# PROCEEDINGS OF THE CONSULTATIVE GROUP MEETING

## International Centre for Diarrhoea Disease Research, Bangladesh

GENEVA
JUNE 1984

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INTERNATIONAL CENTRE FOR
DIARRHOEAL DISEASE
RESEARCH, BANGLADESH

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INTERNATIONAL CENTRE FOR
DIARRHOEAL DISEASE RESEARCH, BANGLADESH
G P O Box 128, Dhaka 2
Bangladesh

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# PREFACE

The International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) was established under an Ordinance promulgated on 6 December 1978, by the President of the People's Republic of Bangladesh. The ICDDR,B is governed by a Board of sixteen Trustees, each acting in his or her own capacity. The majority are drawn from developing countries. The Government of Bangladesh may elect three members, and WHO one.

The fifth meeting of the Consultative Group was sponsored by UNDP and convened on June 5, 1984 in Geneva, Switzerland. The purpose of the meeting was to bring together representatives of interested countries and agencies from around the world to consider the programme and progress of the Centre during its first years of life.

The proceedings of the Consultative Group meeting have been edited from transcripts of taped recordings to present an overall picture of the meeting.

ICDDR,B takes full responsibility for this report.

# AGENDA

## CONSULTATIVE GROUP FOR THE INTERNATIONAL CENTRE FOR DIARRHOEAL DISEASE RESEARCH, BANGLADESH

Geneva, 5 June 1984

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MR. MASHLER (UNDP):

Good morning, Ladies and Gentlemen. It gives me great pleasure to open this Consultative Group meeting of the International Centre for Diarrhoeal Disease Research, Bangladesh in the same room where that institute was conceived in February 1979. And it is very nice to be hosted by WHO. Before I make any statement I would like to call for a few remarks by Dr. Partow, Assistant Director General of WHO, who is here to greet you on behalf of the Director General.

DR. PARTOW (WHO):

Thank you, Mr. Mashler. Dear Colleagues, Ladies and Gentlemen: On behalf of the Director General of the World Health Organization, Dr. Halfdan Mahler, I have the pleasure to welcome you to this fifth meeting of the Consultative Group of the International Centre for Diarrhoeal Disease Research, Bangladesh. WHO is again very pleased to hold, as well as participate in this meeting.

As many of you undoubtedly know, the WHO has long recognised the seriousness of diarrhoeal diseases as a major public health problem in the developing world, especially in infants and young children. As many of you are also aware, the WHO has established a Global Programme for Diarrhoeal Disease Control which is being implemented in close collaboration with UNICEF, UNDP, and the World Bank. As part of this

global effort, more than 70 countries are now implementing national diarrhoeal disease control programmes as part of their primary health care activities, and some 250 bio-medical and health service research projects in this field are being carried out by investigators in over 70 countries. As one of the Global Programme's Collaborating Centres, the ICDDR,B continues to make important contributions to our knowledge about the aetiology and the treatment of diarrhoeal diseases, about the ways these diseases are transmitted, and about how the body can defend itself against the diarrhoeal pathogens. It has also been the site of a number of WHO research training courses attended by scientists undertaking clinical and laboratory-oriented research. We are confident that collaboration between WHO and ICDDR,B in research and research training will continue in the years ahead.

I understand that at this meeting we will be offering comments and suggestions on the work of the Centre. I have no doubt that during these relatively difficult economic times we would also be considering the best means that can be made of the Centre's resources. In this regard, I am sure we will take into account the Centre's long-standing expertise in research, especially in the area of cholera, and the need for proper coordination of activities of the many international and bilateral organisations and agencies presently involved in diarrhoeal disease services and research. I wish you all a successful meeting and a pleasant stay in Geneva, in spite of the weather. Thank you very much.

MR. MASHLER (UNDP):

Thank you very much, Dr. Partow. I will make a few introductory remarks and then perhaps more, as Chairman of this annual occasion as well as representative of UNDP.

As always, we at UNDP have been working closely with the Centre, both directly and through the CDD Programme of which UNDP is a part and of which ICDDR,B is a cooperating institution. We are very pleased to say that the year under review has been, I think, by and large a very good one for ICDDR,B both in terms of marshalling financial resources as well as in its work. There have been a number of occasions where ICDDR,B's work was recognised internationally: one occasion for which we can all be proud was several months ago when Dr. Greenough received the King Faisal International Prize in Medicine in Saudi Arabia, this was a signal honour in recognition of his work in diarrhoeal diseases. I think it should be appropriate in this meeting to congratulate him on this occasion. There have been important advances made in the Centre which Dr. Greenough will report to you.

I think that all of us can be pleased that the continuing support from the international community has been as strong as it is; that in itself is a recognition of the excellence of the work of the Centre, and we hope that in the years to come the donor network will accelerate, expand, and its research become applicable worldwide.

May I, with these few introductory words, come to the adoption of the Agenda which is before you. The Agenda follows generally the previous model, and I would like to ask your comments, additions, deletions, or modifications on it. If I hear no objections, I assume the Agenda is adopted.

We will now proceed to hear the Progress Report under item 3. I call on the Chairman of the ICDDR,B Board of Trustees, Dr. Kostrzewski to make a few introductory remarks.

DR. KOSTRZEWSKI (CHAIRMAN, ICDDR,B BOARD OF TRUSTEES):

On behalf of the Board of Trustees of the ICDDR,B I would like to welcome all participating countries and agencies and I would like to express our thanks to the United Nations Development Programme for chairing the meeting in the person of Mr. Mashler, who is a very good friend of the Centre, and to express our gratitude to the World Health Organization for hosting this meeting. With your permission, Mr. Chairman, I am not going to present the Progress Report, but will leave that to the Director of the Centre. I would like to express great appreciation on behalf of the Board for all the support provided to the Centre by the Government of Bangladesh.

ICDDR,B, as a fast-growing and fast-developing organisation, is developing its facilities within the Centre in Bangladesh and beyond

the borders of Bangladesh. There are of course some "growing pains" connected with this period. However, there is already great appreciation for its activities and increasing recognition of the Centre's accomplishments: for example, the receipt by Dr. Greenough of the King Faisal International Prize in Medicine which Mr. Mashler just mentioned, this is an accomplishment of Dr. Greenough as well as the CRL which, as predecessor of the ICDDR,B, was involved in a great deal of research in this area. The Centre, as an institution, also received the UNICEF Maurice Pate Award for its outstanding contribution to the survival of children through sustained excellence and innovative research on the diagnosis and treatment of diarrhoea.

Permit me, Mr. Chairman, to end my introductory comments with thanks to all donors for their past support to the Centre for these activities and for their quest for continued and increased assistance for future activities. Thank you.

MR. MASHLER (UNDP):

Thank you, Dr. Kostrzewski. May I now call on Dr. Greenough to introduce the Annual Report for 1983. I suggest and Dr. Greenough has agreed that we combine Agenda items 3 b, c, and e, and then hear the report on Resources Development from Mr. Bashir.

DR. GREENOUGH (DIRECTOR, ICDDR,B):

Thank you, Mr. Chairman. I would like to express my appreciation to WHO for hosting the meeting, to UNDP for chairing it, and to all of you who have come on this rainy day. The weather right now is not far different from Bangladesh, except that it is a bit warmer there than in Switzerland.

I would like to give you an idea about what the Centre is, as some of you may not be very familiar with it. After that I would like to highlight a few of the Centre's activities last year. If you have read the 1983 Annual Report, you will notice that it is different from the previous ones. Having introduced our programmes and the structure in the previous years, this year we have chosen to highlight specific accomplishments in science and training during 1983. The Report also offers other information about the Centre, including the audited financial statements and the list of publications.

I would like to begin by discussing three ideas which are central to the concept of ICDDR,B and the work we are doing. When the Cholera Research Laboratory (CRL) was established in 1960, and then later when the International Centre for Diarrhoeal Disease Research, Bangladesh came into being in 1978 and 1979, it was the belief that there are very specific biological, social, and cultural settings in which particular communicable diseases exist; and that the study or research on these

diseases must be done in these settings. At that time, this was a relatively new initiative on the part of communities outside of areas where the major health problems of the world exist, diarrhoeal disease being one of the most important. There are now a number of health institutions located where the major health problems exist; the Centre is one of them.

The second idea is that in health sciences the best effort should be applied towards the solution of the most major health problems in the world. Unfortunately, I think there has been a tendency to define major health problems as those which affect developed countries; these indeed are not the major or the most major health problems that confront the peoples of the world. And in a developing country setting, because there had been an emphasis and a focus on applying science and technology to health problems which were present in developed countries, I feel that there has been a period of neglect in applying the best efforts of science and technology to those health problems which in fact effect the most people in this world. Therefore the Centre, as well as being located where diarrhoeal diseases are a very important and serious problem, also has endeavoured to apply the best and most applicable scientific expertise and technology to solve these problems, with as little compromise as possible. This means that in some of our research you will see very advanced and sophisticated techniques being employed in rather remote rural areas of a developing country.

It is a third and underlying idea that, resources devoted to health have not received first priority in development and often are really very minimal in developing countries, often those meagre resources are not applied as well as they could have been. It is common sense that if one is going to control, much less eradicate a disease, one ought to have a minimum base of knowledge as to what is causing it. When I first went to Bangladesh in 1962, answer to even the basic questions on the setting and nature of diarrhoeal diseases were not known. We could only diagnose about 20% of the diarrhoea cases. I am happy to say that, after the last 20 years of work, and particularly the last decade, we are now able to recognise in acute watery diarrhoea something upward of 80% of the causes. Obviously in 1962 we were very ignorant of the causes of diarrhoeal disease. We are considerably better off in 1984, but there still is some way to go, particularly in the area of sub-acute or chronic diarrhoeal diseases.

With this preamble on why the Centre is in Dhaka, what its central philosophy is, I would like to go over some of the activities of the Centre during the past year. Before I go into the details, I would like to draw the connection between scientific efforts, which may seem quite abstruse and basic, to the outcome, which is an applicable preventive or treatment measure for diarrhoeal diseases. This is particularly relevant in developing country settings, where, because of the limited resources available, one may hesitate and even think that such

scientific efforts should be only pursued by countries with surplus resources.

Regarding the Centre's 1983 activities, I think the Centre has had a very good year. There have been over 80 original publications and review articles in relation to diarrhoeal disease published in global scientific literature.

The first topic I would like to go into in some detail is Oral Rehydration Therapy. ORT is an example of how a rather basic principle of physiology and biochemistry (how salts and water are transported by our digestive tract, from what we eat and drink — into the body to provide the necessary fluids) has been translated into an extremely simple home treatment of diarrhoeal diseases. Fortunately ORT is being promoted around the world, to a large extent through the Diarrhoeal Diseases Control Programme of the WHO. As with many issues in medicine and science there are improvements to be made; and during this year what I would consider a major improvement in oral rehydration therapy, has taken place. The basic idea of oral rehydration is that, in diarrhoea the body loses fluid, salts, and water, and you must drink back or get back into the body those fluids that have been lost in the proper composition. Twenty years ago, or even ten years ago, the only way to do this effectively was with an intravenous needle, which required doctors, hospitals and medical

paraphernalia. When the discovery was made that, glucose helps the body to absorb salts and water even during cholera, which is the most severe of diarrhoeal diseases. It was possible then to transfer the treatment of even some of the most severe diarrhoeal diseases, such as cholera from a hospital setting into the home.

Where does glucose come from? In nature it comes from starch in the cereals we eat, and from sugars. Starches could be conceived of as long necklaces of glucose molecules. Our body is designed to digest starch into glucose and absorb it for use, principally for energy. From basic studies carried out mostly at the Centre it was shown that the digestive enzymes responsible for converting starches into glucose are present in a high level during diarrhoeal disease, therefore, it is reasonable to think that you continue digesting cereals during diarrhoea.

Three or four years ago a series of hospital-based studies were carried out both in Dhaka and subsequently in Calcutta and have been recorded in the literature. These studies showed that rice is a good source of the material by which salt and water can be transported into the body during diarrhoeal disease.

One of the problems of oral rehydration was that, although you could drink sugar and water and salt solution, remain in good hydration and not die, the diarrhoea continued. One of the advantages of using rice

for oral rehydration base, rather than glucose, is that, diarrhoea amount and duration is cut almost in half. Therefore, one can say to a mother or someone taking care of a child that "Yes, if you use ORT with a cereal, (meaning rice,) you can not only expect to have good hydration but you can expect to have less diarrhoea and probably less duration of diarrhoea". So oral rehydration therapy becomes both a replacement solution and a treatment solution.

Up until now we have tried a variety of drugs as antisecretory agents, most of which have not been very effective and some of which have been harmful. So I think that this finding of the Centre indicates that we have not yet pushed oral rehydration therapy to the limit.

There are further developments beyond this. Therefore, the World Health Organization, which has to deal with instructions for all the countries of the world, will have to think over the next few years how to adapt the improvements to oral rehydration therapy, as will we; and this will be a necessary cooperative effort. We will also need to push oral rehydration to its limit, which could bring a very great reduction in diarrhoea as well as dehydration.

There is another benefit of this discovery: nutrition is maintained very well if one eats and absorbs food during diarrhoeal disease, and using rice we get very many more calories and nutrients into a child

or an adult during the course of diarrhoea. So we feel this is a finding of major importance. For that reason we have done two things this year. One, we have begun a small-scale field trial in rural Bangladesh, where the sugar-based ORS and the rice-based ORS are undergoing comparative trials. Secondly, in the ICDDR,B hospital you will not find anyone drinking sugar-based oral rehydration solutions any more -- every one is drinking rice ORS. We are utilising Urban Volunteers--mothers from Dhaka slums to cooperate in our programmes. They learn how to prepare rice ORS for patients, at the ICDDR,B, and then do the same at home for their neighbours to learn.

This, in brief, is rice ORS. We foresee additional improvements, which means that we will have to regularly improve and modify the instructions. It also means that in each national setting, there will have to be adaptations in how a cereal-based oral rehydration solution should be prepared. This means a lot of fairly practical research in country settings, but I think by doing that we will have a very strong attack on diarrhoeal disease and the complications of malnutrition which follow it.

One other point, in order to push oral rehydration therapy to the limit, a good deal more research in basic science is needed. What sort of basic science? We will have to study in detail the way the intestinal tract responds to the use of different cereals, food-stuffs,

and proteins. We might deal with synthetic polyglycine, a protein made up of a single amino acid; so these are getting quite esoteric. I will not go into details but simply indicate that there is a continuing job of basic physiology in transport science that must go on, which can be carried out both in more sophisticated settings as well as in places such as Bangladesh.

The second development I would like to mention, has to do with preventive measures for cholera. Although we tend to think that cholera is not a problem in most countries of the world any more, actually that isn't the case. Most educated people I talk to believe that cholera is not a problem in their country, or in most countries, but I can report that many developed countries have cholera declared as an endemic problem, as well as countries like Bangladesh.

Despite many years of intensive investigation, the cycle of how cholera spreads, and where it hides when it is not in epidemic form, has not been solved. So this must be the subject for a basic field research and laboratory research effort. Often people say, "The Centre has been there for twenty years; why is cholera still there?" Well, if every medical research institution in twenty years could eradicate a disease on which they are working, we would live in a much better world from the health point of view. Unfortunately we are still grappling with how to prevent cholera by means of vaccines or immunity.

This year, after five years of basic research on how the body defends itself locally in the intestinal tract and digestive system by antibodies, we have an oral cholera vaccine. This is a new concept, previous cholera vaccines were what you received by injection when you were travelling to a country that was thought to be prone to cholera. The injected vaccines, unfortunately, have proven ineffective and therefore are required by only a very few countries in the world, mainly in Africa. Bangladesh dropped its requirement about five years ago.

The oral vaccine trial project has been taken up jointly by the Government of Bangladesh, the World Health Organization and the Centre. We are in rural Bangladesh to try out what appears to be a potentially effective, killed, oral cholera vaccine. There will be large-scale field trials in a population of about 180,000 people in rural Bangladesh, starting in early 1985. The preliminary trials have been carried out during 1983 and 1984 with volunteers in Sweden and the United States. We don't know what the outcome of the field trial in Bangladesh will be, but we think the initial evidence is good enough to justify a cholera vaccine field trial. So, we hope that perhaps next year we will have some good news on an oral cholera vaccine.

The next thing I would like to mention is that we are dealing with populations that not only suffer diarrhoeal diseases but many other problems. We do not feel it is ethical to approach only diarrhoeal

disease, and not look at it, in the context of primary health care and maternal and child health. So you will find the Centre immunising young girls before child-bearing age and mothers, against tetanus. You will find us immunising children against measles and taking steps to improve nutrition, to prevent vitamin-A deficiency and related blindness, which don't seem related to diarrhoeal disease; we feel that our diarrhoeal disease research programme or service has to be in a setting of general primary health care. The only difference between what we are doing and what others are doing, is that we are taking only five or six steps which we know through research to be highly effective in averting death and disability, principally in children. By taking these measures, we have been able to show that one can markedly reduce the death rate without great improvement of the resources in a rural area of Bangladesh; and, indeed, by offering family planning, markedly reduce the rate of growth of population because there seems to be a greater willingness to have fewer children when they are less likely to die. This has been of enough interest to the Government of Bangladesh that they, during the past two years have asked us to form a partnership, whereby we are trying to see if we can assist in implementing through the Government health system some specific measures in the context of their own health care system. I think by next year we might be able to say how successful that has been. We do see improvements in health in Bangladesh through the Government health system, even without the special emphasis on these measures to attack diarrhoea and other easily

controllable diseases. It is of course apparent that other countries besides Bangladesh suffer from similar problems of diarrhoeal disease. In cooperation with WHO and UNDP, we have had the privilege of training many people from many developing countries, basically on the simple measures by which you can take care of diarrhoea patients, perform laboratory tests to control and to recognise the causes, and also how to measure the magnitude of the diarrhoea-problem in a field setting. Through this training programme we have become acquainted with people from many other countries facing problems of diarrhoeal diseases, and consequently there has been an increasing number of requests to the Centre for fairly practical assistance to design settings for the care of diarrhoeal disease, to train their own people in-country, and to set up field laboratories and other assistance.

We have tried to respond to these requests, and have during the past year, established a project in the Eastern Province of Saudi Arabia. We have responded over the past three or four years to a request from Indonesia, and as a result now increased our association with them. We have also responded to several other countries, including one in Africa, one in South America, to see in a preliminary way what we can offer that would be of use above and beyond the resources of the global agencies such as WHO and UNICEF. This has been done with the full knowledge of all of these partners and we would hope that, because the problem is very big, the few resources we have to deploy can be

used in the most effective fashion. We do see as part of the Centre's responsibility, the ability to provide specific assistance, when requested, to people from countries that we have been training, and we hope to continue doing that.

One of the key foci of this assistance is to develop settings in other countries where research can be done. Because, we feel that there is need for a great deal of research at both, the practical and sometimes the basic levels, in developing countries which face the problem of diarrhoeal disease. Until this research capability is developed, progress will be relatively slow. Our main emphasis would be to get colleagues, who have already worked with us, to establish research in their own country settings. I think this is completely congruent with the goals of the Control Programme for Diarrhoeal Disease; Dr. Merson may want to comment on that.

Finally, I would like to say that we have had the privilege of establishing an information system for diarrhoeal diseases with the help of Canada, by which we can share the information we have with many other countries. We have initiated the publication of the quarterly Journal of Diarrhoeal Diseases Research, which has been well received and has a good deal of material coming. We have held two scientific conferences on important issues revolving around contaminated water in conjunction with control of the spread of diarrhoeal diseases. There

are some significant problems we face right now, which I have mentioned in my introduction in the Annual Report and I would like to call your attention to those.

Diarrhoeal diseases do not happen in isolation. A main cause of death now in the patients that we treat is pneumonia. At our treatment Centres, we don't get deaths from dehydration any more; and deaths due to malnutrition have almost been obliterated after using the cereal-based ORS and intensive feeding programmes in the Dhaka Treatment Centre. So what we confront now as the biggest single killer, in rural Bangladesh is acute respiratory disease - pneumonia. I can say that we are almost totally ignorant of its causes and we feel that this will require attention as we get better and better control of the diarrhoea problem.

I think I will stop my discussion on the programme of the Centre. It is not a comprehensive one, but I would like to move on now to the budget.

The next item is the budget, and my presentation will be brief. I will try to give you the dimensions of the budgets we are working with, and will be happy to go into detail at a later time in response to questions. In doing this I would point out, since I come from a developed country, that the budgets we are working with for the most

important health problem of the developing world and a serious one still in developed countries, is of the magnitude of a divisional budget in a department of medicine in my own country. This is certainly not an enormous resource to apply to these problems.

Our budget in 1983 was originally $ 6.5 million, but because of delayed realisation of contributions, we have controlled our expenditures to a level of slightly under $ 6 million this year. Although we have been productive, I believe we could have been more productive had we had our full budget. We have a shortfall, as you will notice in our statement. This has been subsequently covered by the receipts, as expected, so that financially I think we are in a sound position at the present time. Several important steps have been taken during this year, we now have a planned set-aside for capital improvements, so that we do not continually live with decaying equipment and inability to replace it. We do have also established from our own side a Reserve Fund, which I will discuss in a moment.

The budget for 1984 will be close to $ 7 million, which is really a level budget. Currently we have commitments of about $ 6.5 million, and the Trustees have authorised expenditure up to the level of $ 6.2 million. I hope in June, I can persuade them to increase that ceiling because I think that level of budget would be damaging to our work. Mr. Bashir will address the shortfall in his remarks. In 1985, the

budget will have to increase if we are to do our job. We have been for three years at essentially a level budget in order to come to a more stable position. We have become much more efficient by tackling our financial system and many other things which come up in growing from a small project, to an international institution with many participants. The ordinary increase from inflation from $ 7 million would be about $ 7.7 million. In order to push the applications of the cereal ORS and the science related to that, we would like an incremental expenditure of about $ 200,000 over that level budget. In addition, we feel the technical cooperation we can offer to other developing countries in view of the demand we receive, should also have incremental expenditure of about $ 300,000 beyond a level budget, which brings us up to about $ 8.2 million. We will also carry out the vaccine trial; since we are doing it on a large scale with three simultaneous comparisons in 180,000 people, it will be expensive: costing about one million dollars. We hope that will be added on top of the budget rather than cutting things which are ongoing, are very important and necessary. in 1985 we are going to endeavour to increase our budget to the order of approximately $ 9.2 million. This is a big challenge, particularly in the current times. I think this is all I will say about the budget. I can go into any details anyone would like during the discussion, but I would like to concentrate on the major overall issue of where we are headed.

Finally, I would like to make a comment on a new initiative, the Reserve Fund. We have distributed a draft document for your consideration. I would point out that the Centre does not have any single sponsoring government, or agency; it has a consortium of about 22 countries and agencies that have been willing to support us each year. As best we all try, there are still delays in realisation of funds. These delays force us, if we are to continue programmes, to borrow from the bank. I think all of us would agree that this is not an effective use of precious resources which should be going into the field. Therefore, we feel a Reserve Fund should be established.

A second issue is that as we move with a greater number of interested parties, countries and agencies, there are more and more good ideas for projects, both from us and from other agencies; consequently funds may become very much tied to specific projects over specific time periods. But often situations arise in the field that dictate that we should take up a new priority, that we should get going on an apparent problem and we cannot afford to wait for a year or two until we convince someone that this is important. This kind of urgency, after all, is one reason why we are in the field. Therefore, there is another need for a Reserve Fund which should be available to the Centre and protected from the influences, usually of the best-meaning of people, who are offering projects. Thus, perhaps there should be an income from a Reserve Fund that could be expended in this way. I will leave it up to you for thinking how much that might be.

Finally, we are in a developing country situation, a small country with limited resources, with a hundred million people with many very difficult problems to solve well beyond diarrhoeal diseases. Situations arise where they may not be able to give us the support we require. There may be difficulties in others providing resources to us and, therefore, there is an emergency preparedness issue. I can say that in the time I have been in the Centre we have been through, in partnership with our colleagues in Bangladesh, several wars and natural catastrophes. At times this has limited the ability of the Centre to have resources available to it. I think this is a serious issue, and it is unfair to the Government of Bangladesh to put them in a position where they would have to come forward, because they have shown great interest, and expressed and demonstrated that interest, in the value of the Centre. Therefore, I think the Reserve Fund should also approach that issue.

These are the main points for the Reserve Fund. The Trustees two years ago had indicated that an overall size of this, although it may sound quite astonishing, is about ten million dollars. Certainly we are not going to raise that in the next one, two or even five years; but I think it is a reasonable target, and five million dollars should be satisfactory as a first goal.

Thank you very much for bearing with me through this trilogy of presentations. I would be happy to answer questions after the presentation of my Associate Director for Resources Development.

MR. MASHLER (UNDP):

Thank you, Dr. Greenough, for this lucid presentation of the programme and the budget. Dr. Freij of Sweden.

DR. FREIJ (SWEDEN):

Mr. Chairman, I would like to ask a question about the research training issue. It is our interest that ICDDR,B training programmes are mainly focussed on the more practical aspects of diarrhoeal diseases control, oral rehydration and management control programmes, etc. Less emphasis seems to have been given to research training; and I think this is what Dr. Greenough hinted, also. We feel the organisation of research training programmes would be a very important task for an international research centre like ICDDR,B. Perhaps Dr. Greenough could comment a little bit more about that. What are the plans for the future?

DR. GREENOUGH (ICDDR,B):

Thank you for that comment. I agree that this is a very important point. First we should define research. Research, we believe, is basically the process of answering questions by scientific

investigation. Those investigations might be in the field, they might be in the hospital, they might be in the home, or they might be in the laboratory. We do not define research by the particular tool with which it is done. The training that we have given for management of diarrhoeal disease and for its diagnosis has been of a practical nature; it has been dedicated toward bringing people of other countries up to the point of the state of the art in which we find ourselves. We often find that they are now carrying out research protocols either stimulated by ourselves or by the Control Programme for Diarrhoeal Diseases, which offers a mechanism for financing research from participating countries. This year we held the first workshop to bring together people from the designated centres of WHO to Dhaka, to have an intensive session on developing research. I hope that we will now do a lot more of this.

The second thing is that we often have course participants come back as fellows, in which case they develop a research protocol. We have a fairly individualised research training situation; often the fellows are funded by WHO to enable them to come and spend the three to six months that might be necessary to accomplish this.

Thirdly, we have been encouraged by our Board to provide more specific research-oriented courses, such as on the technology of recognising enterotoxins, or perhaps specific diagnostic methods for

one or another cause of diarrhoea. This we have not yet done; we had scheduled it for 1984, but I am afraid that more pressing priorities have displaced those more specific course until into 1985. Also, as I pointed out, we have been short of funds. We have truncated our programme, and so we have continued that as a more urgent priority at present. This is one of the difficulties of having diarrhoea on your doorstep: we do give a great deal of service and attention to getting simply the most immediate tasks done. Our priority, however, is to emphasise research training, go to more specific research-oriented courses, and we would expect them to be both in the laboratory and in field methodology.

MR. MASHLER (UNDP):

The Representative from Bangladesh.

MR. MOSTAFA (BANGLADESH):

Thank you, Mr. Chairman. I would like first of all to thank Dr. Greenough for his very lucid statement describing the progress of the ICDDR,B and also the need for funding for next year and future years. I am one of the Trustees of the Centre, so I know a little bit of the activities which are going on; but I would like to ask him two or three specific questions for the information of others who are present in this meeting. The Centre is located in Bangladesh, and the impression might be that the benefit is confined only to the people of

that country. What is your assessment as to how the Centre is helping other developing countries which suffer from this type of disease, and what is the extent of assistance that you are giving to other countries having this type of problem?

Second, in the course of the last few years how do you find the Centre has progressed in obtaining this objective of control of the diarrhoea and cholera research?

MR. MASHLER (UNDP):

Thank you Mr. Mostafa.

DR. GREENOUGH (ICDDR,B):

The details of the assistance we are able to provide to others can be seen in the Annual Report under the Training and Technical Co-operation section. This year, we have provided assistance in one form or another to almost 50 developing countries. For most of these countries, the initial step is bringing professionals to the Centre, because we have the facilities and can demonstrate for them what we are doing in Bangladesh, both on our own and with the Government health programmes. After they return to their own countries, we usually keep contact with them, and from this base, come specific requests. We also try to respond to requests for technical assistance from other countries and from agencies such as UNICEF, if it is within our ability.

The Government of Bangladesh has taken an active role in using the Centre as a resource in Bangladesh, in response to requests they have utilized ICDDR,B to help neighbouring countries in South and East Asia. For these reasons, we would like to seek incremental funding into various aspects of Technical Cooperation among Developing Countries. We have some support for that now promised from the Federal Republic of Germany, but we see this as a situation where there is a great demand and therefore need further resources, since we are quite limited in how much we can spare. We hope we can muster our resources along with those of UNICEF and WHO and others, to begin to meet the demand. I am very pleased that we have come to the stage where governments understand the need for technical health assistance and request it. Now I hope that this demand can be met. Now a comment about Mr. Mostafa's second question, regarding control of cholera. I think Bangladesh may have more notoriety about cholera than any other country in the world, because they had the courage and foresight to establish a Cholera Research Laboratory and now have an International Centre for Diarrhoeal Disease Research. So, as good as our institution may be, it also has a negative side efficiently projecting the actual disease data. This may potray Bangladesh as a country, the only country which has so many problems with diarrhoeal diseases, which of course is not correct. Cholera and other diarrhoeal diseases are problems faced by over 70 countries in the world. More and more of these countries are willing to report and tackle these problems in a open way.

As I said earlier, the main hope for control of cholera and other diarrhoeas rests either in simple measures like hand washing inside the home, or in vaccines. There is a missing piece of knowledge, as I mentioned: where does cholera hide in nature, when is it not epidemic in men and women and children, and where does it return to in nature? This is something that we would very much like to solve. Because if we did, then we could offer more for control of cholera.

MR. MASHLER (UNDP):

Thank you, Dr. Greenough. I would like to ask a question as a follow-up to Dr. Freij on science training, as I know that the issue of training is a perennial one, not only in this Centre but in all kinds of other Centres; obviously the transfer of scientific knowledge is a key issue in disseminating the work of the Centre into other countries. It has been my experience over the years that training is one need that can be filled, not necessarily from core funds, but from training funds which could be financed through bilateral funding -- out of country specific funding from the bilateral donors, who could, for example, find out a number of trainees who could be sent to Bangladesh and then return to their home countries to be integrated into research activitie there. Such funding would make life easier for the Centre. This is really one area where, in many institutions, both in the field of agriculture as well as in medicine, we have been able to marshal funds in the manner described, very satisfactorily, because very often these

are one shot operations. Although being repeated the next year, it can always come out of bilateral pockets more easily that from international pockets which finance the Centre. I simply am throwing this open as a suggestion to be pursued both by the Centre on one hand, and the bilateral programmes on the other. Are there any other questions? I see none. Would Dr. Merson like to make a comment or a reference on the two points of Dr. Greenough's speech.

DR. MERSON (WHO):

I have no specific comment. I more or less, agree with the point Dr. Greenough made, that the critical issue in research is to develop the national capabilities in developing countries for undertaking research as much as possible in the countries concerned. I think our efforts of the Global Programme and as Dr. Greenough mentioned of the Centre, is to do what we can to strengthen national capabilities. Regarding the comments made by Dr. Freij concerning research training, I can say that in our own Technical Advisory Group meeting in March we were asked by our Advisory Group and are now launching on a major initiative, especially in the area of epidemiology research training, which as you, Mr. Chairman, know very well, has been a problem in that sector. And, we are trying, in fact, to combine our efforts with TDR in this area of epidemiology research training. In fact, I know Dr. Freij, himself, has had a long-term interest in this area. I think the area of research training, especially in epidemiology, remains in

my opinion, the biggest gap we have in diarrhoeal disease, as well as in TDR; I don't think there is any difference in that respect. I think that the issue of how to best get this training done is controversial -- how much should be done in the country and how much people should be sent out of the country. One needs to have a delicate balance in this regard and I think we are grateful for the Centre's interest and continuing activity in this area. I think both the Centre and the Global Programme are going to continue to put a great deal of emphasis on it. I think that if one looks at the world today, compared to five years ago, there are certainly through the Centre's efforts and through the Global Programmes efforts, something roughly like fifty developing countries where diarrhoeal disease research is going on. Now the question is how to improve that research and how to strengthen and build on the existing research. I think this is where the future stands in terms of research training, I can only endorse, therefore, the comments made by Dr. Greenough. Thank you.

MR. MASHLER (UNDP):

I am very pleased you said that, and I hope we can agree that this matter should be kept under review in the years to come and that we can report on activities that can be organized in a meaningful way; not necessarily taking the whole field, but just moving ahead so as to meet Dr. Freij's point. Which is not just his point, this point has been made before, but, making the point in the sense that we look at the

training issue per se but also look at it in terms of financing. I think this may then meet all of our expectations.

I see we have a question from the Representative from Norway, Ms. Fjellang.

MS. FJELLANG (NORWAY):

Thank you. First of all I would like to thank Dr. Greenough for a most interesting report. I regret to bother you with a detail question but I do not find the information in the documentation. I would ask if you could please repeat the components of the budget that you are presenting for 1985, or do I find it somewhere?

DR. GREENOUGH (ICDDR,B):

The 1985 budget has not yet been presented to the Board of Trustees; that will be done next week. Ordinarily this C.G. meeting is carried out after the Board meeting; this is the first year we have had it before. However, the budget is, excepting the incremental items I mentioned, distributed approximately as it has been in the following way: We have five scientific program areas and the Training, Extension and Communication Programme. If everyone is interested I could read them out. I would say this is not an approved or vetted budget by the Board, but I have the breakdown as it exists in front of me, either by categories of personnel services, local international contractual

services, supplies, materials, depreciation, etc. And, I have it broken down programme wise in comparison to the 1984 budget as its latest construction. Maybe the easiest thing would be just to share this with you, understanding that this is not a vetted document by the Board; therefore, it is not a public document yet, but this is what we will be presenting to the Board next week.

MR. MASHLER (UNDP):

I think we will photocopy this, it being understood that it is an informal unapproved budget.

DR. GREENOUGH (ICDDR,B):

Let me say one other thing on the budget. Reviewing the distribution of the budget, since I have been out during this last ten-days' period when my finance people have put together our suggestions, I can see immediately by looking at it, the vaccine trial is, I think, in the community services research instead of the disease transmission programme. However, it would be there. It will probably show up differently when we get through with the Board meeting, so except for details of that sort, the breakdown is quite okay. The vaccine trial being an item of almost a million dollars, will change the budget if it is put in one place or another. As I look at the figures I think that is what has happened; it is in the CSRWG, which is responsible for the Matlab field trial area, but in fact, since it is principally

epidemiology, run by an epidemiologist, I probably will put it in another programme. That also will balance the programmes a bit better than they appear in this budget. Thank you.

MR. MASHLER (UNDP):

Thank you, Dr. Greenough. I see we have a comment from the Representative from Canada.

MR. SPERBER (CANADA):

I just again would like to join my colleagues in congratulating the Director on a very very lucid report and also congratulate the Centre on winning several awards -- the Director winning the King Faisal Award and also the Maurice Pate Award from UNICEF for the Centre.

One question I would like to ask: Perhaps Dr. Greenough could give us some progress or some information on some of the other areas the Centre's involvement. I am thinking particularly of the demographic surveillance system.

DR. GREENOUGH (ICDDR,B):

In my presentation I have tried not to indicate which country or agency has supported which work. My basic belief is all of our participants, even if they are supporting a single project, should

back to the establishment of the Reserve Fund because these two issues are closely linked.

MR. BASHIR (ICDDR,B):

We live in a world today where we see humankind, especially in the developing countries, taking great strides to improve its economic condition. Economic development, to be truly meaningful must have concurrent development in the health sector. Unfortunately, even amidst the humdrum of these tremendous economic development programmes, we still see one of humankind's oldest enemies -- diarrhoeal disease -- continue to take its annual toll of upwards five million lives, mostly those of young children in the homes of the poorest of the poor. Every year we still experience at least one billion episodes of serious diarrhoea, causing wide spread debilitation and death. Its young victims who are fortunate enough to survive, are often denied a full productive adult life. But thanks to more than two decades of research at the International Centre for Diarrhoeal Disease Research, Bangladesh, its predecessor, and to combined international efforts, we can now see the light at the end of the tunnel.

ICDDR,B's two-pronged approach to the diarrhoeal disease problem, first through the development of simple, cheap yet effective intervention techniques, and second through dissemination of this knowledge world-wide has contributed significantly to the international awareness of this

disease. The Centre is now not only developing new technologies, but also spreading the knowledge obtained through research among a large number of countries.

The oral rehydration solution which is saving millions of lives all over the world today was developed in its current form at the Centre. This has been acclaimed as potentially one of the most important, significant medical advances of the century. Continuing with this research, we are now field-testing the next generation of ORS based on cereals.

Mr. Chairman, we today have the tools with which we can control diarrhoea and are developing the community-based models which can easily be adopted by the developing countries. This has been made possible through continued active support of our donors. However, to achieve our ultimate objective, we need further support from the donors.

As in the previous years, a major focus of the Resources Development Programme has been to seek new donors for the Centre. I am pleased to inform you that last year several donors have given their support to ICDDR,B and some existing donors have renewed their contribution to the Centre.

The Canadian International Development Agency has for the first time extended its support to the Centre. The CIDA contribution will be

applied in two vital areas; first to the Centre's demographic surveillance system which is the largest system of continuous registration of vital events of its size and kind. Second, with CIDA assistance, a new large computer, suitable for scientific applications is being installed. This will enhance, to a great extent, the data management capabilities of the Centre.

The Centre also secured the assistance of the Arab Gulf Fund in 1983. The Fund has extended partial support to the Centre's Urban Volunteer Programme. The community-based models developed here will be available for replication throughout the developing countries. AGFUND also funded the Centre's training and international fellowship programmes and the purchase of basic equipment needed to upgrade the Centre's specialised laboratories. This valuable support will go a long way in mitigating the sufferings of the poorest of the poor.

Belgium also agreed to extend partial support to the Urban Community Programme and to support the Centre's staff development through traineeships in Belgium. In addition, services of three scientists/technicians, were made available to the Centre under the Belgium technical assistance programme.

Last year UNICEF announced its long-term support to the Centre's vital research, training and extension activities. The UNICEF grant

was applied to the Centre's training programme, water and sanitation programmes and to the development of the cereal-based oral rehydration project. This new generation of ORS which is currently being field tested, holds the promise of revolutionising the currently available sucrose-based packeted ORS.

The Aga Khan Foundation, which in previous years partially funded the development of the cereal-based ORS at the Centre, has also provided seed money last year for study of ORS based on cereals other than rice. Results of this research will be applied to those countries that do not use rice as their staple food.

France made the services of a French scientist available to the Centre and agreed to support his work at the ICDDR,B.

The Ford Foundation, which supported the transition phase of the Centre from the Cholera Research Laboratory to the ICDDR,B, extended its support for an epidemic control preparedness project. This programme will upgrade the national health personnel's capabilities for diarrhoeal disease surveillance, management and control in epidemic situations.

One of the most important new developments in 1983, has been the preparation of the base for the Centre's international extension activities. The South East Asian Health Minister's meeting recognised

ICDDR,B as an important resource centre in management and control of diarrhoeal diseases. These countries, through the Government of Bangladesh, requested technical assistance from the Centre under the Technical Cooperation among the Developing Countries. I am pleased to inform you, Mr. Chairman, that the Federal Republic of Germany agreed to support this programme and will partially fund this activity which will be undertaken during this year.

As I mentioned last year, the Indonesian Government requested and received ICDDR,B assistance to combat an outbreak of cholera in one of their provinces. In view of the successful intervention, the Government of Indonesia has again requested ICDDR,B's technical assistance. A tripartite agreement between Indonesia, ICDDR,B and USAID as the funding agency, is now being negotiated.

The Ministry of Health of the People's Republic of China has expressed keen interest in developing collaboration with ICDDR,B. During the past years a large number of Chinese scientists have been trained in the Centre. Recently an official Chinese delegation visited ICDDR,B. Areas of collaboration have been identified and we hope that under a tripartite arrangement this technical assistance can be extended to the People's Republic of China in the near future.

As I reported last year, in the Gulf region, ICDDR,B has set up a diarrhoeal disease control centre in Saudi City of Dammam. This

project, which became operational in 1983, is fully funded by the Kingdom of Saudi Arabia. This will provide a base from which the problem of diarrhoeal disease can be controlled in the region.

Furthermore, under tripartite arrangement with UNICEF, ICDDR,B teams have carried out feasibility studies in Tanzania and Columbia to provide technical assistance to UNICEF activities in the field of diarrhoeal diseases in those countries.

Commitments by several long-standing donors to ICDDR,B were renewed last year. This was a very important event, as their support constitutes the backbone of the Centre's activities. Australia and the United Kingdom, both of whom have been donors of long standing, have renewed their support to the core fund. Switzerland renewed its support at an enhanced level and Japan, which became a donor in 1982, included ICDDR,B in their regular aid-giving budget and renewed their support in 1983.

SAREC of Sweden, a long-time supporter of the Centre, also renewed its financial contribution at an enhanced level, both to core and project activities for another two years.

UNDP renewed its funding to the Centre's clinical and immunological programmes for a second four-year cycle. USAID-Dhaka also renewed its project support to a tripartite arrangement in Bangladesh. The Population Council and IDRC (Canada) also renewed their project support in 1983.

ICDDR,B is planning an African Conference on Diarrhoeal Diseases in Tanzania by the end of 1984. CIDA, Canada, has already committed their financial support to this conference.

A special mention must be made regarding Bangladesh's contribution to ICDDR,B. Our host country, in spite of its own financial constraints, has always extended its support to ICDDR,B and continues to provide cash and in-kind support to the Centre.

In the field of collaborative activities, during the last year ICDDR,B established scientific collaboration with several institutions, both in the developing and the developed countries. These institutions are the Australian National University, Australia, ORSTOM, France, Free University of Belgium, and Göteborg University of Sweden, and in our host country, Bangladesh, with Bangladesh National Research Council and the Institute of Post-Graduate Medicine and Research. In addition, the Centre continued a long-standing collaboration with the Johns Hopkins University of U.S.A.

Mr. Chairman, our budget for 1984 is US $ 7 million. Our Director has already placed the budget before you. The prevailing political and economic situation of the world today has made resource development activities very difficult and we still have a shortfall of half a million dollars in budgetary requirements for 1984. This money,

Mr. Chairman, must be raised for the smooth operation of ICDDR,B and for the implementation of its plans for 1984. I earnestly request the donors to come forward and meet this budget shortfall so that ICDDR,B can continue with its activities and bring the fruits of its research into the homes of the poorest of the poor in the developing countries where it is needed most.

Finally, I would like to mention here our capital development programme. In 1983, ICDDR,B completed the construction of one floor of its new building, which has been built, on four acres of land donated by the Government of Bangladesh, with funds from OPEC Fund and Saudi Arabia. This building houses the clinical research and treatment centre facilities. However, six more floors of this building and ancilliary structures will still have to be built. In the two rural field stations, Matlab and Teknaf, ICDDR,B has already purchased the necessary land. Physical facilities now need to be constructed. With the steadily increasing scope of the Centre's activities, it is of the utmost importance that we build our own facilities...

We have approached several agencies for support to our capital development programme, including OPEC Fund and the UNCDF. We hope other donors will extend their support to this important programme of the Centre.

Thank you, Mr. Chairman.

MR. MASHLER (UNDP):

Thank you, Mr. Bashir. May I say from the outset that both Mr. Bashir and Dr. Greenough cannot be bested for having tried, because they have been travelling both professionally in search of money all year and have done amazingly well. The fact that we still have a budget gap of half a million dollars is somewhat disappointing, but at the same time it is heartening because on previous occasions we had much bigger budget gaps. It is my hope that we can find this half million dollars from the donor community because, indeed, the Centre is working on a very lean budget. I had an opportunity to visit the Centre last November and saw the new facilities for the first time, although I had been helping in getting that money for the first floor. This was the first time I did see it and it is a distinct improvement over what existed in Dhaka before. The facilities, if they can be completed with relatively little money (and there are ways and means of doing this, partly from the donor community and there is another way which we are trying to go, by the OPEC Fund together with the Bangladesh Government) would, of course, make a tremendous difference -- not only to the Centre but also to Bangladesh itself because Bangladesh is the first country to be served by the Centre.

This raises, of course, the question of the Reserve Fund which is intended to overcome budget gaps and the need for external borrowing. The idea is not a new one; it is perhaps, a new one for the Centre. It has been tried in the context of other international endeavours, particularly in the international agriculture research centres. The one big problem we have is that governments in particular, and certainly international organisations are not usually in a position to make contributions to a reserve fund because governments would like to fund operational projects and not reserve funds, however laudatory is their intent. But there are other organisations that may be able to provide funding for that purpose, and possibly there may be ways in which the budget itself may be so structured to perhaps put aside certain funds for reserve funding activities. I wonder whether Mr. Bashir has any specific ideas on this issue.

The fact that I raise this point on governments and international organisations not being able to contribute to the fund is almost statutory and, therefore, however much we endorse the idea, I would simply say that to avoid extensive discussion, we're all in the same boat on that one. That leaves out, however, private foundations and possibly private endowments that might be sought outside the governmental and intergovernmental circles. Could you make any comments as to what progress you have made in this respect and what prospects there are to the establishment of a minimum fund?

MR. BASHIR (ICDDR,B):

Thank you, Mr. Chairman. The Reserve Fund idea is not new. In fact, in 1982, out of the Japanese Government contribution of $ 200,000, $ 50,000 was ear-marked as a Reserve Fund. So, in fact Reserve Fund started in 1982 with the Japanese Government support.

We have now gone through proposals and discussed with a few donors; the Board has approved a two phased $ 10 million Reserve Fund budget. The first phase will be for five million dollars and completed in five years and in the next five years we will go for another five million dollars. We are trying to raise and build up our own Reserve Fund at the same time, as we have mentioned, setting aside in our budget a certain amount as a Reserve Fund. We also have discussed with the Ford Foundation and requested contribution for the transition period, till such time as we approach other donors. Since the Japanese Government gave us $ 50,000 initially, there may be some government who will be interested to contribute as a one-time grant to our Reserve Fund. We have explained in our proposal what our intentions are, and how we would like to use this money. The Centre is facing great difficulties; we get commitments from the various donors but not the payment in time. Sometimes we have to borrow money from the bank with a high rate of interest; at times this amounts to half a million to one million dollars. We need a Reserve Fund to ease this cash-flow problem; this money could be set aside and the interest would take care of an

emergency situation. I am quite optimistic and am hopeful that during the next few months perhaps we will get some commitment from the Ford Foundation and other governments for the Centre's Reserve Fund.

MR. MASHLER (UNDP):

Thank you, Mr. Bashir. May I ask you how much money you have so far in the Reserve Fund?

MR. BASHIR (ICDDR,B):

The latest -- $ 400,000.

DR. GREENOUGH (ICDDR,B):

This is as of the end of December. Since December 31st we have not been able to set aside more. Of course that is offset by an overdraft, but it is set-aside as a reserve. It is intended to indicate the importance we place on this. We think that some of the agencies and donors we have discussed this with see this as a necessary next institutional step -- to develop something less than a crisis approach to our cash-flow problems. I believe, and since I am responsible for sometimes forcing the maintenance of programmes in the field at the cost of what might be called "fiscal wisdom," I find it very difficult to think that for a temporary problem you would truncate many of the things that are going on in either service training or research which are on our doorstep. I am optimistic that other agencies and perhaps some

governments will see this as an institutional structural step and a logical one at the age of five years. Thank you.

MR. MASHLER (UNDP):

Thank you, Dr. Greenough. Does anybody wish to comment? If not, I would like to make a very brief comment on the question of financing; it is a perennial one which I keep making in TDR, CDD and ICDDR,B. The question of funding for medical research and medical activities is perennially a bad one. Medical research has always been underfunded internationally, certainly. TDR is perennially short 15% of its approved budget which JCV approves; CDD is short of funding and so is ICDDR,B, although ICDDR,B being a scientific entity in its own right located in a particular place, has had a little easier time of it than others. But nevertheless, even here you see there is a shortfall of half a million dollars in an operational budget approved by the Board and in a budget that is extremely lean. Moreover, this is a voluntary budget and what we have here is the additional problem of currency fluctuations which has hit the Centre as it has hit everybody, including UNDP; but its voluntary programme also is suffering from the same malaise. But what is so shocking is that support for medical scientific research has been on a very low level, indeed, in relation to other activities. It seems to me that in the development field, particularly in the developing countries, the issue of health needs to be raised to the level of other issues because if health is not addressed, as I tried to make the point

yesterday at the Governing Council, the whole issue is going to be lost. People who are sick and who are debilitated cannot perform to their level of their daily requirements. It is no good putting all your money into research and agriculture and other issues when people themselves suffer the kind of illnesses and in the numbers they do at this time. It is an intolerable situation; unfortunately even the governments in developing countries are not paying enough attention to this problem, since I know of hardly any government that puts more than 5% in its national budget for health. There are some notable exceptions, but basically that is the situation. I am sure that all of us need to keep this very much in mind and this point needs to be reiterated. It is The crucial issue in development. We talk about employment, we talk about food, we talk about education, and a whole number of other issues, but health always is low man on the totem pole. What is even sadder is that, here we have a Centre working together with CDD, which has the tools to do a lot more than it can, and it cannot be done because of lack of adequate funding. So I would appeal to those who are here today and those who will receive the record of this meeting, to review again sympathetically, their financing system to see whether some additional funds cannot be directed to a Centre which has clearly demonstrated beyond all doubt, as present contributors and their spirit in which they contribute show, that they have made a contribution that is a very major consequence to the developing world and in the disease of diarrhoea. That is all I have to say at this point. Thank you.

Unless there are any other points, I would like to call on the Representative of the host country, Mr. Gulam Mostafa, who is Secretary of Health of Bangladesh and is also a member of the Board of Trustees of the ICDDR,B.

MR. MOSTAFA (BANGLADESH):

Thank you, Mr. Chairman. As a representative of the host country, Bangladesh, in which ICDDR,B is located, it gives me great pleasure to be here with you today at the fifth meeting of the Consultative Group of this august body. Today, like on the four previous occasions, we have gathered not only to review the activities and plans of the Centre, but also to affirm our commitment to mankind's struggle against one of its oldest enemies, namely, diarrhoea. Diarrhoeal diseases pose an enormous problem for us today. On a global scale an estimated one billion episodes of serious diarrhoea occur every year. Diarrhoea strikes simply and silently. It is often only a matter of hours between the onset of the disease and death. It claims some six million lives every year; most of its victims are young children of poor families in developing countries -- people who, unfortunately, do not have easy access to medical facilities. Therefore, although diarrhoea prevails over mankind all over the world, the poorest of the poor in developing countries bear the brunt of its evil impact. Control and eradication of diarrhoeal disease also constitutes a development activity. In developing countries the population is an important resource. Diarrhoea

debilitates millions, often denying them a full productive adulthood. Therefore, the international focus on economic development, to be truly meaningful for developing countries like Bangladesh must involve concurrent development in health and social sectors. Control and regulation of diarrhoeal diseases will truly be a major step in this direction because diarrhoea is a major killer, causing widespread debilitation in developing countries today.

ICDDR,B, as you are all aware, has been at the forefront of international effort to develop viable means of control and ultimate eradication of the disease. As its host country, Bangladesh takes great pride in ICDDR,B's achievements which include the development of the first single intravenous fluid replacement solution, the Dhaka Solution, and the ORS. The ORS is being distributed worldwide by WHO and UNICEF and is widely used in the management of diarrhoeal disease. The sucrose-based ORS still has some production and logistic problems. Indeed, for poor villagers in developing countries, who are fighting for their very survival, it is not considered very inexpensive. To overcome these drawbacks, ICDDR,B is currently field-testing a new generation of ORS, the cereal-based ones. This new ORS uses ingredients that are readily available in all households and can be prepared and administered at home before the disease reaches critical proportions. The cereal-based ORS costs a fraction of the sucrose-based ORS and provides some nutrition to the patients. For developing countries like

Bangladesh, with limited medical facilities, these considerations are of great importance.

Furthermore, in addition to its research activities, ICDDR,B is playing a vital role in the field of technical cooperation among developing countries. Highly effective treatment and service delivery models developed at the Centre are being successfully transferred to our national health network and our health personnel are receiving training in the latest diarrhoea management technologies. Seven South-East Asian countries have already sought the Centre's assistance to develop and strengthen their national diarrhoea management programmes. A team from the Ministry of Health, People's Republic of China, visited the Centre last month to discuss technical cooperation with ICDDR,B. In cooperation with the Ministry of Health, Kingdom of Saudi Arabia, ICDDR,B established a diarrhoeal control centre in Dammam. It is expected that this centre will serve as a base for ICDDR,B's future activities in the Arabian Gulf region.

ICDDR,B has also developed several programmes under tripartite arrangements. In cooperation with UNICEF, teams of ICDDR,B have already visited Tanzania and Colombia to study ways by which the Centre can strengthen these agencies' ORS and diarrhoeal disease management programmes in these countries. Under similar arrangement with USAID, ICDDR,B is assisting Indonesia to strengthen its diarrhoea management

programme. This programme involves technical assistance by ICDDR,B scientists in Indonesia, and training of Indonesian health personnel at the Dhaka Centre. The Canadian International Development Agency is coming to the support of ICDDR,B to hold a conference on diarrhoeal diseases in Africa. This conference will initiate research training and services in African countries.

Mr. Chairman, ICDDR,B is a non-profit organization solely dependent on donor contributions to support its research training and service activities. It often faces resource gaps in funding new research and emergency activities such as intervention in outbreaks; Centre intervention in Bangladesh, Indonesia and the Maldives are cases in point. A growing awareness among developing countries about the role of ICDDR,B has also led to an increase in its extension services. All these erode the Centre's core funds. To overcome these resource gaps, the Centre has decided to establish a Reserve Fund, which the Director has already talked about.

These, Mr. Chairman, are the ways in which ICDDR,B can assist developing countries develop and strengthen their national diarrhoeal management programmes. I am very happy to say that in Bangladesh we are rather proud and very fortunate to have the Centre helping us in many ways. We are also happy to say that in our humble manner and in a very humble way, we are contributing to this Centre, both in cash and in kind,

which I am told is not a very big amount, but would run around one million dollars in cash and in kind, and converted to Bangladesh currency might be around 25 million taka. But the amount is not important. We are committed to see that this Centre, located in Bangladesh, provides service to all the unfortunate people all over the world, mainly suffering from a particular disease, and this Centre being a fore-runner in bringing this particular disease under control.

In this context, I would invite the more fortunate among us to support ICDDR,B in extending its services to all those in need in developing countries. Simple technologies developed at ICDDR,B have clearly demonstrated that with timely administration, none need die from diarrhoea. With due support, most of these deaths can be averted.

As you have already heard, there is a gap of half-a-million dollars and also the need for a Reserve Fund of two million dollars, which is very essential to ensure that in case of delay in getting funds from the donor countries, the Centre does not run into difficulties; so it is a proposition to help the Centre to avoid it. So, I would again request the existing and prospective donors to come forward and contribute to meet the Centre's budget deficit, and the developing countries to make token contributions in support of ICDDR,B and to participate in the Centre's war against diarrhoea. From the Government of Bangladesh, I assure of our whole hearted support, continuing support, increased support, to the activities of the Centre. Thank you very much.

MR. MASHLER (UNDP):

Thank you, Mr. Mostafa. I am very appreciative of Bangladesh's role in the Centre, its support to it, and its continuing interest in the Centre. I am very appreciative of that.

I think the point has been made adequately, under both items that there is need for additional funding. I hope that all those around the table and those who will receive the record of this meeting will take note of it and hopefully support Dr. Greenough and Mr. Bashir in their continuing efforts to raise funds in which I am also trying to play a small role on behalf of UNDP, not only as role of Chairman of the group, but in general support of scientific research in the field of agriculture and medicine.

May I call on Mr. Dwyre, who I see has a question?

MR. DWYRE (U.S.A.):

Thank you, Mr. Chairman. Thank you, Dr. Greenough, and Mr. Bashir, for your presentation and explanation of the Centre's work and the Centre's financial needs. Thank you to WHO and to UNDP for organizing this meeting and the continuing support to the work of the Centre and the interest that the developed and the developing countries have in the problem of control of diarrhoeal diseases. The control of diarrhoeal diseases is a priority and the key element of the USAID health strategy,

and has been going along for quite a few years, but at the present time, it is being incorporated within the broad-based primary health care programme. I am not a specialist in health development but I have observed development efforts and health development efforts in developing countries over many years and I think we are getting to a point where the emphasis, which our Chairman has stated, is necessary on health development, is coming very much to the forefront; and this is an area of increasingly close collaboration between USAID and WHO. I wanted to make that point at the outset. I also want to make the point that I think is well known by most of you here, but I still think it bears repeating, that USAID has supported the Bangladesh Centre since the 1960s, prior to its becoming an international centre and a national centre, and has continued that support.

I would like to comment in that context on the Annual Report. The notes to the financial report which begin following page 40 refer to note number 11 which is about four pages after end of the notes. USAID is listed as an Unrestricted Contribution in 1983 and 1982 at $ 2.2 million and $ 1.9 million, respectively. Now it is our intention to continue annual contributions to the core financing of the Centre at approximately the level of 1982. I have to repeat that in that annual contributions are always subject to annual appropriations. It is not possible to make a statement for the future of any absolute definity. I would also like to pose a question, though, in terms of the statement

on page 36 of the Annual Report under Continuing Donors, that the USAID is not mentioned as a Continuing Donor, although it is mentioned that the activities which are carried out by USAID in Dhaka are a national programme in cooperation with the Government of Bangladesh. Going back to the notes again, note 11 under the Restricted Contributions, I note that there are a number of contributions: USAID Dhaka, USAID Djakarta, also Dhaka the Nirog project, and a number of other non-governmental contributions, some of which are U.S. based, and each of these were mentioned in different statements that I heard earlier today, and I would like to personally draw attention to the importance which we see in additional continuing activities on the national level. This, of course, is what both Mr. Mashler and Dr. Merson mentioned -- the need for more activities at the national level to extend the work of the Centre. This really brings me to my last comment: In addition to our intention to continue the core grant annually, we are proposing an expanded programme. I say proposing because it is only in the initial proposal stages, of research at the national level in other developing countries, which would be directed at really extending the research results at the Centre. At the moment, on June 1st, a circular telegram was sent out to all our field missions in which a proposal to that effect was made and comments have been asked for from our field missions. It will of course, be several weeks before we get comments back and it will be quite a long time in the development of any project which would have any specific funds or estimates attached to it, but it is the direction

in which we see our expanded efforts to translate our policy of using the oral rehydration treatment, other diarrhoeal disease interventions, as the basis of the key element of primary health care. Therefore, our decision will depend on the responses of the field missions. Thank you.

MR. MASHLER (UNDP):

Thank you, Mr. Dwyre. Dr. Greenough, Mr. Bashir, would you like to make any comments to the points made by Mr. Dwyre before I turn to the Representative from Japan?

MR. BASHIR (ICDDR,B):

Thank you, Mr. Chairman. First of all I think we should mention very clearly that USAID has been a long-standing donor to ICDDR,B and its predecessor organisation, the Cholera Research Laboratory, and started supporting and funding this organisation since 1961. They are still the largest single donor and their support of $ 1.9 million every year is core support. We also have listed project support such as USAID Djakarta and USAID Dhaka, but basic funding on core support is $ 1.9 million which comes from USAID Washington.

Now, about page 36 in the Annual Report, the Continuing Donors section, we didn't mean those who are existing donors; what we meant was those whose terms had expired and had renewed. We only listed those countries who renewed their contribution during 1983 We should

have stated very clearly that the renewal donors are of that country. As for the project that is now for Bangladesh, USAID support which we get is a tripartite kind of arrangement, funded by USAID Dhaka for a project in Bangladesh along with the Government of Bangladesh Health Ministry officials. The Indonesian Djakarta project -- we have been giving training to the Indonesian Government Health Workers in our Centre and now they have requested technical assistance in Indonesia, which we intend to start by the end of this year. This is funded by USAID, and is an example of what we have been requesting the various donors to give us, some support for services we can give to other developing countries, funded by a donor under a tripartite kind of arrangement. We are very grateful to USAID both in Bangladesh as well as in Djakarta and Washington for their continuous and very important support to the Centre. Thank you.

MR. MASHLER (UNDP):

Thank you, Dr. Greenough. I will now call on the Representative from Japan.

MR. ISOBE (JAPAN):

Thank you, Mr. Chairman. I would like to express deep appreciation to the Chairman of the Consultative Group and the representative of ICDDR,B for their presentation of various reports on activities and budget of the Centre. It is an honour for me to take this opportunity

to briefly explain my government's position on the activities of ICDDR,B. We are concerned that the diarrhoeal diseases continue to bother developing countries and that the rate of mortality from these diseases remains very high. We regard the problem of diarrhoeal diseases in developing countries as particularly important. International cooperation is essential in order to prevent and control these diseases. We, therefore, recognised the important work done by ICDDR,B and began to extend assistance to the Centre since 1982. It is my pleasure to announce that the Japanese Government has decided to increase our contribution to $ 240,000 this year in spite of its financial difficulties. I hope that our contribution will help the Centre further strengthen its research and other important activities. Finally, as to the Centre's plan to construct a new ward, we believe it important to pay particular attention not only to construction cost but also the maintenance cost entailed in the completion, and deal with the plan cautiously. Thank you very much.

MR. MASHLER (UNDP):

Thank you. Representative from China.

MRS. CHEN HAIHUA (CHINA):

I have listened carefully to the Chairman's Report and also the Director's Report. It is very interesting and it is very helpful. China is interested in this, and we pay much attention to diarrhoeal diseases in order to prevent it and also to cure it and consider research to be

specially important. China also takes an active part in activities towards control of diseases, including the tropical diseases. This is very important because they concern a great number of people all over the whole world; and China is interested in contributing to activities for solving such problems. China is a developing country. We are trying to pay attention to various kinds of activities. I am sure that in the future, China will seriously consider more positive support towards ICDDR,B. Thank you very much.

MR. MASHLER (UNDP):

Thank you. Representative from Canada.

MR. SPERBER (CANADA):

I don't have much to add. As was mentioned, Canada is supporting the DSS programme and the value of that contribution by the year 1987-88 will be about $ 5,000,000 Canadian dollars. Thank you.

MR. MASHLER (UNDP):

Thank you. The Representative from Bangladesh has already commented; will you add anything?

MR. MOSTAFA (BANGLADESH):

Mr. Chairman, I would like to add a comment, but not about funding; rather on the point raised by the distinguished Representative from USAID.

I feel we should also mention that ORS for treating diarrhoeal diseases will be an important element not only in health care but also in population control. As you know, MCH is an important element of population control programmes; child health, reducing mortality in children will indirectly help the population control activity. We are very much interested in having an integrated health and family planning programme, with this particular intervention the ORS. So, I thought I had better make this point. Thank you.

MR. MASHLER (UNDP):

Thank you. Representative from Australia.

MR. CAMPBELL (AUSTRALIA):

Thank you, Mr. Chairman. At the outset I would like to associate myself in brief with the comments of appreciation made by various colleagues here for the presentations made by Dr. Greenough and Mr. Bashir in relation to the work of the ICDDR,B, over the past year. The Australian Government has great respect both for the research achievements and the able administration of the Centre since its inception, and it looks forward to continuing the support it has given in the past for the Centre's work for the future.

In this particular context I have been instructed to inform you that the Australian Development Assistance Bureau will continue to support

the ICDDR,B in 1984-85 by providing core budget support to the level of approximately $ 191,600 Australian dollars. It's also hoped that something of the order of $ 66,700 will be provided to fund the first year of a three-year collaborative agreement between the ICDDR,B and the demography department of the Australian National University. However, the actual figures in both of these amounts, the actual specific figures will depend, on the appropriations being approved. Thank you, Mr. Chairman.

MR. MASHLER (UNDP):

Thank you very much. I was asked last night by the Representative from the United Kingdom to announce that the United Kingdom hopes to continue its contributions at present levels in the coming year. Representative from Switzerland.

MR. ROHNER (SWITZERLAND):

Dr. Cornaz who would have liked to have come over, is preparing a trip to Asian countries and unfortunately had to cancel her trip to Geneva yesterday afternoon. She gave me indications over the phone which I am happy to read out here. As you know, for 1984 Switzerland has pledged and already transferred, I believe, an amount of 750,000 Swiss Francs. This is part of an agreement which was signed in November of last year, as I understand. The support and interest Switzerland gives and has in this programme has been mentioned at other times.

Dr. Cornaz is a member of the Board of Trustees and through her we get all the information we want and I can assure you that the activities of the Centre get a lot of attention in Berne. We follow with particular interest, the field-oriented research and all the research which is linked to traditional methods, to methods of curing which are applicable at grass roots level. This is all I will say; thank you again for the invitation.

MR. MASHLER (UNDP):

Thank you, and it is very helpful. Dr. Freij.

DR. FREIJ (SWEDEN):

I would also like to join the other delegates in complimenting Dr. Greenough and the Centre on the value of the work that is being carried out by ICDDR,B. The Swedish Agency for Research Cooperation with Developing Countries, SAREC, has given modest contributions to ICDDR,B and its core budget since 1980. Initially the grant was 450,000 Swedish Kroner; that is a little bit over $100,000 US dollars; and that is for a new two-year period. It was communicated to ICDDR,B that this increase was made in view of the fact that the field testing of the new cholera vaccine will be a very costly affair. This vaccine has been developed as part of a collaborative project between ICDDR,B and a Swedish institution. This project has also been funded by SAREC. After the present two-year period, it is SAREC's intention not to

consider designated contributions or special project grants to ICDDR,B. With regard to the possibility of the future core contributions, that is after 1985, I am not in a position to give any firm indication of that.

MR. MASHLER (UNDP):

Thank you, Dr. Freij. Representative from Pakistan?

MR. KAMRAN NIAZ (PAKISTAN):

Thank you, Mr. Chairman. May I also join everyone here who has praised the reports which have been presented so far. I will confine myself to saying that my Government wholeheartedly supports the endeavours being made by the ICDDR,B and the WHO towards the control of diarrhoea. Allow me also to put on record my Government's appreciation for the donations by the donor countries. Thank you.

MR. MASHLER (UNDP):

Thank you. Representative from the Aga Khan Foundation.

DR. WILSON (AGA KHAN FOUNDATION):

Thank you, Mr. Chairman. The Aga Khan Foundation cannot compare with the governments that are represented here in terms of resources. We are a young foundation. However, because of our orientation in the health programmes, being one of community-oriented, community-based

health projects, the adaptation, development, and transfer of health technology, its relevance and appropriateness for PHC, is one that is flatly in our strategy. We see ourselves as playing a double role: One is providing direct assistance to what we see as key efforts at ICDDR,B that apply to our strategy -- in this case it is the cereal-based ORT; having provided a grant in 1983 to look at rice and other grains for the cereal base. A particular interest in African and Asian countries have resulted in the choice of maize, millet, sorgum, wheat, potato and such as the alternate cereal. However, the other side of what we see as a kind of collaborative relationship is that we have requested to borrow from ICDDR,B one of their principal investigators for an international conference that we are holding in August, this year, and he will not only report his findings but discuss the implications of those findings at a conference that centers on the Aga Khan Health Services Global Programme and the Aga Khan Foundation's primary health care projects. We expect that the cereal-based ORT through this process will impact the entire Aga Khan health services, possibly the Aga Khan University in Karachi; and we hope to continue support. Unfortunately, our Board has a policy to give unrestricted grants, so we are currently having a dialogue with ICDDR,B to look at new projects, particularly ones that would extend to other countries of Asia and Africa.

DR. GREENOUGH (ICDDR,B):

I would like to say something on behalf of the Government of the Kingdom of Saudi Arabia, since I was there day before yesterday. They

have provided us with continuing core support in the amount of about $ 100,000 a year over a long period -- five year commitment -- and I think this should be recognised by the group here. In addition, they have provided full support and enthusiastic cooperation for a diarrhoeal disease control project in the Eastern Region of Saudi Arabia. We are only nine months along in that project. I have just come from Riyadh and found enthusiasm for continuation and extension of this project to other regions of the country. This project is fundamentally research in the field of diarrhoeal diseases in the Kingdom of Saudi Arabia and neighbouring areas. So, I would like to recognise this at this point. Thank you.

MR. MASHLER (UNDP):

Thank you, Dr. Greenough. Are there any other comments? If there are not, then we come to other business. Does anyone wish to raise any points under other business? If not, I think we have come to the end of our deliberations. I think it is fair to say that the group would ask me to extend to Dr. Greenough, the Chairman of the Board, and Mr. Bashir the thanks of the group for their presentations, the work they have done, and it is considerable. We hope that we will meet with them again next year.

As I said before, we normally meet at the time of the Governing Council; sometimes we have better luck that we did today in terms of

representation. We feel that it is important for this group to meet once a year to get a direct feed-in from the management of the Centre both on the Board side and Direction side. We intend to follow this procedure next year when the Governing Council will be meeting in New York. We will notify you well in advance.

Again, my thanks to all of you for coming today and I hope that the presentations that have been made to you, plus the other points that have been made, will be helpful in marshalling additional funds in the coming years for the International Centre for Diarrhoeal Diseases Research, Bangladesh.

Thank you again. The meeting is closed.

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