GOB)	12 Nov 1986	30 June 1988
Mr T. Rahman (completing Mr Karim's term - GOB)	8 June 1987	30 June 1989
Mr M.K. Anwar (completing Mr A.K. Chowdhury's term - GOB)	9 Sept 1987	30 June 1990
Prof. H. Tanaka (completing Prof. Y. Takeda's term)	1 July 1987	30 June 1988
Dr D. Ashley	1 July 1987	30 June 1990
Prof. A. Lindberg	1 July 1987	30 June 1990
Prof. V.I. Mathan	1 July 1987	30 June 1990

Outgoing Board Members June 1988

Prof. D. Bell*
Dr H. Tanaka (completed Dr Takeda's term)+
Dr M.H. Merson

Prof. R. Feachem
Dr Nyi Nyi (completed Dr Joseph's term)+
Dr K.A. Monsur (completed Maj. Gen. Huq's term)+
Prof. R. Eeckels

* Not eligible for reappointment after completion of current term without a break

\+ Please note the following [Ordinance Section 8(6)] "Vacancies in seats of members at large shall be filled by the Board. A member appointed to a vacancy arising from a cause other than the normal expiration of a term shall serve for the remainder of the term of the member being replaced. No member may serve more than two consecutive three-year terms or portion thereof, ...".

Board of Trustees - Terms

3 years from July 1982

Dr Y. Takeda
Prof. D. Bell
Maj. Gen. M.S. Huq
Dr F. Assaad

3 years from July 1983

Dr A.R. AlSweilem
Mr ABM Ghulam Mostafa
(Mr Manzoor ul Karim)
Dr I. Cornaz
Prof. D. Rowley

3 years from July 1984

Mr Munir-uz-Zaman (Mr M.K. Anwar/
Mr A.K. Chowdhury)
Dr D. Sebina (Prof. D. Habte)

3 years then 3 yrs from July 1985

Prof. D. Bell*
Maj. Gen. M.S. Huq (Dr K.A.
Monsur from Nov. 86)

3 years from July 1985

Dr M.H. Merson
Prof. R. Feachem
Dr S. Joseph (Dr Nyi
Nyi from April 86)
Prof. R. Eeckels

3 years then 3 yrs from July 1986

Dr A.R. AlSweilem*
Mr Manzoor ul Karim (Messrs S.A. &
K.G.Rahman/T. Rahman from June 87)
Dr I. Cornaz*
Prof. D. Rowley*

3 years from July 1986

Dr P. Sumbung

3 years then 3 yrs from July 1987

Mr A.K. Chowdhury (Mr M.K. Anwar
from Sept. 87)
Dr D. Habte* - completed
Dr Sebina's term

3 years from July 1987

Dr D. Ashley
Prof. A. Lindber
Prof. V.I. Matha

* unable to compete for another 3-year term without a break
() completing another's term so only eligible for one -year term after that