

FD-ARJ-439

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE

A = Add  
 C = Change  
 D = Delete

Amendment Number

DOCUMENT CODE

3

2. COUNTRY/ENTITY

Worldwide

3. PROJECT NUMBER

936-5991

4. BUREAU/OFFICE

S&T/Office of Health

5. PROJECT TITLE (maximum 40 characters)

Data for Decision-making

6. PROJECT ASSISTANCE COMPLETION DATE (FACD)

MM DD YY  
 06 30 97

7. ESTIMATED DATE OF OBLIGATION  
 (Under "B" below, enter 1, 2, 3, or 4)

A. Initial FY 91 B. Quarter 3 C. Final FY 95

8. COSTS (\$000 OR EQUIVALENT \$1 = )

A. FUNDING SOURCE	FIRST FY <u>91</u>			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total						
(Grant)	( 3,050 )	( )	( 3,050 )	( )	( )	( 9,300 )
(Loan)	( )	( )	( )	( )	( )	( )
Other U.S. 1. add-ons						4,900
2.						
Host Country						
Other Donor(s)						
<b>TOTALS</b>						

9. SCHEDULE OF AID FUNDING (\$000)

14,200

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) CS	580	520						4,000	
(2) HE	580	520						4,000	
(3) ARDN	580	520						500	
(4) DFA	580	520						800	
<b>TOTALS</b>								9,300	

10. SECONDARY TECHNICAL CODES (maximum 8 codes of 3 positions each)

11. SECONDARY PURPOSE CODE

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code

B. Amount

13. PROJECT PURPOSE (maximum 400 characters)

To develop, refine and demonstrate practical approaches to increase informed decision-making for the health sector.

14. SCHEDULED EVALUATIONS

Interim MM YY MM YY Final MM YY  
 03 93 03 97

15. SOURCE/ORIGIN OF GOODS AND SERVICES

000  941  Local  Other (Specify)

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a \_\_\_\_\_ page PP Amendment.)

17. APPROVED BY

Signature

*Ann Van Dusen*

Title Ann Van Dusen  
 Acting Agency Director for Health

Date Signed

MM DD YY  
 04 04 91

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

MM DD YY

Agency for International Development

Washington, D.C. 20523

ACTION MEMORANDUM FOR THE ACTING AGENCY DIRECTOR FOR HEALTH  
BUREAU FOR SCIENCE AND TECHNOLOGY

FROM: S&T/H/AR, Pamela Johnson 

SUBJECT: Authorization of the Data for Decision-making  
(936-5991) project.

PROBLEM: Your authorization is requested to initiate a new centrally-funded project entitled "Data for Decision-making" (936-5991) in the amount of \$9,300,000 from the Child Survival, Health, and Agriculture Rural Development and Nutrition accounts.

DISCUSSION:

Project Data

The initial obligation year is FY 91, and it is planned that \$3,050,000 of central funds will be obligated the first year. The final year of obligation is FY 95, and the Project Assistance Completion Date is June 30, 1997.

In addition to the amount authorized above, an estimated \$4,900,000 may be contributed to this project by Missions, Regional Bureaus, and other offices of the Agency for International Development (A.I.D.). Funding may be provided from the Economic Support Fund (ESF), the Development Fund for Africa (DFA), as well as the accounts authorized for S&T funding under this project.

Special Interest in the Project

This project is of special interest to the Agency, because, in addition to improving data based decision-making in developing countries, it will provide the Agency with data useful for planning, implementing and evaluating A.I.D.-funded projects in those same developing countries. It will also contribute to the Agency's Democracy Initiative by developing tools to broaden the basis of decision-making in the health sector.

Waivers, Special Clearances, Provisos and Determinations:

a) Provisos: There is no need for any special provisions because the research supported by the project is non-biological, does not affect the environment, and will not infringe on intellectual property rights.

b) Determinations and Certifications: A 621 (a) determination to access the expertise of the Centers for



Disease Control (CDC) of the Department of Health and Human Services is appropriate. CDC has a worldwide reputation and a unique expertise in the collection and use of epidemiological data, a cornerstone of health information systems and of this project. In addition, in its Field Epidemiology Training Program, CDC has a unique capacity to train technicians in the collection and use of epidemiologic data. CDC has demonstrated its capability through its involvement in the design of this project. It would be a loss to the project not to continue the momentum, particularly CDC's contribution relating to the identification, adaptation and testing of tools and methods for epidemiologists and other technicians and involvement of the Field Epidemiology Training Program and its graduates. These activities are not competitive with the private sector and would not interfere with the normal work of CDC.

#### Sector Council Review

The Health Sector Council has reviewed the project paper for this project and suggestions made by members of the Sector Council have been incorporated in the final draft.

#### Congressional Justification

A Congressional Notification of program change in reference to FY 91 CP, Main Volume, page 177 was sent to Congress on March 22, 1991.

#### Procurement Plan and Budget

The project will be implemented using several procurement instruments. The two principal instruments will be a) a competitive cooperative agreement for the activities relating to policy makers and to development, application, testing of tools and methods directed at them; and, b) a PASA for the activities relating to the identification, adaptation, and testing of tools and methods and to the training of technicians in their use. In addition, the project will make use of non-competitive cooperative agreements or grants to implement other collaborative activities that contribute to the achievement of project objectives. The FY 91 OYB has \$1,000,000 to initiate the project. An additional \$2,050,000 OYB transfer from USAID/India is in process to continue an activity initiated by the Mission that falls under the category of other collaborating activities related to the objectives of this project.

RECOMMENDATION: That you sign the attached project authorization.

PROJECT AUTHORIZATION

Name of Country: Worldwide  
Project Title: Data for Decision-making  
Project Number: 936-5991

1. Pursuant to Sections 103 and 104 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Data for Decision-making project involving planned obligations not to exceed \$9,300,000 in grant funds from the Health, Child Survival and Agriculture Rural Development and Nutrition accounts, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process.

The initial obligation year for the project is FY 91, the final obligation year is FY 95, and the PACD is March 31, 1997.

In addition to the amounts authorized above, an estimated \$4,900,000 may be contributed to the project by Missions, Regional Bureaus, and other offices of A.I.D. Funding may be provided from the Economic Support Fund (ESF) or the Development Fund for Africa (DFA) as well as the accounts authorized for S&T funding under this project.

2. The project purpose is to develop, refine and demonstrate practical approaches to increase informed decision-making for the health sector.

The project will demonstrate the viability of approximately 10 to 12 tools or methods which will enable readily available data to be analyzed, interpreted and presented in ways relevant to decision-makers. The project will strengthen broad data-based decision-making in the health sector of three to four countries, address specific problems and impediments to decision-making in the health sector of an additional 10 to 12 countries, test methods and incorporate training materials relevant to decision-making, and establish a mechanism to advise on evolving epidemiologic and demographic trends and related issues critical to decision-makers in the health sector.

3. The agreements which may be negotiated and executed by the officer(s) to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate:

a. Source and Origin of Commodities, Nationality of Services. Commodities financed by A.I.D. under the project shall have their source and origin in the United States, except as

A.I.D. may otherwise agree in writing. Except for ocean shipping, the suppliers of commodities or services shall have the cooperating country or the United States as their place of nationality, except as A.I.D. may otherwise agree in writing.

Ocean shipping financed by A.I.D. under the project shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of the United States.

b. Based on the justification described on page 2 of the March 29, 1991 Action Memorandum, I hereby determine that the proposed PASA with the Centers for Disease Control of the Department of Health and Human Services qualifies under Section 621 (a) of the FAA because it is (1) for technical assistance, (2) the Centers for Disease Control is particularly suited to carry out the scope of work, (3) this action is not competitive with private enterprise, and (4) it will not interfere with the normal work nor will it interfere with the domestic operations of the Centers for Disease Control. The planned life of project funding for the PASA is \$3,500,000.

Approved: *Ann Van Dusen*

Disapproved: \_\_\_\_\_

Date: *April 9 1991*

Clearances:

S&T/H/AR: PJohnson	draft	date 3/18/91
S&T/H/PO: GPettigrew	GP	date 4/1/91
S&T/H/PO: NPielemeier	GP for	date 4/1/91
S&T/PO: DSheldon	<i>DE for</i>	date <i>4/8/91</i>
GC/S&T: GWinter	draft JI	date 4/1/912

Drafted: S&T/H/AR, JBeausoleil 13/15/91

**PROJECT PAPER**  
**DATA FOR DECISION-MAKING**  
**936-5991**

**March 22, 1991**

*h*

## TABLE OF CONTENTS

	PAGE
I. SUMMARY AND RECOMMENDATIONS . . . . .	1
II. BACKGROUND AND RATIONALE . . . . .	3
A. The People, the Process and the Task . . . . .	3
B. The Growing Need for Informed Decision-Making . . . . .	5
C. Efforts to Date . . . . .	6
D. Perceived Problem . . . . .	7
III. DETAILED PROJECT DESCRIPTION . . . . .	11
A. Project Goal and Purpose . . . . .	11
B. Project Elements . . . . .	13
1. Tools and Methodologies . . . . .	13
2. Country Activities . . . . .	15
3. Trends and Issues . . . . .	17
C. Other Considerations. . . . .	18
1. Dissemination of Results. . . . .	18
2. Peer Review Plan. . . . .	18
IV. COST ESTIMATE AND FINANCIAL PLAN . . . . .	19
V. IMPLEMENTATION PLAN . . . . .	21
A. Roles and Responsibilities . . . . .	21
B. Contracting and Procurement Plan . . . . .	26
C. Implementation and Financing Methods Table . . . . .	28
D. Gray Amendment Considerations . . . . .	28
E. Country Selection Criteria and Process . . . . .	28
F. Implementation Schedule . . . . .	29
G. Monitoring Plan . . . . .	30
VI. PROJECT ANALYSES . . . . .	32
A. Technical Analysis. . . . .	32
B. Economic Analysis . . . . .	36
C. Social Analysis . . . . .	37
D. Environmental Examination . . . . .	42
VII. EVALUATION AND AUDIT ARRANGEMENTS . . . . .	42
ANNEXES	
A. Logical Framework	
B. Statutory Checklist	
C. Summaries of Case Studies	
D. Notes and Assumptions for Cost Estimates	
E. Related Project Experiences	
F. Tools and Methods for Decision-making	
G. Collaborative Activities	
H. Initial Environmental Examination	

## I. SUMMARY AND RECOMMENDATIONS

### A. Background

The primary challenge facing planners and decision-makers in the health sector of developed and developing countries is the allocation of scarce resources among a wide variety of competing and high priority needs. Compounding the severe resource constraints, epidemiologic and demographic changes are leading to both an increasing and shifting demand for health services which will require review and reformulation of existing policies, as well as the development of policies and legislation to reflect new health issues. When the choices are tough ones, decision-makers need data to make the best decisions possible. And yet, existing data are not being effectively used by decision-makers.

Considerable assistance has been directed at developing health information systems and refining systems of data collection. Developing countries and donors alike have made substantial investments in establishing systems and training people in the collection of data. But the problems extend beyond issues of data availability and quality and involve a range of human, technical, institutional and cultural factors. In fact, one of the most striking of these factors is that the communications linkages between ongoing data collection and the actual making of management and policy decisions are generally weak or nonexistent. As a result the impact of the data which is collected is limited. The emphasis on data collection and systems must be balanced by concomitant attention to how data are used and to the tools and process of decision-making.

### B. Project Description

The Data for Decision-Making (DDM) project is a six year \$14.2 million (S&T-\$9.3 million, USAIDs-\$4.9 million) project to develop, refine and demonstrate practical approaches to increase informed decision-making for the health sector and thereby better policies and programs. Efforts under DDM will concentrate on the human aspects of decision-making and on tools and methods to make better use of routine, available and/or poor data rather than on improving the collection of new/more data or obtaining data through more expensive studies.

The tools and methods developed will enable decision-makers to better understand and communicate their information needs to data producers, and the data producers in turn, to better analyze and present data in formats useable by the decision-makers.

Project components include tool/methodology identification and testing, country activities and analysis and dissemination of

evolving health issues. By the end of the project, S&T/H/AR expects to demonstrate that:

1. Ten to 12 tools or methods which will enable readily available data to be analyzed, interpreted and presented in ways relevant to decision-makers will have been developed, tested and demonstrated as viable.
2. Comprehensive data-based (informed) decision-making will have been applied in the health sectors of three to four countries.
3. In an additional 10 to 12 countries, approaches addressed at specific policy issues and impediments to decision-making in the health sector will be applied.
4. Decision-oriented training materials will be incorporated in four to five national programs
5. A mechanism to advise A.I.D., other donors and host countries on evolving epidemiologic and demographic trends and related data and issues will be established and operating.

C. Summary of A.I.D. Financing (\$000)

ITEM	S&T	USAIDS
Research Services	3500	2277
Training	2225	1125
Research Grants	875	0
Miscellaneous	580	300
Evaluation & Audit	420	90
Contingency	760	379
Inflation	<u>940</u>	<u>729</u>
TOTAL	9300	4900

D. Summary Findings

The DDM project conforms with and supports the priority goal of A.I.D.'s health policy: the improvement of health and survival of children and mothers. It also positions A.I.D. to be able to be better informed about and prepared for evolving health priorities. The analyses show the project to be technically, socially, economically, financially and environmentally sound. Authorization of the project is recommended.

## II. BACKGROUND AND RATIONALE

### A. The People, the Process and the Task

"Decision-makers use a decision-making process to make decisions." While axiomatic, this statement, nevertheless, highlights that decisions are complex tasks performed by a variety of different people acting in response to a wide array of variables and influences.

#### 1. Decision-Makers, Collectors and Analysts

Health sector choices are made by decision-makers both within and outside the sector. Those from outside are frequently the most powerful actors in the country and include heads of government, members of their cabinets and legislators. For most of these people, health is only one of many concerns and usually not the highest. Their decisions may affect policy and programmatic thrusts, as well as budgetary allocations.

Decision-makers in the health sector include primarily those responsible for managing public health programs starting with the minister of health and including managers of national health initiatives as well as managers of health programs and facilities at the regional and local levels. In some instances, the minister of health may not even be a health specialist, but most of these people will be health professionals generally familiar with technical data and information.

Decision-makers, however, are only one part of a system which also includes data collectors, data analysts and a variety of health care providers. For the system to perform effectively, there must be solid two-way communication: from the care providers, collectors and analysts to the decision-makers and from the decision-makers to the technicians. The decision-makers must know the kind of information they need and be able to communicate their demands to the technicians. The technicians in turn must understand what is needed, know how to accurately collect the appropriate data and know how to package and present it in a format which is both understandable and persuasive.

#### 2. Decision-Making

While data needs will vary depending upon individual backgrounds, experience, responsibilities and inclinations, several types of information are essential for sound decision-making in the health sector. These include epidemiologic, demographic, economic, bureaucratic, political and sociological data.

Technical data includes information regarding epidemiologic trends, treatment alternatives and facilities coverage areas. Epidemiologic data covers the incidence and prevalence of diseases, as well as its etiology and the effectiveness of treatments. It provides an understanding of the patterns and distribution of disease, factors which put populations at risk and the effectiveness of interventions and treatment programs. This is critical information for health managers and policy makers. Technical data also includes: information on which treatments do and do not work and the relevant merits of each; and demographic data which puts health problems into perspective and helps to assess trends and project population-based priorities into the future.

Economic and financial data are needed to assess costs and to determine cost-effective and cost-efficient procedures. Bureaucratic data defend or challenge an organization's management capability and relate decisions to such things as organigrams and staffing patterns. Higher level officials, particularly those outside the health sector, need access to political information because they must be sensitive to political lobbies, voting blocks and other bases of support. Sociological data are also needed to understand demand for health services and to adapt interventions to socially and culturally diverse settings.

While health priorities are most easily ranked by having a common comparison, none of these types of information are, alone, a sufficient basis for making decisions in the health sector. Epidemiologists may consider the social demand for adult health services to be "irrational." Sophisticated and expensive surveys may give quantifiably verifiable results which, for decision-making purposes, are worth little more than the intuition of front-line care providers. And, with the economic realities facing all countries (developed and developing) the days of "nothing is too expensive if it saves a life" are gone. Economic efficiency frequently outweighs sectoral priorities. In practice, decision-makers juggle the various types of information available to them and act on their own judgements as to whether and how they and/or the society at large will be effected by their decisions. Rarely, however, do legislators in developing countries have access to usable data which quantify and qualify the health situation in their country. If they do have access, they are unlikely to pore over extensive and complicated information. At best, there is a health committee (rarely staffed) to which they can turn. Or they may depend on the ministry of health to provide all health information.

Unfortunately, in developing countries, policy decisions which affect the health sector are too rarely influenced by data, whether made by presidential decree, by the president's cabinet or by the legislature.

### 3. Decisions

The products of this process (decisions) are often regarded as impersonal matters such as policies, regulations, procedures, budgetary allocations, strategies and approaches. But, in the health sector, such decisions can strongly influence which conditions and diseases are avoided and which affect people of what age groups, in what regions and from what racial and/or economic classes. The decisions have bearing on where people go for help and the facilities, equipment, medicines and personnel providing treatment. They influence the cost of treatment as well as its effectiveness. The harsh reality of such seemingly impersonal decisions is that they impact who gets sick and who dies and how much they suffer.

#### B. The Growing Need for Informed Decision-Making

It is not surprising then that decision-making in public health has attracted much attention in recent years. Health decisions are now critical to more and more people and affect more and more resources. The demand for health services screams for a bigger slice of the public resources pie - a pie which is shrinking relative to the need. While economics has not yet become the sole criteria for health decisions, this approach is having a growing effect on the manner in which decisions are made.

Moreover, because the situation in the health sector is changing so rapidly, informed decisions based on data are especially critical. Changes are resulting in part from an "epidemiologic transition", the term applied to the movement from a predominance of infectious and parasitic diseases linked to poverty, malnutrition and improper sanitation to a predominance of chronic diseases such as hypertension, cancer and diabetes as well as man-made problems arising from a more toxic environment and changing social conditions. In the industrialized countries, this transition took place over the last century or more. In developing countries, however, it is taking many forms and, in some, taking place in less than a generation, accelerated at least in part by the widespread application of health technologies such as immunization. Infectious disease will continue to dominate the health patterns of many countries, but specific patterns of disease will change.

Rapid population growth, changing age structures and other demographic changes, including migration and urbanization are also affecting the health needs of developing world populations. Larger populations and increased life expectancy are resulting in new and mounting demands on the health systems, systems which have been largely developed to cope with the urgent needs of maternal and child health (MCH). Adding to the continuing maternal and child health needs, will be epidemiologic changes,

including an increasing significance of chronic and man-made diseases.

These factors, leading to both increasing need and shifting demand for health services, occur in a context of severely limited resources which, in turn, increase the importance and urgency of using these resources in the most efficient and effective way as possible. Especially when choices are difficult, decision-makers in the health sector need data to make the best decisions possible.

Greater sectoral efficiency is a priority for all donors and all developing countries, virtually without exception. By contributing towards increased efficiency, i.e. savings, the Data for Decision-Making (DDM) project will benefit not only the health sector but potentially other development priorities as well. In addition, this project will better position the Agency for International Development (A.I.D.) to sustain and refine its health and child survival programs and strategies and to respond to evolving areas of significance.

#### C. Efforts to Date

Although the actual capacity to use data varies from one country to another, intuitively, most public health officials are aware of the value of epidemiologic and other data and make the effort to improve its collection and use. Developments pertinent to decision-making in the health sector include:

##### 1. Strengthening of Data Collection and Processing

To date, most technical assistance has been directed at developing health information systems and refining systems of data collection. Developing countries and donors alike have made substantial investments in establishing systems and training people in the collection of data. A.I.D. itself has financed a number of important child survival projects that, in the process of achieving project goals, have made substantial progress in generating health-related data useful for decision-making by managers of health programs. A.I.D. funded projects include:

- Combatting Childhood Communicable Diseases (CCCD);
- Resources for Child Health (REACH);
- Primary Health Care Operations Research (PRICOR);
- Technologies for Primary Health Care (PRITECH);
- Demographic and Health Surveys (DHS); and
- Center for International Health Information (CIHI).

Specific country needs have also been addressed through a number of bilateral projects. The projects have contributed to the availability of health-related data through operations research, the establishment of health information systems and the development of meaningful data presentation techniques. In many countries, relevant data or the capacity to collect it already exists.

The World Health Organization (WHO) and the Canadian International Development Agency have recently begun to sponsor research on using Health Systems Research (HSR) in decision-making. That work will be monitored carefully under DDM and may offer experience and tools for use to this project.

## 2. Advances in Technology

There has been an explosion in computer and communications technology making it faster, easier and cheaper to collect and analyze large quantities of data and to present it in more graphic and easily understood ways. Such technology is now available in virtually all countries of the world. Ironically, in the absence of more effective methods to prioritize and present data, this advance can result in decision-makers facing "information overload."

## 3. Decision-Making Techniques

In contrast, little attention has been directed at the use of epidemiologic and demographic data. However, as discussed in more detail in the technical analysis, decision-making experience in the developed world and in advanced developing countries have also provided tools for packaging data and processes for delivering it that can now be developed for application to developing countries.

## 4. Decision-Making Process

Similarly, the essentially human dimension/factors of the decision-process have been largely ignored. Even the most well informed policy-maker may not ask the right questions of the data.

### D. Perceived Problem

Despite these efforts and developments, data are not being widely and effectively used by decision-makers in the health sector. Under an agreement funded through the Child Survival Action Program (CSAP) Support project, during the first half of 1990,

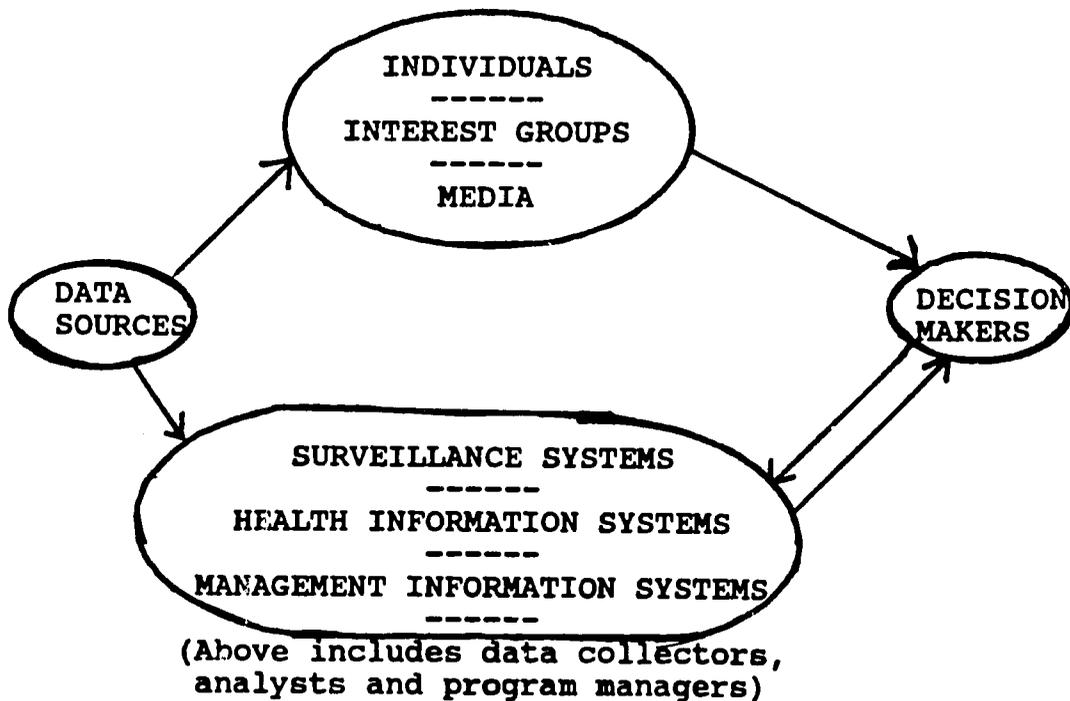
the Centers for Disease Control (CDC) conducted a series of case studies examining the role of health sector data in influencing program decisions. Each study, conducted over a two week period: reviewed the availability of data; explored the factors that either enhanced or limited the use of data; and examined potential ways to overcome the constraints identified. Summaries of the six studies (Bolivia, Dominican Republic, Niger, Togo, Zaire and the United Nations Relief and Works Agency for Palestinian Refugees) are found in Annex C.

A composite of their results revealed a range of important constraints to the use of data for decision-making including:

- o An enormous amount of data is being collected and represents what many consider to be an excessive reporting burden at the health services delivery level. There is, however, little supervision of the data collection and analysis process.
- o Relatively little of the collected data is translated into information readily usable by decision-makers.
- o Technical managers within the health sector try to use the health information available to them and this information can have a substantial positive impact on program implementation.
- o Decision-makers frequently are not health professionals and, therefore, rarely use health data to affect decisions.
- o Decision-makers (both inside and outside the sector) are not sufficiently aware either of the range of data or of all the programmatic, economic and policy options available to them.
- o Decision-makers fail to communicate their information needs to data collectors and analysts.
- o Data providers are not sufficiently aware either of the data needs of decision-makers or how the data they are providing is being used.
- o Data providers also seemed to lack the knowledge and skills to analyze and transform (present) data into formats required for decision-making (tables, graphs, executive summaries, etc.).
- o Decision-makers who do consult data in making decision frequently are not able to apply the more sophisticated epidemiological and economic techniques.

- o There is a lack of regular dissemination of feedback information at all levels of the health system, but especially to the care providers whose responsibility includes collection of data.
- o In general, there is a low level of confidence in the validity, reliability, relevance and timeliness of much of the data.
- o In some cases, a lack of computer software and hardware impedes management, analysis and presentation of data.

In summation, the problems extend beyond the most self-evident issues of data availability and quality and involve a range of human, technical, institutional and cultural factors. The most striking of these factors, however, is that the communications linkages between ongoing data collection and the actual making of management and policy decisions are generally weak or nonexistent. As a result the impact of the data which is collected is limited. When decision-makers are better able to understand and communicate their information needs to data producers, and the data producers in turn, are able to analyze and present data in formats useable by the decision-makers, data-based decision-making is more possible. This two-way communication (illustrated below) is the focus of the DDM Project.



This project's emphasis on linkages, interface and communications should not be seen as lessening the importance of accurate data or the need for solid systems for the collection of data. Rather, it recognizes that the emphasis on data collection and systems to date has not been balanced by concomitant attention to the need for tools and processes that facilitate the use of those data.

The American Public Health Association recently underscored the need to focus in the U.S. on the process of decision-making and policy-formulation even in the absence of complete evidence. It states, "Often the impact of a given problem warrants action even though the evolving epidemiologic or other scientific evidence is considerably less than perfect. . . agencies do not share with scientists the luxury of expressing uncertainty; either definitive action or no action is usually required." A decision must be made.

In the developing world, where the health needs are so great and where per capita public expenditures average less than ten dollars and are as low as one dollar in some of the poorest countries, that focus can be no less urgent. As populations grow and age, the needs and constraints will also increase. It is imperative that existing resources be used in the most cost-effective and efficient way possible.

### III. DETAILED PROJECT DESCRIPTION

#### A. Project Goal and Purpose

The goal of the Data for Decision-Making project is to make more cost-effective and efficient use of resources in the health sector of selected A.I.D. - assisted countries. Cost effectiveness and efficiency is defined as the enactment of policies and programs which allocate health resources to priority problems as supported by epidemiologic and demographic data.

This goal assumes that decisions based on data are, in fact, better decisions: that such decision-making contributes to more effective policies, more realistic planning, better use of resources and programming, improved implementation and better health. This assumption applies not only to technical decisions such as determining the proper dosage for the treatment of malaria but also to management decisions such as the deployment of health workers in rural areas and to decisions on policies, programs, and regulations. The goal also assumes that, once the value of the developed approaches is demonstrated, they will be applied and sustained in the target countries with little need for outside assistance.

The specific purpose of the project is to develop, refine and demonstrate practical approaches to increase informed decision-making for the health sector. As discussed above, the project is targeted at both technical and policy/program decisions as well as at technicians inside the health sector and decision-makers both inside and outside the sector.

The project will address four major types of decisions:

1. The policy and regulatory environment
2. Budget allocation for direct government investment
3. Incentives, e.g. taxes and subsidies
4. Program strategies and approaches

Examples of specific policy-oriented issues include: epidemiological changes for child survival, ways to enhance sectoral efficiency through non-project assistance (NPA) and policy reform; policy and manpower implications of demographic shifts; tradeoffs between expanding services coverage and adding new interventions; program efficiencies and quality of care issues and the appropriate mix of public and private delivery of child survival services.

Because the project will seek to maximize its impact, its principle focus will be on policy decisions. It will, therefore, have as primary targets policy makers and those technicians who are in the position to influence policy with data. However, as this project's purpose is experimental, other decision-makers and technicians may be involved as needed to develop and test specific approaches that appear promising.

At the end of the project S&T/H/AR expects to have:

1. Demonstrated the viability of 10 to 12 tools or methods which will enable readily available data to be analyzed, interpreted and presented in ways relevant to decision-makers. Such tools or methods (discussed in Annex F) should be considered as generic and may have either broad or specific applicability to countries, technical areas or decision-making constraints.

2. Applied broad data-based (informed) decision-making in the health sectors of three to four countries. This achievement, will be demonstrated when: a) communication linkages between data collectors, analysts and decision-makers are regularly maintained; b) decision-makers can formulate appropriate policy questions, request information and utilize data to rationalize decisions; c) data analysts can present decision-makers with understandable and supported options; d) people who are sensitized to data-based decision-making are playing a larger role in decisions affecting the health sector; e) when the existing health information system is providing useful data more efficiently and presenting it more effectively; and f) when policy and budgetary processes incorporate data-based presentations and concerns.

3. Addressed specific problems and impediments to decision-making in the health sectors of an additional ten to twelve countries. This will be accomplished when one or more of the benchmarks noted in 2. (above) has been reached.

4. Tested and incorporated training materials in ongoing technical training courses that will enable epidemiologists and other host country technicians to apply these tools and techniques on an ongoing basis.

5. Established and operating a mechanism to advise A.I.D., other donors and host countries on evolving epidemiologic and demographic trends and related issues and data requirements.

The primary objective of the project is the End of Project Status (EOPS) indicator number one. EOPS indicators two through four will be achieved as a by-product from using the target countries as research laboratories. The basic assumption underlying the above EOPS, and supported by existing case studies, is that

decision-makers will actually use the data which is presented to them in an understandable and cogent fashion.

## B. Project Elements

The DDM project will carry out a variety of research, technical assistance and training activities aimed at meeting the above objectives. Built into the project design is a tension between two of these elements: a) the research and development aspects of decision-making and b) the application or extension of the results of the R&D. A successful project demands that both aspects be implemented collaboratively and with the close participation of developing country professionals. Practical application under real circumstances is essential to proving that various approaches do work. Nevertheless, as the project purpose states, the emphasis of DDM is on efforts to "develop, refine and demonstrate" approaches. A successful project will enable these approaches to be extended more broadly and aggressively in the future. While the specific activities will be adjusted to meet the demands of particular country circumstances, an illustrative outline of the three primary components is presented below.

### 1. Tool/Methodology Identification and Testing

If data are to be used in making decisions, ways must be improved to identify priority data needs, to access the data, to transform the data into information packages which are more understandable, i.e. more user friendly to the decision-makers, and to deliver the packages to the proper users in a timely fashion. It has also been demonstrated that more data and/or more sophisticated data frequently either overwhelms decision-makers or significantly slows the process. Accordingly, efforts under the DDM will concentrate on tools and methods making better use of routine, available and sometimes even poor data rather than on improving the collection of new/more data or obtaining data through more expensive studies.

"Tools" and "methods" are broad, terms intended to address data collection analysis, packaging and consensus-building techniques. The terms can include things as diverse as quantitative or computer analysis, presentations via simple tables or complex computer graphics and delivery by electronic mail, newsletters or face to face communications. Some will facilitate bottom-up communication to the decision-makers while others will facilitate top-down communications from the decision-makers. Certain tools may be technically demanding and geared for use by technicians, health professionals and computer specialists. Others are aimed at faster, more effective dissemination to non-health professionals and policy makers and/or managers of health programs. Still others may be directed primarily at the process

of decision-making and be intended to build scientific and even popular consensus for sector decisions. Some of the tools which have already been identified as likely candidates for project application and testing under the project are illustrated below.

#### Some Potential Tools and Methods

<u>Analysis</u>	<u>Packaging</u>	<u>Consensus-building</u>
Decision Analysis	Newsletters	Advisory Boards or Councils
Risk Analysis	RAPID-like graphics	Media Orientation
Economic Analysis	Conferences	Democratic Decision-Making
Health Days of Life Lost	Workshops	Policy Dialogue
Potential Years of Life Lost		
Policy Studies		

Candidate tools and methodologies may be identified by any of a number of channels including the host country and project implementing entities. A small sub-grants program will be incorporated into the project to support the development and testing of such tools at the country level, applied to a particular problem-solving effort and, in some cases, to academic groups to advance the theoretical underpinnings for tool development.

Each tool will be adapted and tested in a minimum of two countries following discussions with host-country personnel and incorporation of the testing into the country plan. Several tools may be tested in one country. It is expected that, in all, approximately sixteen to twenty tools will be examined, of which approximately eight will be developed and prepared under this project for future extension.

When the project-funded research and testing is complete, the information package for each tool will include a definition and description of the tool, a description of the testing methods employed, a summary of the results obtained particularly noting strengths and weaknesses, and recommendations for its effective

use. In most cases, a case study documenting its use will be prepared. Each package will be prepared in a form and substance appropriate for future and broader dissemination and extension in other projects, countries and training programs.

## 2. Country Activities

Most project activities will take place in developing countries. While not the primary objective of the project, those activities will contribute towards the building of local decision-making capacity. Following examination of several candidate countries, according to guidelines and criteria discussed in the Implementation Plan, the project expects to undertake long-term (24-30 months), integrated and extensive involvement in three to four countries. A decision-making activities program will be developed and executed in each of these countries and may be broadly focussed or specific, depending upon particular country needs. The likely components of such major programs are illustrated below.

- a. Health Information Inventory and Decision-Process Assessment  
Each inventory/assessment will examine the types of information being collected in relation to priority health problems and/or specific policies; its availability; how it is being analyzed, how it is being presented and disseminated; how it is being used and by whom; the institutional, social, political and economic context; factors facilitating and limiting the use of data (with particular emphasis on linkages between decision-makers, analysts and data collectors); and recommendations for increasing and improving informed decision-making in the sector.
- b. Decision-Making Activity Plan  
Based on the results of the inventory and assessment in each target country, a plan will be developed to address one or more of the country-specific needs, priorities and constraints identified. The plan, developed with close host-country collaboration will be appropriate to the sophistication of the data and information systems in place and to the level of training of the decision-makers, analysts and data collectors involved. Each plan will include:
  - 1) Candidate tools identified (assume three for each country) and the specific objectives, methodologies and schedule proposed for tool testing;
  - 2) Training objectives and plan including workshops and conferences, on-the-job training, and short-term U.S. or third country training. For the major programs, assume:

- One orientation Workshop and one End-of-Activity Workshop, each for 30 people.
  - Four workshops for 15 people on case studies or subjects such as the value of data, understanding decision-makers, decision-making for non-health professionals, recognizing and prioritizing data needs, data collection quality control and supervision, quantitative methods and specific decision-making tools.
  - Five people receive three months of short-term training in such things as computerized techniques and developing communications for decision-making. It should be noted that training materials will be developed and tested in cooperation with on-going technical training programs such as the Field Epidemiology Training Program and the International Clinical Epidemiology Network. It is anticipated that they will be incorporated into such routine training over the long run.
- 3) Host-country institutional locus and responsibilities. The decision-making activity will be tied to one or more lead host-country institution involved in health policy development and implementation and will be linked to specific health problems. It will be expected that the lead institution will involve others, as appropriate.
- The institutional locus with defined responsibilities is a key element for ensuring sustainability of the project activities.
- 4) Decision-Making communications efforts to widely disseminate information on the progress and results of the activities, to sensitize people to the process and to promote ongoing feedback, perhaps to include a periodic newsletter.
- 5) Technical Assistance Requirements assuming the equivalent of eight single person visits for four weeks each over the 24-30 months of country activities. Where justified, limited assistance may be provided to strengthening parts of an existing health information system as a prerequisite to major project activities.
- 6) Miscellaneous requirements (personnel, facilities, hardware and software, financial, etc.) from A.I.D. and the host country.

- 7) **Monitoring and Evaluation Plan** - For the project to be successful, it must assure that each country experience is carefully and fairly examined and that the results and lessons learned from the activity are preserved, analyzed, synthesized and made available to other interested countries and donors.

One probable major country activity already identified will be carried out in collaboration with the Rockefeller Foundation. USAID Delhi is expected to support the extension of activities under the International Clinical Epidemiology Network. The basic objective of the activity would be to train and develop and incorporate data for decision-making tools into the public health curriculum of India's medical schools.

For many or most of the countries involved in the DDM project, however, the activities will be much less comprehensive than described above. Those activities will be problem specific and focused on improving data collection or on increasing community participation in decision-making. The components of the assessment and activities plan in each country will be similar, but the assistance will be likely be smaller in magnitude, narrower in focus and/or shorter in duration.

An important type of country activity may be carried out in conjunction with non project assistance and other USAID funded programs. DDM may assist USAID and host countries to link data with decision-making on budgetary allocations and to assist them with their analytic efforts.

The DDM project should be flexible to conform to the individual country needs and circumstances. At the same time, A.I.D. and project implementers will exercise discipline over activity and country selection to assure that the primary objectives of decision-making tool research and demonstration are met.

Missions were polled for interest and comments during the preparation of the Project Identification Document. Based on the responses, six countries were selected for case studies. Additional countries, including India, Indonesia, and the Philippines, have subsequently expressed interest in participating in the project. Furthermore, in response to African regional interest, the ability to access expertise to continue to strengthen surveillance systems in support of project goals will be built in through the PASA with CDC.

### 3. Trends and Issues

The project will support a mechanism to identify and advise A.I.D., other donors and host countries on rapidly changing demographic and epidemiologic transitions and on the substantial variations among developing countries of the world. The

mechanism, consisting of panels of experts and working groups, will discuss and critique already existing documentation on particular subjects, commission technical papers and present seminars to discuss those papers, recommend specific policies and programs implied by the changes examined. CDC and other collaborating institutions under the project will participate in these sessions and inject the information and recommendations into DDM activities in the target countries to identify future health trends, policy agenda and future data requirements. Advisors will include preeminent experts and scientists from the United States as well as appropriate representatives from developing countries.

In carrying out their work, the panels and working groups will focus on two major health issues which have been identified by A.I.D. as priorities for the 1990s. They are: sustaining child survival program initiatives and successes; and responding to emerging health problems.

## C. Other Considerations

### 1. Dissemination of Results

The DDM project will disseminate its results through a variety of channels in order to broaden the impact of the research it supports. First, in country, the project will be devoted to finding the most effective ways to reach decision-makers and disseminate results. In a number of countries, there will be a direct link with existing training programs so that project results can have a long-term impact. Internationally, it is expected that the project will disseminate its results through existing networks (e.g. INCLIN and FETP); meetings sponsored by the project and collaborating institutions; papers and case studies to be made available to academic and non-academic training institutions and publications; and through cooperation with other AID-funded projects.

### 2. Peer Review Plan

The DDM project makes provision for peer oversight of the overall project, through the National Academy of Sciences and the project's Advisory Committee. Individual research grants and activities will be reviewed by ad-hoc panels with appropriate expertise. The Advisory Committee will be charged with ensuring appropriate levels of peer review in consultation with the NAS as needed.

#### IV. COST ESTIMATE AND FINANCIAL PLAN

Tables I and 2 present a summary cost estimate and financial plan and illustrative expenditures by year. All costs are estimates based upon hypothetical and illustrative country activities. The Notes and Assumptions for Project Cost Estimates are found in Annex D.

Project costs are based upon the assumption that major programs will be undertaken in three focus countries and that the major programs will include the health information and assessment and decision-making implementation plan activities. It is further assumed that scaled down activities will be undertaken in twelve additional countries. Activities in those twelve countries have been budgeted at 50% of the major program levels. Additional assumptions are also made for the foreign exchange and local currency components of each project element as well as for the amounts to be paid out of central project funds and USAID add-ons.

Add-ons will finance country activities in part or whole. In the case of the three to four focus countries, USAIDS will be expected to fund at least 50% of total costs and may exceed \$250,000. S&T/H funding will be directed at core activities and staff, research grants, country planning and assessment and evaluation and case studies, and conferences. Missions will be expected to cover at least in part training costs and costs of technical assistance and in-country workshops.

TABLE 1  
SUMMARY COST ESTIMATE AND FINANCIAL PLAN  
(\$000)

COMPONENT	CENTRAL FUNDS	BUY-INS	TOTAL
Research Services	\$ 3,500	2,277	5,777
Training	2,225	1,125	3,350
Research Grants	875	0	875
Miscellaneous	580	300	880
Evaluation and Audit	420	90	510
Contingency	<u>760</u>	<u>379</u>	<u>1,139</u>
SUBTOTAL	8,360	4,171	12,531
Inflation	<u>940</u>	<u>729</u>	<u>1,669</u>
TOTAL	9,300	4,900	14,200

TABLE 2  
ILLUSTRATIVE AID EXPENDITURES BY YEAR  
(\$000)

PROJECT ELEMENT	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		YEAR 6		TOTAL		GRAND TOTAL
	S&T/H	USAIDS	S&T/H	USAIDS											
Research Services	350	0	700	455	875	683	700	455	525	342	350	342	3500	2277	5777
Training	222	0	450	225	556	338	450	225	334	169	223	169	2225	1125	3350
Research Grants	87	0	175	0	219	0	175	0	131	0	88	0	875	0	875
Miscellaneous	58	0	116	60	145	90	116	60	87	45	58	45	580	300	880
Evaluation and Audit	42	0	84	13	105	19	84	13	63	10	42	10	420	90	510
Contingency	76	0	152	75	190	113	152	75	114	56	76	56	760	379	1139
SUBTOTAL	835	0	1677	829	2090	1243	1677	829	1254	621	837	621	8360	4171	12531
Inflation	0	0	67	50	187	149	217	157	222	162	247	211	940	729	1669
TOTAL	835	0	1744	878	2277	1392	1894	986	1476	783	1084	833	9300	4900	14200

NOTE: Expenditures allocated according to following formulas:  
S&T/H - YR1=10%, YR2=20%, YR3=25%, YR4=20%, YR5=15%, YR6=10%  
USAIDS - YR1=0%, YR2=20%, YR3=30%, YR4=20%, YR5=15%, YR6=15%

## V. IMPLEMENTATION PLAN

### A. Roles and Responsibilities

Despite the efforts to date, decision-making in the health sectors of developing countries is not a well developed field. While relatively simple in concept, when closely examined, decision-making is quite complex. The DDM project, for instance will simultaneously address the problem from both ends of the decision-making spectrum: a top-down approach focusing on the decision-makers themselves; and a bottom-up approach focusing on health technicians, e.g. care providers, data collectors and data analysts. It will also need to work in several countries simultaneously. These demands will require expertise in a variety of hard and social sciences not likely to be available through a single contracting entity. In fact, two principle implementing organizations are envisioned for this project. The innovative nature of the project and the complexity of its implementation will require strong and regular technical direction from the Office of Health, Division of Applied Research (S&T/H/AR).

The roles and responsibilities of the major project actors are described below.

#### 1. S&T/H/AR

Primary responsibility for project management and technical direction will rest with the Cognizant Technical Officer (CTO) within S&T/H/AR. The project manager in S&T/H/AR will be expected to work approximately three-quarters time on DDM and will, among other management responsibilities:

- Coordinate with geographic bureaus, A.I.D. field offices and implementing entities and chair the Project Advisory Committee meetings;
- Draft the program description and areas of substantive involvement for the Request for Application (RFA) and Participating Agency Services Agreement (PASA);
- Review all requests for mission "add-ons" for clarity of objectives, conformance to project criteria and reasonableness of level of effort. Approve as appropriate;
- Assure that all Mission funding for "add-ons" to the Cooperative Agreements (CAs) and PASA is incorporated into CA/PASA amendments;

- Review CA/PASA progress toward program objectives including: country-specific plans, overall and annual work plans, semi-annual reports, activity reports, etc. Provide on-site reviews as necessary;
- Review and administratively approve monthly invoices; and
- Assure proper execution of the monitoring and evaluation plan.

## 2. Office of Procurement

MS/OP/W will be responsible for preparing and issuing the Request for Application and for negotiating and executing the CAs and PASA and any amendments thereto.

## 3. Advisory Committee

It is planned that S&T/H/AR will organize an Advisory Committee which will play a substantive role in project implementation. The Advisory Committee will be composed of disinterested experts in the field, such as an epidemiologist, a sociologist and an economist, as well as representatives from A.I.D. and the three major implementing agencies. The Advisory Committee will meet at least annually to review overall project progress, provide guidance and feedback to the project manager, assist him/her to set and clarify the technical and managerial direction of the project, address conceptual or implementation problems, and ensure adequate peer review of research results. The Advisory Committee is expected to function also as an additional link between AID, CDC, and the major CA recipient.

## 4. USAIDS

After project authorization, country Missions will be invited to submit candidate countries and organizations for participation in the project in accordance with the selection criteria (see E. below). USAIDS will play a direct role in assuring that the country activities carried out by CDC and the CA recipient are integrated into the ongoing USAID health program. Where both of the major implementing agencies are involved, USAID will help to clarify roles, responsibilities and scopes of work, assure coordination and avoid duplication.

## 5. Host Country Entities

Organizations which may participate in the project include ministries of public health, regional or local health agencies,

schools of public health, local universities or other academic organizations, private voluntary organizations and private for-profit firms which seek to improve the utilization of data for decision-making in the health sector. The roles and responsibilities of the particular selected entities will be spelled out in country-specific decision-making activity plans.

## 6. Major Implementing Agencies

Two major implementing organizations are envisioned for this project. Tool/methodology activities and country activities will be carried out by a primary Cooperative Agreement recipient which will work from one end of the decision-making spectrum and by the Centers for Disease Control (CDC) which will work from the other end. In addition, the project will collaborate with and selectively fund other activities which contribute to the project's goals.

### a. Cooperative Agreement Recipient

The primary CA recipient will take a top down approach focusing primarily on policy makers and upper level decision-makers. Their work and focus in specific countries will be directed by the country assessments and the Decision-Making Activity Plan developed for that country. In general it will include but not be limited to:

- Development and implementation of strategies, programs and activities to identify the decision-makers outside the health sector whose decisions affect the health sector, to sensitize them to the value and importance of utilizing data in decision-making, and to help them identify and communicate to health technicians the information they need to responsibly perform their jobs;
- Development and testing of policy and related tools and approaches to effectively link decision-makers to data and thereby enhance data-based policy development, e.g. advisory boards, media orientation, democratic decision-making;
- Assisting USAIDs and host countries in specific analytic efforts to use data to improve policy formulation and assistance efforts.
- Working with CDC to assure that the technical tools and methodologies developed and employed by data collectors and analysts are practical, useful and can be effectively and readily applied at the decision-making level;

- Designing and carrying out a small grants program to identify and develop the theoretical bases for the "non-technical" decision-making tools to be tested;
- Developing and carrying out overall CA and country specific action plans including, as appropriate resource requirements, budgets, schedules, reporting procedures, monitoring and evaluations; and
- Maintaining appropriate project information which preserves project experience (positive and negative) and presents it in a format readily understandable and ready for future dissemination including use in future training programs.

b. Centers for Disease Control

The roles and responsibilities of the Centers for Disease Control, will complement those of the CA recipient. CDC's approach will be bottom-up, concentrating on teaching statistical people and technicians within the health sector to talk to decision-makers. Accordingly, its tools, methodologies and programs will focus on helping those people to collect, analyze and present the data in ways useful to and understood by the decision-makers. Such tools may include;

- Quantitative methods of analysis, graphic presentation of data, scientific writing, and oral presentation of findings;
- Computer techniques to facilitate data analyses and presentation;
- Prioritizing data needs and eliminating irrelevant data from collection efforts;
- Fine-tuning existing health information and/or surveillance systems; and
- Improving systems of quality control and supervision of data processing.

There is no clear and precise point where the "top-down" and the "bottom-up" approaches meet. Hence, close coordination between the CA recipient and CDC is important, both on a project wide and especially in the focus countries, which will include a definition of responsibilities and a plan for coordination. where initial requests suggest that the services of both may be required. In this case, both implementors will participate in the country assessment and in the development of a detailed country

specific Decision-Making Activity Plan. The participation of each entity will be determined by the country requirements and the skill and capabilities of each, in consultation with host country institutions and the USAIDS. CDC activities in some countries may begin before CA services are available. However, where feasible, initiation of major programs will await availability of both implementing entities. Representatives of both entities will also be on the project's Advisory Committee.

The program of small research grants will be shared by the CA recipient (60%) and CDC (40%) with each focusing on its respective ends of the decision-making spectrum. Possible criteria for selecting topics for research grants are:

- 1) Does it address a priority problem in decision-making and is it of interest to decision-makers?
- 2) Is the topic small, discrete and readily understandable? Can the work be accomplished within the time allocated?
- 3) Are decision-makers and appropriate level data collectors and analysts directly involved in the research design and execution?
- 4) Is the estimated cost reasonable and consistent with DDM guidelines (i.e. approximately \$50,000 each)?

CDC will build on its unique network of Field Epidemiology Training Programs, drawing on technicians in those programs for participation in DDM and will ultimately consider incorporating DDM-developed tools and approaches into FETP curricula.

#### c. Collaborative Activities

The project will collaborate with and, on a selective basis, fund other activities that contribute to the goals of the project. Two initial collaborations have been identified:

**The National Academy of Sciences:** The project will collaborate with an on-going cooperative agreement with the National Academy of Sciences (NAS) initially established under the Child Survival Action Program-Support Project (936-5951), adding funds specifically to identify and advise on the rapidly changing health situation due to the epidemiologic and demographic transitions taking place in developing countries. Complete data of good quality on mortality, morbidity, and disability are not always available in many developing countries. The NAS will advise on the development of tools and methods to deal with these deficiencies.

The NAS will use two mechanisms in providing these services; panels of experts and working groups. The panels of experts will discuss and critique already existing documentation on a particular subject. The working groups will be commissioned to prepare papers and present seminars to discuss those papers and make recommendations. The agenda for each panel or working group will be determined either by the project's Advisory Committee or at a joint meeting of the primary CA recipient, CDC, NAS and A.I.D.

Rockefeller Foundation: The project will also collaborate with activities supported by the Rockefeller Foundation including its International Clinical Epidemiology Network (INCLIN), a program of training directed primarily at medical schools, and its efforts to establish National Epidemiology Boards. As an initial activity, the project will support a continuation and expansion of INCLIN's activities in India, permitting it to add training activities that will enhance technicians' ability to link epidemiologic data with areas of policy and programmatic concern and to expand their ability to use economic, demographic and social data.

#### B. Contracting and Procurement Plan

The primary cooperative agreement recipient must have proven capability and experience in public sector policy development, economic, social and political analysis, communications, training, public administration and decision-making. The recipient should also have experience in a variety of developing countries and knowledge of health issues in those countries. Expertise in the establishment and operation of data and management information systems is also desirable to facilitate the interface with CDC.

The broad qualifications required may not be available through any single institution (or even a single type of institution). The CA recipient is expected to be a U.S. educational institution, training institution, private non-profit organization, for-profit firm willing to waive its fees or a consortium or joint venture thereof. The CA will be competitively let for five years.

Both Cooperative Agreements and Contracts were examined as implementation mechanisms for this component of the project. Since this is essentially a research project, the products and deliverables are still difficult to quantify and specify. Moreover, the cooperating agency will have considerable responsibility for identifying, developing and testing effective approaches. Finally A.I.D. will need to be substantively involved in key areas, including the selection and evaluation of different approaches; coordination of activities with

collaborating agencies; and, coordination in countries where a non project assistance mode is selected. Accordingly, a cooperative agreement rather than a contract, was determined better suited for this project.

In providing services to this project, the Centers for Disease Control (CDC) will build on its expertise in collecting, analyzing and disseminating disease surveillance information and on its experience in providing training in these areas. CDC has a long history of direct involvement in national and international disease prevention and control programs. Its involvement in the developing world began in the 1960's with A.I.D funded malaria and smallpox eradication programs in Africa and Asia. Since then CDC has been involved with the collection and dissemination of surveillance information important to the successful control of communicable childhood diseases and the reduction of infant and childhood mortality in many parts of the world. The project will also build on the developed Field Epidemiology Training Program (FETP), under which CDC has developed professional training from all over the world in applied quantitative epidemiology to document public health problems.

Public health surveillance programs, supported by CDC, have provided the critical information essential to the success of many programs. As public health is confronting the challenges of contemporary diseases as well as injuries and personal risk factors, CDC has taken the lead in broadening systems of public health surveillance to provide the information needed to guide public health decisions and interventions in both communicable and noncommunicable disease.

Because of their sophisticated and specialized nature, the services required are not generally available in the private sector. Therefore, the services will be obtained through a Participating Agency Services Agreement (PASA) with CDC.

The National Academy of Sciences inputs will be obtained through a buy-in to an existing cooperative agreement under the CSAP-Support project (936-5951). The NAS has a unique capability, to access expertise from a wide variety of private and public sources. That capability is not available from other institutions.

The collaborative activity with the Rockefeller Foundation will be carried out by a grant to the International Clinical Epidemiology Network (INCLIN). INCLIN has submitted its papers to A.I.D. for the purpose of being registered as a private voluntary organization.

**C. Implementation and Financing Methods Table**

<b>ITEM</b>	<b>METHOD OF IMPLEMENTATION</b>	<b>METHOD OF FINANCING</b>	<b>ESTIMATED COST (\$000)</b>
Research Services	Cooperative Agrmnt /PASA/Grant	Direct Reimbursement	7,725
Training	Cooperative Agrmnt /PASA/Grant	Direct Reimbursement	4,500
Research Grants	Cooperative Agrmnt /PASA/Grant	Direct Reimbursement	1,100
Procurement	Cooperative Agrmnt /PASA	Direct Reimbursement	425
Evals/Audits	Contract	Direct Payment	550

**D. Gray Amendment Considerations**

Because of the broad technical qualifications required for this project, the primary Cooperative Agreement will be competitively let. Proposers are encouraged to involve Historically Black Colleges and Universities and small, minority and women-owned businesses to the maximum extent possible. It is anticipated that the proposers will make every reasonable effort to identify and make maximum practical use of such entities. All other selection criteria being equal, the participation of such firms may become a determining factor for selection.

**E. Country Selection Criteria and Process**

Representatives of the primary cooperative agreement and CDC will visit the leading candidate countries for preliminary reviews and country selections. Where the proposed activities do not clearly and singularly fall to either the CA recipient or CDC, or where a major country program is anticipated, the representatives will conduct a joint visit. Trip reports and selection recommendations must be approved by the CTO.

The capacity of the project to provide centrally funded research, training and TA has well defined limits based on the estimated budget. Priorities for centrally funded country activities will reflect:

1. Regional diversity (approximately 3 countries from each region).

2. Strong demonstrated interest and support from the Ministry of Health, Finance and/or other entities as appropriate in the development, testing and ongoing application of decision-making methodologies.
3. Adequacy of the existing health information to support the project and availability of personnel with adequate technical training.
4. Support of USAID and relevance to the ongoing USAID health program.
5. Likely contribution of the proposed country activities towards achievement of wider project objectives.
6. Financial capability (ability of USAID and the host country to support the program proposed).

While the country criteria are intended to insure a certain degree of design integrity and implementation discipline, they should not be applied in an absolute way or in a way which would compromise project flexibility. In countries where small and discrete chunks of assistance are requested, project assistance may be provided following an abbreviated review and approval process.

#### F. Implementation Schedule

Since it could take up to a year to compete and award a cooperative agreement, and since approximately five years of the CA activities are required to achieve the project purpose, a six year life of project is anticipated. The CA recipient should be ready to initiate activities no later than January 1, 1992. It is anticipated that the PASA with CDC would be ready to initiate within three months of project authorization and the expert advice from NAS, which will be procured by incremental funding of an existing CA would be available almost immediately.

The Project Assistance Completion Date (PACD) will be established six years from the date of the signing of the PASA with the CDC. A preliminary implementation schedule is established as follows:

DATE	ACTION	RESPONSIBILITY
Feb-91	Expert meeting on mortality	NAS
Mar-91	Project Authorized	Agency Director for Health
Mar-91	PIO/T for PASA prepared/approved	CTO/PO
Mar-91	Follow-up with interested missions	CTO
Mar-91	PIO/T for CA prepared/approved	CTO/PO

Apr-91	PASA negotiated with CDC	MS/OP/W
Apr-91	RFA published in CBD	MS/OP/W
May-91	CDC initiates activities	CDC
Jly-91	Bids on CA reviewed	MS/OP/W
Jly-91	PIO/T for 2nd collab. activity	CTO/PO
Aug-91	CA awarded	MS/OP/W
Sep-91	CA initiates field activities	CA
Sep-91	Workshop on Epid. Transition	NAS
Nov-91	Planning meeting (CDC,CA,NAS)	CTO
Nov-91	2nd collab. activity begins	CA2
Dec-91	First LT country activity begun	CDC/CA
	1 ST activity complete	CDC
	1 ST activity underway	CA
Jan-92	Advisory Committee meeting	CTO
Jan-92	Workshop on Economic Consequences of Health	NAS
Apr-92	3 Research grants awarded	CDC
Jly-92	Expert meeting on aging and health	NAS
Dec-92	3 LT country activities underway	CDC/CA
	4 ST activities complete	CDC/CA
Jan-93	Advisory Committee meeting	CTO
Apr-93	3 Research grants awarded	CA
Apr-93	Planning meeting (with CDC, CA)	NAS
Jly-93	Expert meeting	NAS
Dec-93	4 LT country activities underway	CDC/CA
	6 ST activities complete	CDC/CA
Jan-94	Advisory Committee meeting	CTO
Jan-94	Mid-Term Evaluation	CTO
Feb-94	International Conference (all)	CA
Mar-94	PES Submitted	CTO
Jun-94	Remaining Research grants awarded	CDC/CA
Sep-94	Workshop on disabilities in LDCs	NAS
Dec-94	Expert meeting	NAS
Jan-95	Advisory Committee meeting	CTO
Jun-95	Expert meeting	NAS
Jan-96	Advisory Committee meeting	CTO
Sep-96	ST Activities complete	CDC/CA
Nov-96	Final Evaluation performed	IQC
Jan-97	Advisory Committee meeting	CTO
Jan-97	PES submitted	CTO
Feb-97	PACD, PACR Submitted	CTO

### G. Monitoring Plan

Project monitoring is briefly mentioned under Roles and Responsibilities (above). The project will be monitored by the Applied Research Division of the Health Office of the Science and Technology Bureau (S&T/H/AR). It is estimated that it will require one U.S Direct Hire (USDH) employee three-quarters time

during the first two years of the project and half of his/her time during the remaining years of the project. The employee responsible for monitoring the project should be a health development officer with field experience in program management and exposure to the potential applications of computer technology to information sciences. Field experience related to policy reform, technology transfer, economics, financial management, quantitative analysis and/or epidemiology would also be a plus.

Project officer site visits, together with USAID visits to individual country activities, will be needed. Two trips may be required during each of the first two years of the project, while one trip should be sufficient for each of the four latter years.

Occasional travel to the home offices of the implementing entities as well as attendance at professional meetings related to the project are also required.

Each PASA and CA recipient will prepare overall project and annual work plans and submit semi-annual reports discussing progress towards meeting PASA/CA targets and objectives. The reports will compare actual to planned targets, explain discrepancies, describe problems encountered and measures being undertaken to correct those problems. Management reviews of the PASA and the CAs will be conducted at least once a year and may entail a visit to the home office and/or field sites. Interviews with key personnel, review of administrative matters and/or assessment of products/deliverables may be done as part of the review. Should the project officer discover that a particular issue needs further review, s/he may use outside contractors. In addition, the Project Advisory Committee will meet at least yearly to review overall progress.

Each PASA and CA recipient will be responsible for accounting for all funds provided under project agreements. Funds will be kept separately and disbursed according to normal A.I.D. practices. Records will be maintained and submitted in accordance with procedures acceptable to A.I.D. All agreements are subject to review and audit by A.I.D. or private audit firms appointed by A.I.D. Two audits of each organization are programmed over the life of the project.

## VI. PROJECT ANALYSES

### A. Technical Analysis

#### 1. Introduction

Health is costly: whether one focuses on the human suffering and social costs of allowing health needs to go unmet or on the economic costs to individuals and the larger society of providing curative or preventive health services. It is no surprise then that decision-making in the health sector has received a lot of attention in recent years. There is nearly universal recognition that, to minimize these costs, health decisions must be made in the most rational way possible. Despite this common goal, however, there is no similar agreement either on common criteria for measuring a "healthy society," on prioritizing diseases or on preferred decision-making methodologies. Experts have never agreed upon a single indicator of health status. For many reasons, the substantial efforts to improve health planning have given disappointing results in many countries. Planning and management has been overly centralized contributing to inadequate knowledge of regional or local conditions and inadequate delegation of authority to those areas. An emphasis on the collection and accuracy of health data has not automatically facilitated better decisions. As Leslie Boss and Lucina Suarez have pointed out in their article, "Uses of Data to Plan Cancer Prevention and Control Programs," although there is a wealth of data in the U.S. on the disease (frequently in published tables, charts and graphs), it had not been well utilized in planning and evaluating public health programs. They found few viable models which enable data to "be displayed in a format that is quickly absorbed and easily compared with other data."

The conclusion that one might draw from this and other similar articles is that little progress in decision-making has been made or can realistically be expected and that, therefore, additional investments in the area should be avoided. On the other hand, the importance and value of informed decision-making - as well as the risk of doing nothing - has never been greater. Even marginal improvements in the process will have far-reaching and positive implications.

Most efforts to date have had a single, or at least very narrow, focus. Frequently the focus has been solely or primarily on health information systems, or the quantity and quality of data, or the relative utility of a specific data analysis or presentational tool (discussed below). While the multifaceted complexity of decision-making is widely recognized, little effort has been made to closely examine why and how decision-makers operate and to make their task easier and more comfortable for

them. The tools to be developed and tested under Data for Decision-Making will not be exclusively or predominantly epidemiological or even "scientific" data. Data for Decision-Making will not challenge the importance of those factors, but its research and testing will follow a more balanced approach with a major focus on the human factors - "the ergonomics of decision-making."

## 2. A Dissection of Decision-Making

The American Public Health Association (APHA) recently published a technical report entitled "Public Health Policy-Making in the Presence of Incomplete Evidence." The report dissects decision-making into eight factors which usually influence decisions in the health sector. They are:

- a. The Need for Action - determined by measuring the problems impact;
- b. Firmness of Evidence - it usually falls between anecdote and absolute proof;
- c. Time Constraints - nature of the perceived problem or political, administrative and social pressures frequently make quick decisions imperative;
- d. Anticipated Benefits and Untoward Effects of Action - measured in terms of the estimated efficacy of the proposed measure, secondary benefits, expectations for compliance, and risks of undesirable effects;
- e. Costs of the Proposed Action - the absolute costs of most actions are far less than the costs of not addressing the problem. Frequently, however, the greater costs result from compromising programs addressing other high priority problems.
- f. Social and Political Implications - influences of groups with special age, ethnic, religious, cultural, economic or commercial interests.
- g. Public Understanding of Science - most people (including many decision-makers) are inadequately versed in science and its methods. As a result communication between scientists and decision-makers is frequently difficult.
- h. Legal Issues - health matters always have a variety of legal implications including possible conflicts between public interests and individual rights.

APHA states, "when it can be demonstrated that the need is great, an action produces the desired benefits, the risks are not too

high, the intervention is economically feasible, and there are no viable, more scientifically certain alternatives, then policy-makers should proceed even in the face of less than complete evidence." Though accurate, this statement conceals the importance and difficulty of the phrase "when it can be demonstrated." What do decision-makers seek as evidence? How much data and of what types are needed to be convincing? How can that data be transformed to demonstrate the data's conclusions? That interface between data and the decision-maker and between data collectors/analysts and the decision-maker is the primary focus of DDM.

### 3. Existing Tools and Methodologies

Annex F briefly reviews a number of tools and methodologies currently being promoted as helpful to decision-making. They include epidemiological tools such as healthy days of life lost and risk analysis and tools more common to business and economics such as decision analysis and cost benefit analysis. The background behind the development of most of these tools is an assumption (reasonable) that useful comparisons of diseases can only be made by having a single common indicator. As a result, each of the methodologies has an approach, whether epidemiological, economic or social, which tends to dilute the value of the other approaches and ignore the myriad of external factors not incorporated into the models. In general, these tools tend to ignore or minimize:

- The non-medical and non-statistical inputs to decisions;
- The effects that such factors as income and educational levels have on health;
- The perceived (and real) demand for health services which may not coincide with the statistical analysis. The undervaluation of adult morbidity is a prime example of this; and
- Issues of equity and equality of service.

Annex F also includes a number of readily understood and currently practiced communications techniques which have weaker statistical underpinnings, but which could help to bridge the gap between decision-makers and data, data analysts and data collectors. The thread common to most of these tools (including conferences and workshops, media orientation and newsletters) is the increased emphasis on two-way communications. The tools are not complex, but they cannot work if they are not perfected and used regularly.

Simply using one or more of the discussed techniques encourages the collection and use of better data. RAPID and other population policy projects have demonstrated that data convincingly presented can cause decision-makers to change policies and institute new programs. However, from a technical perspective, the key to success for DDM will be getting each side to understand and appreciate the others jobs; their requirements, skills and limitations. Tool development and refinement cannot be conducted in isolation. Each development team must include a decision-maker, analyst and collector participating fully and communicating effectively.

Despite the relative merits and problems with the various decision-making methods discussed, the overriding reality is that seldom will decisions be based entirely on only one kind of data, scientific, economic, political or emotional. And seldom will decision-makers (particularly those outside the health sector) seek to understand the intricacies of collection or analysis methodologies. Therefore, the obligation of any activity purporting to facilitate decision-making is to maintain efforts to improve and simplify a variety of these tools, to be aware of the relative merits and problems of each and to continually ask whether the product produced is what the decision-maker needs and can understand.

An example of the potential rewards of such an approach is found in Thailand. There the National Epidemiology Board (NEB) has been set up as a mechanism to mobilize resources to acquire and apply essential information for health development in the country. Though it has been operating only since 1986, preliminary evidence suggests that it: interacts with policy makers to explore their concerns; looks at existing information to identify priority problems as well as additional information needs; and mobilizes academic communities to help in searching for new knowledge to fill in identified gaps. The NEB of Thailand thus supports solid policy-relevant decision-making based on thorough review and searching of scientific information.

One last technical note - because the methodologies discussed above are more likely to be useful and utilized within the context of a relatively sophisticated and developed health information system, this project is well suited for so-called "transitional" A.I.D.-assisted countries. Other countries, with less fully developed information systems, may wish to use this project to access expertise on using B-A-D (Best Available Data) or to help them focus their efforts to build improved information systems on the needs of decision-makers. Country-specific approaches will need to reflect country situations.

## B. Economic Analysis

The economic impact of research projects is frequently not direct results of the research itself, but rather indirect results from the future application and extension of a product after the research project itself is completed. Similarly the intent of the DDM project is not that it will directly produce high internal rates of return, but rather that it will develop tools and methodologies which, when later applied, result in significant economic efficiencies and cost savings. The benefits of any research project are hard to quantify. With DDM, quantification is made even more difficult by the unpredictable human elements permeating it.

While some measurable benefits should result from individual country activities, the major and secondary benefits to be derived from the Data for Decision-Making Project will be increased cost-effectiveness within the health sector and increased overall funding for the sector. The tools developed will help decision-makers choose between competing priorities in the health sector. The project will not attempt to advance the allocation of resources among competing sectors such as health, education and/or defense. Still, effective utilization of resources within the sector is one reasonable criteria for the provision of resources to the sector.

As has been so clearly illustrated by the annual budget exercise in the United States over the past few years, decision-makers operate within a relatively narrow band of issues in which they can exercise substantial discretion and creativity. So too, in the health sector of developing countries decision-makers have limited flexibility. They are not starting from scratch to design the best possible system. Rather their decisions are constrained by: the health systems already in place including hospitals, medical schools and other infrastructure; personnel including doctors and other care providers oriented to specific practices and traditions; historical precedents; bureaucratic and managerial limitations; financial and social factors.

Given these limitations, in some countries, even informed decisions may make only marginal improvements within that narrow band of decision-maker flexibility. Nevertheless, the substantial investment being made in the health sector means that even marginal improvements to productivity translate into substantial rates of return.

Assuming conservatively that the project is implemented in countries having an aggregate population served by the existing health systems of 100 million people, and assuming also that the cost of those systems is approximately \$5.00 per person per year. Then only a one percent improvement in the operating efficiency of those systems would result in savings of \$5 million per year.

Though very substantial, those benefits would pale by comparison to the benefits possible from the long-term extension and application of viable tools and methodologies to many other countries.

Of course underlying any economic analysis of the project is the major assumption that informed (data-based) decision-making is in-fact more economically efficient than decisions not based on data. It's intuitively reasonable, but not yet proven. One of the areas of likely investigation under the project, and an area important to the acceptance of the methodologies proposed, is that of establishing a clear and demonstrable relationship between data-based decisions and economic cost savings.

Assessments of the economic merit of any method developed and tested will also be a mandatory element of evaluation for each country decision-making improvement plan as well as for the mid-term and end of project evaluations.

At the same time the technical and social analyses both show that scientific and technical factors are critical but not sufficient criteria for making decisions. Value judgements are also necessary. While economic criteria are growing in relative importance, it is unlikely that they will (or should) ever be the sole criteria for decision-making.

## C. Social Analysis

### 1. Socio-Cultural and Political Context

The project will be implemented in a variety of socio-cultural contexts and countries throughout the world. Specific country-level activities will be designed to be appropriate to each country's capabilities, needs, and socio-cultural context.

The project aims at two levels of decision-makers --policy and management. At the highest policy level, the project will be concerned with legislation, allocation of resources, and setting of priorities regarding the health sector. At the management level, the project will be concerned with operational policy, programmatic decisions, planning and implementation.

While the project seeks to promote the use of technical data in decision-making, it recognizes that decision-makers are subject to a variety of external and subjective influences. Influences on decision-making may be categorized as:

- \* Technical information related to the subject in question;
- \* Political considerations and priorities, and
- \* Personal considerations and priorities.

Clearly political and other personal considerations play a major role at the national policy levels. At program, policy and lower managerial levels, technical information usually plays a greater role in decision-making (See Note 1 below). At no level, however, is decision-making not influenced by political and personal considerations. This is not just a phenomenon of developing countries, but a fact of human nature. It would be naive to suggest that any project could ever result in decision-making based on data and rationality alone.

The DDM project thus will not ignore these subjective factors, but will better prepare policy and decision-makers at all levels to use technical information. It will encourage them to do so both more frequently and more effectively. Its success will be premised on addressing countries, programs, and individuals where there is an interest in or at least openness to selecting among alternatives on a rational basis.

## 2. Participation

Project success will depend upon the interest and active participation of decision-makers who include a hierarchy of types which may be categorized as follows:

- a. Policy-makers for whom health is only one of many concerns -- and usually not the highest (e.g., politicians, legislators, and officials within ministries of finance and planning, all of whose decisions and policy-making are likely to be heavily influenced by political and personal priorities having little to do with health).
- b. Ministers of Health (some of whom may not even be health specialists and whose decisions and policy-making are also likely to be heavily influenced by political and personal priorities having little to do with health);
- c. Managers of national health programs -- health specialists who are responsible for policy-making, policy implementation, and actual resource use and whose decision-making relies significantly on technical data;
- d. Program managers at the regional, district, and local levels -- all of whom use technical data in their decision-making;
- e. Managers of health-care facilities --all of whom use health data in their decision-making;
- f. Other priority users of health data -- such as national epidemiology boards, the private sector, and the media.

At the policy level, participation will be more difficult to achieve because of competing political and economic forces. Policy makers, for example, often use data to support their political agendas rather than to work toward the latter use. At the managerial level, participation is more certain given the near-universal awareness on the part of managers of the need for information for effective management. It is expected that managers will willingly participate in the project. The project's challenge will be to get the participation of policy-makers.

### 3. Socio-Cultural Feasibility

How can the project actually succeed in changing the behavior of decision-makers? Given that decision-making is often heavily influenced by political and personal priorities, will decision-makers have sufficient interest in data-based decision-making that they will first, devote the time to participate in the activities envisaged by the project and then, second, actually apply, in their daily work, the ideas and approaches presented?

It will not be difficult to attract managers to participate in training activities, given the general recognition by many managers of the need for data for good management. The challenge will be to design an approach that first captures and then holds the interest of policy-makers -- especially as they have less time for such activities, may consider "mere data" peripheral to their work, and may deem themselves above it all.

Success will depend on many factors including:

- a. . Appropriate choice of emphasis countries in which to carry out the project;
- b. Linking DDM to other AID child survival projects and ongoing programs in which priority is being placed on effective policy-making and management;
- c. In each participating country, availability of data of sufficient quality to be worth using for decision-making -- or, alternatively, linking the project's data utilization activities to ongoing data collection and research efforts (e.g. health services research or activities to improve management information systems);
- d. Developing effective tools (See Note 2 below) that capture the attention of policy and decision-makers and persuade them of the value of data based decision making (the "persuasive tools," similar to S&T/POP's RAPID model);
- e. Developing effective methodologies (See Note 2 below) to use in training participants in skills of data synthesis,

presentation, and utilization (the "how-to methodologies");

- f. Innovative training activities tailored to the intended participants' needs and priorities; and
- g. Careful on-going evaluation of project components and modification of implementation plans as needed. The DDM project will play a valuable role in enabling decision-makers to understand more clearly the gaps and disparities in terms of health status and access to health services among various segments of the country's population and to make appropriate allocation decisions. This will help assure that at-risk populations are not overlooked and that health care resources continue to be directed to them.

For data analysis and use at the national level to be successful, strategies will be developed to strengthen the process at all levels:

a. Involving top-level policy-makers: planning for their time constraints. It is essential to sensitize top-level policy-makers, such as government ministers and those immediately under them, to the importance of using data effectively for decision-making. However, these officials often have very little time to focus on any one issue and strategies for involving policy-makers must take account of this constraint. For example, sessions on the use of data for decision-making may have to be integrated into national or international management meetings these officials are already scheduled to attend. Efforts can be made to include illustrations of how data has improved policy-related decisions in speeches prepared for these top officials to deliver at high-level meetings, at the opening ceremonies of relevant workshops, and so on. (These and other innovative ideas are presented in the WHO/IDRC document "Strategies for Orienting Decision- Makers..." discussed below.)

b. The importance of cultural differences in decision-making. There are often substantial differences in the way decisions are reached in different cultures, as has been well documented by anthropologists and others. Although the wide differences between decision-making processes in certain traditional cultures may be somewhat muted as education increases, some differences still remain in developing country bureaucracies. In some societies, for example, decisions are most often arrived at by consensus, while in others they are made by one or more powerful leaders and, in still others, by majority rule, politics or family ties. These differences will be seriously examined as strategies are designed at the country level.

The project is socio-culturally and politically feasible, provided adequate attention is given to the seven concerns above. The better the project elements are designed and implemented, the project may fail at the policy level but should, nevertheless, be able to improve the quality of decision making at some lower managerial levels. This would still be a significant achievement.

#### 4. Beneficiaries

In each participating country, the immediate, direct beneficiaries will be those persons involved with the provision of health services who will receive training and be provided useful job tools under this project.

Data-driven decision-making helps ensure a better quality of health care. Thus, secondarily, the project should benefit all those involved in the delivery of health services by creating conditions more conducive to effective and efficient health care.

The ultimate beneficiaries will be the entire population of each participating country whose needs can be better met through better targeting of resources to population groups at risk and whose taxes go further through more efficient planning and execution of health policies and programs.

Moreover, project outputs (tools and methodologies as well as state-of-the-art knowledge about epidemiological and demographic trends) should have applicability in a broad range of countries in addition to those receiving direct assistance.

#### 5. Impact

Successful implementation of the project will contribute to improved health programs. Improved health programs mean not only more efficient use of the resources allocated for health but also a more appropriate distribution of those resources. Given the resource limitations and growing demand for health care, resources will still not meet demand. However, those at greatest risk and most in need of health care should have an increased chance of receiving their fair share.

Note 1: This is well-documented in the anthropological, political science, and other behavioral science literature. The interest of program managers in having better data is also evidenced in background case studies upon which these project will build. These show that managers are not reluctant to use data but that they do not receive relevant information in time and often are unaware of analytic techniques that would help them to use appropriate data for making sound decisions. (See Annex C: Summary of Case Studies.)

Note 2: Tool is understood here to mean a computer-based presentation, similar to the RAPID program. "Methodology" is understood to be more general, denoting any approach or method of communication information and ideas in greater detail, and may or may not involve use of computers.

#### D. Environmental Examination

An Initial Environmental Examination recommended a negative determination. Therefore, a more detailed Environmental Assessment of Environmental Impact will not be required (See Annex H).

### VII. EVALUATION AND AUDIT ARRANGEMENTS

The purpose of the DDM project is to develop, refine and demonstrate practical approaches to increase informed decision-making for the health sector. It is, therefore critical to be able to review and evaluate all project activities in terms of lessons learned (both positive and negative) and potential for application elsewhere in the future. Accordingly, evaluation must play a critical and integral role in this project.

There will be two overall project evaluations. The mid-term evaluation, occurring sometime during the third year of the project, will be a collaborative activity and focus on a critical assessment of various approaches underway linking data with decision-making. Thus it will look at the substantive outputs of the project, i.e. tools and methodologies, country activities and trends and issues.

Building on the case study approach developed as a pre-project activity, the evaluation will include 4-7 case studies of project interventions that have been developed and implemented. Preparation of the case studies and of the evaluation will be facilitated by the fact that each country activity and research grant will include its own evaluation criteria and plan. The case studies will assess the degree to which and in what ways the specific interventions have encouraged better use of decision-making. Among the specific questions to be answered will be:

- Is the methodology of the research and testing itself clear? Can it be easily duplicated?
- Is the methodology of the tool developed technically solid and reliable?

- Is the methodology readily understandable? Can it be taught easily and to what kinds of people?
- Are the skills to utilize the methodology readily available in less developed countries (LDCs)? If not, where would it be most applicable?
- Can the tool be used without continuing assistance? If not, what type and quantity of continuing support is required?
- How have decision-makers, analysts and collectors reacted to the tool? Do they use it eagerly or reluctantly?
- Under what circumstances is the tool most useful?
- What particular problems were encountered and how have they been overcome?
- What are the quantified costs of using the methodology, in financial, materials, facility, and human resource terms?
- What are the corresponding quantified benefits of the tool?
- Have the inventories and assessments been conducted thoroughly? Was the information they provided appropriate for the decision-making improvement plan?
- Was the Decision-Making Improvement Plan complete? Was it linked to the inventory/assessment? Were host country decision-makers, analysts and collectors actively involved in its preparation?
- Are the tools being tested appropriate to the country context?
- What training has been provided and in what categories? Has the training provided been consistent with the plan? How has it been regarded by the participants?
- What efforts are underway to disseminate the country experience? How are they being received?
- Has the host institution fulfilled its agreed upon roles and responsibilities? How or how not? If not, what steps may be taken to address this?
- Have A.I.D and the CA/PASA parties lived up to their agreements? How or how not?

- Are the trends and issues activities on track as planned? If not, what steps can be taken to address this?
- Have the meetings/conferences/workshops been well executed? Well attended? How have they been received?
- What problems have been encountered and how will they be addressed?

These case studies will be presented at a workshop with the cooperating agencies at the end of the third year. The intention will be to assess and share experience with specific approaches, derive lessons and refine approaches based on lessons learned. The evaluation will contribute to the project in other ways as well. The teams carrying out the case studies should draw on host country participants who have been involved in project activities. And, the case studies themselves will add to the materials used in the training programs.

The final evaluation will be conducted during the last year of the project. Though the primary focus of this evaluation will be impact; i.e., the changes that have resulted because of the project, an assessment along the lines noted above will also have to be conducted of those activities carried out during the second half of the project. Among the questions to be addressed for the impact part of the end-of-project evaluation will be:

- What tools have been developed and clearly demonstrated as technically and economically viable?
- To what extent in the target countries:
  - a) Have two way communication linkages between data collectors, analysts and decision-makers been established and regularly maintained?
  - b) Can decision-makers formulate appropriate policy questions, request information and utilize data to rationalize decisions?
  - c) Can data analysts present decision-makers with understandable and supported options?
  - d) Are people, sensitized to data-based decision-making, playing a larger role in decisions affecting the health sector? and
  - e) Is the previously existing health information system providing useful data more efficiently and presenting it more effectively?

- Is a mechanism in place and operating to advise A.I.D., other donors and host countries on evolving epidemiologic and demographic trends and related issues and data requirements?
  
- What significant information has it provided? What has been the follow-on activity to the information provided?

The evaluations will be conducted either by individuals hired under Personal Services Contracts (PSCs) or by an IQC or 8(a) firm. The scopes of work for the evaluations will be prepared by S&T/H/AR. \$118,000 has been budgeted for the mid-term evaluation (approximately 5.5 person-months) and \$153,000 has been budgeted for the final evaluation (approximately 9 person-months). The project officer will be responsible for preparing the Project Evaluation Summary (PES).

In accordance with the Administrator's Policy Statements, project financial audits are incorporated into the project design and provisionally programmed for the third and sixth years for the project. The \$200,000 budgeted for audits covers two audits for each of three organizations requiring approximately two person-months of effort for each audit.

LOGICAL FRAMEWORK MATRIX  
 DATA FOR DECISION MAKING (DDM)  
 (936-5991)

**PROGRAM OR SECTOR GOAL**

To increase effectiveness and efficiency of the use of health resources in target countries.

**MEASURES OF GOAL ACHIEVEMENT**

Health resources targeted at major priorities supported by epidemiologic and demographic information.

Policies and programs enacted to implement reorientation of resources.

**MEANS OF VERIFICATION**

National health policies.

National budgets.

Project studies and surveys.

Project evaluations.

**IMPORTANT ASSUMPTIONS**

Data-based decision making does contribute to better planning and policies better allocation and more efficient use of resources.

Models and methodologies can continue to be applied with minimal outside assistance.

**PROJECT PURPOSE**

To develop, refine and demonstrate practical approaches to increase informed decision making (DM) for the health sector.

**END OF PROJECT STATUS**

1. 10-12 tools demonstrated viable using readily available data and to analyze, interpret and present them in ways relevant to decision makers.

2. Data-based DM applied in 3-4 countries by:

-- Two-way communication links maintained between data collectors, analysts and DMers.

-- DMers able to formulate appropriate policy questions, request information and utilize data to rationalize choices.

-- Data analysts presenting DMers with understandable and supported options.

-- DMers sensitized to data-based decision making are playing a larger role in decisions affecting the health sector.

-- Existing HIS refined to provide useful data more efficiently and present it more effectively.

3. Specific policy issues and decision-making problems addressed in 10-12 countries.

4. Training materials developed and tested and incorporated in 4-5 national training programs.

5. Mechanism operating to advise on evolving epidemiologic/demographic trends and related issues and data requirements.

Project reports, publications and information.

Special on-site and case studies.

Project evaluations.

USAID reports and evaluations of technical assistance.

**ASSUMPTIONS FOR ACHIEVING EOPS**

Data which is presented in understandable and cogent fashion will be used by decision makers.

Data-based decisions are made within the context of rapid demographic and epidemiologic change, continuing child survival needs and severe resource constraints.

Data and information is not overwhelmed by competing political and social arguments.

**OUTPUTS**

- 1. Tools/methodologies identified, developed, adapted and/or tested.
- 2. 6-8 countries prepared to perform data-based decision making.
- 3. Epidemiologic and demographic transition (emerging health issues) analyzed and results disseminated.

**MAGNITUDE OF OUTPUTS**

- 1.a. 10-12 tools/methods, each tested in at least 2 countries.
- 1.b. 2 computerized models for integrated health data presentation developed.
- 2.a. 12-15 country health information inventories completed.
- 2.b. 6-8 country-based decision making improvement plans developed.
- 2.c. Approx. 700 people attend workshops /seminars/training courses on data based decision making.
- 2.d. Approx. 40 people receive U.S. or 3rd country training.
- 2.e. Newsletters and/or other communications machinery in place.
- 3.a. Approximately 5 expert-level meetings and workshops held.
- 3.b. Approx. 100 people attend 2 international conferences
- 3.b. Approx. 4 books/reports on subject published and distributed.

Project reports, publications and information.

Special on-site studies.

Project evaluations.

USAID reports and evaluations of technical assistance.

**ASSUMPTIONS FOR OUTPUTS**  
Participation of decision makers, data analysts and data collectors is voluntary and active.

**INPUTS**

- Research Services
- Training
- Research Grants
- Miscellaneous
- Evaluation and Audit
- Contingency
- Inflation

**IMPLEMENTATION TARGETS**  
(Central Funding Only \$000)

3074.00  
1430.00  
500.00  
380.00  
360.00  
574.00  
995.00

**TOTAL**

**7313.00**

Project reports.

PASA and Cooperative Agreement disbursement records.

Central and buy-in funding available.

Appropriate technical resources available.

97-

## STATUTORY CHECKLIST

A. GENERAL CRITERIA FOR PROJECT

1. FY 1989 Appropriations Act Sec. 523; FAA Sec. 634A. If money is sought to obligated for an activity not previously justified to Congress, or for an amount in excess of amount previously justified to Congress, has Congress been properly notified? NO
2. FAA Sec. 611(a)(1). Prior to an obligation in excess of \$500,000, will there be (a) engineering, financial or other plans necessary to carry out the assistance, and (b) a reasonable firm estimate of the cost to the U.S. of the assistance? (a) yes  
(b) yes
3. FAA Sec. 611(a)(2). If legislative action is required within recipient country, what is the basis for a reasonable expectation that such action will be completed in time to permit orderly accomplishment of the purpose of the assistance? N/A
4. FAA Sec. 611(b); FY 1989 Appropriations Act Sec. 501. If project is for water or water-related land resource construction, have benefits and costs been computed to the extent practicable in accordance with the principles, standards, and procedures establishing pursuant to the Water Resources Planning Act (42 U.S.C. 1962, et seq.)? (See A.I.D. Handbook 3 for guidelines.) N/A
5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and total U.S. assistance for it will exceed \$1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability to maintain and utilize the project effectively? N/A
6. FAA Sec. 209. Is project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs. NO

7. FAA Sec. 601(a). Information and conclusions on whether projects will encourage efforts of the country to:
- (a) increase the flow of international trade;
  - (b) foster private initiative and competition;
  - (c) encourage development and use of cooperatives, credit unions, and savings and loan associations;
  - (d) discourage monopolistic practices;
  - (e) improve technical efficiency of industry, agriculture and commerce; and
  - (f) strengthen free labor unions.
- (a) NO  
(b) YES  
(c) NO  
(d) NO  
(e) YES  
(f) NO
8. FAA Sec. 601(b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).
- N/A
9. FAA Secs. 612(b), 636(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services and foreign currencies owned by the U.S. are utilized in lieu of dollars.
- N/A
10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?
- N/A
11. FY 1989 Appropriations Act Sec. 521. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity?
- N/A
12. FY 1989 Appropriations Act Sec. 549. Will the assistance (except for programs in Caribbean Basin Initiative countries under U.S. Tariff Schedule "Section 807," which allows reduced tariffs on articles assembled abroad from U.S.-made components) be used directly to procure feasibility studies, prefeasibility studies, or project profiles of potential investment in, or to assist the
- N/A

establishment of facilities specifically designed for, the manufacture for export to the United States or to third country markets in direct competition with U.S. exports, of textiles, apparel, footwear, handbags, flat goods (such as wallets or coin purses worn on the person), work gloves or leather wearing apparel?

13. FAA Sec. 119(g)(4)-(6) & (10). Will the assistance (a) support training and education efforts which improve the capacity of recipient countries to prevent loss of biological diversity; (b) be provided under a long-term agreement in which the recipient country agrees to protect ecosystems or other wildlife habitats; (c) support efforts to identify and survey ecosystems in recipient countries worthy of protection; or (d) by any direct or indirect means significantly degrade national parks or similar protected areas; or introduce exotic plants or animals into such areas? N/A
14. FAA Sec. 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (either dollars or local currency generated therefrom)? N/A
15. FY 1989 Appropriations Act. If assistance is to be made to a United States PVO (other than a cooperative development organization), does it obtain at least 20 percent of its total annual funding for international activities from sources other than the United States Government? YES
16. FY 1989 Appropriations Act Sec. 538. If assistance is being made available to a PVO, has that organization provided upon timely request any document, file, or record necessary to the auditing requirements of A.I.D., and is the PVO registered with A.I.D.? PVO Involved has submitted document for registration

17. FY 1989 Appropriations Act Sec. 514. If funds are being obligated under an appropriation account to which they were not appropriated, has prior approval of the Appropriations Committees of Congress been obtained? N/A
18. State Authorization Sec. 139 (as interpreted by conference report). Has confirmation of the date of signing of the project agreement, including the amount involved, been cabled to State L/T and A.I.D. LEG within 60 days of the agreement's entry into force with respect to the United States, and has the full text of the agreement been pouched to those same offices? (See Handbook 3, Appendix 6G for agreements covered by this provision). N/A

B. FUNDING CRITERIA FOR PROJECT

1. FY 1989 Appropriations Act Sec. 548 (as interpreted by conference report for original enactment). If assistance is for agricultural development activities (specifically, any testing or breeding feasibility study, variety improvement or introduction, consultancy, publication, conference, or training), are such activities (a) specifically and principally designed to increase agricultural exports by the host country to a country other than the United States, where the export would lead to direct competition in that third country with exports of a similar commodity grown or produced in the United States, and can the activities reasonably be expected to cause substantial injury to U.S. exporters of a similar agricultural commodity; or (b) in support of research that is intended primarily to benefit U.S. producers? N/A
2. FAA Secs. 102(b), 111, 113, 281(a). Describe extent to which activity will (a) effectively involve the poor in development by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, dispersing investment from cities to small towns and rural areas, and insuring wide participation of the poor in (a) YES (b) NO (c) YES (d) YES (e) YES

the benefits of development on a substantial basis, using appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance to assist rural and urban poor to help themselves toward a better life, and otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries.

- |    |   |  |
|----|---|--|
| 3. | <u>FAA Secs. 103, 103A, 104, 105, 106, 120-21; FY 1989 Appropriations Act (Development Fund for Africa).</u> Does the project fit the criteria for the source of funds (functional account) being used?   | YES  |
| 4. | <u>FAA Sec. 107.</u> Is emphasis placed on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)?  | YES<br>through<br>improved<br>data<br>proces-<br>sing<br>techni-<br>ques                 |
| 5. | <u>FAA Secs. 110, 124(d).</u> Will the recipient country provide at least 25 percent of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is it the latter cost-sharing requirement being waived for "relatively least developed" country)?  | Cost-<br>sharing<br>will be<br>required<br>except<br>for LCDs                            |
| 6. | <u>FAA Sec. 128(b).</u> If the activity attempts to increase the institutional capabilities of private organizations or the government of the country, or if it attempts to stimulate scientific and technological research, has it been designed and will it be monitored to ensure that the ultimate beneficiaries are the poor majority? | YES  |
| 7. | <u>FAA Sec. 281(b).</u> Describe extent to which program needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective  | FULLY<br>RECOG-<br>NIZES<br>STRENGTHS<br>AND NEEDS<br>OF TARGET<br>COUNTRIES<br>TRAINING |

57

participation in governmental processes essential to self-government.

8. FY 1989 Appropriations Act Sec. 536. Are any of the funds to be used for the performance of abortions as a method of family planning or to motivate or coerce any person to practice abortions? NO
- Are any of the funds to be used to pay for the performance of involuntary sterilization as a method of family planning or to coerce or provide any financial incentive to any person to undergo sterilizations? NO
- Are any of the funds to be used to pay for any biomedical research which relates, in whole or in part, to methods of, or the performance of, abortions or involuntary sterilization as a means of family planning? NO
9. FY 1989 Appropriations Act. Is the assistance being made available to any organization or program which has been determined to support or participate in the management of a program of coercive abortion or involuntary sterilization? NO
- If assistance is from the population functional account, are any of the funds to be made available to voluntary family planning projects which do not offer, either directly or through referral to or information about access to, a broad range of family planning methods and services? N/A
10. FAA Sec. 601(E). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise? YES
11. FY 1989 Appropriations Act. What portion of the funds will be available only for activities of economically and socially disadvantaged enterprises, historically black universities, colleges and universities having a student body in which more than 40 percent of the students are Hispanic Americans, and private and voluntary organizations which are NO SET ASIDES BUT OPEN TO FULL COMPETITION. SUBCONTRACTING

controlled by individuals who are black Americans, Hispanic Americans, or who are economically or socially disadvantaged (including women?)

IS  
ENCOUR-  
AGED

12. FAA Sec. 118(c). Does the assistance comply with the environmental procedures set forth in A.I.D. Regulation 16? Does the assistance place a high priority on conservation and sustainable management of tropical forests? Specifically, does the assistance, to the fullest extent feasible: (a) stress the importance of conserving and sustainably managing forest resources; (b) support activities which offer employment and income alternatives to those who otherwise would cause destruction and loss of forests, and help countries identify and implement alternatives to colonizing forested areas; (c) support training programs, educational efforts, and the establishment or strengthening of institutions to improve forest management; (d) help end destructive slash-and-burn agriculture by supporting stable and productive farming practices; (e) help conserve forests which have not yet been degraded by helping to increase production on lands already cleared or degraded; (f) conserve forested watersheds and rehabilitate those which have been deforested; (g) support training, research, and other actions which lead to sustainable and more environmentally sound practices for timber harvesting, removal, and processing; (h) support research to expand knowledge of tropical forests and identify alternatives which will prevent forest destruction, loss, or degradation; (i) conserve biological diversity in forest areas by supporting efforts to identify, establish, and maintain a representative network of protected tropical forest ecosystems on a worldwide basis, by making the establishment of protected areas a condition of support for activities involving forest clearance or degradation, and by helping to identify tropical forest ecosystems and species in need of protection and establish and maintain appropriate protected areas; (j) seek to increase the awareness of U.S. government agencies and other donors of the immediate

N/A

54

and long-term value of tropical forests;  
and (k) utilize the resources and  
abilities of all relevant U.S. government  
agencies?

13. FAA Sec. 118(c) (13). If the assistance will support a program or project significantly affecting tropical forests (including projects involving the planting of exotic plant species), will the program or project (a) be based upon careful analysis of the alternatives available to achieve the best sustainable use of the land, and (b) take full account of the environmental impacts of the proposed activities on biological diversity? N/A
14. FAA Sec. 118(c) (14). Will assistance be used for (a) the procurement or use of logging equipment, unless an environmental assessment indicates that all timber harvesting operations involved will be conducted in an environmentally sound manner and that the proposed activity will produce positive economic benefits and sustainable forest management systems; or (b) actions which will significantly degrade national parks or similar protected areas which contain tropical forests, or introduce exotic plants or animals into such areas? NO
15. FAA Sec. 118 (c) (15). Will assistance be used for (a) activities which would result in the conversion of forest lands to the rearing of livestock; (b) the construction, upgrading, or maintenance of roads (including temporary haul roads for logging or other extractive industries) which pass through relatively undegraded forest lands; (c) the colonization of forest lands; or (d) the construction of dams or other water control structures which flood relatively undegraded forest lands, unless with respect to each such activity an environmental assessment indicates that the activity will contribute significantly and directly to improving the livelihood of the rural poor and will be conducted in an environmentally sound manner which supports sustainable development? NO
16. FY 1989 Appropriations Act. If assistance

will come from the Sub-Saharan Africa DA account, is it (a) to be used to help the poor majority in Sub-Saharan Africa through a process of long-term development and economic growth that is equitable, participatory, environmentally sustainable, and self-reliant; (b) being provided in accordance with the policies contained in section 102 of the FAA; (c) being provided, when consistent with the objectives of such assistance, through African, United States and other PVOs that have demonstrated effectiveness in the promotion of local grassroots activities on behalf of long-term development, in Sub-Saharan Africa; (d) being used to help overcome shorter-term constraints to long-term development, to promote reform of sectoral economic policies, to support the critical sector priorities of agricultural production and natural resources, health, voluntary family planning services, education, and income-generating opportunities, to bring about appropriate sectoral restructuring of the Sub-Saharan African economies, to support reform in public administration and finances and to establish a favorable environment for individual enterprise and self-sustaining development, and to take into account, in assisted policy reforms, the need to protect vulnerable groups; (e) being used to increase agricultural production in ways that protect and restore the natural resource base in ways that increase agricultural production, to improve health conditions with special emphasis on meeting the health needs of mothers and children, including the establishment of self-sustaining primary health care systems that give priority to preventive care, to provide increased access to voluntary family planning services, to improve basic literacy and mathematics especially to those outside the formal educational system and to improve primary education, and to develop income-generating opportunities for the unemployed and underemployed in urban and rural areas?

- (a) YES
- (b) YES
- (c) N/A
- (d) YES
- (e) YES

17. FY 1990 Appropriations Act Sec. 515. If deob/reob authority is sought to be exercised in the provision of DA YES

*J*

assistance, are the funds being obligated for the same general purpose, and for countries within the same general region as originally obligated, and have the Appropriations Committees of both Houses of Congress been properly notified?

**C. APPLICABLE STANDARD ITEM CHECKLIST**

1. FAA Sec. 602(a). Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed? YES
2. FAA Sec. 604(a). Will all procurement be from the U.S. except as otherwise determined by the President or determined under delegation from him? YES
3. FAA Sec. 621(a). If technical assistance is financed, will such assistance be furnished by private enterprise on a contract basis to the fullest extent practicable? Will the facilities and resources of other Federal Agencies be utilized, when they are particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs? YES
4. International Air Transportation Fair Competitive Practices Act, 1974. If air transportation of person or property is financed on grant basis, will U.S. carriers be used to the extent such service is available? YES
5. FY 1990 Appropriations Act Sec. 524. If assistance is for consulting service through procurement contract pursuant to 5 U.S.C 3109, are contract expenditures a matter of public record and available for public inspection (unless otherwise provided by law or Executive order?) YES

51

**SUMMARY OF CASE STUDIES**

Six case studies were conducted by the Centers for Disease Control under the CSAP-Support Project (936-5951) to 1) review the availability of data, 2) determine the factors that enhance or limit the use of data in decision making and 3) identify the most effective ways to promote the use of data by decision makers. The case studies, undertaken from an epidemiological perspective, are summarized as follows:

1. **United Nations Relief and Works Agency (UNRWA):** This study examined the use of an existing data collection system to identify health and program performance programs for the management of MCH services, including nutrition, pregnancy care and immunizations, for the UNRWA population of the West Bank.

The case study found that an enormous amount of data was available for decision makers. The data flowed from many sources, including family clinic records, MCH records, emergency service records and medical, dental and staffing records. However, little of this data was used for health services management decisions at the field or central office level.

Two major factors seemed to facilitate the use of data in decision making. First, decision makers were more likely to use data if the data were "thorough and complete for the most part." Second, decision makers were more likely to use data if they had a positive attitude about using data in making of decisions.

Three major factors seemed to constrain the use of data. These factors included lack of validation of data within the system; a primarily upward flow of data; and lack of computers and epidemiological expertise to analyze the data and present the results to the decision makers.

The study was unclear as to who establishes data needs and health priorities and how. This is very important, as information needs and health priorities are country-specific. In the case of the West Bank, data information systems were not responsive to war-related health concerns (abortion and stillbirth related to exposure to tear gas) and emerging health concerns such as care of the elderly, injuries and disabilities.

2. A case study in Niger looked at the use of data produced by a management information system (process indicators) and a public health surveillance system (morbidity, mortality and other epidemiologic indicators). Public health decision making in Niger was found to occur within a centralized hierarchy, with major decisions made by the Ministry of Health. The MOH directorates are charged with the analysis

and interpretation of data and public health planning. The directorates are responsible for areas such as health training and education and curative care and serve as an advisory board to the MOH.

The study found that the traditional system of public health information served as a public health archive and as an epidemic alert. Data were not systematically requested or used for decision making within or beyond the Ministry. Thus, there was no use of surveillance information for national or regional planning, implementation and evaluation of public health programs. Further, there was a lack of personnel trained in the analysis, interpretation and use of public health surveillance information.

With the assistance of donors, the Ministry of Health instituted a new public health system. This system seeks to assess the information needs of the MOH directorates and the public health system. Clear identification of data needs will help simplify the amount and type of data collected; data analysis results will be disseminated throughout the public health system.

3. Togo: The study in Togo investigated the use of data from several sources by decision makers in the malaria control program.

Malaria is of great public health concern in Togo. It is the leading cause of mortality and morbidity among children under five years of age. A relatively large amount of malaria-related data has been collected by the health information system in Togo, largely due to the collaboration between the Ministry of Health and the CCCD Program.

A major finding of the case study was that data can stimulate decisions even though the decisions themselves may not be based directly on the data. This was illustrated by a change in the chloroquine treatment policy in Togo. The actual decision seemed to be based more on WHO recommendations and donor consultation than on the findings of the studies.

A second major finding concerned the need for further research in informal delivery (e.g., sale of chloroquine in markets) and home delivery of health services. There was also a clear need for data to answer program evaluation and policy questions relating to activities such as routine reporting of slide-confirmed cases of malaria, the clinical efficacy of chloroquine in malaria treatment and the monitoring the treatment practices of health care workers.

91

4. **Dominican Republic:** The case study in the Dominican Republic examined the use of data by decision making in the EPI program and by staff involved in the health budget in the MOH.

- a. **The EPI Program:** Decision making for the EPI program was found to be centralized, though immunization goals generally followed WHO guidelines. Information flowed from the local to the central level. There was virtually no validation of data. Data were presented in tabular and graphic form at the national level and used in annual reports for the MOH. Dissemination of data was upward; national data were not available to local and regional centers.

The case study also demonstrated the importance of routine surveillance. An informal study showed that regular vaccine coverage diminished in the Dominican Republic. This reduction is thought to be due to the false notion among health care workers that the national campaigns are adequate to meet immunization policy objectives. Routine surveillance has identified measles as a continuing problem.

- b. **Health Care Budget:** This case study illustrated the importance of involving decision makers in the identification of data needs and making them aware of the usefulness of data in decision making. The key decision maker for the health care budget is the president of the country. Efforts by the MOH and USAID to change the health care budget from a line-item budget to a program budget were unsuccessful. The president showed little interest or confidence in a program budget. As a result, extensive data generated by hospitals to serve as a basis for a program budget were not used.

5. **Bolivia:** This case study investigated the use of data by decision makers in the EPI program.

In Bolivia, data is collected according to national guidelines at all levels of the public health system. However, data collection is not systematized and the quality of the data is poor. In addition, computer support is limited and there is a lack of staff trained in epidemiology and statistics. Thus, little of the data is translated into usable information.

One of the major findings of the case study was that surveillance systems should be integrated and expanded to include a wide range of health disorders. Further, surveillance systems should address the key health concerns and be country-specific. In Bolivia, there is an excellent surveillance system for poliomyelitis. However, disease surveillance for diseases of similar or greater public health importance--such as tuberculosis and Chagas disease--was found

to be less intensive and less well organized. Of note, these are often the diseases in which international and donor organizations express less interest. In addition, there was almost no information available on chronic diseases, disabilities and injuries.

Another major finding of the case study was that methodologies focusing on the analysis of data and the decision making process need to be further tested and refined. The investigators report that "the process for making decisions appears to be highly appropriate in the organizations examined." However, there is little insight into the complexity of the decision making process.

6. Zaire: The case study in Zaire compared and contrasted the use of data by decision makers in the EPI and malaria control programs.

In addition to their medical training, the decision makers in both programs were trained in public health. According to the investigators, the decision makers seemed to have a positive attitude towards the needs and uses of data and were able to clearly articulate their information needs.

Program guidance from WHO and financial and consultative support by donor agencies was an important factor in determining the priority level of a disease or program. For example, the measles immunization program was significantly stronger than the malaria program because of the emphasis placed on measles by donor organizations and international agencies.

For both programs, operational research projects had been carried out to support policy development. Data collection was more difficult for malaria. There was a lack of clear criteria for case-definition for malaria and surveillance of non-slide confirmed fever cases as an indicator of malaria.

## ANNEX D

### NOTES AND ASSUMPTIONS FOR PROJECT COST ESTIMATES

Projects costs are based upon the assumption that major programs will be undertaken in three focus countries and that the major programs will include the health information and assessment and decision making implementation plan activities as described in A. and B. below. It is further assumed that scaled down activities will be undertaken in twelve additional countries. Activities in those twelve countries have been budgeted at 50% of the major program levels. Additional assumptions are also made for the foreign exchange and local currency components of each projects element as well as for the amounts to be paid out of central project funds and USAID buy-ins.

Host-country (HC) participation has been estimated at 25% of all A.I.D.-funded costs rather than total costs. This would accommodate waivers which might be requested for some countries as well as some elements where very limited HC cost sharing will be requested. Host-country costs include salaries of participants, office space, some local transportation and miscellaneous expenses.

#### A. Health Information Inventory and Assessment 1. Preliminary Review and Country Selection

(Assume 3 trips of 2 people and 5 countries each)

Salaries - 2 expats. @ \$300/day x 24 days	\$14,400
International Travel - \$5,000 x 2	10,000
Per Diem - 2 @ \$125/d x 28 days	7,000
Miscellaneous	<u>600</u>
Subtotal per Preliminary Trip	\$32,000
TOTAL FOR 3 TRIPS	\$96,000

#### 2. Detailed Country Assessments

(Assume 3 U.S. advisors and 2 host country reps. for 4 weeks)

Salaries - a) 3 expats. @ \$300/day x 24 days	\$21,600
b) 2 locals @ \$100/day x 24 days	4,800
International Travel - \$3,000 x 3	9,000
Per Diem - 3 @ \$125/d x 28 days	10,500
2 @ \$125/d x 15 days	3,750
In-Country Travel - 5 x 500	<u>\$2,500</u>

TOTAL ASSESSMENT PER MAJOR PROGRAM (X3)	\$52,150
NORMAL PROGRAMS (X12)	\$26,000
TOTAL FOR COUNTRY ASSESSMENTS	\$468,450

<Expenses budgeted as technical assistance, all as foreign exchange and all as centrally funded.>

**B. Decision Making Implementation Plan**

1. Plan Development - 2 expats @ \$300/d x 10 days  
 + 2 locals @ 100/d x 10 days  
 + communications & report preparation  
 of \$2,000. (Done as follow-up to assessment). \$8,000

<Expenses budgeted as technical assistance, 75% foreign exchange and equally split between central funds and Assets.>

2. Training

2.a. Workshops - (4 wkshps x 2 weeks x 15 people)

Salaries - a) 2 expats @ \$300/day x 12 days	\$7,200
b) 2 locals @ \$100/day x 12 days	2,400
International Travel - \$3,000 x 2	6,000
Per Diem - 2 @ \$125/d x 15 days	3,750
Participants travel, support, material \$75/day x 15 people x 12 days	13,500
Miscellaneous	2,150
Subtotal per workshop	<u>\$35,000</u>

Orientation & End of Activity Workshops (3 days for 30 high-level officials - assume 50% of cost of above sessions)	35,000
---	--------

Total Workshops per Country	\$175,000
-----------------------------	-----------

2.b. <u>Short-Term Training</u> (5 people to U.S. for 3 months each @ \$5,000/month)	75,000
---	--------

TOTAL TRAINING PER COUNTRY	\$250,000
----------------------------	-----------

<Expenses budgeted as training, 75% foreign exchange and equally split between central funds and Assets.>

3. <u>DM Communications</u> (Newsletter @ \$2,000/issue x 4 yrs.)	\$16,000
--	----------

<Expenses budgeted as miscellaneous, 50% foreign exchange and equally split between central funds and Assets.>

4. Technical Assistance Requirements  
 (Separate and distinct from TA needs of  
 above assessments and workshops.)  
 Assume 8 one-person visits x 4 weeks each over

24-30 months.	
Salaries - @ \$300/day x 24 days	\$7,200
International Travel	3,000
Per Diem - @ \$125/d x 28 days	3,500
In-Country Travel	500
Miscellaneous	<u>800</u>
Subtotal Per TA Visit	\$15,000
 TOTAL TA PER COUNTRY	 \$120,000

<Expenses budgeted as technical assistance, 90% foreign exchange and equally split between central funds and Assets.>

5. Country-Level Monitoring and Evaluation \$20,000  
 Plan preparation included in B.1. above and periodic monitoring included in host-country institutional management, TA per 4. above and regular supervision visits. Amount is suggested lump sum for additional expenses for such things as interviewers, reporting expenses and logistics.

<Expenses budgeted as monitoring and evaluation, 50% foreign exchange and equally split between central funds and Assets.>

6. Miscellaneous - (incl. hardware/software, furniture, office equipment, facilities, mail, electronic communications, supplies, etc.) \$50,000

<Expenses budgeted as technical miscellaneous, 75% foreign exchange and equally split between central funds and Assets.>

TOTAL PER MAJOR IMPLEMENTATION PLAN (X3)	\$464,000
TOTAL PER NORMAL PROGRAM (X12)	232,000
TOTAL PER IMPLEMENTATION PLANS	\$4,176,000

- C. Research Grants Program \$500,000  
 (10 grants @ \$50,000)  
 <Expenses budgeted as research grants, 75% foreign exchange and all centrally funded.>

D. PASA Management and Overhead

1. Direct Costs
- |   |           |
|---|-----------|
| Project Director - 5 years @ 60,000/y                     | \$300,000 |
| Project Assistant - 5 years @ \$30,000/y                  | 150,000   |
| Computer Specialist - 5 yrs @ \$30,000/y                  | 150,000   |
| Review/Supervision trips - 2/year x 5 yrs @ \$10,000/trip | 100,000   |
| Miscellaneous - (incl. hardware/software,                 | 50,000    |

V

furniture, office equipment, facilities,  
mail, electronic communications,  
supplies, etc.)

Subtotal Management 750,000

2. Overhead

(20% of one-half of A. through D. \$589,445  
- <\$5,895,450>)

TOTAL PASA MANAGEMENT AND OVERHEAD \$1,339,445

<Expenses budgeted as technical miscellaneous, 90%  
foreign exchange and equally split between central  
funds and Assets.>

E. CA Management and Overhead

1. Direct Costs (same as above) \$750,000

2. Overhead

(40% of one-half of A. through D. \$1,178,890

TOTAL CA MANAGEMENT AND OVERHEAD \$1,928,890

<Expenses budgeted as technical miscellaneous, 90%  
foreign exchange and equally split between central  
funds and Assets.>

F. Trends and Issues

1. Meetings and Workshops -  
(5 wkshps x 3 days x 15 people)  
N.B. no salaries required.

Travel \$10,000

Domestic - \$500 x 8 = \$4,000

International - \$3,000 x 2 = 6,000

Per Diem - 10 @ \$125/d x 4 days 5,000

Miscellaneous (materials, communications, etc.) 2,000  
Subtotal per workshop \$17,000

TOTAL MEETINGS/WORKSHOPS \$85,000

<Expenses budgeted as technical assistance, 75%  
foreign exchange and all centrally funded.>

2. International Conferences

(5x 3 days x 50 people)

N.B. no salaries required.

Travel	\$85,000
Domestic - \$500 x 20 = \$10,000	
International - \$3,000 x 25 = 75,000	
Per Diem - 50 @ \$125/d x 4 days	12,500
Miscellaneous (materials, communications)	<u>12,500</u>
Subtotal per conference	\$110,000
<b>TOTAL INTERNATIONAL CONFERENCES</b>	<b>\$220,000</b>

<Expenses budgeted as technical assistance, 75% foreign exchange and all centrally funded.>

3. Publications & Dissemination - (4 x \$20,000) \$80,000

<Expenses budgeted as miscellaneous, all foreign exchange and all centrally funded.>

4. Trends/Issues Management & Overhead

a. Direct Costs

Project Director - 1/2 time x 5 years	\$150,000
@ \$60,000/y	
Project Assistant - 1/2 time x 5 years	\$75,000
@ \$30,000/y	
Other Staff Support @ \$10,000/y x 5 yrs	\$50,000
Miscellaneous - (incl. hardware/software, furniture, office equipment, facilities, mail, electronic communications, supplies, etc.)	\$25,000
Subtotal Management	\$300,000

b. Overhead (20% of E.1. - 4. (\$685,000)) \$137,000

**TOTAL TRENDS AND ISSUES** \$822,000

<Expenses budgeted as technical assistance, 90% foreign exchange and all centrally funded.>

G. Collaborative Activity - INCLLEN

1. Meetings and Workshops

Attendance at INCLLEN meetings	\$260,000
Annual in-country India CLEN meeting	60,000

<Expenses budgeted as research services, 81.5% foreign exchange and all centrally funded.>

2. Training

Long-Term Fellowships	\$620,000
Short-Term Fellowships	80,000
India-CLEN courses	100,000

164

<Expenses budgeted as training, 87.5% foreign exchange and all centrally funded.>

3. Research Services  
CERTC Faculty/Selection Visits \$40,000  
Fellow Follow-Up Visits 70,000

<Expenses budgeted as research services, 50% foreign exchange and all centrally funded.>

4. Research Grants  
CEU support grants \$250,000  
Fellow support grants 120,000

<Expenses budgeted as research grants, 33% foreign exchange and centrally funded.>

5. India-CLEN Management  
Governing Board Activities \$100,000  
INCLN offices for India 100,000

<Expenses budgeted as miscellaneous, 10% foreign exchange and all centrally funded.>

6. Evaluating and Auditing \$50,000

<Expenses budgeted as Evaluating and Auditing, 90% foreign exchange and all centrally funded.>

7. Contingency/Overhead \$200,000  
<Expenses budgeted as Contingency, 75% foreign exchange and all centrally funded.>

H. Project-Level Monitoring and Evaluation  
4 people x \$300/day x 30 days \$36,000  
International Travel - 4 countries  
4 people @ \$4,000 16,000  
Per Diem - 4 people x \$125/day x 40 days 20,000  
Report Preparation, Communications + Misc. 6,000  
Subtotal \$84,000  
  
Overhead @ 40% \$33,600  
  
TOTAL PER MAJOR EVALUATION (X2) \$117,600  
INCREMENT FOR FINAL EVALUATION (30%) 35,280  
TOTAL FOR EVALUATIONS \$270,480

## RELATED EXPERIENCES

Several recent initiatives by the World Health Organization (WHO) and the International Research Development Centre (IDRC) offer experience and tools of use to this new project.

DECISION-MAKING"Improving Health Care Through Decision-Linked Research"

This recent initiative of WHO/Geneva (Programme on Health Systems Research and Development) has produced several deductions that may be useful to the DDM project. This initiative and its approach are described in Annex I (WHO: "Improving Health Care Through Decision-Linked Research").

Also potentially useful for DDM project development are other sections of this WHO/IDRC document -- Part II: "Options for Implementation"; Part III: "Preparing for Change"; and Part IV: "Initiatives to Introduce Change."

Research as a Management Tool: "Strategies for Orienting Decision-Makers to Health Systems Research". A Technical Working Group has been organized by WHO/Geneva, IDRC, PAHO, and A.I.D. to develop and test a package of training materials in health systems or applied research. These aim at four target groups: 1) health workers and mid-level health managers, 2) researchers, 3) decision-makers, and 4) facilitators, trainers and research managers.

Almost completed is a document currently titled "Strategies for Orienting Decision-Makers to Health Systems Research." This is based on an analysis of recent experiences in several countries in promoting the use of health systems research (HSR) as a management tool. The first chapter provides examples of better decisions resulting from the use of research data, reviews the decision-making process, describes the phases in the institutionalization of decision-linked research, and briefly reviews strategies for promoting decision-linked research among top-level policy-makers and senior-level technical managers. The second and third chapters describe in more detail the strategies for promoting decision-linked research among these two groups. The strategies presented for senior-level technical managers include:

- o Inter-country workshops on health systems research,
- o Health systems research projects with intensive decision-maker involvement,
- o Sessions on HSR in more broadly-focused workshops,

- o National consultative meetings on health systems research,
- o Task forces on health research,
- o Orientation sessions for decision-makers preceding HSR proposal development workshops,
- o HSR focus points, health research units, and advisory committees,
- o Case study workshops on health systems research,
- o Health manager/donor representative working sessions and,
- o National and international networks.

Some of these strategies include useful "tools" that might be further developed or adapted within the DDM Project.

Health Systems Research in Action. This is a useful book produced by WHO's Programme on Health Systems Research and Development (publication WHO/SHDS/HSR/88.1) It provides interesting case studies of the strategies used in several countries to strengthen the use of health systems research as a decision-making tool. Two of the more interesting case studies (from Botswana and Malaysia) are available for ST/H/AR.

#### DEVELOPMENT OF TOOLS AND TRAINING ACTIVITIES

Several of the strategies featured in the document "Strategies for Orienting Decision-Makers to Health Systems Research," described above, could be adapted or further developed as one or more of the tools, methodologies, of decision-maker training activities of the DDM Project. Some of the strategies found helpful in promoting the use of data for decision-making are the following:

Case-study workshops for decision-makers. The Eastern Mediterranean Regional Office (EMRO) of WHO has sponsored several activities promoting the use of health care systems research by decision-makers to improve health care management. One initiative has focused on development and field-testing of case-study workshops for decision-makers. The workshops, usually about a week in length, give decision-makers a chance to work through 2 or 3 cases that illustrate the importance of using data and research for attaining health care goals and provide practice in the skills needed if data are to be appropriately used for decision-making. Twenty case studies, based on real-life health problems in the EMRO countries, have been produced. The approach and the case studies themselves are presented in a report, Health Systems Research Case Studies.

Each case consists of a brief presentation of background information concerning the country, its population and health situation, a description of the problem to be addressed by the decision-maker, and a series of questions, some of which are

posed after additional information is provided. For example, some cases ask the participants to consider whether plans to solve the problem described should be made immediately or whether additional information is needed. After deciding that additional information is needed, the participants may be asked to decide whether it is all available from existing sources and, if not, what additional information must be gathered and what research plan should be designed. Some cases ask participants to react to data gathering or research designs proposed by other local professionals or outside research groups that may not be appropriate. Other cases address issues related to how decision-makers should use the research results to make appropriate changes. Notes provided for the trainers review the salient points that should be brought out in the discussion of each question posed in the cases. These notes assist the trainer in guiding the small groups to consider all essential issues in their discussions.

This case-study workshop strategy might be adapted as a methodology under the DDM Project.

Inter-country or national workshops on data use for decision-making. WHO and certain national governments and donor projects working with WHO have gained valuable experience in the past 3 or 4 years in holding workshops or "consultative meetings" for top-level decision-makers focused on strengthening the use of research as a management tool. EMRO began early on to develop strategies for orienting decision-makers. The SHDS Project held several of these workshops. The Public Health Institute in Malaysia has developed a strong country-wide HSR program which has included a major emphasis on the decision-maker level. The Hout WHO/Royal Tropical Institute/Dutch Technical Cooperation Project on HSR for the Southern African Region has held a number of successful workshops for decision-makers. These workshops are reviewed in detail in the document "Strategies for Orienting Decision-Makers to Health Systems Research" prepared for WHO/IDRC (see above).

The sequence of the agenda in these workshops is particularly important. The agendas of some of the more successful workshops provide a brief overview and then use case studies to provide concrete examples of the effective use of data and health systems research as a management tool. Then they guide the participants through a process of identifying information needs, reviewing current HSR activities and coordination mechanisms and becoming aware of their deficiencies, and finally developing plans for more appropriate HSR and data management structures.

The content for these workshops would, of course, be somewhat different in the DDM project, but what has been learned concerning effective strategies for this type of workshop for top-level policy-makers and technical managers, would certainly be useful in getting DDM off to a successful start. The manner in which the workshops have been planned as part of a much larger

development process is also instructive. Reports and agendas from these workshops are available.

"Learning by doing": Research projects with intensive decision-maker involvement. Analysis of several successful country efforts to promote the use of data as a management tool has shown that often an important step is providing decision-makers with experience in projects that provide results of real use to managers. Decision-Makers can be asked to identify priority issues or problems and then participate in the design and implementation of studies or data gathering efforts to resolve them. A major emphasis can be placed on utilization of the results, with workshops or other forums organized in which policy-makers and senior managers work with the researchers to plan policy and program changes based on the results. "Learning by doing" has been a powerful tool for convincing decision-makers of the general utility of "data for decision-making."

TOOLS AND METHODS FOR DECISION-MAKING

1. Analytic Techniques

A. Scientific/Epidemiological

**HEALTHY DAYS  
OF LIFE LOST**

Starting from a base of estimated life expectancy, diseases are ranked by estimating the number of healthy days of life lost over a lifetime period as a result of acute illness, partial disability and/or death (complete disability). Certain values are implicit within this method which aggregates mortality and morbidity. For instance, it equates one healthy day of a dependent child with one healthy day of a productive adult, making the death of a newborn the greatest possible loss. It also equates the costs of caring for a disabled person for one year with the costs of one year of premature death.

**POTENTIAL YEARS  
OF LIFE LOST**

Mortality-oriented, this method also starts from the base of life-expectancy and ranks diseases according to the numbers of deaths caused and at what ages. The method tends to underestimate diseases which may be painful, chronic or disabling but are seldom the underlying causes of death.

**RISK ANALYSIS**

This is an ongoing approach of: a) identifying priority health problems and associated risk factor; b) assessing performance in the health care delivery system; c) planning strategies for modifying risk factors and decreasing health problems; and d) evaluating the strategy's effectiveness and application. For decision-makers to use this approach to guide health care and policy, information is needed on mortality rates, risk factors for mortality and indicators on performance in the care delivery system.

**SELECTIVE  
PRIMARY HEALTH  
CARE**

This method starts from the premise that, in most developing countries, comprehensive care cannot be made available to all and that attention to certain priority diseases is the most effective means of improving the health of the greatest number of people. It uses

four major factors to rank (select) those priorities: prevalence, morbidity, mortality and the feasibility of control (including efficacy and cost).

Though couched under a variety of labels, selective primary health care and its associated methodology has, for a decade, been the basic approach preached by bilateral and multilateral donors in the health sector, including A.I.D. Most developing country programs considered effective today also follow a similar approach. Nevertheless, its emphasis on cost-effectiveness implies several values including relating the availability of effective controls to the actual costs and benefits of disease; minimizing the costs to individual suffering from non-priority diseases; and negating the value of treating a non-priority disease and, thereby, attracting people for treatment of priority diseases.

## B. Business/Economics

### DECISION ANALYSIS

This decision tree tool is intended for use under conditions of uncertainty and/or subjectivity. It requires the decision-maker to understand and stipulate the alternatives to be considered, dissect and arrange the components of the decision logically and temporally, quantify the possible consequences of each potential outcome as well as the probability of individual action components actually taking place.

A decade of decision analysis use (particularly by for-profit corporations) has demonstrated that: when correctly applied, it can be very useful as a decision-making tool; the discipline required to understand the problem is valuable whether the analysis is completed or not; because most decisions are very complex, the decision analysis for them can be quite complicated; it can require substantial training, practice and time to use effectively; sensitivity to the methodology has been acquired slowly; its use is very sensitive to the accuracy and assumptions of the subjective inputs.

## **ECONOMIC ANALYSES**

Tools such as cost/benefit analysis, cost effectiveness and returns on investment are fairly well understood concepts which compare anticipated benefits and returns with expected costs and risks. They have been proven effective in many situations, but are heavily biased by the assumptions (frequently subjective) built into the methodology. Within the health sector this tool is handicapped by the fact that many variables important to making decisions (social, legal, political, etc.) are not easily or appropriately reduced to an economic analysis.

## **2. Dissemination and Consensus-Building Techniques**

### **ADVISORY BOARDS AND COUNCILS**

By involving decision-makers in such organizations, they not only become more aware of research and data needs, uses and ongoing activities but also have an opportunity to convey their own needs and preferences.

### **COMMUNICATION METHODS**

Techniques as simple as memoranda, newsletters and epidemiological bulletins can be very effective ways to inform decision-makers. More structured tools such as "RAPID"-like graphics presentations can also be effective. Given the ability of the media to influence decisions, orientation and presentation of data to the media might be a supplementary tool to employ.

### **CONFERENCES AND WORKSHOPS**

DDM related presentations by researchers analysts can either be the focus of the meeting or appended to the agenda of a related meeting. Such meetings also offer the decision-makers themselves an opportunity to make presentations, thereby increasing the incentive to understand the data involved.

### **DEMOCRATIC DECISION-MAKING OR CHOICES BY CONSENSUS**

In some cultures and countries, this may help encourage a free exchange of data and perspectives and shield decision-makers from choices they would be unwilling to make on their own.

**EVALUATION  
TECHNIQUES**

A variety of low cost and rapid evaluation techniques can provide decision-makers with order-of-magnitude data about specific health situations. These include small area surveys, surveillance methods, screening and individual risk assessments, community indicators of risk and special studies.

Given the reliability of statistics available in many developing countries and the external factors also involved, for practical purposes, "order-of-magnitude"-level information is frequently as useful as more expensive and time consuming analyses.

**INFORMAL METHODS**

Some researchers have found that the most effective linkage between health professionals and decision-makers is via informal conversations or in small groups around a table where they can lay out charts and tables, discuss their significance and assess the consequences of various alternative actions.

COLLABORATIVE ACTIVITIES

1. NAS

National Academy of Sciences  
National Research Council  
Commission on Behavioral and Social Sciences and Education  
Committee of Population

I. BACKGROUND

As populations in the developing world proceed through the demographic and epidemiological transitions, the challenge of tracking and predicting changes in health is enormous. The U.S. Agency for International Development, as a major donor of international assistance in the area of health, has a particular interest in influencing and anticipating these changes. A critical component of policy formulation and evaluation is appropriate data for decision-making. Unfortunately, complete data of good quality on mortality, morbidity, and disability are not available in many developing countries.

The Committee on Population has a long history of evaluating and working with incomplete data and applying demographic techniques of indirect estimation to extract from the available data reasonably good estimates of levels and trends in demographic processes, including mortality. Furthermore, the Committee has considerable experience in assessing ways in which economic, social, and policy changes interact with demographic processes. For example, in 1986 it published its landmark study, Population Growth and Economic Development, which investigated the effect of family planning and fertility decline on economic growth, and in 1989, Contraception and Reproduction: Health Consequences for Women and Children, which examined the health consequences of changing patterns of fertility and use of contraceptives in developing countries.

II. PROPOSAL

Accordingly, the Committee on Population proposes a series of activities over a five-year period that will help inform the policy development process of the Office of Health of the U.S. Agency for International Development, as well as policymakers in developing countries. Given the goal of addressing the most important health issues as they emerge, the complete program of activities cannot be set at the beginning of the five-year period. However, the following list should serve as an illustration of the type and quantity of activities that will be undertaken:

. Two planning meetings of a subcommittee or working group of the Committee on Population, one at the beginning of the five-year period and one in the third year. At these meetings, which will also be attended by representatives of the sponsor, the final topics, formats, and participant lists for subsequent workshops and expert meetings will be discussed in detail.

. Five expert meetings to address topics, such as new findings and new developments in the measurement of mortality levels, patterns, and trends in developing countries, and population aging and health care financing. Expert meetings bring together policy makers and researchers to discuss in a relatively informal manner the selected topics. Participants are usually asked to prepare a short (five-Page) memo that summarizes their views on particular aspects of the topic, e.g., availability of data, approaches to analysis, important findings, and implications for policy.

Three workshops for policymakers and researchers to more formally address selected topics, such as the economic consequences of health improvements, policy and planning implications of the epidemiological transition in developing countries (joint with the Institute of Medicine's Board of International Health), and the measurement and projection of disability in developing countries. Appropriate background papers will be solicited and, when necessary, commissioned. Depending on the quality of the papers, a volume of selected papers will be published after the workshop and distributed to policymakers and researchers in the United States and in the developing world.

. Two meetings of the Working Group on the Demographic Impact of Child Survival Programs of the Panel on the Population Dynamics of Sub-Saharan Africa (one in Washington and one tentatively planned in Accra; both partially funded under this cooperative agreement).

### III. COORDINATION

To facilitate communication, representatives of the Office of Health and, as appropriate, its cooperating agencies, such as the Centers for Disease Control, will be invited to attend all meetings and workshops. The Committee on Population's subcommittee or working group responsible for leading these activities may occasionally choose to hold a closed executive session.

The above activities will be carried out over a five-year period at an estimated cost of \$1,000,000.

41

## 2. INCLLEN

### International Clinical Epidemiology Network

An affiliation of clinical faculty members, biostatisticians, epidemiologists, health economists and social scientists committed to improving health status and the effectiveness and efficiency of health services

#### I. OBJECTIVES AND GOALS

INCLLEN is founded in the belief that clinical epidemiology is a basic science for medicine, as important as physiology, biochemistry, and immunology. Epidemiological research can be used to estimate the burden of illness experienced in a community, identify etiological factors including environmental, behavioral, and occupational hazards and permits the development of appropriate preventive, diagnostic, and therapeutic responses. Without information about the health priorities for underserved populations and the relative efficacy of interventions, it is unlikely that research efforts, policies, or resources will be directed effectively to meet health needs, under conditions of economic constraint.

#### II. THE PROGRAM

INCLLEN introduces epidemiology into the mainstream of clinical medicine by training and supporting promising young clinical faculty members from medical schools in developing countries. It does this by organizing and supporting five CERTCs including a special executive management course at the University of Toronto. Training is designed to create a clinical epidemiology unit staffed by at least six clinical epidemiologists, a biostatistician, and a health economist. A new program will add social scientists to CEUs. Normally, as a support system for CEUs, organizing annual scientific meeting, providing consultants for site visits, enhancing communication, and creating an environment in which high-quality research can be done. Finally, INCLLEN provides an avenue for support from other agencies.

It is planned that within three years of the formation of a unit (two or more members), CEUs will have: adequate space where clinical epidemiologists can work together; a supportive management structure; various members who are doing research into the effectiveness of high resource-using clinical activities; research into health problems of high regional priority; substantial undergraduate and graduate education in clinical epidemiology; and programs for upgrading research methodology, clinical economics, and clinical decision-making by fellow faculty members and members of the academic medical community at large.

18

Through the processes described, CEUs should perform research which has a measurable impact on health or health care policy, and should educate physicians who demonstrate insight into epidemiological methodologies and have an enhanced understanding of health problems from a population perspective. All such progress should be documented by publication of research reports in referenced journals.

### III. THE FUTURE

The current INCLEN program which has been designated phase I will be completed when a full cohort of clinical epidemiologists, social scientists, biostatisticians and health economists have been trained in the 27 CEUs. The second phase of the program will be the transition of selected CEUs into training centers. It is expected that these new training center will help establish addition CEUs in developing country medical schools. We also envision closer linkages between INCLEN and the other international training programs such as the Centers for Disease Control's Field Epidemiology Training Program (FETP), the International Health and Policy Program (IHPP) as well as the continuation of the work of the International Commission for Research in Development (ICRD).

### IV. INCLEN GOVERNANCE

INCLEN was incorporated as an independent entity in 1988. The Board of Directors is composed of representatives from the CERTCs and selected CEUs and currently led by Dr. Scott B Halstead of the Rockefeller Foundation who is the President of INCLEN. Advising the Board of Directors is the INCLEN Council which consists of the sponsors or directors of the CEUs, Directors of the CERTCs, and representatives of funding agencies. This Council meets at the Annual conference. An Advisory Committee consisting of the directors of the CERTCs and representatives of the Rockefeller Foundation meets twice a year.

### V. STRUCTURE OF INCLEN

The five principal training centers (CERTCs) used by INCLEN are: McMaster University, Canada; University of Newcastle, Australia; University of Pennsylvania, USA; University of Toronto, Canada; and University of North Carolina, USA.

Twenty-seven institutions have established Clinical Epidemiology Units (CEUs) and have two or more fellows returned from training at a CERTC. These institutions are located in Asia, Africa and Latin America.

INCLEN executive office has been established at the University of Pennsylvania in Philadelphia, Pennsylvania.

# The Rockefeller Foundation

March 8, 1991

Dr. Pamela R. Johnson  
Chief, Applied Research Division  
Office of Health, S&T Bureau  
U.S.A.I.D.  
Washington, D.C. 20523

Dear Pamela:

Many thanks for setting up the meetings for U.S.A.I.D. and Rockefeller staff to review our respective projects in health policy research and decision-making. It is quite clear that the Rockefeller funded programs of the International Clinical Epidemiology Network (INCLIN) and the National Epidemiology Boards have mutual and quite complementary objectives as the proposed new U.S.A.I.D. program on Data for Decision Making.

As we discussed, for the past decade, the Rockefeller Foundation has supported the INCLIN program which has established units at 27 medical schools in 16 developing countries. The goal in each case has been to form a critical mass of epidemiologists with special training in economics, social science and biostatistics, who are able to use these skills to seek out information about the health priorities for underserved populations and the relative efficacy of interventions. With 27 units now firmly in place in Asia, Latin America, India and Africa, this network is now in a position to promote population-based national health research and provide leadership to public and private decision-makers to better manage health resources and better reach underserved populations. The Rockefeller Foundation support for the National Epidemiology Boards and the Commission on Essential Health Research are two examples of activities which have drawn heavily on INCLIN trained staff to begin to focus health priorities in developing countries.

The Rockefeller Foundation has made a long-term commitment to the INCLIN system and Enhancing National Capability for Population-Based Health Care is one of the three Program Guidelines for our Health Sciences Division. I hope we can find mechanisms to coordinate our mutual interests in these areas, and thereby reinforce and augment the population-based health policy programs we are each supporting.

Again, thank you for organizing the meetings, and I look forward to a continued relationship in this area.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott", written over a horizontal line.

Scott B. Halstead, M.D.  
Acting Director  
Health Sciences Division



UNITED STATES AGENCY for INTERNATIONAL DEVELOPMENT

NEW DELHI, INDIA

February 28, 1991

MSG. NO. A-130

Fax No. 703-875-5490

To : Ms. Pam Johnson, S&T/HP/H

From : John J. Dumm, USIAD/HPN

Subject: USAID/India's support for the Data for Decision Making Project

It was very gratifying to learn that the project paper for the Data for Decision Making Project is almost complete and that you are now confident of a FY 1991 authorization and obligation. The purpose of this note is to confirm that USAID/India intends to deobligate \$2.051 million from our Biomedical Research Support Project and reobligate these funds into the Data for Decision Making Project. By doing this, we will be able to complete what has become a very successful component of our project and make a major contribution to the use of epidemiological data in the decision making process in India's health sector.

Timing is going to be very important. Please let us know when you think the Data for Decision Making Project will be authorized so that we can synchronize the deobligation/reobligation process which inevitably takes longer than we plan. Thanks. Best regards.

BCUW:JJD:rv

INITIAL ENVIRONMENTAL EXAMINATION

Project Location: Worldwide  
Project Title and Number: Data for Decision-making (936-5991)  
Life of Project: Six Years  
Project Assistance Completion Date: June 30, 1997  
IEE Prepared by: F. Eugene McJunkin  
S&T/H/AR  
Date Prepared: February 25, 1991

Threshold Decision: Pursuant to A.I.D. authority to prepare and approve environmental analyses and based on an Initial Environmental Examination (IEE) for the proposed use of A.I.D. project funds to support and improve health sector data collection, analysis, training, and planning for better management and decision-making for interventions in the health sectors of several developing countries, I recommend the following negative determination:

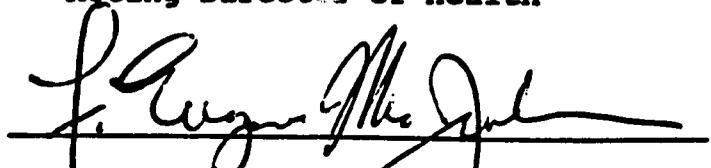
The proposed action is not an action which will have a significant effect on the human, physical, and biological environment over and above that described in the Project Paper and is, therefore, not an action for which a more detailed Environmental Impact will be required under this project. (See Section 216.2, 22 CFR Part 216, Environmental Procedures.)

Approved:



Ann Van Dusen  
Acting Director of Health

Concurrence:



F. Eugene McJunkin  
Environmental Officer, S&T/H/AR