

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT PAPER FACESHEET



A ADD
C CHANGE
D DELETE

PP

2. DOCUMENT CODE

3

1. COUNTRY ENTITY

TAB/Interregional

4. DOCUMENT REVISION NUMBER

TAB

08

5. PROJECT NUMBER (7 digits)

931-1014

6. BUREAU OFFICE

A. SYMBOL

TAB

B. CODE

08

7. PROJECT TITLE (Maximum 40 characters)

Health Impact of Non Health Sectors

8. ESTIMATED FY OF PROJECT COMPLETION

FY 80

9. ESTIMATED DATE OF OBLIGATION

A. INITIAL FY

78

B. QUARTER

1

C. FINAL FY

79

(Enter 1, 2, 3, or 4)

10. ESTIMATED COSTS (\$000 OR EQUIVALENT \$) -

A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B. FX	C. L/C	D. TOTAL	E. FX	F. L/C	G. TOTAL
AID APPROPRIATED TOTAL	109		109	274		274
(GRANT)	(109)	()	(109)	(274)	()	(274)
(LOAN)	()	()	()	()	()	()
OTHER U.S. 1						
2						
HOST COUNTRY						
OTHER BONDS(S)						
TOTALS	109		109	274		274

11. PROPOSED BUDGET APPROPRIATED FUNDS (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. 1ST FY 78		H. 2ND FY 79		K. 3RD FY	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	I. GRANT	J. LOAN	L. GRANT	M. LOAN
(1) PH	581	520		109		165			
(2)									
(3)									
(4)									
TOTALS				109		165			

A. APPROPRIATION	N. 4TH FY		O. 5TH FY		LIFE OF PROJECT		12. IN-DEPTH EVALUATION SCHEDULED
	D. GRANT	P. LOAN	R. GRANT	S. LOAN	T. GRANT	U. LOAN	
(1)					274		MM YY 03 79
(2)							
(3)							
(4)							
TOTALS					274		

13. DATA CHANGE INDICATOR. WERE CHANGES MADE IN THE PID FACESHEET DATA, BLOCKS 12, 13, 14, OR 15 OR IN PRP FACESHEET DATA, BLOCK 12? IF YES, ATTACH CHANGED PID FACESHEET.

Community organization & health

1 1 = NO
2 = YES

14. ORIGINATING OFFICE CLEARANCE

SIGNATURE

Lee M. Howard, M.D.

TITLE

Director, Office of Health
Technical Assistance Bureau

DATE SIGNED

MM DD YY
05 27 77

15. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION

MM DD YY

Project Title: Health Impact of Non-Health Sector Activities
Principal Investigator: Not Selected
Project Life: 36 months
Estimated Cost: \$274,000
Initial Project Funding: FY 77 \$109,000
Project Manager: Dr. Joe H. Davis

1. Narrative

The Foreign Assistance Act directs U. S. aid efforts to focus on critical problems which effect the lives of the majority of people in developing countries. Health is singled out as one area for attention. Current work on development of an Agency strategy to assist in improving health in LDCs recognizes that the approach must be multisectoral; a strategy which focussed exclusively on health sector activities would ignore aspects of other developmental sectors which probably have a greater impact on health in LDCs than health sector activities.

Any consideration of the influence of other sectors on health soon leads to a realization that the relationships are very extensive, complex, and interrelated. Great clarity and specificity of indicators is required for relationships to be quantified to the extent that they will be useful for policy making.

The major areas of potential relationships which require consideration are: 1)Family income - changed expectations for housing, sanitation, education, value of children, health care expenditures - health status; 2)maternal education/knowledge - changed values concerning infant care, family planning, family diet, sanitation - health status; 3)family household holding agricultural production - value of children as laborers, nutrient availability, family income - health status; 4)agricultural water management practices - family agricultural production, disease vectors, sanitation - health status; 5)health status - agricultural production, educational achievement - household income. Obviously much more disaggregated definitions and indicators must be identified for this complex set of relationships to be adequately conceptualized.

The project proposes a fair amount of analytical rigor for an exploratory project of this type. It is the opinion and experience of the technical office that the relationships in the area of health and development are so complex and intertwined that an analytical framework is required to adequately identify and define research hypotheses.

2. Research Purpose and Expected Products

A. The Purpose of the Project

The project is to define and provide a conceptual base for the study of health status as influenced by all sectors, health, social and economic; develop tools and guidance for planners concerned with developmental planning; and define relationships most appropriate for further research.

B. Expected Research Objectives

The project will be expected to produce the following products:

- 1) A framework of analysis and a set of defined variables within that framework. Health status, health care, sociocultural characteristics, and economic production are some of the components to be incorporated. The definitions of other variables will depend on the method of sectoring used in the framework. The analytical framework will be in the form of a disaggregated descriptive model.
- 2) Definition of a set of valid and reliable measures and indicators that will permit estimation of these variables and investigation of their relationship by means of the analytical framework in 1) above.
- 3) A best present estimate of current inter-sectoral and reciprocal relationships described in the analytical framework based on current literature adjusted by the analytical framework proposed. Examples would include estimates of the effect of health care activities, of defined types on agricultural output, of urbanization on health, and so forth. In this element, the project will attempt to synthesize a series of general statements from knowledge found in a variety of scattered sources. These statements should prove useful in future field experiments and may help in answering a number of complex

questions such as the mix of health care activities to be used in integrated rural projects, or the effects of other factors on health that might be collinear with the introduction of a rural water supply system. 4) A set of hypotheses, indicators and guidelines which will direct further research efforts aimed at revising the "best present estimate" and making it more realistic and useful produced by a series of iterations of the analytical framework utilized.

3. Significance and Rational for Research

A. The Problem and its Relationship to AID Objectives

The Foreign Assistance Act of 1973 requires that U.S. aid efforts "focus on critical problems in those functional sectors which effect the live of the majority of the people in the developing countries" (U.S. House of Representatives, Committee on Foreign Affairs and U.S. Senate, Committee on Foreign Relations, p. 9).* The document defines development as better living standards for this "majority". Although health, population and food are singled out for attention, the term "functional sectors" is left vague.

The legislation further requires the Agency to measure the impact of all its programs on the health, fertility and nutritional indicators.

Serious difficulties complicate AID's response to the Congressional directive. The most amateur public health technician knows that health can be more readily influenced by changes in sociocultural, environmental or economic factors than by most health sector activities. It is useful to consider some specific examples - malnutrition

among infants and children is a much greater problem today than in the past in many societies due to changed breast feeding patterns and changed family agricultural production; on the other hand LDC households tolerate unsanitary environments which lead to excessive levels of diarrheal disease - in currently developed countries infectious disease rates for most diseases were decreasing even prior to the introduction of chemotherapeutic agents - many water borne diseases have been exacerbated by the extension of irrigation systems in LDCs. Unfortunately the current state of knowledge concerning the expected level of impact of these relations is not sufficient for planning purposes. There simply do not exist accurate estimates of the impact of activities in other sectors on health or of health status on other sectoral variables. An improved understanding is essential if the Agency is to respond appropriately to Congressional directives.

B. The State of the Art

Kamarck has noted the inadequacy of present theories and the operational importance of attempting to remedy that inadequacy:

Practically nothing has been done in the way of systematic economic analysis of the various specific disease obstacles to economic development and of the economic and social costs and benefits of projects to remove them. Without this basic information it is impossible for a government or aid agency to allocate investment optimally between disease control as such and other more conventional projects. In the meantime it is highly improbable that the existing distribution of resources is anywhere near optimal. (Kamarck, 1975a, p. 560.)

This judgement is echoed by two other knowledgeable economists (Stevens, 1975 and Malenbaum, 1973). Both of these economists have

* Bibliography Attached.

declared that present concepts of health status, socio-economic development and the relationship between the two cannot support rational resource allocation or good project design.

It is now generally recognized that present concepts and measurements of development are also inadequate for analysis and policy (Adelman and Morris, 1973, United Nations Research Institute for Social Development, 1972).

In August, 1975, TA/H convened a group of experts to develop research recommendations. The four experts were Drs. Irma Adelman, University of Maryland; Hector Correa, University of Pittsburgh; Peter Newman, Johns Hopkins University; and Burton Weisbrod, University of Wisconsin. Their consensus opinion was that current concepts of the relationships between health and development could neither support rational resource allocation nor adequate research hypothesis formulation. Their advice was to support a process of concept building and hypotheses formulation as a prerequisite to Agency investment in specific research on the relationships of health and development.

The advice of the expert group is reinforced by an unsuccessful GTS project undertaken in FY 71 to do a feasibility study for research on the relationships between health and development. The contractor was unable to define with sufficient certainty research areas most warranting attention. In retrospect, this was in large part due to the lack of a theoretical construct or the use of a specific analytical framework capable of capturing and describing the complex set of inter-relationships extant.

4. Plans to Coordinate and to Link Research--Including Networks

Information about the results of past AID financed projects will be made available to the committee and principal investigator. TA/H will explore the possibilities of cooperating with other technical assistance offices and organizations in incorporating indicators into the evaluation components of field projects so that results from the field during the life of these projects can aid in the conceptual analysis.

In addition, possibilities of cooperation have been explored and seem likely with the United Nations Research Institute for Social Development and the World Employment Programme of the ILO. Further networks will be explored with the World Bank and with the International Institute for Applied Systems Analysis.

In November, 1976, TA/H staff members began discussions with the World Health Organization on the development of a worldwide institutional network in health development. The term health development was coined to describe an interdisciplinary approach within public health which will concern itself with health status and all the factors of human existence which influence health status (the same interdisciplinary approach this project envisions). Currently WHO is presenting the health development program to its Executive Board and TA/H proposes to incorporate components of the program into its FY 79 program. WHO will also seek funding from other donors.

The health development program will include development of a research capability in network institutions. The timing and focus of this research project make it ideally suited to link with the health development institutional network and assist in defining the content of their research agenda.

5. Plans to Facilitate Utilization of Research Results

There is, in a sense, a "derived demand" for this project. Health planners need information on the interactions that this project will investigate. Some of that information can only be gained by field investigations, but the field investigations require prior conceptual analysis. This project is undertaken to define hypotheses warranting further research. TA/H intends to redirect some of its research efforts to the area of relationships between health and development following completion of this project.

Research findings will also be disseminated through a planned series of AID regional conferences on health.

Research findings will be distributed to AID field health officers through current information dissemination activities of TA/H. They will be distributed to LDC institutions by AID research abstracts dissemination activities.

Information dissemination will form an integral portion of the proposed WHO health development institutional network. The results of this project will be disseminated through that network.

6. Management Considerations

Since the project will provide a critical strategic input into both AID's research agenda and that of the proposed health development institutional network, TA/H is anxious that the contractor selected interact closely with personnel from AID, WHO and other organizations. For these reasons TA/H intends to expand its consultant roster of health and development economists and intends to sponsor a small workshop at the termination of phase 1 of this project.

TA/H also expects to include in its FY 79 program partial support to the health development institutional network which will be involved in dissemination of the research findings of this project.

The technical evaluation of the project will be carried out by the expert consultant board established for this project. (See attached list of potential consultants.)

All project activities will be carried out in the U.S. by a U.S. institution. All management will, therefore, be the responsibility of TA/H. The project officer, Dr. Joe H. Davis, is trained in both public health and economics.

The contractor is not selected at this time. The project idea was generated by AID personnel who are of the opinion that several U.S. institutions are capable of doing the tasks this project requires. It is proposed that formal competition be utilized for contractor selection. The criterion for contractor selection will weight heavily: 1) academic qualifications and overseas experience in health, social and economic disciplines of team members; 2) health, social and

economic interdisciplinary skills of team leader and experience of team leader with LDCs and the uses of mathematical modeling; and 3) bidding institutions relationships with UNRISD, ILO or WHO. The team leader selection criterion will be weighted more heavily than any other factor.

Research Design, Methodology and Plans

7. Technical Review

A major focus of this project is the development of a set of concepts that are relevant to health and other planners in dealing with intersectoral issues in health. This is important for there is a considerable amount of conceptual confusion; in the first instance because of disharmony or disorder in the use of terms and expressions, i.e. the conflict in jargon between professions; and in the second instance, the confusion about whether what one means constitutes an adequate signal of reality. One authority asserts that this confusion has seriously impeded progress in our understanding of economic development.

When it comes to the theory of economic development, the failure to recognize explicitly the essentially epistemological nature of the problem has led to the proliferation of mechanical models of very doubtful value, and, one fears, the giving of a large amount of bad advice (Boulding, 1971, p. 25).

It is not difficult to show that such confusion does exist in discourse about development, about health and about the relationship between the two, and that policy analysis could be improved by clarification in this area. Development, for example, was once defined operationally to be

per capita income. It was used on the assumption that if total income grew fast enough, some would trickle down to the poor, and living standards in the aggregate would rise. But this assumption is now discredited and per capita income is no longer considered an adequate index of development (Adelman and Morris, 1973, United Nations Research Institute for Social Development, 1971, 1973; Baster, 1972.).

Indicators which ignore the multi-dimensional aspects of development can be deceptive and policies which attempt simply to maximize per capita income misleading. Work is proceeding on attempts to measure development more adequately and to develop policies, programs and projects with multiple objectives. But an examination of the literature proves that these efforts have not kept up with advances in the health field. For, just as planners have recognized the need for a broader concept of development, health professionals have become dissatisfied with the uni-dimensional concept of health as the absence of disease. Such thinking motivated the WHO definition of health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". For years this was considered a non-operational ideal, but recently efforts have been made to take the definition seriously, indeed to be satisfied with nothing less, and significant advances have been made in developing indicators based on this concept (Breslow, 1972; Fanshel, 1972). The weakness of these indicators, however, is that they are based on questionnaires administered in advanced countries. Little thought has been given to the necessity of developing indicators more suited to the context of the LDC.

The connection between malnutrition and mental retardation, and the growing emphasis on the human element in development have led to the need for a concept of health which includes the notions the ability to function, and eliminate the obstacles to the ability to function. The concept is not limited to mere physical and mental ability, but also to motivation and attitudes. Health professionals have become aware of the fact that they cannot deal with ill health unless they account for the effects of the socio-economic environment. Both in the United States and abroad, health professionals have become aware of the problems of the "clinical approach" to medicine in the developing world.

"American style problem-solving aims at putting quite sizeable resources into a very limited number of "key factors". This strategy was very useful in engineering research, but did not achieve similar successes in the U.S.A. in social and biological research, including health in the 1960's... there are good reasons to suspect the failure was mainly due to the nature of causal webs in social and biological phenomena. A striking example of this is the interaction between malnutrition and infection.... Action programs aiming at malnutrition only, or infection only, have singularly failed, because the whole ecology and biology tend to maintain the original level of illness."

DeSwerner, D., Proposal for Program Development in Family Health and Population--West Africa (Appendix III). Ford Foundation, August, 1974 (mimeographed). (Quoted in Martin, 1975, p. 175).

Scrimshaw (August, 1974) notes that the basic reason for protein malnutrition lies in the distribution of income. The world, and most individual countries produce enough protein to feed all the citizens. The problem is distribution of protein, and he lists the following causes:

*Low wages and income which limit the purchase of relatively costly foods that contain protein of good quality.

*A preference for protein foods so that persons who can afford it eat far more than they need.

*Lack of knowledge of appropriate nutrition practices and specific prejudices against giving protein foods to young children, especially when they have infectious illness; and

*Higher requirements of underprivileged persons for protein because of the effects of acute and chronic diseases. It is young children who are most affected by these factors (pp. 795-6).

Most other health variables are equally affected by activities in other sectors in a very complex fashion.

Though the notion has been severely battered in the literature, the concept that development depends on accumulation of physical capital still has an influence on the approach used to analyze the relationship between health and economic development. The standard approach considers the effects of health on labor, land and capita accumulation (Barlow, 1976, 1968). By reducing premature death, days absent from work, and disability on the job, disease control activities would increase the number of units of homogeneous labor and hence have a positive effect on output. By increasing the number of equivalent consumers, however, it would leave less output for savings and investment. This would reduce the rate of capital accumulation and hence have a negative effect on output. An increased number of children would lead to higher government expenditures for welfare purposes, and thus drain funds away from more productive investments. Finally, such factors as the opening up of new lands due to eradication of disease vectors can lead to increases in production, though the opportunity costs of complementary factors should be deducted from gross output attributed to the operation.

This whole framework carries the implicit assumption that the accumulation of homogeneous units of land, labor and natural resources holds the key to economic growth, and economic researchers long ago rejected that assumption (Denison, 1962; Kuznets, 1966).

The concepts of human capital was developed partially to deal with the problems of the over-emphasis on physical capital, and when simple relationships between educational services and work force skill or between a specific health service and a specific reduction in illness are possible, it is a valuable concept (Schultz, 1961, 1962, 1964).

But even the human capital approach has problems accounting for the complex inter-action between malnutrition and infection, or of the effect of malnutrition on mental ability. Heroic efforts have been made to consider this latter effect of malnutrition, but so far the results are more notable for ingenuity than for credibility (Selowsky and Taylor, 1973; Belli, 1971; Correa, 1975, pp. 13-24). Even the concept that there is a trade-off between consumption and investment has been called into question, as rural capital investment, such as land clearing usually takes place during a different season of the year from the production of consumer goods (Simon, 1976).

Gunnar Myrdal has, in fact, questioned whether the concept of capital is at all useful for understanding the process of economic development:

But if we do add investment in health to investment in education and define human resources in terms of two dimensions of population quality--as occasional references invite--we must include all costs in improving conditions of health--not just expenditures on health facilities... .The implication is that the new term "investment in man" should include not only the consumption of educational and health facilities, but practically all essential consumption if the underlying reasoning is to be logically consistent.

The productivity effect on the margin of various items of consumption differs, however--some consumption is relatively unproductive and some has a negative value for health. The real planning problem is how to squeeze and twist consumption in such a way as to speed up development (Myrdal, 1968, III, 1549-50).

A review of the literature on modeling the relationships between different sectors is not presented in this section. Instead the reader is referred to "Population, Environment and Natural Resources: A Critical Review of Recent Models".

It is asserted that sufficient experience has been gained in using various modeling techniques useful for relating health to development to select the appropriate modeling tool for the purposes of this project, see attached bibliography: Adelman and Morris, Barlow, Correa, Malenbaum, UNRISD and Weisbrod.

8. Research Project Design and Methods

This activity will be undertaken in two phases or stages. During phase one, lasting fifteen months, the principal investigator, using members of the committee as consultants when necessary, will develop operational definitions, a useful taxonomy of sectors, and begin, on the basis of selected data sets, limited investigations leading to specification of hypothesized functional relationships utilizing existing data sets. At the end of phase one, the principal investigator will present a paper summarizing progress up to that point. The members of the committee will comment on the paper. Since the object of this project is to develop fruitful approaches, disagreements between the principal investigator and various committee members will not be discouraged, and dissenting or minority reports will be permitted.

In phase two, the principal investigator will complete the investigation by means of simulation model, will investigate further the

specified functional relationships, and on this basis formulate hypotheses for field investigation.

Within this skeletal framework, continual feedback and interaction is envisioned. It is expected that the principal investigator will be made aware of the results of other projects sponsored by AID, such as the Danfa project, the Narangwal project, and the UNRISD investigation of progress at this local level. In a similar fashion, considerable interaction between the principal investigator and the members of the committee is expected. And finally, further possibilities for mutually beneficial interactions with other agencies will be explored. TA/H is expected to make available the results of ongoing field projects sponsored by AID and cooperate with other AID agencies providing the feedback from the field which will enrich the conceptual analysis. Ongoing research in INCAP, Danfa and results from AID sponsored household and fertility surveys will be particularly useful.

Prior Activities: Selection of Committee and Principal Investigator

Since this project is inter-disciplinary in scope, efforts must be made to pick an individual with an inter-disciplinary background, e.g. an economist conversant with anthropological techniques and modes of analysis. Since such an individual would be deficient in one or more of the areas needed to analyze the problem, it will be necessary to have a body of consultants available. In particular, the project demands considerable epidemiological and health expertise.

A consultant project committee will be established to advise the

project monitor in all stages of the investigation and make known any data sets that the members might be aware of. The project monitor will inform the principal investigator about existing data sets that have been produced with AID monies.

Specifically the activities to be carried out prior to initiation of project activities are:

1) selection of an expert consultant project committee with skills and experience in health, economics, systems analysis, anthropology and sociology and;

2) selection of a contractor using criterion outlined on page 8.

Phase I. Selection of Variables and Definitions

Adelman and Morris, in their recent study of income distribution and development, distinguish between two types of research design:

In formulating a research design, it is useful to distinguish between subjects about which much is known and those on which there is very little validated knowledge. For subjects characterized by much prior information, the formulation and empirical testing of theoretically based models is desirable. For subjects characterized by little prior information, the use of statistical tools to describe more simply the structure of the actual world in order to formulate empirically well-grounded hypotheses for future testing appears more appropriate (Adelman and Morris, 1973, p.5).

There are very few subjects about which absolutely nothing is known, and there are very few about which knowledge of functional relationships is absolutely certain. In the present case, there is also a long history of experience, but considerable confusion still exists, and so it would seem reasonable at the beginning to approach the subject as if it lay in the second class described above.

The principal investigator will critically examine existing theoretical explanations of the relationship between health and economic development. At this stage extensive conversations with experts will probably be necessary so that the investigator can see the problem from the points of view of the differing disciplines - economics, anthropology, epidemiology, nutrition, and health care.

In addition, the principal investigator will examine different bodies of data, and committee members will be expected to help in identifying existing data sets. Further, AID personnel will make available information from on-going AID field projects, such as the Danfa project, the Narangwal project, and the studies of Infant and Childhood Mortality in Latin America.

For the definitions and indicators of development, health and other variables, the principal investigator will examine existing literature on indicators of health and development. He or she will also need some awareness of the limitations of existing data. The major conceptual task of phase 1 will be the identification and specification of a series of hypothesized relationships between health and development which will define and limit the scope of further analysis i.e., define the framework of analysis; and select appropriate existing data sets and appropriate methodologies for examining these data sets. In this element the principal investigator must consider the merits of different ways of defining and delimiting functional sectors--traditional-modern, industrial, agricultural, urban-rural and agent-environmental-host.

It is difficult to predict the optimal sectoral delimitation or the variables to be included. It is clear however that the following inter-relationships would be included in any adequate conceptual framework: household income; family size; household environment; maternal education; household agricultural production; child spacing; nutrient intake; household savings and consumption resource allocations; social and cultural values; a set of expectations and attitudes towards sanitation, infant care, family diet etc; the consumption value of health care; health status including malnutrition fertility and functional disability; labor force productivity; educational attainment and certain large scale development activities.

The investigator must also select and choose a definition of welfare or quality of life which captures sociocultural as well as economic aspects.

The development of indicators will depend on the conceptual problems mentioned earlier, the framework of analysis chosen, the definitions of health, development, and the other terms, and finally on the analytical techniques chosen.

After examining the existing data the investigator will begin developing guidelines for determining the most crucial missing data, as this bears on the fundamental purpose of the project. The interest is to develop adequate health indicators more suitable to the situation of LDC's than those currently in use.

In summary, the Phase I report will include a definition of the framework of analysis including definitions of terms, a description of indicators, a summary of theory, description of the modeling tools

proposed for Phase II, a summary and critique of previous research and identification of data sources for Phase II work.

Specifically the activities to be carried out in Phase I are:

- 1) Careful review of background literature covering the following aspects: research findings on the relationships between health and development, indicators which have been utilized to define inter-sectorial variables and their relationships and conceptual frameworks which have attempted to describe the relationships between health and other sectors. The contractor will be provided the results of the 1971 literature review on this subject.
- 2) The identification of potential relationships between health and other developmental sectors including education, agriculture, savings and consumption household decisions, family income, socio-cultural factors and health including malnutrition and fertility. The initial set of relationships should be comprehensive but fairly aggregated at this early stage. The activity mode will be that of conceptualization and definition. Probably a modified group process with specific selection criterion will be required.
- 3) The mapping out of the interrelationships identified under 2) above into a visual model identifying linkages between variables and direction of the causal relationships if known. The limits of the conceptual frame will be established at this stage.
- 4) The identification of most useful definitions and indicators to describe the relationships mapped in 3) above.

- 5) The selection and specification of the method of analysis most appropriate for the indicators and interrelationships developed in 3) and 4) above.
- 6) The review, identification and selection of existing data sources as possible inputs into the analysis.

Phase II. Elaboration of Analytical Framework and Strategy Development

The major products of Phase II will be the development of a conceptual model for the relationships between health and development the identification of research hypotheses proceeding from the model and the recommendation of a research strategy to address the research hypotheses identified.

The model components will be defined by the definitions proceeding from phase I and the interrelationships of model components will be those gleaned from the literature or hypothesized in phase I.

It must be emphasized that the model developed can probably not be made operational within the limits of presently available data. Its utility at this time is to define potential ranges for the technical coefficients linking health variables with other variables rather than attempting to accurately predict the true values of relationships between health and development. It is possible that the model developed for the purposes of this project could be used in the future as an aid to accurately predicting the impacts on health of changes in other sectors but that would await a great deal of empirical research so no efforts are to be made at this time to assure that the model developed could be used for policy purposes.

What will be developed, however, is the simplest model which can capture the majority of the potential relationships between health and development and will be amenable to some type of sensitivity analysis to establish the potentially realistic ranges of values for hypothesized relationships. The model will be descriptive not normative and conditional rather than scientific.

An example may be useful for the justification of this approach. It can be hypothesized that if a child dies, parents fecundity will change in an attempt to replace the lost child. The number of additional births which would result would most likely vary between 0 and 1. The ranges of the number of additional births can be arrived at by simple logic. Many of the relationships between health and development, however, are very complex, represent a chain of events rather than direct causality, and are interrelated with other causative, intermediate or outcome variables. It may well be that many of the estimates of relationships between aspects of health and developmental factors that have been drawn from more limited analysis are quite inaccurate because the complexity of linkages has been ignored. The analytical framework developed by this project must be sufficiently broad to capture the major portion of the complex set of linkages extant.

The model requirements are that potential relationships be clearly visualized, a moderate amount of disaggregation be possible and sensitivity analysis be possible. It is suggested that simulation or path modeling would be the most appropriate.

A simple model proposed by the World Health Organization but never utilized is described below. The model is conceptually weak, highly aggregated and appears to be focused on national level data.

It is asserted that the majority of research which will be required to elucidate the relationships of health and development must be focused on the household level, therefore, the model developed in this project must be specifically focused at the household level. Once conceptualized and defined several model iterations will be made to establish researchable ranges of variable interaction. The data used for model iterations will be a combination of readily accessible estimates from household surveys and a-priori estimates.

It must be emphasized that the size of the specific content of the modeling effort cannot be predicted at this time due to the exploratory and developmental nature of this project. We can predict, however, that relationships to be modeled will include the relationships of:

- 1) health status to productivity in several sectors;
- 2) education to health status;
- 3) migration to health status;
- 4) health status to fertility;
- 5) nutritional status and health status;
- 6) family income to health status;
- 7) sociocultural factors to health status;
- 8) family size to health status;
- 9) housing to health status;
- 10) environmental and climate factors to health status;
- 11) role of women to health status;
- and 12) health status to investment decisions.

It is predicted that no matter how large the simulation model or models may result the relationships identified will remain complex and

multidetermined. An example is the relationship between health and educational attainment. The relationship would not only be collinear with other variables like family income but also would be a multistage relationship. Examples include: Attitudes of parents toward educational investment for healthy children vs. non-healthy children, effects of low birth weight and malnutrition on educational achievement potential, effects of illness on educational achievement and probably many other variables as well. Empirical research would be required to quantify the variables in order to adequately consider relevant policies.

Following final model iterations, it is expected that many of the potential linkages between health and development will appear to be sufficiently significant to form research hypotheses. The research hypotheses will be identified, described and elaborated. Research approaches will be suggested and research topics will be prioritized according to possible ways that subsequent research can be built onto the findings of preliminary research endeavors.

Existing data sources will be examined and analyzed from the point of view of their appropriateness for implementing the research proposed. Information on research sites and data sources will be combined with research priority statements for the development of recommended research strategy.

The specific Scope of Work for the second phase of the project will consist of:

- 1) The development of an analytic model based on the specification of analytical methods and selection of indicators from Phase 1.

- 2) The development of variable magnitude and technical coefficient estimators from existing data sets or prior estimates.
- 3) The implementation of several model iterations while modifying technical coefficient estimates in order to develop feasible solutions.
- 4) Conduct sensitivity analyses on the final model iteration.
- 5) Identify model components where hypothesized relationships are sufficiently sensitive to warrant further research.
- 6) Describe and elaborate research hypotheses.
- 7) Suggest research approaches and a research agenda based on a time phased approach to researchable hypotheses described in step 6.

9. Overall Cost Estimates

The cost estimates of the project are \$109,000 for phase 1 and \$165,000 for phase 2. Phase 1 will be of 15 months duration and phase 2 of 21 months duration.

10. Work Plan and Contract Budget

A. Objective 1

The development of a conceptual framework for the relationships between health and development.

- 1) Activities - the investigator will: a) conduct an extensive review of the literature; b) select definitions and indicators of development, health and related variables; c) identification and specification of a series of hypothesized relationships between health and development; and d) selection of data sets for refining hypothesized relationships.

2) Inputs

service staff	-	12 m.m.
research assistants	-	24 m.m.
consultants	-	1 m.m.
secretarial and		
clerical staff	-	12 m.m.
travel	-	\$1,100
computer	-	2 hours CPU
supplies	-	\$1,250

3) Objectively verifiable progress and completion indicators:

- a) A report describing the state of the art of knowledge concerning the relationships between health and development.
- b) A report describing definitions and indicators of development, health and related variables.
- c) A report listing hypothesized relationships between health and development and describing the general form of the simulation model to be implemented in phase 2; and
- d) A report identifying data sets to be utilized for phase 2 testing.

B. Objective 2

The development and implementation through several iterations of a simulation model defining the hypothesized relationships between health and development, utilizing household data; the specification of the relationships between variables which have a predicted magnitude sufficiently great to warrant research investments

and the development of a research strategy and agenda.

1) Activities

- a) specification of a simulation model;
- b) development of prior estimates of variable interaction;
- c) use of prior estimates and household data to test model specification and iterative model modification to obtain a best fit of technical coefficients;
- d) development of a set of research recommendations and strategy for their implementation.

2) Inputs

senior staff	- 16 m.m.
research assistants	- 32 m.m.
secretarial and clerical staff	- 16 m.m.
travel	- \$2,100
computer	- 5 CPU hours
supplies	- \$1,750

3) Objectively verifiable progress and completion indicators

- a) A report describing the simulation model results;
- b) A report containing research recommendations and strategy.

11. General Appraisal

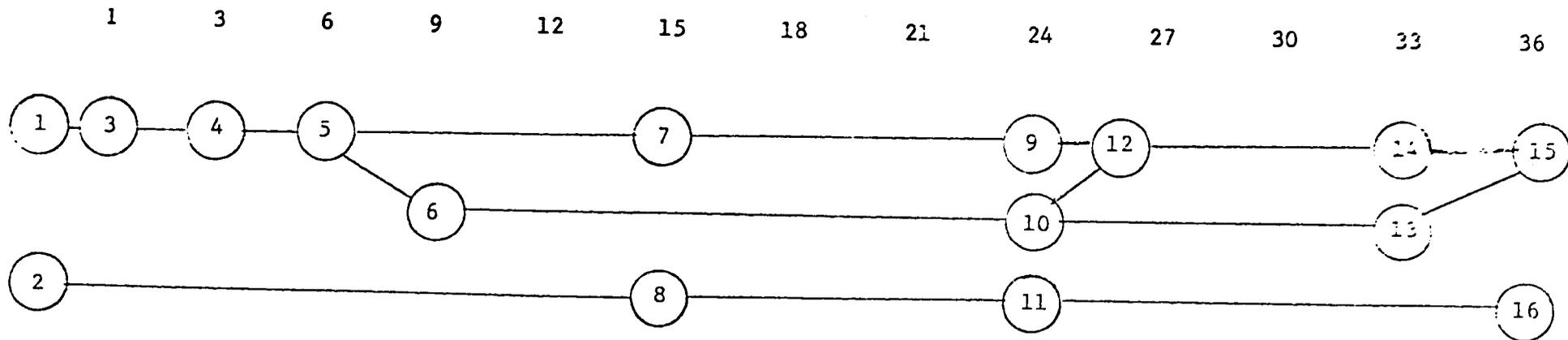
TA/H considers the project a necessary prerequisite for undertaking more extensive research on the relationships between health and development. Technical review indicates that the proposed research activities methods and techniques are adequate for the described tasks.

Index to Attachments

- Attachment 1 - Planned Project Track
- Attachment 2 - Budget and Cost Estimate
- Attachment 3 - WHO Health and Economic Sector Model
- Attachment 4 - Bibliography
- Attachment 5 - Outline of Proposed WHO Program for
Health Development

Project Milestones

Month



1. selection of contractor
2. selection of consultant committee
3. begin literature review
4. complete literature review
5. complete operational definition, taxonomy of sector and delimitation of scope of theoretical construct
6. selection of data sources for model iteration
7. completion of theoretical construct
8. project review

9. completion of simulation model development
10. completion of variable estimator
11. 2nd project review
12. begin model iterations and modification
13. complete review of LDC data sources for subsequent research
14. complete model
15. presentation of research hypotheses, strategy and agenda
16. final project review

FORMAT FOR WORKPLAN/CONTRACT BUDGET AND LIFE-OF-PROJECT COST ESTIMATE

INPUTS	First Two Fiscal Years				Workplan Sub-total		To Project Completion				Total Est'd Life-of-Pro Research Co
	Man Mos.	Est'D Cost	Man Mos.	Est'd Cost	Man Mos.	Est'd Cost	FY 1977	FY 1978	FY 1979	FY 1979	
1. Salaries	33	42	32	42	64	84					
2. Consultants	1	2	2	4	3	6					
3. Fringe Benefits		5		5		10					
4. Overhead		32		33		65					
5. Travel and Trans.		4		4		8					
6. Allowance											
7. Other Dir. Costs											
8. Equip., vehicles materials & supplies											
9. Publications											
10. Subcontracts											
11. Other Costs Costs											
TOTAL Costs by Inputs	<u>46</u>	<u>86</u>	<u>47</u>	<u>89</u>	<u>93</u>	<u>175</u>	<u>86</u>	<u>89</u>	<u>99</u>	<u> </u>	<u>274</u>
OUTPUTS*											
<u>Research Object. #1</u>	<u>46</u>	<u>86</u>	<u>12</u>	<u>23</u>	<u>48</u>	<u>109</u>	<u>86</u>	<u>23</u>	<u>-</u>	<u>-</u>	<u>109</u>
<u>Research Object. #2</u>	<u>-</u>	<u>-</u>	<u>35</u>	<u>66</u>	<u>35</u>	<u>66</u>	<u>-</u>	<u>66</u>	<u>99</u>	<u> </u>	<u>165</u>
<u>Research Object. #3</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
TOTAL Costs by Outputs	<u>46</u>	<u>86</u>	<u>47</u>	<u>89</u>	<u>93</u>	<u>175</u>	<u>86</u>	<u>89</u>	<u>99</u>	<u> </u>	<u>274</u>

(B Y T O T A L S O N L Y)

*Research objectives or other program categories as described in Items 8 and 10 of project statement.

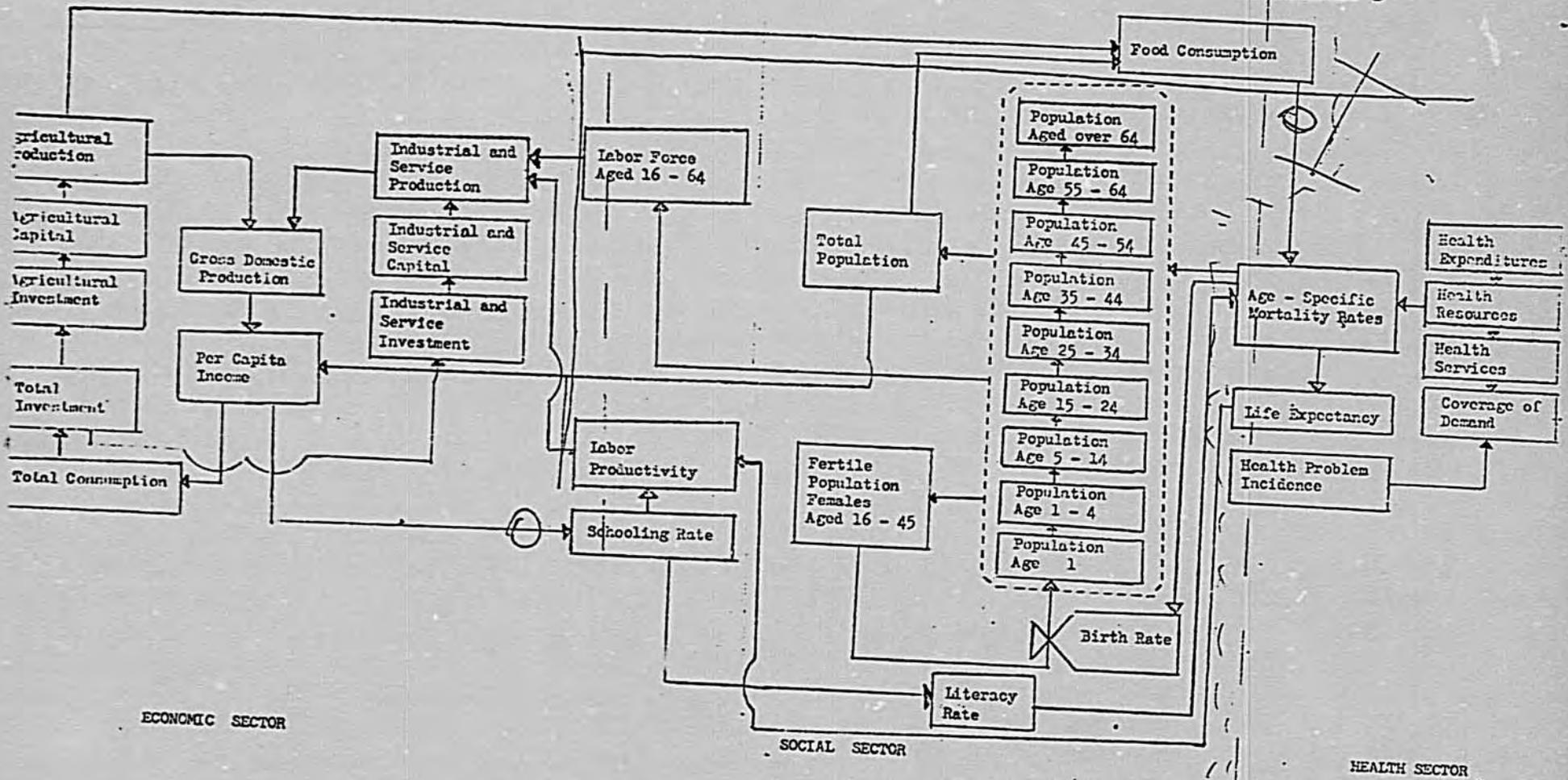


Figure 2. Detailed Structure of the Present State of the Model

BIBLIOGRAPHY

Adelman, Irma and Morris, Cynthia Taft. Economic Growth and Social Equity in Developing Countries, Stanford California: Stanford University Press, 1973.

The authors use discriminant analysis to find relationships between equality of income distribution, and a large number of social and economic indicators. The insufficiency of per capita income as the sole maximand is obvious in their analysis.

Almeida, S.; Baytelman, D.; Chonochol, J.; Collins, J.; George, S.; Liszt, A.; Vieira, V.; Jean, M. "Analysis of Traditional Strategies to Combat World Hunger and Their Results," International Journal of Health Services, 5.1. 121-41, 1975.

This article objects to "standard" solutions of the world food shortage problem which fail to account for complementarities between agriculture and industry and inequitable national and international social structures.

Almeida, S.; Baytelman, D.; Chonochol, J.; Collins, J.; George, S.; Liszt, A.; Vieira, V.; Jean, M. "Assessment of the World Food Situation - Present and Future," International Journal of Health Services, 5.1. 95-120, 1975.

Summarizes the facts of the world food shortage of 1972 and 1973. Covers such factors as the increase in acreage, problems in land reform, the extent of the present problem, and an assessment of trends in production of and demand for food.

Ammundson, E. and Newell, K.W. "Health Service Development in the Third World," WHO Chronicle, 29.1. 10-1, January 75.

A short article emphasizing the need for a rational approach to health service and advising the WHO three step procedure: 1) country health programming 2) project formulation 3) development of guidelines for project management and evaluation.

Anderson, G.A. "Review of Nancy Baster, ed., Measuring Development: the Role and Adequacy of Development Indicators," Economic Development and Cultural Change, 4.23. 771-3, July 75.

A critical review of Baster's book. He objects to the "flight into cultural relativism" and maintains "But the conceptual tools of no social science can produce generalizations from such wispy material".

Anderson, R.K. "Family Planning and Malaria Control - Some Parallels Between two Large-scale Health-related Programs," Mt. Sinai Journal of Medicine, NY, 42.4. 256-64, July-August, 1975.

Compares family planning with malaria control efforts dating back to the 15th century. In both areas there seem to be three schools of thought: 1) those who rely on prevention - contraception, mosquito control 2) those who rely on treatment - quinine, abortion 3) those who rely on social and economic change. In neither case is it possible to verify with certitude any one position.

Barlow, Robin. "The Economic Effects of Malaria Eradication," American Economic Review, 57.2. 130-48, May 1967.

Contains a summary of his work until that time. He describes his model and summarized methodology, but his results are not yet complete.

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Contains the complete results of his work. His "without malaria" growth path rises above the "with malaria" growth path until 1974 when they cross.

Basta, S.S. and Churchill, A. Iron Deficiency and the Productivity of Adult Males in Indonesia, World Bank, 1974.

A study of the effects of anemia on physical productivity of workers on a rubber plantation. Depending on the task, anemia reduces productivity from 15% to 20%.

Baster, Nancy, ed. Measuring Development: the Role and Adequacy of Development Indicators, London: Frank Cass, 1972.

A collection of studies based on the view that per capita income is not an adequate index of development.

Belli, Pedro. "The Economic Implications of Malnutrition: the Dismal Science Revisited," Economic Development and Cultural Change, 20. 1-23, October 1971.

Reviews economic literature dealing with malnutrition, child growth and economic development. Also includes a regression equation which purports to show the relationship between protein and income. The regression has, however, been severely criticized on grounds of methodology.

Benyoussef, A.; Cutler, J.L.; Baylet, R.; Collomb, H.; Diop, S.; Lacombe, B.; Vangelade, J.; Levine, A. "Sante, Migration et Urbanisation," Bulletin of the World Health Organization, 49. 517-37, 1973.

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Contains a discussion of methodology in Utilization studies and the results of such a study in Tunisia.

Berg, Alan with Robert Muscat. The Nutrition Factor, Washington, D.C.: the Brookings Institution, 1973.

Summarizes the literature on the role of nutrition in development and analyzes various policy suggestions.

Borts, George. "Discussion of Robin Barlow's Paper," American Economic Review, 57. 149-51, May 1967.

Discusses Barlow's paper. Points up the problem of accounting for health as a consumption good.

Boulding, Kenneth E. "The Economics of Knowledge and the Knowledge of Economics," In Economics of Information and Knowledge, ed. by D.M. Lambertson, Baltimore: Penguin Books, 21-36, 1971.

He deals with the concept of knowledge and information, and with its importance for economics.

Bravo, G.Z. "Population Policy in Colombia - A Holistic Approach," International Journal of Health Services, 3. 737-44, Fall 1973.

Argues that population policies must be formulated within an "overall strategy of development". Gives a history of the development of Colombia's policy and the creation of the notion of "human development".

Breslow, Lester. "A Quantitative Approach to the World Health Organization Definition of Health: Physical, Mental and Social Well-being," International Journal of Epidemiology, 1.4. 347-55, Winter 1972.

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Chenery, Hollis. "Notes on the Use of Models in Development Planning," in The Crisis in Planning, ed. by Mike Faber and Dudley Seers, London: Chatto and Windus, 1. 129-35, 1972.

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Denison, Edward Fulton. The Sources of Economic Growth in the United States and the Alternatives Before Us, Supplementary paper No. 13, New York: Committee for Economic Development, 1962.

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Discombe, G. "Letter: Medical Nemesis," Lancet, 2.7880. 584-5, 7 September 1974.

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Enke, Stephen. Economics for Development, Englewood Cliffs, New Jersey: Prentice-Hall, 1963.

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Fanshel, S. "A Meaningful Measure of Health for Epidemiology," International Journal of Epidemiology, 1.4. 319-337, Winter, 1972.

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Hughes, Charles C. and Hunter, John M. "Disease and Development in Africa," Social Science and Medicine, (in press).

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Kanagaratnam, K. "The Concern and Contribution of the World Bank in Population Planning," International Journal of Health Services, 3. 709-18, Fall 1973.

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Kuznets, Simon. Modern Economic Growth: Rate, Structure and Spread; Studies in Comparative Economics, New Haven, Conn.: Yale University Press, 1966.

A treatment of economic growth and its causes using historical data of the National Income Accounts type.

Leesen, J. "Social Science and Health Policy in Pre-industrial Society," International Journal of Health Services, 4.3. 429-40, Summer 1974.

A critical review of the biases of social sciences in their approach to development

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This article contains the results of a number of regressions in which government health services and health indicators have a significant explanatory effect on agricultural output.

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Martin, J.F. "International Health Planning: Socioenvironmental Dimensions and Community Participation," American Journal of Public Health, 65.2. 175-7, February 1975.

He stresses in this article, the inability of "standard" methods to deal with the problem of health allocation.

Meadows, Donella H.; Meadows, Dennis L.; Randers, Jørgen; Behrens, William W., III. The Limits to Growth, New York: Signet Books, 1972.

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Morley, David. Pediatric Priorities in the Developing World, London: Butterworths, 1973.

A comprehensive examination of the relationship between child health and the socio-economic environment. A classic treatment of the relationship between poverty and disease in LDC's.

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A massive treatment illustrating Myrdal's "vicious circle" concept. Volume III deals with investment in man, and an appendix effectively destroys the hypothesis of disguised unemployment.

Myrdal, Gunnar. "The Transfer of Technology to Underdeveloped Countries," Scientific American, 231. 172-82, September 1974.

Today's LDC's will have more trouble importing technology than the U.S. and Western Europe had in the 19th Century. Literacy was almost 100% in the U.S. and Western Europe. It is much lower in the LDC's. Modern technology is much more complex than 19th Century technology. He argues against the myth that labor intensive technologies provide much of an answer to the problem. For many countries, of course, industrialization is the only long run hope. Labor intensive techniques can, however, lead to higher agricultural yields. But here unjust social structures must be squarely faced. Developed nations must re-orient their research efforts, support appropriate research in LDC's and increase aid.

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Navamor, Vincente. "The Industrialization of Fetishism or the Fetishism of Industrialization," International Journal of Health Services, 5. 351-71, 1975.

A critical review of Ivan Illich's Medical Nemesis.

Naylor, Thomas H., ed. Computer Simulation Experiments with Models of Economic Systems.

A set of readings on the use of computer simulation in economic analysis.

Newell, K.W.; King, M.H.; Sarosa, J. Sulianti. "The Health Care Package," WHO Chronicle, 29.1. 12-8, January 1975.

Defines a health care package as "an integrated set of components for the improvement of health care under specific socio-economic conditions". He proposes the development of "packages" of equipment, operating procedures manuals and so forth to be used in different socio-economic environments, admitting that the socio-economic environment would be crucial.

Newman, Peter. "Discussion of Robin Barlow's Paper," American Economic Review, 57. 155-7, May 1970.

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Shows that death rates and birth rates are declining as modernization measured by a number indicator proceeds.

Schultz, Theodore W. "Investment in Human Capital," American Economic Review, 1-17, March 1961.

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Schultz, Theodore W. "Reflections on Investment in Man," Journal of Political Economy, Supp. 1-18, October 1962.

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Schultz, Theodore W. Transforming Traditional Agriculture, New Haven: Yale University Press, 1964.

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Selowsky, Marcelo and Taylor, Lance. "The Economics of Malnourished Children: An Example of Disinvestment in Human Capital," Economic Development and Cultural Change, 22.1. 17-30, October 1973.

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Simon, Julian L. "Population Growth May be Good for LDC's in the Long Run: A Richer Simulation Model," Economic Development and Cultural Change, 24.2. 309-337, January 1976.

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Stevens, Carl M. "Health, Employment and Income Distribution," World Employment Programme Working Paper (WEP 2-23/wp 21), Geneva: International Labour Office, August 1975.

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Susser, Mervyn. Causal Thinking in the Health Sciences: Concepts and Strategies of Epidemiology, New York, London and Toronto: Oxford University Press, 1973.

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Discusses methods of measuring development at the local level.

U.S. House of Representatives, Committee on Foreign Affairs and U.S. Senate, Committee on Foreign Relations. Legislation on Foreign Relations with Explanatory Notes, Joint Committee Print 93d. Congress 2nd Session, Washington, G.P.O., 1974.

Contains the Foreign Assistance Acts.

Weisbrod, Burton A. Economics of Public Health: Measuring the Economic Impact of Diseases, Philadelphia: University of Pennsylvania Press, 1961.

An early study which explored the use of the discounted present value of future earnings as a device for allocating research funds in public health.

Weisbrod, Burton A.; Anderson, Ralph, L.; Baldwin, Robert E.; Epstein, Erwin H.; and Kelley, Allen C. Disease and Economic Development: The Impact of Parasitic Diseases in St. Lucia, Madison: University of Wisconsin Press, 1973.

A review of the literature on disease and economic development. Also contains a detailed explanation and all the results of a study of the effects of schistosomiasis on worker productivity and school performance in St. Lucia.

Wittgenstein, Ludwig. Remarks on the Foundations of Mathematics, ed. by G.H. Wright, R. Hees, G.E.M. Anscombe, trans. by G.E.M. Anscombe, New York: Macmillan, 1956.

Intended as a response to Bertrand Russell's positivism. It contains Wittgenstein's basic philosophy.

PLANNING FOR HEALTH DEVELOPMENT

An International Network to Support Health, Policy,
Programming and Management

I. INTRODUCTION

No area of activity has received greater stress in WHO deliberations in recent years than the need for improving planning for health development. In WHO's Sixth General Programme of Work - covering the period 1978-1983* the following statements were made:

"It has become clear that for health development, as for all other endeavours for social development, it is necessary to evolve and to apply realistic yet flexible planning processes, establishing policies and translating them into development strategies, formulating operational programmes for the application of the strategies, and managing the programmes properly so as to ensure that their objectives are attained. In this planning process, account has to be taken of very many epidemiological, environmental, social, political, economic, scientific and technical factors, as well as the availability and utilization of resources."

"The contribution of health programmes to socioeconomic development, and the integration of health planning with socioeconomic planning, were dealt with at some length during the technical discussions on these matters at the Twenty-fifth World Health Assembly in 1972."*

* Reference - footnote

It is also mentioned that "health administrators (of the countries) are thus faced with the necessity of strengthening their functions for planning and long-term development, in addition to their executive powers."

In the General Programme of Work the first of the specific objectives is:

"10.1 To promote the strengthening of countries' capacities for the planning and management of comprehensive national health services."

Comprehensive care includes recognition of the reality that other development sectors have major impact on health and their role must be defined, appreciated and enhanced. In support of that principle the General Programme of Work also includes the following two specific objectives:

"10.7 To promote closer cooperation of health services with all other sectors concerned with health promotion, including social welfare services."

"15.1 To promote, within the context of overall socioeconomic development, support for health-promoting activities."

An important shift in WHO activities in member countries away from merely attempting to provide advisory services is based on the conviction that, if self-reliance is to be more than a slogan, better mechanisms must be found for mutual collaboration between nations in achieving the broad goals of health development. In its international coordinating role, WHO is able to bring together competence from many countries, governmental and

private agencies and institutions and persons around the world to focus on applying what is now known and searching for new solutions and understanding. Growing awareness of the need for social equity in health care and increasing public demand for better coverage by health services generates political pressure that cannot be ignored.

For this program the following definitions are proposed:

Planning for Health Development is the rationalization of efforts to improve health as part of a better quality of life and general socioeconomic development incorporating other development forces in addition to health care. As means of achieving that broad goal, specific measures need to be mobilized for policy determination, programming and management.

This report of an informal consultation is a preliminary draft for discussion defining a proposal for stepwise progress to a network to achieve the goals defined. It is recognized that present resources for this purpose are fragmented. The urgency of present need and the evident commitment of national governments and international agencies suggests that a major effort to mobilize resources would be timely. The success of most other health and development programs would be improved by the planning efforts proposed. These in time would build national and institutional competence toward the ultimate goal of promoting self-reliance in member states. The current attention to problems of poverty makes new approaches feasible. A careful progressive building of institutional linkages is proposed to mobilize the world's best talent in scientific and organizational disciplines. It is time for

serious implementation of what we know and a deliberate search for understanding in areas where knowledge is limited.

This report defines the general problem and a proposed program under the headings: Information Dissemination, Training, Technical Cooperation and Research. An outline is then presented of a possible organizational structure and sources of funding. Finally, a strategy is presented for moving toward a worldwide network of institutions and agencies concerned with planning for health development.

II. PROBLEM

A crisis of health care exists in many countries of the world, both developing and more developed. At a time when the technologic capacity to improve dramatically the well being and quality of life of people is clearly possible, the application of knowledge and resources continues to be ineffective and inequitable. Within the context of the new worldwide emphasis on social development the challenge is particularly clear to mobilize resources for the planning of health development.

A. Dissemination of Information

Past experience in dissemination of information on planning for health development has been limited. Prior planning programs have emphasized training and technical cooperation and these have occasionally had the coincidental benefit of information exchange. Although there are still widely different approaches in systems and styles relating to planning, management and the political process of planning some convergence is emerging as a result of informal contacts between nations. Furthermore,

those countries which have not yet begun to systematize planning for health development can benefit directly from other countries' experience. The proposed network will provide opportunities to systematize the process of collecting and disseminating information to member countries. It is recognized that the strengthening of national information systems is of great importance for the development and implementation of health plans, however, the responsibility for supporting these activities at the country level is part of other WHO cooperative programs.

B. Training

Training activities for health planning have received considerable support for the last fifteen years. Diverse programmes initiated by international agencies, national governmental development agencies, teaching institutions, and official health services have contributed to expanded training in various countries of the world. These health planning endeavors have been, in general, oriented to teaching methodology for the formulation of health plans with minimal attention to linking health with other sectors. In some centers the training was mostly theoretical and academic with little exposure to field realities. Policy and management approaches have been gradually incorporated together with case studies of specific problems of dealing with local, regional, health institutional, and sectoral levels of planning. Increasing importance has been given to the critical role of political and management components of the planning process. In a few instances deliberate use has been made of practical workshop experience in going through a simulated planning process or a field experience.

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In the past, sufficient consideration was not given to the different types of health and health-related personnel that require training. In general, the orientation and content of training activities was not sufficiently flexible and adaptable to the different requirements of various levels of expertise.

C. Direct Technical Cooperation

The shift of international assistance from advisory services to technical cooperation has a particular challenge in planning for health development. The notion that any outside expert can do detailed planning for a country has been tried repeatedly in many developing countries. The lack of success of these efforts then led to attempts to maximize national input into planning exercises supported by external organizations. This approach has been systematized particularly in WHO's Country Health Programming and AIDS Health Sector Analysis. It is apparent that even these exercises have been more useful to international agencies than to the countries themselves. There has been some local learning and stimulus to developing a national planning process. However, the objective of promoting self-reliance requires a major new effort to respond specifically to national requests within a new pattern of technical cooperation.

Direct technical cooperation is relevant for three practical reasons. First, the specifics of policy determination, programming and management have to be developed within the context of national conditions and must grow out of the national political system. The record of non-implementation of plans is especially chastening and requires new

attention to establishing processes rather than producing plan documents. Second, there is so much that is not known about the health development process that no country can assume the posture of advising others. All countries have much to learn from each other and the mutuality of need suggests that a posture of humility is appropriate as a basis for sharing through technical cooperation. Third, the recognition that interactions with other sectors must be part of planning for health development requires a new flexibility in approach.

D. Research

Research on planning for health development has been minimal in most countries, but recent identification of many critical issues and gaps in knowledge has emphasized its importance. New research methods must be synthesized combining the skills of public administration, epidemiology, operations research, economics, etc. specifically to meet planning needs.

Considerable research on national health planning has been carried out in some socialist countries. In the Health Planning Center in Santiago, Chile the limited research grew directly out of modelling for economic planning. Health planning research has also been undertaken by various academic institutions, i.e., Johns Hopkins University's Health Manpower Studies and the intensive microplanning research of the Functional Analysis Methodology.

Research capacity and resources are so limited that only priority issues should be studied. The first research questions are: how do we start and what tools do we have? The greatest constraint is the lack of scientists with the needed expertise. Since multidisciplinary approaches

are necessary, research teams will have to overcome both interdisciplinary and cross-cultural barriers. To demonstrate that research is needed on a diverse range of subjects illustrative examples are listed in Appendix B.

III. PROPOSED PROGRAM

The general purpose of the proposed program is to develop network mechanisms through which WHO and other international agencies can cooperate with member states in establishing and/or strengthening self-reliant planning processes for health development within the context of their socioeconomic development policies and strategies.

A. Information Dissemination

1. Specific Objectives

1.1 To promote patterns of direct communication between institutions, agencies and individuals so that they can exchange experience between countries or within countries.

1.2 To collect information on examples of national or local planning for health development analyzing the reasons for both successes and failures.

1.3 To organize this experiential information together with available research findings into understandable and transferrable form.

1.4 To disseminate information widely through multiple channels such as newsletters and publications, meetings, workshops and international visits so as to have the maximum impact on national policy, programming and management.

2. Functions

A balance needs to be worked out within the network between a centralized activity to organize systematic information collection and dissemination and decentralized responsibilities in regional and

national institutions.

Some specific functions are:

2.1 The network should assist in developing mechanisms for collecting information in readily retrievable format. The development of information banks of planning data at institutional, national, regional and inter-regional levels requires major effort and considerable investment. It will be particularly important to sort out from the large masses of information collected in routine services, programme activities and special studies those data that are useful in understanding the planning process.

2.2 From research, including comparative case studies, there will be need to collate and analyze relevant data in a form that will be useful to policy makers, administrators, planners and other country officials.

2.3 The network should take the initiative in diffusing information of general interest through all available channels.

2.4 The network should also be responsive to requests for specific information from national governments, collaborating institutions and international agencies.

2.5 The network should particularly facilitate communication across boundaries between disciplines and development sectors.

B. Training

1. Specific Objectives

The purpose of the new emphasis on training is to improve the content of training, to increase the numbers and types of persons trained

and to stimulate the development of more appropriate sites for training.

1.1 The new content of training in policy, programming and management for health development should include understanding of the political process and policy development, specific steps in planning, measures to improve management and budgeting, and the process of implementation and evaluation.

1.2 In short courses and special programmes national institutions should attempt to reach large numbers of health workers already employed and professionals from other sectors which influence health.

1.3 The concepts of planning for development should be built into regular training programmes for health workers.

1.4 Sites for training should be as close to the process of implementation as possible.

1.5 In some cases the network should promote special training programmes which require international coordination.

2. Functions

2.1 The training component of the programme should emphasize the ability to recognize problems and to solve them within existing constraints rather than mechanically transferring formal planning methodologies. The content of training should include the skills necessary for the various stages of the planning process, the interrelationships of health with other sectors, and health planning as an integral part of the social and economic development process of a country. Training must also focus on the problems of implementation.

2.2 The training activities promoted by the programme should reflect the variety of types of personnel that require different approaches, contents and methods of teaching. Those in the health services should receive training which concentrates on technical skills and planning procedures. Key personnel directing national programmes, planning units or training activities will require high level courses often at the international level. Special orientation and short-term workshops should be provided for policy makers and persons outside the health sector who will be involved in planning and implementing health activities at national, regional and community levels (see Appendix A).

2.3 Training within the programme should be practical and case oriented giving special emphasis to field experiences. Most of the training should be carried out at the national level by national institutions. The programme should strengthen and use capabilities that are already available rather than developing new international training centers.

C. Direct Technical Cooperation

1. Objectives

The general purpose of direct technical cooperation through the network is to provide opportunities for a two way sharing of experience between countries and institutions. Working together in mutually beneficial programmes will help develop a continuing process of planning for health development.

Some specific objectives are:

1.1 To stimulate the capacity to identify specific problems in policy setting, programme and management and to solve them within the existing constraints.

1.2 To arrange for individuals and institutions to work together effectively to find solutions. These linkages may be at national, institutional or regional level and should continue over a long enough period to grapple with critical underlying problems with particular benefit from repeated visits by the same individual.

1.3 To provide multidisciplinary expertise to facilitate work among the various sectors influencing health.

2. Functions

Direct technical cooperation between countries will be developed within the network on the basis of country requests. The responsibility for these activities will permeate all parts of the network and initiation may come from national officials, participating institutions and local agencies. The matching of expertise to specific need will require continuing mechanisms for facilitating easy exchange using mechanisms such as:

2.1 An inventory of appropriate institutional and individual expertise for specific assignment as requested by countries.

2.2 Long-term linkages between institutions or agencies in various countries on general areas of activity.

D. Research

1. Purpose and Objectives

A fundamental purpose of this network is to promote national self-reliance in research activities and to mobilize local institutions to solve their own problems. All experience shows that this cannot be done primarily by international agencies or professionals from outside; though these can help through working with local research groups. Research must

grow out of field realities. The critical issues must be defined by those who face the problems of implementation in collaboration with those who have the academic background to provide perspective on underlying issues.

Comparative analysis of case studies of health policy, planning and management are especially needed to define why it has been so difficult to get implementation of plans. While the general focus should be on short-term pragmatic studies to provide incremental improvement in existing health care there should also be a long-term approach to solving basic questions such as understanding the interactions of various development sectors as they influence health. Generic problems often are as relevant for developed countries as for developing countries. Because this is complex research it may be necessary to use sophisticated methods but the eventual goal must be to develop simple methods and applications.

Special objectives are:

1.1 To identify gaps in present knowledge and to define research questions and hypotheses.

1.2 To develop and coordinate the best scientific talent in local institutions and agencies as close to peripheral field problems as possible.

1.3 To undertake definitive studies of underlying problems interfering with the health development process.

1.4 To find practical solutions for immediate problems in planning and management for rapid feedback in implementation.

2. Functions

The research network that is proposed should provide the following functions:

2.1 A broad based input into problem definition by individuals who have policy, management and administrative responsibility for health care and representatives of other sectors and disciplines in addition to health professionals.

2.2 Identification of institutions and individuals to do the research.

2.3 Research training and sharing of expertise.

2.4 Monitoring of research quality and international standards of ethics and relevance.

IV. ORGANIZATIONAL STRUCTURE

The organization of the proposed network must start with recognition of existing foci of strength in planning for health development so that present fragmentation of efforts can be alleviated. The new programme should facilitate international collaboration of bilateral as well as UN related agencies through enhancing new activity and providing a better focus for what is already being done.

A. Structure

1. The central focus of the programme is the progressive development of a network of national institutions operating within a common set of objectives, approaches and activities as an international cooperative effort. WHO will act as international coordinator through its different

components: a) the member states represented directly or indirectly in the governing bodies (the World Health Assembly and the Executive Board) and its ad hoc committees; b) persons from member states acting in their technical capacity in WHO Expert Advisory Panels, Expert Committees, Study Groups, Working Groups, etc., or attending as individuals or as governmental representatives in seminars, conferences, and other international meetings; and c) the WHO Secretariat with its different levels (global, regional, and country). Each of these elements of WHO should play an active part in the coordinating role, thus facilitating the positive impact that the programme would have in member states.

2. The experience of other networks, such as those in the special programmes on Human Reproduction Research (HRP) and Tropical Disease Research (TDR) should be considered critically, adapting what is suitable within the broad scope and complexity of the area of planning for health development and the particular features of the support to be given to countries in this long-range process.

3. Information and/or training and/or research centers should constitute a first level of organization in the network. Although WHO support will usually be important in the establishment of such centers, their role and activities should be planned with national governmental and institutional authorities so as to ensure that they are considered an integral part of host country or institutional programmes and are staffed by nationals who will receive continuing support.

4. Collaborating centers would constitute a second level of the network. They would be institutions designated because they can offer the necessary expertise and facilities to carry out specific tasks in the programme.

5. Coordination of the technical work of the information, training and research centers and the collaborating centers which deal with similar or complementary tasks would be carried out by mechanisms that have been used in other WHO programmes such as Task Forces and Steering Committees. For research activities there will probably be particular need for specialized committees and task forces.

6. The programme will require a differentiated function and structure within the WHO Secretariat duly integrated into the various levels (Headquarters, Regional Offices, and WHO staff at country level). The definition of functions and the organization of corresponding structural units should balance the need for central coordination and decentralization, facilitating both the availability of technical resources at every level and the sense of autonomy and self-reliance.

7. The program will require advisory and review bodies at central and regional levels which will have balanced membership from member states, governmental development agencies contributing funds to the programme, and persons selected for their technical capacity.

8. The programme should use all available mechanisms for coordination to facilitate the active involvement of other agencies of UN, bilateral and non-governmental international organizations, both at the level of the central programme and at country level. Appropriate ad hoc mechanisms may be needed in order to strengthen such collaboration.

9. The initial organizational structure of the programme can phase in initial activities within present patterns of work to evolve gradually into a systematic strategy to achieve the long range purposes of the programme.

B. Financial Support

1. Member states can contribute financial support for the development and implementation of various parts of the programme, directly or through governmental development agencies. Similar channeling of financial support can come from other UN agencies, international institutions, and non-governmental organizations, private foundations, etc. The major financial contributions should be provided to national institutions which will operate as information and/or training and/or research centers or as collaborating centers within the network. Direct financial support to governments for improving their own processes of planning for health development would presumably be oriented by programme activities.
2. Support will also be needed for WHO in its international coordinating role and the interregional activities that are complementary to those within countries.
3. Patterns of communication to facilitate contractual, administrative and accounting procedures should be developed for the more efficient channeling of financial support to all parts of the programme.
4. The core function and structure within the WHO secretariat should be financed through the regular budget. The allocation of adequate financial resources in the WHO programme budget would be evidence of the will of the member states and the priority assigned by them to solution of problems associated with planning for health development.

V. STRATEGY

A. Present Situation

During the past two decades health planning has become a recognized need, an accepted concept, and a relatively common activity in practically all countries. Some health planning activities have evolved into serious efforts to establish continuing processes rather than being limited to periodical or occasional exercises for formulate plans. These developments have been supported by WHO, by governmental development agencies, by universities and other scientific and teaching institutions through a variety of different programmes and approaches so that considerable, though fragmented accumulated experience is available.

B. Acceptability of Network Concept

The assumption behind this proposal is that a high level of demand for planning for health development already exists. The need is reflected in numerous resolutions and documents of WHO. In addition the following reasons suggest that the proposed network concept will meet this need.

1. The limitations of both multilateral and bilateral approaches in international assistance have become evident. While there is need to build on their particular strengths it is evident that new mechanisms are needed to bridge present gaps and enhance the effectiveness of both approaches.

2. The expertise needed to promote health development is scarce and poorly defined. New and flexible approaches are required to mobilize the best talent and information wherever it can be found; both in-country and internationally. Multidisciplinary teams will be needed which bring

together the best experience from different institutions and agencies in continuing working relationships.

3. The advantage of long-term institutional linkages holds promise of producing new patterns of international relationships that build self-reliance rather than dependency. These linkages should be between institutions in developing countries as well as with institutions in more developed countries. In the new mutual exchanges optimum use can be made of the special strengths and contributions of each institution.

4. Prior experience in the Expanded Programme for Research in Human Reproduction and the Programme for Tropical Disease Research have demonstrated the value of the network concept. The proposed programme is broader than the primarily research orientation of these programmes.

C. Principles

1. Maximum direct participation of member countries and their institutions is to be encouraged in a phased way.

2. Linkages should be tested first in a few institutions and then expanded as methods and mechanisms are worked out.

3. The programme should make use of the usual international mechanisms by which countries monitor and control activities of international agencies, such as WHO, for their own benefit; World Health Assembly, Executive Board, Regional Committees, Expert Panels, Study Groups, etc.

4. New mechanisms are needed to involve agencies representing other development sectors in addition to present interagency committees, boards, etc.

5. Flexibility in implementation should be based on rapid feedback. The programme should not be locked into bureaucratic constraints but be sufficiently autonomous to make needed programme adjustments.

6. To coordinate the network special staff arrangements will be set up in WHO at Headquarters and regional levels. Relationships will be maintained with other UN agencies, with the development agencies of developed countries and with other international groups, such as foundations.

7. The network will encourage and facilitate all parallel and direct aid activities which are or will be implemented.

D. Specific Steps in Establishing Network

Two parallel and complementary sets of activities are planned as indicated in Figure 1. This draft proposal will be circulated informally to get maximum input of preliminary advice and suggestions from the following groups: WHO regional offices, study groups from member countries, non-UN donor agencies, related UN agencies, representative institutions that might participate in the network. This process will lead to revision of the proposal so that it will meet the special needs of all groups.

In parallel a formal process of WHO approval will be initiated through the Executive Board and World Health Assembly. This proposal responds to earlier resolutions but the proposed sequence of formal action will still require preparatory steps leading up to formal approval at the 1978 World Health Assembly. In the meantime, as many as possible institutional linkages should be established in informal initiation of the network.

APPENDIX A

PERSONNEL TO BE INCLUDED IN TRAINING AND INFORMATION DISSEMINATION

INTER-REGIONAL COURSES			NATIONAL					
	Long 1-2 yrs.	Short 1-4 mo.	Part of Health Professional Courses	Short Planning Courses 1-4 mo.	Workshops 2-14 days	"In-Service Training" work contacts	Publications and Information Channels	
<u>Health Sector</u>			Eventually all health professionals should be exposed to new concepts of health planning in their formal education					
Senior Health Planners and teachers of national courses	+	+				+	++	
Ministers, Directors General, Program Directors, Province/state Directors		+			+	++	++	++
Middle level health planners					++			++
<u>Non-Health Sectors</u>								
Politicians (national) Economic Planners Other sector planners					+	+	+	
Politicians (local) Community leaders					+	+	+	

APPENDIX B

Sample Research Questions Basic to Health Planning

1. What are the effects on morbidity/mortality from various health programmes at varying levels of input?
2. What are the effects on morbidity/mortality from various non-health programmes?
3. How can the marginal returns from various mixes of inputs be maximized?
4. What is the relationship between morbidity/mortality levels and productivity under various conditions?
5. What loss accrues to society from preventable, pre-retirement deaths?
6. What loss accrues to society from excessive birth rates/narrow birth intervals?
7. What are appropriate discount rates for human capital estimation?
8. What value does society place on improved health? Access to health services?
9. How much will equalization of these distributions of health benefits augment economic development? social development?
10. How can political power structures be identified? national level? local level?
11. How can health professionals best inform political leaders?
12. How can health policy development be made more rational?
13. What are the true constraints to plan implementation?
14. What are the factors influencing successful community participation in health planning/implementation at the local level?
15. What systems of supervision are optimal for different situations?

16. What elements are essential for successful regionalization?
17. What systems of evaluation are cost-effective in which situations?